INVITATION FOR BID
IFB #14-2404-OV
44th Avenue East
(From 30th Street East to 45th Street East)
Project No.: 6071160

Manatee County, a political subdivision of the State of Florida, (hereinafter "County") will receive sealed Bids from individuals, corporations, partnerships, and other legal entities organized under the laws of the State of Florida or authorized to conduct business in the State of Florida.

NON-MANDATORY INFORMATION CONFERENCE
In order to ensure that all prospective Bidders have sufficient information and understanding of County's needs, an Information Conference will be held at: **11:00 AM on October 10, 2014** at the **Public Works Compound, 1022 26th Avenue East, Bradenton, FL 34208, Conference Room "A"** . Attendance is not mandatory, but is highly encouraged.

DEADLINE FOR CLARIFICATION REQUESTS: **5:00 PM on October 17, 2014**
(Reference Bid Article A.05)

TIME AND DATE DUE: **3:00 PM on November 6, 2014**

FOR INFORMATION CONTACT:
Olga Valcich, CPPB, Contract Specialist
(941) 749-3055, Fax (941) 749-3034
olga.valcich@mymanatee.org
Manatee County Financial Management Department
Purchasing Division

AUTHORIZED FOR RELEASE: _____

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Attachment(s):

Plan Set (dated 5/23/14 Signed and Sealed, Roadway) .....162 pages

Plan Set (dated 5/23/14 Signed and Sealed, Signing & Pavement Marking).....13 pages

Plan Set (dated 5/27/14 Signed and Sealed, Lighting Plans).....11 pages

Plan Set (dated 5/23/14 Signed and Sealed, Water Main Installation).....24 pages

Special Provisions (dated 9/12/2014).....37 pages

Technical Special Provision for Settlement Plates,Revised 08/12/2014..... 3 pages

Potable Water Main Specification .....139 pages

Southwest Florida Water Management District, ERP Individual Construction, dated 02/24/2011, Revised 07/11/2012 Permit #43035341.001..... 23 pages

ERP General Construction Modifications Permit #44035341.002, 06/07/2012..16 pages

Department of the Army Permit, Permit #:SAJ-2010-01862(SP-MEP),Jacksonville,FL .....3 pages

FPL, Facilities Relocation Agreement dated 12/18/2012.....7 pages

Florida Department of Health Water Distribution Permit, approved by Manatee County Health Department Environmental Health Services, dated 10/ 28/2010, Permit # 0133068-956 DSGP.....30 pages

Tierra, Inc., Pond and Floodplain Mitigation Site Soil Report dated 05/29/2012, Tierra Project #6511-09-089.....26 pages

Tierra, Inc., Roadway Soil Survey Report dated 05/29/2012, Tierra Project #6511-09-089 .....159 pages

SECTION A
INFORMATION TO BIDDERS

A.01 OPENING LOCATION

Sealed Bids will be **publicly opened** at the **Manatee County Purchasing Division, 1112 Manatee Avenue West, Suite 803, Bradenton, Florida 34205** in the presence of County officials at the time and date stated, or soon thereafter. All Bidders or their representatives are invited to be present.

Any Bids received after the stated time and date will not be considered. It shall be the sole responsibility of the Bidder to have their Bid delivered to the Manatee County Purchasing Division for receipt on or before the stated time and date. Bidder shall be solely and strictly responsible for its timely delivery to the Purchasing Division. Bids delayed by mail, courier, or Bids delayed for any other reason, shall not be considered, shall not be opened at the public opening, and arrangements shall be made for their return at the Bidder's request and expense.

A.02 SEALED & MARKED

Bids shall be submitted in **triplicate, one original (marked Original) and two (2) copies (marked Copy)** of your **signed Bid** shall be submitted in one **sealed** package, clearly marked on the outside **"Sealed Bid #IFB#14-2404-OV, 44th Avenue East (From 30th Street East to 45th Street East) Project No.: 6071160"** along with your company name. For your convenience, a mailing label is provided with this Invitation for Bid package. Or, you may address the package as follows:

Address package to: Manatee County Purchasing Division
1112 Manatee Avenue West, Suite 803
Bradenton, Florida 34205
Sealed Bid # _____, Title _____

All blank spaces must be filled in as noted with amounts extended and totaled and no changes shall be made in the wording of the forms or in the items mentioned therein. In the event a change is made in your submittal, the Bidder shall write its initials by the change. Any Bid may be rejected which contains any omissions, alterations, irregularities of any kind, or which shall in any manner fail to conform to Bid requirements.

A Bid made by an individual, either in his/her own or proper person or under a trade or firm name, shall be executed under the individual's signature. If made by a partnership, the Bid shall be executed by two or more of the general partners. If made by a corporation, the Bid shall be executed by its President or other legally authorized corporate officer or agent.

A.03 SECURING OF DOCUMENTS

Invitation for Bids (IFB) and related documents are available on http://www.mymanatee.org/purchasing for download in a portable document format (.PDF) file by clicking on "Bids and Proposals" from the Purchasing Division's web page. You may view and print these files using Adobe Reader software. If necessary, you may download a free copy of Adobe Reader from the link provided on the "Bids and Proposals" page.

Additionally, Manatee County collaborates with the Manatee Chamber of Commerce by emailing solicitation opportunities to its members.

Manatee County may also use DemandStar to distribute Bids. On the DemandStar web site, http://www.DemandStar.com, click on the tab titled "My DemandStar" for more information regarding this service. Participation in the DemandStar system is not a requirement for doing business with Manatee County.

Complete copies of the IFB and all related documents are available for public inspection at the Manatee County Purchasing Division, 1112 Manatee Avenue West, Suite 803, Bradenton, FL 34205, or by calling (941) 749-3014. Appointments are encouraged. Documents are available between the hours of 9:00 AM and 4:00 PM Monday through Friday, with the exception of holidays. A complete set of the IFB documents must be used in preparing Bids. County assumes no responsibility for errors and misinterpretations resulting from the use of incomplete sets of Bid Documents.

A.04 MODIFICATION OF IFB DOCUMENTS

If a Bidder wishes to recommend changes to the IFB documents, the Bidder shall furnish, in writing, data and information necessary to aid County in evaluating the request to modify the Specifications. County is not obligated to make any changes to the IFB documents. Unless an Addendum is issued, the IFB documents shall remain unaltered. **Bidders must fully comply with the IFB documents in their entirety.**

A.05 DEADLINE FOR CLARIFICATION REQUESTS

5:00 PM on October 17, 2014 shall be the deadline to submit all inquiries, suggestions, or requests concerning interpretation, clarification or additional information pertaining to this Invitation for Bid to the Manatee County Purchasing Division.

This deadline has been established to maintain fair treatment of all potential Bidders, while maintaining progression of the Project to promote economic stimulus.

A.06 CLARIFICATION & ADDENDA

Each Bidder shall examine all Invitation for Bid Documents and shall judge all matters relating to the adequacy and accuracy of such documents. Any inquiries, suggestions or requests concerning interpretation, clarification or additional information pertaining to this Invitation for Bid shall be made through the Manatee County Purchasing Division. County shall not be responsible for oral interpretations given by any County employee, representative, or others.

The issuance of a written Addendum is the only official method whereby interpretation, clarification or additional information can be given.

If any Addenda are issued to this Invitation for Bid, County will post the documents on the Purchasing Division's web page, which can be accessed at http://www.mymanatee.org/purchasing, and then by clicking on "Bids and Proposals". If the original solicitation was broadcast via DemandStar, the addenda will also be broadcast on the DemandStar distribution system to "Planholders" on this web service.

It shall be the **responsibility of each Bidder, prior to submitting their Bid**, to contact the Manatee County Purchasing Division (see contact information on the cover page) to **determine if any Addenda were issued** and to make such Addenda a part of their Bid.

A.07 LOBBYING

After the issuance of any Invitation for Bid prospective Bidders, or any agent, representative or person acting at the request of such Bidder shall not contact, communicate with or discuss any matter relating in any way to the Invitation for Bid with any officer, agent or employee of Manatee County other than the Purchasing Official or as directed in the Invitation for Bid, pursuant to the Manatee County Code. This prohibition includes the act of carbon copying officers, agents or employees of Manatee County on all correspondence, including email correspondence. This requirement begins with the issuance of an Invitation for Bid, and ends upon execution of Contract or when the invitation has been cancelled. Violators of this prohibition shall be subject to sanctions as provided in the Manatee County Code.

A.08 UNBALANCED BIDDING PROHIBITED

County recognizes that large and/or complex Projects will often result in a variety of methods, sources, and prices. However, where in the opinion of County such variation does not appear to be justified, given Bid requirements and industry and market conditions, the Bid will be presumed to be unbalanced. Examples of unbalanced Bids will include:

a. Bids showing omissions, alterations of form, additions not specified, or required conditional or unauthorized alternate Bids.

A.08 UNBALANCED BIDDING PROHIBITED (Continued)

b. Bids quoting prices that substantially deviate, either higher or lower, from those included in the Bids of competitive Bidders for the same line item unit costs.

c. Bids where the unit costs offered are in excess of or below reasonable cost analysis values.

In the event County determines that a Bid is presumed unbalanced, it will request the opportunity to, and reserves the right to, review all source quotes, Bids, price lists, letters of intent, etc., which the Bidder obtained and upon which the Bidder relied upon to develop its Bid. County reserves the right to reject as non-responsive any presumptive unbalanced Bids where the Bidder is unable to demonstrate the validity and/or necessity of the unbalanced unit costs.

A.09 FRONT END LOADING OF BID PRICING PROHIBITED

Prices offered for performance and/or acquisition activities to occur early in the Project schedule, such as mobilization; clearing and grubbing; or maintenance of traffic; that are substantially higher than pricing of competitive Bidders within the same portion of the Project schedule, will be presumed to be front end loaded. Front end loaded Bids could reasonably appear to be an attempt to obtain unjustified early payments creating a risk of insufficient incentive for the Bidder to complete the Work or otherwise creating an appearance of an undercapitalized Bidder.

In the event County determines that a Bid is presumed to be front end loaded, it will request the opportunity to, and reserves the right to, review all source quotes, bids, price lists, letters of intent, etc., which the Bidder obtained and upon which the Bidder relied upon to develop the pricing or acquisition timing for these Bid items. County reserves the right to reject as non-responsive any presumptive front end loaded Bids where the Bidder is unable to demonstrate the validity and/or necessity of the front end loaded costs.

A.10 WITHDRAWAL OF OFFERS

Bidders may withdraw offers as follows:

a. Mistakes discovered before the opening of a solicitation may be withdrawn by written notice from the Bidder submitting the Bid. This request must be received in the office designated for receipt of Bids in the solicitation document prior to the time set for delivery and opening of the Bids. A copy of the request shall be retained and the unopened Bid returned to that Bidder; or

b. After the responses to a solicitation are opened or a selection has been determined, but before a Contract is signed, a Bidder alleging a material mistake of fact may be permitted to withdraw their Bid if:

A.10 WITHDRAWAL OF OFFERS (Continued)

1. the mistake is clearly evident in the solicitation document; or

2. Bidder submits evidence which clearly and convincingly demonstrates that a mistake was made. Request to withdraw a Bid must be in writing and approved by the Purchasing Official.

A.11 IRREVOCABLE OFFER

Any Bid may be withdrawn up until the time and date set for opening of the Bid. Any Bid not so withdrawn shall, upon opening, constitute an irrevocable offer for a period of ninety (90) days to sell to Manatee County the goods or services set forth in the attached IFB until one or more of the Bids have been duly accepted by County.

A.12 BID EXPENSES

All expenses for making Bids to County are to be borne by the Bidder.

A.13 RESERVED RIGHTS

County reserves the right to accept or reject any and/or all Bids, to waive irregularities and technicalities, and to request resubmission. Also, County reserves the right to accept all or any part of the Bid and to increase or decrease quantities to meet additional or reduced requirements of County. Any sole response received by the first submission date may or may not be rejected by County depending on available competition and current needs of County. For all items combined, the Bid of the lowest, responsive, responsible Bidder will be accepted, unless all Bids are rejected.

The lowest, responsible Bidder shall mean that Bidder who makes the lowest Bid to sell goods and/or services of a quality which meets or exceeds the quality of goods and/or services set forth in the IFB documents or otherwise required by County, and who is fit and capable to perform the Bid as made.

To be responsive, a Bidder shall submit a Bid which conforms in all material respects to the requirements set forth in the Invitation for Bid.

To be a responsible Bidder, the Bidder shall have the capability in all respects to perform fully the Bid requirements, and the tenacity, perseverance, experience, integrity, reliability, capacity, facilities, equipment, and credit which will assure good faith performance.

Also, County reserves the right to make such investigation as it deems necessary to determine the ability of any Bidder to furnish the service requested. Information County deems necessary to make this determination shall be provided by the Bidder. Such information may include, but shall not be limited to current financial statements, verification of availability of equipment and personnel, and past performance records.

A.14 APPLICABLE LAWS

Bidder must be authorized to transact business in the State of Florida. All applicable laws and regulations of the State of Florida and ordinances and regulations of Manatee County will apply to any resulting Contract. Any involvement with the Manatee County Purchasing Division shall be in accordance with the Manatee County Purchasing Ordinance as amended.

A.15 COLLUSION

By submitting a Bid to this Invitation for Bid, the Bidder certifies that it has not divulged, discussed or compared its Bid with any other Bidder, and has not colluded with any other Bidder or parties to this Bid whatsoever. Also, Bidder certifies, and in the case of a joint Bid each party thereto certifies as to their own organization, that in connection with this Bid:

a. any prices and/or cost data submitted have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices and/or cost data, with any other Bidder or with any competitor;

b. any prices and/or cost data quoted for this Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder, prior to the scheduled opening, directly or indirectly to any other Bidder or to any competitor;

c. no attempt has been made or will be made by the Bidder to induce any other person or firm to submit or not to submit a Bid for the purpose of restricting competition;

d. the only person or persons interested in this Bid, principal or principals is/are named therein and that no person other than therein mentioned has any interest in this Bid or in the resulting Contract to be entered into; and

e. no person or agency has been employed or retained to solicit or secure the resulting Contract upon an agreement or understanding or a commission, percentage, brokerage, or contingent fee except bona fide employees or established commercial agencies maintained by Bidder for purpose of doing business.

A.16 CODE OF ETHICS

With respect to this Bid, if any Bidder violates, directly or indirectly, the ethics provisions of the Manatee County Purchasing Ordinance and/or Florida criminal or civil laws related to public procurement, including but not limited to Florida Statutes, Chapter 112, Part III, Code of Ethics for Public Officers and Employees, such Bidder will be disqualified from eligibility to perform the Work described in this Invitation for Bid, and may also be disqualified from furnishing future goods or services to, and from submitting any future Bids to supply goods or services to, Manatee County.

A.16 CODE OF ETHICS (Continued)

By submitting a Bid, the Bidder represents to County that all statements made and materials submitted are truthful, with no relevant facts withheld. If a Bidder is determined to have been untruthful in their Bid or any related presentation, such Bidder will be disqualified from eligibility to perform the Work described in this Invitation for Bid, and may also be disqualified from furnishing future goods or services to, and from submitting any future Bids to supply goods or services to, Manatee County.

A.17 PUBLIC CONTRACTING AND ENVIRONMENTAL CRIMES

A person or affiliate who has been placed on the State's convicted vendor list following a conviction for a public entity crime, as that term is defined in Florida Statute § 287.133, may not submit a Bid to provide any goods or services to a public entity; may not submit a Bid with a public entity for the construction or repair of a public building or public work; may not submit Bids on leases of real property to a public entity; may not be awarded or perform Work as a Contractor, Supplier, Subcontractor, or Consultant under a Contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in Florida Statutes § 287.017 for CATEGORY TWO for a period of thirty-six (36) months following the date of being placed on the convicted list.

In addition, the Manatee County Code prohibits the Award of any resulting Contract to any person or entity who/which has, within the past five (5) years, been convicted of, or admitted to in court or sworn to under oath, a public entity crime or of any environmental law that, in the reasonable opinion of the Purchasing Official, establishes reasonable grounds to believe the person or business entity will not conduct business in a responsible matter.

To ensure compliance with the foregoing, the Code requires all persons or entities desiring to contract with County to execute and file with the Purchasing Official an affidavit, executed under the pain and penalties of perjury, confirming that person, entity and any person(s) affiliated with the entity, does not have such a record and is therefore eligible to seek and be awarded business with County. In the case of a business entity other than a partnership or a corporation, such affidavit shall be executed by an authorized agent of the entity. In the case of a partnership, such affidavit shall be executed by the general partner(s). A Public Contracting and Environmental Crimes Certification form is included (reference Section 00491 of this document) for this purpose.

A.18 BID FORMS

Bids must be submitted on attached provided forms, although additional pages may be attached. **Bidders must fully complete all pages of the Bid Forms. Bid Forms must be executed by an authorized signatory who has the legal authority to make the Bid and bind the company. Bidders must fully comply with all requirements of this IFB in its entirety**. Failure to comply shall result in default of the resulting Contract, whereupon, the defaulting Contractor shall be required to pay for any and all re-procurement costs, damages, and attorney fees as incurred by County.

A.19 LEGAL NAME

Bids shall clearly indicate the legal name, address and telephone number of the Bidder on the Bid Form. Bid Forms shall be signed above the typed or printed name and title of the signer. The signer must have the authority to bind the Bidder to the submitted Bid.

When Bidder is a partnership, the Bid Form shall be signed in the name of the firm and by all partners required under the terms of the partnership agreement. When a corporation is a Bidder, the authorized corporate officers shall sign.

Bidders who are corporations or limited partnerships shall provide a certified copy of their permit to transact business in the State of Florida, preferably along with the Bid Form, or within forty-eight (48) hours after request by County.

When submitting a Bid as a joint venture, it must have filed paper documents with the Division of Profession's Construction Industry Licensing Board prior to submitting a Bid.

A.20 DISCOUNTS

Any and all discounts must be incorporated in the prices contained in the Bid and not shown separately. The prices as shown on the Bid Form shall be the prices used in determining Award.

A.21 TAXES

Manatee County is exempt from Federal Excise and State Sales Taxes. (F.E.T. Cert. No. 59-78-0089K; Florida Sales Tax Exempt Cert. No. 85-8012622206C-6); therefore, the Bidder is prohibited from delineating a separate line item in his Bid for any sales or service taxes. Nothing herein shall affect the Bidder's normal tax liability.

A.22 DESCRIPTIVE INFORMATION

Unless otherwise specifically provided in the IFB documents, all equipment, materials and articles provided shall be new and of the most suitable grade for the purpose intended. Unless otherwise specifically provided in the IFB documents, reference to any equipment, material, article or patented process, by trade name, brand name, make or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition.

A.23 AMERICANS WITH DISABILITIES ACT

County does not discriminate upon the basis of any individual's disability status. This non-discrimination policy involves every aspect of County's functions including one's access to, participation, employment, or treatment in its programs or activities. Anyone requiring **reasonable accommodation** for an Information Conference or Bid Opening should contact the person named on the cover page of this Bid document at least twenty-four (24) hours in advance of either activity.

A.24 EQUAL EMPLOYMENT OPPORTUNITY CLAUSE

In accordance with the provisions of Title VI of the Civil Rights Act of 1964 and Title 15, Part 8 of the Code of Federal Regulations, County hereby notifies all prospective Bidders that they will affirmatively ensure minority business enterprises will be afforded full opportunity to participate in response to this advertisement and will not be discriminated against on the grounds of race, color or national origin in consideration for Bid Award.

A.25 MBE/DBE

The State of Florida, Office of Supplier Diversity provides the certification process and the database for identifying certified MBE/DBE firms. This service may be directly accessed at: http://www.osd.dms.state.fl.us/iframe.htm

If you have any questions regarding this State service, please contact their office at (850) 487-0915.

A.26 MATHEMATICAL ERRORS

In the event of multiplication/extension error(s), the unit price shall prevail. In the event of addition error(s) the extension totals will prevail. All Bids shall be reviewed mathematically and corrected, if necessary, using these standards, prior to additional evaluation.

A.27 DISCLOSURE

Upon receipt, all inquiries and responses to inquiries related to this Invitation for Bid become "Public Records", and shall be subject to public disclosure consistent with Florida Statues, Chapter 119.

Bids become subject to disclosure thirty (30) days after the opening or if a Notice of Intent to Award decision is made earlier than this time as provided by Florida Statutes § 119.071(1)(b). No announcement or review of the Bid shall be conducted at the public opening.

Based on the above, County will receive Bids at the time and date stated, and will make public at the opening the names of the business entities of all that submitted a Bid and any amount presented as a total offer without any verification of the mathematics or the completeness of the Bid.

A.27 DISCLOSURE (Continued)

If County rejects all Bids and concurrently notices its intent to reissue the solicitation, the rejected Bids are exempt from public disclosure until such time as County provides notice of an intended decision concerning the reissued solicitation or until County withdraws the reissued solicitation. A Bid is not exempt for longer than twelve (12) months after the initial notice rejecting all Bids.

Pursuant to Florida Statutes 119.0701, to the extent Successful Bidder is performing services on behalf of County, Successful Bidder must:

a. Keep and maintain public records that ordinarily and necessarily would be required by County in order to perform the service;

b. Provide the public with access to public records on the same terms and conditions that County would provide and at a cost that does not exceed the cost provided in Florida Statutes, Chapter 119, or as otherwise provided by law;

c. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law, and;

d. Meet all requirements for retaining public records and transfer, at no cost, to County all public records in possession of Successful Bidder upon termination of the awarded Contract and/or PO and destroy any duplicate public records that are exempt or confidential from public records disclosure requirements. All records stored electronically must be provided to County in a format that is compatible with County's information technology systems.

A.28 LOCAL PREFERENCE

a. Local business is defined as a business legally authorized to engage in the sale of the goods and/or services to be procured, and which certifies within its Bid that for at least six (6) months prior to the announcement of the solicitation of Bids it has maintained a physical place of business in Manatee, Desoto, Hardee, Hillsborough, Pinellas or Sarasota County with at least one full-time employee at that location.

b. Local preference shall not apply to the following categories of Contracts:

   1. Purchases or Contracts which are funded, in whole or in part, by a governmental or other funding entity, where the terms and conditions of receipt of the funds prohibit the preference;

A.28 LOCAL PREFERENCE (Continued)

2. Any Bid announcement which specifically provides that the general local preference policies set forth in this section are suspended due to the unique nature of the goods or services sought, the existence of an emergency as found by either the County Commission or County Administrator, or where such suspension is, in the opinion of the County Attorney, required by law.

c. To qualify for local preference under this section, **a local business must certify to County** by completing an **"Affidavit as to Local Business Form"**, which is available for download at www.mymanatee.org/vendor. Click on "Affidavit for Local Business" to access and print the form. Complete, notarize, and mail the notarized original to the following address: Manatee County Purchasing Division, 1112 Manatee Avenue West, Suite 803, Bradenton, FL 34205.

It is the responsibility of the Bidder to ensure accuracy of the Affidavit as to Local Business and notify County of any changes affecting same. Bidder attests that it:

1. Has not within the five (5) years prior to the Bid announcement admitted guilt or been found guilty by any court or state or federal regulatory enforcement agency of violation of any criminal law, or a law or administrative regulation regarding fraud;

2. Is not currently subject to an unresolved citation or notice of violation of any Manatee County Code provision, except citations or notices which are the subject of a current legal appeal, as of the date of the Bid announcement;

3. Is not delinquent in the payment of any fines, liens, assessments, fees or taxes to any governmental unit or taxing authority within Manatee County, except any such sums which are the subject of a current legal appeal.

A.29 VENDOR REGISTRATION

All vendors are encouraged to register with Manatee County using the on-line "Vendor Registration" web page on www.mymanatee.org/purchasing.

Your cooperation in registering your business with Manatee County will enhance our opportunities to identify sources for goods and services, plus identify local businesses. This information is used for soliciting quotations up to $250,000.00 and for competitive solicitations of larger purchases.

You will note that Manatee County collaborates with the Manatee Chamber of Commerce (www.manateechamber.com) by emailing solicitation opportunities to its members.

Our staff can assist you with your registration as needed. Our office hours are 8:00 A.M. to 5:00 P.M., Monday through Friday on regular business days. Please call (941) 749-3014 if you wish to have a Purchasing staff member assist you.

A.29 VENDOR REGISTRATION (Continued)

Quick steps to registration: www.mymanatee.org/purchasing

A link to Vendor Registration is listed on the Purchasing Division's web page under "Register as a Vendor".

Click on "Vendor Registration Form" for on-line input.

Thank you for reviewing this information and considering registering your business with Manatee County. Registration is not mandatory; however, by taking the time to register, you are helping County to provide timely notifications of Quotation, Bid and Proposal opportunities to your business.

A.30 ePAYABLES

Manatee County and Clerk of the Circuit Court have partnered to offer the ePayables program, which allows payments to be made to vendors via credit cards. The Clerk will issue a unique credit card number to each vendor; the card has a zero balance until payments have been authorized.

After goods are delivered or services rendered, vendors submit invoices to the remit to address on the purchase order according to the current process. When payments are authorized, an email notification is sent to the vendor. The email notification includes the invoice number(s), invoice date(s), and amount of payment. Once the vendor receives the email, the credit card has been authorized to be charged for the amount listed in the email. When the vendor charges the full amount authorized in the email, the card will return to a zero balance until the next payment is authorized.

There is no cost for vendors to participate in this program; however, there may be a charge by the company that processes your credit card transactions.

If you are interested in participating in this program, please complete Form D, ePayables Application and return the completed form via email to Ms. Lori Bryan, Supervisor at lori.bryan@manateeclerk.com.

NOTE: ANY OR ALL STATEMENTS CONTAINED IN THE FOLLOWING SECTIONS: MIMIMUM QUALIFICATIONS & BASIS OF AWARD, GENERAL TERMS AND CONDITIONS, OR SPECIFICATIONS, WHICH VARY FROM THE INFORMATION TO BIDDERS, SHALL HAVE PRECEDENCE.

END OF SECTION A

SECTION B
BID SUMMARY

B.01 THE WORK

The Work included in this Bid consists of the following: Construct a four (4) lane road from 30th Street East to 45th Street East with sidewalks, curbs, and gutters. Provide turn lanes and connections for the eastern leg of the 30th Street East intersection, the intersections at 37th Street East, 39th Street East, and 45th Street East. Connections will not be made to Highland Ridge, Oak Trace, Wallingford, or Fairfax. Stormwater management construction shall include two (2) detention ponds, two (2) floodplain mitigation sites, drainage pipes, and drainage structures. Pit will be crossed with earthwork and settlement plate monitoring. Wetland Mitigation construction shall include two (2) on-site mitigation sites and one (1) off-site mitigation site at Walker Crews Preserve. Provide pavement signing and marking for the entire length of the project limits. Provide street lighting along 44th Avenue East throughout the entire project. Utility construction shall include the installation of one (1) 8" PVC water main from 30th Street East for approximately one (1) mile and one (1) 36" DIP water main from the 8" PVC water main to a connection at 45th Street East, including all appurtenances and items necessary for connection to the County's existing system. The utility construction shall also include the removal of approximately 1,615 LF of existing water mains.

The Standard Specifications to be used for this work shall be Division II and III of the Florida Deprtment of Transportation (FDOT) Standard Specification for Road and Bridge Construction (2014 Edition), and all Supplemental Specifications thereto, hereinafter referred to as the Standard Specifciations, for roadway construction, except as amended under this Contract, or as noted on the construction plans meeting Manatee County Highway, Traffic & Stormwater Standards (dated 2007)

The Contractor's work shall follow the Manatee County Public Works Utility Standards and Specifications (dated 2011) for the water main work, reclaimed water main, sanitary sewer, and force main work.

The Successful Bidder shall furnish all Shop Drawings, working drawings, labor, materials, equipment, tools, services and incidentals necessary to complete all Work required by these Specifications.

The successful Bidder shall perform the Work complete, in place and ready for continuous service and shall include any repairs, replacements, and/or restoration required as a result of damages caused prior to acceptance by County.

The Successful Bidder shall furnish and install all materials, equipment and labor which is reasonably and properly inferable and necessary for the proper completion of the Work, whether specifically indicated in the Bid Documents or not.

B.02 EXAMINATION OF BID DOCUMENTS AND SITE(S)

It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Bid Documents thoroughly; (b) visit the site(s) to become familiar with local conditions that may affect cost, progress, performance, or furnishing of the Work; (c) consider federal, state, and local codes, laws, and regulations that may affect costs, progress, performance, or furnishing of the Work; (d) study and carefully correlate Bidder's observations with the Bid Documents; and (e) notify County of all conflicts, errors, or discrepancies in the Bid Documents.

Each Bidder may, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies, and obtain any additional information and data which pertain to the physical conditions at or contiguous to the site(s) or otherwise which may affect cost, progress, performance or furnishing of the Work and which Bidder deems necessary to determine his Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of the Bid Documents. County will provide each Bidder access to the site(s) to conduct such explorations and tests.

Bidder shall fill all holes, clean up and restore the site(s) to its former condition upon completion of such explorations. The lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and other lands designated for use by Contractor in performing the Work are identified in the Bid Documents.

All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Contractor. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by County unless otherwise provided in the Bid Documents.

Inspection of the site(s) is **a requirement** to be considered for Award of this Bid. Prior to submitting a Bid, each Bidder shall examine the site(s) and all conditions thereon fully familiarizing themselves with the full scope of the Project. Failure to become familiar with site conditions will in no way relieve the Successful Bidder from the necessity of furnishing any materials or performing any Work that is required to complete the Project in accordance with the plans and Specifications. Bidder shall acknowledge inspection of the Project site(s) on his/her signed, submitted Bid Form.

END OF SECTION B

SECTION C

BASIS OF AWARD & MINIMUM QUALIFICATIONS

C.01 BASIS OF AWARD

Award shall be to the lowest, responsive, responsible Bidder meeting Specifications and having the lowest **Grand Total Offer for Bid "A"**, or the lowest **Grand Total Offer for Bid "B"**, for the requirements listed on the Bid Form for the Work as set forth in this Invitation for Bid. Bid prices shall include costs for furnishing all labor, equipment and/or materials for the completion of the Work in accordance with and in the manner set forth and described in the Bid Documents to County's satisfaction within the prescribed time.

Two schedules for completion of Work shall be considered. Each Bid for completion by the specified stated time shall be offered as a separate "total offer". County has the sole authority to select the Bid based on the completion time which is in the best interest of County. Only one Award shall be made.

NOTE: Inspection of the site is a pre-requisite to be considered for Award of this Bid.

In evaluating Bids, County shall consider the qualifications of the Bidders; and if required, may also consider the qualifications of the Subcontractors, Suppliers, and other persons and organizations proposed. County may also consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work.

Whenever two or more Bids are equal with respect to price, the Bid received from a local business shall be given preference in Award. Whenever two or more Bids which are equal with respect to price are received, and neither of these Bids are from a local business, the Award shall be determined by a chance drawing, coin toss, or similar tie-breaking method conducted by the Purchasing Division and open to the public.

C.02 MINIMUM QUALIFICATIONS OF BIDDERS

No person who is not certified or registered as a General Contractor OR FDOT Prequalified Contractor in Road Construction may submit a Bid. In performance of the Water Main installation, no person who is not certified or registered as a General Contractor and / or Underground Utility Contractor with a minimum of five (5) years' experience may submit a Bid pursuant to Florida Statutes, Chapter 489 on the day the Bid is submitted, and who has continuously held that certification or registration for a period of at least three (3) consecutive years immediately prior to the day the Bid is submitted, may be qualified to bid on this Project. In the event that a Bidder is a business organization, including a partnership, corporation, business trust or other legal entity as set forth in Florida Statutes § 489.119(2), then the Bidder shall only be qualified to bid on this Project if: 1) the Bidder (the business organization) is on the day the Bid is submitted, and for at least three (3) consecutive years immediately prior to the day the Bid is submitted has been, in continuous existence, properly licensed and registered as required by Florida law; and 2) the Bidder, on the day the Bid is submitted, has a certified or registered Qualifying Agent, as required by Florida Statutes § 489.119, and that Qualifying Agent has been the same Qualifying Agent of the Bidder for a period of at least three (3) consecutive years immediately prior to the day the Bid is submitted.

SECTION D

GENERAL TERMS & CONDITIONS

D.01 CONTRACT FORMS

The Contract resulting from the acceptance of a Bid shall be in the form of the Contract stated in this Bid (reference Section F of this document).

A written notice confirming Award or recommendation thereof will be forwarded to the Successful Bidder accompanied by the required number of unsigned counterparts of the Contract. Within ten (10) days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Contract with any other required documents to County. (Note: Contract must be approved in accordance with Chapter 2-26 of the Manatee County Code, and the Administrative Standards and Procedures Manual approved by the County Administrator).

D.02 ASSIGNMENT OF CONTRACT

Contractor shall not assign, transfer, convey, sublet or otherwise dispose of the resulting Contract or of his right, title, or interest therein, or his power to execute such Contract, or to assign any monies due or to become due there under to any other person, firm or corporation unless first obtaining the written consent of County. The giving of such consent to a particular Subcontractor assignment shall not dispense with the necessity of such consent to any further or other assignment.

D.03 COMPLETION OF WORK

The Work will be completed and ready for final inspection within the specified calendar days from the date the Contract Time commences to run. Two Bids shall be considered, **Bid "A"** based on **540 calendar days** and **Bid "B"** based on **720 calendar days**. County has the sole authority to select the Bid based on the completion time which is in the best interest of County. **Only one Award shall be made**.

D.04 LIQUIDATED DAMAGES

If the Contractor refuses or fails to prosecute the Work, or any separable part thereof, with such diligence as will hinder its completion within the time specified, County may seek damages. The actual damages for delay will be impossible to determine and in lieu thereof, the Contractor shall pay to County the sum of **$4,624.00** as fixed, agreed, and liquidated damages for each calendar day of the delay until the Work is finally accepted by County and the Contractor and his Surety shall be liable for the amount thereof.

D.05 PAYMENT

Contractor may apply for partial payment on monthly estimates, based on the amount of the Work done or completed in compliance with the provisions of the resulting Contract. Contractor shall submit an application, on a standard pay application form provided or approved by County, of an approximate estimate of the proportionate value of the Work done, items and locations of the Work performed up to and including the last day of the period then ending.

D.05 PAYMENT (Continued)

County will then review said estimate and make any necessary revisions so that the estimate can receive approval for payment. If the Contractor and County do not agree on the approximate estimate of the proportionate value of the Work done for any pay period, the determination of County will be binding. The amount of said estimate after deducting any required Retainage and all previous payments shall be due and payable to the Contractor, twenty (20) business days if County is its own Engineer of Record (EOR) or twenty-five (25) business days if outside agent approval is required after the pay estimate has been approved by the agent for County.

In accordance with the Prompt Payment Act, Florida Statutes § 218.735(7), a Punch List shall be formulated.

Time allowed for development of Punch List:

a. Awarded Contracts with an estimated cost of less than $10 million will be within thirty (30) calendar days after reaching Substantial Completion.

b. Awarded Contracts with a cost of $10 million dollars or more will be within thirty (30) calendar days OR if extended by Contract, up to sixty (60) calendar days after reaching Substantial Completion.

The Final Completion date of the resulting Contract must be at least thirty (30) days after delivery of the list of items. If the list is not provided to the awarded Contractor by the agreed upon date, the Contract completion time must be extended by the number of days County exceeds the delivery date.

It is the Contractor's responsibility for the care of the materials. Any damage to or loss of said materials is the full responsibility of the Contractor. Any periodical pay estimate signed by the Contractor shall be final as to the Contractor for any or all Work covered by the periodical pay estimate.

Any requests for payment of materials stored on site must be accompanied with a paid receipt. The 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 County at the time of payment free and clear of all liens, claims, security interests and encumbrances (hereafter referred to as "Liens").

The Contractor agrees to furnish an affidavit stating that all laborers, material men, and Subcontractors have been paid on the Project for Work covered by the Application for Payment and that a partial or complete release of lien, as may be necessary, be properly executed by the material men, laborers, Subcontractors on the Project for Work covered by the Application for Payment, sufficient to secure County from any claim whatsoever arising out of the aforesaid Work. When the Contractor has completed the Work in compliance with the terms of the Contract Documents, he shall notify County in writing that the Project is ready for final inspection.

D.05 PAYMENT (Continued)

County will then advise the Contractor as to the arrangements for final inspection and what Work, if any, is required to prepare the Project or a portion thereof for final inspection. When County determines the Project or portion thereof is ready for final inspection, County shall perform same. Upon completion of final inspection, County will notify Contractor 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. When all such errors have been corrected, a final re-inspection will be made.

The process will be repeated until, in the opinion of County, the Project has been completed in compliance with the terms of the Contract Documents.

When final acceptance has been made by County, County will make final payment of the resulting Contract amount, plus all approved additions, less approved deductions and previous payments made. The resulting Contract will be considered complete when all Work has been finished, the final inspection made, approved as-builts received, and the Project finally accepted in writing by County. The Contractor's responsibility shall then terminate except as otherwise stated.

D.06 CONTRACT CONTINGENCY WORK

This Bid item entails a monetary allowance which is used at County's discretion to handle unexpected conditions as required to satisfactorily complete the Project in accordance with the plans and Specifications. A Field Directive must be issued by an authorized County Representative to authorize use of Contract Contingency funds.

The percentage for Contract Contingency is listed on the Bid Form. Vendor shall enter the amount for Contract Contingency based on the percentage of their Total Base Bid. The total Contract Award will include the Contract Contingency funds.

Appropriate uses of Contract Contingency funds include increases to existing Bid item quantities that do not change the initial Scope of Work, which may be directed by staff; modification items not originally bid which were unforeseen yet necessary during the construction to provide a safe, complete Project and that do not change the initial Scope of Work; and unanticipated conflicts and/or design changes required during construction which are necessary to provide a safe, complete Project and that do not change the initial Scope of Work.

Inappropriate uses of Contract Contingency funds include anything that changes the initial Scope of Work, including the Contract Price and Contract Time, and adding Bid items not previously contemplated that change the initial Scope of Work.

D.07 RETAINAGE

A Retainage of 10% of the total Work in place shall be withheld until 50% complete. After 50% completion, the Retainage shall be reduced to 5% of the total Work in place until Final Completion and acceptance of the Work by County. Upon final acceptance, the remaining Retainage shall be included in the final payment.

D.08 PROGRESS REQUIREMENTS

All Work done under the resulting Contract shall be done with a minimum of inconvenience to the private property owners in the area. The Contractor shall coordinate his Work with private property owners such that existing utility services are maintained and they have access to their property at all times.

D.09 WARRANTY AND GUARANTEE PROVISIONS

All Work, materials, and equipment furnished as defined herein shall be guaranteed and warranted by the Contractor for a minimum period of three (3) years, unless otherwise specified, from final acceptance by County to be free from defects due either to faulty materials or equipment or faulty workmanship.

All materials, equipment, and workmanship furnished and installed by the Contractor is warranted and guaranteed by the Contractor to meet the required standards and to accomplish the purposes and functions of the Project as defined, detailed, and specified herein.

County shall, following discovery thereof, promptly give written notice to the Contractor of faulty materials, equipment, or workmanship within the period of the guarantee and the Contractor shall promptly replace any part of the faulty equipment, material, or workmanship at his own cost. These warranty and guarantee provisions create no limitations on County as to any claims or actions for breach of guaranty or breach of warranty that County might have against parties other than the Contractor, and do not constitute exclusive remedies of County against the Contractor.

D.10 MATERIALS AND WORKMANSHIP

All materials and apparatus required for this Work, except as specified otherwise, shall be new, of first class quality, and shall be furnished, delivered, connected and finished in every detail. Construction shall be prescribed by good industry practice and in accordance with manufacturer's recommendations for the type being installed.

Use skilled workman trained and experienced in the necessary trades and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this section.

D.11 PROJECT CLOSE-OUT

Clean construction site and remove any and all excess materials. Correct any damages to property that may have occurred as a result of installation and/or delivery. Repair and patch all surfaces cut for installation. The Contractor shall remedy any deficiencies promptly should County determine any Work is incomplete or defective.

D.11 PROJECT CLOSE-OUT (Continued)

When County determines the Work is acceptable in accordance with this Invitation for Bid, the Contractor shall provide the close out submittals, including but not necessarily limited to the following:

1 set	Certificate of Warranties	
1 set	Manufacturer's Product Literature	(when applicable)
1 set	Project Record Drawings	
1 set	Subcontractor Information	(when applicable)

D.12 ROYALTIES AND PATENTS

The Contractor shall pay all royalties and license fees for equipment or processes in conjunction with the equipment and/or services being furnished. Contractor shall defend all suits or claims for infringement of any patent, trademark or copyright, and shall save County harmless from loss on account thereof, including costs and attorney's fees.

D.13 AUTHORIZED PRODUCT REPRESENTATION

The Bidder, by virtue of submitting the name and Specifications of a manufacturer's product, will be required to furnish the named manufacturer's product. Failure to perform accordingly may, in County's sole discretion, be deemed a Material Breach of the resulting Contract, and shall constitute grounds for County's immediate termination of the resulting Contract.

D.14 REGULATIONS

It shall be the responsibility of the Contractor to assure compliance with any OSHA, EPA and/or other federal or State of Florida rules, regulations or other requirements, as each may apply.

D.15 CANCELLATION

Any failure of the Contractor to furnish or perform the Work (including, but not limited to, commencement of the Work, failure to supply sufficient skilled workers or suitable materials or equipment) in accordance with the resulting Contract, County may order the stop of the Work, or any portion thereof, until the cause for such order has been eliminated. If the Contractor persistently fails to perform the Work in accordance with the resulting Contract, County reserves the right to terminate the resulting Contract and select the next qualified Bidder or re-advertise this procurement in part or in whole. County reserves the right to cancel all or any undelivered or unexecuted portion of the resulting Contract with or without cause.

D.16 INDEMNIFICATION

The Contractor covenants and agrees to indemnify and save harmless County, its agents and employees, from and against all claims, suits, actions, damages, causes of action, or judgments arising out of the terms of the resulting Contract for any personal injury, loss of life, or damage to the property sustained as a result of the performance or non-performance of services or delivery of goods; from and against any orders, judgments, or decrees, which may be entered against County, its agents or employees; and from and against all costs, attorney's fees, expenses and other liabilities incurred in the defense of any such claim, suit or action, and the investigation thereof. Nothing in the resulting Award, Contract or Purchase Order shall be deemed to affect the rights, privileges and immunities of County as set forth in Florida Statutes § 768.28.

D.17 SUBCONTRACTORS, SUPPLIERS AND OTHERS

The identity of Subcontractors, Suppliers, and other persons and organizations (including those who are to furnish the principal items of material and equipment) may be requested by County for each Bid item from any of the Bidders; and the Bidder shall respond within five (5) days after the date of such request. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, persons or organization if requested by County. If County, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, other person or organization, County may, before the Notice of Intent to Award is given, request the apparent Successful Bidder to submit an acceptable substitute without an increase in Contract Price or Contract Time.

If apparent Successful Bidder declines to make any such substitution, County may Award the resulting Contract to the next lowest qualified Bidder that proposes to use acceptable Subcontractors, Suppliers, and other persons who County does not make written objection to. Contractor shall not be required to employ any Subcontractor, Supplier, other person or organization who Contractor has reasonable objection to.

Subcontractors shall be bound by the terms and conditions of the resulting Contract insofar as it applies to their work, but this shall not relieve the prime Contractor from the full responsibility to County for the proper completion of all Work to be executed under the resulting Contract.

The employment of unauthorized aliens by any Contractor is considered a violation of Section 274 (e) of the Immigration and Employment Act. If the Contractor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of the resulting Contract.

A complete list of all Subcontractors proposed for any portion of the Work may be requested of any Bidder deemed necessary by County. Subcontracts shall be awarded only to those Subcontractors considered satisfactory by County.

D.18 MANUALS, SCHEMATICS, HANDBOOKS (IF APPLICABLE)

All manuals, schematics and handbooks shall be provided which are applicable to the equipment delivered. An operators manual, parts manual and technician manual must also be provided. Parts lists (manuals) must include OEM part numbers for items not manufactured by the Contractor. Contractor shall furnish two (2) copies of each.

D.19 INSURANCE

The Contractor will not commence Work under the resulting Contract until all insurance under this section and such insurance coverage as might be required by County has been obtained. The Contractor shall obtain, and submit to the Purchasing Division within ten (10) calendar days from the date of Notice of Intent to Award, at his expense, the following minimum amounts of insurance (inclusive of any amounts provided by an umbrella or excess policy):

a. Workers' Compensation/Employers' Liability

Part One - There shall be no maximum limit (other than as limited by the applicable statute) for liability imposed by Florida Workers' Compensation Act or any other coverage required by the resulting Contract Documents which are customarily insured under Part One of the standard Workers' Compensation Policy.

Part Two - The minimum amount of coverage required by the resulting Contract Documents which are customarily insured under Part Two of the standard Workers' Compensation Policy shall be:

(Each Accident)	$100,000
(Disease-Policy Limit)	$500,000
(Disease-Each Employee)	$100,000

b. Commercial General Liability

The limits are to be applicable only to Work performed under the resulting Contract and shall be those that would be provided with the attachment of the Amendment of Limits of Insurance (Designated Project or Premises) endorsement (ISO Form CG 25 03) a Commercial General Liability Policy with the following minimum limits.

General Aggregate:	
Products/Completed Operations Aggregate	$2,000,000
Personal and Advertising Injury	$2,000,000
Each Occurrence	$2,000,000
Fire Damage (Any One Fire)	$Nil
Medical Expense (Any One Person)	$Nil

ADDITIONAL INSURED: Manatee County, a political subdivision of the State of Florida, shall be specifically named as additional insured on the Commercial General Liability Policy.

D.19 INSURANCE (Continued)

c. Business Auto Policy

Each Occurrence Bodily Injury and Property Damage Liability Combined	$2,000,000
Annual Aggregate (if applicable)	$1,000,000

ADDITIONAL INSURED: Manatee County, a political subdivision of the State of Florida, shall be specifically named as additional insured on the Business Auto Policy.

d. Property Insurance

If the resulting Contract includes construction of or additions to above ground buildings or structures, Contractor shall provide **"Builder's Risk"** insurance with the minimum amount of insurance to be 100% of the value of such addition(s), building(s), or structure(s).

e. Installation Floater

If the resulting Contract does not include construction of or additions to above ground building or structures, **but does involve** the installation of machinery or equipment, Contractor shall provide an **"Installation Floater"** with the minimum amount of insurance to be 100% of the value of such addition(s), building(s), or structure(s).

f. Certificates of Insurance and Copies of Policies

Certificates of Insurance in triplicate evidencing the insurance coverage specified herein shall be filed with the Purchasing Official before operations are begun. The required certificates of insurance shall name the types of policy, policy number, date of expiration, amount of coverage, companies affording coverage, and also shall refer specifically to the Bid number and title of the Project. All insurance policies required herein shall be issued by companies that are authorized to do business under the laws of the State of Florida and hold an A.M. Best rating of A- or better. Insurance, as specified herein, shall remain in force and effect for the duration of the Project including any warranty periods.

g. Complete Policies: The entire and complete insurance policies required herein shall be provided to County on request.

Nothing herein shall in any manner create any liability of County in connection with any claim against the Contractor for labor, services, or materials, or of Subcontractors; and nothing herein shall limit the liability of the Contractor or Contractor's Sureties to County or to any Workers, Suppliers, material men or employees in relation to the resulting Contract.

D.19 INSURANCE (Continued)

h. By way of its submission of a Bid hereto, Bidder:

1. Represents that Bidder maintains, and will maintain during the term of any Contract arising from this solicitation, insurance coverage from responsible companies duly authorized to do business in the State of Florida and deemed acceptable to County, as set forth in this solicitation; and

2. Agrees that, insurance should not be cancelled without thirty (30) days notice to County and must be endorsed to provide same. Failure of Bidder to obtain and maintain proper amounts of insurance at all times as called for herein shall constitute a Material Breach of the resulting Contract, which may result in immediate termination.

i. Certification Requirements – In order for the certificate of insurance to be accepted it **must** comply with the following:

1. The certificate holder shall be:
Manatee County Board of Commissioners,
A political subdivision of the State of Florida
P.O. Box 1000
Bradenton, FL 34206-1000
IFB# 14-2404-OV, 44th Avenue East
(From 30th Street East to 45th Street East)
(Project No.: 6071160)

2. Certificate shall be mailed to:
Manatee County Purchasing Division
1112 Manatee Avenue West, Suite 803
Bradenton, FL 34205
Attn: Olga Valcich, CPPB, Contract Specialist

D.20 BID BOND/CERTIFIED CHECK

By submitting a Bid to this Invitation for Bid, the Bidder agrees should the Bidder's Bid be accepted, **to execute the form of Contract and present the same to Manatee County for approval within ten (10) calendar days after Notice of Intent to Award.** The Bidder further agrees that failure to execute and deliver said form of Contract **within ten (10) calendar days** will result in damages to Manatee County and as guarantee of payment of same a Bid Bond/certified check shall be enclosed within the submitted sealed Bid in the amount of five (5%) percent of the total amount of the Bid. The Bidder further agrees that in case the Bidder fails to enter into a Contract, as prescribed by Manatee County, the Bid Bond/certified check accompanying the Bid shall be forfeited to Manatee County as agreed liquidated damages. If County enters into a Contract with a Bidder, or if County rejects any and/or all Bids, accompanying bond will be promptly returned.

D.21 PERFORMANCE AND PAYMENT BONDS

The Successful Bidder shall furnish Surety bonds using the Public Construction Bond form prescribed in Florida Statutes § 255.05, which is provided herein, as security for faithful performance of the Contract awarded as a result of this Bid and for the payment of all persons performing labor and/or furnishing material in connection therewith. Failure to provide the required bonds on the prescribed form may result in Successful Bidder being deemed nonresponsive. Bonds must be in the form prescribed in Florida Statutes § 255.05, and must not contain notice, demand or other terms and conditions, including informal pre-claim meetings, not provided for in Florida Statutes § 255.05.

Surety of such bonds shall be in an amount equal to 100% of the Contract Award issued by a duly authorized and nationally recognized Surety company, authorized to do business in the State of Florida, satisfactory to this County. Surety shall be rated as "A-" or better as to general policy holders rating and Class V or higher rating as to financial size category and the amount required shall not exceed 5% of the reported policy holders' surplus, all as reported in the most current Best Key Rating Guide, published by A.M. Best Company, Inc. of 75 Fulton Street, New York, New York, 10038. The attorney-in-fact who signs the bonds must file with the bonds, a certificate and effective dated copy of power-of-attorney. Performance and Payment Bonds shall be issued to Manatee County, a political subdivision of the State of Florida, within ten (10) calendar days after Notice of Intent to Award.

In addition, pursuant to Florida Statutes § 255.05(1)(b), prior to commencing Work, the Contractor shall be responsible and bear all costs associated to record the Performance and Payment Bond with the Manatee County Clerk of the Circuit Court. A certified copy of said recording shall be furnished to the Purchasing Division upon filing. Pursuant to Florida Statutes § 255.05(1)(b), County will make no payment to the Contractor until the Contractor has complied with this paragraph.

Furnishing Performance and Payment Bonds shall be requisite to execution of a Contract with County. Said Performance and Payment Bonds will remain in force for the duration of the Contract with the premiums paid by the Contractor. Failure of the Successful Bidder to execute such Contract and to supply the required bonds shall be just cause for cancellation of the Award. County may then contract with another acceptable Bidder or re-advertise this Invitation for Bid. If another Bidder is accepted, and notice given within ninety (90) days after the opening of the Bids, this acceptance shall bind the Bidder as though they were originally the Successful Bidder.

Failure of County at any time to require performance by the Contractor of any provisions set out in the resulting Contract will in no way affect the right of County, thereafter, to enforce those provisions.

When activity occurs within the resulting Contract that increases the amount of the Contract by either an approved Administrative Contract Adjustment (ACA) or an approved Change Order, a recorded Bond Rider shall be provided before the additional Work can proceed. All premiums shall be paid by the Contractor.

D.22 NO DAMAGES FOR DELAY

No claim for damages or any claim other than for an extension of time shall be made or asserted against County by reason of any delays. The Contractor shall not be entitled to an increase in the total Contract Price or payment or compensation of any kind from County or direct, indirect, consequential impact or other costs, expenses for damages, including but not limited to costs of acceleration or inefficiency arising because of delay, disruption, interference or hindrance from any cause whatsoever; provided, however, that this provision shall not preclude recovery or damages by the Contractor for hindrance or delays due solely to fraud, bad faith, or active interference on part of County or its agents. Otherwise, the Contractor shall only be entitled to extensions of the Contract Time as the sole and exclusive remedy for such resulting delay, in accordance with and to the extent specifically provided above.

D.23 NO INTEREST

Any monies not paid by County when claimed to be due to the Contractor under this Contract shall not be subject to interest including prejudgment interest. Any monies not paid by County when claimed to be due to the Contractor for damages awarded in the case of construction delays shall not be subject to prejudgment interest.

D.24 CONSTRUCTION OF CONTRACT

The resulting Contract and the rights and responsibilities hereunder shall not be construed more strongly against either party, regardless of the extent to which such party may have participated in the preparation hereof.

D.25 BE GREEN

All Contractors are encouraged to use as many **environmentally preferable** "green" products, materials, supplies, etc. as possible in order to promote a safe and healthy environment. **Environmentally preferable are products or services that have a reduced adverse effect on the environment**. Provide detail of your organization's initiative and its ability to meet the goal of environmental sustainability.

END OF SECTION D

SECTION E
GENERAL CONDITIONS

ARTICLE 1. DEFINITIONS

Whenever used in the Contract Documents, the following terms have the meaning indicated which are applicable to both the singular and plural thereof:

Addendum - Written or graphic instruments issued prior to the opening of Bids which clarify or change the Bid Documents.

Administrative Contract Adjustment (ACA) – A minor change to a Contract, which is less than 10% of the Contract Price or less than 20% of the Contract Time, and does not require Board approval. (Reference Resolution R-07-189)

Application for Payment - The form accepted by the Project Representative which is to be used by Contractor in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

Award - Acceptance of the Bid from the person, firm, or corporation which in the County's sole and absolute judgment will under all circumstances best serve the public interest. Award shall be made in accordance with Chapter 2-26 of the Manatee County Code.

Bid - The Offer of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

Bid Bond – An insurance agreement, accompanied by a monetary commitment, by which a third party (the Surety) accepts liability and guarantees that the Bidder will not withdraw the Bid.

Bidder - One who submits a Bid directly to the County, as distinct from a Sub-bidder, who submits a Bid to a Bidder.

Bid Documents - Consists of the Invitation for Bid, which includes but is not limited to the Bid Form, drawings, technical Specifications, terms and conditions, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids); and becomes a part of the resulting Contract.

Bid Summary – Specifications or scope of Work that specifically describes the Work to be done for this Project.

Bond Rider – A Bond Rider increases the Performance Bond coverage to ensure responsibility of the Contractor in executing the Work for the County in consideration of the increased value resulting from an approved change in the Contract amount.

Change Order - A document recommended by the Project Representative which is signed by Contractor and County and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Contract.

Compensable Delay - Any delay beyond the control and without the fault or negligence of the Contractor resulting from County-caused changes in the Work, differing site conditions, suspensions of the Work, or termination for convenience by County.

Contract - The written Contract between County and Contractor covering the Work to be performed; other Contract Documents are attached to the Contract and made a part thereof as provided therein.

Contract Contingency - A monetary allowance used at the County's discretion, which is part of the total sum of the Contract that allows for minor changes in the Contract that do not change the initial Scope of Work, including Contract Price and Contract Time.

Contract Documents - The Contract, Invitation for Bid in its entirety, Public Construction Bond Form and Insurance Certificate(s), Drawings/Plans, Addenda (which pertain to the Bid Documents), Contractor's Bid Form (including documentation accompanying the Bid and any post-Bid documentation submitted prior to the Notice of Award), and Reports, together with all written Change Orders and other documents amending, modifying or supplementing the Contract Documents issued on or after the Effective Date of the Contract.

Contract Price - The monies payable by County to Contractor under the Contract Documents as stated in the Contract.

Contract Time - The number of days or the date stated in the Notice to Proceed for the completion of the Work.

Contractor - The person, firm or corporation with whom County has entered into a Contract.

Days - All references to days are to be considered calendar days except as specified differently.

Defective - An adjective which when modifying the Work refers to work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to Project Representative's recommendation of final payment (unless responsibility for the protection thereof has been assumed by County).

Drawings - The drawings which show the character and Scope of Work to be performed and which have been prepared or approved by Engineer and are referred to in the Bid and Contract Documents.

Effective Date of the Contract - The date indicated in the Contract on which it becomes effective (date of execution).

Engineer – Licensed professional who is responsible for the preparation, signing, dating, sealing and issuing of any engineering document(s) for any engineering service or Work.

Excusable Delay - Any delay beyond the control and without the negligence of the Contractor, the County, or any other Contractor caused by events or circumstances such as, but not limited to, acts of God or of the public enemy, fires, floods, freight embargoes, acts of government other than County or epidemics. Labor disputes and above average rainfall shall give rise only to Excusable Delays.

Field Directive - A written order issued by an authorized County Representative which approves changes in the Work, but does not involve a change in the initial Scope of Work, including the Contract Price and the Contract Time. A Field Directive must be issued by an authorized County Representative to authorize use of Contract Contingency funds.

Final Completion – The Work (including items defined on the Punch List) has been completed, accepted in writing by the County, approved as-builts have been received, and is ready for final payment.

Float or Slack Time - The time available in the progress schedule during which an unexpected activity can be completed without delaying Substantial Completion of the Work.

Inexcusable Delay - Any delay caused by events or circumstances within the control of the Contractor, such as inadequate crewing, slow submittals, etc., which might have been avoided by the exercise of care, prudence, foresight, or diligence on the part of the Contractor.

Information (Pre-Bid) Conference – A meeting held by the Purchasing Division with potential Bidders, prior to the opening of the solicitation, for the purpose of answering questions, clarifying ambiguities, and responding to general issues in order to establish a common basis for understanding all of the requirements of the solicitation; may result in the issuance of an Addendum.

Material Breach – A substantial failure in the performance of the Contract, as to give the affected party the right to remedies available in the Contract.

Non-prejudicial Delay - Any delay impacting a portion of the Work within the available total Float or Slack Time and not necessarily preventing completion of the Work within the Contract Time.

Notice of Award - The written notice to the Successful Bidder stating Award has been approved by the Board of County Commissioners; or by the Purchasing Official in accordance with Chapter 2-26 of the Manatee County Code.

Notice of Intent to Award - The written notice to the apparent Successful Bidder stating Award has been recommended with final Award to be authorized by the Purchasing Official or Board of County Commissioners, as appropriate.

Notice to Proceed - Written notice by County (after execution of Contract) to Contractor fixing the date on which the Contract Time will commence to run and on which Contractor shall start to perform (ten (10) days from date of such notice) Contractor's obligations under the Contract Documents.

Payment Bond – An instrument, issued by a Surety that guarantees that Subcontractors will be paid for labor expended on the Contract.

Performance Bond – An instrument executed subsequent to Award by the successful Contractor that protects the County from loss due to Contractor's inability to complete the Contract as agreed.

Preconstruction Conference - Prior to starting the Work, a meeting scheduled by County with Contractor to review the Work schedules, to establish procedures for handling Shop Drawings and other submissions, for processing periodical pay estimates, and such other matters as may be pertinent to the project.

Prejudicial Delay - Any excusable or Compensable Delay impacting the Work and exceeding the total float time available in the progress schedule, thus preventing completion of the Work within the Contract Time unless the Work is accelerated.

Pre-operation Testing - All field inspections, installation checks, water tests, performance tests and necessary corrections required of Contractor to demonstrate that individual components of the Work have been properly constructed and do operate in accordance with the Contract Documents for their intended purposes.

Project - The total construction of which the Work to be provided under the Contract Documents (may be the whole or a part as indicated elsewhere in the Contract Documents).

Project Representative - The authorized representative of Manatee County who is assigned to the project or any part thereof.

Punch List – A list of minor deficiencies or additional Work that does not prohibit achieving Substantial Completion yet must be completed before Final Completion of the Contract can be achieved.

Retainage – A certain percentage, identified in the solicitation document, is withheld from payment due to the Contractor until the Work is fully completed and accepted by County.

Schedule of Values – In the case of a total, lump sum Bid, unit prices shall be established for this Contract by the submission of a Schedule of Values. In the case of an itemized Bid, unit prices are the prices bid. The Contractor shall submit a Schedule of Values within ten (10) days of Notice to Proceed date. The schedule shall include quantities and prices of items equaling the Total Offer and will subdivide the Work into components in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work. Upon request of the County, the Contractor shall support the values with data which will substantiate their correctness.

Shop Drawings - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by Contractor to illustrate material or equipment for some portion of the Work.

Special Provisions: As required to define Work or procedures not covered in the standard Specifications, and as necessary to supplement or modify items in the standard Specifications.

Subcontractor - An individual or corporation having a direct contact with Contractor or with any other Subcontractor for the performance of a part of the Work at the site. Such person or firm has contractual relations with the Contractor, not with the County.

Substantial Completion - The stage in the progress of the Work (or a specified portion thereof) is sufficiently complete in accordance with the Contract Documents so the Work (or a specified portion thereof) can be utilized for the intended purpose.

Successful Bidder - The lowest, responsible and responsive Bidder to whom an Award is made.

Supplier - A manufacturer, fabricator, Supplier, distributor, material man or vendor.

Surety – A pledge or guarantee by an insurance company, bank, individual or corporation on behalf of the Bidder which protects against default or failure of the principal to satisfy the contractual obligations.

Underground Facilities - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments and any encasement containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

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

Work - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

Work Directive Change - A written directive to Contractor, issued on or after the Effective Date of the Contract and signed by County and recommended by Project Representative ordering an addition, deletion or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed or to emergencies. A Work Directive Change itself may not change the Contract Price or Contract Time; but is evidence that the parties expect that the change directed or documented by a Work Directive Change will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Time.

Written Amendment - A Written Amendment of the Contract Documents, signed by County and Contractor on or after the Effective Date of the Contract and normally dealing with the non-engineering or non-technical rather than strictly Work related aspects of the Contract Documents.

ARTICLE 2. PRELIMINARY MATTERS

Computation of Time: When 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 legal holiday, such day will be omitted from the computation.

2.1 The Contractor must submit a proposed schedule of the Work at the Preconstruction Conference. The purpose of this schedule is to enable the County to govern the Work, to protect the functions of the local government and its citizens and to aid in providing appropriate surveillance. The County shall have the right to reschedule Work provided such rescheduling is in accordance with the remainder of the terms of the Contract. The schedule shall show, as a minimum, the approximate dates on which each segment of the Work is expected to be started and finished, the proposed traffic flows during each month, the anticipated earnings by the Contractor for each month and the approximate number of crews and equipment to be used. The County, after necessary rescheduling and obtaining additional information for specific

purposes, shall review and approve the schedule. The Contractor shall also forward to the County, as soon as practicable after the first day of each month, a summary report of the progress of the various parts of the Work under the Contract, in fabrication and in the field, stating the existing status, estimated time of completion and cause of delay, if any. Together with the summary report, the Contractor shall submit any necessary revisions to the original schedule for the County's review and approval. In addition, more detailed schedules may be required by the County for daily traffic control.

2.2 A Notice to Proceed may be given at any time within thirty (30) days after the Effective Date of the Contract. The Contract Time will commence at the time specified in such notice. Contractor shall start to perform the Work on the date specified in the Notice to Proceed, but no Work shall be done at the site prior to the date on which the Contract Time commences to run.

2.3 If at any time the materials and appliances to be used appear to the County as insufficient or improper for securing the quality of Work required or the required rate of progress, the County may order the Contractor to increase his efficiency or to improve the character of his Work and the Contractor shall conform to such an order. The failure of the County to demand any increase of such efficiency of any improvement shall not release the County from its obligation to secure the quality of Work or the rate of progress necessary to complete the Work within the limits imposed by the Contract. The County may require the Contractor to remove from the Work such employees as the County deems incompetent, careless, insubordinate or otherwise objectionable, or whose continued employment on the Work is deemed to be contrary to the County's interest.

2.4 The County reserves the right to let other Contracts in connection with this Work. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and execution of their Work, and promptly connect and coordinate the Work with theirs.

ARTICLE 3. CONTRACT DOCUMENTS: INTENT, AMENDING, RE-USE

3.1 The Contract Documents comprise the entire Contract between County and Contractor concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the laws and ordinances of the State of Florida and Manatee County.

Should a conflict exist within the Contract Documents, the precedence in order of authority is as follows: 1) Special Conditions, 2) General Conditions, and 3) Drawings.

Note: Computed dimensions shall govern over scaled dimensions.

3.2 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 work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for in the Contract Documents. When words which have a well-known technical or trade meaning are used to describe Work, materials, or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard Specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of County, Contractor or Engineer, or any of their agents or employees from those set forth in the Contract Documents.

3.3 The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:

3.3.1 A Written Amendment

3.3.2 A Change Order

3.3.3 An Administrative Contract Adjustment (ACA)

3.3.4 A Work Directive Change

3.4 In addition, the requirements of the Contract Documents may be supplemented and minor variations and deviations in the Work may be authorized in one or more of the following ways:

3.4.1 Contract Contingency Work – Field Directive

3.4.2 Engineer's approval of a Shop Drawing or sample

ARTICLE 4. CONTRACTOR'S RESPONSIBILITIES

4.1 Contractor shall keep on the Work at all times during its progress a competent resident superintendent; who shall be the Contractor's representative at the site and shall have authority to act on behalf of Contractor. All communications given to the superintendent shall be as binding as if given to Contractor.

4.2 Contractor shall provide competent, suitable 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. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours and Contractor will not permit overtime Work or the performance of Work on Saturday, Sunday or legal holiday without County's written consent given after prior notice to Engineer (at least seventy-two (72) hours in advance).

4.2.1 Contractor shall pay for all additional engineering charges to the County for any overtime Work which may be authorized. Such additional engineering charges shall be a subsidiary obligation of Contractor and no extra payment shall be made by County on account of such overtime Work. At County's option, overtime costs may be deducted from Contractor's monthly payment request or Contractor's Retainage prior to release of final payment.

4.3 Unless otherwise specified, Contractor shall furnish and assume full responsibility for all bonds, insurance, 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 furnishing, performance, testing, start-up and completion of the Work.

4.4 All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instruction of the applicable Supplier except as otherwise provided in the Contract Documents.

4.5 Contractor shall be fully responsible to County for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect Contract with Contractor just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between County or Engineer and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of County to pay or to see to the payment of any monies due any such Subcontractor, Supplier or other person or organization.

4.6 Permits: Unless otherwise provided, Contractor shall obtain and pay for all construction permits and licenses. County 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.

4.7 During the progress of the Work, Contractor shall keep the premises free from accumulation of waste materials rubbish and other debris resulting from the Work. At the completion of the Work, Contractor shall remove all waste materials, rubbish, and debris from and about the premises as well as all tools, appliances, construction equipment and machinery and surplus materials and shall leave the site clean and ready for occupancy by County. Contractor shall restore to original conditions all property not designated for alteration by the Contract Documents.

4.8 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.

4.9 Safety and Protection: Contractor shall comply with the Florida Department of Commerce Safety Regulations and any local safety regulations. Contractor shall be 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:

4.9.1 all employees on the Work and other persons and organizations who may be affected thereby;

4.9.2 all the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and

4.9.3 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.

4.9.4 Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall provide and maintain all passageways, guard fences, lights and other facilities for the protection required by public authority or local conditions. Contractor shall provide reasonable maintenance of traffic way for the public and preservation of the County's business, taking into full consideration all local conditions. Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed.

4.10 Emergencies: In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, Contractor, without special instruction or authorization from Engineer or County, is obligated to act to prevent threatened damage, injury or loss. Contractor shall give County prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If County determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a Work Directive Change or Change Order will be issued to document the consequences of the changes or variation.

4.11 For substitutes not included with the Bid, but submitted after the Effective Date of the Contract, Contractor shall make written application to Engineer for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will also contain an itemized estimate of all costs and delays or schedule impacts that will result directly or indirectly from review, acceptance and provisions of such substitute, including costs of redesign and claims of other Contractors affected by the resulting change, all of which will be considered by the Engineer in evaluating the proposed substitute. Engineer may require Contractor to furnish at Contractor's expense, additional data about the proposed substitute. In rendering a decision, County/Engineer and Contractor shall have access to any available Float or Slack Time in the construction schedule. In the event that substitute materials or equipment not included as part of the Bid, but proposed after the Effective Date of the Contract, are accepted and are less costly than the originally specified materials or equipment, then the net difference in cost shall be credited to the County and an appropriate Change Order executed.

4.11.1 If a specific means, method, sequence, technique or procedure of construction is indicated in or required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to Engineer if Contractor submits sufficient information to allow Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents.

4.11.2 Engineer will be allowed a reasonable time within which to evaluate each proposed substitute. Engineer will be the sole judge of acceptability and no substitute will be ordered, installed or utilized without Engineer's prior written acceptance which will be evidenced by either a Change Order or an approved shop drawing. County may require Contractor to furnish at Contractor's expense a special performance guarantee or other Surety with respect to any substitute.

4.11.3 Contractor shall reimburse County for the charges of Engineer and Engineer's consultants for evaluating each proposed substitute submitted after the Effective Date of the Contract and all costs resulting from any delays in the Work while the substitute was undergoing review.

4.12 The Contractor shall furnish, free of charge, all labor, stakes, surveys, batter boards for structures, grade lines and other materials and supplies and shall set construction stakes and batter boards for establishing lines, position of structures, slopes and other controlling points necessary for the proper prosecution of the construction Work. Where rights-of-way, easements, property lines or any other conditions which make the lay-out of the project or parts of the project critical are involved, the Contractor will employ a competent surveyor who is registered in the State of Florida for lay-out and staking. These stakes and marks shall constitute the field control by and in accord with which the Contractor shall govern and execute the Work. The Contractor will be held responsible for the preservation of all stakes, marks and if for any reason any of the stakes or marks or batter boards become destroyed or disturbed, they will be immediately and accurately replaced by the Contractor.

4.13 The Contractor has, by careful examination, satisfied himself as to the nature and location of the Work and all other matters which can in any way affect the Work under this Contract, including, but not limited to details pertaining to boring, as shown on the drawings, are not guaranteed to be more than a general indication of the materials likely to be found adjacent to holes bored at the site of the Work, approximately at the locations indicated. The Contractor shall examine boring data, where available, and make his own interpretation of the subsoil investigations and other preliminary data, and shall base his Bid on his own opinion of the conditions likely to be encountered. In no event shall an extension of time be considered for any conditions that existed at the time of bidding, nor shall the Contractor receive extra compensation for completion of the project as intended by the drawings and in keeping with the Contact documents. No verbal agreement or conversation with any officer, agent or employee of the County, before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.

4.14 If the Contractor, in the course of the Work, finds that the drawings and/or Contract Documents cannot be followed, he shall immediately inform the County in writing, and the County shall promptly check the accuracy of the information. Any Work done after such discovery, until any necessary changes are authorized, will be done at the Contractor's risk.

ARTICLE 5. COUNTY'S RESPONSIBILITIES

5.1 County shall furnish the data required of County under the Contract Documents promptly and shall make payments to the Contractor within a reasonable time after the Work has been accepted by the County. Payment shall be made no more than twenty (20) business days if County is its own Engineer of Record or twenty-five (25) business days if outside agent approval is required after the pay estimate has been approved by the agent for the County. The form of all submittals, notices, Change Orders and other documents permitted or required to be used or transmitted under the Contract Documents shall be determined by the County/Engineer. Standard County forms shall be utilized.

5.2 The County shall provide the lands upon which the Work under this Contract is to be done, except that the Contractor shall provide all necessary additional land required for the erection of temporary construction facilities and storage of his materials, together with right of access to same.

5.3 The County shall have the right to take possession of and use any completed portions of the Work, although the time for completing the entire Work or such portions may not have expired, but such taking possession and use shall not be deemed an acceptance of any Work not completed in accordance with the Contract Documents.

ARTICLE 6. CHANGES IN THE WORK

6.1 Without invalidating the Contract and without notice to any Surety, County may, at any time, order additions, deletions or revisions in the Work. These will be authorized by a Written Amendment, a Change Order, or a Work Directive Change. 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).

6.2 Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented.

6.3 County and Contractor shall execute appropriate Change Orders, or Written Amendments, covering changes in the Work which are ordered by County, or which may be required because of acceptance of defective Work.

6.4 At any time Engineer may request a quotation from Contractor for a proposed change in the Work and within twenty-one (21) calendar days after receipt, Contractor shall submit a written and detailed proposal for an increase or decrease in the Contract Price or Contract Time for the proposed change. Engineer shall have twenty-one (21) calendar days after receipt of the detailed proposal to respond in writing. The proposal shall include an itemized estimate of all costs and time for performance that will result directly or indirectly from the proposed change. Unless otherwise directed, itemized estimates shall be in

sufficient detail to reasonably permit an analysis by Engineer of all material, labor, equipment, subcontracts, overhead costs and fees, and shall cover all Work involved in the change, whether such Work was deleted, added, changed or impacted. Notwithstanding the Request for Quotation, Contractor shall carry on the Work and maintain the progress schedule. Delays in the submittal of the written and detailed proposal will be considered non-prejudicial.

ARTICLE 7. CHANGE OF CONTRACT PRICE

7.1 The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at his expense without change in the Contract Price.

7.2 The Contract Price may only be changed by Change Order or by a Written Amendment. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by the party making the claim to the other party. Notice of the amount of the claim with supporting data shall be delivered within ten (10) days from the beginning of such occurrence and shall be accompanied by claimant's written statement that the amount claimed covers all known amounts (direct, indirect and consequential) to which the claimant is entitled as a result of the occurrence of said event.

7.3 The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways, at the County's discretion:

7.3.1 Where the Work involved is covered by unit prices contained in the Contract Documents, cost will be determined by application of such unit prices to the quantities of the items involved.

7.3.2 By mutual acceptance of lump sum.

7.3.3 On the basis of the cost of the Work, plus a 15% Contractor's fee for overhead and profit. (Contractor shall submit an itemized cost breakdown together with supporting data.)

7.4 Either County or Contractor may make a claim for an adjustment in the Contract Price. The unit price of an item of Unit Price Work shall be subject to re-evaluation and adjustment under the following conditions:

7.4.1 If the total cost of a particular item of Unit Price Work amounts to 5% or more of the Contract Price and the variation in the quantity of the particular item of Unit Price Work performed by Contractor differs by more than 15% from the estimated quantity of such item indicated in the Contract; and

7.4.2 If there is no corresponding adjustment with respect to any other item of Work; and

7.4.3 If a Contractor believes that it has incurred additional expense as a result thereof; or

7.4.4 If County believes that the quantity variation entitles it to an adjustment in the unit price; or

7.4.5 If the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.

ARTICLE 8. CHANGE OF CONTRACT TIME

8.1 Contract Time may only be changed by a Change Order or a Written Amendment. Any claim for an extension or shortening of the Contract Time shall be based on written notice delivered by the party making the claim to the other party. Notice of the extent of the claim with supporting data shall be delivered within fifteen (15) days from detection or beginning of such occurrence and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event.

8.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of Contractor. Such delays shall include, but not be limited to, acts or neglect by County or others performing additional Work; or to fires, floods, epidemics, abnormal weather conditions or acts of God.

8.3 All time limits stated in the Contract Documents are of the essence.

ARTICLE 9. WARRANTY, TEST/INSPECTION, CORRECTION

9.1 Contractor warrants, for a minimum period of three (3) years or as otherwise stated herein, and guarantees to County that all Work will be in accordance with the Contract Documents and will not be defective; that County, representatives of County, and governmental agencies with jurisdictional interests will have access to the Work at reasonable time for their observation, inspecting and testing (Contractor shall give Engineer timely notice of readiness of the Work for all required approvals and shall assume full responsibility, including costs, in obtaining required tests, inspections, and approval certifications and/or acceptance, unless otherwise stated by County).

9.2 If any Work (including work of others) that is to be inspected, tested, or approved is covered without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation. Such uncovering 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. Neither observations by

Engineer nor inspections, tests, or approvals by others shall relieve Contractor from Contractor's obligations to perform the Work in accordance with the Contract Documents.

9.3 If the Work is defective, or Contractor fails to supply sufficient skilled workers, or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, County may order Contractor to stop the Work, or any portion thereof and terminate payments to the Contractor until the cause for such order has been eliminated. Contractor shall bear all direct, indirect and consequential costs for satisfactory reconstruction or removal and replacement with non-defective Work, including, but not limited to fees and charges of engineers, architects, attorneys and other professionals and any additional expenses experienced by County due to delays to other Contractors performing additional Work and an appropriate deductive Change Order shall be issued. Contractor shall further bear the responsibility for maintaining schedule and shall not be entitled to an extension of the Contract Time and the recovery of delay damages due to correcting or removing defective Work.

9.3.1 If Contractor fails within seven (7) days after written notice to correct defective Work, or fails to perform the Work in accordance with the Contract Documents, or fails to comply with any other provision of the Contract Documents, County may correct and remedy any such deficiency to the extent necessary to complete corrective and remedial action. County may exclude Contractor from all or part of the site, take possession of all or part of the Work, Contractor's tools, construction equipment and machinery at the site or for which County has paid Contractor but which are stored elsewhere. All direct and indirect costs of County in exercising such rights and remedies will be charged against Contractor in an amount approved as to reasonableness by Engineer and a Change Order will be issued incorporating the necessary revisions.

9.3.2 If within three (3) years after the date of completion or such longer period of time as may be prescribed by laws or regulations or by the terms of any applicable special guarantee required by the Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to County and in accordance with County's written instructions, either correct such defective Work or if it has been rejected by County, remove it from the site and replace it with non-defective Work. If Contractor does not promptly comply with the terms of such instruction, County may have the defective Work corrected or removed and all direct, indirect and consequential costs of such removal and replacement will be paid by Contractor.

ARTICLE 10. SUSPENSION OR TERMINATION OF WORK

10.1 County reserves the right to suspend the Work, or any portion thereof, at any time without cause for a period not to exceed ninety (90) days by written notice to Contractor, which will fix the date on which Work will be resumed. Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if Contractor makes an approved claim therefore.

10.1.1 If Work is suspended by County for a period that exceeds ninety (90) days; or if Work is suspended by an order of court or other public authority; or if County fails to pay Contractor, then Contractor may, upon seven (7) days written notice to County, terminate the Contract and recover payment for all Work executed.

10.1.2 In lieu of terminating the Contract, if the Engineer has failed to act on any Application for Payment or County has failed to make any payment as aforesaid, Contractor may, upon seven (7) days written notice to County, stop the Work until payment of all amounts then due have been received.

10.2 County reserves the right, after giving seven (7) days written notice, to terminate this Contract if:

10.2.1 Contractor persistently fails to perform the Work in accordance with the Contract Documents;

10.2.2 Contractor disregards laws or regulations of any public body having jurisdiction;

10.2.3 Contractor commences a voluntary case under any chapter of the Bankruptcy Code or any similar action by filing a petition under any other federal or state law relating to bankruptcy or insolvency;

10.2.4 Contractor has a petition filed against them under any chapter of the Bankruptcy Code or similar relief under any other federal or state law;

10.3 County may exclude Contractor from the site and take possession of the Work and of all Contractor's tools, construction equipment and machinery at the site and use same to the full extent they could be used (without liability to Contractor for trespass or conversion); incorporate in the Work all materials and equipment stored at the site or for which County has paid Contractor but which are stored elsewhere, and finish the Work as County may deem expedient.

10.3.1 Contractor shall not be entitled to receive any further payment beyond an amount equal to the value of material and equipment not incorporated in the Work, but delivered and suitably stored, less the aggregate of payments previously made.

10.3.2 If the direct, indirect and consequential costs of completing the Work exceed the unpaid balance of the Contract Price, Contractor shall pay the difference to County. Such costs incurred by County shall be verified by County and incorporated in a Change Order; but in finishing the Work, County shall not be required to obtain the lowest figure for the Work performed. Contractor's obligations to pay the difference between such costs and such unpaid balance shall survive termination of this Contract.

10.4 In the event sufficient budgeted funds are not available for a new fiscal year, County shall notify Contractor of such occurrence and Contract shall terminate on the last day of the current fiscal year without penalty or expense to County.

10.5 Failure of Contractor to comply with any of the provisions of this Contract shall be considered a Material Breach of Contract and shall be cause for immediate termination of Contract at the discretion of County.

10.6 In addition to all other legal remedies available to County, County reserves the right to terminate and obtain from another source, any commodities or services which have not been delivered within the Contract Time as stated in the Contract Documents.

ARTICLE 11. CONTRACT CLAIMS & DISPUTES

11.1 Except as otherwise provided herein, any dispute arising under this Contract shall be decided by the Purchasing Official in accordance with Section 2-26-63 of the Manatee County Code subject to an administrative hearing process provided in 2-26-64. The decision of the Board of County Commissioners in accordance with Section 2-26-64 of the Manatee County Code shall be the final and conclusive County decision subject to exclusive judicial review in the circuit court by a petition for certiorari.

ARTICLE 12. RESIDENT PROJECT REPRESENTATIVE - DUTIES, RESPONSIBILITIES

12.1 The Resident Project Representative is the Engineer's Agent, who will act as directed by and under the supervision of the Engineer, and who will confer with County regarding his actions. Resident Project Representative's dealing in matters pertaining to the on-site Work shall, in general, be only with the County and Contractor and dealings with Subcontractors shall only be through or with the full knowledge of Contractor.

12.2 Resident Project Representative will:

12.2.1 Review the progress schedule, schedule of shop drawing submissions and Schedule of Values prepared by Contractor and consult with County concerning their acceptability.

12.2.2 Attend Preconstruction Conferences. Arrange a schedule of progress meetings and other job conferences as required in consultation with County and notify those expected to attend in advance. Attend meetings and maintain and circulate copies of minutes thereof.

12.2.3 Serve as County's liaison with Contractor, working principally through Contractor's superintendent and assist him in understanding the intent of the Contract Documents. As requested by Contractor, assist in obtaining additional details or information when required at the job site for proper execution of the Work.

12.2.4 Receive and record date of receipt of Shop Drawings and samples, receive samples which are furnished at the site by Contractor and notify Engineer of their availability for examination.

12.2.5 Advise Engineer and Contractor or his superintendent immediately of the commencement of any Work requiring a shop drawing or sample submission if the submission has not been approved by the County.

12.2.6 Conduct on-site observations of the Work in progress to assist Engineer in determining if the Work is proceeding in accordance with the Contract Documents and that completed Work will conform to the Contract Documents.

12.2.7 Report to County whenever he or she believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or does not meet the requirements of any inspections, tests or approvals required or if Work has been damaged prior to final payment; and advise Contractor when he believes Work should be corrected or rejected or should be uncovered of observation or requires special testing, inspection or approval.

12.2.8 Verify that tests, equipment and system start-ups and operating and maintenance instructions are conducted as required by the Contract Documents and in the presence of the required personnel, and that Contractor maintains adequate records thereof; observe, record and report to Engineer appropriate details relative to the test procedures and start-ups.

12.2.9 Accompany visiting inspectors representing public or other agencies having jurisdiction over the project; record the outcome of these inspections and report to County.

12.2.10 Transmit to Contractor, Engineer's clarifications and interpretations of the Contract Documents.

12.2.11 Consider and evaluate Contractor's suggestions or modifications in drawings or Contract Documents and report them with recommendations to County.

12.2.12 Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and sample submissions, reproductions of original Contract Documents including all Addenda, Change Orders, field orders, additional drawings issued subsequent to the execution of the Contract, Engineer's clarifications and interpretations of the Contract Documents, progress reports and other project related documents.

12.2.13 Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extras or deductions; list of visiting officials and representatives or manufacturers, fabricators, Suppliers and distributors; daily activities, decisions, observations in general and specific observations in more detail as in the case of observing test procedures. Send copies to County.

12.2.14 Record names, addresses and telephone numbers of all Contractors, Subcontractors and major Suppliers of materials and equipment.

12.2.15 Furnish Engineer periodic reports as required of progress of the Work and Contractor's compliance with the approved progress schedule and schedule of shop drawing submissions.

12.2.16 Consult with Engineer in advance of scheduling major tests, inspections or start of important phases of the Work.

12.2.17 Report immediately the occurrence of any accident.

12.2.18 Review applications for payment with Contractor for compliance with the established procedure for their submission and forward them with recommendations to Engineer, noting particularly their relation to the Schedule of Values, Work completed and materials and equipment delivered at the site but not incorporated in the Work.

12.2.19 During the course of the Work, verify that certificates, maintenance and operations manuals and other data required to be assembled and furnished by Contractor are applicable to the items actually installed, and deliver this material to County for his review prior to final acceptance of the Work.

12.2.20 Before Engineer issues a certificate of Substantial Completion, submit to Contractor a list of observed items requiring completion or correction.

12.2.21 Conduct final inspection in the company of County and/or Engineer and Contractor and prepare a Punch List of items to be completed or corrected. Reference Florida Statutes § 218.735(7).

12.2.22 Verify that all items on final list have been completed or corrected and make recommendations to County concerning acceptance.

12.3 Except upon written instructions of Engineer, Resident Project Representative:

12.3.1 Shall not authorize any deviation from the Contract Documents or approve any substitute materials or equipment;

12.3.2 Shall not exceed limitations on Engineer's authority as set forth in the Contract Documents;

12.3.3 Shall not undertake any of the responsibilities of Contractor, Subcontractors or Contractor's superintendent, or expedite the Work;

12.3.4 Shall not advise on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents;

12.3.5 Shall not advise on or issue directions as to safety precautions and programs in connection with the Work;

12.3.6 Shall not authorize County to occupy the project in whole or in part; and

12.3.7 Shall not participate in specialized field or laboratory tests.

ARTICLE 13. APPRENTICES

13.1 If successful Contractor employs apprentices, he shall be governed and comply with the provisions of Fla.Stat. § 446.011.

NOTE: The form of all submittals, notices, Change Orders and other documents permitted or required to be used or transmitted under the Contract shall be determined by the County. Standard County forms shall be utilized.

END OF SECTION E

SECTION F
FORM OF CONTRACT
BETWEEN THE
COUNTY OF MANATEE, FLORIDA
AND CONTRACTOR AS IDENTIFIED BELOW
ON THE BASIS OF A STIPULATED UNIT COST CONTRACT PRICE

This CONTRACT is made and entered into by and between the COUNTY OF MANATEE, a political subdivision of the State of Florida, hereinafter referred to as "COUNTY" and **insert Contractor name**, hereinafter referred to as "CONTRACTOR," duly authorized to transact business in the State of Florida, with offices located at **insert Contractor address**.

ARTICLE 1. WORK

CONTRACTOR shall furnish all labor, materials, supplies, and other items required to complete the Work for **IFB#14-2404-OV, 44th Avenue East (From 30th Street East to 45th Street East) Project No.: 6071160** in strict accordance with Contract Documents and any duly authorized subsequent Addenda thereto, all of which are made a part hereof.

ARTICLE 2. COMPENSATION

As compensation to CONTRACTOR, COUNTY shall pay and CONTRACTOR will accept as full consideration for the performance of all Work required by **IFB#14-2404-OV, 44th Avenue East (From 30th Street East to 45th Street East) 6071160**, subject to additions and deductions as provided therein, the sum of **$insert** for Bid "**insert A or B**" based on a completion time of **insert days** calendar days.

ARTICLE 3. LIQUIDATED DAMAGES

Time is of the essence in this CONTRACT. As of the date of this CONTRACT, the damages that will be suffered by COUNTY in the event of CONTRACTOR'S failure to timely complete the Work are impossible to determine. In lieu thereof, it is agreed that if CONTRACTOR fails to achieve Final Completion of the Work within insert days calendar days of issuance of the Notice to Proceed (accounting, however, for any extensions of time granted pursuant to approved Change Orders), CONTRACTOR shall

pay to COUNTY, as liquidated damages (and not as a penalty), the sum of $insert dollar amount per calendar day for each day beyond insert days days until CONTRACTOR achieves Final Completion. COUNTY shall have the option of withholding said liquidated damages from any pay application(s) thereafter submitted by CONTRACTOR. Alternatively, CONTRACTOR shall immediately pay said sums to COUNTY upon COUNTY'S demand for same.

ARTICLE 4. ENGINEER

The COUNTY of MANATEE, Public Works Department, is responsible as COUNTY and HDR as "ENGINEER" designed this Project and is responsible for technical/engineering reviews and decisions. The ENGINEER is a member of COUNTY'S Project Management team which is collectively responsible for ensuring the Work is completed in accordance with the Contract Documents.

All communications involving this Project will be addressed to: Mr. Kent Bontrager, Project Manager and to the Engineer of Record, Mr. Donald R. Holcomb, P.E., Vice President, Project Manager, HDR. All invoicing will be addressed to the attention of: Mr. Kent Bontrager, Project Manager with copies to Mr. Donald R. Holcomb, P.E., Vice President, Project Manager, HDR.

Manatee County Public Works Dept.
IFB#14-2404-OV
Mr.Kent Bontrager, Project Manager
1022 26th Avenue East
Phone: (941) 708-7450, Ext. 7331

HDR
Mr. Donald R. Holcomb, P.E.
Vice President, Project Manager
2601 Cattlemen Rd., Ste. 400
Phone: 941-342-2705

Where the terms ENGINEER and/or COUNTY are used in the Contract Documents, it shall mean COUNTY'S Project Management team.

ARTICLE 5. CONTRACTOR'S REPRESENTATIONS

In order to induce COUNTY to enter into this CONTRACT, CONTRACTOR makes the following representations:

5.1 CONTRACTOR has familiarized itself with the nature and extent of the Bid Documents, Work, site, locality and all local conditions and laws and regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

5.2 CONTRACTOR has studied carefully all drawings of the physical conditions upon which CONTRACTOR is entitled to rely.

5.3 CONTRACTOR has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies which pertain to the physical conditions at or contiguous to the site or which otherwise may affect the cost, progress, performance or furnishing of the Work as CONTRACTOR considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Bid Documents; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by CONTRACTOR for such purposes.

5.4 CONTRACTOR has reviewed and checked all information and data shown or indicated on the Bid Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. Any additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities conducted by CONTRACTOR will be done at CONTRACTOR'S expense.

5.5 CONTRACTOR has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Bid.

5.6 CONTRACTOR has given COUNTY written notice of all conflicts, errors or discrepancies that have been discovered in the Bid Documents and the written resolution thereof by COUNTY is acceptable to CONTRACTOR.

5.7 CONTRACTOR shall schedule and perform the Work subject to COUNTY'S approval and shall hold COUNTY harmless from all liabilities incurred due to CONTRACTOR'S failure to coordinate with COUNTY.

ARTICLE 6. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire CONTRACT between COUNTY and CONTRACTOR concerning the Work consist of the following:

6.1 This CONTRACT and Bid Document **IFB#14-2404-OV**

6.2 Invitation for Bid #IFB#14-2404-OV, in its entirety

6.3 Public Construction Bond Form and Insurance Certificate(s)

6.4 Drawings/Plans (not attached)

6.5 Addendum number insert Addendum # to insert Addendum # inclusive

6.6 CONTRACTOR'S Bid Form

6.7 Reports

6.8 The following, which may be delivered or issued after the Effective Date of the CONTRACT and are not attached hereto: all written Change Orders and other documents amending, modifying, or supplementing the Contract Documents.

6.9 The documents listed in paragraphs above are attached to this CONTRACT (except as noted otherwise above). There are no Contract Documents other than those listed above in this Article 6.

ARTICLE 7. DISPUTE RESOLUTION

Disputes shall be resolved as follows: good faith negotiations by the designated agents of the parties and if not resolved by such designated agents, CONTRACTOR shall submit its claim, with the basis for the dispute, in writing to the Manatee County Purchasing Official for a determination and handling in accordance with the provisions of Chapter 2-26 of the Manatee County Code.

ARTICLE 8. NO WAIVER

8.1 The failure of CONTRACTOR or COUNTY to insist on the strict performance of the terms and conditions hereof shall not constitute or be construed as a waiver or relinquishment of either party's right to thereafter enforce the same in accordance with this CONTRACT in the event of a continuing or subsequent default on the part of CONTRACTOR or COUNTY.

8.2 Nothing herein shall be interpreted as a waiver of COUNTY of its rights, including the limitations of the limited waiver of sovereign immunity, as set forth in Florida Statute 768.28, or any other statute, and COUNTY expressly reserves these rights to the full extent allowed by law.

ARTICLE 9. NO THIRD-PARTY BENEFICIARIES

This CONTRACT is solely for the benefit of the parties hereto, and no right, privilege, or cause of action shall by reason hereof accrue upon, to, or for the benefit of any third party. Nothing in this CONTRACT is intended or shall be construed to confer upon or give any person, corporation, partnership, trust, private entity, agency, or any other governmental entity any right, privilege, remedy, or claim under or by reason of this CONTRACT or any provisions or conditions hereof.

ARTICLE 10. GOVERNING LAW, JURISDICTION AND VENUE

10.1 This CONTRACT and the construction and enforceability thereof shall be interpreted under the laws of the State of Florida.

10.2 CONTRACTOR consents and agrees that all legal proceedings related to the subject matter of this CONTRACT shall be governed by the laws of the State of Florida.

10.3 CONTRACTOR consents and agrees that jurisdiction for such proceedings shall lie exclusively with such court, and venue shall be in the Circuit Court of the Twelfth Judicial Circuit in and for Manatee County, Florida.

10.4 In the event of any litigation arising under the terms of this CONTRACT, each party shall be responsible for their own attorney's fees, including appellate fees, regardless of the outcome of the litigation.

ARTICLE 11. FORCE MAJEURE

Neither party shall be considered in default of performance of such obligations hereunder to the extent that performance of such obligations or any of them is delayed or prevented by Force Majeure. Force Majeure shall include, but not be limited to hostility, revolution, civil commotion, strike, epidemic, fire, flood, wind, earthquake, hurricane, or other disruptive event of nature, act of terrorism, explosion, lack of or failure of transportation or bridge/roadway facilities, any law, proclamation, regulation, ordinance or other act of government, or any act of God or any cause whether of the same or different nature, existing or future; provided that the cause, whether or not enumerated in this Article, is beyond the control and without the fault or negligence of the party seeking relief under this Article.

ARTICLE 12. MISCELLANEOUS

12.1 Terms used in this CONTRACT are defined in Article 1 of Section E, General Conditions.

12.2 No assignment by a party hereto of any rights under or interest in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law); and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignee from any duty or responsibility under the Contract Documents.

12.3 COUNTY and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract Documents.

12.4 By accepting Award of this CONTRACT, CONTRACTOR, which shall include its directors, officers and employees, represents that it presently has no interest in and shall acquire no interest in any business or activity which would conflict in any manner with the performance of duties or services required hereunder.

CONTRACT

IFB #14-2404-OV

IN WITNESS WHEREOF, the parties hereto have caused this CONTRACT **IFB#14-2404-OV** to be duly executed by their authorized representatives.

CONTRACTOR

By: _____

_____
Print Name & Title of Signer

Date: _____

COUNTY OF MANATEE, FLORIDA

By: _____
Melissa M. Wendel, CPPO
Purchasing Official

Date: _____

MANATEE COUNTY GOVERNMENT
PUBLIC CONSTRUCTION BOND

Bond No. _____
(Enter bond number)

BY THIS BOND, We_____, located at _____, as
(Name of Contractor) (Address)

Principal and _____, a corporation, whose address is
(Name of Surety)

_____

are bound to Manatee County, a political subdivision of the State of Florida, herein called County, in the sum of $ _____, for payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally.

WHEREAS, the Contractor has entered into Contract No. _____ with the County for the project titled _____, with conditions and provisions as are further described in the aforementioned Contract, which Contract is by reference made a part hereof for the purposes of explaining this bond.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs Contract No. _____, between Principal and County for construction of

_____, the Contract being made a part of this bond by reference, at
(Title of Project)

the times and in the manner prescribed in the Contract; and

2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the Work provided for in the Contract; and

3. Pays County all losses, damages, expenses, costs, and attorney's fees, including appellate proceedings, that County sustains because of a default by Principal under the Contract; and

4. Performs the guarantee of all Work and materials furnished under the Contract for the time specified in the Contract, then this bond is void; otherwise it remains in full force.

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes.

Any changes in or under the Contract documents and compliance or noncompliance with any formalities connected with the Contract or the changes does not affect Surety's obligation under this bond.

DATED ON _____.

CONTRACTOR AS PRINCIPAL	**SURETY**
_____	_____
Company Name	Company Name
_____	_____
Signature	Signature
_____	_____
Print Name & Title	Print Name & Title
(Corporate Seal)	*(Corporate Seal)*

AGENT or BROKER

_____
Company Name

_____
Address

_____

_____
Telephone

Licensed Florida Insurance Agent? ☐ **Yes** ☐ **No**

License #: _____

State of: _____

County of: _____

City of: _____

BID FORM

(Submit in triplicate)

For: IFB#14-2404-OV, 44th Avenue East, (From 30th Street East to 45th Street East)
Project No.: 6071160

Total Offer (Bid "A"): _____
Based on a completion time of 540 calendar days
Total Offer (Bid "B"): _____
Based on a completion time of 720 calendar days

Two schedules for completion of the Work shall be considered. Each Bid for completion by the specified stated time shall be offered as a separate "total offer". County has the sole authority to select the Bid based on the completion time which is in the best interest of County. Only one Award shall be made.

We, the undersigned, hereby declare that we have carefully reviewed the Bid Documents and with full knowledge and understanding of the aforementioned herewith submit this Bid, meeting each and every specification, term, and condition contained in the Invitation for Bid package, in its entirety.

We understand that the Invitation for Bid package, in its entirety, including but not limited to, all Specifications, terms, and conditions shall be made a part of any resulting Contract between Manatee County and the Successful Bidder. Failure to comply shall result in Contract default, whereupon, the defaulting Contractor shall be required to pay for any and all re-procurement costs, damages, and attorney fees as incurred by County, and agrees to forfeit his/her Bid Bond.

Communications concerning this Bid shall be addressed as follows: **(Complete all fields)**

Bidder's Name: _____

Mailing Address: _____

Telephone: ( ) _____ Fax: ( ) _____

Email Address: _____

I, _____ attest that I have read, understand, and agree to the Local Preference policy of Manatee County.

I, _____ on [date(s)] _____ attest that I have visited the Project site(s) to familiarize myself with the full Scope of Work required for the Bid.

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

Authorized Signature(s): _____

Name and Title of Above Signer(s): _____

Date: _____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "A" Based on a completion time of 540 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
	ROADWAY:				
101-1	Mobilization	LS	1		
102-1	Maintenance of Traffic	LS	1		
104-10-3	Sediment Barrier	LF	40,190		
104-11	Floating Turbidity Barrier	LF	1,555		
104-12	Staked Turbidity Barrier - Nylon Reinforced PVC	LF	992		
104-15	Soil Tracking Prevention Device	EA	5		
104-18	Inlet Protection System	EA	72		
110-1-1	Clearing and Grubbing (31.35 AC)	LS	1		
110-4	Removal of Existing Concrete Pavement	SY	840		
110-6	Plugging Water Wells, Non-Artesian	EA	1		
110-7-1	Mail Box (F & I) Single (NEW)	EA	5		
120-1	Regular Excavation	CY	77,671		
120-4	Subsoil Excavation	CY	8,463		
120-6	Embankment	CY	95,301		
141-70	Settlement Plate Assembly	AS	7		
WMS-1	Wetland Mitigation Site Creation and Enhancement	LS	1		
160-4	Type B Stabilization	SY	59,260		
285-709	Optional Base (Base Group 09)	SY	51,860		
286-1	Turnout Construction	SY	739		

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "A" Based on a completion time of 540 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
327-70-6	Milling Exist. Asph. Pavt. 1 1/2" Avg Depth	SY	3,275		
334-1-23	Superpave Asphaltic Concrete, Traffic C, PG 76-22, PMA	TN	8,560		
337-7-74	Asphalt Friction Course Traffic C, FC-12.5, PG 76-22, ARB	TN	4,550		
339-1	Miscellaneous Asphalt Pavement	TN	118		
400-0-11	Concrete Class NS, Gravity Wall	CY	440		
400-1-2	Concrete Class I, Endwalls	CY	43.2		
400-4-1	Concrete Class IV, Culverts	CY	167		
415-1-1	Reinforcing Steel - Roadway	LB	26,774		
425-1-351	Inlets, Curb, Type P-5 <10'	EA	53		
425-1-361	Inlets, Curb, Type P-6, <10'	EA	10		
425-1-451	Inlets, Curb, Type J-5, <10'	EA	5		
425-1-452	Inlets, Curb, Type J-5, >10'	EA	5		
425-1-461	Inlets, Curb, Type J-6, <10'	EA	2		
425-1-549	Inlets, DT BOT, Type D, Modify	EA	3		
425-2-101	Manholes, P-7 Partial	EA	3		
425-2-43	Manholes, P-8, <10'	EA	7		
425-2-61	Manholes, J-8, <10'	EA	4		
425-2-91	Manholes, Special, <10'	EA	1		
430-94-1	Desilting Pipe, 0-24"	LF	167		
430-175-115	Pipe Culvert, OPT Material, Round, 15" S/CD (RCP)	LF	639		

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "A" Based on a completion time of 540 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
430-175-118	Pipe Culvert, OPT Material, Round, 18" S/CD (RCP)	LF	3,992		
430-175-124	Pipe Culvert, OPT Material, Round, 24" S/CD (RCP)	LF	2,827		
430-175-130	Pipe Culvert, OPT Material, Round, 30" S/CD (RCP)	LF	1,484		
430-175-136	Pipe Culvert, OPT Material, Round, 36" S/CD (RCP)	LF	1,991		
430-175-142	Pipe Culvert, OPT Material, Round, 42" S/CD (RCP)	LF	294		
430-175-148	Pipe Culvert, OPT Material, Round, 48" S/CD (RCP)	LF	742		
430-175-154	Pipe Culvert, OPT Material, Round, 54" S/CD (RCP)	LF	312		
430-175-218	Pipe Culvert, OPT Material, Other-ELIP/ARCH, 18" S/CD (RCP)	LF	32		
430-175-224	Pipe Culvert, OPT Material, Other-ELIP/ARCH, 24" S/CD (RCP)	LF	394		
430-200-29	Flared End Section, Concrete 24"	EA	2		
430-982-123	Mitered End Section, Optional Round, 15" CD	EA	1		
430-982-125	Mitered End Section, Optional Round, 18" CD	EA	11		
430-982-129	Mitered End Section, Optional Round, 24" CD	EA	3		
430-982-138	Mitered End Section, Optional Round, 36" CD	EA	2		
430-982-141	Mitered End Section, Optional Round, 48" CD	EA	2		
430-984-625	Mitered End Section, Optional Elliptical / ARCH, 18" SD	EA	2		
430-984-629	Mitered End Section, Optinal Elliptical / ARCH, 24" SD	EA	6		
440-1-20	Underdrain, TYPE II	LF	1,165		

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "A" Based on a completion time of 540 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
514-72	Liner Impermeable PVC	SY	17,620		
515-1-1	Pipe Handrail - Guiderail, Steel	LF	20		
515-2-111	Pedestrian/Bicycle Railing, Non Specified, 42" Type 1	LF	1,759		
520-1-10	Curb & Gutter Concrete (TYPE E)	LF	11,973		
520-1-7	Curb & Gutter Concrete (TYPE F)	LF	12,659		
522-1	Sidewalk Concrete (4" Thick)	SY	5,130		
522-2	Sidewalk Concrete (6" Thick)	SY	2,610		
530-3-3	RIPRAP- Rubble, Bank and Shore	TN	979		
530-3-4	RIPRAP - Rubble, F & I, Ditch Lining	TN	74		
536-1-1	Guardrail - Roadway	LF	2,156.25		
536-7	Special Guardrail Post	EA	16		
536-85-24	Guardrail End Anchorage Assembly - Parrel	EA	2		
536-85-25	Guardrail End Anchorage Assembly- Type II	EA	2		
550-10-220	Fencing, Type B, 5.1-6.0, Standard	LF	5,345		
550-60-224	Fence Gate, Type B, Double, 18. 1-20.0' Opening	EA	6		
570-1-2	Performance Turf (SOD)	SY	71,845		
580-1-1	Landscape Complete - Small Plants - Mainline Buffer	LS	1		
580-1-2	Landscape Complete - Large Plants - Planting Plan	LS	1		
700-1-11	Single Post Sign (F & I, <12 SF)	AS	16		

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "A" Based on a completion time of 540 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
700-1-12	Single Post Sign (F & I, 12-20 SF)	AS	7		
700-1-60	Single Post Sign (Remove)	AS	11		
705-11-1	Delineator, Flexible Tubular	EA	20		
706-3	Retro-Reflective Pavement Markers	EA	709		
710-11-160	Painted Pavement Markings, STD., White, BIKE LANE	EA	24		
710-11-290	Painted Pavement Markings, STD., Yellow , ISLAND NOSE	SF	155.4		
710-90	Painted Pavement Markings (Final Surface)	LS	1		
711-11-111	Thermoplastic, STD., White, SOLID, 6"	NM	4.105		
711-11-122	Thermoplastic, STD., White, SOLID, 8"	LF	834		
711-11-123	Thermoplastic, STD., White, SOLID, 12"	LF	755		
711-11-124	Thermoplastic, STD., White, SOLID, 18"	LF	338		
711-11-125	Thermoplastic, STD., White SOLID, 24"	LF	273		
711-11-131	Thermoplastic, STD., White SKIP, 6" (10' - 30')	GM	1.177		
711-11-151	Thermoplastic, STD., White, SKIP, 6" (2' - 4')	LF	56		
711-11-160	Thermoplastic, STD., White, MERGE	EA	2		
711-11-170	Thermoplastic, STD., White ARROW (LEFT)	EA	44		
711-11-211	Thermoplastic, STD., Yellow, SOLID, 6"	NM	3.613		

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "A" Based on a completion time of 540 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
711-11-224	Thermoplastic, STD., Yellow, SOLID, 18"	LF	566		
711-11-251	Thermoplastic SATD., Yellow, SKIP, 6", (2' - 4')	LF	128		
715-1-12	Lighting Conductors (F & I) (Insulated) (No. 8 - 6)	LF	60,973		
715-2-11	Lighting Conduit (F & I) (Underground)	LF	8,577		
715-4-123	Light Pole Complete (F & I) (Wind Speed 130) (Pole Height 50')	EA	17		
715-4-129	Light Pole Complete (F & I) (Wind Speed 130) (Custom Height)	EA	34		
715-7-11	Load Center (F & I) Secondary Voltage)	EA	1		
715-14-11	Lighting Pull Box (F & I) (Roadside)	EA	12		
715-500-1	Pole Cable Distribution System	EA	51		
783-4-112	ITS Conduit (F & I) Underground	LF	6,538		
783-5-1	ITS Pull Box for FO (F & I)	EA	13		
783-6-1	ITS Splice Box for FO (F & I)	EA	1		
	SUBTOTAL ROADWAY				$
	CONTRACT CONTINGENCY (USED ONLY WITH COUNTY APPROVAL)	%	7.5		$
TOTAL ROADWAY AWARD - Bid "A" Based on a Completion Time of 540 Calendar days)					$

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "A" Based on a completion time of 540 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
	WATER MAIN COST				
MANATEE COUNTY ITEM	**DESCRIPTION**	**UNIT**	**EST. QTY.**	**BID PRICE PER UNIT ($)**	**TOTAL BID PRICE ($)**
MC-1	6" PVC Water Main Pipe	LF	70		
MC-2	6" 45 Degree Bend	EA	4		
MC-3	6" Plug	EA	1		
MC-4	6" Gate Valve	EA	3		
MC-5	8"PVC Water Main Pipe	LF	5,110		
MC-6	8" DIP Water Main Pipe	LF	140		
MC-7	8" 11 1/4 Degree Bend	EA	1		
MC-8	8" 45 Degree Bend	EA	3		
MC-9	8" 90 Degree Bend	EA	1		
MC-10	8" Tee	EA	4		
MC-11	8" Cross	EA	1		
MC-12	8" x 6" Reducer	EA	2		
MC-13	Fire Hydrant Assembly (Including 6" Gate Valve)	EA	9		
MC-14	Fire Hydrant / Blow-Off Assembly (30" and Greater)	EA	2		
MC-15	8" Gate Valve	EA	19		
MC-16	14" Dia. X 1/4" Wall Thickness Steel Casing (Open Cut)	LF	100		
MC-17	18" Dia. X 1/2" Wall Thickness Steel Casing (J & B)	LF	100		
MC-18	18" Dia. X 1/2" Wall Thickness Steel Casing (Open Cut)	LF	200		

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "A" Based on a completion time of 540 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
MC-19	36" X 30" Tee	EA	1		
MC-20	36" Ductile Iron Water Main Pipe	LF	1,365		
MC-21	36" Ductile Iron Pipe X PCCP Adapter	EA	1		
MC-22	30" Butterfly Valve	EA	1		
MC-23	36" Butterfly Valve	EA	3		
MC-24	36" 45 Degree Bend	EA	2		
MC-25	36" X 6" Tee	EA	1		
MC-26	36" X 8" Tee	EA	1		
MC-27	36" Plug	EA	1		
MC-28	Air Release Assembly	EA	1		
MC-29	Remove Existing 36" Water Main Pipe	LF	1,390		
MC-30	Remove Existing 8" Water Main Pipe	LF	50		
MC-31	Remove Existing 6" Water Main Pipe	LF	175		
MC-32	Remove Existing 6" Valve	EA	1		
MC-33	Temporary Jumper Connection	EA	2		
MC-34	Miscellaneous Concrete (Thrust Blocks)	CY	4		
	SUBTOTAL WATER MAIN				$
	CONTRACT CONTINGENCY (ONLY USED WITH COUNTY APPROVAL	%	10		$
TOTAL WATER MAIN - (Bid "A" Based on a Completion Time of 540 Calendar days)					$
GRAND TOTAL ROADWAY AND WATER MAIN - (Based On Bid "A" Completion time of 540 Calendar Days)					$

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "B" Based on a completion time of 720 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
	ROADWAY:				
101-1	Mobilization	LS	1		
102-1	Maintenance of Traffic	LS	1		
104-10-3	Sediment Barrier	LF	40,190		
104-11	Floating Turbidity Barrier	LF	1,555		
104-12	Staked Turbidity Barrier - Nylon Reinforced PVC	LF	992		
104-15	Soil Tracking Prevention Device	EA	5		
104-18	Inlet Protection System	EA	72		
110-1-1	Clearing and Grubbing (31.35 AC)	LS	1		
110-4	Removal of Existing Concrete Pavement	SY	840		
110-6	Plugging Water Wells, Non-Artesian	EA	1		
110-7-1	Mail Box (F & I) Single (NEW)	EA	5		
120-1	Regular Excavation	CY	77,671		
120-4	Subsoil Excavation	CY	8,463		
120-6	Embankment	CY	95,301		
141-70	Settlement Plate Assembly	AS	7		
WMS-1	Wetland Mitigation Site Creation and Enhancement	LS	1		
160-4	Type B Stabilization	SY	59,260		
285-709	Optional Base (Base Group 09)	SY	51,860		
286-1	Turnout Construction	SY	739		

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "B" Based on a completion time of 720 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
327-70-6	Milling Exist. Asph. Pavt. 1 1/2" Avg Depth	SY	3,275		
334-1-23	Superpave Asphaltic Concrete, Traffic C, PG 76-22, PMA	TN	8,560		
337-7-74	Asphalt Friction Course Traffic C, FC-12.5, PG 76-22, ARB	TN	4,550		
339-1	Miscellaneous Asphalt Pavement	TN	118		
400-0-11	Concrete Class NS, Gravity Wall	CY	440		
400-1-2	Concrete Class I, Endwalls	CY	43.2		
400-4-1	Concrete Class IV, Culverts	CY	167		
415-1-1	Reinforcing Steel - Roadway	LB	26,774		
425-1-351	Inlets, Curb, Type P-5 <10'	EA	53		
425-1-361	Inlets, Curb, Type P-6, <10'	EA	10		
425-1-451	Inlets, Curb, Type J-5, <10'	EA	5		
425-1-452	Inlets, Curb, Type J-5, >10'	EA	5		
425-1-461	Inlets, Curb, Type J-6, <10'	EA	2		
425-1-549	Inlets, DT BOT, Type D, Modify	EA	3		
425-2-101	Manholes, P-7 Partial	EA	3		
425-2-43	Manholes, P-8, <10'	EA	7		
425-2-61	Manholes, J-8, <10'	EA	4		
425-2-91	Manholes, Special, <10'	EA	1		
430-94-1	Desilting Pipe, 0-24"	LF	167		
430-175-115	Pipe Culvert, OPT Material, Round, 15" S/CD (RCP)	LF	639		

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "B" Based on a completion time of 720 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
430-175-118	Pipe Culvert, OPT Material, Round, 18" S/CD (RCP)	LF	3,992		
430-175-124	Pipe Culvert, OPT Material, Round, 24" S/CD (RCP)	LF	2,827		
430-175-130	Pipe Culvert, OPT Material, Round, 30" S/CD (RCP)	LF	1,484		
430-175-136	Pipe Culvert, OPT Material, Round, 36" S/CD (RCP)	LF	1,991		
430-175-142	Pipe Culvert, OPT Material, Round, 42" S/CD (RCP)	LF	294		
430-175-148	Pipe Culvert, OPT Material, Round, 48" S/CD (RCP)	LF	742		
430-175-154	Pipe Culvert, OPT Material, Round, 54" S/CD (RCP)	LF	312		
430-175-218	Pipe Culvert, OPT Material, Other-ELIP/ARCH, 18" S/CD (RCP)	LF	32		
430-175-224	Pipe Culvert, OPT Material, Other-ELIP/ARCH, 24" S/CD (RCP)	LF	394		
430-200-29	Flared End Section, Concrete 24"	EA	2		
430-982-123	Mitered End Section, Optional Round, 15" CD	EA	1		
430-982-125	Mitered End Section, Optional Round, 18" CD	EA	11		
430-982-129	Mitered End Section, Optional Round, 24" CD	EA	3		
430-982-138	Mitered End Section, Optional Round, 36" CD	EA	2		
430-982-141	Mitered End Section, Optional Round, 48" CD	EA	2		
430-984-625	Mitered End Section, Optional Elliptical / ARCH, 18" SD	EA	2		
430-984-629	Mitered End Section, Optinal Elliptical / ARCH, 24" SD	EA	6		
440-1-20	Underdrain, TYPE II	LF	1,165		

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "B" Based on a completion time of 720 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
514-72	Liner Impermeable PVC	SY	17,620		
515-1-1	Pipe Handrail - Guiderail, Steel	LF	20		
515-2-111	Pedestrian/Bicycle Railing, Non Specified, 42" Type 1	LF	1,759		
520-1-10	Curb & Gutter Concrete (TYPE E)	LF	11,973		
520-1-7	Curb & Gutter Concrete (TYPE F)	LF	12,659		
522-1	Sidewalk Concrete (4" Thick)	SY	5,130		
522-2	Sidewalk Concrete (6" Thick)	SY	2,610		
530-3-3	RIPRAP- Rubble, Bank and Shore	TN	979		
530-3-4	RIPRAP - Rubble, F & I, Ditch Lining	TN	74		
536-1-1	Guardrail - Roadway	LF	2,156.25		
536-7	Special Guardrail Post	EA	16		
536-85-24	Guardrail End Anchorage Assembly - Parrel	EA	2		
536-85-25	Guardrail End Anchorage Assembly- Type II	EA	2		
550-10-220	Fencing, Type B, 5.1-6.0, Standard	LF	5,345		
550-60-224	Fence Gate, Type B, Double, 18. 1-20.0' Opening	EA	6		
570-1-2	Performance Turf (SOD)	SY	71,845		
580-1-1	Landscape Complete - Small Plants - Mainline Buffer	LS	1		
580-1-2	Landscape Complete - Large Plants - Planting Plan	LS	1		
700-1-11	Single Post Sign (F & I, <12 SF)	AS	16		

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "B" Based on a completion time of 720 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
700-1-12	Single Post Sign (F & I, 12-20 SF)	AS	7		
700-1-60	Single Post Sign (Remove)	AS	11		
705-11-1	Delineator, Flexible Tubular	EA	20		
706-3	Retro-Reflective Pavement Markers	EA	709		
710-11-160	Painted Pavement Markings, STD., White, BIKE LANE	EA	24		
710-11-290	Painted Pavement Markings, STD., Yellow , ISLAND NOSE	SF	155.4		
710-90	Painted Pavement Markings (Final Surface)	LS	1		
711-11-111	Thermoplastic, STD., White, SOLID, 6"	NM	4.105		
711-11-122	Thermoplastic, STD., White, SOLID, 8"	LF	834		
711-11-123	Thermoplastic, STD., White, SOLID, 12"	LF	755		
711-11-124	Thermoplastic, STD., White, SOLID, 18"	LF	338		
711-11-125	Thermoplastic, STD., White SOLID, 24"	LF	273		
711-11-131	Thermoplastic, STD., White SKIP, 6" (10' - 30')	GM	1.177		
711-11-151	Thermoplastic, STD., White, SKIP, 6" (2' - 4')	LF	56		
711-11-160	Thermoplastic, STD., White, MERGE	EA	2		
711-11-170	Thermoplastic, STD., White ARROW (LEFT)	EA	44		
711-11-211	Thermoplastic, STD., Yellow, SOLID, 6"	NM	3.613		

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "B" Based on a completion time of 720 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
711-11-224	Thermoplastic, STD., Yellow, SOLID, 18"	LF	566		
711-11-251	Thermoplastic SATD., Yellow, SKIP, 6", (2' - 4')	LF	128		
715-1-12	Lighting Conductors (F & I) (Insulated) (No. 8 - 6)	LF	60,973		
715-2-11	Lighting Conduit (F & I) (Underground)	LF	8,577		
715-4-123	Light Pole Complete (F & I) (Wind Speed 130) (Pole Height 50')	EA	17		
715-4-129	Light Pole Complete (F & I) (Wind Speed 130) (Custom Height)	EA	34		
715-7-11	Load Center (F & I) Secondary Voltage)	EA	1		
715-14-11	Lighting Pull Box (F & I) (Roadside)	EA	12		
715-500-1	Pole Cable Distribution System	EA	51		
783-4-112	ITS Conduit (F & I) Underground	LF	6,538		
783-5-1	ITS Pull Box for FO (F & I)	EA	13		
783-6-1	ITS Splice Box for FO (F & I)	EA	1		
	SUBTOTAL ROADWAY				$
	CONTRACT CONTINGENCY (USED ONLY WITH COUNTY APPROVAL)	%	7.5		$
TOTAL ROADWAY AWARD - Bid "B" Based on a Completion Time of 720 Calendar days)					$

Bidder:_____

Authorized Signature:_____

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "B" Based on a completion time of 720 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
	WATER MAIN COST				
MANATEE COUNTY ITEM	**DESCRIPTION**	**UNIT**	**EST. QTY.**	**BID PRICE PER UNIT ($)**	**TOTAL BID PRICE ($)**
MC-1	6" PVC Water Main Pipe	LF	70		
MC-2	6" 45 Degree Bend	EA	4		
MC-3	6" Plug	EA	1		
MC-4	6" Gate Valve	EA	3		
MC-5	8"PVC Water Main Pipe	LF	5,110		
MC-6	8" DIP Water Main Pipe	LF	140		
MC-7	8" 11 1/4 Degree Bend	EA	1		
MC-8	8" 45 Degree Bend	EA	3		
MC-9	8" 90 Degree Bend	EA	1		
MC-10	8" Tee	EA	4		
MC-11	8" Cross	EA	1		
MC-12	8" x 6" Reducer	EA	2		
MC-13	Fire Hydrant Assembly (Including 6" Gate Valve)	EA	9		
MC-14	Fire Hydrant / Blow-Off Assembly (30" and Greater)	EA	2		
MC-15	8" Gate Valve	EA	19		
MC-16	14" Dia. X 1/4" Wall Thickness Steel Casing (Open Cut)	LF	100		
MC-17	18" Dia. X 1/2" Wall Thickness Steel Casing (J & B)	LF	100		
MC-18	18" Dia. X 1/2" Wall Thickness Steel Casing (Open Cut)	LF	200		

SECTION 00300 BID FORM

(Submit in triplicate)

IFB #14-2404-OV

44th Avenue East (From 30thStreet East to 45th Street East)

Bid "B" Based on a completion time of 720 Calendar Days

Project No.: 6071160

FDOT ITEM NO.	DESCRIPTION	U/M	EST. QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
MC-19	36" X 30" Tee	EA	1		
MC-20	36" Ductile Iron Water Main Pipe	LF	1,365		
MC-21	36" Ductile Iron Pipe X PCCP Adapter	EA	1		
MC-22	30" Butterfly Valve	EA	1		
MC-23	36" Butterfly Valve	EA	3		
MC-24	36" 45 Degree Bend	EA	2		
MC-25	36" X 6" Tee	EA	1		
MC-26	36" X 8" Tee	EA	1		
MC-27	36" Plug	EA	1		
MC-28	Air Release Assembly	EA	1		
MC-29	Remove Existing 36" Water Main Pipe	LF	1,390		
MC-30	Remove Existing 8" Water Main Pipe	LF	50		
MC-31	Remove Existing 6" Water Main Pipe	LF	175		
MC-32	Remove Existing 6" Valve	EA	1		
MC-33	Temporary Jumper Connection	EA	2		
MC-34	Miscellaneous Concrete (Thrust Blocks)	CY	4		
	SUBTOTAL WATER MAIN				$
	CONTRACT CONTINGENCY (ONLY USED WITH COUNTY APPROVAL	%	10		$
TOTAL WATER MAIN - (Bid "B" Based on a Completion Time of 720 Calendar days)					$
GRAND TOTAL ROADWAY AND WATER MAIN - (Based On Bid "B" Completion time of 720 Calendar Days)					$

Bidder:_____

Authorized Signature:_____

		DEFINITION OF THE UNITS OF MEASURE, IFB #14-2404-OV, 44th Avenue East (From 30th Street East to 45th Street East (Project No. 6071160	
		DEFINITION OF THE UNITS OF MEASURE	U/M
		Acre	AC
		Assembly	AS
		Cubic Yard	CY
		Each	EA
		Each Day	ED
		Foot	FT
		Gross Mile	GM
		Hour	HR
		Linear Foot	LF
		Lump Sum	LS
		Net Mile	NM
		Per Intersection	PI
		Pound	LB
		Square Feet	SF
		Square Yard	SY
		Ton	TN

MAILING LABEL

Cut along the outside border and affix this label to your sealed Bid envelope to identify it as a "Sealed Bid". Be sure to include the name of the company submitting the Bid and the Bid due date and time where requested.

MAILING LABEL TO AFFIX TO OUTSIDE OF SEALED BID PACKAGE:

SEALED BID - DO NOT OPEN

CONTRACTOR: _____

SEALED BID NO: IFB #14-2404-OV

BID TITLE: 44th Avenue East (From 30th Street East to 45th Street East) Project No.: 6071160

DUE DATE/TIME: _____ @ _____

FORM A

CONTRACTOR'S QUESTIONNAIRE

(Submit in Triplicate)

The Bidder warrants the truth and accuracy of all statements and answers herein contained. (Attach additional pages if necessary.)

THIS QUESTIONNAIRE MUST BE COMPLETED AND SUBMITTED WITH YOUR BID

1. Contact Information:

   License #: _____

   License Issued to: _____

   Date License Received (MM/DD/YR): _____

   Company Name: _____

   Physical Address: _____

   City: _____ State of Incorporation: _____ Zip Code: _____

   Phone Number: ( ) _____ Fax Number: ( ) _____

   Email address: _____

2. Bidding as: an individual __; a partnership __; a corporation __; a joint venture __

3. If a partnership, list names and addresses of partners; if a corporation, list names of officers, directors, shareholders, and state of incorporation; if joint venture, list names and address of ventures' and the same if any venture are a corporation for each such corporation, partnership, or joint venture:

   _____

   _____

   _____

   _____

4. Bidder is authorized to do business in the State of Florida: ☐ Yes ☐ No

   For how many years? _____

5. Your organization has been in business (under this firm's name) as a

   _____

   Is this firm in bankruptcy? _____

   BIDDER: _____

6. Attach a list of projects where this specific type of Work was performed.

7. Describe and provide the names, dates and locations of the last three government or provide work of similar socpe you have completed which are similar in cost, type, size and nature as this Project. Include contact name, phone number and email address for each reference. Provide the budget, actual cost, size and summary of work for each project. Attach additional pages as necessary. (Note: If listing a Manatee County reference, contact peson should not be directly assocaited with this Project.

_____

_____

_____

8. Have you ever been assessed liquidated damages under a Contract during the past five (5) years? If so, state when, where (contact name, address and phone number) and why.

_____

_____

_____

9. Have you ever failed to complete projects awarded to you? Or failed to complete projects within Contract Time? If so, state when, where (contact name, address, phone number) and why.

_____

_____

_____

10. Have you ever been debarred or prohibited from providing a Bid to a governmental entity? If yes, name the entity and describe the circumstances:

_____

_____

_____

BIDDER: _____

11. Will you subcontract any part of this Work? If so, describe which major portion(s):

_____

_____

_____

12. If any, list (with Contract amount) MBE/DBE to be utilized:

_____

_____

_____

13. What equipment do you own to accomplish this Work? (A listing may be attached)

_____

_____

_____

14. What equipment will you purchase/rent for the Work? (Specify which)

_____

_____

_____

15. List the following in connection with the Surety which is providing the bond(s):

Surety's Name: _____

Address: _____

_____

Name, address, phone number and email of Surety's resident agent for service of process in Florida:

Agent's Name: _____

Address: _____

_____

Phone: _____

Email: _____

BIDDER: _____

FORM B

PUBLIC CONTRACTING AND ENVIRONMENTAL CRIMES CERTIFICATION

SWORN STATEMENT PURSUANT TO ARTICLE V, MANATEE COUNTY PURCHASING ORDINANCE

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

This sworn statement is submitted to the Manatee County Board of County Commissioners 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: _____

I understand that no person or entity shall be awarded or receive a County Contract for public improvements, procurement of goods or services (including professional services) or a County lease, franchise, concession or management Contract, or shall receive a grant of County monies unless such person or entity has submitted a written certification to County that it has not:

(1) been convicted of bribery or attempting to bribe a public officer or employee of Manatee County, the State of Florida, or any other public entity, including, but not limited to the Government of the United States, any state, or any local government authority in the United States, in that officer's or employee's official capacity; or

(2) been convicted of an agreement or collusion among Bidders or prospective Bidders in restraint of freedom of competition, by agreement to bid a fixed price, or otherwise; or

(3) been convicted of a violation of an environmental law that, in the sole opinion of County's Purchasing Official, reflects negatively upon the ability of the person or entity to conduct business in a responsible manner; or

(4) made an admission of guilt of such conduct described in items (1), (2) or (3) above, which is a matter of record, but has not been prosecuted for such conduct, or has made an admission of guilt of such conduct, which is a matter of record, pursuant to formal prosecution. An admission of guilt shall be construed to include a plea of nolo contendere; or

(5) where an officer, official, agent or employee of a business entity has been convicted of or has admitted guilt to any of the crimes set forth above on behalf of such an entity and pursuant to the direction or authorization of an official thereof (including the person committing the offense, if he is an official of the business entity), the business shall be chargeable with the conduct herein above set forth. A business entity shall be chargeable with the conduct of an affiliated entity, whether wholly owned, partially owned, or one which has common ownership or a common Board of Directors. For purposes of this Form, business entities are affiliated if, directly or indirectly, one business entity controls or has the power to control another business entity, or if an individual or group of individuals controls or has the power to control both entities. Indicia of control shall include, without limitation, interlocking management or ownership, identity of interests among family members, shared organization of a business entity following the ineligibility of a business entity under this Article, or using substantially the same management, ownership or principles as the ineligible entity.

(Continued)

Any person or entity who claims that this Article is inapplicable to him/her/it because a conviction or judgment has been reversed by a court of competent jurisdiction shall prove the same with documentation satisfactory to County's Purchasing Official. Upon presentation of such satisfactory proof, the person or entity shall be allowed to contract with County.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR MANATEE COUNTY IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT ANY CONTRACT OR BUSINESS TRANSACTION SHALL PROVIDE FOR SUSPENSION OF PAYMENTS, OR TERMINATION, OR BOTH, IF THE CONTRACTING OFFICER OR COUNTY ADMINISTRATOR DETERMINES THAT **SUCH PERSON OR ENTITY HAS MADE FALSE CERTIFICATION.**

_____
[Signature]

STATE OF FLORIDA
COUNTY OF _____

Sworn to and subscribed before me this ___ day of _____, 2014 by _____

Personally known _____ OR Produced identification _____
[Type of identification]

_____ My commission expires _____
Notary Public Signature

_____
[Print, type or stamp Commissioned name of Notary Public]

Signatory Requirement - In the case of a business entity other than a partnership or a corporation, this affidavit shall be executed by an authorized agent of the entity. In the case of a partnership, this affidavit shall be executed by the general partner(s). In the case of a corporation, this affidavit shall be executed by the corporate president.

FORM C

SWORN STATEMENT

THE FLORIDA TRENCH SAFETY ACT

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR BY AN OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This Sworn Statement is submitted with IFB No. **14-2404-OV**
2. This Sworn Statement is submitted by_____ 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 _____.
3. Name of individual signing this Sworn Statement is: _____, Whose relationship to the above entity is: _____.
4. The Trench Safety Standards that will be in effect during the construction of this Project shall include, but are not limited to: Laws of Florida, Chapters 90-96, TRENCH SAFETY ACT, and OSHA RULES AND REGULATIONS 29 CFR 1926.650 Subpart P, effective October 1, 1990.
5. The undersigned assures that the entity will comply with the applicable Trench Safety Standards and agrees to indemnify and hold harmless County and Engineer, and any of their agents or employees from any claims arising from the failure to comply with said standard.
6. The undersigned has appropriated the following costs for compliance with the applicable standards:

Trench Safety Measure (Description)	Units of Measure (LF, SY)	Unit Quantity	Unit Cost	Extended Cost
a. _____	_____	_____	$_____	_____
b. _____	_____	_____	$_____	_____
c. _____	_____	_____	$_____	_____
d. _____	_____	_____	$_____	_____

7. The undersigned intends to comply with these standards by instituting the following procedures:

_____

_____

_____

THE UNDERSIGNED, in submitting this Bid, represents that they have reviewed and considered all available geotechnical information and made such other investigations and tests as they may deem necessary to adequately design the trench safety system(s) to be utilized on this Project.

_____

(AUTHORIZED SIGNATURE / TITLE)

SWORN to and subscribed before me this _____ day of _____, 2014.

(Impress official seal)

Notary Public, State of Florida: _____

My commission expires: _____

R. B. "Chips" Shore

CLERK OF THE CIRCUIT COURT AND COMPTROLLER OF MANATEE COUNTY

1115 Manatee Avenue West, Bradenton, Florida 34205 - Phone (941) 749-1800 – Fax (941) 741-4082
P.O. Box 25400, Bradenton, Florida 34206 - www.manateeclerk.com

E PAYABLES APPLICATION

Company name_____

Contact person_____

Phone number_____

Email Address_____

FINANCE USE ONLY

Open orders: YES or NO
PEID _____
CREATE DATE _____
CONFIRMED WITH _____
Name and phone number

IFAS _____

BANK _____

INITIALS_____

Return completed form to:
Via email to:
lori.bryan@manateeclerk.com
Via fax to: (941) 741-4011
Via mail:
PO Box 1000
Bradenton, Fl 34206

Revised: June 26, 2013

COMPONENTS OF CONTRACT PLANS SET

ROADWAY PLANS
SIGNING & PAVEMENT MARKING PLANS
LIGHTING PLANS
WATER MAIN PLANS

A DETAILED INDEX APPEARS ON THE KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2 - 7	DRAINAGE MAPS
8	SUPPLEMENTAL DRAINAGE MAP
9	SUMMARY OF EXISTING DRAINAGE STRUCTURES
10 - 13	TYPICAL SECTIONS
14 - 17	SUMMARY OF DRAINAGE STRUCTURES
18	PROJECT LAYOUT
19	SURVEY REFERENCE POINTS
20	BENCHMARKS
21	GENERAL NOTES
22 - 36	PLAN & PROFILE SHEETS
37	SUPERELEVATION TRANSITION DETAILS
38	DRAINAGE STRUCTURE SHEET
39	WILDLIFE CROSSING SHEET
40	BOX CULVERT DATA SHEET
41 - 42	BOX CULVERT REINFORCING BAR LIST
43	BOX CULVERT REPORT OF CORE BORINGS
44	ROADWAY SOIL SURVEY
45	MUCK DELINEATION SHEET
46	PLASTIC DELINEATION SHEET
47	SETTLEMENT MONITORING FOR CAUSEWAY CONSTRUCTION SHEET
48 - 79	ROADWAY CROSS SECTIONS
80	DETENTION POND PLAN - WEST-3L & WEST-3R
81	DETENTION POND TYPICAL SECTIONS - WEST-3L & WEST-3R
82	DETENTION POND SOIL SURVEY - WEST-3L & WEST-3R
83 - 91	DETENTION POND CROSS SECTIONS - WEST-3L & WEST -3R
92	DETENTION POND PLANTING PLAN - WEST-3L
93	DETENTION POND PLANTING PLAN - WEST-3R
94	FLOODPLAIN MITIGATION SITE PLAN - WEST-2
95 - 97	FLOODPLAIN MITIGATION SITE CROSS SECTIONS - WEST-2
98	FLOODPLAIN MITIGATION SITE PLANTING PLAN - WEST-2
99	DETENTION POND PLAN - EAST-2
100	DETENTION POND TYPICAL SECTIONS - EAST-2
101	DETENTION POND SOIL SURVEY - EAST-2
102 - 105	DETENTION POND CROSS SECTIONS - EAST-2
106	FLOODPLAIN MITIGATION SITE PLAN - EAST-2
107	FLOODPLAIN MITIGATION SITE TYPICAL SECTIONS - EAST-2
108	FLOODPLAIN MITIGATION SITE SOIL SURVEY - EAST-2
109 - 111	FLOODPLAIN MITIGATION SITE CROSS SECTIONS - EAST-2
112 - 114	MODIFIED DETAIL - CONTROL STRUCTURES
115 - 121	WETLAND IMPACT SHEETS
122	WETLAND MITIGATION SITE PLAN SHEET - SOUTH
123	WETLAND MITIGATION SITE SECTIONS- SOUTH
124	WETLAND MITIGATION SITE PLAN SHEET - NORTH
125	WETLAND MITIGATION SITE SECTIONS - NORTH
126	WETLAND MITIGATION SITE GENERAL NOTES - WALKER CREWS PRESERVE
127	WETLAND MITIGATION SITE PLAN SHEET - WALKER CREWS PRESERVE
128 - 145	STORM WATER POLLUTION PREVENTION PLANS
146 - 150	TRAFFIC CONTROL PLANS
151 - 162	UTILITY ADJUSTMENT SHEETS

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
DESIGN STANDARDS DATED 2014,
AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED 2013,
AS AMENDED BY CONTRACT DOCUMENTS.

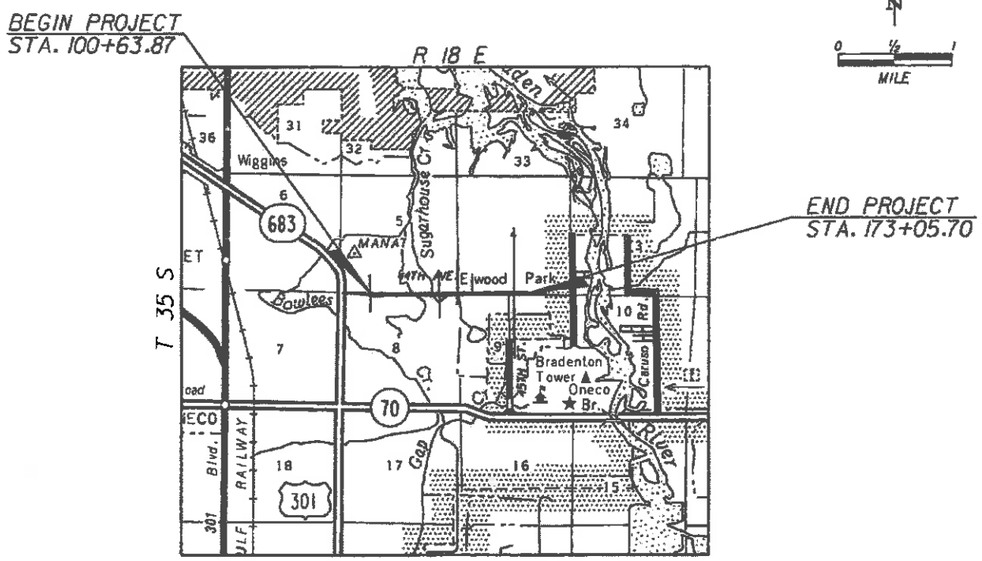
REVISIONS

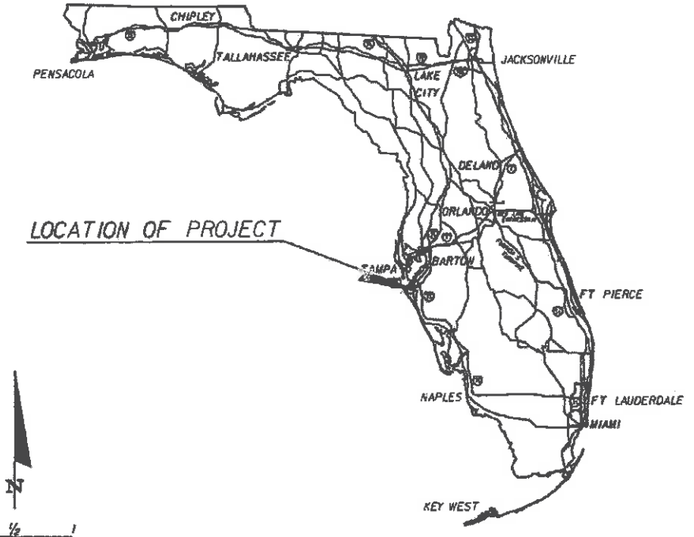
MANATEE COUNTY
PUBLIC WORKS DEPARTMENT

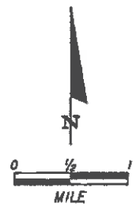
CONTRACT PLANS

MANATEE COUNTY
(6071160)

44TH AVENUE EAST
FROM 30TH STREET EAST TO 45TH STREET EAST

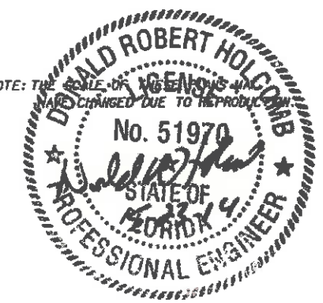






ROADWAY SHOP DRAWINGS
TO BE SUBMITTED TO:
DONALD R. HOLCOMB, P.E.
HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD., STE. 400
SARASOTA, FLORIDA 34232-6233
PHONE NO. (941) 342-2700

PLANS PREPARED BY:
HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD., STE. 400
SARASOTA, FLORIDA 34232-6233
PHONE NO. (941) 342-2700
FAX (941) 342-6589
CONTRACT NO. 12348
VENDOR NO. VF-470680568
CERTIFICATE OF AUTHORIZATION No. 4213



NOTE: THE SCALE OF DRAWINGS MAY HAVE CHANGED DUE TO REPRODUCTION

Roadway

PROJECT LENGTH IS BASED ON ℄ OF CONST.

LENGTH OF PROJECT	LINEAR FEET	MILES
ROADWAY	7,241.83	1.371
BRIDGES	0.00	0.000
NET LENGTH OF PROJECT	7,241.83	1.371
EXCEPTIONS	0.00	0.000
GROSS LENGTH OF PROJECT	7,241.83	1.371

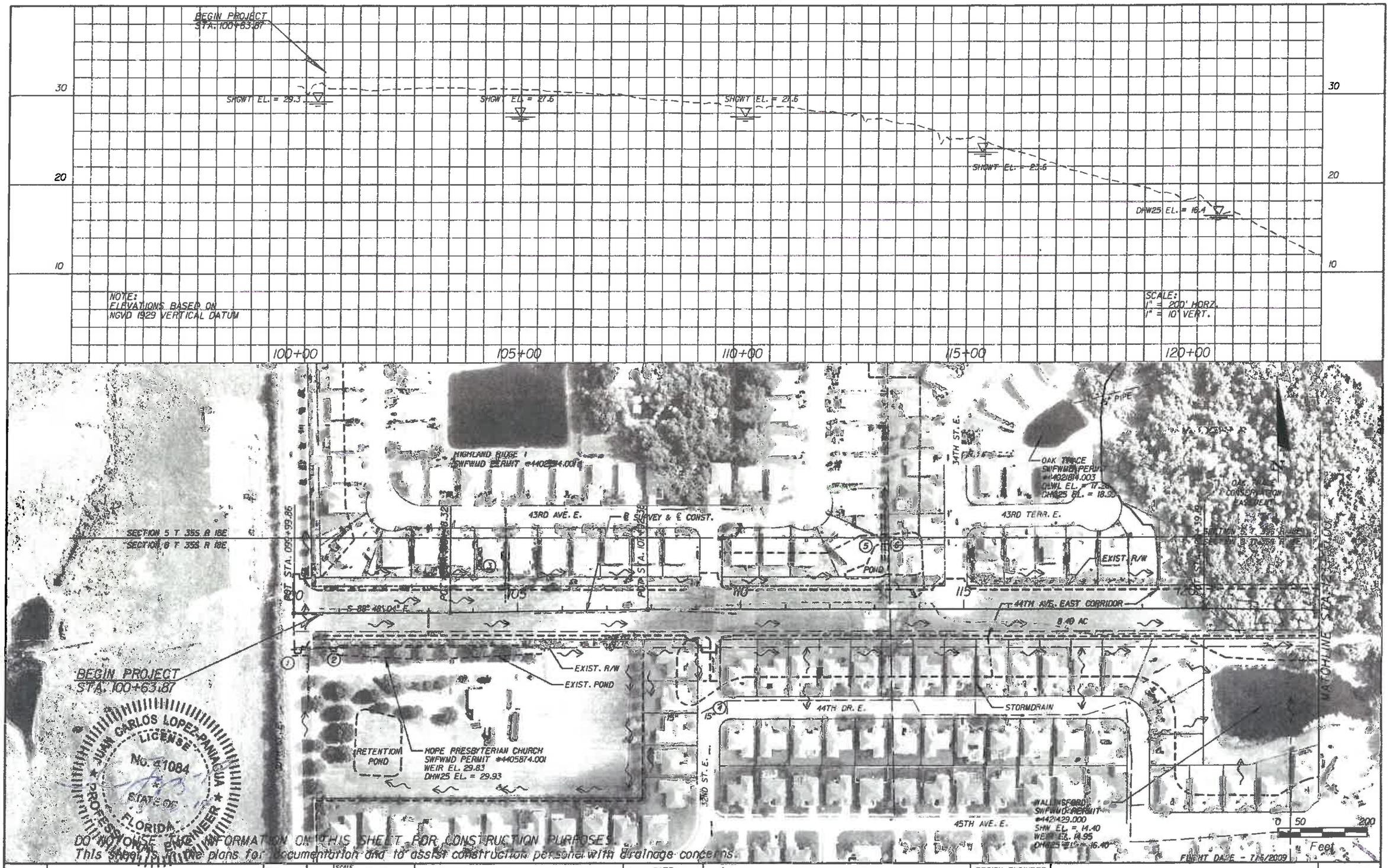
MANATEE COUNTY PROJECT MANAGER: KENT D. BONTRAGER, P.E.

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

ROADWAY PLANS
ENGINEER OF RECORD: DONALD R. HOLCOMB, P.E.

P.E. NO.: 51970

FISCAL YEAR	SHEET NO.
14	1



BEGIN PROJECT
STA. 100+63.87

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DO NOT USE INFORMATION ON THIS SHEET FOR CONSTRUCTION PURPOSES.
This sheet is for documentation and to assist construction personel with drainage concerns.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607160

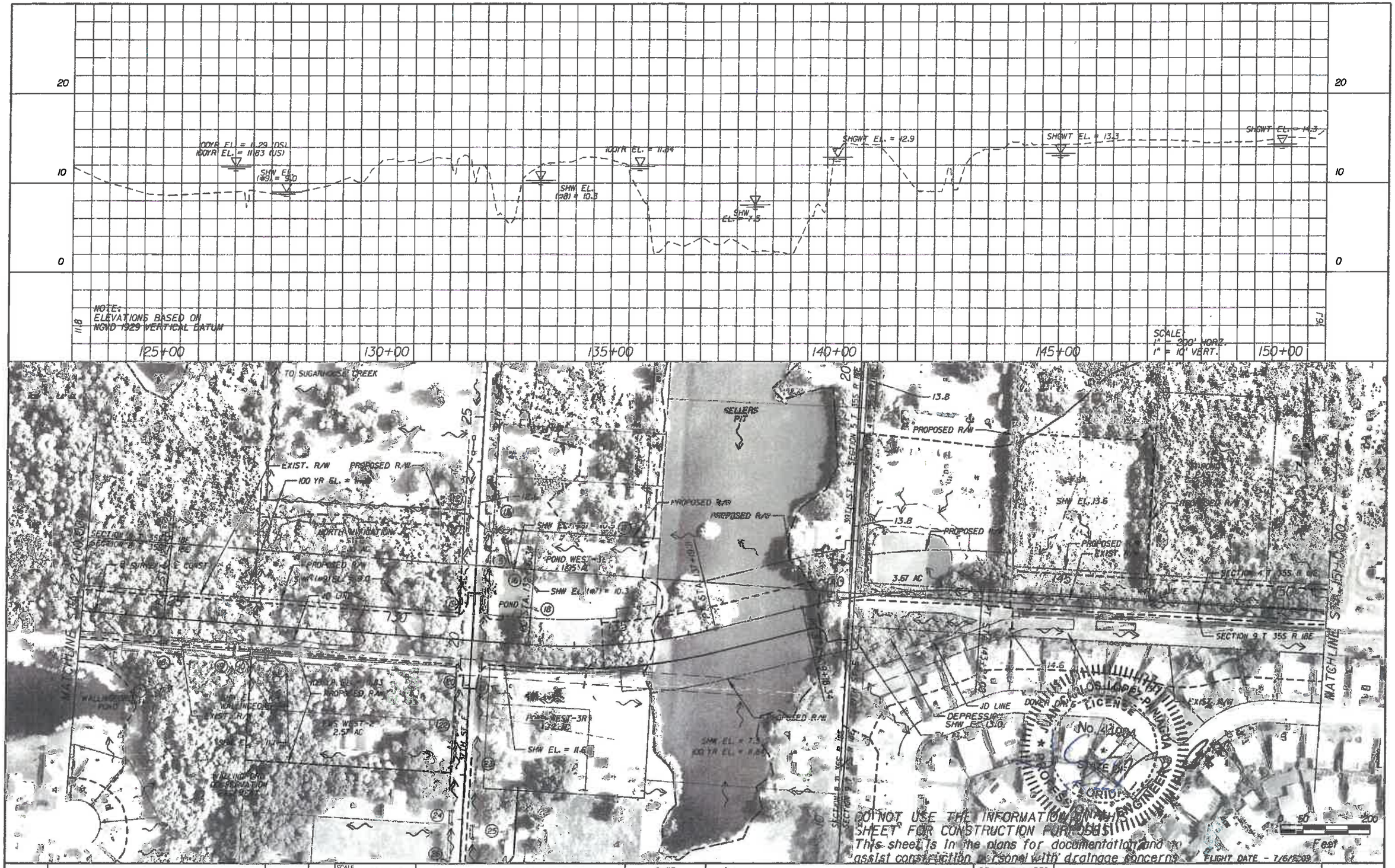
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DRAINAGE MAP (EXISTING CONDITIONS)

SHEET NO.: 2

2:29:35 PM 5/22/2014
FN:\007992\CONG\446\8\0000000001\3343\v3.00.CAD\E3455520\drainage\drmp-ex1.dgn



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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607160

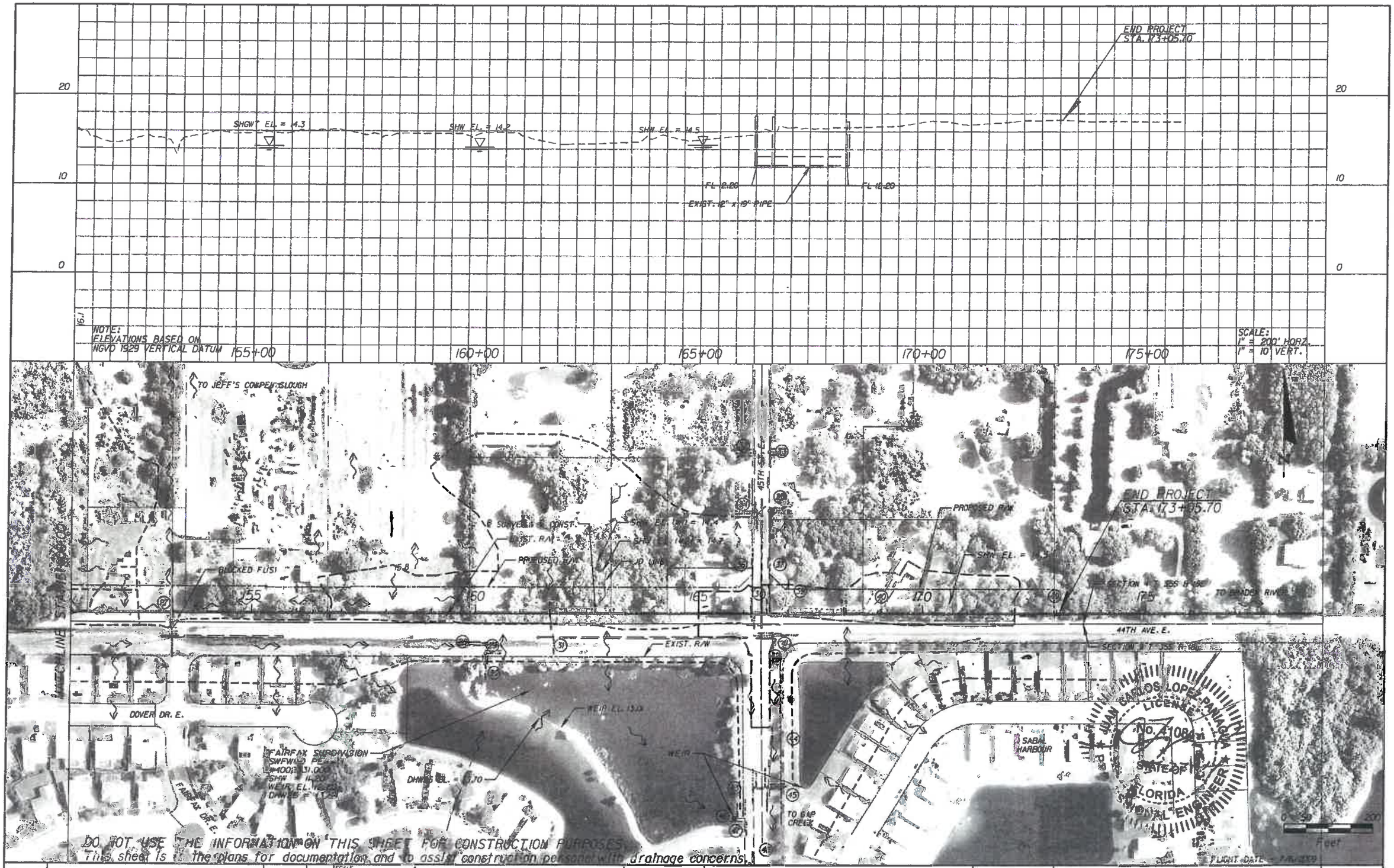
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DRAINAGE MAP (EXISTING CONDITIONS)

SHEET NO.: 3

2:53:41 PM 5/22/2014



No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

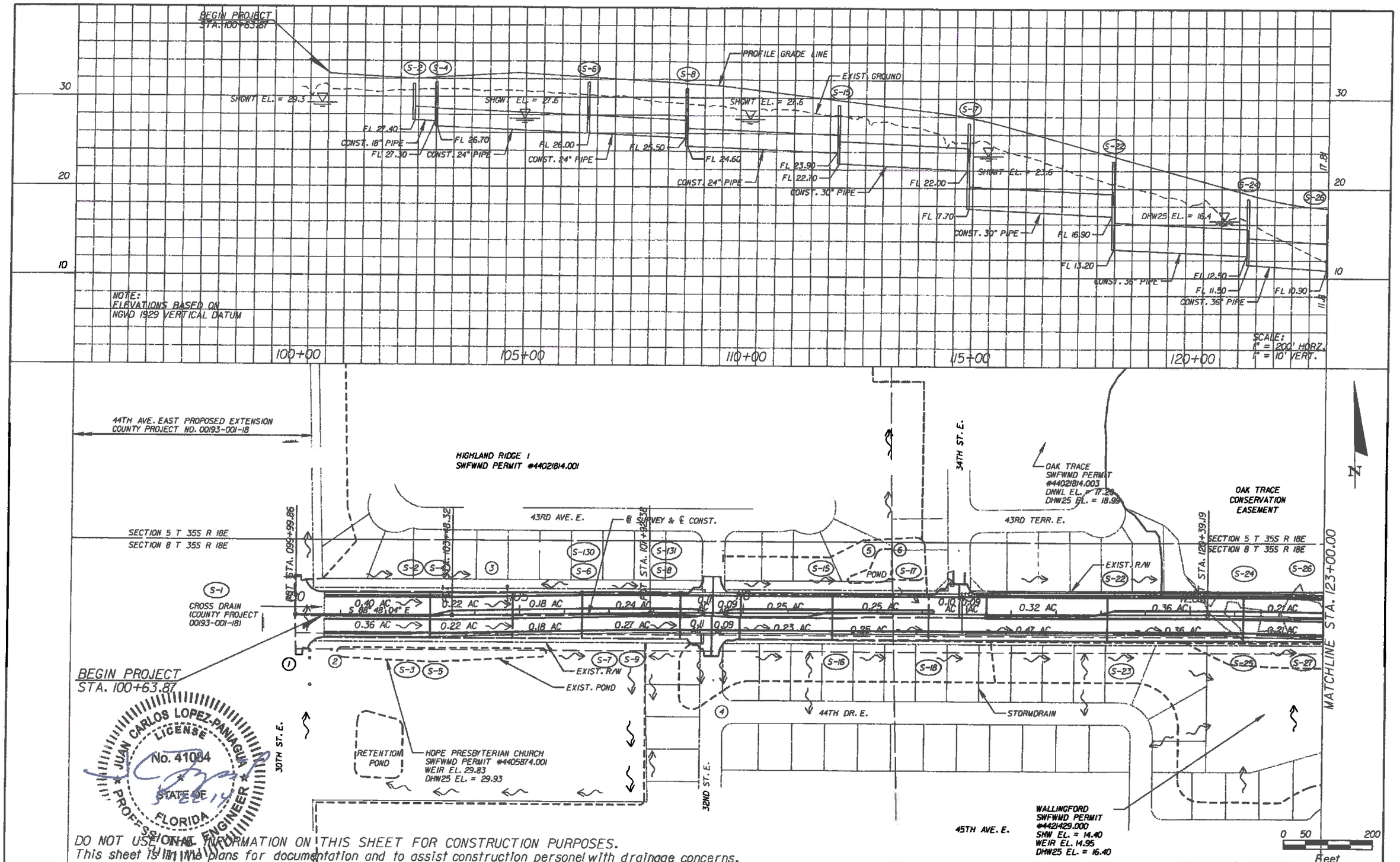
DATE: 05/27/14
PROJECT NO.: 607116O

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DRAINAGE MAP
(EXISTING CONDITIONS)

SHEET NO.: 4



BEGIN PROJECT
STA. 100+63.87

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER

DO NOT USE THE INFORMATION ON THIS SHEET FOR CONSTRUCTION PURPOSES.
This sheet is in the plans for documentation and to assist construction personel with drainage concerns.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

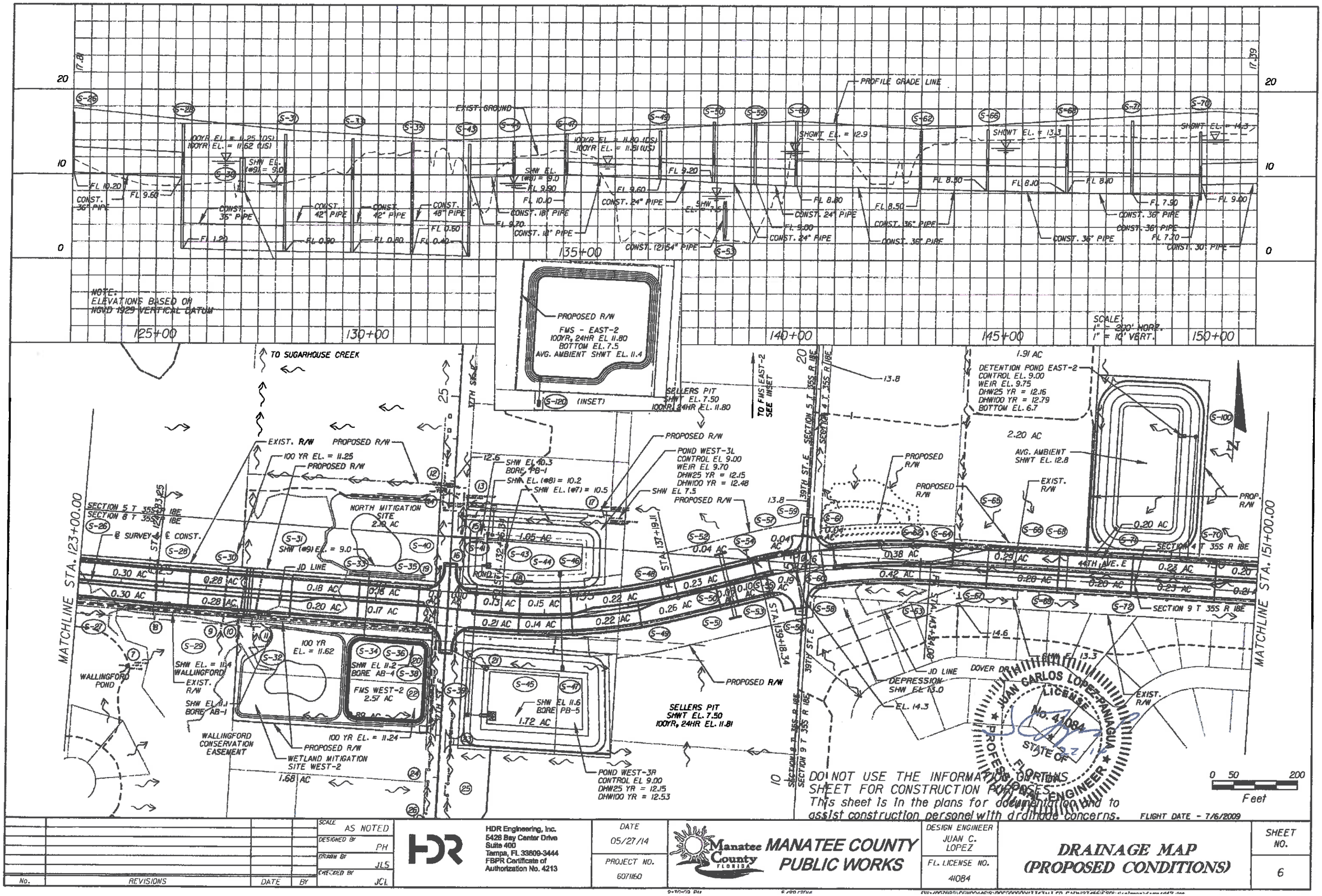
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DRAINAGE MAP (PROPOSED CONDITIONS)

SHEET NO.: 5

2:29:55 PM 5/27/2014 P:\6071160\COM\0446\R\0000000001\3343\3.00 CAD\P3455150\Drainage\drngmap01.dgn



DO NOT USE THE INFORMATION ON THIS SHEET FOR CONSTRUCTION PURPOSES. This sheet is in the plans for documentation and to assist construction personel with drainage concerns.

FLIGHT DATE - 7/6/2009

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

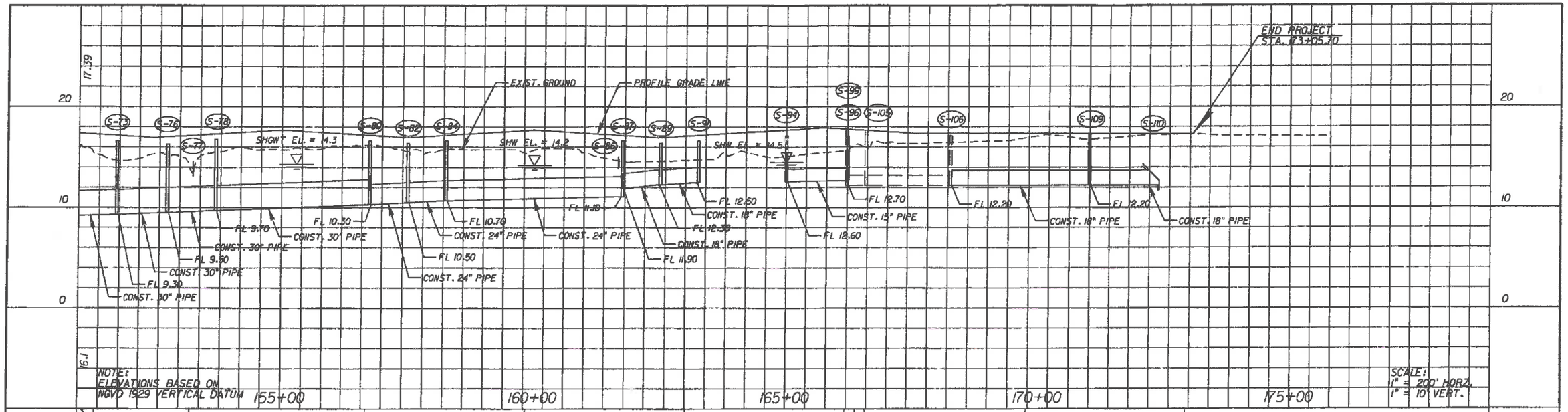
DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DRAINAGE MAP (PROPOSED CONDITIONS)

SHEET NO. 6



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This sheet is in the plans for documentation and to assist construction personel with drainage concerns.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: J.L.S
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DRAINAGE MAP (PROPOSED CONDITIONS)

SHEET NO.: 7

2:30:15 PM 5/22/2014
O:\07582\COM00446\0000000013343\V3.00\CAD\23456%20Drainage\drmap43.dgn

STRUCTURE NO.	STATION	DESIGN FLOOD		BASE FLOOD		OVERTOPPING FLOOD				GREATEST FLOOD			
		2% PROB.	50 YR. FREQ.	1% PROB.	100 YR. FREQ.								
		DISCHARGE	STAGE	DISCHARGE	STAGE	DISCHARGE	STAGE	PROB %	FREQ YR.	DISCHARGE	STAGE	PROB %	FREQ YR.
S-30	129+60	148.4	11.28	177.4	11.61	-				-			
S-52	138+40	35.9	11.42	35.8	11.84	-				-			

NOTE: THE HYDRAULIC DATA IS SHOWN FOR INFORMATIONAL PURPOSES ONLY, TO INDICATE THE FLOOD DISCHARGES AND WATER SURFACE ELEVATIONS WHICH MAY BE ANTICIPATED IN ANY GIVEN YEAR. THIS DATA WAS GENERATED USING HIGHLY VARIABLE FACTORS DETERMINED BY A STUDY OF THE WATERSHED. MANY JUDGEMENTS AND ASSUMPTIONS ARE REQUIRED TO ESTABLISH THESE FACTORS. THE RESULTANT HYDRAULIC DATA IS SENSITIVE TO CHANGES, PARTICULARLY OF ANTECEDENT CONDITIONS, URBANIZATION, CHANNELIZATION, AND LAND USE. USERS OF THIS DATA ARE CAUTIONED AGAINST THE ASSUMPTION OF PRECISION WHICH CAN NOT BE ATTAINED. DISCHARGES ARE IN CUBIC FEET PER SECOND AND STAGES ARE IN FEET, NGVD, 1929.

DEFINITIONS:

DESIGN FLOOD: THE FLOOD SELECTED BY F.D.O.T. TO BE UTILIZED TO ASSURE A STANDARD LEVEL OF HYDRAULIC PERFORMANCE.

BASE FLOOD: THE FLOOD HAVING A 1% CHANCE OF BEING EXCEEDED IN ANY YEAR. (100 YR. FREQUENCY)

OVERTOPPING FLOOD: THE FLOOD WHERE FLOW OCCURS (A) OVER THE HIGHWAY (B) OVER A WATERSHED DIVIDE OR (C) THRU EMERGENCY RELIEF STRUCTURES.

GREATEST FLOOD: THE MOST SEVERE FLOOD WHICH CAN BE PREDICTED WHERE OVERTOPPING IS NOT PRACTICABLE, NORMALLY ONE WITH A 0.2% CHANCE OF BEING EXCEEDED IN ANY YEAR. (500 YR. FREQUENCY)

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: F-H
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 60160

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

SUPPLEMENTAL DRAINAGE MAP

SHEET NO.: 8

5:34:9 PM 5/22/2014 P:\1007982\CONDO44618\0000000001\3343\13.00_CAD\P3456.520\drainage\drmp422.dgn

1 18" RCP W/ (2) MES
INV. 29.92 (S)
INV. 29.81 (N)

2 12" PVC W/ MES
INV. 28.36 (W)
DBI
INV. 28.84 (E)

3 18" RCP W/ MES
INV. 25.32 (S)
INV. 23.50 (N)

4 8" PVC
INV. 21.03 (S)
MANHOLE
INV. 22.51 (N)

5 12" CPP
INV. 25.46 (S)
INV. 24.69 (N)

6 12" CPP
INV. 25.30 (S)
INV. 24.59 (N)

7 36" RCP W/ WEIR
INV. 11.98 (S)
INV. 12.01 (N)

8 28" X 22" CMP
INV. 9.16 (S)
INV. 8.58 (N)

9 27" X 21" CMP
INV. 9.98 (S)
INV. 9.84 (N)

10 40" X 30" CMP
INV. 7.96 (S)
INV. 7.80 (N)

11 28" X 22" CMP
INV. 9.79 (S)
INV. 8.93 (N)

12 24" CMP W/ MES
INV. 8.98 (S)
INV. 9.86 (N)

13 36" RCP W/ DBI
INV. 4.60 (W)
INV. 5.20 (E)

14 30" X 19" RCP W/ MES
INV. 8.84 (S)
INV. 8.43 (N)

15 4" PVC
INV. 9.79 (S)
INV. 10.00 (N)

16 4" PVC
INV. 9.81 (S)
INV. 8.88 (N)

17 36" RCP
INV. 5.20 (W)
INV. 5.08 (E)

18 4" PVC
DIRECTIONAL ONLY
INV. 10.15 (W)

19 18" RCP W/ (2) MES
INV. 10.72 (S)
INV. 10.63 (N)

20 18" RCP W/ (2) MES
INV. 10.62 (S)
INV. 10.85 (N)

21 18" RCP W/ (2) MES
INV. 10.84 (S)
INV. 10.61 (N)

22 23" X 14" RCP W/ (2) MES
INV. 11.33 (S)
INV. 11.13 (N)

23 18" RCP W/ (2) MES
INV. 11.21 (S)
INV. 10.92 (N)

24 23" X 14" RCP W/ (2) MES
INV. 11.85 (S)
INV. 11.78 (N)

25 23" X 14" RCP W/ (2) MES
INV. 11.51 (S)
INV. 11.27 (N)

26 15" RCP W/ (2) MES
INV. 12.25 (S)
INV. 11.85 (N)

27 18" RCP W/ ENDWALL
DIRECTIONAL ONLY
INV. 10.97 (N)

28 24" RCP
INV. 10.86 (W)
INV. 10.87 (E)

29 24" RCP
INV. 11.01 (W)
INV. 10.79 (E)

30 15" RCP W/ DBI
INV. 11.69 (S)
INV. 11.28 (N)

31 8" PVC
INV. 13.32 (S)
INV. 13.97 (N)

32 19" X 12" RCP W/ INLET
INV. 13.42 (S)
INV. 13.58 (N)

33 19" X 12" RCP W/ INLET
INV. 13.34 (S)
INV. 13.57 (N)

34 19" X 12" RCP W/ INLETS
INV. 13.07 (S)
INV. 13.45 (N)

35 19" X 12" RCP W/ INLETS
INV. 13.17 (S)
INV. 13.34 (N)

36 6" PVC W/ INLETS
INV. 13.10 (S)
INV. 13.66 (N)

37 19" X 12" RCP W/ MANHOLE
INV. 12.61 (S)
INLET
INV. 13.21 (N)

38 19" X 12" RCP W/ INLET
INV. 12.80 (W)
MANHOLE
INV. 12.64 (E)

39 19" X 12" RCP W/ MANHOLE
INV. 12.42 (W)
INLET
INV. 12.22 (E)

40 19" X 12" RCP W/ INLET
INV. 12.21 (W)
ENDWALL
INV. 12.20 (E)

41 12" PVC W/ INLETS
INV. 14.85 (W)
INV. 14.84 (E)

42 12" PVC W/ INLETS
INV. 14.79 (S)
INV. 14.86 (N)

43 15" RCP W/ INLET
DIRECTIONAL ONLY
INV. 11.46 (W)

44 12" PVC W/ INLETS
INV. 14.54 (S)
INV. 14.68 (N)

45 6" PVC W/ INLET
DIRECTIONAL ONLY
INV. 11.64 (N)

46 60" X 38" RCP W/ (2) DBI
INV. 11.24 (W)
INV. 11.11 (E)

47 60" X 38" RCP W/ DBI
INV. 10.85 (S)
INV. 10.97 (N)

48 19" X 12" RCP W/ INLET
INV. 10.66 (S)
INV. 11.44 (N)

49 48" RCP W/ ENDWALLS
INV. 12.26 (W)
INV. 11.60 (E)

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

SUMMARY OF EXISTING DRAINAGE STRUCTURES

SHEET NO.: 9

2:31:24 PM 5/22/2014

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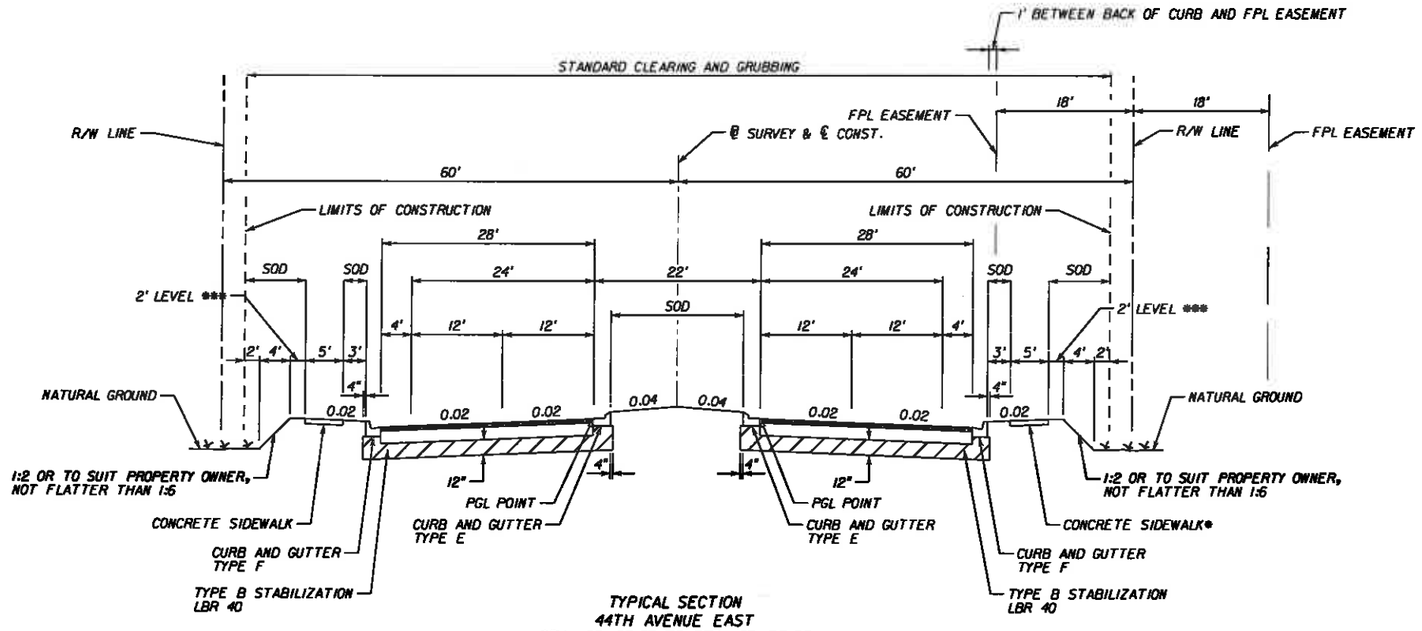


TYPICAL SECTION
44TH AVENUE EAST
STA. 100+63.87 TO STA. 107+53.22
STA. 120+78.35 TO STA. 143+24.00

* 6" THICK IN FPL EASEMENT
STA. 100+64.00 TO STA. 134+30.00

** LIMITS OF GRAVITY WALL
STA. 115+50.00 TO STA. 129+32.26 (LT.)
STA. 124+51.03 TO STA. 126+82.74 (RT.)

*** THE CONTRACTOR SHALL PLANT LANDSCAPING SHRUBS (SHRUB TYPE TO BE DETERMINED) (3 GAL. - 3FT O.C.) FROM STATION 100+63.87 TO STATION 109+09.56 AND STATION 109+14.56 TO STATION 115+50.00 LT. AND FROM STATION 100+63.87 TO 109+07.00 AND STATION 109+12.00 TO STATION 120+40.37 RT.

THE CONTRACTOR SHALL WATER THE LANDSCAPING FOR 90 DAYS TO ENSURE GROWTH.

THE CONTRACTOR SHALL APPLY FERTILIZER TO THE LANDSCAPED AREAS. THE CONTRACTOR SHALL REMOVE ALL BROADCAST FERTILIZER FROM ADJACENT SIDEWALKS, CURBS, AND PAVEMENT.

AT SUCH TIME THE ENGINEER SHALL EITHER ACCEPT THE LANDSCAPING OR REQUEST REPLACEMENTS.

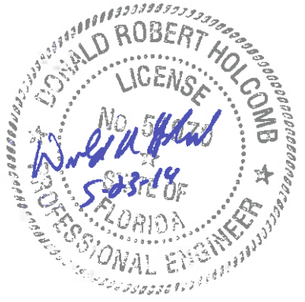
ALL ITEMS REQUIRED FOR THE LANDSCAPING, WATERING, AND FERTILIZING SHALL BE PAID FOR UNDER THE PAY ITEM NUMBER 580-1-1 LANDSCAPE COMPLETE - SMALL PLANTS - LUMP SUM

TRAFFIC DATA - 44TH AVENUE EAST

CURRENT YEAR EST. 2012 AADT = 0
ESTIMATED OPENING YEAR EST. 2015 AADT = 11,429
ESTIMATED DESIGN YEAR EST. 2035 AADT = 16,000
K = 8% D= 50% T= 7% (24 HOUR)
DESIGN SPEED = 45 MPH
POSTED SPEED = 35 MPH

NEW CONSTRUCTION - MAINLINE PAVEMENT

OPTIONAL BASE GROUP 9 WITH
3" STRUCTURAL COURSE TYPE SP 12.5 (TRAFFIC C) AND
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22, ARB)



No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-8233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

TYPICAL SECTION (1)

SHEET NO.: 10

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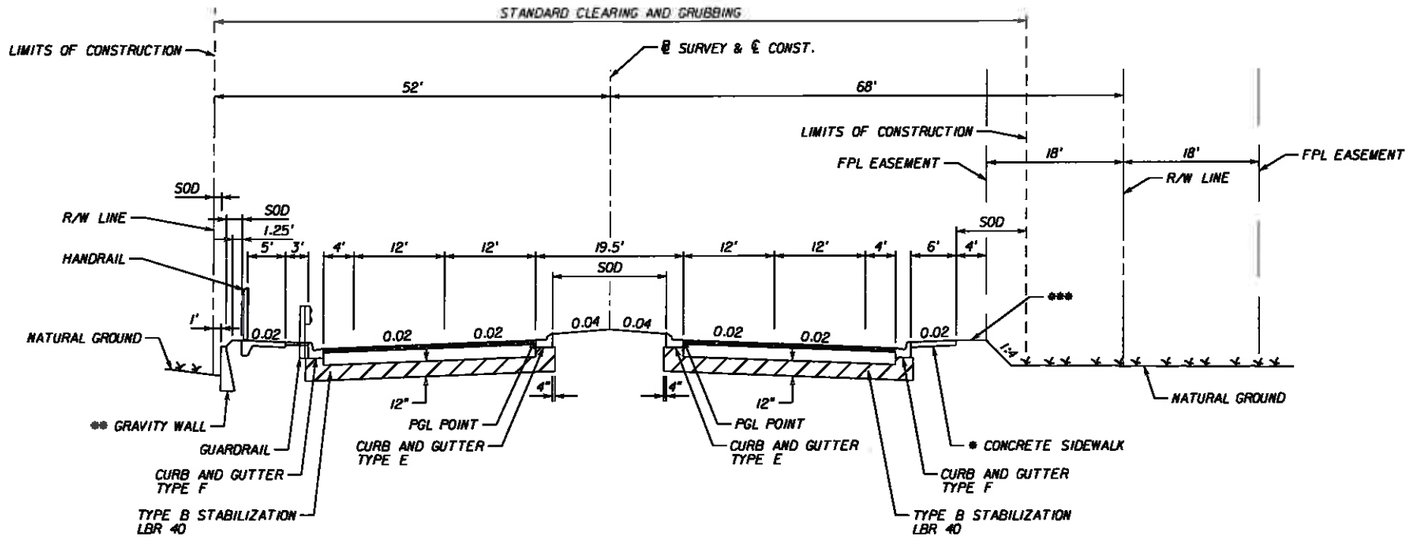

TYPICAL SECTION
44TH AVENUE EAST
STA. 107+53.22 TO STA. 120+78.35

NEW CONSTRUCTION - MAINLINE PAVEMENT

OPTIONAL BASE GROUP 9 WITH
3" STRUCTURAL COURSE TYPE SP 12.5 (TRAFFIC C) AND
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22, ARB)

* 6" THICK IN FPL EASEMENT
STA. 100+64.00 TO STA. 134+30.00

** LIMITS OF GRAVITY WALL
STA. 115+50.00 TO STA. 129+32.26 (LT.)

*** THE CONTRACTOR SHALL PLANT LANDSCAPING SHRUBS (SHRUB TYPE TO BE DETERMINED) (3 GAL. - 3FT O.C.) FROM STATION 100+63.87 TO STATION 109+09.56 AND STATION 109+14.56 TO STATION 115+50.00 LT. AND FROM STATION 100+63.87 TO 109+07.00 AND STATION 109+12.00 TO STATION 120+40.37 RT.

THE CONTRACTOR SHALL WATER THE LANDSCAPING FOR 90 DAYS TO ENSURE GROWTH.

THE CONTRACTOR SHALL APPLY FERTILIZER TO THE LANDSCAPED AREAS. THE CONTRACTOR SHALL REMOVE ALL BROADCAST FERTILIZER FROM ADJACENT SIDEWALKS, CURBS, AND PAVEMENT.

AT SUCH TIME THE ENGINEER SHALL EITHER ACCEPT THE LANDSCAPING OR REQUEST REPLACEMENTS.

ALL ITEMS REQUIRED FOR THE LANDSCAPING, WATERING, AND FERTILIZING SHALL, BE PAID FOR UNDER THE PAY ITEM NUMBER 580-1-1 LANDSCAPE COMPLETE - SMALL PLANTS - LUMP SUM

TRAFFIC DATA - 44TH AVENUE EAST

CURRENT YEAR EST. 2012 AADT = 0
ESTIMATED OPENING YEAR EST. 2015 AADT = 11,429
ESTIMATED DESIGN YEAR EST. 2035 AADT = 16,000
K = 8% D= 50% T= 7% (24 HOUR)
DESIGN SPEED = 45 MPH
POSTED SPEED = 35 MPH

DONALD ROBERT HOLCOMB
LICENSE
No. 51970
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-23-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

TYPICAL SECTION (2)

SHEET NO.: 11

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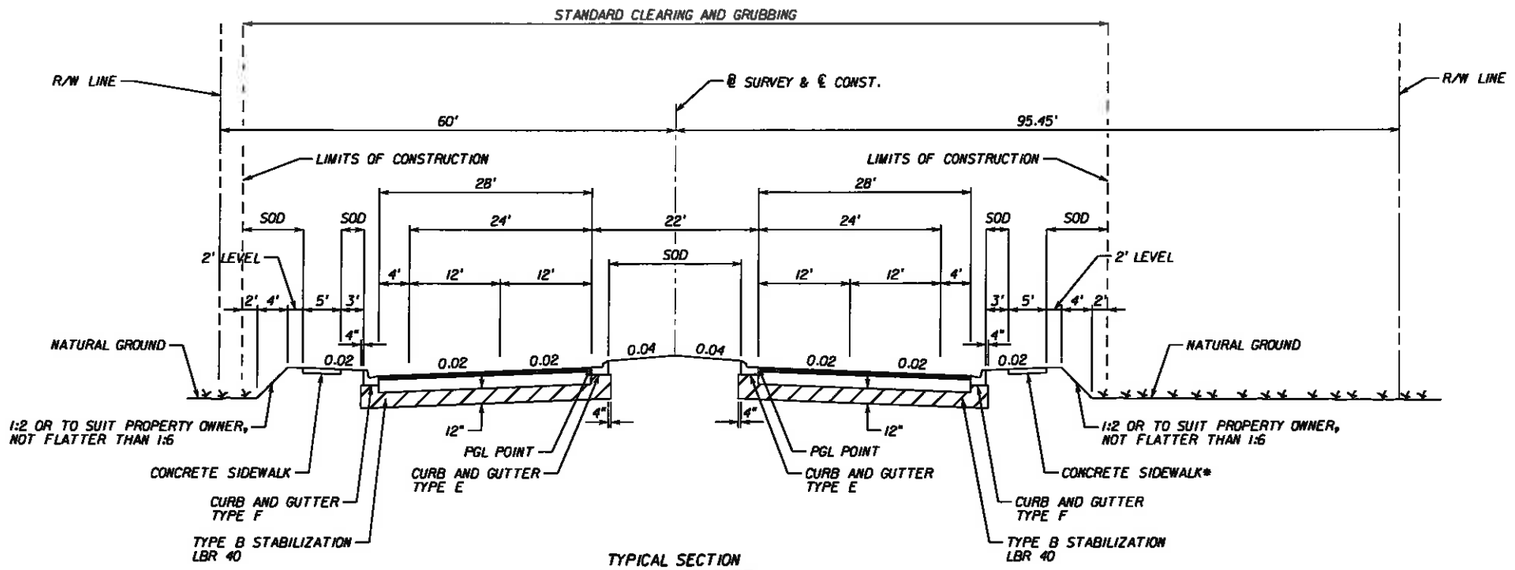

TYPICAL SECTION
44TH AVENUE EAST
STA. 143+24.00 TO STA. 173+05.70

NEW CONSTRUCTION - MAINLINE PAVEMENT

OPTIONAL BASE GROUP 9 WITH
3" STRUCTURAL COURSE SP 12.5 (TRAFFIC C) AND
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22, ARB)

TRAFFIC DATA - 44TH AVENUE EAST

CURRENT YEAR EST. 2012 AADT = 0
ESTIMATED OPENING YEAR EST. 2015 AADT = 11,429
ESTIMATED DESIGN YEAR EST. 2035 AADT = 16,000
K = 8% D= 50% T= 7% (24 HOUR)
DESIGN SPEED = 45 MPH
POSTED SPEED = 35 MPH

DONALD ROBERT HOLCOMB
LICENSE
No. 51970
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
5-23-14

* 6" THICK ADJACENT TO FPL POLES
STA. 143+67.49 TO STA. 144+67.49
STA. 146+68.37 TO STA. 147+68.37
STA. 148+36.50 TO STA. 149+36.50
STA. 150+56.19 TO STA. 151+56.19
STA. 152+89.98 TO STA. 153+89.98
STA. 155+20.51 TO STA. 156+20.51
STA. 158+08.14 TO STA. 159+08.14
STA. 160+92.78 TO STA. 161+92.78
STA. 164+35.36 TO STA. 165+35.36

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

TYPICAL SECTION (3)

SHEET NO.: 12

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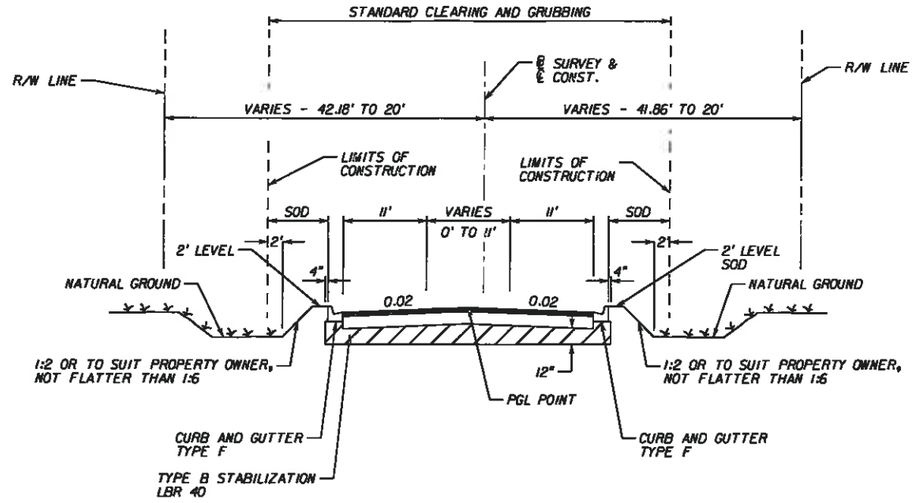

TYPICAL SECTION
45TH STREET EAST
STA. 496+31.61 TO STA. 501+75.00

NEW CONSTRUCTION - MAINLINE PAVEMENT

OPTIONAL BASE GROUP 9 WITH
3" STRUCTURAL COURSE TYPE SP 12.5 (TRAFFIC C) AND
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22, ARB)

44TH AVENUE EAST
MILLING AND RESURFACING

MILLLING
MILL EXISTING ASPHALT PAVEMENT (1-1/2" AVG. DEPTH)

RESURFACING
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22, ARB)

LIMITS
MILLING LIMITS - STA. 91+01.00 TO STA. 96+31.48
EB LANES - SEE PLAN & PROFILE SHEETS (88+00.TO 95+00 AND 95+00 TO 104+00)

30TH STREET EAST
MILLING AND RESURFACING

MILLING
MILL EXISTING ASPHALT PAVEMENT (1-1/2" AVG. DEPTH)

RESURFACING
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22, ARB)

LIMITS
MILLING LIMITS - STA. 208+43.83 TO STA. 211+43.77
ALL LANES - SEE PLAN & PROFILE SHEETS (30TH STREET EAST)

DONALD ROBERT HOLCOMB
LICENSE
No. 51970
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-23-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

TYPICAL SECTION (4)

SHEET NO.: 13

11:32:39 AM 6/17/2014
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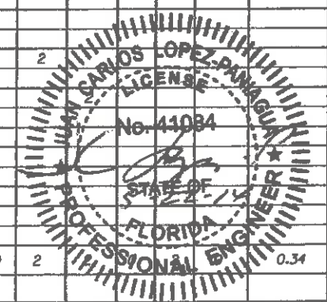
QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM DRAIN CLASS II RCP										UNDERDRAIN	WH (SPEC)	CURB INLETS					MANHOLES			DITCH BOTTOM INLETS	MITERED END SECTIONS								FES (EA)	FES (EA)	DESILT PIPE (LF)	CLASS I CONCRETE		RIP RAP	REMARKS
						ROUND SHAPE (LF)								ELLIP/ARCH SHAPE (LF)													ROUND (EA)					ELLIP/ARCH (EA)								
						UP TO 24"			25" TO 36"		37" TO 48"																													
						15"	18"	24"	30"	36"	42"	48"	54"	14"x23"	19"x30"	TYPE 11 (LF)	<10' (EA)	P-5 <10' (EA)	J-5 <10' (EA)	J-5 >10' (EA)	P-6 <10' (EA)	J-6 <10' (EA)	P-7 PARTIAL (EA)	P-8 <10' (EA)	J-8 <10' (EA)	TYPE D MODIFY (EA)	15"	18"	24"	36"	48"	14"x23"	19"x30"	18"	24"	0-24"	MISC (CY)	ENDWALLS (CY)	(TN)	
P	S-2	102+50.19	LT	INLET, PIPE	1		50														1																		
F																																							
P	S-3	102+50.19	RT	INLET, PIPE	1		50														1																		
F																																							
P	S-4	103+00.00	LT	INLET, PIPE	1			340										1																					
F																																							
P	S-5	103+00.00	RT	INLET, PIPE	1		81											1																					
F																																							
P	S-6	106+40.00	LT	INLET, PIPE	1			221										1																					
F																																							
P	S-7	106+40.00	RT	INLET, PIPE	1		81											1																					
F																																							
P	S-8	108+60.00	LT	INLET, PIPE	1			340										1																					
F																																							
P	S-9	108+60.00	RT	INLET, PIPE	1		78											1																					
F																																							
P	S-15	112+00.00	LT	INLET, PIPE	1				290									1																					
F																																							
P	S-16	112+00.00	RT	INLET, PIPE	1		78											1																					
F																																							
P	S-17	114+90.00	LT	INLET, PIPE	1				325									1																					
F																																							
P	S-18	114+90.00	RT	INLET, PIPE	1		78											1																					
F																																							
P	S-22	118+15.00	LT	INLET, PIPE, UD	1					306						270			1																				
F																																							
P	S-23	118+15.00	RT	INLET, PIPE, UD	1		78									315		1																					
F																																							
P	S-24	121+20.00	LT	INLET, PIPE, UD	1					180						290			1																				
F																																							
P	S-25	121+20.00	RT	INLET, PIPE, UD	1		79									290		1																					
F																																							
P	S-26	123+00.00	LT	INLET, PIPE	1					260									1																					
F																																							
P	S-27	123+00.00	RT	INLET, PIPE	1		81											1																					
F																																							
P	S-28	125+60.00	LT	INLET, PIPE	1					237										1																				
F																																							
P	S-29	125+60.00	RT	INLET, PIPE	1		78											1																					
F																																							
P	S-30	127+00.00	LT	CBC 6'x4'	2																																	
F																																							
P	S-31	128+00.00	LT	INLET, PIPE	1						157									1																				
F																																							
P	S-32	128+00.00	RT	INLET, PIPE	1		77											1																					
F																																							
P	S-33	129+60.00	LT	INLET, PIPE	1						137									1																				
F																																							
P	S-34	129+60.00	RT	INLET, PIPE	1		77											1																					
F																																							
P	S-34A	129+80.00	RT	FES, PIPE, FES	1			153																													2		0.34		
F																																							
P	S-35	131+00.00	LT	INLET, PIPE	1							132								1																				
F																																							
P	S-36	131+00.00	RT	INLET, PIPE	1		77											1																					
F																																							
P	S-36A	17+12.10	LT	MES, PIPE, MES	1										32																								
F																																							
P	S-37	131+49.10	RT	MES, PIPE, MES	1											181																								
F																																							
P	S-38	19+01.20	LT	INLET, PIPE	1		24											1																					
F																																							
P	S-39	19+01.20	RT	INLET, PIPE, MES	1		77											1									1											8.0	
F																																							
P	S-40	20+98.30	LT	INLET, PIPE	1		23											1																					
F																																							
SUB TOTALS				PLAN QUANTITY	0	1167	1054	615	983	294	132	0	32	181	1165	0	20	3	4	2	0	0	0	0	0	0	0	1	0	0	0	2				0.34	0	8.0	
				FINAL QUANTITY																																			



No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
6426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

SUMMARY OF DRAINAGE STRUCTURES

SHEET NO.: 14

2:31:29 PM 5/22/2014

PW:\607982\CDM\0044618\D0000000011.3343\V3.00_CAD\P23456.S201\drainage\summdrstr.cgn

QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM DRAIN CLASS II RCP									UNDERDRAIN	MH (SPEC)	CURB INLETS					MANHOLES			DITCH BOTTOM INLETS	MITERED END SECTIONS							FES (EA)	FES (EA)	DESILT PIPE (LF)	CLASS I CONCRETE		RIP RAP	REMARKS
						ROUND SHAPE (LF)								ELLIP/ARCH SHAPE (LF)			P-5 <10'	J-5 <10'	J-5 >10'	P-6 <10'	J-6 <10'	P-7 PARTIAL	P-8 <10'	J-8 <10'	TYPE D MODIFY	ROUND (EA)					ELLIP/ARCH (EA)					MISC	ENDWALLS	
						UP TO 24"		25" TO 36"		37" TO 48"																												
						15"	18"	24"	30"	36"	42"	48"	54"	14"x23"	19"x30"	TYPE II	(SPEC) <10'	(EA)	(EA)	(EA)	(EA)	(EA)	(EA)	(EA)	(EA)	15"	18"	24"	36"	48"	14"x23"	19"x30"	18"	24"	0-24"	(CY)	(CY)	(TN)	
P	S-41	20+97.80	RT	INLET, PIPE, MES	1		62									(LF)	(EA)	1									1										8.0	
F																																						
P	S-42	131+97.00	RT	MES, PIPE, MES	1										181																		2						
F																																						
P	S-43	132+35.00	LT	INLET, PIPE	1							280								1																		
F																																						
P	S-43A	17+51.57	RT	MH, PIPE, MES	1							25												1														32.0	
F																																						
P	S-43B	132+61.40	LT	INLET, PIPE, MES	1			51																	1												8.0	
F																																						
P	S-43C	16+26.30	RT	PIPE, MES	1		32																			2												
F																																						
P	S-43D	22+01.90	RT	MES, PIPE, MES	1										32																		2						
F																																						
P	S-44	133+40.00	LT	INLET, PIPE	1		100											1																				
F																																						
P	S-44A	134+40.00	RT	MES, PIPE, MES	1					208																				2									
F																																						
P	S-45	133+40.00	RT	INLET, PIPE	1		47											1																				
F																																						
P	S-46	134+65.00	LT	INLET, PIPE	1		50											1																				
F																																						
P	S-47	134+65.00	RT	INLET, PIPE	1		221											1																				
F																																						
P	S-48	136+85.00	LT	INLET, PIPE	1		38											1																				
F																																						
P	S-49	136+85.00	LT	INLET, PIPE	1			127																														
F																																						
P	S-50	138+11.71	LT	MH, PIPE	1			100																1														
F																																						
P	S-51	138+11.71	RT	INLET, PIPE	1		44											1																				
F																																						
P	S-52	138+40.00	LT	ENDWALLS, PIPE	2								312																								30.46	
F																																						
P	S-53	138+54.00	RT	INLET, PIPE	1		43											1																				
F																																						
P	S-54	139+00.00	LT	MH, PIPE, ENDWALL	1			24																1													2.24	
F																																						
P	S-55	139+09.94	LT	INLET, PIPE	1			98										1																				
F																																						
P	S-56	14+06.12	LT	INLET, PIPE	1		28											1																				
F																																						
P	S-57	139+88.00	LT	MH, PIPE	1			87																1														
F																																						
P	S-58	14+09.63	RT	INLET, PIPE	1		87											1																				
F																																						
P	S-59	15+80.71	LT	INLET, PIPE	1		90											1																				
F																																						
P	S-60	140+06.51	RT	MH, PIPE	1					293														1														
F																																						
P	S-61	15+74.45	RT	INLET, PIPE	1		34											1																				
F																																						
P	S-62	143+00.00	RT	INLET, PIPE	1					165											1																		
F																																						
P	S-63	143+00.00	RT	INLET, PIPE	1		38													1																		
F																																						
P	S-64	143+80.00	LT	MH, PIPE	1			398																1														
F																																						
P	S-66	144+58.40	LT	INLET, PIPE	1					189											1																		
F																																						
P	S-67	144+58.40	RT	INLET, PIPE	1		81											1																				
F																																						
P	S-68	146+47.00	LT	INLET, PIPE	1					153									1																				
F																																						
P	S-69	146+47.00	RT	INLET, PIPE	1		81											1																				
F																																						
SUB TOTALS			PLAN QUANTITY		0	1076	885	0	1008	0	305	312	0	213	0	0	15	1	1	2	2	0	4	2	1	0	3	1	2	1	0	4				32.70	48.0	
			FINAL QUANTITY																																			

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: J.L.S.
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

JUAN CARLOS LOPEZ-PINAGLIA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

SUMMARY OF DRAINAGE STRUCTURES

SHEET NO. 15

2:34:32 PM 5/22/2014

PW2/007992\CONDO44618\0000000003343\v1.00_CAD\v23456.520\drainage\summ_rip01.dgn

QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM DRAIN CLASS II RCP										UNDERDRAIN	MH (SPEC)	CURB INLETS					MANHOLES			DITCH BOTTOM INLETS	MITERED END SECTIONS								FES	FES	DESILT PIPE	CLASS I CONCRETE		RIP RAP	REMARKS
						ROUND SHAPE (LF)								ELLIP/ARCH SHAPE (LF)		TYPE II	<10'	P-5 <10'	J-5 <10'	J-5 >10'	P-6 <10'	J-6 <10'	P-7 PARTIAL	P-8 <10'	J-8 <10'	TYPE D MODIFY	ROUND (EA)					ELLIP/ARCH (EA)			(EA)	(EA)	(LF)	MISC	ENDWALLS	(TN)	
						UP TO 24"			25" TO 36"		37" TO 48"																													
						15"	18"	24"	30"	36"	42"	48"	54"	(4"x23")	(19"x30")	(LF)	(EA)	(EA)	(EA)	(EA)	(EA)	(EA)	(EA)	(EA)	(EA)	(EA)	15"	18"	24"	36"	48"	(14"x23")	(19"x30")	18"	24"	0-24"	(CY)	(CY)	(TN)	
P	S-70	149+30.00	LT	MH, PIPE	1							280													1														
F																																							
P	S-71	148+00.00	LT	INLET, PIPE	1				127										1																				
F																																							
P	S-72	148+00.00	RT	INLET, PIPE	1		81											1																				
F																																							
P	S-73	151+75.00	LT	INLET, PIPE	1				242									1																				
F																																							
P	S-74	151+75.00	RT	INLET, PIPE	1		81											1																				
F																																							
P	S-75	152+50.00	RT	INLET, PIPE	1		75															1																
F																																							
P	S-76	152+75.00	LT	INLET, PIPE	1				100													1																
F																																							
P	S-77	153+25.00	LT	ENDWALLS, PIPE	1		117																														3.12		
F																																							
P	S-78	153+70.00	LT	INLET, PIPE	1				95									1																				
F																																							
P	S-79	153+70.00	RT	INLET, PIPE	1		120											1																				
F																																							
P	S-80	156+75.00	LT	INLET, PIPE	1				305									1																				
F																																							
P	S-81	156+75.00	RT	INLET, PIPE	1		81											1																				
F																																							
P	S-82	157+50.00	LT	INLET, PIPE	1			75														1																
F																																							
P	S-83	157+50.00	RT	INLET, PIPE	1		75															1																
F																																							
P	S-84	158+25.00	LT	INLET, PIPE	1			75										1																				
F																																							
P	S-85	158+25.00	RT	INLET, PIPE	1		75											1																				
F																																							
P	S-86	161+67.00	RT	ENDWALLS, PIPE	1	115																															2.46		
F																																							
P	S-87	161+75.00	LT	INLET, PIPE	1			350										1																				
F																																							
P	S-88	161+75.00	RT	INLET, PIPE	1		81											1																				
F																																							
P	S-89	162+50.00	LT	INLET, PIPE	1		75															1																
F																																							
P	S-90	162+50.00	RT	INLET, PIPE	1		75															1																
F																																							
P	S-91	163+25.00	LT	INLET, PIPE	1		75											1																				
F																																							
P	S-92	163+25.00	RT	INLET, PIPE	1		75											1																				
F																																							
P	S-93	165+00.00	LT	INLET, PIPE, MES	1		21											1									1												
F																																							
P	S-94	165+00.00	RT	INLET, PIPE	1		81											1																				
F																																							
P	S-95	166+14.50	LT	INLET, PIPE, MES	1	22												1									1												
F																																							
P	S-96	166+20.90	RT	MH, PIPE	1	118																			1														
F																																							
P	S-97	497+50.00	LT	INLET, PIPE, PIPE	1	211												1																				45TH STREET
F																																							
P	S-97A	497+50.00	LT	MH (SPEC), PIPE	1	129											1																				45TH STREET
F																																							
P	S-98	497+50.00	RT	INLET, PIPE	1	32												1																				45TH STREET
F																																							
P	S-99	166+18.70	LT	MH																			1															
F																																							
P	S-100	1003+32.87	LT	MH, PIPE, MES	1							25												1								1					18.0	
F																																							
P	S-104	147+12.01	RT	MH				327																1														
F																																							
	SUB TOTALS			PLAN QUANTITY		627	1188	827	869	0	0	305	0	0	0	0	1	18	1	0	6	0	1	2	2	0	1	1	0	0	1	0				5.58	18.0	
				FINAL QUANTITY																																		

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 60116O

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

SUMMARY OF DRAINAGE STRUCTURES

SHEET NO.: 16

JUAN CARLOS LOPEZ-PANIAGUA — LICENSE — No. 41084 — STATE OF FLORIDA — PROFESSIONAL ENGINEER

2:31:33 PM 5/28/2014 P:\tz\007982\CONG044618\0000000013343\V3.00_CADV23456\520\drainage\summrd01.dgn

QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM DRAIN CLASS II RCP ROUND SHAPE (LF) UP TO 24" 15"	18"	24"	25" TO 36" 30"	36"	37" TO 48" 42"	48"	54"	ELLIP/ARCH SHAPE (LF) 14"x23"	19"x30"	UNDERDRAIN TYPE II (LF)	MH (SPEC) <10' (EA)	CURB INLETS P-5 <10' (EA)	J-5 <10' (EA)	J-5 >10' (EA)	P-6 <10' (EA)	J-6 <10' (EA)	MANHOLES P-7 PARTIAL (EA)	P-8 <10' (EA)	J-8 <10' (EA)	DITCH BOTTOM INLETS TYPE D MODIFY (EA)	MITERED END SECTIONS ROUND (EA) 15"	18"	24"	36"	48"	ELLIP/ARCH (EA) 14"x23"	19"x30"	FES (EA) 18"	FES (EA) 24"	DESILT PIPE (LF) 0-24"	CLASS I CONCRETE MISC (CY)	ENDWALLS (CY)	RIP RAP (TN)	REMARKS
P	S-105	166+56.85	RT	MH																			1																	
F																																								
P	S-106	168+25.30	RT	MH, PIPE	1		274																1													167				
F																																							
P	S-107	168+67.46	LT	MES, PIPE, MES	1		58																					2												
F																																							
P	S-108	168+84.51	LT	MES, PIPE, MES	1		50																					2												
F																																							
P	S-109	171+00.00	RT	MH, PIPE	1		140																	1																
F																																							
P	S-110	172+02.00	LT	INLET, PIPE, DBL MES	1		39																			1		2												
F																																							
P	S-120	23+00.94	LT	MES, PIPE, MES	1			43																					2											
F																																							
P	S-121	147+53.92	LT	INLET, PIPE	1			68																		1														
F																																							
P	S-130	106+40.00	LT	ENDWALL, PIPE	1	6																																2.3		NO RIP RAP
F																																							
P	S-131	108+60.00	LT	ENDWALL, PIPE	1	6																																2.3		NO RIP RAP
F																																							
P																																							
F																																							
P																																							
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F																																							
	SUB TOTALS			PLAN QUANTITY		12	561	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	2	0	6	2	0	0	0	0	0	0	167	[illegible]	[illegible]	0	
				FINAL QUANTITY																																				
	PROJECT TOTALS			PLAN QUANTITY		639	3992	2827	1484	1991	294	742	312	32	394	1165	1	53	5	5	10	2	3	7	4	3	1	11	3	2	2	2	6	0	2	167	0.34	42.88	74	
				FINAL QUANTITY																																				

No.	REVISIONS	DATE	BY

SCALE AS NOTED
DESIGNED BY PH
DRAWN BY JLS
CHECKED BY JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14
PROJECT NO. 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

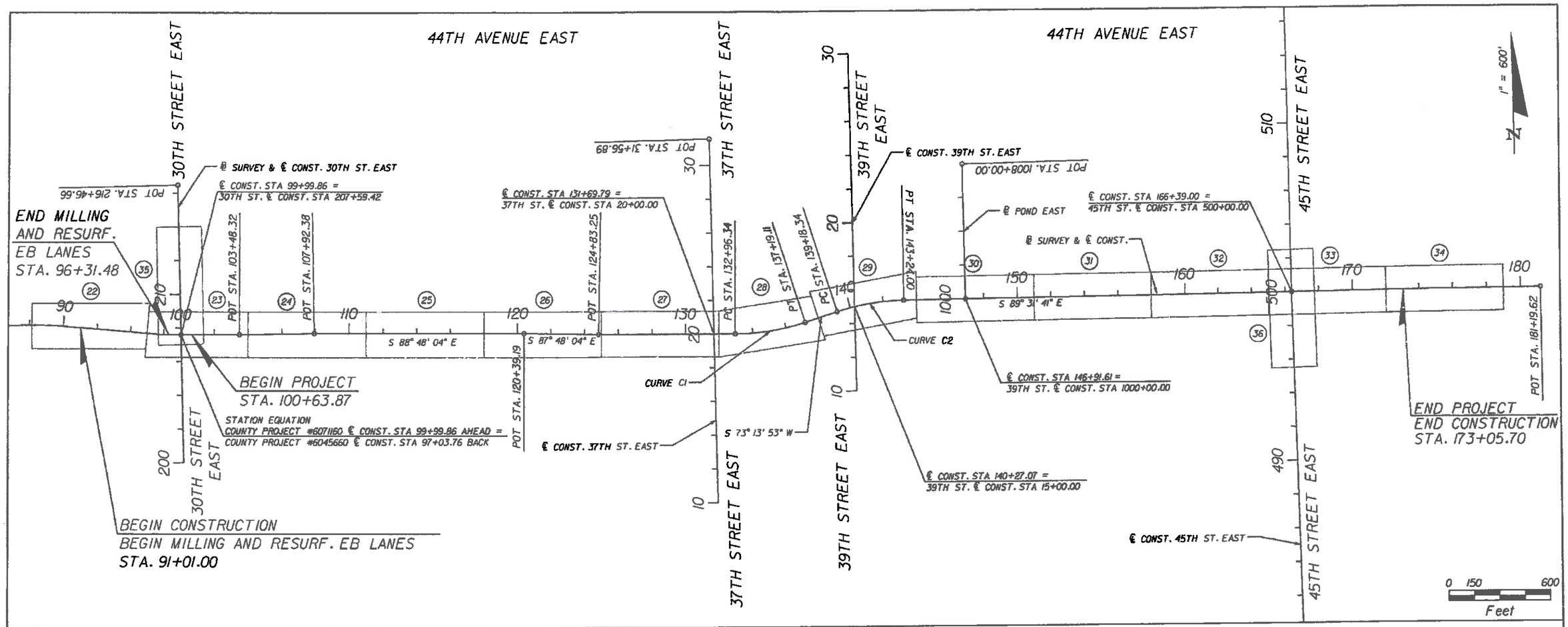
DESIGN ENGINEER JUAN C. LOPEZ
FL. LICENSE NO. 41084

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SUMMARY OF DRAINAGE STRUCTURES

SHEET NO. 17

2:31:31 PM 5/22/2014 PW:/007982\COM004461B\0000000000113343\3.00_CAD\23456152011\drainage\sumdrd01.dgn



CURVE AND COORDINATE DATA

CURVE NO.	ALIGNMENT	P.O.T. STATION	P.O.T. NORTH	P.O.T. EAST	P.C. STATION	P.C. NORTH	P.C. EAST	P.I. STATION	P.I. NORTH	P.I. EAST	P.T. STATION	P.T. NORTH	P.T. EAST	DELTA	D	T	L	R	BACK BEARING	AHEAD BEARING	e	DESIGN SPEED MPH
	℄ CONST.	99+99.86	1,137,321.4962	485,589.3748																		
	℄ CONST.	103+48.32	1,137,314.2057	485,937.7532																		
	℄ CONST.	107+92.38	1,137,312.6646	486,381.8153																		
	℄ CONST.	120+39.19	1,137,286.5786	487,628.3470																		
	℄ CONST.	124+83.25	1,137,269.5409	488,072.0849																		
C1	℄ CONST.				132+96.34	1,137,252.5292	488,884.9953	135+09.47	1,137,248.0700	489,098.0799	137+19.11	1,137,309.5599	489,302.1483	11° 58' 03" LT	4° 15' 00"	213.13'	422.76'	1348.14'	S 88° 48' 04" E	N 73° 13' 53" E	0.02	45
C2	℄ CONST.				139+18.34	1,137,367.0400	489,492.9093	141+22.71	1,137,426.0034	489,688.5928	143+24.00	1,137,424.3201	489,892.9598	11° 14' 26" RT	4° 15' 00"	204.37'	405.66'	1348.14'	N 73° 13' 53" E	S 89° 31' 41" E	0.02	45
	℄ CONST.	181+19.62	1,137,393.0584	493,688.4571																		
	45TH ST. ℄ CONST.	470+00.00	1,134,405.3289	492,229.2108																		
	45TH ST. ℄ CONST.	500+00.00	1,137,405.2531	492,207.8850																		35
	45TH ST. ℄ CONST.	529+57.06	1,140,362.3139	492,212.2967																		35
																						35
	37TH ST. ℄ CONST.	10+00.00	1,136,255.1798	488,760.8313																		
	37TH ST. ℄ CONST.	31+56.89	1,138,412.0670	488,755.7328																		
	℄ POND EAST	1000+00.00	1,137,421.2923	490,260.5639																		
	℄ POND EAST	1008+00.00	1,138,221.2921	490,260.0448																		
	39TH ST. ℄ CONST.	10+00.00	1,136,255.1798	488,760.8313																		
	39TH ST. ℄ CONST.	30+00.00	1,138,894.1781	489,592.1272																		

DONALD ROBERT HOLCOMB
LICENSE
No. 51970
STATE OF FLORIDA

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

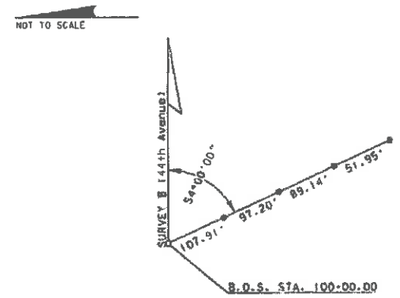
DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

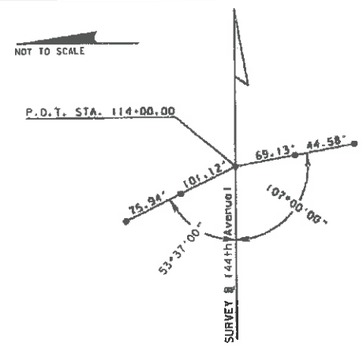
DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

PROJECT LAYOUT

SHEET NO.: 18



B.O.S. STA. 100+00.00
SET PK NAIL & DISK "LB 6566"
44th Avenue



P.O.T. STA. 114+00.00
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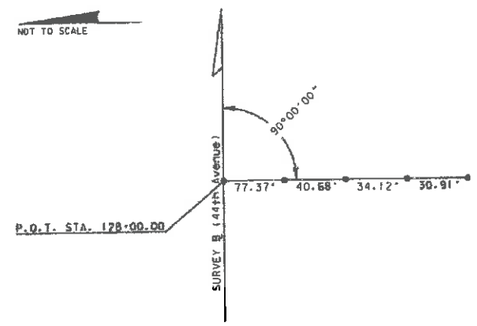
44th Avenue



P.O.T. STA. 128+00.00
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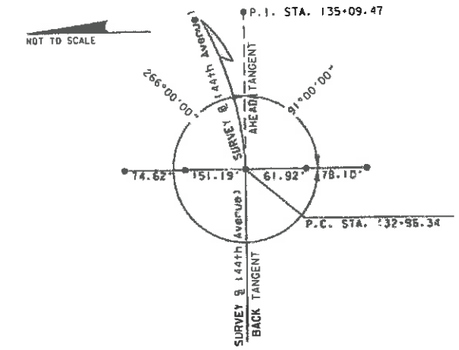
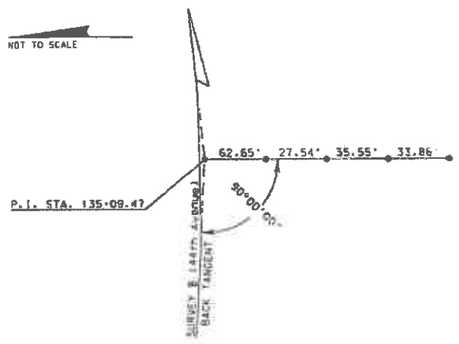
44th Avenue



P.C. STA. 132+96.34
SET⅝" IRON ROD & CAP "LB 6566"
44th Avenue



P.I. STA. 135+09.47
SET⅝" IRON ROD & CAP "LB 6566"
44th Avenue

POINT NOT SET
FALLS IN LAKE

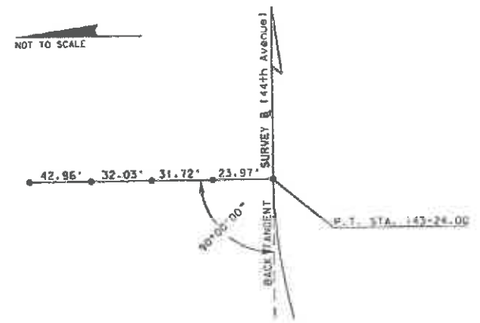
P.T. STA. 137+19.11
44th Avenue

POINT NOT SET
FALLS IN LAKE

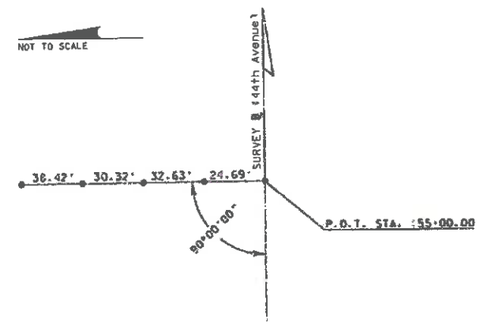
P.C. STA. 139+18.34
44th Avenue

POINT NOT SET
FALLS IN LAKE

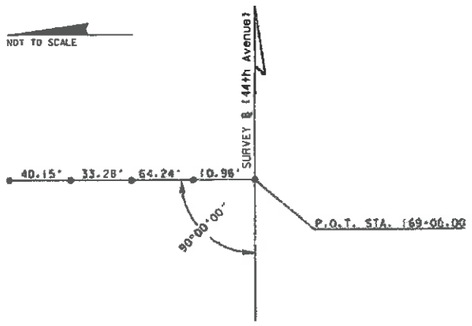
P.I. STA. 141+22.71
44th Avenue



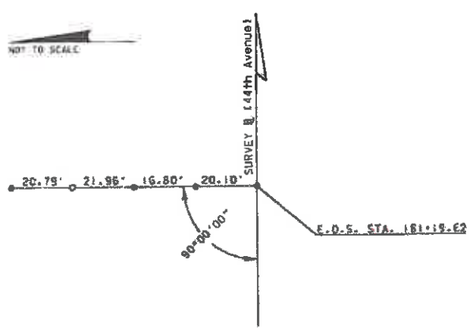
P.T. STA. 143+24.00
SET⅝" IRON ROD & CAP "LB 6566"
44th Avenue



P.O.T. STA. 155+00.00
SET⅝" IRON ROD & CAP "LB 6566"
44th Avenue



P.O.T. STA. 169+00.00
SET⅝" IRON ROD & CAP "LB 6566"
44th Avenue



E.O.S. STA. 181+19.62
SET⅝" IRON ROD & CAP "LB 6566"
44th Avenue

LEGEND

- ●. SET ⅝" IRON ROD AND CAP "LB 6566" (UNLESS OTHERWISE NOTED)
- ○. SET PK NAIL AND DISK "LB 6566" (UNLESS OTHERWISE NOTED)
- DENOTES SURVEY @ (S.R. 951)

44TH AVENUE EAST
FROM: 30TH STREET
TO: 45TH STREET
THIS MAP IS NOT A SURVEY

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY:
DRAWN BY:
CHECKED BY:

McKIM&CREED
378 Interstate Court
Sarasota, FL 34240
Phone: (941) 379-3404
Fax: (941) 379-3530
Licensed Business No. 6566
www.mckimcreed.com

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

PROFESSIONAL SURVEYOR: TOM HALSTEAD
P. S. M. NO.: 5770

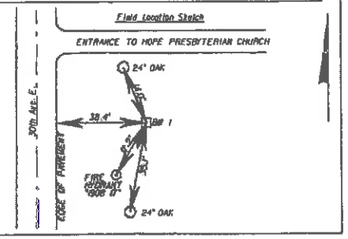
SURVEY REFERENCE POINTS

SHEET NO.: 19

MANATEE COUNTY
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 1 Elevation feet: 31.008
State Road No.: 44th Ave. County: MANATEE
Section: 8 Township: 35 S Range: 18 E Roadway Section I.D.: --
Establishing Firm: McKIM & CREED Financial Project ID: --
Established: 6/24/2009 Recovered: / / Field Book No.: 501677
State Plane Coordinates (Nearest Foot) N (Y): = 1137155 E (X): = 485839
Base Line Station and Offset: STA: 100+93, 865.4' RT.
Description of Monument: SET 4"X4" CONCRETE MONUMENT WITH BRASS DISK STAMPED "BM 1"
Distance and Direction from Nearest Intersection: 1600'+/- SOUTH OF THE INTERSECTION OF 38th Ave. E. & 30th St. E.

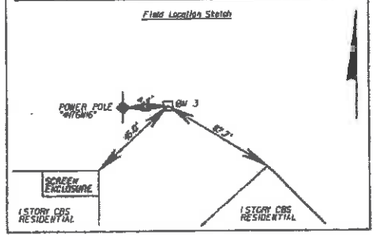
Field Location Sketch



MANATEE COUNTY
Vertical Control Data Sheet
DATUM
NGVD 1929 Y
NAVD 1988 ___

Monument Name or Designation: BM 3 Elevation feet: 20.076
State Road No.: 44th Ave. County: MANATEE
Section: 8 Township: 35 S Range: 18 E Roadway Section I.D.: --
Establishing Firm: McKIM & CREED Financial Project ID: --
Established: 6/24/2009 Recovered: / / Field Book No.: 501677
State Plane Coordinates (Nearest Foot) N (Y): = 1137218 E (X): = 487491
Base Line Station and Offset: STA: 86+05, 63.7' RT.
Description of Monument: SET 4"X4" CONCRETE MONUMENT WITH BRASS DISK STAMPED "BM 3"
Distance and Direction from Nearest Intersection: 140' +/- N.E. OF THE INTERSECTION OF 44th Dr. E. & 33rd Ct. E.

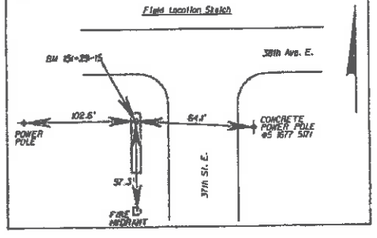
Field Location Sketch



MANATEE COUNTY
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 151-29-15 Elevation feet: 11.777
State Road No.: 44th Ave. County: MANATEE
Section: 8 Township: 35 S Range: 18 E Roadway Section I.D.: --
Establishing Firm: MANATEE COUNTY Financial Project ID: --
Established: / / Recovered: 6/24/2009 Field Book No.: 501677
State Plane Coordinates (Nearest Foot) N (Y): = 1137440 E (X): = 487140
Base Line Station and Offset: STA: 83+49, 853.8' LT.
Description of Monument: FOUND PK NAIL & MANATEE COUNTY DISK IN THE TOP OF A CONCRETE HEADWALL
Distance and Direction from Nearest Intersection: SOUTHWEST CORNER OF INTERSECTION OF 38th Ave. E. & 29th St. E.

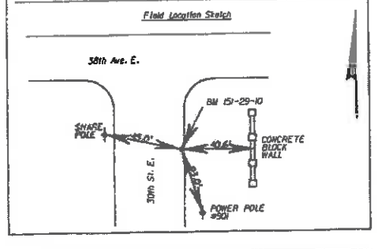
Field Location Sketch



MANATEE COUNTY
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 151-29-10 Elevation feet: 25.646
State Road No.: 44th Ave. County: MANATEE
Section: 8 Township: 35 S Range: 18 E Roadway Section I.D.: --
Establishing Firm: MANATEE COUNTY Financial Project ID: --
Established: / / Recovered: 6/24/2009 Field Book No.: 501677
State Plane Coordinates (Nearest Foot) N (Y): = 1138470 E (X): = 485596
Base Line Station and Offset: FALLS OUTSIDE OF PROJECT LIMITS
Description of Monument: FOUND PK NAIL & MANATEE COUNTY DISK
Distance and Direction from Nearest Intersection: 320' +/- NORTH OF THE INTERSECTION OF 30th ST. E. & 38th Ave.

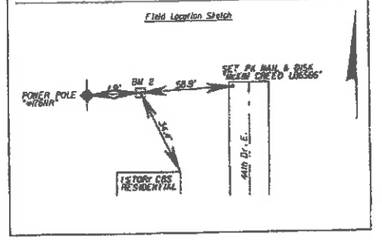
Field Location Sketch



MANATEE COUNTY
Vertical Control Data Sheet
DATUM
NGVD 1929 Y
NAVD 1988 ___

Monument Name or Designation: BM 2 Elevation feet: 30.763
State Road No.: 44th Ave. County: MANATEE
Section: 8 Township: 35 S Range: 18 E Roadway Section I.D.: --
Establishing Firm: McKIM & CREED Financial Project ID: --
Established: 6/24/2009 Recovered: / / Field Book No.: 501677
State Plane Coordinates (Nearest Foot) N (Y): = 1137240 E (X): = 486449
Base Line Station and Offset: STA: 108+61, 63.9' RT.
Description of Monument: SET 4"X4" CONCRETE MONUMENT WITH BRASS DISK STAMPED "BM 2"
Distance and Direction from Nearest Intersection: 150' +/- N. OF THE INTERSECTION OF 32nd St. E. & 44th Dr. E.

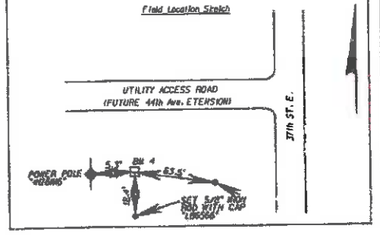
Field Location Sketch



MANATEE COUNTY
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 4 Elevation feet: 12.158
State Road No.: 44th Ave. County: MANATEE
Section: 8 Township: 35 S Range: 18 E Roadway Section I.D.: --
Establishing Firm: McKIM & CREED Financial Project ID: --
Established: 6/24/2009 Recovered: / / Field Book No.: 501677
State Plane Coordinates (Nearest Foot) N (Y): = 1137185 E (X): = 488573
Base Line Station and Offset: STA: 129+85, 64.0' RT.
Description of Monument: SET 4"X4" CONCRETE MONUMENT WITH BRASS DISK STAMPED "BM 4"
Distance and Direction from Nearest Intersection: SOUTHWEST QUADRANT OF THE INTERSECTION OF 37th St. EAST & A UTILITY ACCESS ROAD.

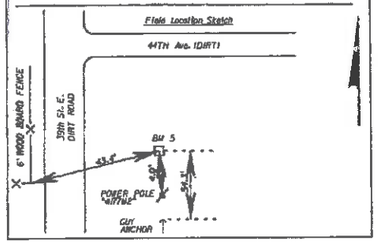
Field Location Sketch



MANATEE COUNTY
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 5 Elevation feet: 14.022
State Road No.: 44th Ave. County: MANATEE
Section: 9 Township: 35 S Range: 18 E Roadway Section I.D.: --
Establishing Firm: McKIM & CREED Financial Project ID: --
Established: 6/24/2009 Recovered: / / Field Book No.: 501677
State Plane Coordinates (Nearest Foot) N (Y): = 1137333 E (X): = 489623
Base Line Station and Offset: STA: 140+39, 64.8' RT.
Description of Monument: SET 4"X4" CONCRETE MONUMENT WITH BRASS DISK STAMPED "BM 5"
Distance and Direction from Nearest Intersection: SOUTHEAST CORNER OF THE INTERSECTION OF 44th Ave. & 39th St. E.

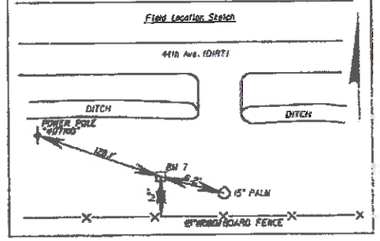
Field Location Sketch



MANATEE COUNTY
Vertical Control Data Sheet
DATUM
NGVD 1929 Y
NAVD 1988 ___

Monument Name or Designation: BM 7 Elevation feet: 15.644
State Road No.: 44th Ave. County: MANATEE
Section: 9 Township: 35 S Range: 18 E Roadway Section I.D.: --
Establishing Firm: McKIM & CREED Financial Project ID: --
Established: 6/24/2009 Recovered: / / Field Book No.: 501677
State Plane Coordinates (Nearest Foot) N (Y): = 1137316 E (X): = 491548
Base Line Station and Offset: STA: 159+86, 84.4' RT.
Description of Monument: SET 4"X4" CONCRETE MONUMENT WITH BRASS DISK STAMPED "BM 7"
Distance and Direction from Nearest Intersection: 140' SOUTH AND 642' EAST OF THE INTERSECTION OF DOVER Dr. E. & FAIRFAX Dr. E.

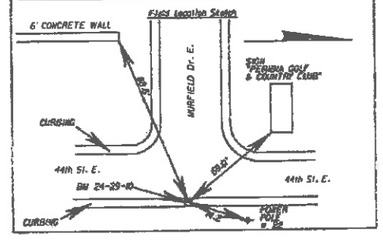
Field Location Sketch



MANATEE COUNTY
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 24-29-10 Elevation feet: 17.833
State Road No.: 44th Ave. County: MANATEE
Section: X Township: X S Range: X E Roadway Section I.D.: --
Establishing Firm: UNKNOWN Financial Project ID: --
Established: / / Recovered: 6/24/2009 Field Book No.: 501677
State Plane Coordinates (Nearest Foot) N (Y): = 1136309 E (X): = 492226
Base Line Station and Offset: STA: 156+66, 1096.0' RT.
Description of Monument: FOUND SQUARE CUT IN TOP OF CURB.
Distance and Direction from Nearest Intersection: AT THE INTERSECTION OF 45th St. E. & MORFIELD Dr. E.

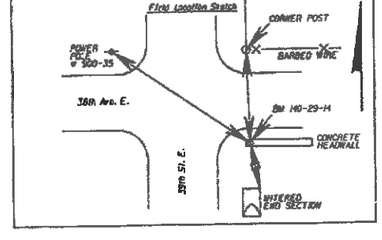
Field Location Sketch



MANATEE COUNTY
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 140-29-14 Elevation feet: 11.277
State Road No.: 44th Ave. County: MANATEE
Section: 4 Township: 35 S Range: 18 E Roadway Section I.D.: --
Establishing Firm: UNKNOWN Financial Project ID: --
Established: / / Recovered: 6/24/2009 Field Book No.: 501677
State Plane Coordinates (Nearest Foot) N (Y): = 1138739 E (X): = 489618
Base Line Station and Offset: STA: 140+80, 1317.4' LT.
Description of Monument: TRIANGLE CUT AT THE CENTER OF A HEADWALL
Distance and Direction from Nearest Intersection: SOUTHEAST CORNER OF THE INTERSECTION OF 39th St. E. & 38th Ave. E.

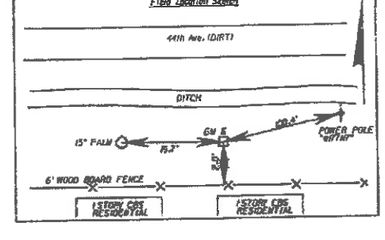
Field Location Sketch



MANATEE COUNTY
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 6 Elevation feet: 15.889
State Road No.: 44th Ave. County: MANATEE
Section: 9 Township: 35 S Range: 18 E Roadway Section I.D.: --
Establishing Firm: McKIM & CREED Financial Project ID: --
Established: 6/24/2009 Recovered: / / Field Book No.: 501677
State Plane Coordinates (Nearest Foot) N (Y): = 1137324 E (X): = 490581
Base Line Station and Offset: STA: 150+13, 94.4' RT.
Description of Monument: SET 4"X4" CONCRETE MONUMENT WITH BRASS DISK STAMPED "BM 6"
Distance and Direction from Nearest Intersection: 132' NORTH & 1285' WEST OF THE INTERSECTION OF DOVER Dr. E. & FAIRFAX Dr. E.

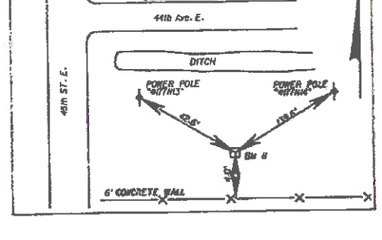
Field Location Sketch



MANATEE COUNTY
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 8 Elevation feet: 17.342
State Road No.: 44th Ave. County: MANATEE
Section: 9 Township: 35 S Range: 18 E Roadway Section I.D.: --
Establishing Firm: McKIM & CREED Financial Project ID: --
Established: 6/24/2009 Recovered: / / Field Book No.: 501677
State Plane Coordinates (Nearest Foot) N (Y): = 1137395 E (X): = 492329
Base Line Station and Offset: STA: 167+60, 69.3' RT.
Description of Monument: SET 4"X4" CONCRETE MONUMENT WITH BRASS DISK STAMPED "BM 8"
Distance and Direction from Nearest Intersection: SOUTHEAST CORNER OF THE INTERSECTION OF 44th Ave. E. & 45th St. E.

Field Location Sketch



SCALE	AS NOTED		
DESIGNED BY			
DRAWN BY			
CHECKED BY			

REVISIONS | DATE | BY

McKIM & CREED
378 Interstate Court
Sarasota, FL 34240
Phone: (941) 379-3404
Fax: (941) 379-3530
Licensed Business No. 6566
www.mckimcreed.com

DATE 05/27/14
PROJECT NO. 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

PROFESSIONAL SURVEYOR TOM HALSTEAD
P. S. M. NO. 5770

BENCHMARKS

SHEET NO. 20

GENERAL NOTES

1. ALL STATIONS AND OFFSETS REFER TO THE ℄ OF CONSTRUCTION UNLESS OTHERWISE NOTED.
2. THE ROAD CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE APPROPRIATE ROADWAY AND TRAFFIC DESIGN STANDARDS AS LISTED ON THE KEY SHEET.
3. DESIGN SPEED IS 45 M.P.H.
4. GRADES SHOWN ARE FINISHED GRADES.
5. THE CONTRACTOR SHALL FIELD VERIFY ANY AND ALL EXISTING CONDITIONS PRIOR TO COMMENCING CONSTRUCTION, AND SHALL NOTIFY THE COUNTY PROMPTLY OF ANY DISCREPANCIES.
6. SEPARATE PAYMENT SHALL BE MADE ONLY FOR THE ITEMS OF WORK LISTED AND IDENTIFIED BY APPROPRIATE PAY ITEM ON THE BID FORM. THE COST OF ANY RELATED WORK NOT SPECIFICALLY IDENTIFIED, BUT WHICH IS REQUIRED FOR SATISFACTORY COMPLETION OF THE WORK, SHALL BE CONSIDERED TO BE INCLUDED IN THE CONTRACT PRICE FOR THE APPROPRIATE BID ITEM.
7. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF EXISTING UNDERGROUND AND OTHER UTILITIES IS BASED ON AVAILABLE RECORDS AND IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO AND IS RESPONSIBLE FOR THE COORDINATION OF UTILITY RELOCATION.
8. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
9. THE CONTRACTOR SHALL NOTIFY SUNSHINE STATE ONE-CALL OF FLORIDA INC, AT 1-800-432-4770, TWO (2) FULL BUSINESS DAYS PRIOR TO CONSTRUCTION.
10. ANY PUBLIC LAND CORNER WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR SHALL NOTIFY THE COUNTY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AT ALL TIMES DURING CONSTRUCTION BY UTILIZING WATER TRUCKS, SILT DRAFT FENCING, SYNTHETIC BALES AND BY COVERING OPEN BODIED TRUCKS TRANSPORTING DEBRIS. THIS WORK SHALL BE PAID UNDER EROSION CONTROL PAY ITEMS.
12. ATTENTION IS CALLED TO THE FACT THAT PORTIONS OF THE DRAINAGE STRUCTURES MAY EXTEND INTO THE STABILIZED SUBBASE AND THAT CAUTION SHOULD BE EXERCISED DURING STABILIZATION OPERATIONS TO AVOID DAMAGE TO THESE STRUCTURES.
13. ALL CONSTRUCTION SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND FLORIDA ACCESSIBILITY CODE AT CURBS, GUTTERS, SIDEWALKS, INTERSECTIONS, ETC. HANDICAP RAMPS ARE TO BE CONSTRUCTED WITH DETECTABLE WARNING SURFACES PER FDOT INDEX 304. SAWCUTTING GROOVES IN RAMPS IS NON-CONFORMING AND POSE A LIABILITY.
14. THE COUNTY RESERVES THE RIGHT TO PERFORM QUALITY ASSURANCE TESTING ON ALL MATERIAL DELIVERED TO THE PROJECT AND TO REJECT ALL MATERIALS NOT MEETING ACCEPTABLE STANDARDS.
15. ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY, PAYMENT SHALL NOT BE MADE FOR THIS WORK.
16. ALL EXISTING DRAINAGE STRUCTURES, UNDERDRAIN SYSTEMS, DITCHES, AND PONDS, ARE TO REMAIN UNLESS OTHERWISE NOTED.
17. ALL STORMDRAIN PIPE SHALL BE STEEL REINFORCED CONCRETE PIPE (CLASS II).
18. THE CONTRACTOR SHALL FIELD VERIFY EXISTING STORMDRAIN AND UNDERDRAIN EXACT LOCATIONS AS WELL AS FINISHED PAVEMENT ELEVATIONS PRIOR TO PRECASTING THE DRAINAGE STRUCTURES.
19. ALL EMBANKMENT MATERIALS SHALL BE CLASSIFICATION A-3, REFER TO FDOT INDEX NO. 505. ALL COSTS SHALL BE INCLUDED IN PAY ITEM 120-6.
20. BEARINGS SHOWN HEREON ARE BASED ON GPS OBSERVATIONS OF THE FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983, 1999 ADJUSTMENT.
21. ELEVATIONS SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
22. ALL MATERIALS NOT CLAIMED BY THE COUNTY SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN AREAS PROVIDED BY THE CONTRACTOR. THIS WORK SHALL BE INCLUDED IN AND PAID FOR UNDER THE PAY ITEM FOR CLEARING AND GRUBBING.
23. ALL AREAS OF EXPOSED EARTH RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE SODDED AS DIRECTED BY THE ENGINEER. SEEDING AND MULCHING SHALL BE APPLIED ONLY WHERE SPECIFICALLY CALLED FOR IN THE PLANS AND SPECIFICATIONS, OR WHERE SPECIFICALLY DIRECTED BY THE COUNTY.
24. THE CONTRACTOR SHALL BACKFILL AREAS TO BE SODDED WITH CLEAN FILL TO MAINTAIN PROPER GRADE OF THE PLANTING AREA, AND THE SOD SHALL BE PROPERLY CUT-IN AND TAMPED. THE COST OF WHICH SHALL BE INCLUDED IN THE PAY ITEM FOR SOD.
25. ALL EXISTING AND PROPOSED UTILITY AND STORM DRAIN SEWER STRUCTURES WHOSE TOPS WILL BE EXPOSED WITHIN ANY SIDEWALK OR PAVED AREA SHALL BE ADJUSTED SO THAT THE TOP SURFACE OF COVERS OR FRAMES SHALL BE FLUSH WITH THE SIDEWALK OR PAVEMENT SURFACE. ALL EXISTING AND PROPOSED UTILITY AND STORM SEWER STRUCTURES WHOSE TOPS WILL BE EXPOSED WITHIN UNPAVED AREAS SUBJECT TO VEHICULAR, BICYCLE, OR PEDESTRIAN TRAFFIC SHALL BE ADJUSTED SO THAT THE TOP SURFACE OF COVERS OR FRAMES SHALL BE NO MORE THAN ONE INCH ABOVE THE FINISHED GRADE. WHERE SODDING IS APPLIED, "FINISHED GRADE" SHALL BE NOMINAL HEIGHT OF GRASS AFTER THE SOD IS FIRMLY PLACED.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE STAKE-OUT OF THE PROJECT, I.E., LINE, GRADE, SLOPE, UTILITY RELOCATIONS OR ANY OTHER STAKE-OUT THAT MAY BE REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THIS WORK.
27. OVERALL CLEANUP SHALL BE ACCOMPLISHED BY THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY. ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE FOR MOBILIZATION.
28. DRIVEWAY LOCATION AND WIDTH MAY BE FIELD ADJUSTED DURING CONSTRUCTION BY THE CONTRACTOR IN COORDINATION WITH REQUESTS FROM PROPERTY OWNERS.
29. RIPRAP (BANK AND SHORE) IS INSTALLED AS CALLED OUT IN THE PLAN SHEETS AND CROSS SECTIONS. THE THICKNESS OF THIS MATERIAL IS 2.5' AND IT IS PAID UNDER PAY ITEM 530-3-3. RIPRAP (DITCH LINING) IS ALSO CALLED OUT IN THE PLAN SHEETS WHERE APPLICABLE AND IS PAID UNDER PAY ITEM 530-3-4. ALL RIPRAP PAY ITEMS SHALL INCLUDE THE FILTER FABRIC REQUIRED BY THE SPECIFICATIONS.
30. PRIOR TO COMMECING WITH CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL SECURE AN APPROVED SWFWMD WATER USE PERMIT FOR TEMPORARY DEWATERING INCLUDING THE PROVISION OF DETAILED DEWATERING PLANS SPECIFIC TO HIS CONSTRUCTION MEANS AND METHODS. GROUNDWATER SAMPLING RESULTS INDICATE THAT ARSENIC CONCENTRATIONS AND TOTAL LEAD ARE PRESENT ABOVE GROUNDWATER CLEANUP TARGET LEVELS. EFFLUENT TREATMENT PRIOR TO DISCHARGE USING FILTRATION OR SETTLING FOLLOWED BY GRANULAR ACTIVATED CARBON AND/OR AIR STRIPING UNITS SHALL BE IMPLEMENTED.
31. SOIL EXCAVATION AND REUSE FROM STATION 115+00 TO 120+00 HAS BEEN IDENTIFIED TO CONTAIN TOTAL ARSENIC CONCENTRATIONS THAT EXCEED THE FDEP SOIL CLEANUP TARGET LEVELS (SCTL) FOR RESIDENTIAL DIRECT EXPOSURE. THE ARSENIC CONCENTRATION IN THE SOILS IS BELOW THE SCTL FOR COMMERCIAL/INDUSTRIAL DIRECT EXPOSURE LEVELS. THESE SOILS CAN BE USED WITHIN THE LIMITS OF THE ROADWAY PROJECT AND SHALL NOT BE USED OFFSITE.

DRAINAGE STRUCTURE NOTES

1. SPECIAL ATTENTION IS DIRECTED TO THE FACT THAT PORTIONS OF SOME DRAINAGE STRUCTURES EXTEND INTO THE STABILIZED PORTION OF THE ROADBED AND EXTREME CAUTION WILL BE NECESSARY IN STABILIZATION OPERATIONS AT THESE LOCATIONS.
2. ALL PROPOSED PIPE FOR STORMDRAINS, CROSSDRAINS, AND SIDE DRAINS SHALL BE REINFORCED CONCRETE PIPE (RCP) CLASS II.
3. THIS PROJECT INCLUDES PROPOSED UNDERDRAIN FOR ROAD BASE DRAINAGE. THE PROPOSED UNDERDRAIN SYSTEM OUTLET PIPES ARE TO CONNECT TO THE PROPOSED DRAINAGE STRUCTURE BOTTOMS. SPECIAL ATTENTION IS DIRECTED TO THE FACT THAT THE PROPOSED UNDERDRAIN SYSTEM OUTLET PIPE CONNECTIONS ARE NOT DETAILED IN THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING UNDERDRAIN SYSTEM LIMITS FROM THE SUMMARY OF UNDERDRAIN IN THE PLANS, AND THE UNDERDRAIN SYSTEM ALIGNMENT THROUGH UTILITY COORDINATION AND IN ACCORDANCE WITH INDEXES 286 AND 500. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE UNDERDRAIN PIPE CONNECTION OPENINGS PRIOR TO CASTING AND INSTALLING THE DRAINAGE STRUCTURES. THE COST FOR THE CONTRACTORS DETERMINATION AND INSTALLATION OF UNDERDRAIN PIPE CONNECTION OPENINGS IN THE PROPOSED DRAINAGE STRUCTURES IS INCLUDED IN THE COST FOR EACH RESPECTIVE DRAINAGE STRUCTURE RECEIVING THE UNDERDRAIN CONNECTIONS. SEE SUMMARY OF UNDERDRAIN IN THE PLANS FOR PROPOSED UNDERDRAIN LOCATION INFORMATION.
4. THE CONTRACTOR IS TO FIELD VERIFY AND / OR DETERMINE THE EXACT LOCATIONS, DIMENSIONS, AND ELEVATION OF ALL UTILITIES THAT ARE SHOWN TO BE IN CLOSE PROXIMITY TO PROPOSED UNDERDRAIN SYSTEMS, DRAINAGE STRUCTURES AND UTILITIES TO BE ACCOMMODATED BY A PROPOSED CONFLICT STRUCTURE. THIS INFORMATION SHALL BE USED BY THE CONTRACTOR FOR HIS USE IN PROPERLY ALIGNING THE PROPOSED UNDERDRAIN SYSTEMS FOR UTILITY CONFLICT AVOIDANCE, AND FOR HIS USE IN PROPERLY CASTING AND PLACING THE DRAINAGE STRUCTURES.
5. THE CONTRACTOR IS TO FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF ALL DRAINAGE STRUCTURES AND PIPES PRIOR TO ORDERING, CASTING, OR PLACING PROPOSED DRAINAGE STRUCTURES AND PIPES.
6. SPECIAL ATTENTION IS DIRECTED TO THE FACT THAT INLET ELEVATIONS FOR CURB INLETS TYPE 5 AND 6 (FDOT INDEX NO. 211) REFERENCE THE EDGE OF PAVEMENT.
7. THE CONTRACTOR IS TO PROVIDE STRUCTURAL DESIGN AND SHOP DRAWINGS FOR INLET TYPE SPECIAL DRAINAGE STRUCTURES.
8. ALL STORMDRAIN MANHOLES SHALL USE MANATEE COUNTY ACCESS COVER, PER MANATEE COUNTY STANDARD NO. 203.1.
9. ANY STORMDRAIN INLETS REQUIRING AN ACCESS COVER SHALL BE IN ACCORDANCE WITH MANATEE COUNTY STANDARD NO. 203.
10. PROPOSED UNDERDRAIN FOR ROAD SUBGRADE DRAINAGE AT LOCATIONS REQUIRING REMOVAL OF PLASTIC MATERIALS SHALL USE UNDERDRAIN TYPE II PER FDOT INDEX NO. 281, INSTALLED PER FDOT INDEX NO. 500 (SEE PLANS FOR LOCATIONS).

DONALD ROBERT HOLCOMB
LICENSE
No. 51970
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
5-13-14

UTILITY CONTACTS

BRIGHTHOUSE NETWORKS	ALEX FLEMING	(941) 748-3816
FLORIDA POWER AND LIGHT DISTRIBUTION	GREG COKER	(941) 723-4430
FLORIDA POWER AND LIGHT LAND MANAGEMENT	MARK BYERS	(941) 316-6288
MANATEE COUNTY UTILITIES	KATHY MCMAHON	(941) 792-8811
VERIZON FLORIDA	DENISE HUTTON	(941) 906-6722

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

GENERAL NOTES

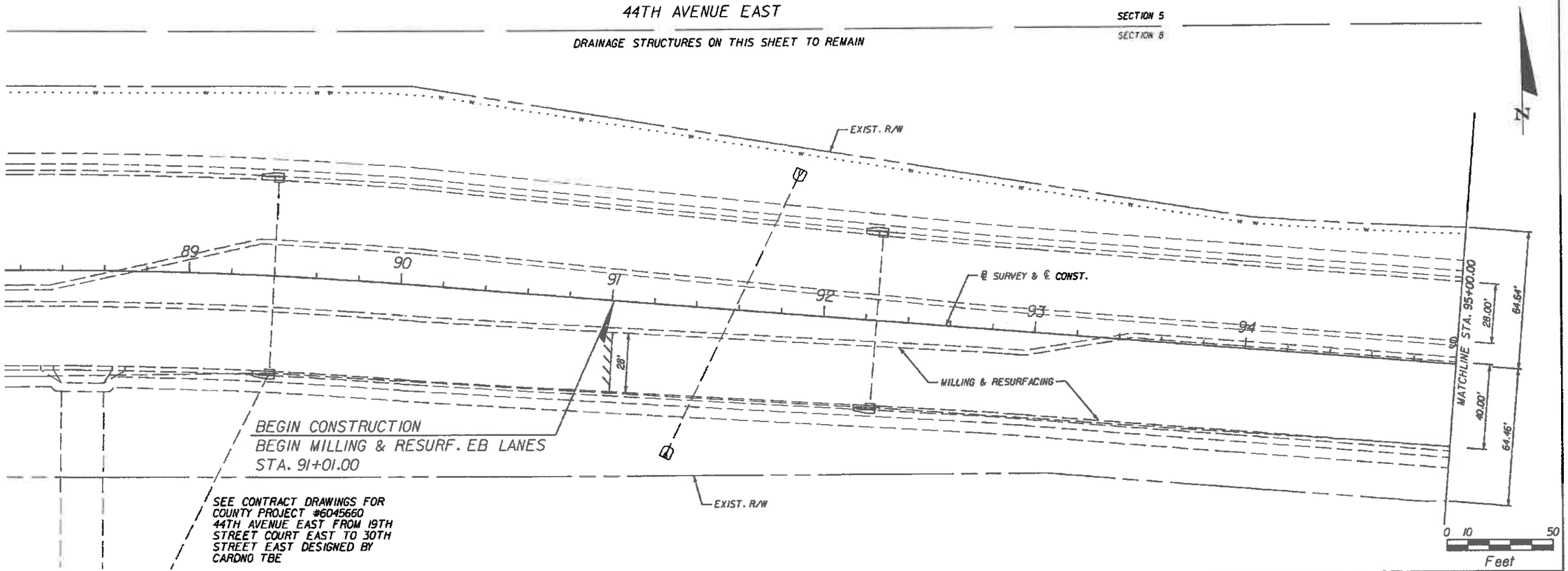
SHEET NO.: 21

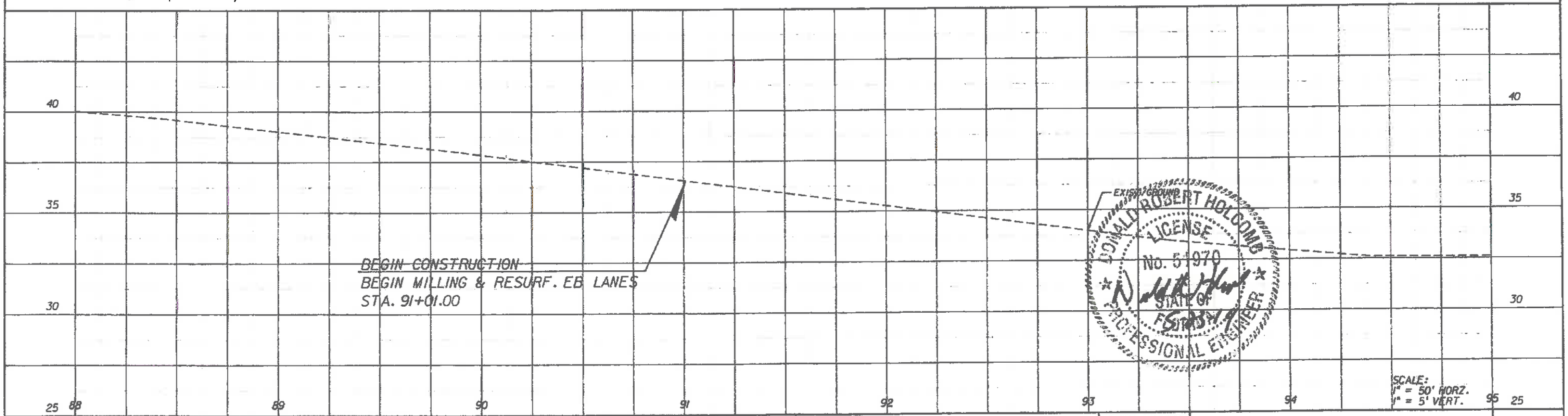
11:26:21 AM 6/13/2014
FW:/007982\CON00446\8\000000001\3343\V3.00_CAD\234561520\roadway\gnnrd01.dgn

44TH AVENUE EAST

SECTION 5
SECTION 8

DRAINAGE STRUCTURES ON THIS SHEET TO REMAIN





DONALD ROBERT HOLCOMB
LICENSE
No. 51970
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

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Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

PLAN & PROFILE SHEET
STA. 88+00 TO STA. 95+00

SHEET NO.: 22

BEGIN 30TH ST. EAST
MILLING & RESURF.
STA. 208+43.83

STATION EQUATION
COUNTY PROJECT #6071160
℄ CONST. STA 100+00.00 =
COUNTY PROJECT #6045660
℄ CONST. STA 97+03.76

44TH AVENUE EAST

30TH STREET EAST

MATCHLINE STA. 95+00.00

64.64'
28.00'
40.00'
64.46'

208
207
96
97
100
101
102
103

°88°33'07"

EXIST. R/W
5' CONC. S/W
CONST. 340' OF 24" PIPE
+63.87 39.00' LT.
C & G TYPE F
CONST. 50' OF 18" PIPE
MATCH EXISTING *
+48.32 10.99' LT.
+63.87 1.00' RT.
@ SURVEY & ℄ CONST.
+98.32 1.00' RT.
S 88° 48' 04" E
S 89° 48' 4" E
+63.87 11.00' RT.
+63.87 39.00' RT.
C & G TYPE E
C & G TYPE F
CONST. 81' OF 18" PIPE
+48.32 11.00' RT.
+48.32 39.00' RT.
FPL EASEMENT
5' CONC. S/W
EXIST. R/W
CONST. 50' OF 18" PIPE

MATCHLINE STA. 103+48.32
MATCHLINE STA. 104+00.00

59.10'
28.00'
60.90'
28.00'

END MILLING & RESURF.
STA. 96+31.48

@ SURVEY 30TH ST. EAST STA. 207+59.42 =
@ SURVEY 44TH AVE. EAST STA. 99+99.86

BEGIN PROJECT
STA. 100+63.87

18" RCP

S-2
STA. 102+50.19 (40.25' LT.)
CONST. INLET TYPE P-6 (ALT. B)
INDEX NO. 211
INLET EL. 31.45
FL 27.40 (AH)

S-4
STA. 103+00.00 (40.25' LT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 31.60
FL 26.70 (AH)
FL 27.30 (BK)
FL 27.10 (RT.)

S-3
STA. 102+50.19 (40.25' RT.)
CONST. INLET TYPE P-6 (ALT. B)
INDEX NO. 211
INLET EL. 31.45
FL 27.40 (AH)

S-5
STA. 103+00.00 (40.25' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 31.60
FL 27.30 (LT.)
FL 27.30 (BK)

0 10 50
Feet

* SEE CONTRACT DRAWINGS FOR COUNTY PROJECT #6045660
44TH AVENUE EAST FROM 19TH STREET COURT EAST
TO 30TH STREET EAST DESIGNED BY CARDNO TBE

BEGIN PROJECT
STA. 100+63.87

MATCH EXISTING *
STA. 100+63.87

32.57

PROFILE GRADE LINE

PI +50.19
EL. 32.07

(-)0.300%
(+)0.300%

32.46

S-2
S-4

EXIST. GRADE

SHGWT EL. = 29.3

CONST. 18" PIPE
18" PIPE
CONST. 24" PIPE

FL 27.40
FL 27.30
FL 27.10
FL 26.70

END MILLING & RESURF. EB LANES
STA. 96+31.48

35
30
25
20

95 96 97 100 101 102 103 104

30.7

SCALE:
1" = 50' HORZ.
1" = 5' VERT.

DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

PLAN & PROFILE SHEET
STA. 95+00 TO STA. 104+00

SHEET NO.: 23

44TH AVENUE EAST

32ND COURT EAST

32ND STREET EAST

RETURN 2

18" RCP

EXIST. R/W

6' CONC. S/W

CONST. 6' OF 15" PIPE

CONST. 24" PIPE

@ SURVEY & ℄ CONST.

S 89° 48' 4" E

S 88° 48' 04" E

CONST. 221' OF 24" PIPE

+49.07 40.26' LT.

+48.88 12.26' LT.

C & G TYPE F

℄ STA. 107+92.38

CONST. 340' OF 24" PIPE

75.00' R

+84.84 9.75' LT.

+12.00 4.66' LT.

5.00' R

+58.38 4.66' LT.

+85.54 9.75' LT.

C & G TYPE E

CONST. 81' OF 18" PIPE

+53.22 9.07' RT.

+53.05 37.07' RT.

C & G TYPE F

CONST. 78' OF 18" PIPE

+84.84 9.75' RT.

+12.00 4.66' RT.

+58.38 4.66' RT.

+85.54 9.75' RT.

109+07.59 52.25' LT.

109+57.59 52.25' LT.

109+05.19 67.75' RT.

109+55.19 67.75' RT.

FPL EASEMENT

MATCHLINE STA. 104+00.00

MATCHLINE STA. 111+00.00

59.10'

60.90'

28.00'

52.25'

57.75'

S-7
STA. 106+40.00 (38.86' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 31.69
FL 26.70 (LT.)

S-9
STA. 108+60.00 (39.00' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 31.03
FL 26.20 (LT.)

S-130
STA. 106+40.00 (49.00' LT.)
CONST. 15" SPECIAL CONCRETE ENDWALL
INDEX NO. 282
FL 29.40

S-131
STA. 108+60.00 (47.00' LT.)
CONST. 15" SPECIAL CONCRETE ENDWALL
INDEX NO. 282
FL 29.30

0 10 50
Feet

S-6
STA. 106+40.00 (41.47' LT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 31.69
FL 26.00 (AH)
FL 26.00 (BK)
FL 26.50 (RT.)
FL 28.00 (LT.)

S-8
STA. 108+60.00 (39.00' LT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 31.03
FL 24.60 (AH)
FL 25.50 (BK)
FL 26.00 (RT.)
FL 27.20 (LT.)

PI +84.53 EL. 32.71

PI +30.00 EL. 31.38

(+) 0.300%

(-) 0.300%

(-) 0.600%

PROFILE GRADE LINE

EXIST. GROUND

15" PIPE
FL 28.00
18" PIPE
FL 26.50
FL 26.00

15" PIPE
FL 27.20
18" PIPE
FL 26.00
FL 25.50
FL 24.60

SHGWT EL. = 27.6

CONST. 24" PIPE

32.46

30.7

28.7

35
30
25
20

104 105 106 107 108 109 110 111

SCALE:
1" = 50' HORZ.
1" = 5' VERT.

DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
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HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607116O

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

PLAN & PROFILE SHEET
STA. 104+00 TO STA. 111+00

SHEET NO.: 24

44TH AVENUE EAST

34TH STREET EAST

MATCHLINE STA. 111+00.00

MATCHLINE STA. 118+00.00

TEMP. EASEMENT

6' CONC. S/W

EXIST. R/W

BEGIN HANDRAIL +22.35, 48.00' LT.

BEGIN WALL +50.00, 51.25' LT.

HANDRAIL PER INDEX 861

CONST. UNDERDRAIN CLEANOUT INDEX NO. 286 STA. 115+44.93 (43.83' LT.) FL 23.08

GRAVITY WALL PER INDEX 6011

CONST. 270' OF UNDERDRAIN TYPE II, INDEX NO. 286

CONST. 24" PIPE

CONST. 290' OF 30" PIPE

C & G TYPE F

CONST. END ANCHORAGE ASSEMBLY TYPE II BEGIN CONST. GUARDRAIL STA. 115+32.35, 39.75' LT.

CONST. 325' OF 30" PIPE

C & G TYPE F

S 88° 48' 04" E

4.25' R

@ SURVEY & ℄ CONST.

REMOVE EXIST. PAVT. & SHLDR. GUTTER

CONST. 78' OF 18" PIPE

C & G TYPE E

CONST. 78' OF 18" PIPE

C & G TYPE E

6' CONC. S/W

FPL EASEMENT

C & G TYPE F

CONST. UNDERDRAIN CLEANOUT INDEX NO. 286 STA. 114+99.55 (41.42' RT.) FL 23.50

CONST. 315' OF UNDERDRAIN TYPE II, INDEX NO. 286

EXIST. R/W

SECTION 8

SECTION 9

0 10 50 Feet

135' V.C.

+3251 EL. 28.36

PI +100.00 EL. 27.96

+67.49 EL. 27.03

(-) 0.600%

(-) 1.378%

PROFILE GRADE LINE

EXIST. GROUND

18" PIPE

CONST. 24" PIPE

FL 24.40

FL 23.90

FL 22.70

CONST. 30" PIPE

18" PIPE

FL 23.00

FL 22.00

FL 17.70

SHGWT EL. = 23.6

CONST. 30" PIPE

S-15 STA. 112+00.00 (39.00' LT.) CONST. INLET TYPE P-5 (ALT. B) INDEX NO. 211 INLET EL. 29.20 FL 23.70 (AH) FL 23.90 (BK) FL 24.40 (RT.)

S-16 STA. 112+00.00 (39.00' RT.) CONST. INLET TYPE P-5 (ALT. B) INDEX NO. 211 INLET EL. 29.20 FL 25.10 (LT.)

S-17 STA. 114+90.00 (39.00' LT.) CONST. INLET TYPE P-5 (ALT. B) INDEX NO. 211 INLET EL. 27.36 FL 17.70 (AH) FL 22.00 (BK) FL 23.00 (RT.)

S-18 STA. 114+90.00 (39.00' RT.) CONST. INLET TYPE P-5 (ALT. B) INDEX NO. 211 INLET EL. 27.36 FL 23.20 (LT.)

DONALD ROBERT HOLCOMB LICENSE No. 51970 STATE OF FLORIDA

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
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DATE	05/27/14
PROJECT NO.	6071160

Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER	DONALD R. HOLCOMB
FL. LICENSE NO.	51970

PLAN & PROFILE SHEET STA. 111+00 TO STA. 118+00

SHEET NO. 25

44TH AVENUE EAST

S-22
STA. 118+15.00 (39.00' LT.)
CONST. INLET TYPE J-5
ALT B (4' x 4')
INDEX NO. 211
INLET EL. 23.06
FL 13.20 (AH)
FL 16.90 (BK)
FL 18.20 (RT.)
FL 19.30 (BK) UD

S-24
STA. 121+20.00 (40.42' LT.)
CONST. INLET TYPE J-5
ALT B (4' x 4')
INDEX NO. 211
INLET EL. 18.85
FL 11.50 (AH)
FL 12.50 (BK)
FL 14.00 (RT.)
FL 15.10 (BK) UD

S-26
STA. 123+00.00 (41.02' LT.)
CONST. INLET TYPE J-5
ALT B (4' x 4')
INDEX NO. 211
INLET EL. 16.49
FL 10.20 (AH)
FL 10.90 (BK)
FL 11.70 (RT.)

CONST. 290' OF UNDERDRAIN TYPE II, INDEX NO. 286
CONST. 30" PIPE
CONST. UNDERDRAIN CLEANOUT INDEX NO. 286 STA. 118+29.93 (43.83' LT.) FL 19.10
5' CONC. S/W
EXIST. R/W
CONST. 180' OF 36" PIPE
WL-H
GRAVITY WALL PER INDEX 601
HANDRAIL PER INDEX 861
CONST. 260' OF 36" PIPE
C & G TYPE F
+82.88 39.00' LT.
+83.06 11.00' LT.
PI STA. 123+93.25
MATCHLINE STA. 118+00.00
MATCHLINE STA. 125+00.00
52.25'
28.00'
67.75'
28.00'
60.00'
28.00'
60.00'
+30.20 9.75' LT.
CONST. 306' OF 36" PIPE
+82.81 40.26' LT.
+82.99 12.26' LT.
S 87° 48' 04" E
CONST. 78' OF 18" PIPE
CONST. UNDERDRAIN CLEANOUT INDEX NO. 286 STA. 118+30.03 (41.88' RT.) FL 19.10
C & G TYPE E
+78.35 9.01' RT.
+78.53 37.01' RT.
@ SURVEY & ℄ CONST.
CONST. 79' OF 18" PIPE
CONST. 81' OF 18" PIPE
C & G TYPE F
+83.25 11.00' RT.
+83.25 39.00' RT.
6' CONC. S/W
EXIST. R/W
FPL EASEMENT
BEGIN HANDRAIL +19.75, 48.95' RT.
BEGIN WALL +51.03, 59.57' RT.
REMOVE 28" x 22" CMP
GRAVITY WALL PER INDEX 601
WL-I
CONST. 290' OF UNDERDRAIN TYPE II, INDEX NO. 286

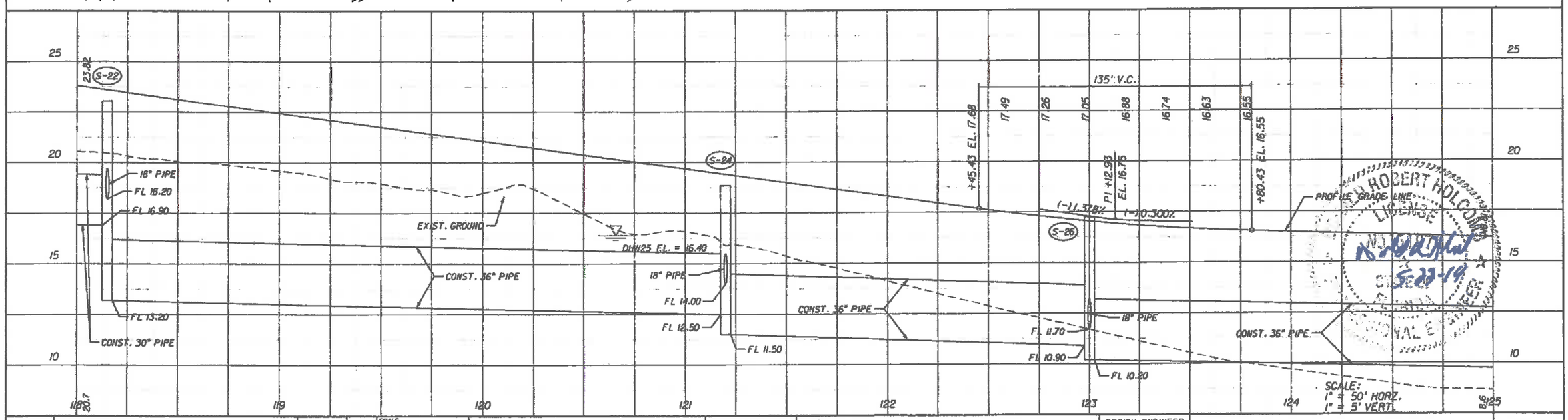
S-23
STA. 118+15.00 (39.00' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 23.06
FL 19.00 (LT.)
FL 19.30 (BK) UD

S-25
STA. 121+20.00 (38.52' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 18.85
FL 14.80 (LT.)
FL 15.10 (BK) UD

CONST. END ANCHORAGE ASSEMBLY TYPE ET 2000 BEGIN CONST. GUARDRAIL STA. 121+54.72, 39.43' RT.

S-27
STA. 123+00.00 (39.37' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.49
FL 12.00 (LT.)

0 10 50
Feet



ROBERT HOLCOMB LICENSE NO. 51970 STATE OF FLORIDA 5-22-14

SCALE	AS NOTED
DESIGNED BY	JLS
DRAWN BY	JHC
CHECKED BY	DRH

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

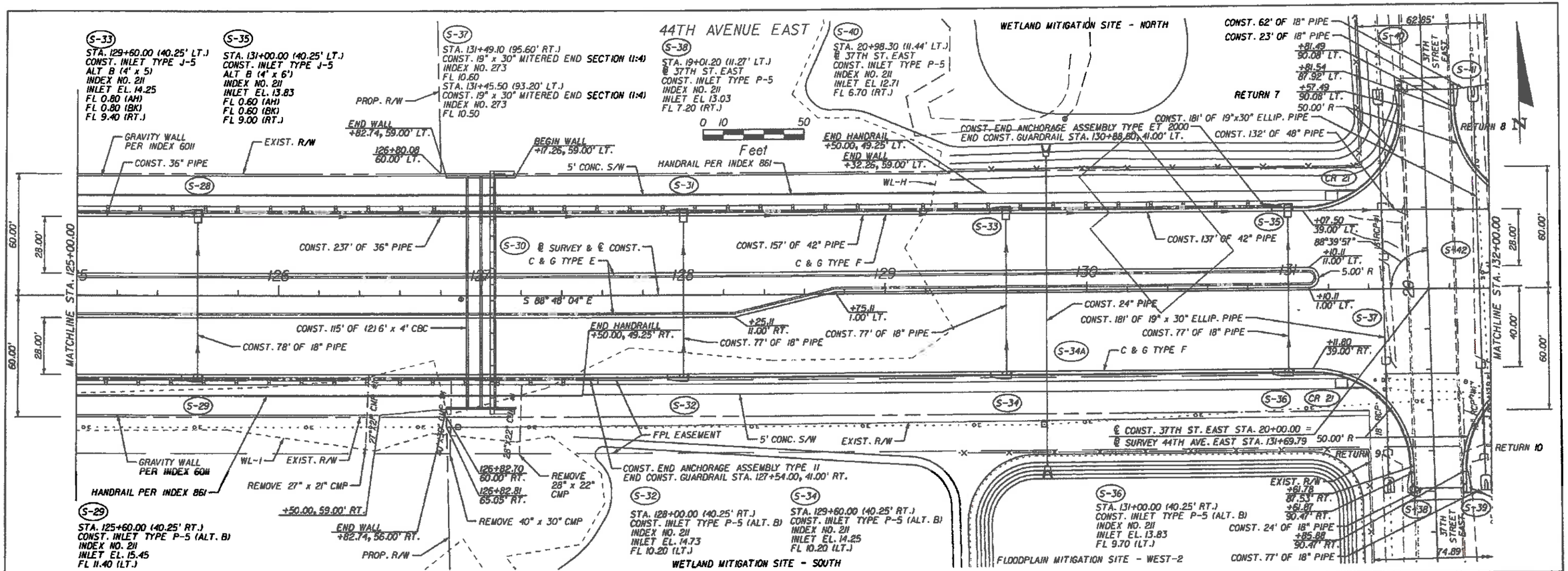
DATE 05/27/14
PROJECT NO. 6071160

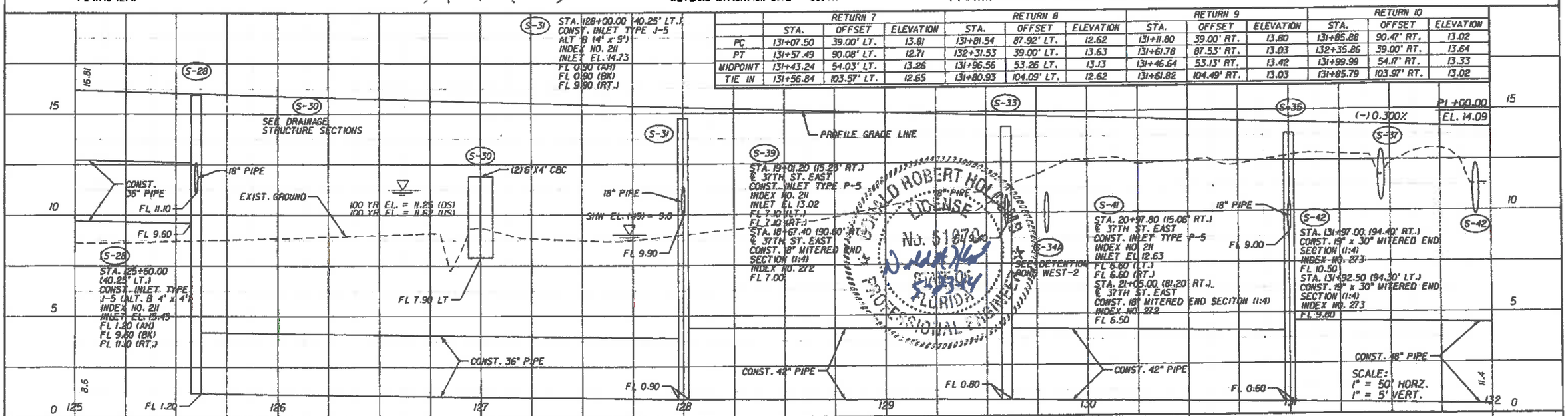
Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER DONALD R. HOLCOMB
FL. LICENSE NO. 51970

PLAN & PROFILE SHEET
STA. 118+00 TO STA. 125+00

SHEET NO. 26





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Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

PLAN & PROFILE SHEET
STA. 125+00 TO STA. 132+00

SHEET NO.: 27

DETENTION POND WEST-3L

44TH AVENUE EAST

(S-43) STA. 132+35.00 (40.25' LT.)
CONST. INLET TYPE J-5
ALT B (6' x 6')
INDEX NO. 211
INLET EL. 13.64
* FL 0.40 (RT.)
FL 0.40 (BK)
FL 9.70 (AH)

CONST. 18" PIPE

CONST. END ANCHORAGE ASSEMBLY TYPE II
BEGIN CONST. GUARDRAIL
STA. 135+30.95, 41.00' LT.

136+07.62
136.04' LT.

137+11.46
109.98' LT.

PROP. R/W

SECTION 5
SECTION 8

(S-48) STA. 136+85.00 (40.25' LT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 14.99
FL 10.90 (RT.)

C & G TYPE F

BEGIN RIPRAP BANK AND SHORE
STA. 135+55.00 LT.
(SEE CROSS SECTIONS FOR DETAILS)

135+00.00
80.00' LT.

PROP. R/W
1268.14' R

135+94.85
80.00' LT.

4" PVC (E)

50.00' R

CONST. 48" PIPE

PROP. R/W

1288.14' R

(S-43) (S-44) (S-46)

5' CONC. S/W

135+00.00
80.00' LT.

60.00'
40.00'
28.00'
60.00'

MATCHLINE STA. 132+00.00

CR 21

+31.53
39.00' LT.

+83.03
1.00' RT.

CONST. 100' OF 18" PIPE

CONST. 280' OF 48" PIPE

STA. 132+96.34

133

CONST. 50' OF 18" PIPE

CONST. 221' OF 18" PIPE

+68.03
1.00' RT.

+18.03
11.00' LT.

CONST. 38' OF 18" PIPE

C & G TYPE E

137

STA. 137+19.11

(S-48)

110.00'

28.00'

MATCHLINE STA. 138+00.00

5.00' R

S 88° 48' 04" E

+33.03
11.00' RT.

+35.86
39.00' RT.

CONST. 47' OF 18" PIPE

134

(S-45) (S-44A)

135

136

N 73° 13' 53" E

(S-49)
+74.00
1.00' LT.

40.00'

CONST. END ANCHORAGE ASSEMBLY TYPE ET 2000
BEGIN CONST. GUARDRAIL
STA. 132+40.30, 41.00' RT.

(S-47) @ SURVEY & ℄ CONST.

+24.00
11.00' RT.

CONST. 127' OF 24" PIPE

C & G TYPE E

CONST. 36" PIPE

C & G TYPE F

5' CONC. S/W

115.00'

132+14.46
51.84' RT.

132+14.84
60.00' RT.

PROP. R/W

1408.14' R

FPL EASEMENT

135+00.00
60.00' RT.

BEGIN RIPRAP BANK AND SHORE
STA. 135+55.00 RT.
(SEE CROSS SECTIONS FOR DETAILS)

(S-47)
STA. 134+65.00 (9.75' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 14.89
FL 10.10 (AH)
FL 10.10 (LT.)

(S-49)
STA. 136+85.00 (2.25' LT.)
CONST. INLET TYPE P-6 (ALT. B)
INDEX NO. 211
INLET EL. 15.31
FL 9.60 (AH)
FL 9.60 (BK)
FL 10.80 (LT.)

50.00' R

EXIST. R/W TO

(S-43A)

135+00.00
105.00' RT.

1453.14' R

135+59.81
105.00' RT.

135+58.17
115.00' RT.

1463.14' R

CONST. 18" PIPE

DETENTION POND WEST-3R

0 10 50
Feet

N

(S-44) STA. 133+40.00 (40.25' LT.)
CONST. INLET TYPE P-5
INDEX NO. 211
INLET EL. 13.95
FL 9.90 (RT.)
FL 9.90 (BK)

(S-46) STA. 134+65.00 (40.25' LT.)
CONST. INLET TYPE P-5 (ALT. A)
INDEX NO. 211
INLET EL. 14.35
FL 10.20 (RT.)

PI +00.00
EL. 14.09

(+)0.300%

PROFILE GRADE LINE

100 YR EL. = 11.80 (DS)
100 YR EL. = 11.81 (US)

15.89

18" PIPE
FL 10.80

18" PIPE
FL 9.60

CONST. 24" PIPE

CONST. 18" PIPE

(S-45) STA. 133+40.00 (9.75' RT.)
CONST. INLET TYPE P-5
INDEX NO. 211
INLET EL. 14.51
FL 10.50 (LT.)

(S-44A) SEE DETENTION PONDS WEST-3L & WEST-3R PLAN SHEET

SHW EL. (#8) = 10.5

FL 9.90

18" PIPE

EXIST. GROUND

FL 9.70

CONST. 18" PIPE

FL 10.10

48" PIPE

CONST. 48" PIPE

FL 0.40

H:4

15
10
5
0

132 133 134 135 136 137 138

SCALE:
1" = 50' HORZ.
1" = 5' VERT.

DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
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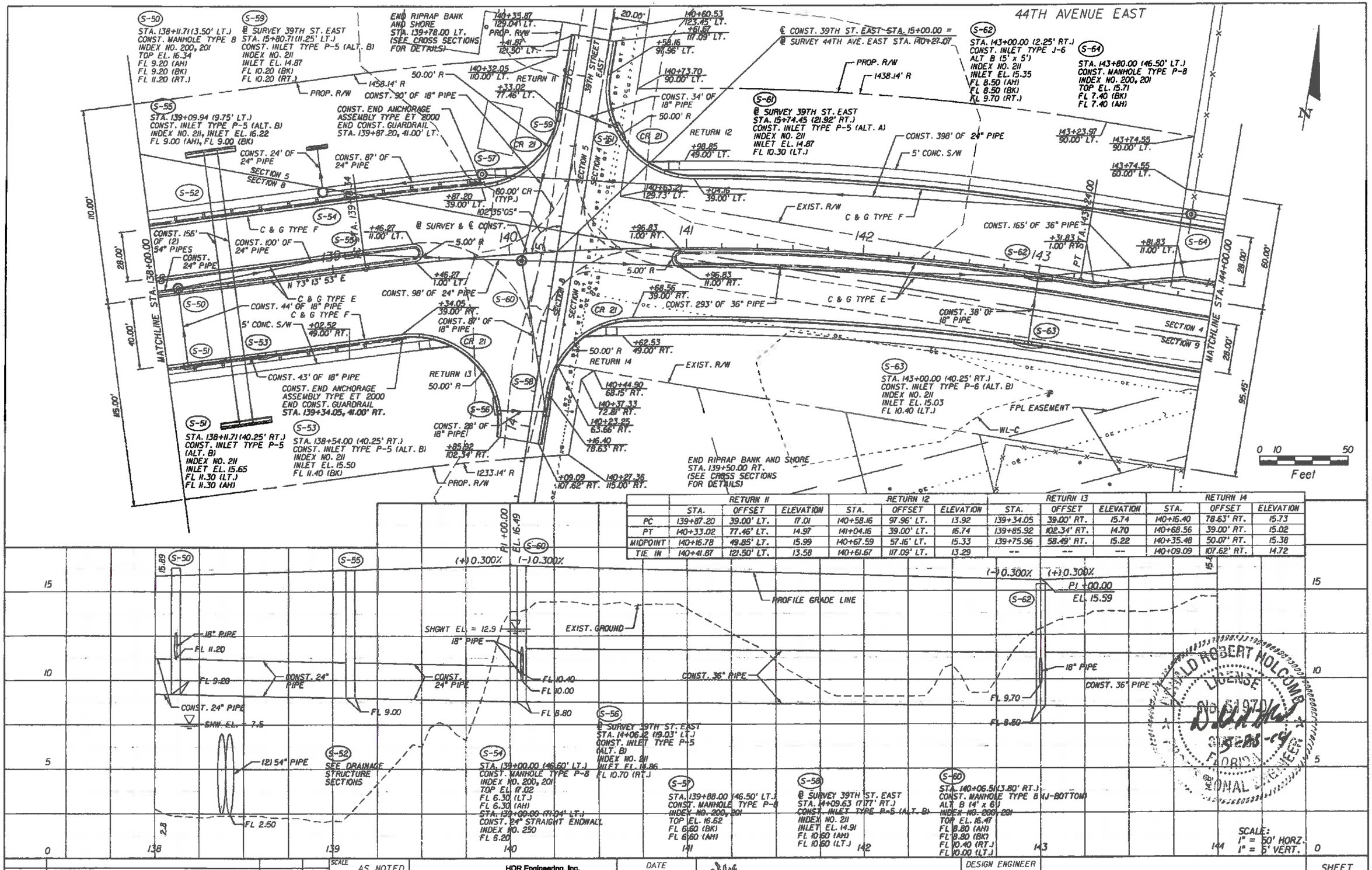
DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

PLAN & PROFILE SHEET
STA. 132+00 TO STA. 138+00

SHEET NO.: 28



	RETURN 11			RETURN 12			RETURN 13			RETURN 14		
	STA.	OFFSET	ELEVATION	STA.	OFFSET	ELEVATION	STA.	OFFSET	ELEVATION	STA.	OFFSET	ELEVATION
PC	139+87.20	39.00' LT.	17.01	140+58.16	97.96' LT.	13.92	139+34.05	39.00' RT.	15.74	140+16.40	78.63' RT.	15.73
PT	140+33.02	77.46' LT.	14.97	141+04.16	39.00' LT.	16.74	139+85.92	102.34' RT.	14.70	140+68.56	39.00' RT.	15.02
MIDPOINT	140+16.78	49.85' LT.	15.99	140+67.59	57.16' LT.	15.33	139+75.96	58.49' RT.	15.22	140+35.48	50.07' RT.	15.38
TIE IN	140+41.87	121.50' LT.	13.58	140+61.67	117.09' LT.	13.29	--	--	--	140+09.09	107.62' RT.	14.72

DONALD ROBERT HOLCOMB
LICENSE
No. 51970
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-8233
FBPR Certificate of Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

PLAN & PROFILE SHEET STA. 138+00 TO STA. 144+00

SHEET NO. 29

44TH AVENUE EAST

DETENTION POND - EAST-2

S-66
STA. 144+58.40 (40.25' LT.)
CONST. INLET TYPE J-6
ALT B (5' x 4')
INDEX NO. 211
INLET EL. 15.51
FL 8.30 (AH)
FL 8.30 (BK)
FL 10.70 (RT.)

S-68
STA. 146+47.00 (40.25' LT.)
CONST. INLET TYPE J-5 BOTTOM
ALT B (5' x 4')
INDEX NO. 211
INLET EL. 16.07
FL 8.10 (BK)
FL 11.20 (RT.)
FL 8.10 (AH)

S-104
STA. 147+12.01 (47.51' LT.)
CONST. MANHOLE TYPE P-8
ALT A (4' DIA.)
INDEX NO. 200, 201
TOP EL. 16.83
FL 8.00 (BK)
FL 8.00 (AH)

S-70
STA. 149+30.00 (48.00' LT.)
CONST. MANHOLE TYPE 8 (J-BOTTOM)
ALT B (6' x 5')
INDEX NO. 200, 201
TOP EL. 17.50
FL 7.20 (LT.)
FL 7.70 (BK)
FL 9.00 (AH)

S-121
STA. 147+53.92 (97.64' LT.)
CONST. INLET TYPE D (MODIFIED)
SEE DRAINAGE DETAILS
FL 8.10 (BK)

PROP. R/W
146+91.08 60.00' LT.
1001
1000
TO S-100
CONST. 327' OF 24" PIPE
5' CONC. S/W
CONST. 68' OF 24" PIPE
CONST. 127' OF 36" PIPE
CONST. 48" PIPE
PROP. R/W
CONST. 242' OF 30" PIPE
CONST. 153' OF 36" PIPE
℄ POND EAST
℄ SURVEY & ℄ CONST.
EXIST. R/W
S 89° 31' 41" E
CONST. 189' OF 36" PIPE
C & G TYPE E
CONST. 36" PIPE
CONST. 81' OF 18" PIPE
CONST. 81' OF 18" PIPE
SECTION 4
SECTION 9
CONST. 81' OF 18" PIPE
C & G TYPE F
C & G TYPE F
+24.15 11.00' RT.
+44.15 1.00' LT.
MATCHLINE STA. 144+00.00
MATCHLINE STA. 151+00.00
60.00'
28.00'
28.00'
95.45'
40.00'
95.45'
145 146 147 148 149 150

FPL EASEMENT
FPL EASEMENT
5' CONC. S/W
FPL EASEMENT
EXIST. R/W

S-67
STA. 144+58.40 (40.25' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 15.51
FL 11.40 (LT.)

S-69
STA. 146+47.00 (40.25' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.07
FL 12.00 (LT.)

S-72
STA. 148+00.00 (40.25' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.53
FL 12.40 (LT.)

S-71
STA. 148+00.00 (40.25' LT.)
CONST. INLET TYPE J-5
ALT B (5' x 4')
INDEX NO. 211
INLET EL. 16.53
FL 7.90 (BK)
FL 7.90 (AH)
FL 12.10 (RT.)

0 10 50
Feet

PROFILE GRADE LINE
PI +50.00 EL. 16.94
PI +00.00 EL. 17.69
(+) 0.300%
(+) 0.300%
(+) 0.300%
(-) 0.300%
15.89
11.39
SHGWT EL. = 13.3
SHGWT EL. = 14.3
EXIST. GROUND
18" PIPE
FL 10.70
CONST. 36" PIPE
FL 8.30
18" PIPE
FL 11.20
CONST. 36" PIPE
FL 8.10
18" PIPE
FL 12.20
CONST. 36" PIPE
FL 7.90
CONST. 36" PIPE
48" PIPE
FL 9.00
FL 7.70
FL 7.20
CONST. 30" PIPE
14.6
16.1
20 15 10 5
144 145 146 147 148 149 150 151

SCALE: 1" = 50' HORZ. 1" = 5' VERT.

DONALD ROBERT HOLCOMB LICENSE 51970 STATE OF FLORIDA ENGINEER

No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	JLS
DRAWN BY	JHC
CHECKED BY	DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14
PROJECT NO. 6071160

Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER DONALD R. HOLCOMB
FL. LICENSE NO. 51970

PLAN & PROFILE SHEET STA. 144+00 TO STA. 151+00

SHEET NO. 30

44TH AVENUE EAST

(S-73)
STA. 151+75.00 (40.25' LT.)
CONST. INLET TYPE P-5
INDEX NO. 211
INLET EL. 16.61
FL 9.30 (BK)
FL 11.80 (RT.)
FL 9.30 (AH)

(S-76)
STA. 152+75.00 (40.25' LT.)
CONST. INLET TYPE P-6 (ALT. B)
INDEX NO. 211
INLET EL. 16.30
FL 9.50 (BK)
FL 9.50 (AH)

(S-77)
STA. 153+25.00 (56.70' LT.)
CONST. 18" STRAIGHT ENDWALL
INDEX NO. 250
FL 13.10
STA. 153+25.00 (58.20' RT.)
CONST. STRAIGHT ENDWALL
INDEX NO. 250
FL 13.20

(S-80)
STA. 156+75.00 (40.25' LT.)
CONST. INLET TYPE J-5
INDEX NO. 211
INLET EL. 16.61
FL 10.30 (BK)
FL 11.70 (RT.)
FL 10.30 (AH)

(S-82)
STA. 157+50.00 (40.25' LT.)
CONST. INLET TYPE P-6 (ALT. B)
INDEX NO. 211
INLET EL. 16.38
FL 10.50 (BK)
FL 10.50 (AH)

END SPECIAL EOP PROFILE (LT.)
STA. 153+00.00

BEGIN SPECIAL EOP PROFILE (LT.)
STA. 152+50.00

153+53.59
60.00' LT.

154+58.55
60.00' LT.

155+35.00
60.00' LT.

155+35.00
58.00' LT.

157+20.00
58.00' LT.

157+20.00
60.00' LT.

PROP. R/W

CONST. 95' OF 30" PIPE

5' CONC. S/W

CONST. 305' OF 30" PIPE

CONST. 100' OF 30" PIPE

14.00'

16.00'

CONST. 30" PIPE

C & G TYPE E

+79.15
11.00' LT.

5.00' R

CONST. 117' OF 18" PIPE

+99.15
1.00' RT.

S 89° 31' 41" E

5.00' R

EXIST. R/W

+79.15
1.00' LT.

REMOVE 18" RCP

18" RCP

+99.15
11.00' RT.

SECTION 4

SECTION 9

CONST. 81' OF 18" PIPE

C & G TYPE F

B SURVEY & ℄ CONST.

+34.05
1.00' RT.

+84.15
11.00' LT.

CONST. 75' OF 24" PIPE

*CONST. 75' OF 24" PIPE

C & G TYPE E

CONST. 75' OF 18" PIPE

CONST. 75' OF 18" PIPE

CONST. EXTRA BASE MATERIAL
PER INDEX NO. 205

CONST. 120' OF 18" PIPE

FPL EASEMENT

5' CONC. S/W

EXIST. R/W

FAIRFAX DRIVE EAST

MATCHLINE STA. 151+00.00

MATCHLINE STA. 158+00.00

60.00'
28.00'
40.00'
95.45'

(S-74)
STA. 151+75.00 (40.25' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.61
FL 12.20 (LT.)
FL 12.20 (AH)

(S-75)
STA. 152+50.00 (40.25' RT.)
CONST. INLET TYPE P-6 (ALT. B)
INDEX NO. 211
INLET EL. 16.38
FL 12.30 (BK)
FL 12.30 (AH)

(S-78)
STA. 153+70.00 (40.25' LT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.74
FL 9.70 (BK)
FL 9.70 (AH)

(S-79)
STA. 153+70.00 (40.25' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.74
FL 12.60 (BK)

(S-81)
STA. 156+75.00 (40.25' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.61
FL 12.10 (LT.)
FL 12.10 (AH)

(S-83)
STA. 157+50.00 (40.25' RT.)
CONST. INLET TYPE P-6 (ALT. B)
INDEX NO. 211
INLET EL. 16.38
FL 12.30 (BK)
FL 12.30 (AH)

0 10 50
Feet

PROFILE GRADE LINE

EXIST. GROUND

SHGWT EL. = 14.3

PI +50.00 EL. 16.94

PI +75.00 EL. 16.30

PI +00.00 EL. 16.53

PI +00.00 EL. 17.69

(-) 0.300%

(+) 0.300%

(+) 0.920%

SPECIAL EOP PROFILE (LT.)

18" PIPE

FL 13.15

FL 11.80

FL 9.30

FL 9.50

FL 9.70

CONST. 30" PIPE

CONST. 24" PIPE

FL 11.78

FL 10.50

17.39

16.94

16.38

16.30

16.53

17.69

17.08

16.1

15.4

20

15

10

5

151

152

153

154

155

156

157

158

SCALE:
1" = 50' HORZ.
1" = 5' VERT.

DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY	SCALE: AS NOTED DESIGNED BY: JLS DRAWN BY: JHC CHECKED BY: DRH	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14 PROJECT NO.: 607/160	Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS DESIGN ENGINEER: DONALD R. HOLCOMB FL. LICENSE NO.: 51970

PLAN & PROFILE SHEET
STA. 151+00 TO STA. 158+00

SHEET NO. 31

44TH AVENUE EAST

(S-84)
STA. 158+25.00 (40.25' LT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.61
FL 10.70 (BK)
FL 10.70 (AH)

(S-86)
STA. 161+67.00 (55.50' LT.)
CONST. 15" STRAIGHT ENDWALL
INDEX NO. 250
FL 13.90
STA. 161+67.00 (57.40' RT.)
CONST. 15" STRAIGHT ENDWALL
INDEX NO. 250
FL 13.80

(S-87)
STA. 161+75.00 (40.25' LT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.61
FL 11.10 (BK)
FL 11.90 (RT.)
FL 11.90 (AH)

(S-89)
STA. 162+50.00 (40.25' LT.)
CONST. INLET TYPE P-6 (ALT. B)
INDEX NO. 211
INLET EL. 16.38
FL 12.30 (BK)
FL 12.30 (AH)

(S-91)
STA. 163+25.00 (40.25' LT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.61
FL 12.50 (BK)

(S-93)
STA. 165+00.00 (40.25' LT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 17.13
FL 12.50 (LT.)
FL 12.50 (RT.)
STA. 165+00.00 (66.90' LT.)
CONST. 18" MITERED END SECTION (1:4)
INDEX NO. 272
FL 12.40

POND GAP-1
BOT EL. (LITTORAL ZONE) 12.4
CONTROL EL. 14.50
DHW 25YR, 24HR EL. 15.50
DHW 100YR EL. 15.63

+42.25 102.59' LT.
164+28.76 103.59' LT.
12.4' R
PROP. R/W
+29.85 90.11' LT.
+30.02 65.40' LT.
164+29.05 60.00' LT.
14.5' R
+44.52 51.00' LT.
TOP OF BANK EL. 16.4 +/-
BOT EL. 12.4
1:4

PROP. R/W
CONST. 24" PIPE
24.00'
16.00'
CONST. 350' OF 24" PIPE
WL-A
CONST. 75' OF 18" PIPE
5' CONC. S/W
C & G TYPE E
EXIST. R/W
CONST. 115' OF 15" PIPE
@ SURVEY & ℄ CONST.
C & G TYPE F
CONST. 75' OF 18" PIPE
CONST. 21' OF 18" PIPE
CONST. 81' OF 18" PIPE
S 89° 31' 41" E
MATCHLINE STA. 158+00.00
MATCHLINE STA. 165+00.00
60.00'
28.00'
95.45'
40.00'
SECTION 4
SECTION 9
CONST. 81' OF 18" PIPE
REMOVE EXIST. 8" PVC
8" PVC
+45.30 1.00' LT.
+95.30 11.00' RT.
5' CONC. S/W
CONST. 18" PIPE
FPL EASEMENT
24" RCP
CONST. EXTRA BASE MATERIAL PER INDEX NO. 205
CONST. 75' OF 18" PIPE
FPL EASEMENT
CONST. 75' OF 18" PIPE
EXIST. 24" PIPES TO REMAIN & DESILTED
EXIST. R/W
15" RCP

0 10 50
Feet

PI +00.00 EL. 17.69
PI +50.00 EL. 16.94
PROFILE GRADE LINE
(+) 0.300%
(-) 0.300%
(-) 0.300%
(+) 0.300%
17.09
17.89
EXIST. GROUND
SHW EL. = 14.2
15" PIPE
FL 13.85
18" PIPE
FL 11.90
FL 11.10
CONST. 24" PIPE
CONST. 18" PIPE
CONST. 18" PIPE
FL 11.90
FL 12.30
FL 12.50
18" PIPE
FL 12.60
FL 10.70
CONST. 24" PIPE
15.4
15.1

(S-85)
STA. 158+25.00 (40.25' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.61
FL 12.50 (BK)

(S-88)
STA. 161+75.00 (40.25' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.61
FL 12.20 (LT.)
FL 12.20 (AH)

(S-90)
STA. 162+50.00 (40.25' RT.)
CONST. INLET TYPE P-6 (ALT. B)
INDEX NO. 211
INLET EL. 16.38
FL 12.30 (BK)
FL 12.30 (AH)

(S-92)
STA. 163+25.00 (40.25' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 16.61
FL 12.50 (BK)

(S-94)
STA. 165+00.00 (40.25' RT.)
CONST. INLET TYPE P-5 (ALT. B)
INDEX NO. 211
INLET EL. 17.13
FL 12.60 (AH)
FL 12.60 (BK)

SCALE:
1" = 50' HORZ.
1" = 5' VERT.

DONALD ROBERT HOLCOMB LICENSE NO. 51970 STATE OF FLORIDA PROFESSIONAL ENGINEER 5-26-14

SCALE: AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14	Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER: DONALD R. HOLCOMB	PLAN & PROFILE SHEET STA. 158+00 TO STA. 165+00	SHEET NO. 32
DESIGNED BY: JLS		PROJECT NO. 607160		FL. LICENSE NO. 51970		
DRAWN BY: JHC						
CHECKED BY: DRH						

No.	REVISIONS	DATE	BY

44TH AVENUE EAST

45TH STREET EAST

MATCHLINE STA. 165+00.00

MATCHLINE STA. 172+00.00

TOP OF BANK EL. 15.4 +/-

PROP. R/W

POND GAP-1

CONST. 22' OF 15" PIPE

BOT EL 12.4

5' CONC. S/W

C & G TYPE F

EXIST. R/W

C & G TYPE E

PGL SHIFT

CR 23

FPL EASEMENT

CONST. 118' OF 15" PIPE

CONST. 15" PIPE

EXIST. R/W

19"x12" PIPE TO REMAIN

19"x12" PIPE TO REMAIN

CONST. 36' ASPHALT DRIVEWAY PER INDEX NO. 515

PROP. R/W

BOTTOM EL 13.5

DESILT 19"x 12" PIPE

REMOVE INLETS & PIPES

PGL

℄ SURVEY & ℄ CONST. SECTION 4

SECTION 9

℄ CONST. 45TH ST. EAST STA. 500+00.00 = ℄ SURVEY 44TH AVE. EAST STA. 166+39.00

REMOVE 19"x 12" PIPE

EOP

CONST. 58' OF 18" PIPE

BOTTOM EL 13.5

BOTTOM EL 13.5

CONST. 50' OF 18" PIPE

CONST. 36' ASPHALT DRIVEWAY PER INDEX NO. 515

POND B-1
BOTTOM EL 13.5 (LITTORAL ZONE)
CONTROL EL 14.5
TREATMENT EL. 15.10
DHW 25YR EL. 15.71
DHW 100YR EL. 15.84

TOP OF BANK MATCH EXIST. (MAINTAIN EL 16.0) (TYP.)

BOTTOM EL 13.5

EOP

CONST. 274' OF 18" PIPE

CONST. 140' OF 18" PIPE

EXIST. R/W

EXIST. R/W

S-93 S-94 S-95 S-96 S-97 S-98 S-99 S-105 S-106 S-107 S-108 S-109

166 167 168 169 170 171

499

50.00' R 5.00' R 15' R

0 10 50 Feet

S-95
STA. 166+14.50 (56.86' LT.)
CONST. INLET TYPE P-5
INDEX NO. 211
INLET EL. 17.00
FL 13.00
STA. 165+94.40 (74.47' LT.)
CONST. 15" MITERED END SECTION (1:4)
INDEX NO. 272
FL 12.40

S-107
STA. 168+67.46 (31.55' LT.)
CONST. 18" MITERED END SECTION (1:4)
FL 13.5
STA. 169+32.97 (29.58' LT.)
CONST. 18" MITERED END SECTION (1:4)
FL 13.5
INDEX NO. 273

S-108
STA. 169+84.51 (25.13' LT.)
CONST. 18" MITERED END SECTION (1:4)
FL 13.5
STA. 170+41.39 (21.90' LT.)
CONST. 18" MITERED END SECTION (1:4)
FL 13.5
INDEX NO. 273

PI +73.95 EL. 17.92

BEGIN PGL SHIFT STA. 165+80.30 11.0' LT. 11.0' RT. EL. 17.90

END PGL SHIFT STA. 166+39.00 0.0' LT. 0.0' RT. EL. 17.72

PI +50.00 EL. 17.39

(+) 0.300% (-) 0.300% (-) 0.300% (-) 0.01%

PROFILE GRADE LINE

EXIST. GROUND

18" PIPE

CONST. 118' OF 15" PIPE

15" PIPE

19" x 12" PIPE

19" x 12" PIPE

CONST. 274' OF 18" PIPE

CONST. 140' OF 18" PIPE

FL 12.60 FL 12.70 FL 12.20 FL 12.20 FL 12.20 FL 12.20

S-99
STA. 166+18.70 (1.90' LT.)
REMOVE EXIST. INLET TOP
CONST. MANHOLE TYPE P-7 (PARTIAL)
INDEX NO. 200, 201
TOP EL. 17.78

S-96
STA. 166+20.90 (40.25' RT.)
CONST. MANHOLE TYPE P-8
INDEX NO. 203
TOP EL. 17.05
FL 12.70 (BK)
FL 12.70 (RT.)

S-105
STA. 166+56.85 (0.80' RT.)
REMOVE EXIST. INLET TOP
CONST. MANHOLE TYPE P-7 (PARTIAL)
INDEX NO. 200, 201
TOP EL. 17.67

S-106
STA. 168+25.30 (0.50' RT.)
REMOVE EXIST. INLET TOP
CONST. MANHOLE TYPE P-7 (PARTIAL)
INDEX NO. 200, 201
TOP EL. 17.13

S-109
STA. 171+00.00 (10.22' RT.)
CONST. MANHOLE TYPE P-8
INDEX NO. 203
TOP EL. 17.26
FL 12.2 (BK)
FL 12.2 (AH)

SCALE: 1" = 50' HORZ. 1" = 5' VERT.

DONALD ROBERT HOLCOMB LICENSE No. 51970 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY	SCALE: AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14	Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS
				DESIGNED BY: JLS		PROJECT NO.: 6071160	
				DRAWN BY: JHC			
				CHECKED BY: DRH			

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

PLAN & PROFILE SHEET STA. 165+00 TO STA 172+00

SHEET NO.: 33

44TH AVENUE EAST

S-110
STA. 172+02.00 (14.50' LT.)
CONST. INLET TYPE D (MODIFY)
SEE DETAIL SHEET
FL 12.3
STA. 172+39.10 (12.73' LT.)
CONST. DBL 18" MITERED END SECTION (1:4)
FL 12.2
INDEX NO. 273

172+94.47
56.48' LT.

CONST. 39' OF 18" PIPE

PROP. R/W

48" PIPE AND ENDWALLS TO REMAIN

172+94.83
3.48' LT.

END PROJECT
END CONSTRUCTION
STA. 173+05.70

+00.38
19.69' LT.

S-110

56.49'

MATCHLINE STA. 172+00.00

@ SURVEY & ℄ CONST.

EXIST. R/W

173 174 175 176 177 178 17

S 89° 31' 41" E

+05.70
15.00' RT.

CONST. 18" PIPE

27.18'

63.51'

SECTION 4

SECTION 9

+00.00
9.70' LT.

PGL

MATCH EXISTING

+05.63
35.00' RT.

EXIST. R/W

N

0 10 50
Feet

END PROJECT
STA. 173+05.70

17.29

17.31

PROFILE GRADE LINE

S-110

EXIST. GROUND

CONST. 18" PIPE

FL 12.20

25 20 15 10

172 173 174 175 176 177 178 179

SCALE:
1" = 50' HORZ.
1" = 5' VERT.

DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
STATE OF FLORIDA
PROFESSIONAL ENGINEER

5-23-14

No.	REVISIONS	DATE	BY

SCALE AS NOTED
DESIGNED BY JLS
DRAWN BY JHC
CHECKED BY DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14
PROJECT NO. 6071160

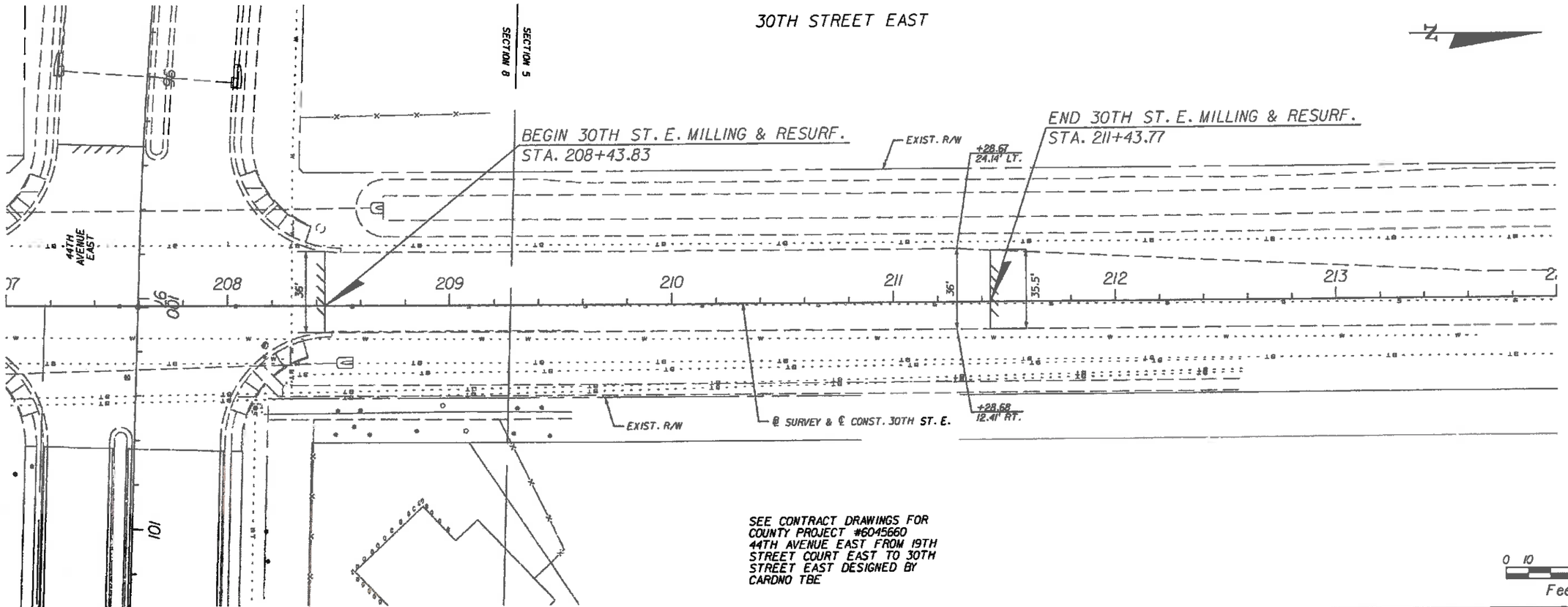
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

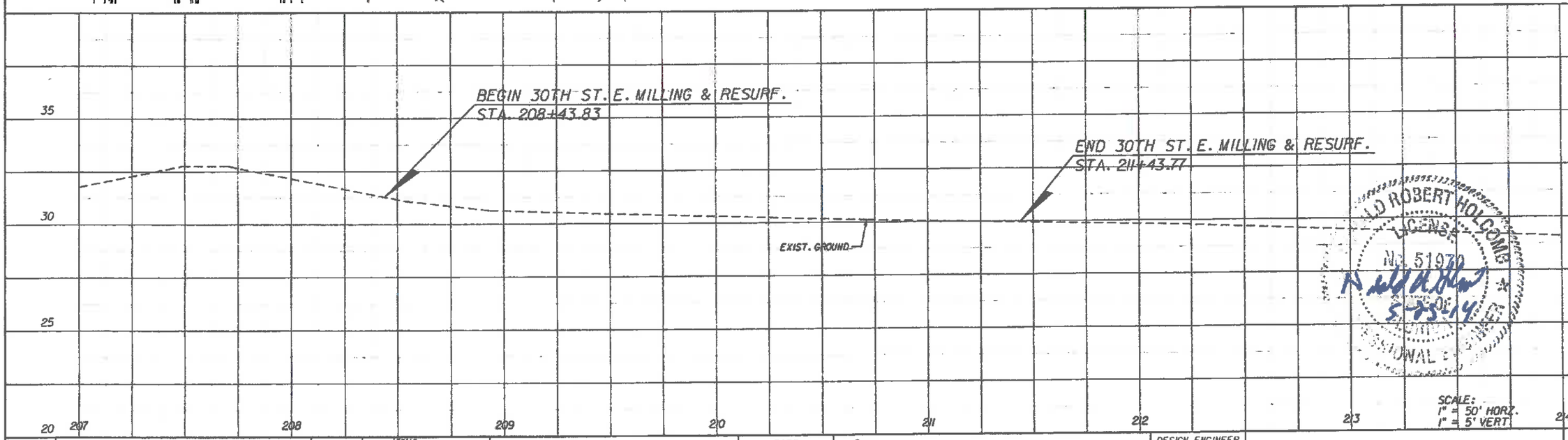
DESIGN ENGINEER
DONALD R. HOLCOMB
FL. LICENSE NO.
51970

PLAN & PROFILE SHEET
STA. 172+00 TO STA. 179+00

SHEET NO.
34

30TH STREET EAST





DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
STATE OF FLORIDA
5-23-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

PLAN & PROFILE SHEET
30TH STREET EAST

SHEET NO.: 35

45TH STREET EAST

EXIST. R/W

CONST. 15" PIPE

44TH AVENUE EAST

POND GAP-I

RETURN 15

PROP. R/W

BEGIN TAPER +31.72 14.55' LT.

BEGIN 45TH ST. E. CONST. STA. 496+31.55

STA. 496+15.40, 18.6' LT. CONNECT 15" PIPE THROUGH NORTH WALL OF EXISTING INLET FL 12.70

EXIST. R/W

END TAPER +46.76 19.12' LT.

CONST. 207' OF 15" PIPE

CONST. 4' OF 15" PIPE

C & G TYPE F

RETURN 17

CONST. 129' OF 15" PIPE

S-97A

S-97

CONST. 15" PIPE

166+18.30 103.56' LT.

EXIST. 19"x12" ELLIP. PIPE TO REMAIN

EXIST. R/W

C & G TYPE F

+75.00 10.61' LT.

INLET TO REMAIN

496

497

498

499

500

501

502

84.04'

40.00'

S-96

S-99

S-95

CONST. 32' OF 15" PIPE

MATCH EXIST.

15" PIPE TO REMAIN

INLET TO REMAIN

BEGIN TAPER +31.55 7.72' RT.

UNDERDRAIN TO REMAIN

END TAPER +46.50 13.88' RT.

S-98

C & G TYPE F

REMOVE INLETS AND PIPES

RETURN 18

S-105

RETURN 16

+75.00 13.39' RT.

C & G TYPE F

EXIST. R/W

EXIST. 19"x12" ELLIP. PIPE TO REMAIN

MATCH EXIST.

END 45TH ST. E. CONST. STA. 501+75.00

℄ CONST. 45TH ST. E

EXIST. R/W

℄ CONST. 45TH ST. EAST STA. 500+00.00 = ℄ SURVEY 44TH AVE. EAST STA. 166+39.00

SECTION 9

SECTION 4

29.18

PROP. R/W

POND B-1

0 10 50

Feet

	RETURN 15			RETURN 16			RETURN 17			RETURN 18		
	STA.	OFFSET	ELEVATION	STA.	OFFSET	ELEVATION	STA.	OFFSET	ELEVATION	STA.	OFFSET	ELEVATION
PC	165+77.83	39.00' LT.	17.39	166+51.99	66.35' LT.	16.93	165+72.53	39.00' RT.	17.38	166+55.53	89.35' RT.	16.93
PT	166+27.82	89.36' LT.	16.61	166+99.37	16.78' LT.	17.16	166+22.53	88.62' RT.	16.87	167+05.28	38.98' RT.	16.88
MIDPOINT	166+13.31	53.77' LT.	17.00	166+65.85	32.16' LT.	17.05	166+07.75	53.51' RT.	17.13	166+69.96	53.84' RT.	16.91

S-97A
STA. 497+50.00 (28.10' LT.)
CONST. MANHOLE TYPE (SPECIAL) WITH INTERNAL WEIR (SEE SPECIAL DETAIL SHEET)
INDEX NO. 200, 201 & 240
TOP EL. 16.75
FL 12.70 (BK)
FL 12.70 (RT.)
FL 12.60 (CONNECTION TO EXIST. INLET)

S-97
STA. 497+50.00 (20.35' LT.)
CONST. INLET TYPE P-5
INDEX NO. 211
INLET EL. 16.75
FL 12.80 (LT.)
FL 12.80 (RT.)
FL 12.80 (AH)

S-98
STA. 497+50.00 (14.90' RT.)
CONST. INLET TYPE P-5
INDEX NO. 211
INLET EL. 16.75
FL 12.90 (LT.)

25

20

15

10

BEGIN CONST. STA. 496+31.55

16.39

-0.0340 %

PROFILE GRADE LINE

EXIST. GROUND

15" PIPE

CONST. 129' OF 15" PIPE

CONST. 207' OF 15" PIPE

16.4

16.4

FL 12.60

FL 11.70

FL 12.70

FL 12.80

FL 12.70

S-98 PI +61.00 EL. 17.38

S-97 PI +39.00 EL. 17.66

S-97A PI +11.00 EL. 17.66

PI +39.00 EL. 17.38

PI +00.00 EL. 17.72

(+)0.300%

(+)1.000%

(+) 0.500%

(-) 0.500%

(-)1.000%

(-)1.123%

-0.2067 %

15.8

15.7

END CONST. STA. 501+75.00

496

497

498

499

500

501

502

SCALE: 1" = 50' HORZ. 1" = 5' VERT.

DONALD ROBERT HOLCOMB LICENSE No. 51970 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

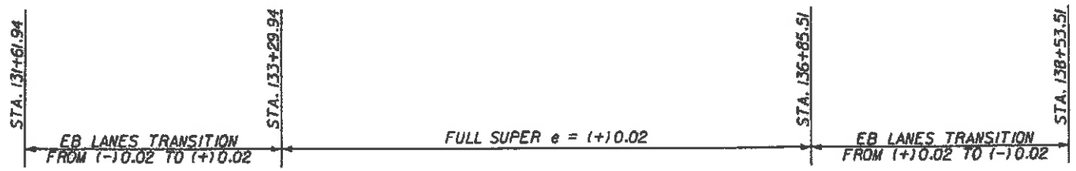
Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

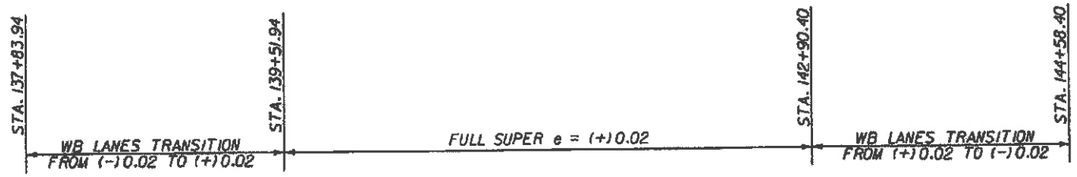
PLAN & PROFILE SHEET 45TH STREET EAST

SHEET NO.: 36

CURVE C1 (EB)



CURVE C2 (WB)



DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607160

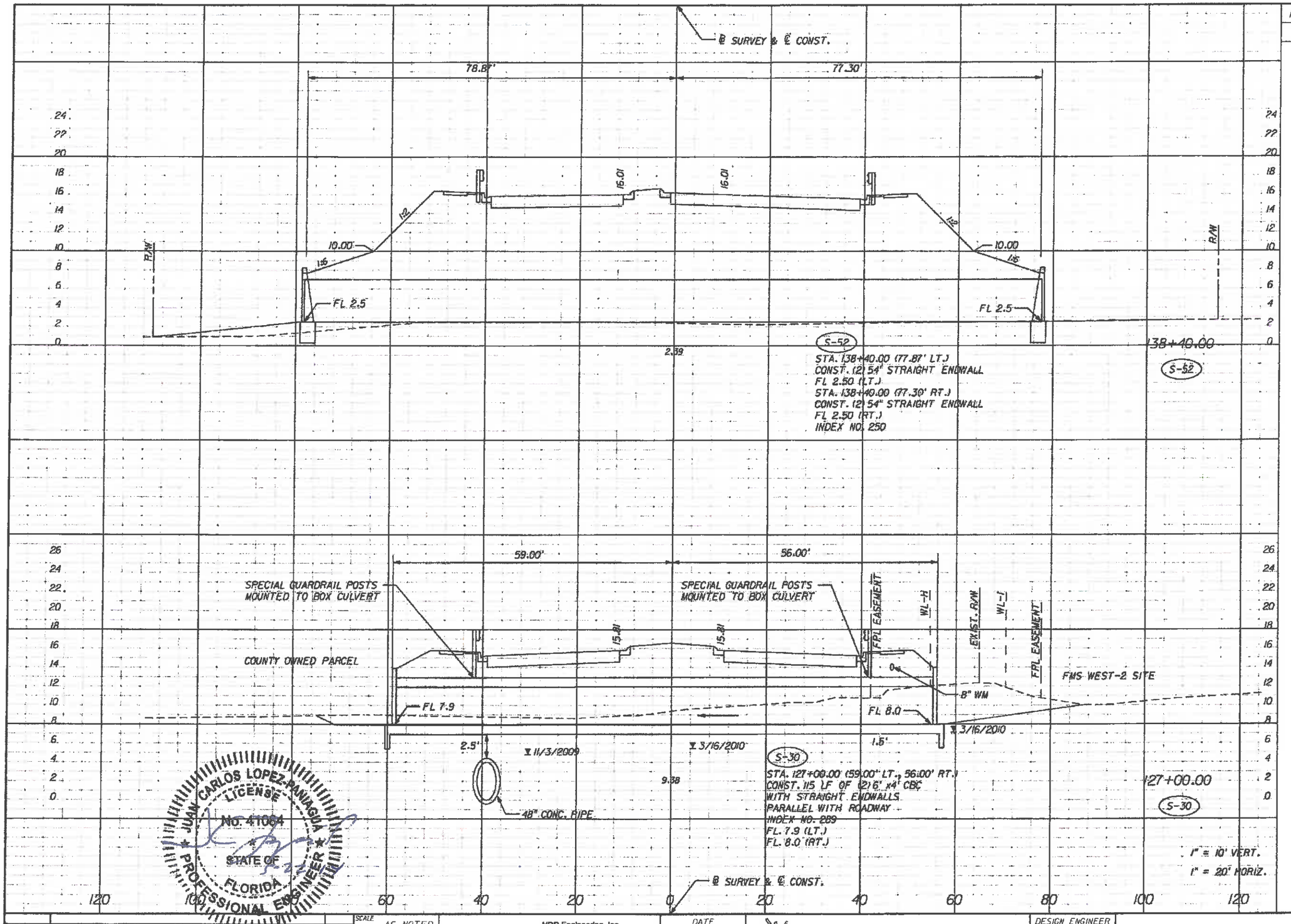
Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

SUPERELEVATION TRANSITION DETAILS

SHEET NO.: 37

Regular Exc.		Embankment	
A	V	A	V



JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607/160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

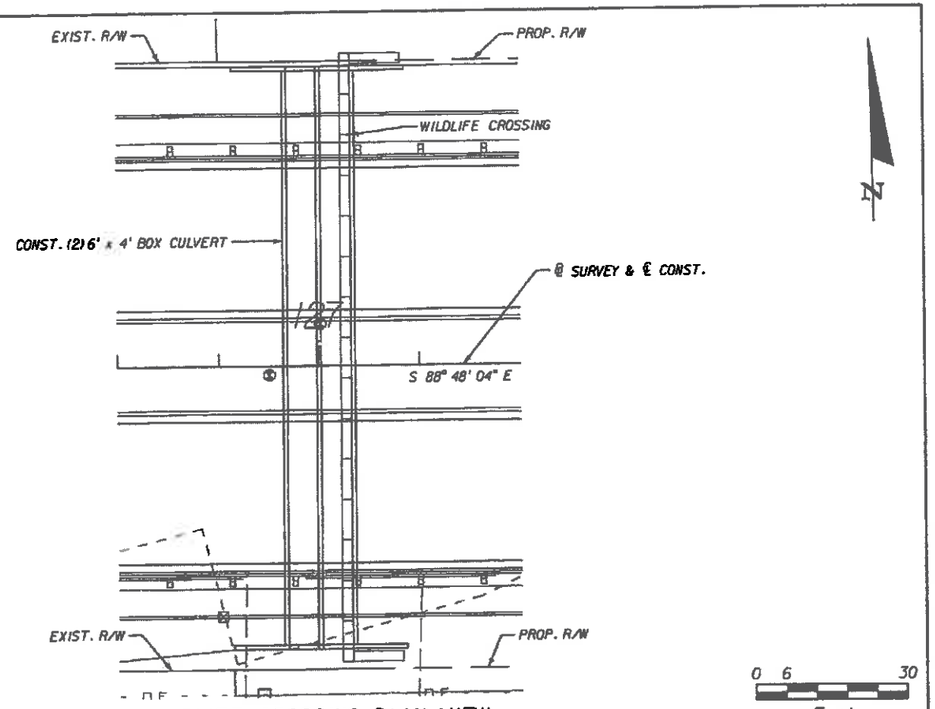
DRAINAGE STRUCTURE SECTION

SHEET NO.: 38

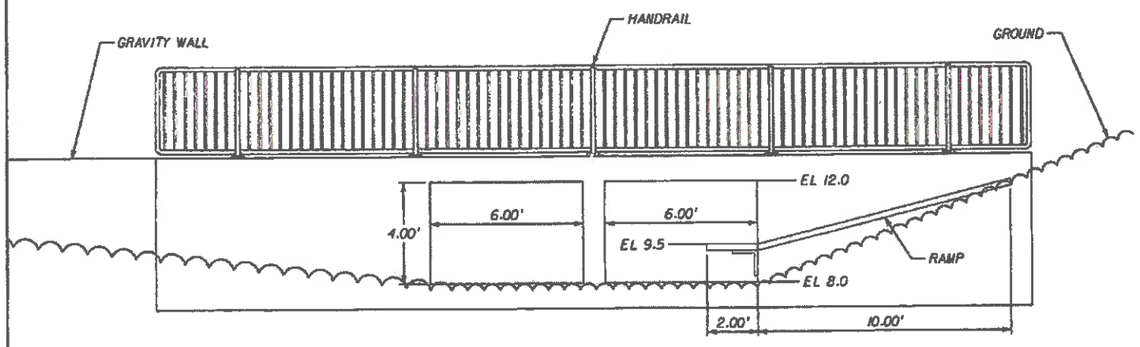
4:00:13 PM 5/22/2014

NOTES:

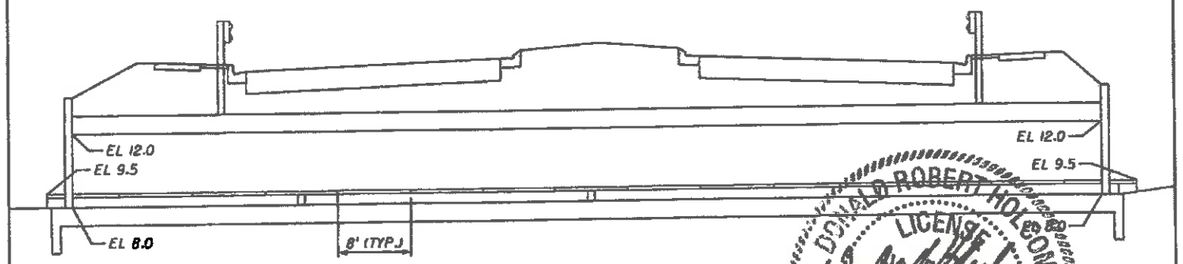
1. WILDLIFE CROSSING SHELVES SHALL BE ROSCOE CULVERT CRITTER TM ANIMAL ACCESS SHELVES OR EQUIVALENT.
2. SHELVES SHALL BE ATTACHED TO THE BOX CULVERT PER MANUFACTURER'S SPECIFICATIONS.
3. RAMPS ON EACH END SHALL BE LONG ENOUGH TO PROVIDE SAFE ACCESS TO THE WILDLIFE CROSSING SHELVES.



WILDLIFE CROSSING PLAN VIEW



WILDLIFE CROSSING DETAIL
N.T.S.



WILDLIFE CROSSING SECTION
N.T.S.

DONALD ROBERT HOLCOMB
LICENSE
5-22-14
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

WILDLIFE CROSSING

SHEET NO.: 39

P:\6071160\CONSTR\446B\0000000003343\V3.00_CADD\2345515201\permits\drdrf603.dgn

BOX CULVERT DATA TABLES

BOX, HEADWALL AND CUTOFF WALL DATA TABLE (inches unless shown otherwise)																					Table Date 01-01-07
LOCATION	STRUCTURE NUMBER	BOX									HEADWALL AND CUTOFF WALL										
		Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	#cells	Lc(ft)	Cover	Blhw	Hlhw	Brhw	Hrhw	Blcw	Hlcw	Brcw	Hrcw	SL(deg)	SR(deg)
STA. 127+00.00	S-30	6	4	10	9	10	9	2	115	2	12	24	12	24	12	24	12	24	--	--

LEFT SIDE WINGWALLS DATA TABLE (inches unless shown otherwise)																			Table Date 01-01-07
STRUCTURE NUMBER	LEFT END WINGWALL									LEFT BEGIN WINGWALL									
	Rt	Rw	Rh	Rd	SW(deg)	β(deg)	He(ft)	Hs(ft)	Lw(ft)	Rt	Rw	Rh	Rd	SW(deg)	β(deg)	He(ft)	Hs(ft)	Lw(ft)	
S-30	18	10	42	10	90	26.6	6	6	14.5	18	10	42	10	90	26.6	6	6	14.5	

RIGHT SIDE WINGWALLS DATA TABLE (inches unless shown otherwise)																			Table Date 01-01-07
STRUCTURE NUMBER	RIGHT END WINGWALL									RIGHT BEGIN WINGWALL									
	Rt	Rw	Rh	Rd	SW(deg)	β(deg)	He(ft)	Hs(ft)	Lw(ft)	Rt	Rw	Rh	Rd	SW(deg)	β(deg)	He(ft)	Hs(ft)	Lw(ft)	
S-30	18	10	42	10	90	26.6	6	6	14.5	18	10	42	10	90	26.6	6	6	14.5	

ESTIMATED CONCRETE QUANTITIES (CY)																					Table Date 01-01-07
STRUCTURE NUMBER	BOX								LEFT END WINGWALL			LEFT BEGIN WINGWALL			RIGHT END WINGWALL			RIGHT BEGIN WINGWALL			Culvert Total
	Left Cutoff Wall	Right Cutoff Wall	Bottom Slab	Walls	Top Slab	Left Head Wall	Right Head Wall	Sub Total	Footing	Wall	Sub Total	Footing	Wall	Sub Total	Footing	Wall	Sub Total	Footing	Wall	Sub Total	
S-30	0.616	0.616	51.9	38.3	50.6	0.616	0.616	144	2.61	2.69	5.92	2.61	2.69	5.92	2.61	2.69	5.92	2.61	2.69	5.92	167

MAIN STEEL REINFORCEMENT SPACING (inches)																			Table Date 01-01-07
STRUCTURE NUMBER	BOX														HEADWALLS		CUTOFF WALLS		
	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115, 116..	803	806	809	812
S-30	9	9	9	9	9	9	12	12	12	12	12	12	12	12	12	12	12	12	12

WINGWALL STEEL REINFORCEMENT SPACING (inches)																										Table Date 01-01-07
STRUCTURE NUMBER	LEFT END WINGWALL							LEFT BEGIN WINGWALL							RIGHT END WINGWALL							RIGHT BEGIN WINGWALL						
	401 407(8)	402 (403)	404 (405)	406	409	410	411	501 507(8)	502 (503)	504 (505)	506	509	510	511	601 607(8)	602 (603)	604 (605)	606	609	610	611	701 707(8)	702 (703)	704 (705)	706	709	710	711
S-30	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12

WINGWALL NOTE: Bar designations in "( )" are only required for variable height wingwalls.

SHINJI KONNO
LICENSE
No. 39536
STATE OF FLORIDA
PROFESSIONAL ENGINEER

NOTES:

1. Environmental Class: MODERATELY AGGRESSIVE
2. Reinforcing Steel, Grade: ASTM A615 GRADE 60
3. Concrete Class IV f'c = 5.5 ksi
4. Soil Properties:
   Friction Angle 29 deg
   Modulus of Subgrade Reaction 100,000 pcf
   Nominal Bearing Resistance 4,500 psf
5. Total Estimated Quantity of Reinforcing Steel 26,774 lbs
6. Work this Drawing with Design Standards Index No. 289 and Sheet Nos. 173 and 174.
7. Limestone and "rock-like" material was encountered in the borings performed. The contractor shall anticipate the need for special equipment and/or procedures to facilitate rock excavation.
8. Based on review of the "Potentiometric Surface of the Upper Floridan Aquifer, West Central Florida" maps published by the USGS, the potentiometric surface elevation of the Upper Floridan Aquifer at the project site ranges from approximately +10 feet to +20 feet, NGVD29. The SPT borings did not encounter an artesion flow condition during the field exploration. However, the contractor should be prepared to handle this condition, if encountered.

No.	REVISIONS	DATE	BY

SCALE: NTS
DESIGNED BY: RCS
DRAWN BY: DH
CHECKED BY: SK

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SHINJI KONNO
FL. LICENSE NO.: 39536

CONCRETE BOX CULVERT DATA TABLES

SHEET NO.: 40

4:15:38 PM 5/22/2014
P:\6079\2\COM00446\B000000001\3343\v3.00_CAD\PS345520\struct\BDataTables01.dgn

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	Ø
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG
CONCRETE BOX CULVERT S-30																																	(NO. REQUIRED = 1)
LOCATION				MAIN BOX																													NO. REQUIRED = 1
5	101	13- 11		154	1			13- 11																									
5	102	13- 11		154	1			13- 11																									
5	103	13- 11		158	1			13- 11																									
5	104	13- 11		158	1			13- 11																									
5	105	7- 0		306	10			2- 10			4- 1																						
5	106	7- 0		306	10			2- 10			4- 1																						
4	107	9- 6		460	10			5- 4			4- 1																						
4	108	5- 4		230	1			5- 4																									
4	109	119- 11		15	2			2- 2			117- 8 ½																					1	
4	110	116- 11		15	2			2- 2			114- 8 ½																					1	
4	111	116- 2		15	2			2- 2			114- 0																					1	
4	112	119- 11		15	2			2- 2			117- 8 ½																					1	
4	113	116- 11		10	2			2- 2			114- 8 ½																					1	
4	114	116- 11		10	2			2- 2			114- 8 ½																					1	
4	115	116- 2		10	2			2- 2			114- 0																					1	
LOCATION				LEFT END WINGWALL																													NO. REQUIRED = 1
4	401	5- 10		15	1			5- 10																									
4	402	14- 2		6	1			14- 2																									
4	404	14- 2		6	1			14- 2																									
4	406	5- 10		15	1			5- 10																									
4	407	5- 8		15	10			2- 0			3- 8																						
4	409	5- 6		15	1			5- 6																									
4	410	5- 6		15	1			5- 6																									
4	411	14- 2		12	1			14- 2																									
5	412	2- 0		9	1			2- 0																									
LOCATION				LEFT BEGIN WINGWALL																													NO. REQUIRED = 1
4	501	5- 10		15	1			5- 10																									
4	502	14- 2		6	1			14- 2																									
4	504	14- 2		6	1			14- 2																									
4	506	5- 10		15	1			5- 10																									
4	507	5- 8		15	10			2- 0			3- 8																						
4	509	5- 6		15	1			5- 6																									
4	510	5- 6		15	1			5- 6																									
4	511	14- 2		12	1			14- 2																									
5	512	2- 0		9	1			2- 0																									
LOCATION				RIGHT END WINGWALL																													NO. REQUIRED = 1
4	601	5- 10		15	1			5- 10																									
4	602	14- 2		6	1			14- 2																									
4	604	14- 2		6	1			14- 2																									
4	606	5- 10		15	1			5- 10																									
4	607	5- 8		15	10			2- 0			3- 8																						
4	609	5- 6		15	1			5- 6																									
4	610	5- 6		15	1			5- 6																									
4	611	14- 2		12	1			14- 2																									
5	612	2- 0		9	1			2- 0																									
LOCATION				RIGHT BEGIN WINGWALL																													NO. REQUIRED = 1
4	701	5- 10		15	1			5- 10																									
4	702	14- 2		6	1			14- 2																									
4	704	14- 2		6	1			14- 2																									
4	706	5- 10		15	1			5- 10																									
4	707	5- 8		15	10			2- 0			3- 8																						

SHINJI KONNO
LICENSE
No. 39536
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: NTS
DESIGNED BY: RCS
DRAWN BY: DH
CHECKED BY: SK

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: SHINJI KONNO
FL. LICENSE NO.: 39536

REINFORCING BAR LIST (1 OF 2)

SHEET NO.: 41

4:15:42 PM 5/22/2014

P:\71\007982\CON\00446\0\0000000\11\33\3V3.23_CAD\v23486-520\struct\BRebar_list01.dgn

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	Ø
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG
CONCRETE BOX CULVERT S-30 (NO. REQUIRED = 1)																																	
4	709	5- 6		15	1			5- 6																									
4	710	5- 6		15	1			5- 6																									
4	711	14- 2		12	1			14- 2																									
5	712	2- 0		9	1			2- 0																									
LOCATION								LEFT HEADWALL												NO. REQUIRED = 1													
5	801	13-11		2	1			13-11																									
5	802	13-11		2	1			13-11																									
4	803	4- 8		15	27			1- 7 ½			0- 6			0- 2			0- 5			1- 2 ½			0- 6			0- 6							
LOCATION								RIGHT HEADWALL												NO. REQUIRED = 1													
5	804	13-11		2	1			13-11																									
5	805	13-11		2	1			13-11																									
4	806	4- 8		15	27			1- 7 ½			0- 6			0- 2			0- 5			1- 2 ½			0- 6			0- 6							
LOCATION								LEFT CUTOFF WALL												NO. REQUIRED = 1													
4	807	13-11		2	1			13-11																									
4	808	13-11		2	1			13-11																									
4	809	4-11		15	7			1- 7 ½			0- 8			0- 6			0- 6																
LOCATION								RIGHT CUTOFF WALL												NO. REQUIRED = 1													
4	810	13-11		2	1			13-11																									
4	811	13-11		2	1			13-11																									
4	812	4-11		15	7			1- 7 ½			0- 8			0- 6			0- 6																

END OF LIST

SHINJI KONNO
LICENSE
No. 39536
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5/27/2014

No.	REVISIONS	DATE	BY

SCALE: NTS
DESIGNED BY: RCS
DRAWN BY: DH
CHECKED BY: SK

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

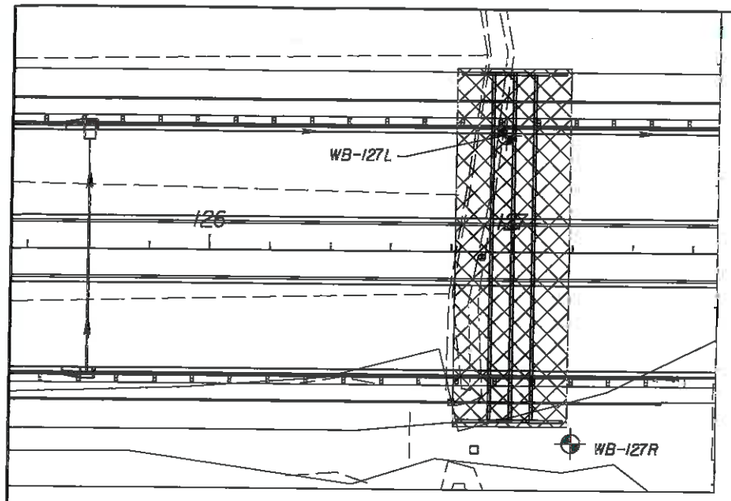
DESIGN ENGINEER: SHINJI KONNO
FL. LICENSE NO.: 39536

REINFORCING BAR LIST (2 OF 2)

SHEET NO.: 42

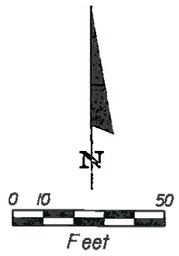
4:15:46 PM 5/22/2014

F:\z\007982\CIVIL\2446IB\000000000\3343V3.00_CADV\2345\PDF\Sheet\SheetList002.dgn



BORING LOCATION PLAN

APPROXIMATE AREA OF ORGANIC SOIL REMOVAL TO ELEVATION +4 FT NGVD 29



ENVIRONMENTAL CLASSIFICATION:
SUBSTRUCTURE CONCRETE: MODERATELY AGGRESSIVE (RESISTIVITY=2,700 OHM-CM)
SUBSTRUCTURE STEEL: MODERATELY AGGRESSIVE (RESISTIVITY=2,700 OHM-CM)

SOIL TEST RESULTS:

RESISTIVITY	2,700 OHM-CM
CHLORIDES	60 PPM
SULFATES	105.6 PPM
pH	8.3

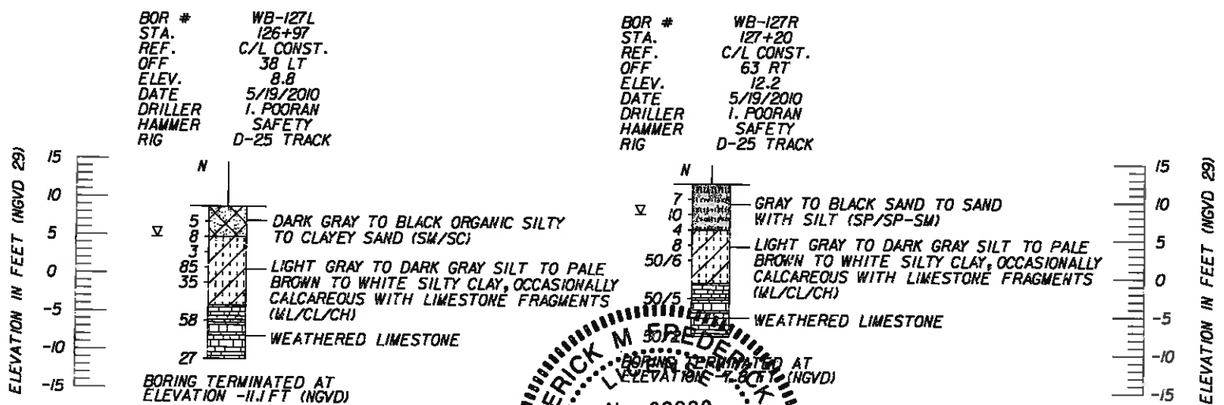
LEGEND

- DARK GRAY TO BLACK ORGANIC SILTY TO CLAYEY SAND (SM/SC)
- LIGHT GRAY TO DARK GRAY SILT TO PALE BROWN TO WHITE SILTY CLAY, OCCASIONALLY CALCAREOUS WITH LIMESTONE FRAGMENTS (ML/CL/CH)
- WEATHERED LIMESTONE
- GRAY TO BLACK SAND TO SAND WITH SILT (SP/SP-SM)

SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND/OR LABORATORY TESTING
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	FELL UNDER WEIGHT OF ROD AND HAMMER
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
⊕	APPROXIMATE SPT BORING LOCATION
▽	GROUNDWATER TABLE

NOTES:

1. LIMESTONE AND "ROCK LIKE" MATERIAL WAS ENCOUNTERED IN THE BORINGS PERFORMED. THE CONTRACTOR SHALL ANTICIPATE THE NEED FOR SPECIAL EQUIPMENT AND/OR PROCEDURES TO FACILITATE ROCK EXCAVATION.
2. THE DARK GRAY TO BLACK ORGANIC SILTY TO CLAYEY SAND (SM/SC) ENCOUNTERED WITHIN THE UPPER 3 TO 4 FEET OF SPT BORINGS SHALL BE REMOVED IN ACCORDANCE WITH INDEX 500 OF THE FDOT DESIGN STANDARDS.
3. BASED ON A REVIEW OF THE "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER, WEST-CENTRAL FLORIDA" MAPS PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER AT THE PROJECT SITE RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. THE SPT BORINGS PERFORMED AT THE BRIDGE SITE DID NOT ENCOUNTER AN ARTESIAN FLOW CONDITION DURING THE FIELD EXPLORATION. HOWEVER, THE CONTRACTOR SHOULD BE PREPARED TO HANDLE THIS CONDITION, IF ENCOUNTERED.



	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	16 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

ERICK M FREDERICK
No 63920
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5/27/14

S-30 BOX CULVERT

No.	REVISIONS	DATE	BY

SCALE: NOTED
DESIGNED BY: JRA
DRAWN BY: BJS
CHECKED BY: EMF

ERICK M. FREDERICK, P.E.
FL. LICENSE NUMBER 63920
TIERRA INC
7351 TEMPLE TERRACE HIGHWAY, TAMPA, FL. 33637
CERTIFICATE OF AUTHORIZATION: 6486

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ERICK M. FREDERICK
FL. LICENSE NO.: 63920

REPORT OF CORE BORINGS

SHEET NO.: 43

5:22:42 PM 5/22/2014
PW:\007982\COM00446\8\00000000\113343\V3.00_CAD\23456\520\geotech\clvgeo01.dgn

DATE OF SURVEY: DECEMBER 2010 TO APRIL 2012
SURVEY MADE BY: TIERRA, INC.
SUBMITTED BY: ERICK M. FREDERICK, P.E.

MANATEE COUNTY
PUBLIC WORKS

COUNTY PROJECT NO : 6071160
PROJECT NAME: 44TH AVENUE EAST FROM 30TH STREET EAST TO 45TH STREET EAST

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS

SURVEY BEGINS STA.: 100+13.47 SURVEY ENDS STA.: 173+07.83

REFERENCE: CENTERLINE CONSTRUCTION

	ORGANIC CONTENT		MOISTURE CONTENT		SIEVE ANALYSIS RESULTS PERCENT PASS						ATTERBERG LIMITS (%)					CORROSION TEST RESULTS				
STRATUM NO.	NO. OF TESTS	% ORGANIC	NO. OF TESTS	MOISTURE CONTENT	NO. OF TESTS	10 MESH	40 MESH	60 MESH	100 MESH	200 MESH	NO. OF TESTS	LIQUID LIMIT	PLASTIC INDEX	AASHTO GROUP	DESCRIPTION	NO. OF TESTS	RESISTIVITY ohm-cm	CHLORIDE ppm	SULFATES ppm	pH
1	2	2	2	22-23	16	90-100	79-93	65-78	34-45	2-10	--	--	--	A-3	GRAY TO BROWN FINE SAND TO FINE SAND WITH SILT	3	28,000-62,000	15-30	<4.8	5.9-6.9
2	--	--	--	--	5	52-77	43-63	36-53	21-35	4-15	--	--	--	A-1-b/A-3	GRAY TO BROWN FINE SAND TO FINE SAND WITH SILT WITH LIMEROCK FRAGMENTS OR WITH SHELL FRAGMENTS	2	2,700-3,200	30	101-288	7.7-8.0
3	1	2	9	18-80	13	80-100	72-94	62-81	46-59	15-33	6	NP-34	NP-15	A-2-4/A-2-6	GRAY TO DARK GRAY TO BROWN SILTY TO CLAYEY SAND	2	6,500-49,000	15-45	<4.8-37	7.8-8.2
4	1	2	10	17-38	11	100	89-92	80-82	61-65	38-90	10	NP-46	NP-23	A-4/A-6/ A-7-6	LIGHT GRAY TO DARK GRAY SANDY SILT TO PALE BROWN TO WHITE SILTY CLAY OCCASIONALLY CALCAREOUS WITH LIMESTONE FRAGMENTS	2	1,500-2,700	30-60	105-660	7.6-8.3
5	8	5-12	8	27-67	8	--	--	--	--	11-40	3	34-38	18-20	A-8	DARK GRAY TO BLACK ORGANIC SILTY TO CLAYEY SAND TO ORGANIC SANDY CLAY OCCASIONALLY WITH WOOD	--	--	--	--	--
6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	WEATHERED LIMESTONE	--	--	--	--	--

EMBANKMENT AND SUBGRADE MATERIAL

STRATA BOUNDARIES ARE APPROXIMATE. MAKE FINAL CHECK AFTER GRADING.

▽ - WATER TABLE ENCOUNTERED

▼ - ESTIMATED SEASONAL HIGH GROUNDWATER TABLE

GNA - GROUNDWATER NOT APPARENT

NOTES:

1. THE MATERIAL FROM STRATA 1 (A-3) AND 2 (A-1-b/A-3) APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH INDEX 505.
2. THE MATERIAL FROM STRATA 3 (A-2-4/A-2-6) AND 4 (A-4/A-6/A-7-6) IS PLASTIC MATERIAL AND SHALL BE REMOVED IN ACCORDANCE WITH INDEX 500. STRATA 3 AND 4 MAY REMAIN IN PLACE ABOVE THE EXISTING WATER LEVEL (AT THE TIME OF CONSTRUCTION) TO WITHIN 2 FEET OF THE PROPOSED BASE. IT SHOULD BE PLACED UNIFORMLY IN THE LOWER PORTION OF THE EMBANKMENT FOR SOME DISTANCE ALONG THE PROJECT RATHER THAN FULL DEPTH FOR SHORT DISTANCES.
3. THE MATERIAL FROM STRATUM 5 IS MUCK (A-8) MATERIAL AND SHALL BE REMOVED IN ACCORDANCE WITH INDEX 500 FROM STATION 123+40 TO STATION 129+00 AS ILLUSTRATED ON THE MUCK DELINEATION PLAN SHEET.
4. THE MATERIAL FROM STRATUM 6 IS ROCK-LIKE AND IS LOCATED AT SHALLOW DEPTHS IN SOME AREAS ALONG THE PROPOSED ROADWAY IMPROVEMENTS. FOUNDATION AND UTILITY EXCAVATION IN THOSE AREAS MAY BE DIFFICULT AND THE ROCK-LIKE MATERIAL SHALL BE UTILIZED IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE CONTRACTOR SHOULD CONSIDER THE INCREASED COST OF ALL THE UNDERGROUND WORK ACTIVITIES WHILE PREPARING HIS BID. ALL COST OF ROCK-LIKE MATERIAL EXCAVATION SHALL BE INCLUDED IN THE APPROPRIATE ITEMS OF WORK CONTAINED WITHIN THE CONTRACT. NO EXTRA COMPENSATION OR TIME EXTENSION WILL BE ALLOWED FOR ADDITIONAL WORK DIRECTLY ASSOCIATED WITH THE SPLITTING, EXCAVATION, CRUSHING, DISPOSAL, REPLACEMENT OF DISPLACED VOLUME OF EXTRACTED ROCK-LIKE MATERIAL WITH FILL MATERIAL, OR SPECIAL HANDLING OF THE ROCK-LIKE MATERIAL.

5. BASED ON A REVIEW OF THE "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER, WEST-CENTRAL FLORIDA" MAPS PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER AT THE PROJECT SITE RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. THE SPT BORINGS PERFORMED ALONG THE ALIGNMENT DID NOT ENCOUNTER AN ARTESIAN FLOW CONDITION DURING THE FIELD EXPLORATION. THE CONTRACTOR'S TOOLS AND CONSTRUCTION METHODS SHOULD BE PREPARED TO HANDLE A POTENTIOMETRIC SURFACE CONDITION OF UP TO +20 FT, NGVD 29, AT NO ADDITIONAL COST TO THE COUNTY.

ERICK M. FREDERICK LICENSE NO 63920 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JRA
DRAWN BY: BJS
CHECKED BY: EMF

E. OR : ERICK M. FREDERICK, P.E.
P.E. LICENSE NUMBER 63920

TIERRA INC
7351 TEMPLE TERRACE HIGHWAY, TAMPA, FL. 33637
CERTIFICATE OF AUTHORIZATION: 6486

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ERICK M. FREDERICK
FL. LICENSE NO.: 63920

ROADWAY SOIL SURVEY

SHEET NO.: 44

5:22:49 PM 5/22/2014

PW:\007982\CON00446\8\0000000011343\V3.00_CAD\V2345615201\geotech\rdssgeo01.dgn

N

0 10 50
Feet

0-1.5 0-2.0 0-2.5 0-1.5 0-3.0 0-3.0 0-4.0 0-2.0 0-1.0 0-2.0 NE-5.0

NE-5.0 NE-4.0 NE-5.0

122 123 124 125 126 127 128 129

NE-5.0 0-0.5

NE-3.5 NE-3.5

NE-5.0 0-0.5 NE-20.0 0-3.5 NE-5.0 0-4.0 2.5-5.0 2.0-4.0 NE-5.0 NE-5.0

GROUND

LEGEND

NE-5.0 — MUCK NOT ENCOUNTERED TO A DEPTH OF 5.0 FEET

4.0-6.0 — MUCK ENCOUNTERED AT DEPTHS RANGING FROM 4.0 TO 6.0 FEET

APPROXIMATE AREA OF ORGANIC MATERIAL/MUCK REMOVAL

ERICK M FREDERICK LICENSE No 63920 STATE OF FLORIDA PROFESSIONAL ENGINEER

5/27/14

No.	REVISIONS	DATE	BY

SCALE: 1"=50'
DESIGNED BY: EMF
DRAWN BY: BJS
CHECKED BY: EMF

ENGR.: ERICK M. FREDERICK, P.E.
P.E. LICENSE NUMBER 63920
TIERRA INC
7351 TEMPLE TERRACE HIGHWAY, TAMPA, FL. 33637
CERTIFICATE OF AUTHORIZATION: 6486

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ERICK M. FREDERICK
FL. LICENSE NO.: 63920

MUCK DELINEATION PLAN SHEET

SHEET NO.: 45

5:22:55 PM 5/22/2014

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N

0 10 50
Feet

0-5.0 0-3.0 0-1.0 0-1.0 0-1.0 0-1.0 0-4.0 0-5.0 NE-5.0 NE-5.0 NE-5.0 NE-5.0 NE-5.0 NE-5.0 NE-5.0 NE-5.0 NE-5.0 NE-5.0 NE-5.0 NE-5.0 NE-4.5 0-4.0 NE-5.0 0-3.0 NE-5.0 NE-5.0 NE-5.0

114 115 116 117 118 119 120 121

LEGEND

NE-5.0 — PLASTIC SOIL NOT ENCOUNTERED TO A DEPTH OF 5.0 FEET

4.0-6.0 — PLASTIC SOIL ENCOUNTERED AT DEPTHS RANGING FROM 4.0 TO 6.0 FEET

APPROXIMATE AREA OF PLASTIC SOIL REMOVAL

ERICK M FREDERICK LICENSE No 63920 STATE OF FLORIDA PROFESSIONAL ENGINEER
5/27/14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JRA
DRAWN BY: BJS
CHECKED BY: EMF

ERICK M. FREDERICK, P.E.
FLORIDA LICENSE NUMBER 63920
TIERRA INC
7351 TEMPLE TERRACE HIGHWAY, TAMPA, FL. 33637
CERTIFICATE OF AUTHORIZATION: 6486

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ERICK M. FREDERICK
FL. LICENSE NO.: 63920

PLASTIC SOIL DELINEATION PLAN SHEET

SHEET NO.: 46

5:23:00 PM 5/22/2014

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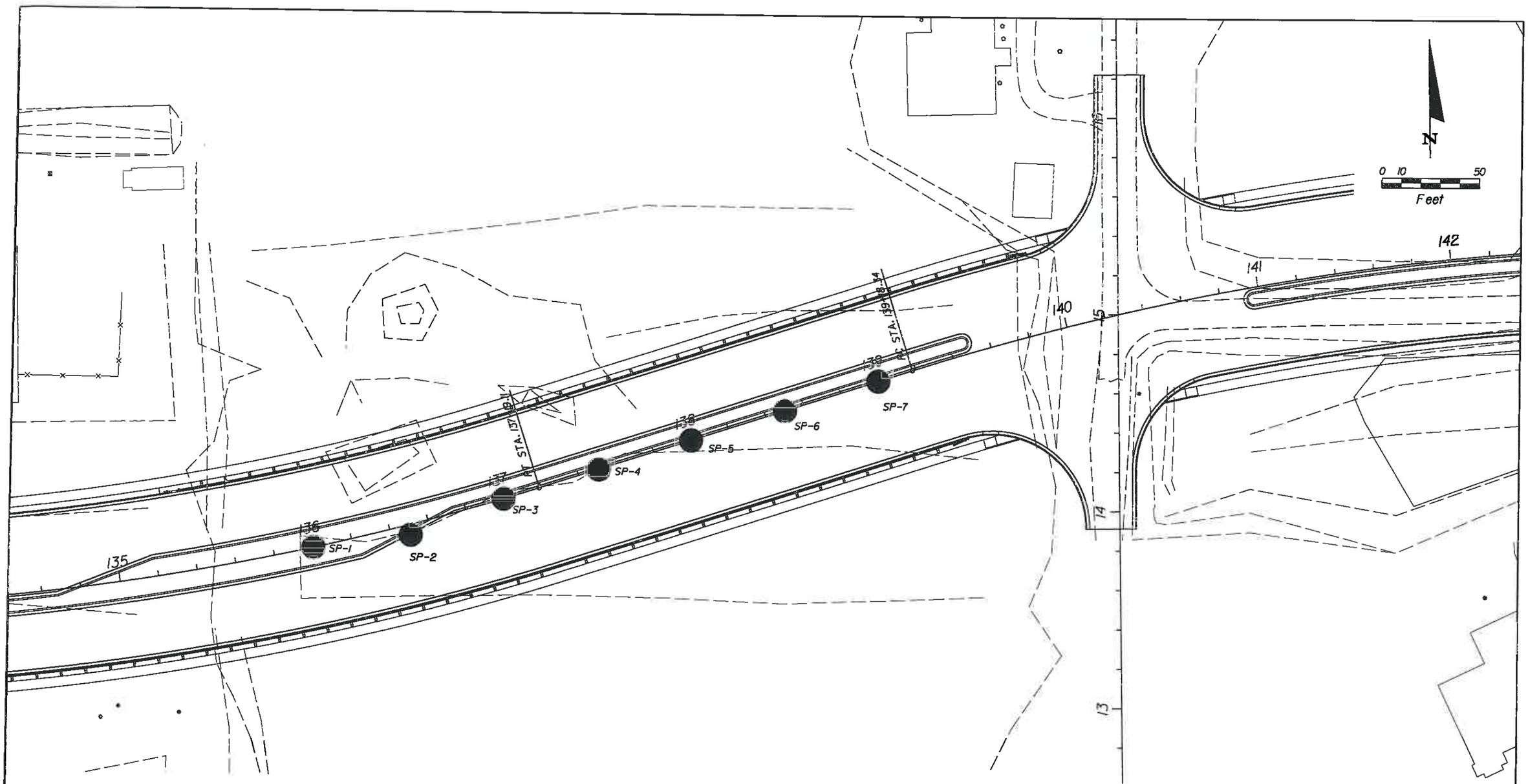


NOTES: 1. SETTLEMENT MONITORING SHALL BE PERFORMED AT THE LOCATIONS AS SHOWN AND ACCORDING TO THE TECHNICAL SPECIAL PROVISION.

2. THE PROPOSED SETTLEMENT PLATE LOCATIONS SHALL BE ADJUSTED TO PREVENT CONFLICTS WITH UTILITIES.

LEGEND

● APPROXIMATE SETTLEMENT PLATE LOCATION

SETTLEMENT PLATE NUMBER	PLATE LOCATION (C/L CONSTRUCTION 44TH AVE.)	
	STATION (FT)	OFFSET (FT)
SP-1	136+00	0 LT
SP-2	136+50	5 RT
SP-3	137+00	0 LT
SP-4	137+50	0 LT
SP-5	138+00	0 LT
SP-6	138+50	0 LT
SP-7	139+00	0 LT

ERICK M FREDERICK LICENSE No 63920 STATE OF FLORIDA PROFESSIONAL ENGINEER
5/27/14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JRA
DRAWN BY: BJS
CHECKED BY: EMF

E.O.R.: ERICK M. FREDERICK, P.E.
P.E. LICENSE NUMBER 63920
TIERRA INC
7351 TEMPLE TERRACE HIGHWAY, TAMPA, FL. 33637
CERTIFICATE OF AUTHORIZATION: 6486

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ERICK M. FREDERICK
FL. LICENSE NO.: 63920

SETTLEMENT MONITORING FOR CAUSEWAY CONSTRUCTION

SHEET NO.: 47

5:23:09 PM 5/22/2014

P:\:/007982\CON00446\8\000000000\13343\V3.00_CAD\V23456\520\geotech\rdgeol05ettlementMon01.dgn

@ SURVEY & ℄ CONST.

EXIST. R/W — FPL EASEMENT — EXIST. R/W — FPL EASEMENT

1:4 — 32.16 — 32.16 — 1:4

30.66 — ℣ 10/19/2009

102+00.00

EXIST. R/W — FPL EASEMENT — EXIST. R/W — FPL EASEMENT

1:4 — 32.46 — 32.46 — 1:4

1 — ℣ 10/19/2009 — 30.77

101+00.00

EXIST. R/W — FPL EASEMENT — EXIST. R/W — FPL EASEMENT

1:4 — 32.57 — 32.57 — 1:4

SHW 10/19/2009 — 1 — ℣ 10/19/2009

100+46

BEGIN PROJECT
BEGIN EARTHWORK
STATION 100+63.87

100+63.87

DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
STATE OF FLORIDA
PROFESSIONAL ENGINEER

1" = 10' VERT.
1" = 20' HORIZ.

@ SURVEY & ℄ CONST.

120 100 80 60 40 20 0 20 40 60 80 100 120

	Regular Exc.		Embankment	
	A	V	A	V
	4	9	57	277
	1	3	92	106
	5	0	66	0

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

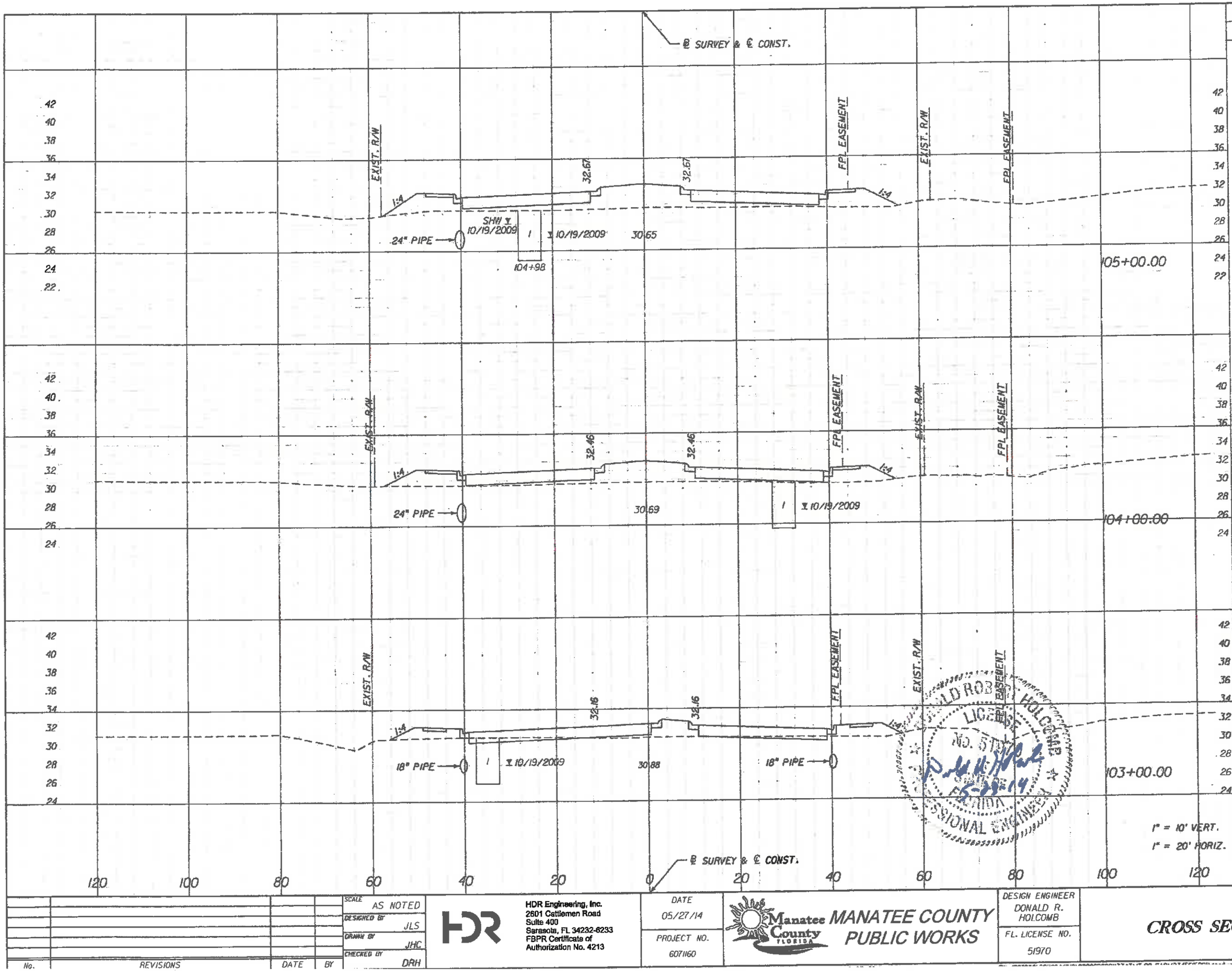
DATE: 05/27/14
PROJECT NO.: 607160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

CROSS SECTIONS

SHEET NO.: 48



	Regular Exc.		Embankment	
	A	V	A	V
105+00.00	0	0	121	396
104+00.00	0	24	94	257
103+00.00	13	32	45	190

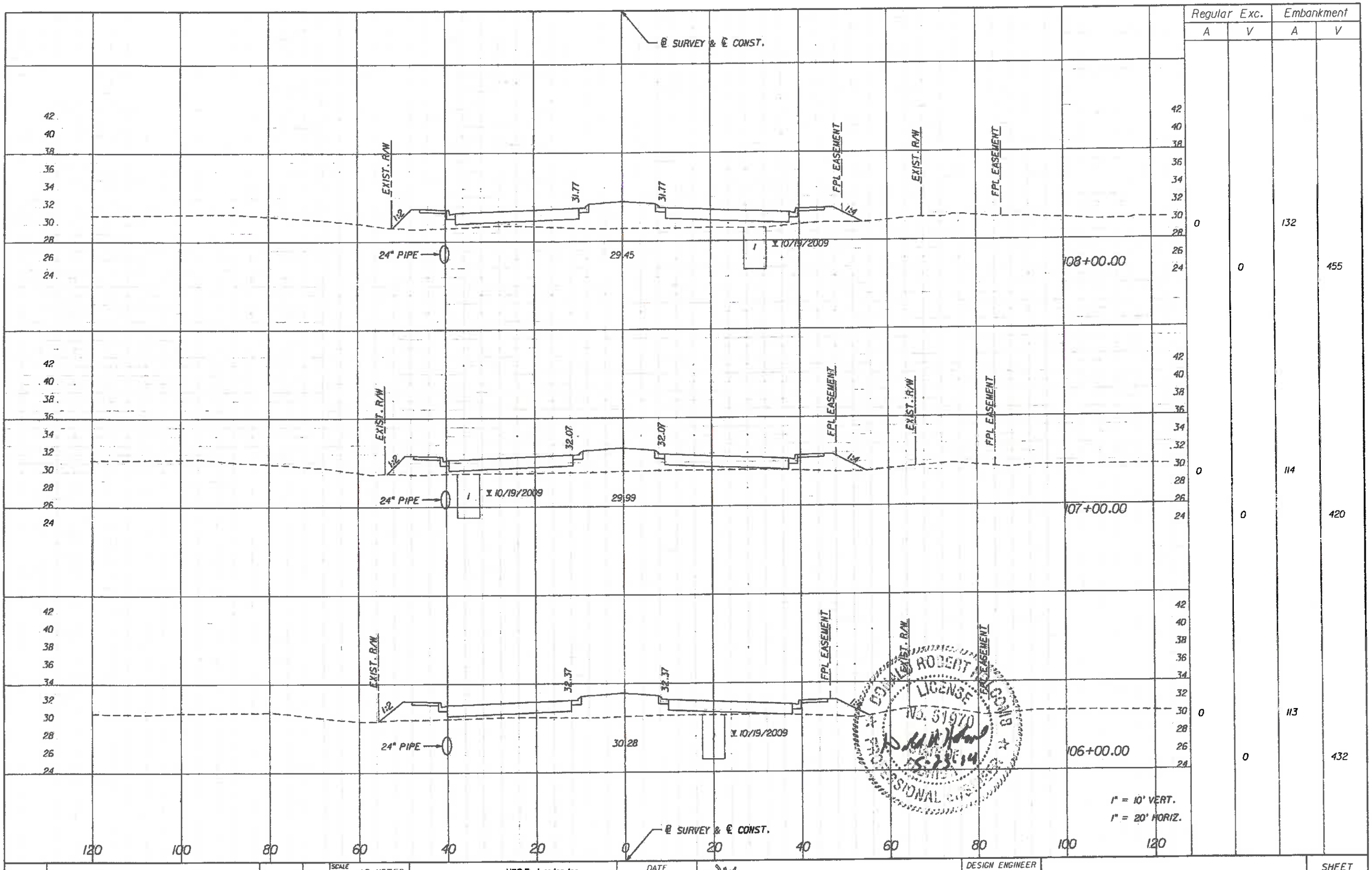
DONALD R. HOLCOMB LICENSE NO. 51970 STATE OF FLORIDA PROFESSIONAL ENGINEER
5-29-14

				SCALE: AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14	Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS
				DESIGNED BY: JLS		PROJECT NO.: 6071160	
				DRAWN BY: JHC			
				CHECKED BY: DRH			
No.	REVISIONS	DATE	BY				

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

CROSS SECTIONS

SHEET NO.: 49



Regular Exc.		Embankment	
A	V	A	V
0		132	
	0		455
0		114	
	0		420
0		113	
	0		432

ROBERT D. HOLCOMB LICENSE NO. 51970 STATE OF FLORIDA PROFESSIONAL ENGINEER 05-23-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

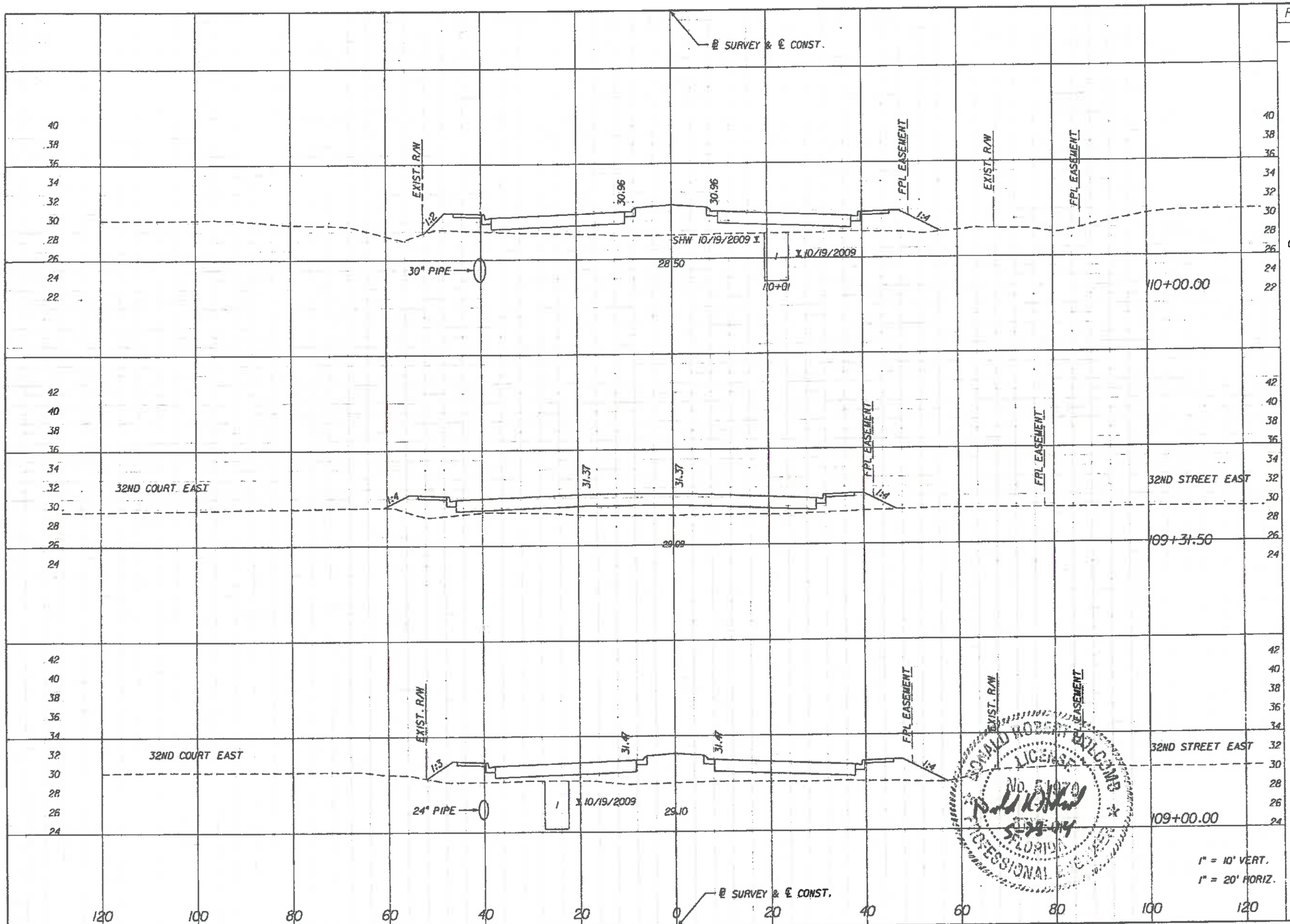
DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

CROSS SECTIONS

SHEET NO.: 50



	Regular Exc.		Embankment	
	A	V	A	V
	0	0	143	303
	0	0	96	136
	0	0	138	500

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 6071160

Manatee County FLORIDA

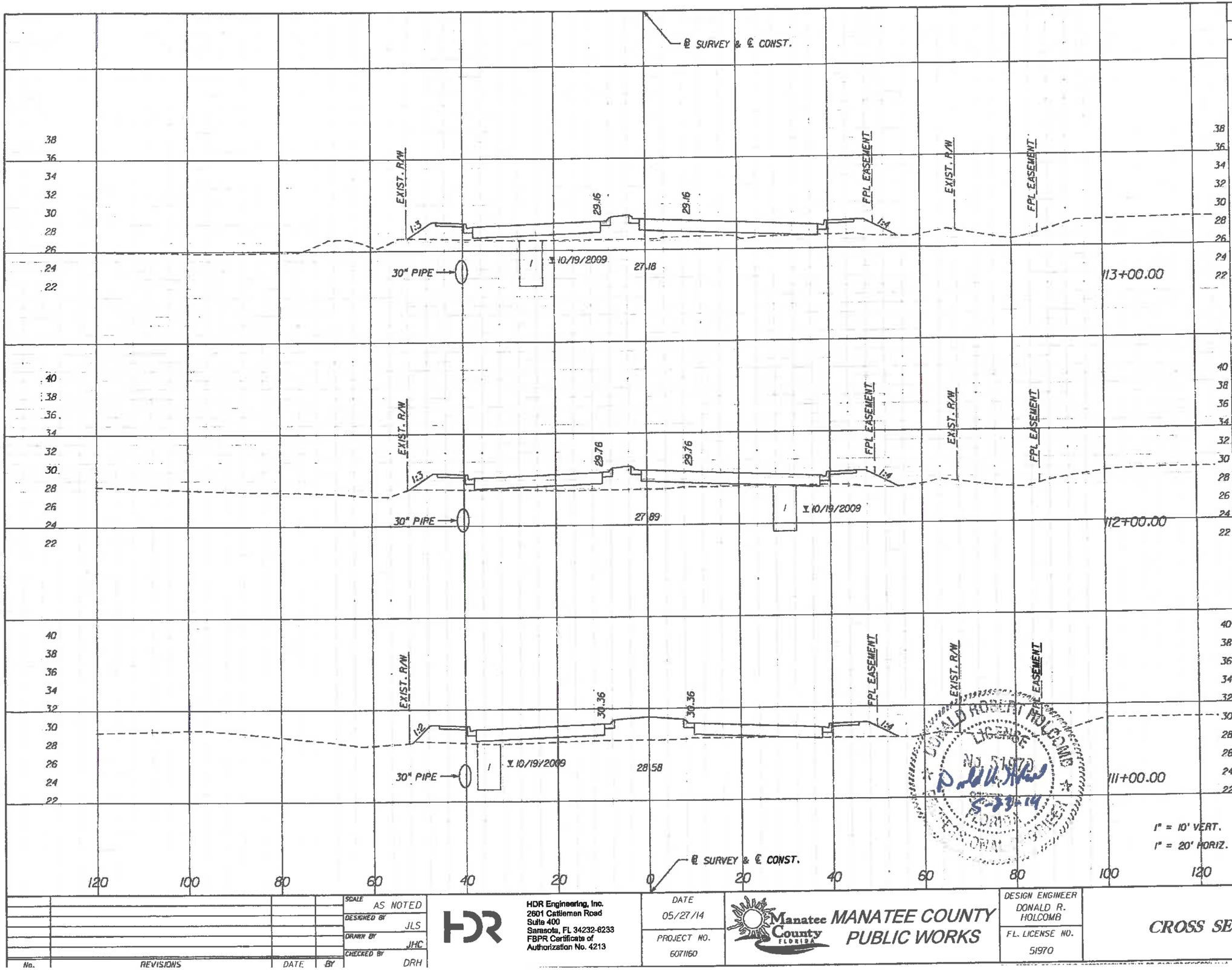
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER
DONALD R. HOLCOMB

FL. LICENSE NO. 51970

CROSS SECTIONS

SHEET NO. 51



Regular Exc.		Embankment	
A	V	A	V
0		83	
	2		289
1		73	
	2		308
0		93	
	1		438

DONALD ROBERT HOLCOMB LICENSE No. 51970 STATE OF FLORIDA REGISTERED ENGINEER
5-23-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

CROSS SECTIONS

SHEET NO.: 52

@ SURVEY & ℄ CONST.

36 34 32 30 28 26 24 22 20 18 16 14

34TH STREET EAST

BEGIN SUBSOIL EXCAVATION
STA. 115+00.00

1:4

27.83 27.83

FPL EASEMENT EXIST. R/W FPL EASEMENT

SHW 10/19/2009

I 10/19/2009

25.40

3/13/2010

30" PIPE

115+34

SUBSOIL	
SF	CY
62	0

115+00.00

36 34 32 30 28 26 24 22 20 18 16 14

30 28 26 24 22 20

34TH STREET EAST

1:4

27.99 27.99

FPL EASEMENT EXIST. R/W FPL EASEMENT

30" PIPE

25.10

114+82.58

38 36 34 32 30 28 26 24 22 20

EXIST. R/W FPL EASEMENT EXIST. R/W FPL EASEMENT

1:2 1:4

28.56 28.56

30" PIPE

I 3/13/2010

26.29

I 10/19/2009

114+00.00

LIMITS OF PLASTIC SOIL REMOVAL

1" = 10' VERT.
1" = 20' HORIZ.

120 100 80 60 40 20 0 20 40 60 80 100 120 @ SURVEY & ℄ CONST.

	Regular Exc.		Embankment	
	A	V	A	V
	0		158	
		11		98
	34		145	
		53		391
	0		111	
		0		360

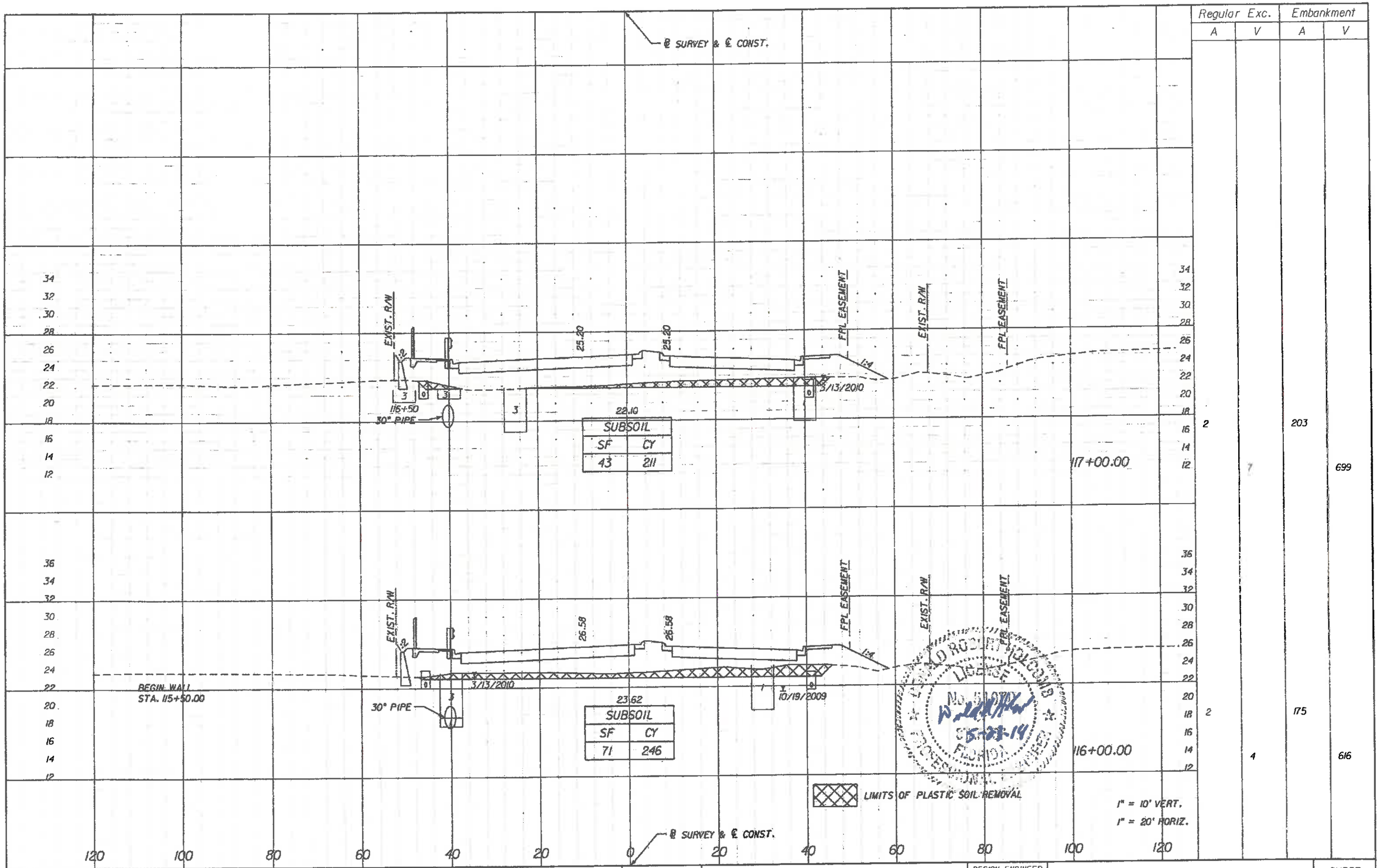
DONALD ROBERT HOLCOMB LICENSE No. 51970 STATE OF FLORIDA

SCALE: AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14	Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS
DESIGNED BY: JLS		PROJECT NO.: 6071160	DESIGN ENGINEER: DONALD R. HOLCOMB
DRAWN BY: JHC			FL. LICENSE NO.: 51970
CHECKED BY: DRH			

No.	REVISIONS	DATE	BY

CROSS SECTIONS

SHEET NO. 53



Regular Exc.		Embankment	
A	V	A	V
2		203	
	7		699
2		175	
	4		616

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 6071160

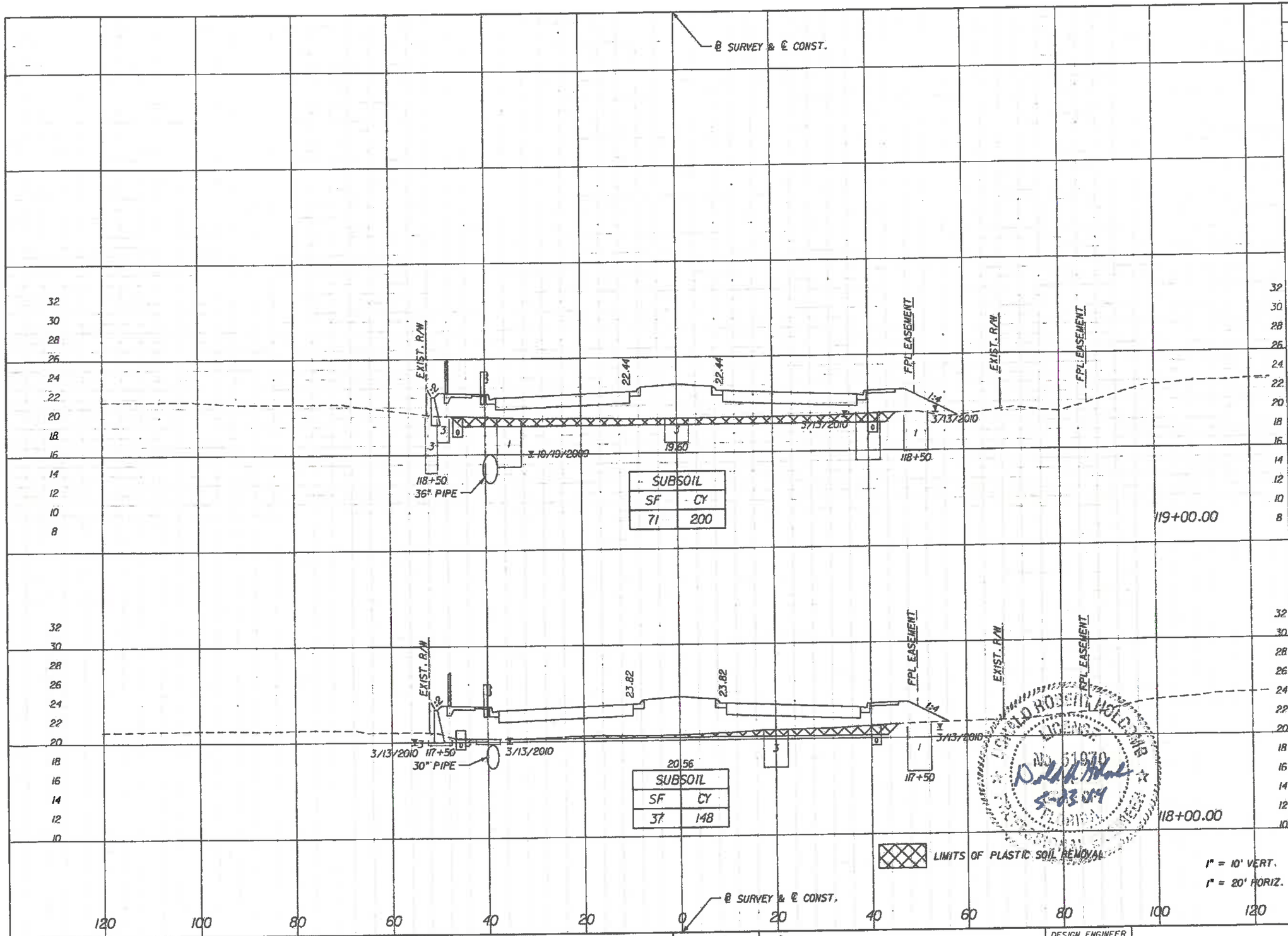
Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER DONALD R. HOLCOMB

FL. LICENSE NO. 51970

CROSS SECTIONS

SHEET NO. 54



Regular Exc.		Embankment	
A	V	A	V
2	6	191	766
2	7	223	789

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 6071160

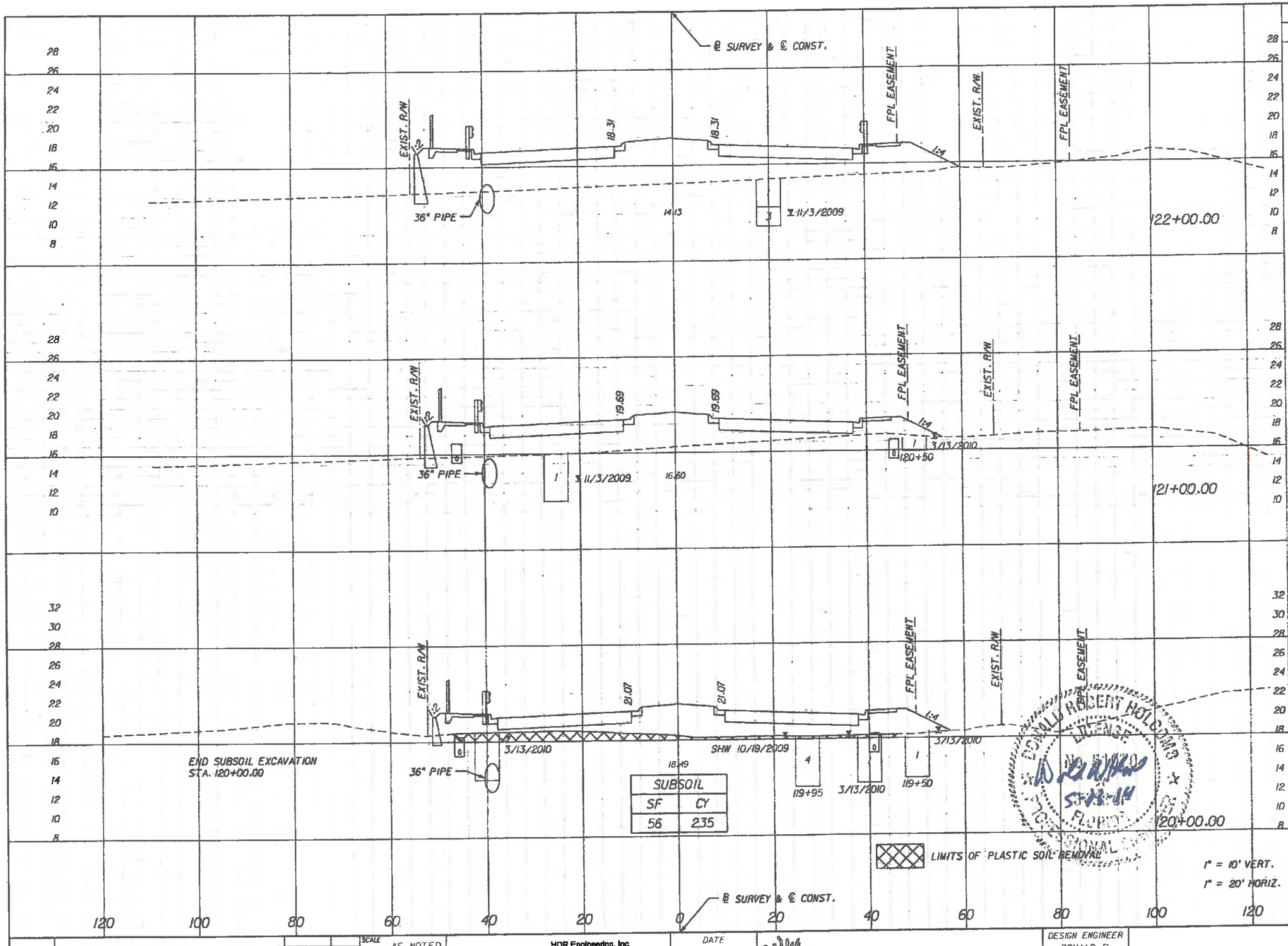
Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER DONALD R. HOLCOMB

FL. LICENSE NO. 51970

CROSS SECTIONS

SHEET NO. 55



	Regular Exc.		Embankment	
	A	V	A	V
1	3	9	334	996
2	2	7	204	680
3	2	6	163	655

DONALD ROBERT HOLCOMB LICENSE NO. 51970 STATE OF FLORIDA PROFESSIONAL ENGINEER

10-29-14

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 607160

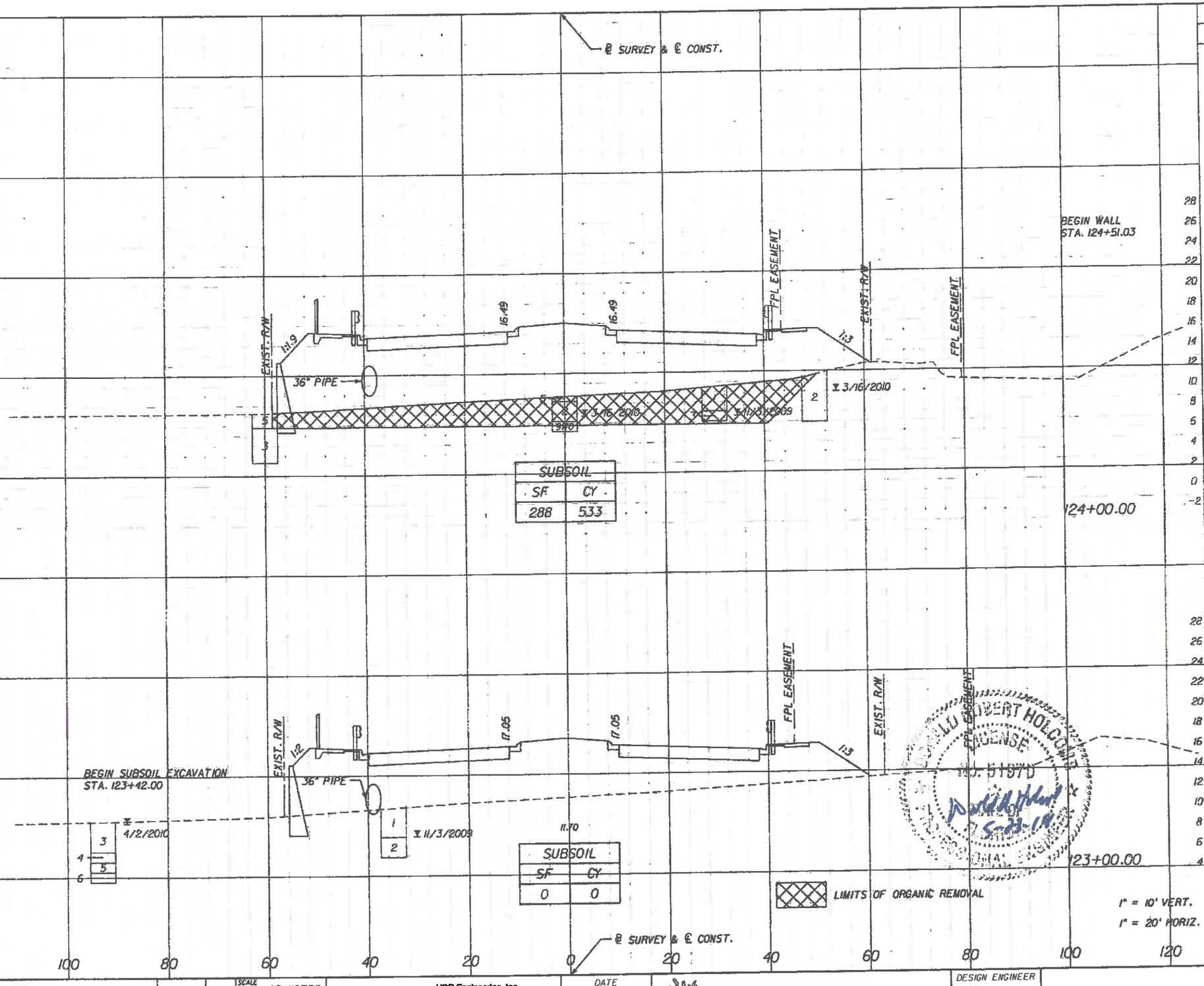
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER DONALD R. HOLCOMB

FL. LICENSE NO. 51970

CROSS SECTIONS

SHEET NO. 56



Regular Exc.		Embankment	
A	V	A	V
6	24	630	2039
6	17	471	1491

DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
STATE OF FLORIDA
5-23-14

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

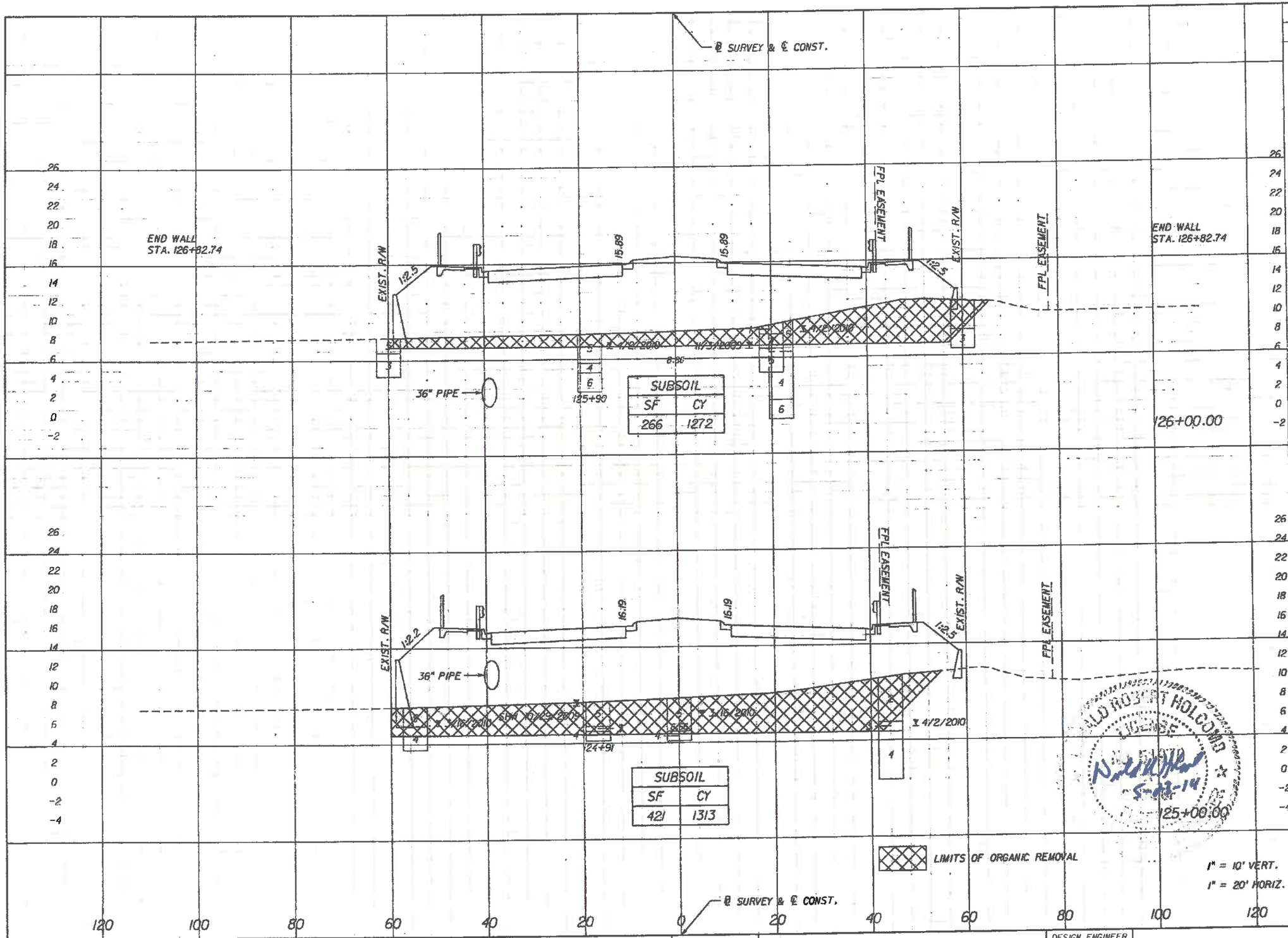
DATE 05/27/14
PROJECT NO. 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER
DONALD R. HOLCOMB
FL. LICENSE NO.
51970

CROSS SECTIONS

SHEET NO.
57



	Regular Exc.		Embankment	
	A	V	A	V
	4	23	637	2518
	8	27	723	2205

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 6071160

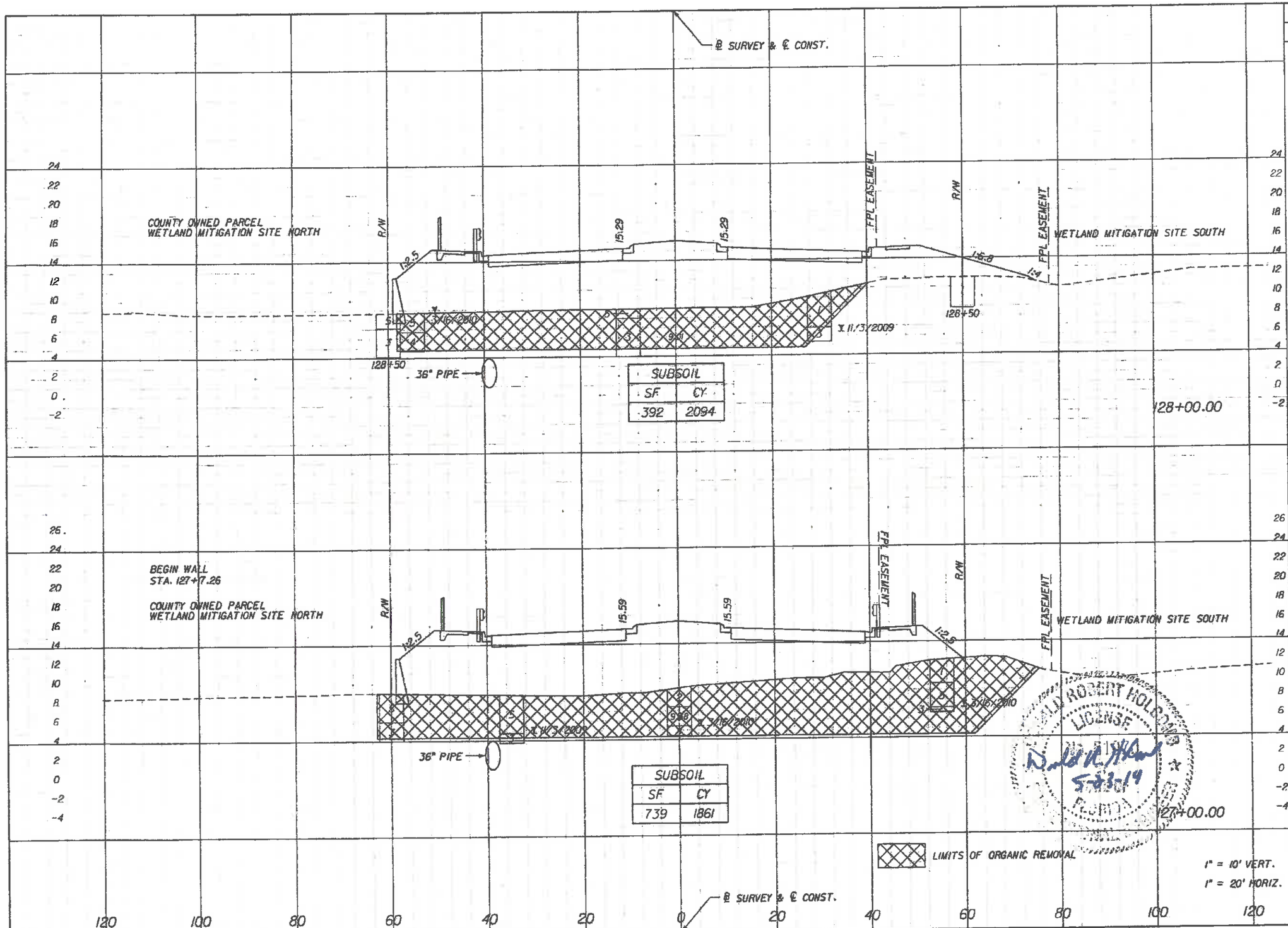
Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER DONALD R. HOLCOMB

FL. LICENSE NO. 51970

CROSS SECTIONS

SHEET NO. 58



Regular Exc.		Embankment	
A	V	A	V
2	9	574	2123
2	12	572	2239

DONALD ROBERT HOLCOMB LICENSE 51970 STATE OF FLORIDA
Donald R. Holcomb 5-13-14

SCALE	AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-8233 FBPR Certificate of Authorization No. 4213	DATE 05/27/14
DESIGNED BY	JLS		PROJECT NO. 607160
DRAWN BY	JHC		
CHECKED BY	DRH		

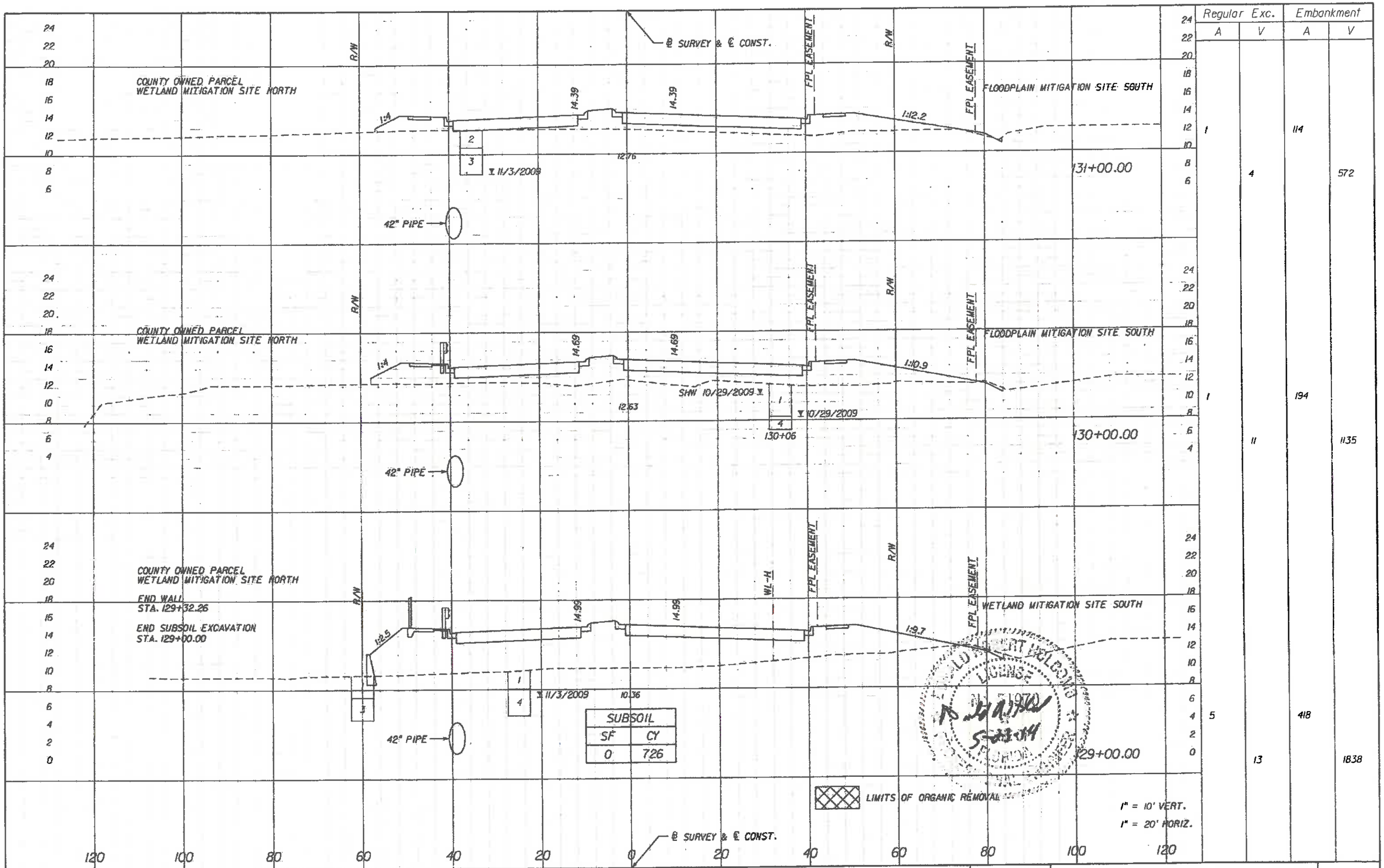
No.	REVISIONS	DATE	BY

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO. 51970

CROSS SECTIONS

SHEET NO. 59



Regular Exc.		Embankment	
A	V	A	V
1		114	
	4		572
1		194	
	11		1135
5		418	
	13		1838

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 6071160

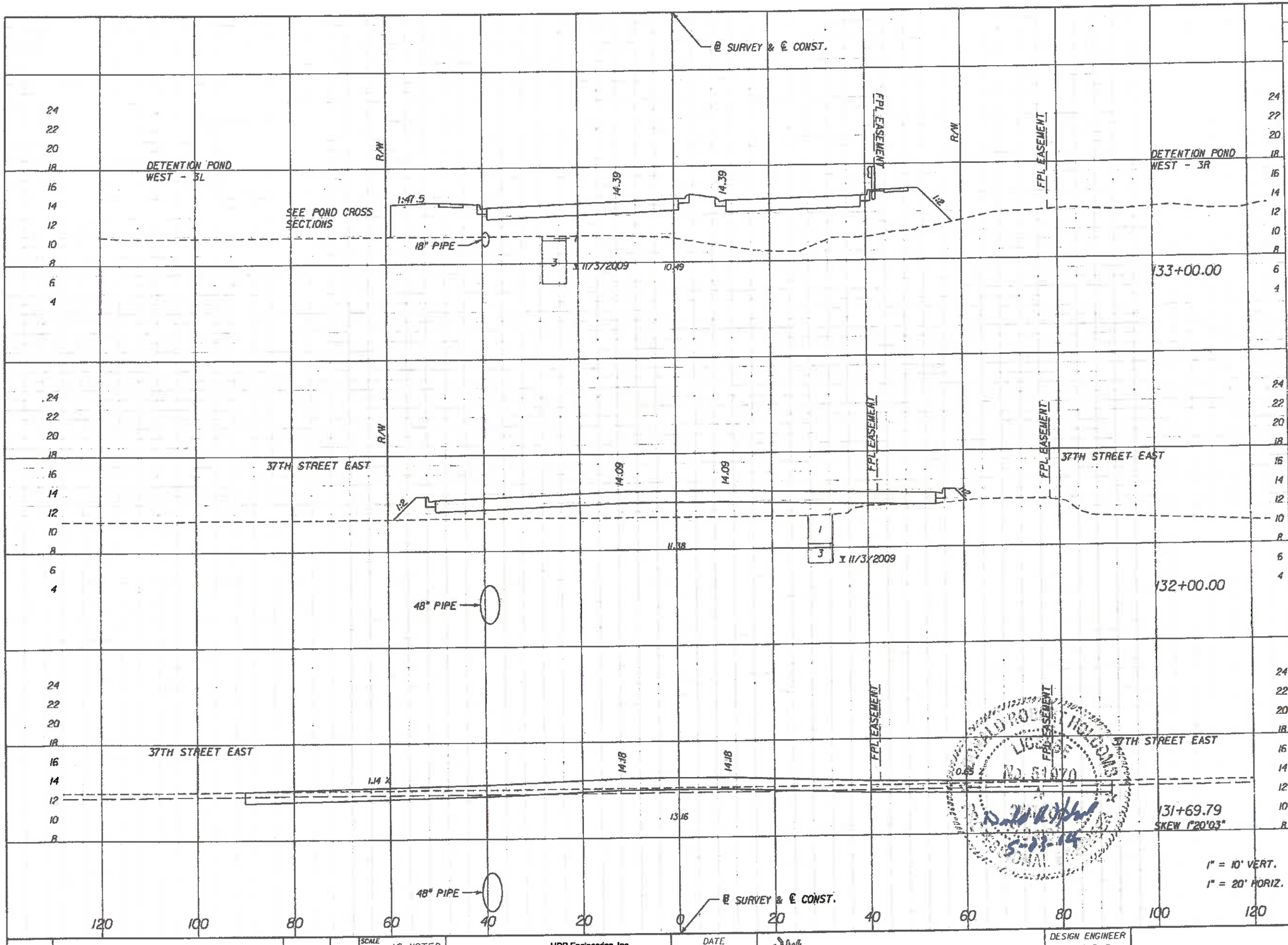
Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER DONALD R. HOLCOMB

FL. LICENSE NO. 51970

CROSS SECTIONS

SHEET NO. 60



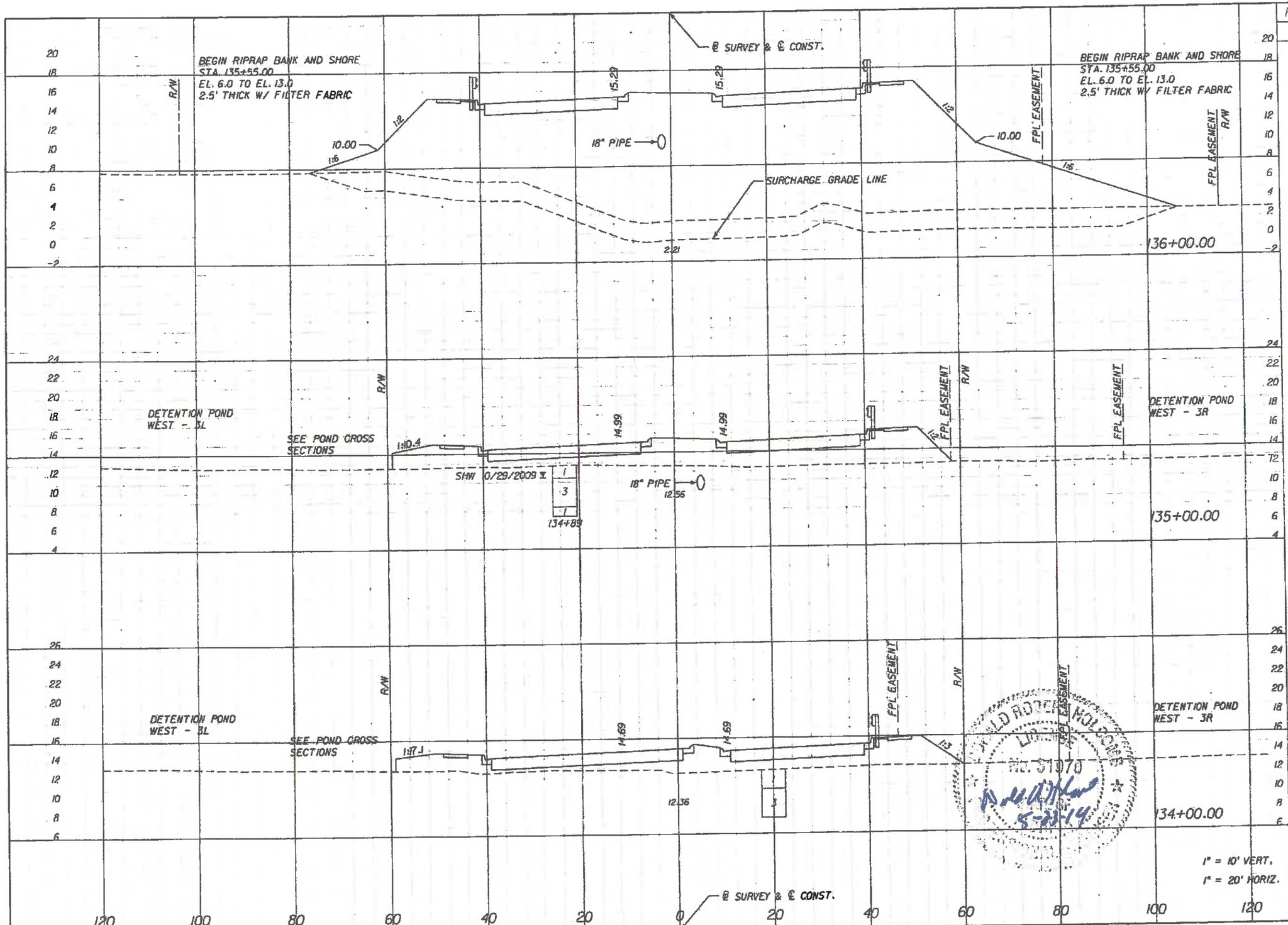
Regular Exc.		Embankment	
A	V	A	V
0		370	
	0		927
0		131	
	73		73
130		0	
	169		147

DONALD R. HOLCOMB LIC. NO. 51970 STATE OF FLORIDA PROFESSIONAL ENGINEER
5-27-14

SCALE: AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14	MANATEE COUNTY PUBLIC WORKS
DESIGNED BY: JLS		PROJECT NO.: 6071160	
DRAWN BY: JHC			
CHECKED BY: DRH			

No.	REVISIONS	DATE	BY

DESIGN ENGINEER	CROSS SECTIONS	SHEET NO.
DONALD R. HOLCOMB		61
FL. LICENSE NO. 51970		



	Regular Exc.		Embankment	
	A	V	A	V
	0		1808	
		0		3745
	0		215	
		0		679
	0		152	
		0		966

SCALE	AS NOTED		
DESIGNED BY	JLS	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE 05/27/14
DRAWN BY	JHC		PROJECT NO. 607160
CHECKED BY	DRH		

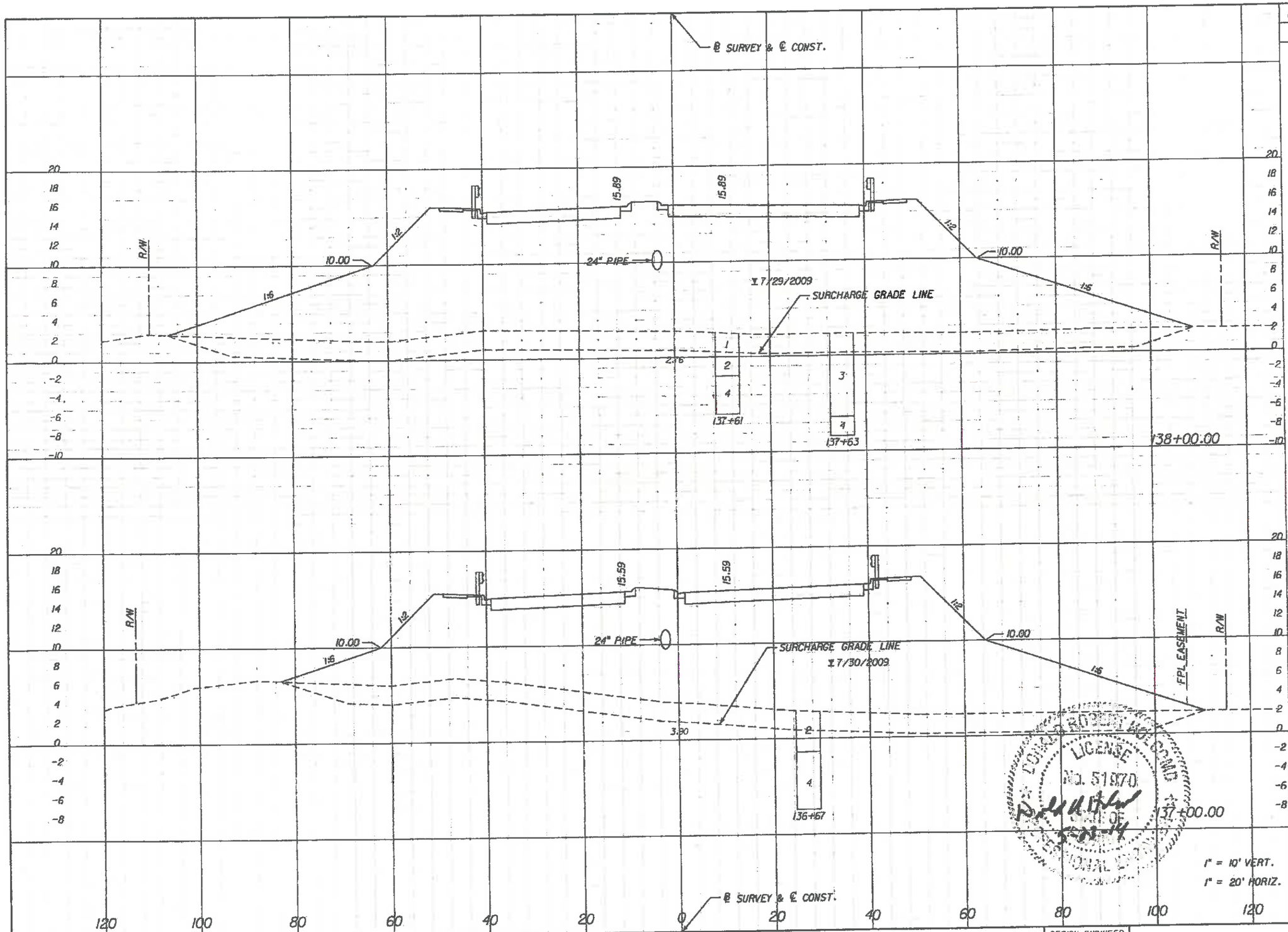
No.	REVISIONS	DATE	BY

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO. 51970

CROSS SECTIONS

SHEET NO. 62



Regular Exc.		Embankment	
A	V	A	V
0	0	2271	7685
0	0	1878	6824

DONALD ROBERT HOLCOMB STATE OF FLORIDA LICENSE No. 51970 PROFESSIONAL ENGINEER 5-01-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

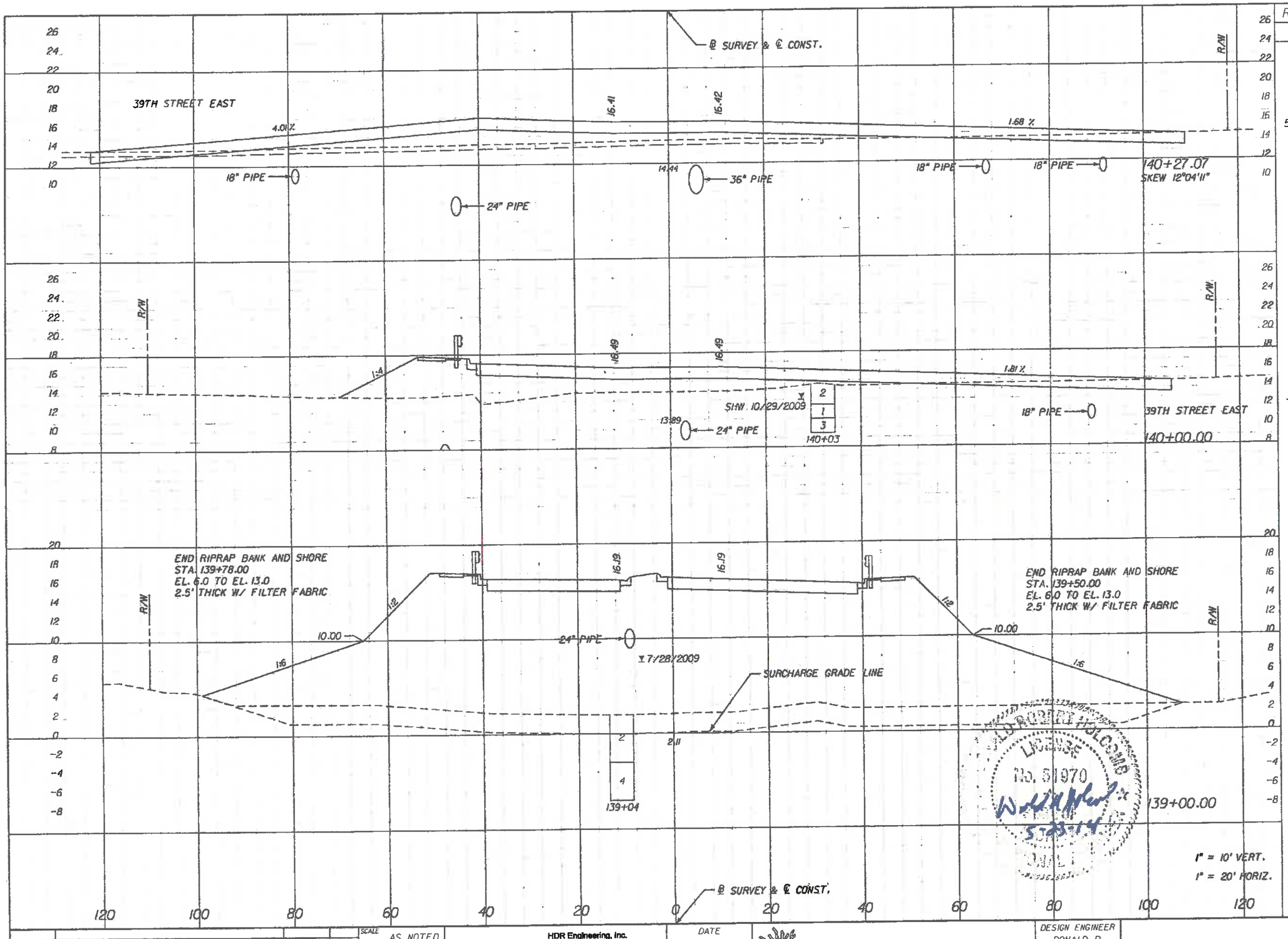
DATE: 05/27/14
PROJECT NO.: 607I160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

CROSS SECTIONS

SHEET NO.: 63

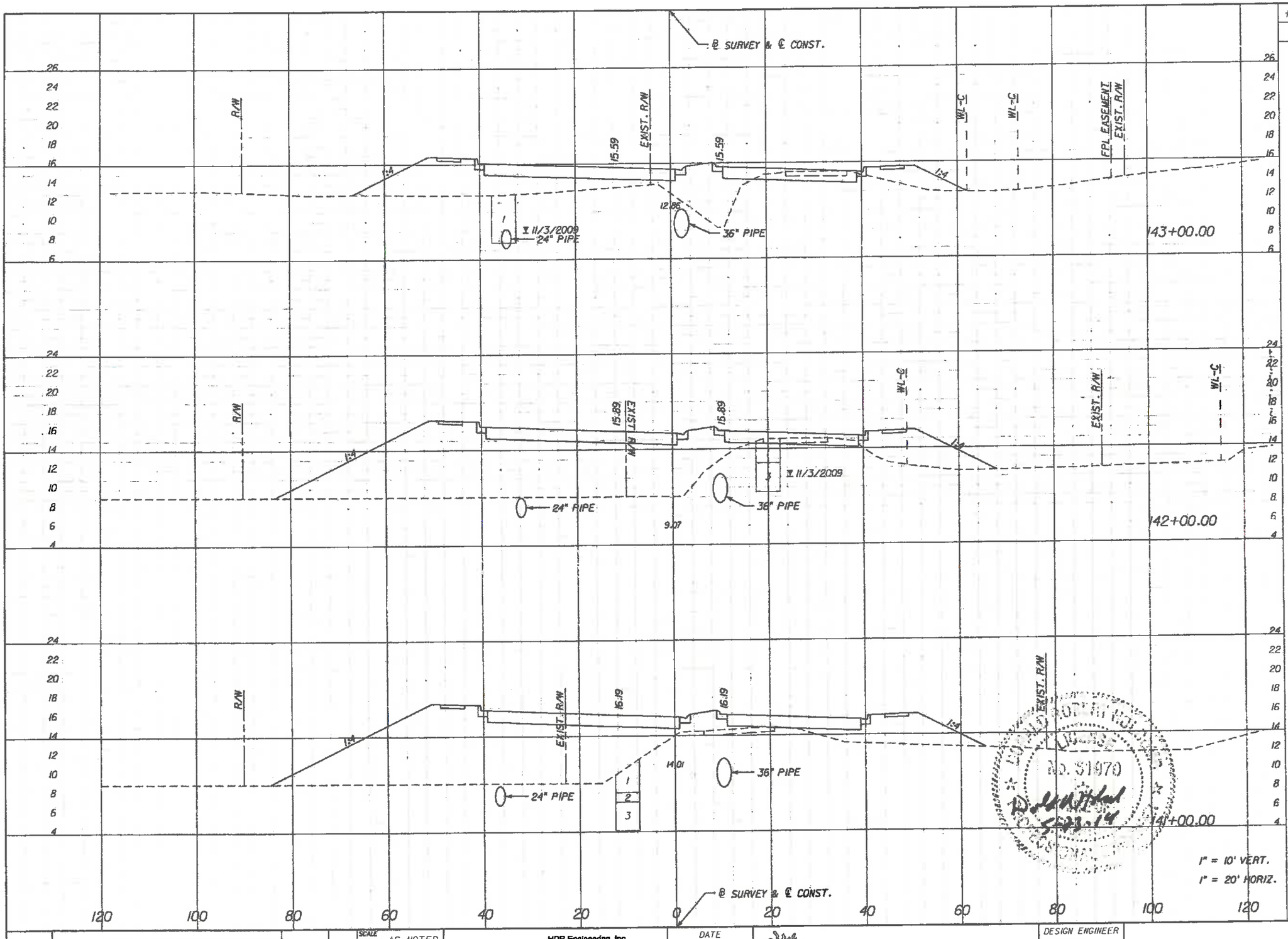


	Regular Exc.		Embankment	
	A	V	A	V
	52		107	
		42		152
	33		196	
		60		4569
	0		2272	
		0		8413

SCALE	AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE 05/27/14	Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS
DESIGNED BY	JLS		PROJECT NO. 6071160	
DRAWN BY	JHC			
CHECKED BY	DRH			

No.	REVISIONS	DATE	BY

DESIGN ENGINEER	CROSS SECTIONS	SHEET NO.
DONALD R. HOLCOMB		
FL. LICENSE NO. 51970		64



	Regular Exc.		Embankment	
	A	V	A	V
	20	63	215	1453
	14	26	569	2018
	0	70	520	847

1" = 10' VERT.
1" = 20' HORIZ.

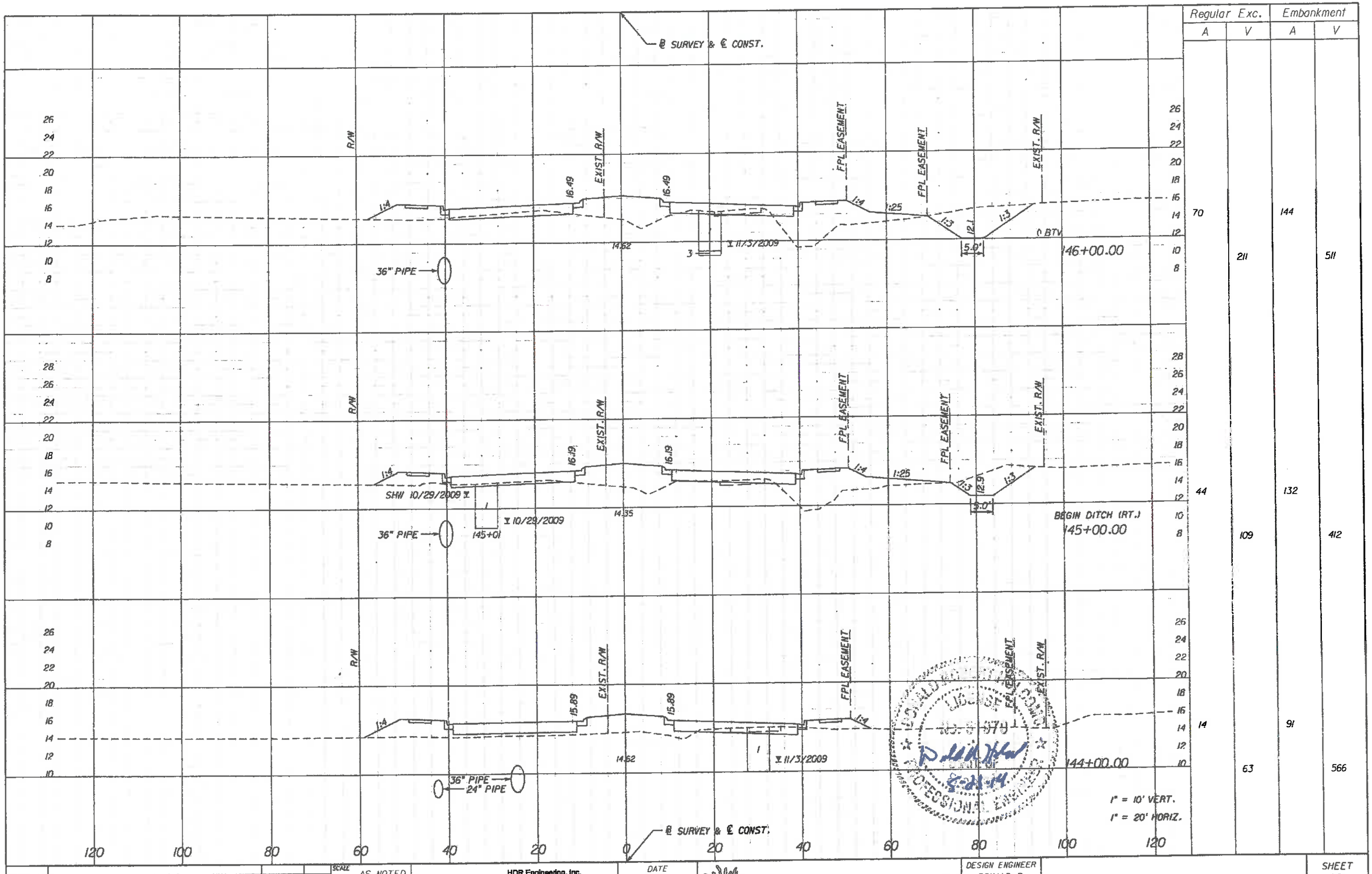
SCALE: AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14	MANATEE COUNTY PUBLIC WORKS
DESIGNED BY: JLS		PROJECT NO.: 6071160	
DRAWN BY: JHC			
CHECKED BY: DRH			

NO.	REVISIONS	DATE	BY

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

CROSS SECTIONS

SHEET NO.: 65



Regular Exc.		Embankment	
A	V	A	V
70	211	144	511
44	109	132	412
14	63	91	566

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

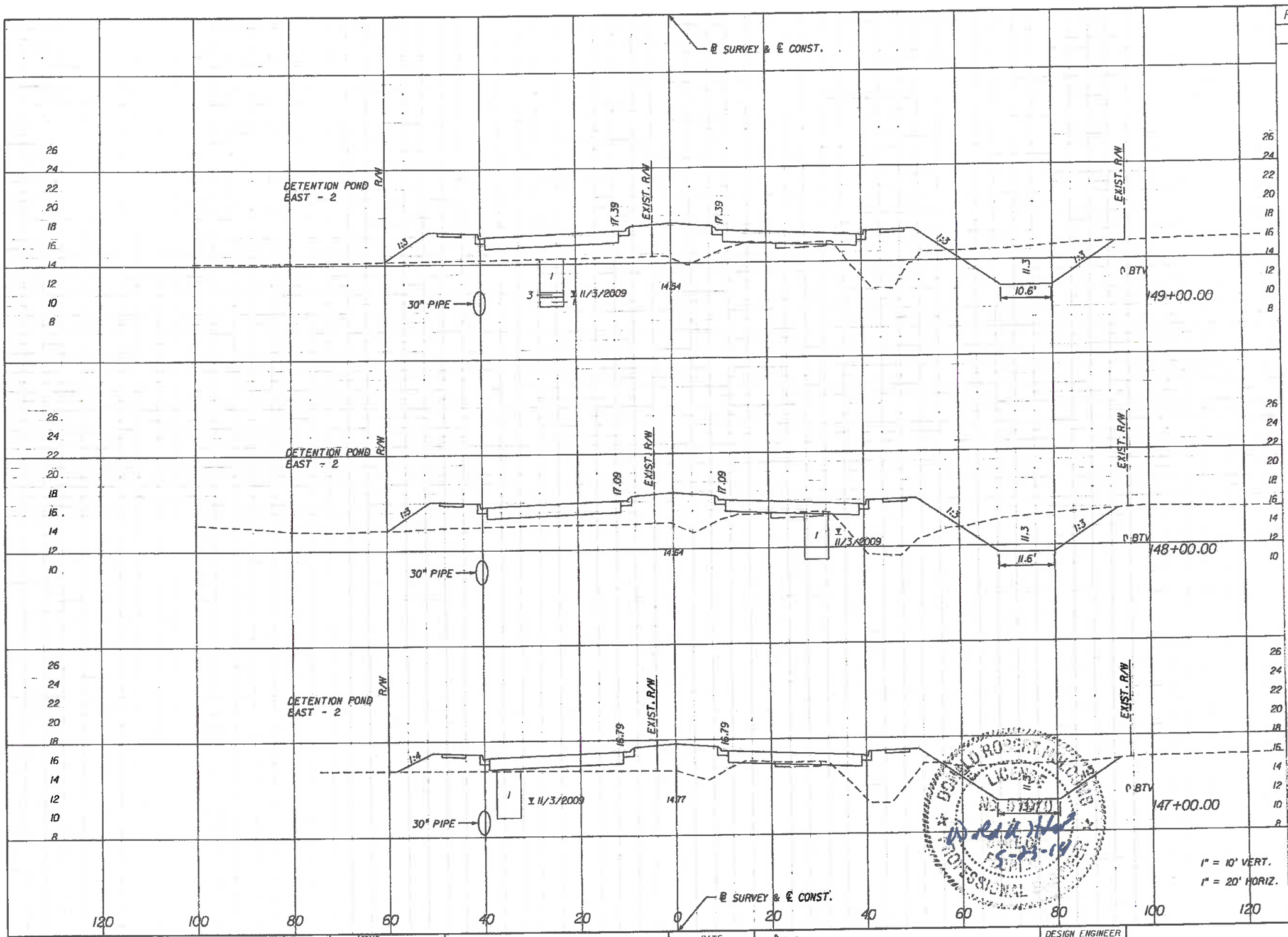
DATE: 05/27/14
PROJECT NO.: 607160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

CROSS SECTIONS

SHEET NO.: 66



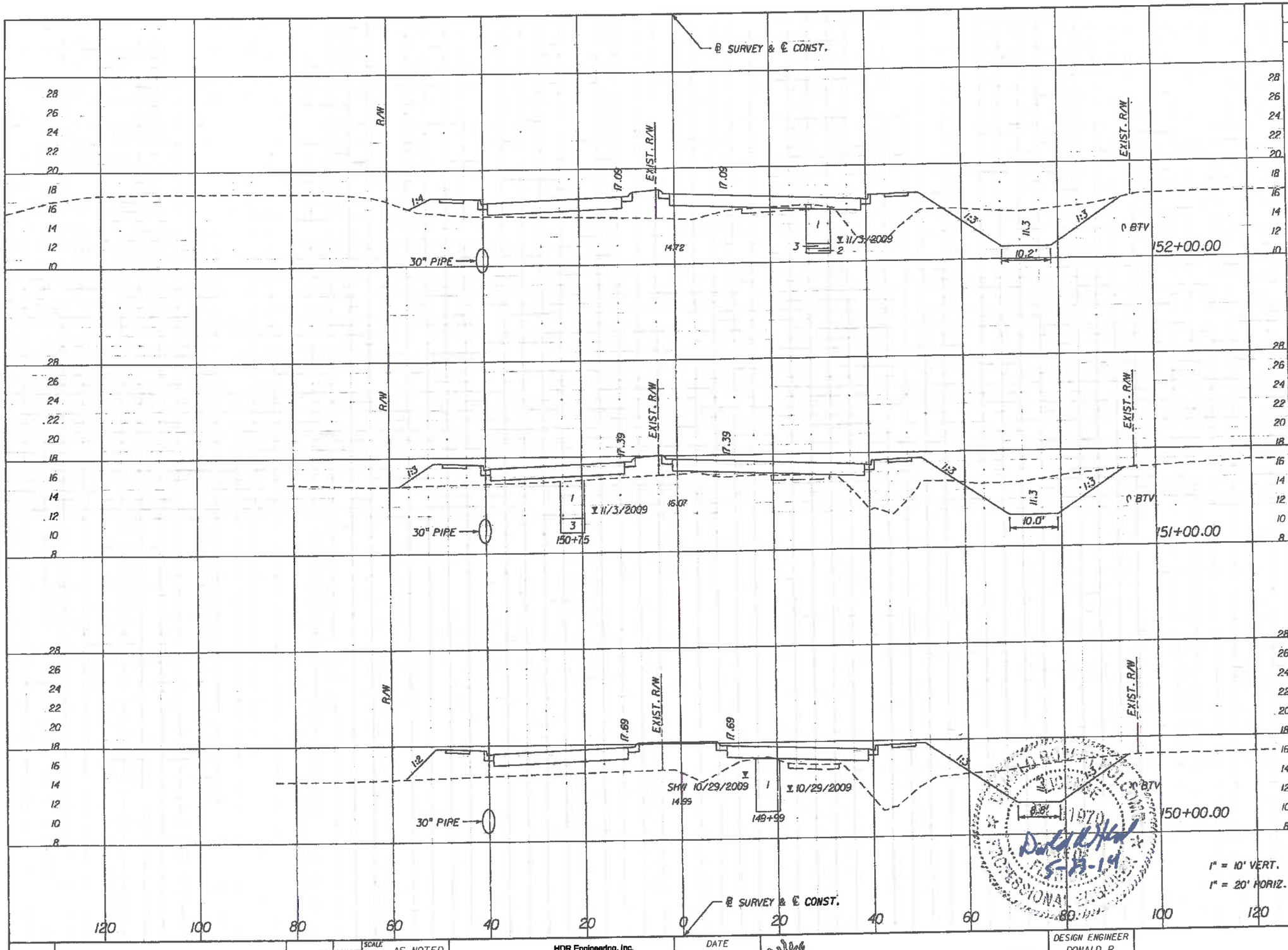
Regular Exc.		Embankment	
A	V	A	V
96	338	232	850
87	347	227	720
100	314	162	566

1" = 10' VERT.
1" = 20' HORIZ.

DONALD R. HOLCOMB — LICENSE NO. 51970 — STATE OF FLORIDA — PROFESSIONAL ENGINEER

SCALE: AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14	DESIGN ENGINEER: DONALD R. HOLCOMB
DESIGNED BY: JLS		PROJECT NO.: 6071160	FL. LICENSE NO.: 51970
DRAWN BY: JHC		Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS	CROSS SECTIONS
CHECKED BY: DRH			SHEET NO.: 67

No.	REVISIONS	DATE	BY



Regular Exc.		Embankment	
A	V	A	V
94	326	132	494
82	304	135	689
82	329	237	869

SCALE	AS NOTED	DESIGNED BY	JLS
DRAWN BY	JHC	CHECKED BY	DRH

NO.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 6071160

Manatee County FLORIDA

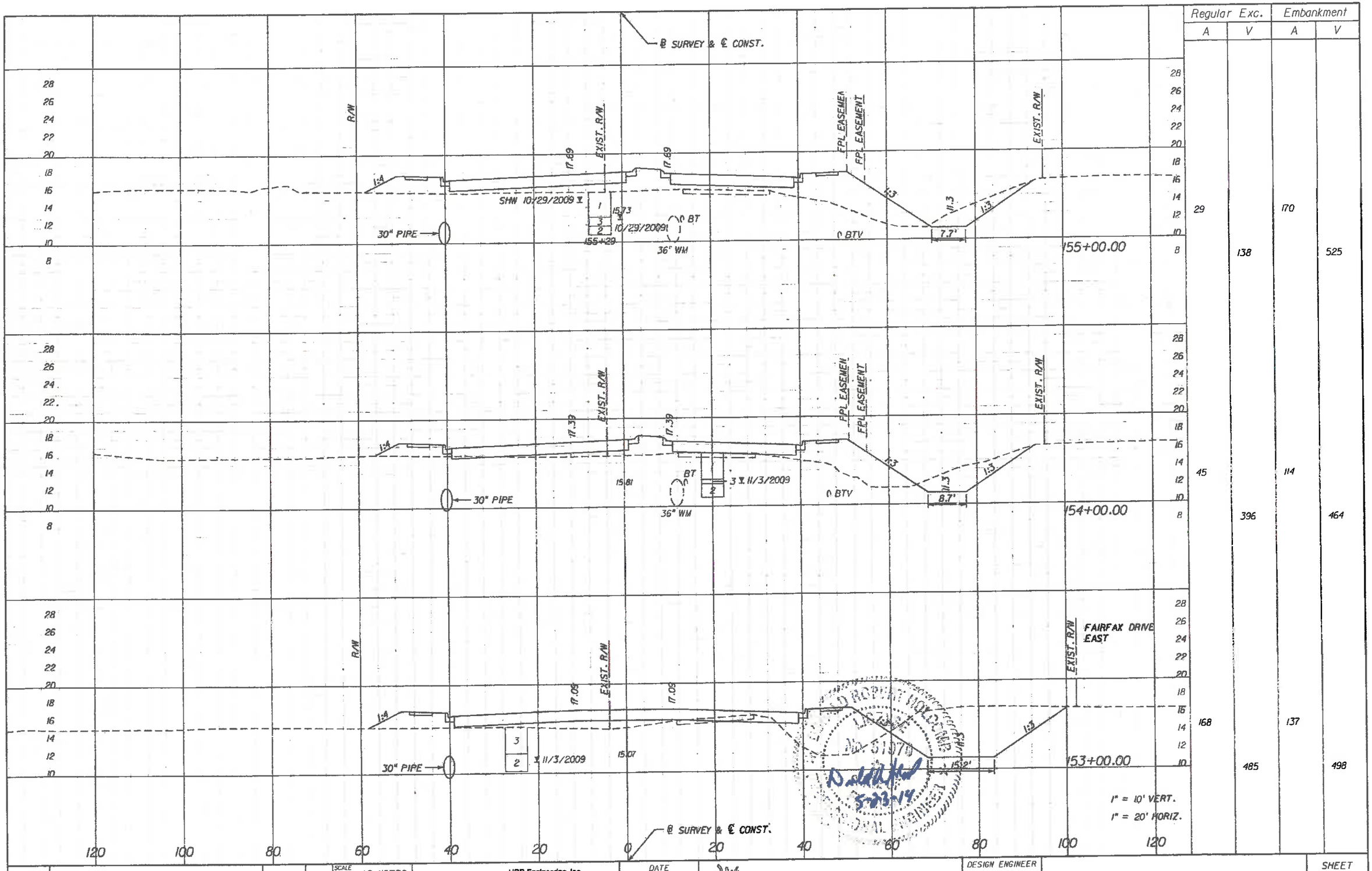
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER
DONALD R. HOLCOMB

FL. LICENSE NO. 51970

CROSS SECTIONS

SHEET NO. 68



Regular Exc.		Embankment	
A	V	A	V
29	138	170	525
45	396	114	464
168	485	137	498

SCALE	AS NOTED	DATE	05/27/14
DESIGNED BY	JLS	PROJECT NO.	6071160
DRAWN BY	JHC	DESIGN ENGINEER	DONALD R. HOLCOMB
CHECKED BY	DRH	FL. LICENSE NO.	51970

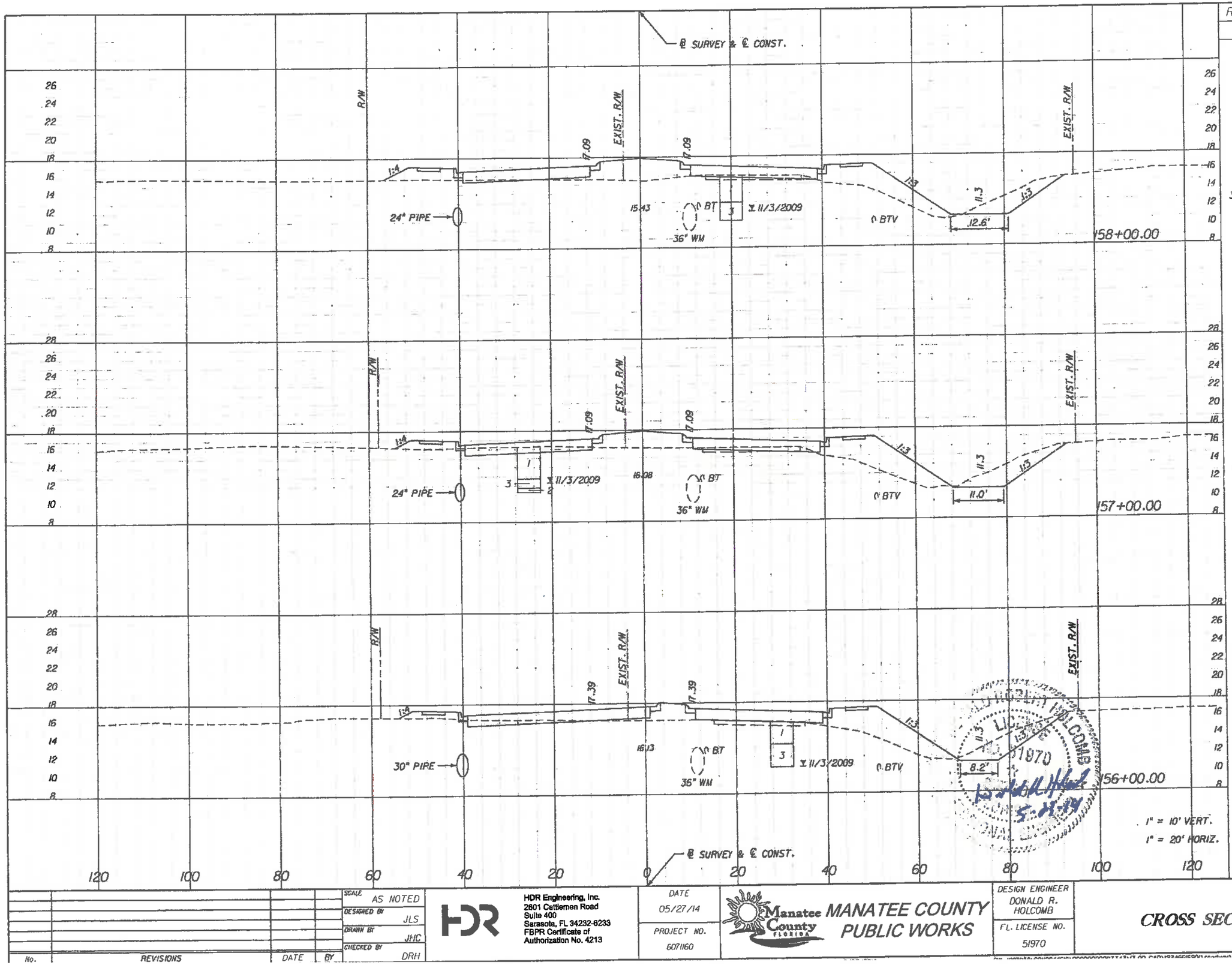
HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

No.	REVISIONS	DATE	BY

CROSS SECTIONS

SHEET NO. 69



	Regular Exc.		Embankment	
	A	V	A	V
	38		115	
		182		403
	61		103	
		194		351
	44		87	
		135		475

1" = 10' VERT.
1" = 20' HORIZ.

DONALD R. HOLCOMB LICENSE 51970 STATE OF FLORIDA
5-21-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

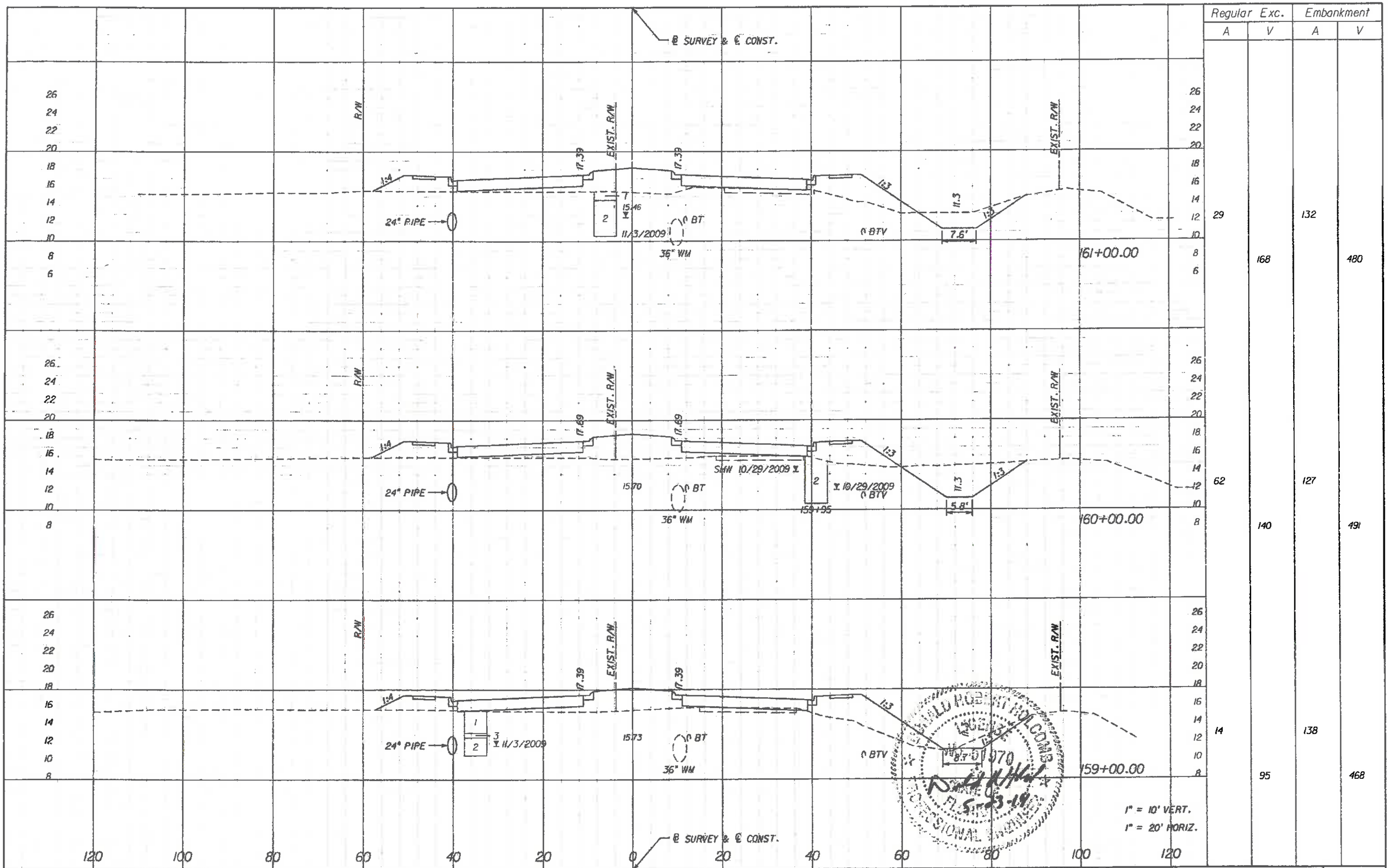
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

CROSS SECTIONS

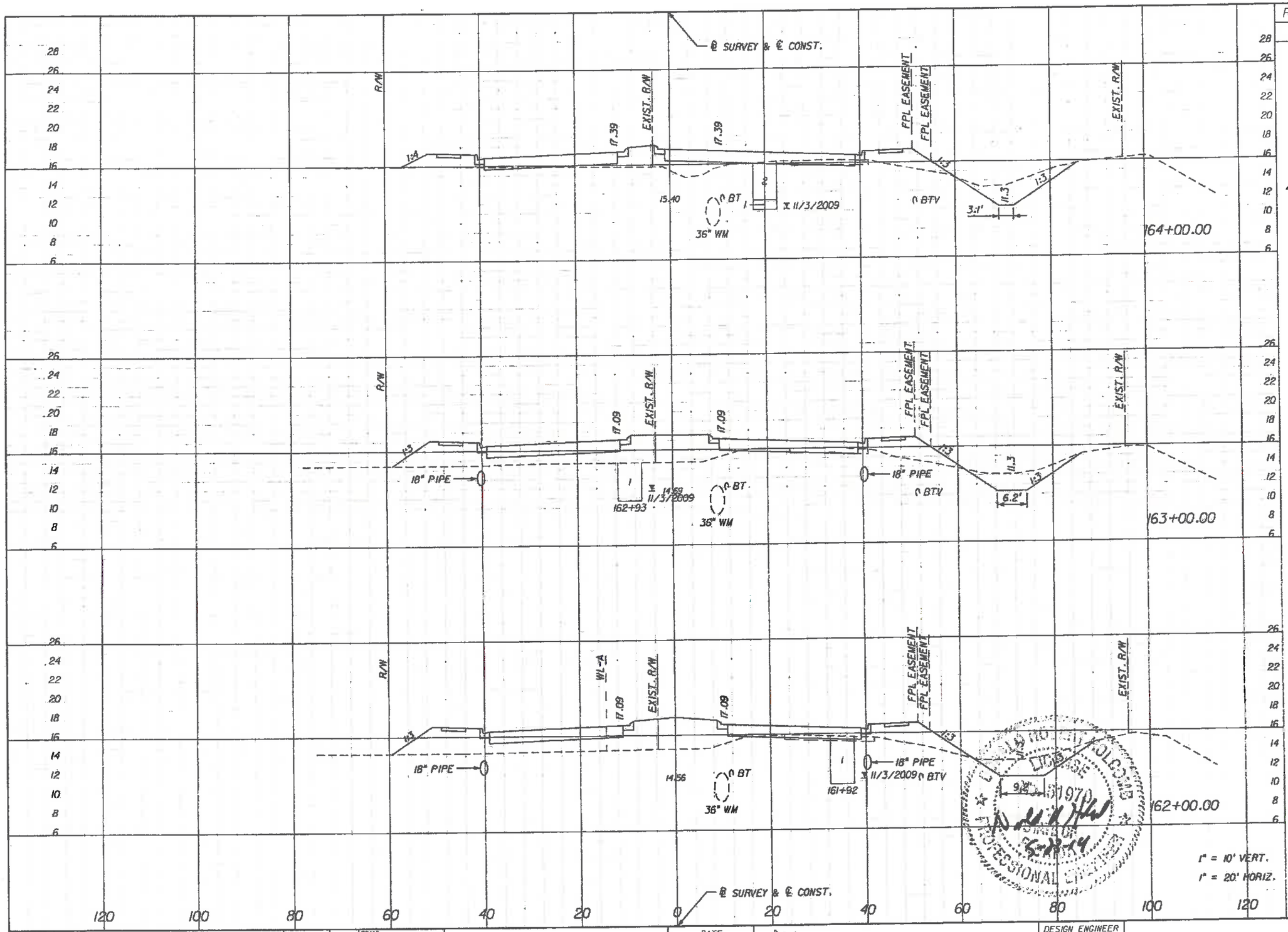
SHEET NO.: 70

	Regular Exc.		Embankment	
	A	V	A	V
161+00.00	29	168	132	480
160+00.00	62	140	127	491
159+00.00	14	95	138	468



				SCALE AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE 05/27/14	MANATEE COUNTY PUBLIC WORKS
				DESIGNED BY JLS		PROJECT NO. 6071160	
				DRAWN BY JHC			
No.	REVISIONS	DATE	BY	CHECKED BY DRH			

DESIGN ENGINEER	CROSS SECTIONS	SHEET NO.
DONALD R. HOLCOMB		71
FL. LICENSE NO. 51970		



	Regular Exc.		Embankment	
	A	V	A	V
164+00.00	43	148	74	414
163+00.00	37	141	150	592
162+00.00	39	125	170	558

SCALE	AS NOTED		
DESIGNED BY	JLS	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE 05/27/14
DRAWN BY	JHC		PROJECT NO. 607/160
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

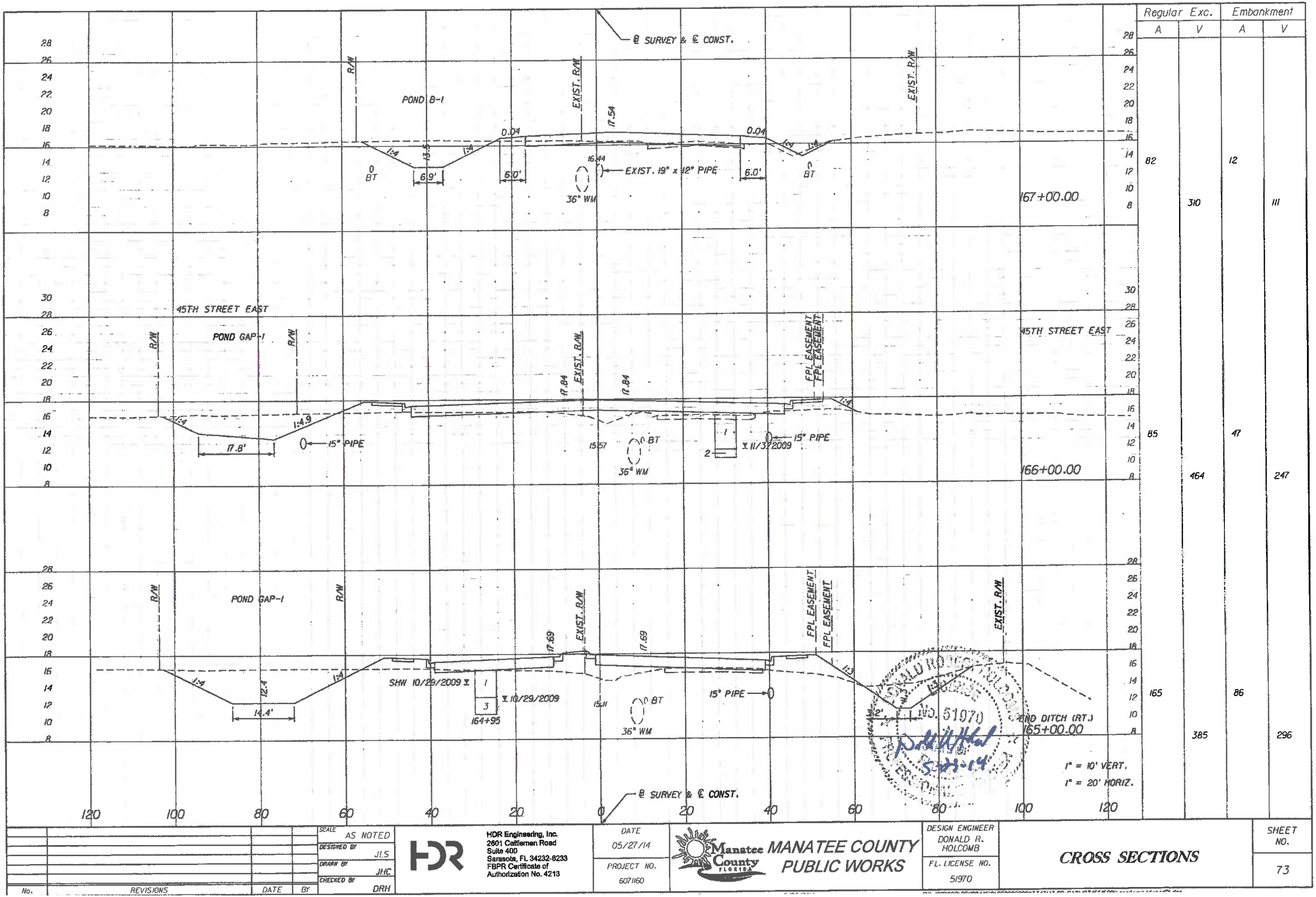
Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB

FL. LICENSE NO. 51970

CROSS SECTIONS

SHEET NO. 72



	Regular Exc.		Embankment	
	A	V	A	V
	82		12	
		310		111
	85		47	
		464		247
	165		86	
		385		296

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

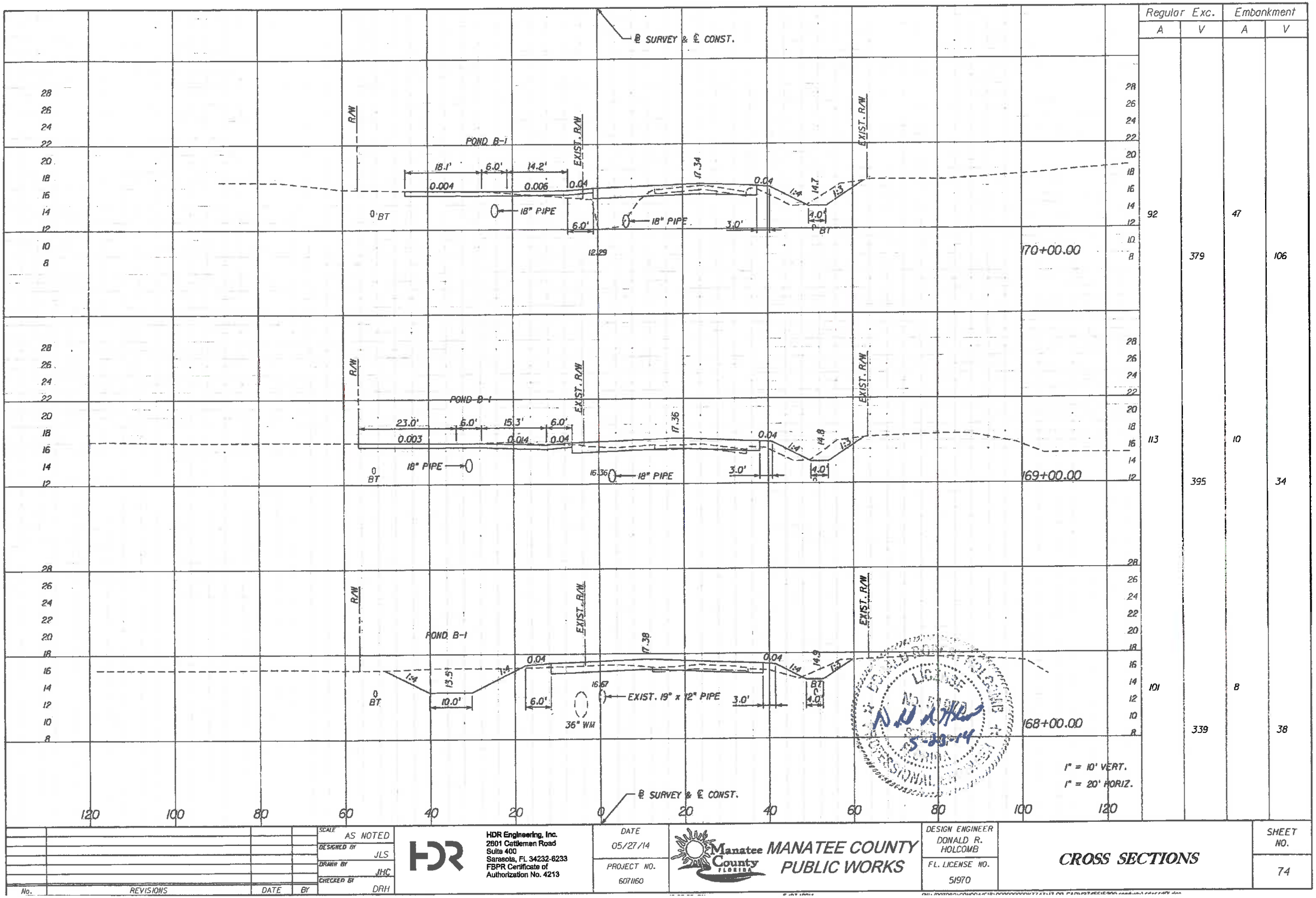
DATE: 05/27/14
PROJECT NO.: 607160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

CROSS SECTIONS

SHEET NO.: 73



Regular Exc.		Embankment	
A	V	A	V
92	379	47	106
113	395	10	34
101	339	8	38

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 6071160

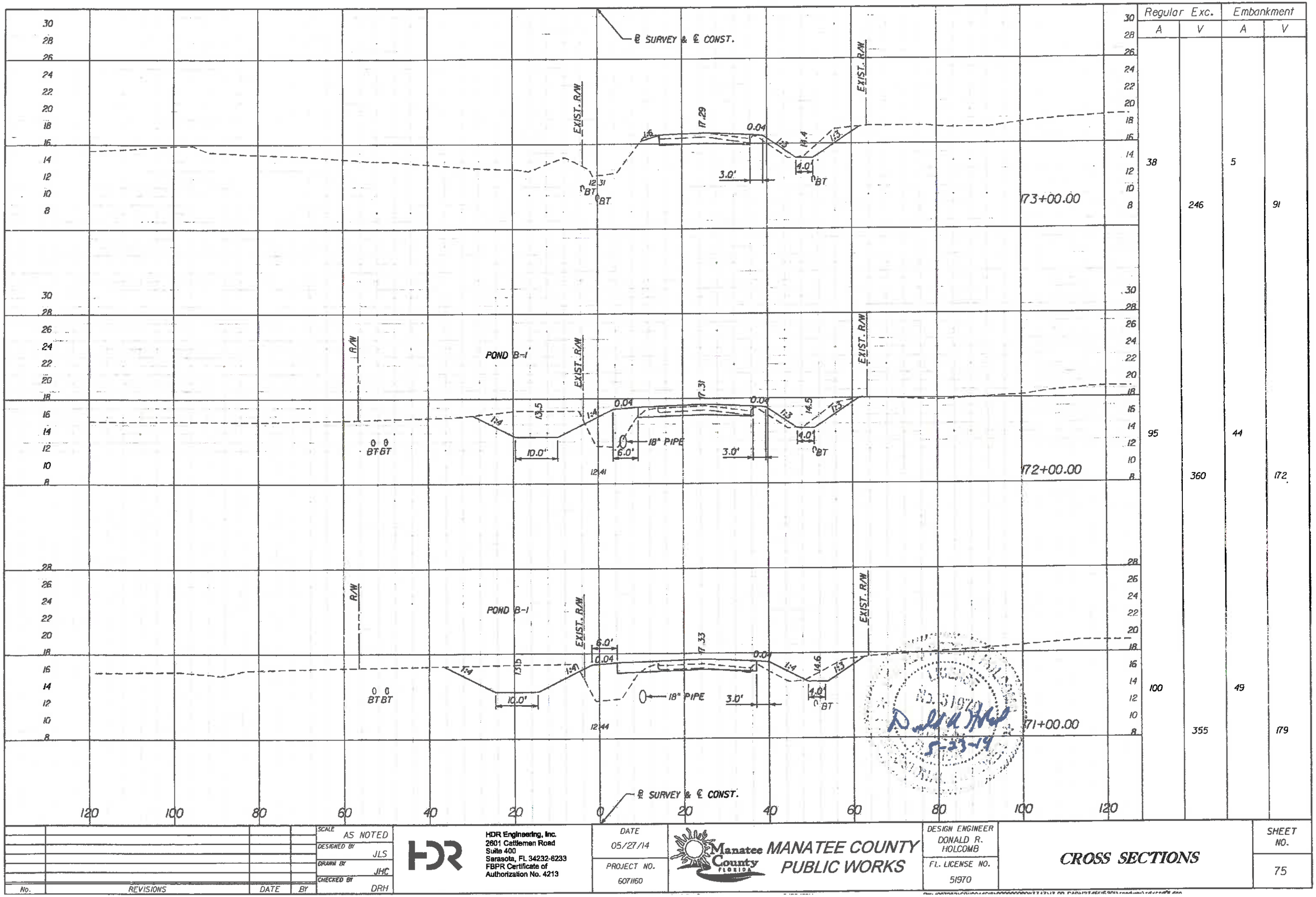
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER
DONALD R. HOLCOMB

FL. LICENSE NO. 51970

CROSS SECTIONS

SHEET NO. 74



Regular Exc.		Embankment	
A	V	A	V
38	246	5	91
95	360	44	172
100	355	49	179

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

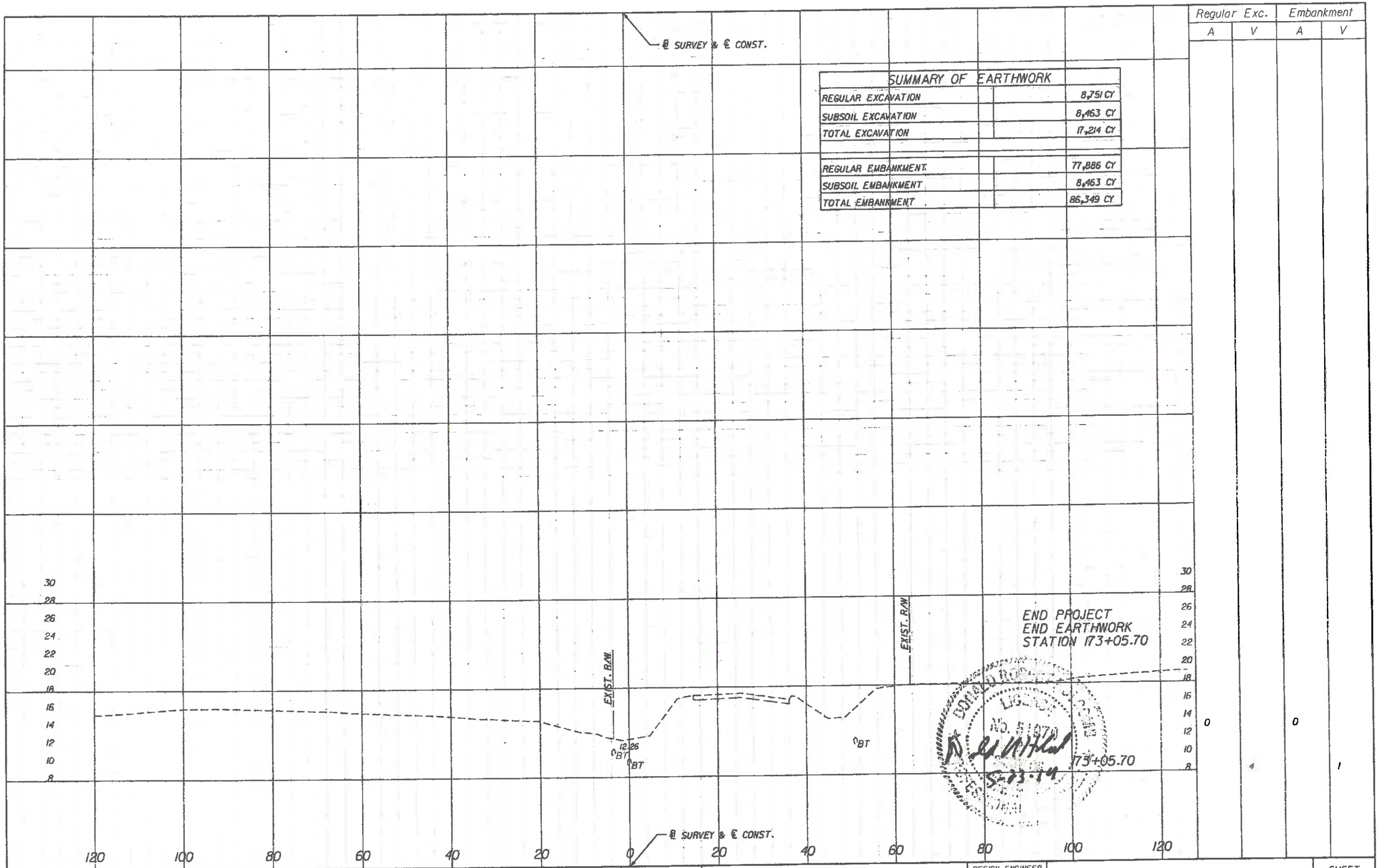
DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

CROSS SECTIONS

SHEET NO.: 75

SUMMARY OF EARTHWORK	
REGULAR EXCAVATION	8,751 CY
SUBSOIL EXCAVATION	8,463 CY
TOTAL EXCAVATION	17,214 CY
REGULAR EMBANKMENT	77,886 CY
SUBSOIL EMBANKMENT	8,463 CY
TOTAL EMBANKMENT	86,349 CY

Regular Exc.		Embankment	
A	V	A	V
0		0	
	4		1



DONALD R. HOLCOMB LICENSE NO. 51970 STATE OF FLORIDA
5-23-14
173+05.70

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE	05/27/14
PROJECT NO.	6071160

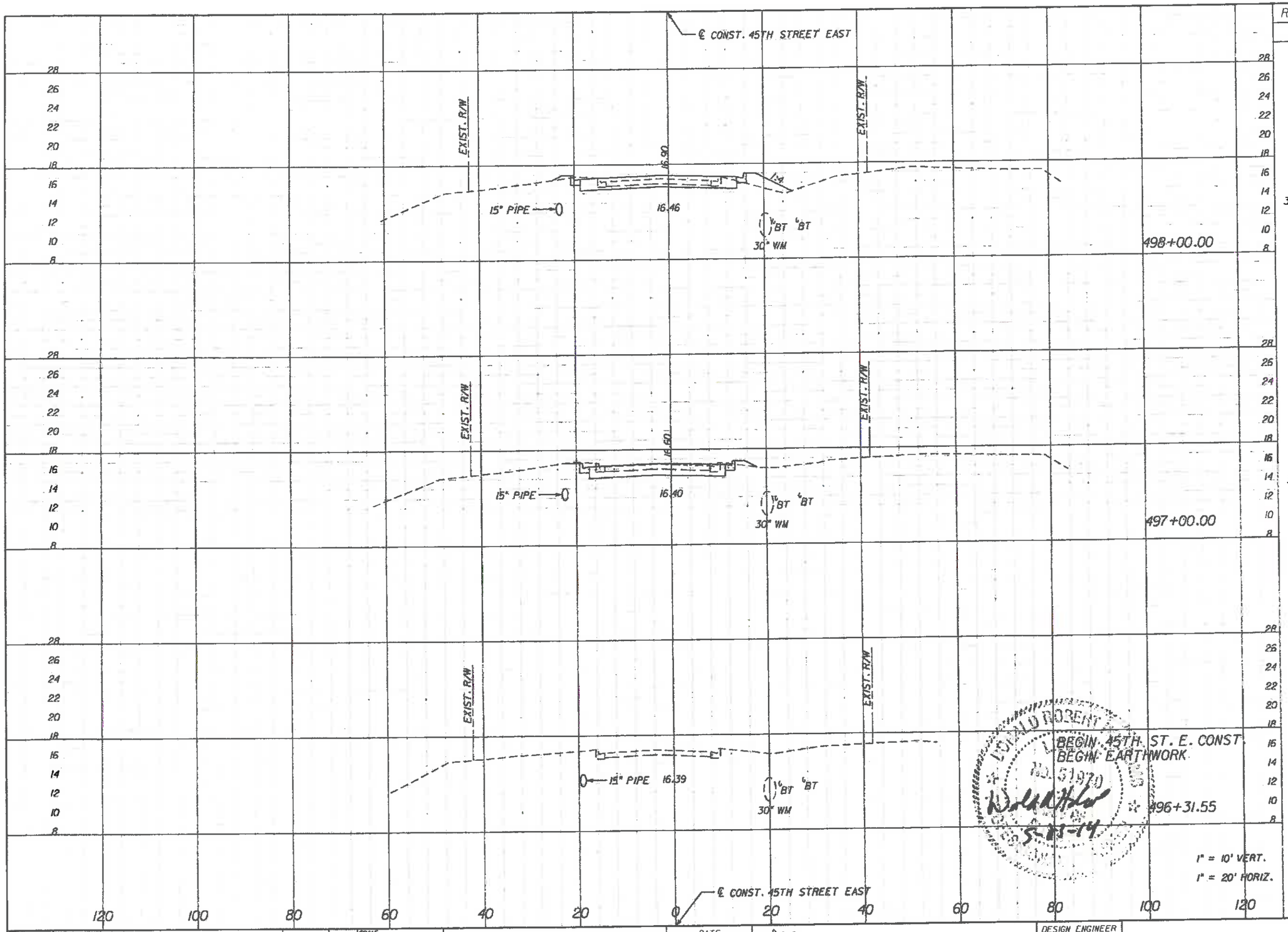
Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER	DONALD R. HOLCOMB
FL. LICENSE NO.	51970

CROSS SECTIONS

SHEET NO. 76



Regular Exc.		Embankment	
A	V	A	V
32	127	10	21
37	47	2	3
0	0	0	0

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 607160

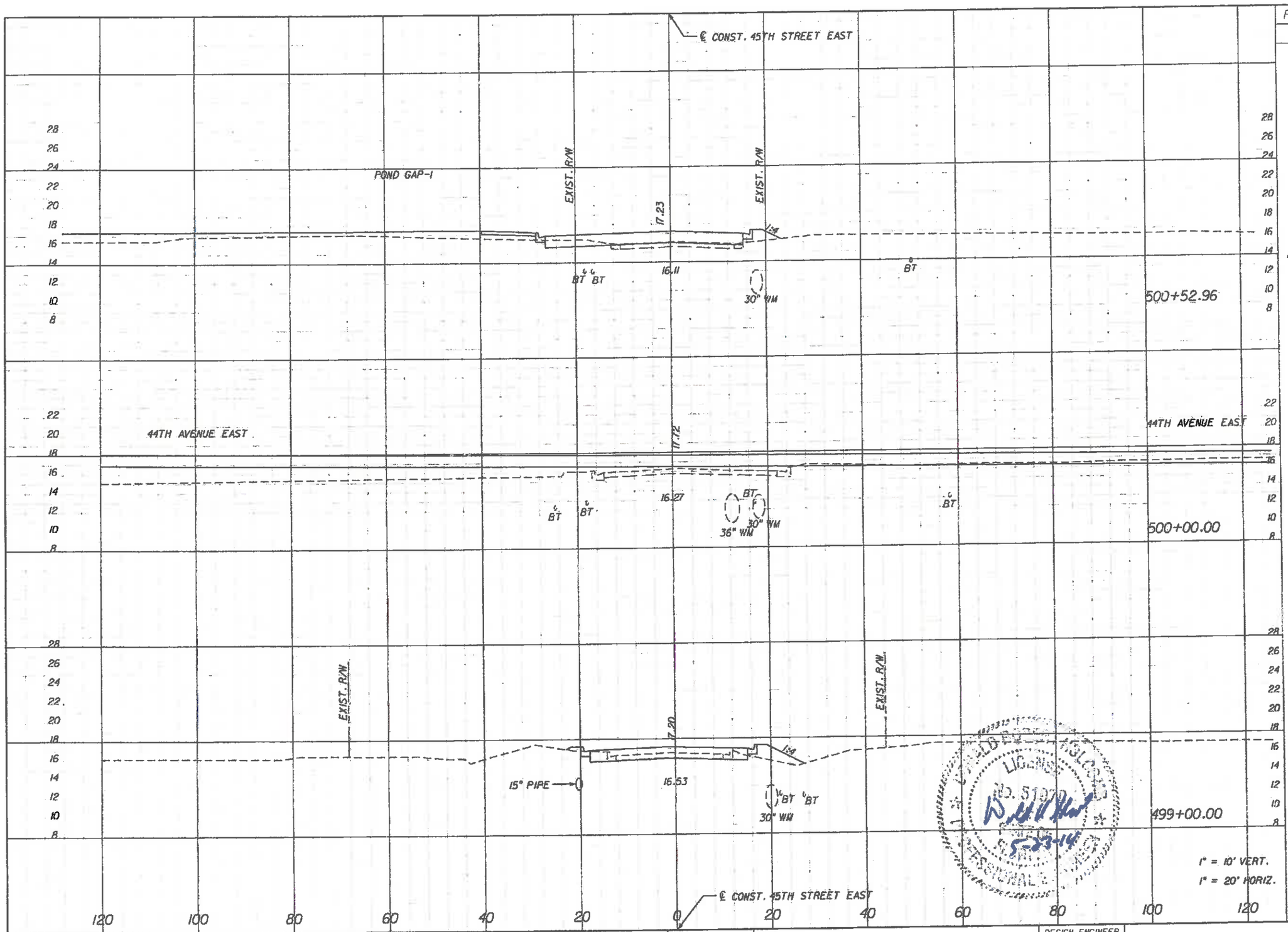
Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER DONALD R. HOLCOMB

FL. LICENSE NO. 51970

45TH STREET EAST CROSS SECTIONS

SHEET NO. 77



	Regular Exc.		Embankment	
	A	V	A	V
	11	95	142	434
	22	100	12	39

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

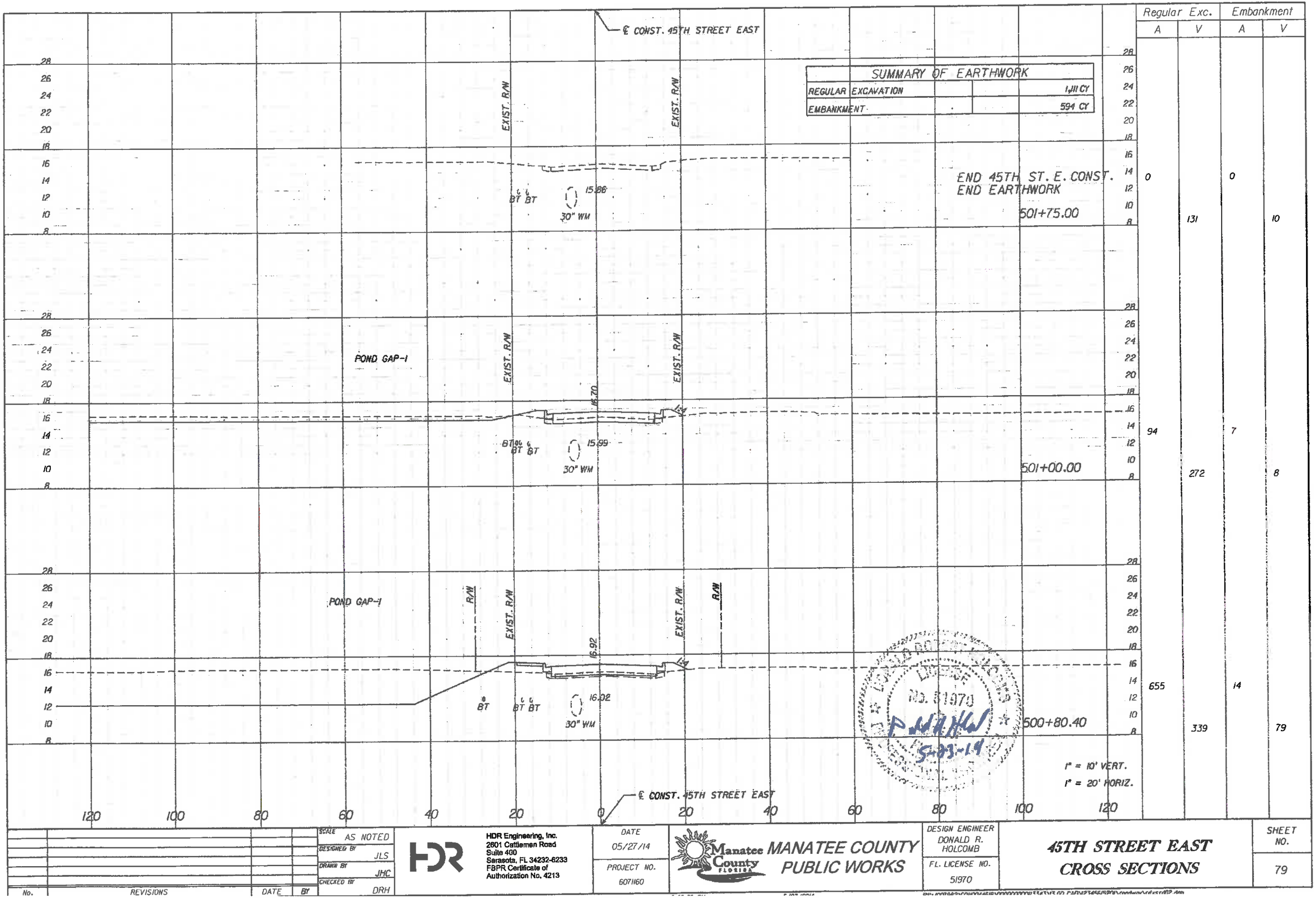
DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

45TH STREET EAST CROSS SECTIONS

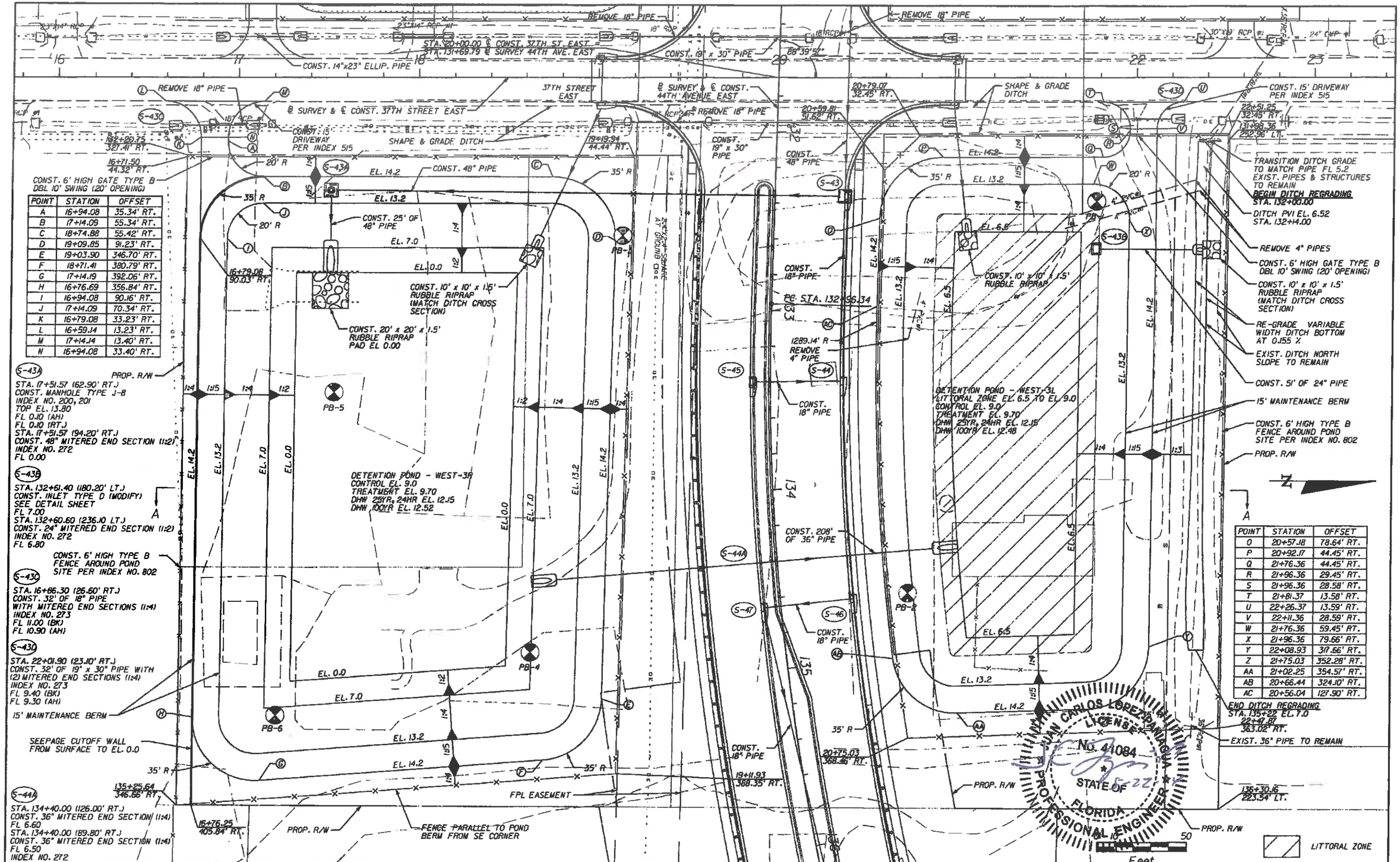
SHEET NO.: 78



	Regular Exc.		Embankment	
	A	V	A	V
	0	131	0	10
	94	272	7	8
	655	339	14	79

No.	REVISIONS	DATE	BY	SCALE: AS NOTED DESIGNED BY: JLS DRAWN BY: JHC CHECKED BY: DRH	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213

DATE: 05/27/14	Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER: DONALD R. HOLCOMB	45TH STREET EAST CROSS SECTIONS
PROJECT NO.: 6071160		FL. LICENSE NO.: 51970	SHEET NO.: 79



POINT	STATION	OFFSET
A	16+94.08	35.34' RT.
B	17+14.09	55.34' RT.
C	18+74.88	55.42' RT.
D	19+09.85	91.23' RT.
E	19+03.90	346.70' RT.
F	18+71.41	380.79' RT.
G	17+14.19	392.06' RT.
H	16+76.69	356.84' RT.
I	16+94.08	90.16' RT.
J	17+14.09	70.34' RT.
K	16+79.08	33.23' RT.
L	16+59.14	13.23' RT.
M	17+14.14	13.40' RT.
N	16+94.08	33.40' RT.

POINT	STATION	OFFSET
O	20+57.18	78.64' RT.
P	20+92.17	44.45' RT.
Q	21+76.36	44.45' RT.
R	21+96.36	29.45' RT.
S	21+95.36	28.58' RT.
T	21+81.37	13.58' RT.
U	22+26.37	13.59' RT.
V	22+11.36	28.59' RT.
W	21+76.36	59.45' RT.
X	21+96.36	79.66' RT.
Y	22+08.93	317.66' RT.
Z	21+75.03	352.28' RT.
AA	21+02.25	354.57' RT.
AB	20+66.44	324.10' RT.
AC	20+56.04	127.90' RT.

S-43A
STA. 17+51.57 (62.90' RT.)
CONST. MANHOLE TYPE J-8
INDEX NO. 200, 201
TOP EL. 13.80
FL 0.10 (AH)
FL 0.10 (RT.)
STA. 17+51.57 (94.20' RT.)
CONST. 48" MITERED END SECTION (1:2)
INDEX NO. 272
FL 0.00

S-43B
STA. 132+61.40 (180.20' LT.)
CONST. INLET TYPE D (MODIFY)
SEE DETAIL SHEET
FL 7.00
STA. 132+60.60 (236.10 LT.)
CONST. 24" MITERED END SECTION (1:2)
INDEX NO. 272
FL 6.80

S-43C
STA. 16+86.30 (26.60' RT.)
CONST. 32' OF 18" PIPE
WITH MITERED END SECTIONS (1:4)
INDEX NO. 273
FL 11.00 (BK)
FL 10.90 (AH)

S-43D
STA. 22+01.90 (123.10' RT.)
CONST. 32' OF 19" x 30" PIPE WITH
(2) MITERED END SECTIONS (1:4)
INDEX NO. 273
FL 9.40 (BK)
FL 9.30 (AH)

S-44A
STA. 134+40.00 (126.00' RT.)
CONST. 36" MITERED END SECTION (1:4)
FL 6.60
STA. 134+40.00 (89.80' RT.)
CONST. 36" MITERED END SECTION (1:4)
FL 6.50
INDEX NO. 272

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

JUAN CARLOS LOPEZ-CANALES LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER
5-22-14

DETENTION PONDS WEST-3L & WEST-3R PLAN SHEET

SHEET NO. 80

LITTORAL ZONE

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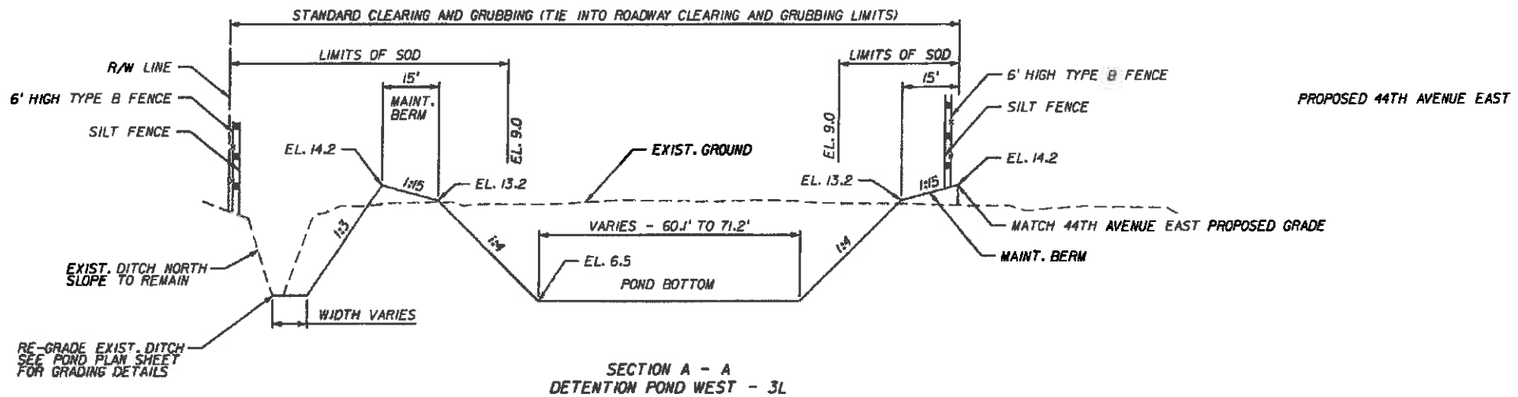
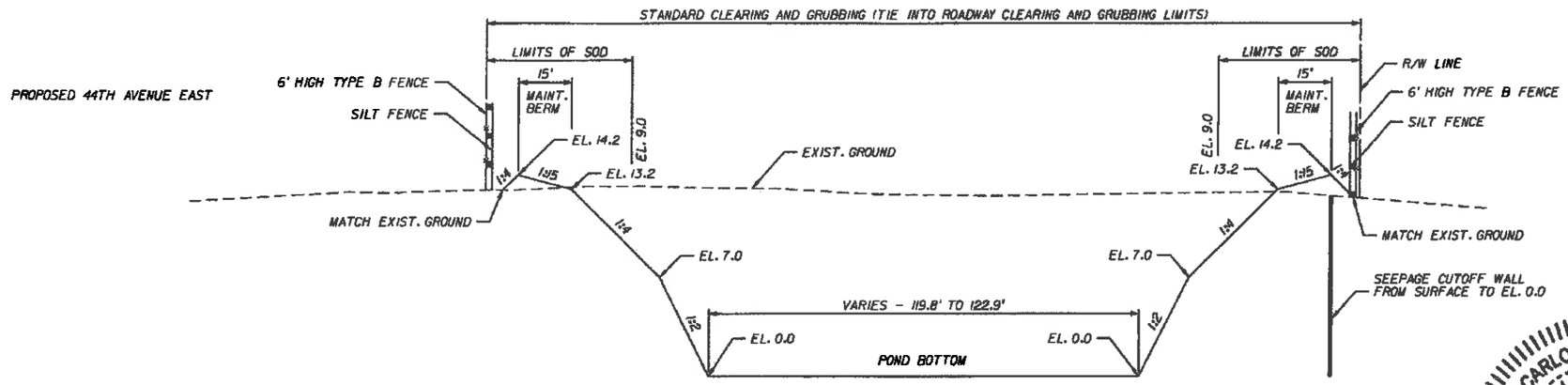


SECTION A - A
DETENTION POND WEST - 3L



SECTION A - A
DETENTION POND WEST - 3R

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-22-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DETENTION POND WEST-3L & WEST-3R TYPICAL SECTIONS

SHEET NO.: 81

2:33:45 PM 5/22/2014
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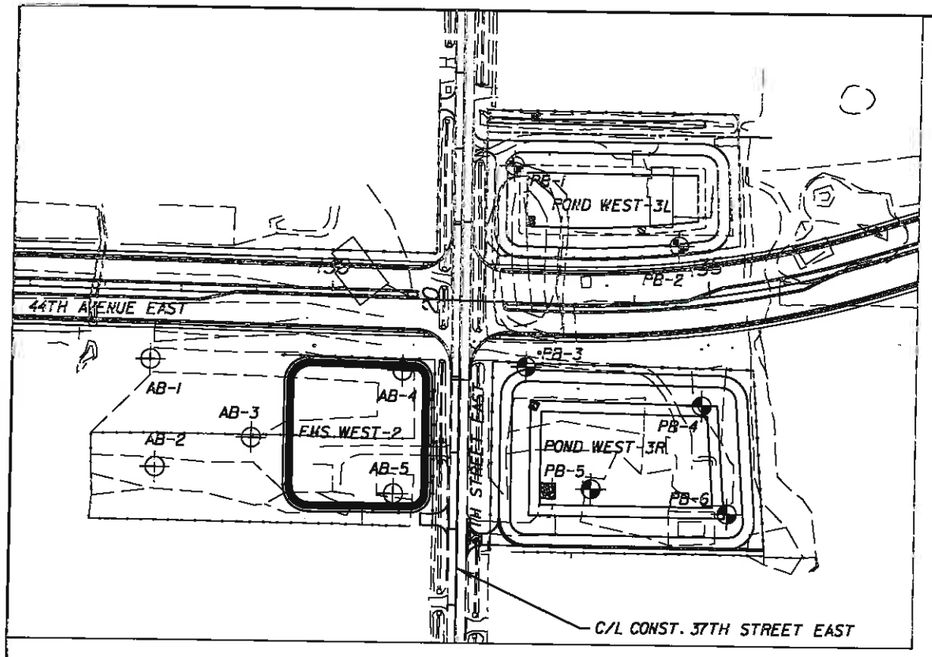
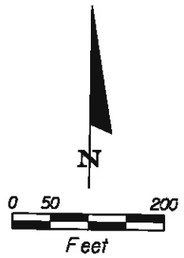


BORING LOCATION PLAN



LEGEND

1. GRAY TO BROWN FINE SAND TO FINE SAND WITH SILT (A-3)
2. GRAY TO BROWN FINE SAND TO FINE SAND WITH SILT WITH LIMEROCK FRAGMENTS OR WITH SHELL FRAGMENTS (A-1-b/A-3)
3. GRAY TO DARK GRAY TO BROWN SILTY TO CLAYEY SAND (A-2-4/A-2-6)
4. LIGHT GRAY TO DARK GRAY SANDY SILT TO PALE BROWN TO WHITE SILTY CLAY OCCASIONALLY CALCAREOUS WITH LIMESTONE FRAGMENTS (A-4/A-6/A-7-6)
5. DARK GRAY TO BLACK ORGANIC SILTY TO CLAYEY SAND TO ORGANIC SANDY CLAY OCCASIONALLY WITH WOOD (A-8)
6. WEATHERED LIMESTONE

▽ GROUNDWATER TABLE

▼ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE

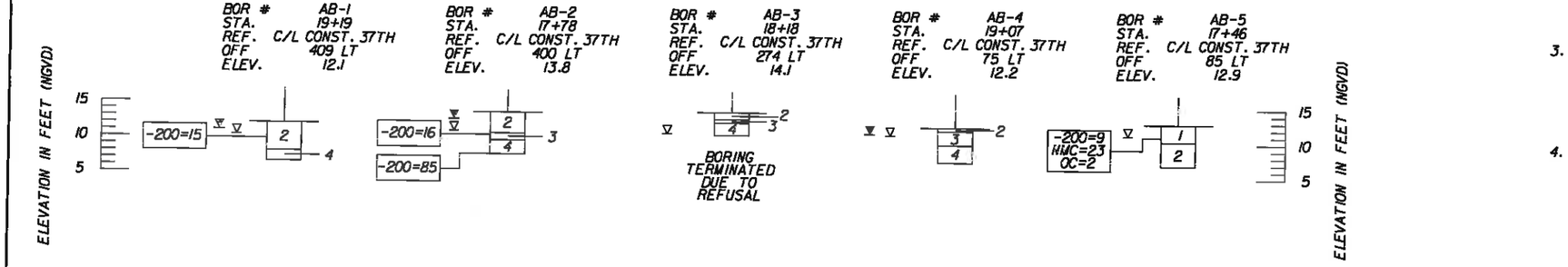
⊕ APPROXIMATE SPT BORING LOCATION

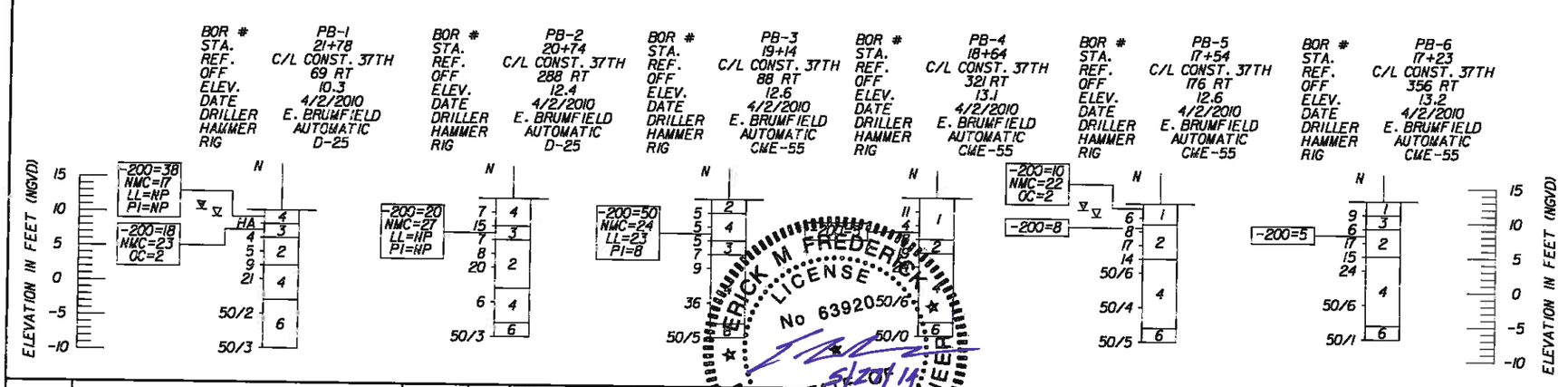
⊕ APPROXIMATE AUGER BORING LOCATION

A-3	AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND/OR LABORATORY TESTING
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
GNE	GROUNDWATER NOT ENCOUNTERED
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
C/L CONST. 37TH	CENTERLINE CONSTRUCTION 37TH STREET EAST
C/L CONST. 39TH	CENTERLINE CONSTRUCTION 39TH STREET EAST
B/L POND E	BASELINE POND EAST

NOTES:

1. BASED ON A REVIEW OF THE "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER, WEST-CENTRAL FLORIDA" MAPS PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER AT THE PROJECT SITE RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. THE SPT BORINGS PERFORMED ALONG THE ALIGNMENT DID NOT ENCOUNTER AN ARTESIAN FLOW CONDITION DURING THE FIELD EXPLORATION. THE CONTRACTOR'S TOOLS AND CONSTRUCTION METHODS SHOULD BE PREPARED TO HANDLE A POTENTIOMETRIC SURFACE CONDITION OF UP TO +20 FT, NGVD 29, AT NO ADDITIONAL COST TO THE COUNTY.
2. HARD SANDY SILT AND WEATHERED LIMESTONE WERE ENCOUNTERED WITHIN THE SPT BORINGS AND SOME OF THE AUGER BORINGS WERE TERMINATED DUE TO REFUSAL. EXCAVATION INTO AND THROUGH THESE MATERIALS MAY BE DIFFICULT AND MAY REQUIRE SPECIALIZED EQUIPMENT. THE CONTRACTOR SHOULD BE PREPARED FOR EXCAVATION INTO AND THROUGH THESE MATERIALS. VARIATIONS IN THE DEPTH OF THESE MATERIALS SHOULD BE ANTICIPATED.
3. THE LEGEND PROVIDED ON THIS SHEET INCLUDES SOIL STRATA ENCOUNTERED WITHIN SOIL BORINGS COMPLETED FOR BOTH THE ROADWAY ALIGNMENT AND PONDS ASSOCIATED WITH THE EXTENSION OF 44TH AVENUE EAST. ALTHOUGH STRATUM 5 WAS NOT ENCOUNTERED WITHIN THE TEST BORINGS COMPLETED FOR THE PONDS, STRATUM 5 IS BEING INCLUDED WITHIN THE POND SOIL SURVEY LEGEND IN ORDER TO MAINTAIN CONSISTENCY WITH THE PROJECT ROADWAY SOIL SURVEY.
4. AN ASTERISK (*) ADJACENT TO THE BORING NUMBER INDICATES THAT THE STATION, OFFSET AND ELEVATION OF THE BORING ARE APPROXIMATE AND WERE ESTIMATED USING MICROSTATION FILES IN CONJUNCTION WITH GPS COORDINATES OBTAINED IN THE FIELD BY THE PROJECT SURVEYOR.





	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	16 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

ERICK M FREDERICK LICENSE No 63920 STATE OF FLORIDA PROFESSIONAL ENGINEER 5/20/14

No.	REVISIONS	DATE	BY

SCALE AS NOTED
DESIGNED BY JRS
DRAWN BY BJS
CHECKED BY EMF

E.O.R.: ERICK M. FREDERICK, P.E.
P.E. LICENSE NUMBER 63920
7351 TEMPLE TERRACE HIGHWAY, TAMPA, FL. 33637
CERTIFICATE OF AUTHORIZATION: 6486

DATE 05/27/14
PROJECT NO. 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER ERICK M. FREDERICK
FL. LICENSE NO. 63920

DETENTION PONDS WEST-3L & WEST-3R & FLOODPLAIN MITIGATION SITE - WEST-2 POND SOIL SURVEY

SHEET NO. 82

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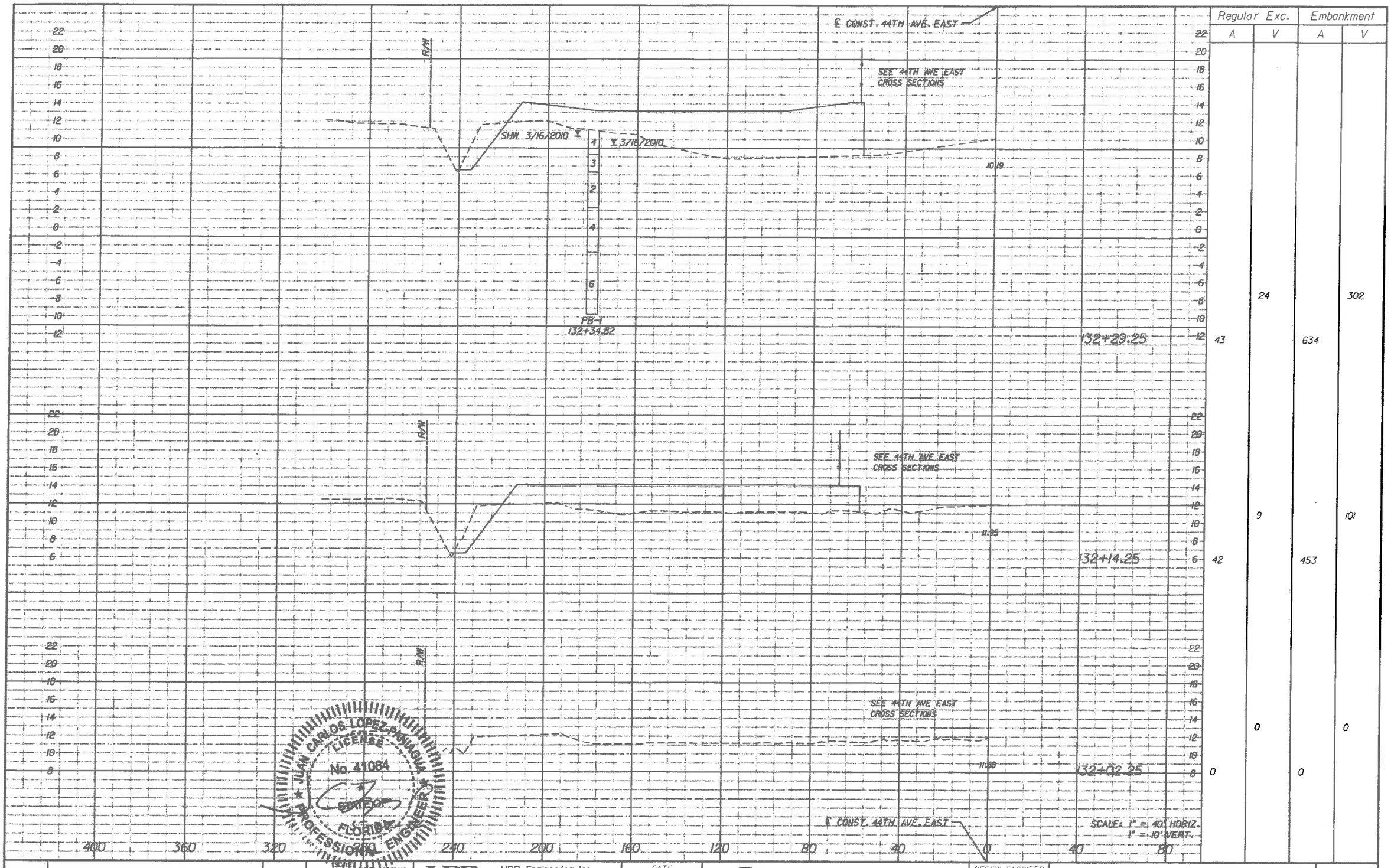

	Regular Exc.		Embankment	
	A	V	A	V
132+29.25	43	24	634	302
132+14.25	42	9	453	101
132+02.25	0	0	0	0

JUAN CARLOS LOPEZ-PINAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

AS NOTED
DESIGNED BY PH
DRAWN BY JLS
CHECKED BY JCL

HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of
Authorization No. 4213

DATE 04/30/12
PROJECT NO. 60160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER JUAN C. LOPEZ
FL. LICENSE NO. 41084

DETENTION POND WEST-3L CROSS SECTION

SHEET NO. 83

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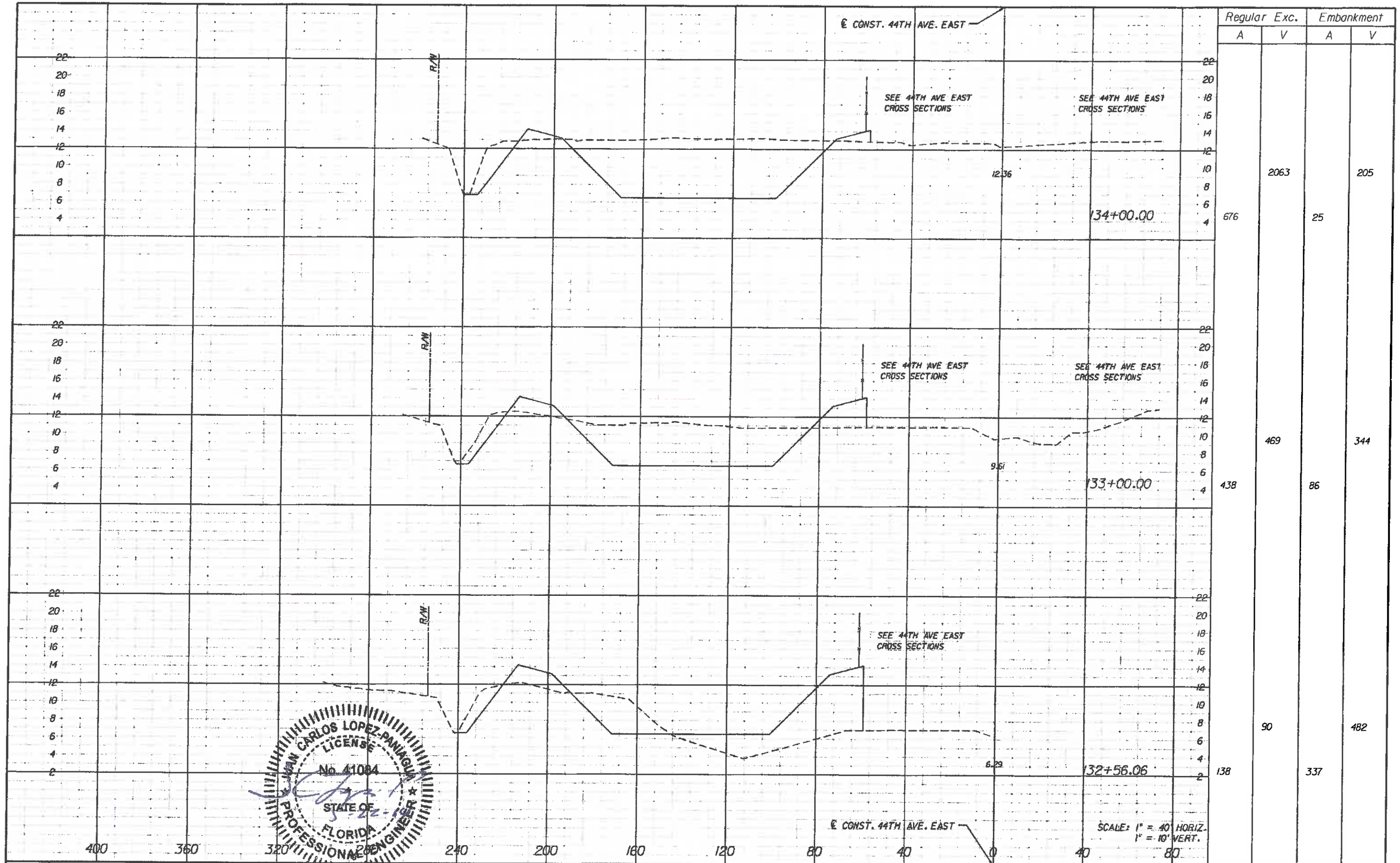

	Regular Exc.		Embankment	
	A	V	A	V
	676	2063	25	205
	438	469	86	344
	138	90	337	482

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

AS NOTED
DESIGNED BY PH
DRAWN BY JLS
CHECKED BY JCL

HDR Employee-owned
HDR Engineering, Inc.
2621 Cattleman Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of
Authorization No. 4213

DATE 04/30/12
PROJECT NO. 607160

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER JUAN C. LOPEZ
FL. LICENSE NO. 41084

DETENTION POND WEST-3L CROSS SECTION

SHEET NO. 84

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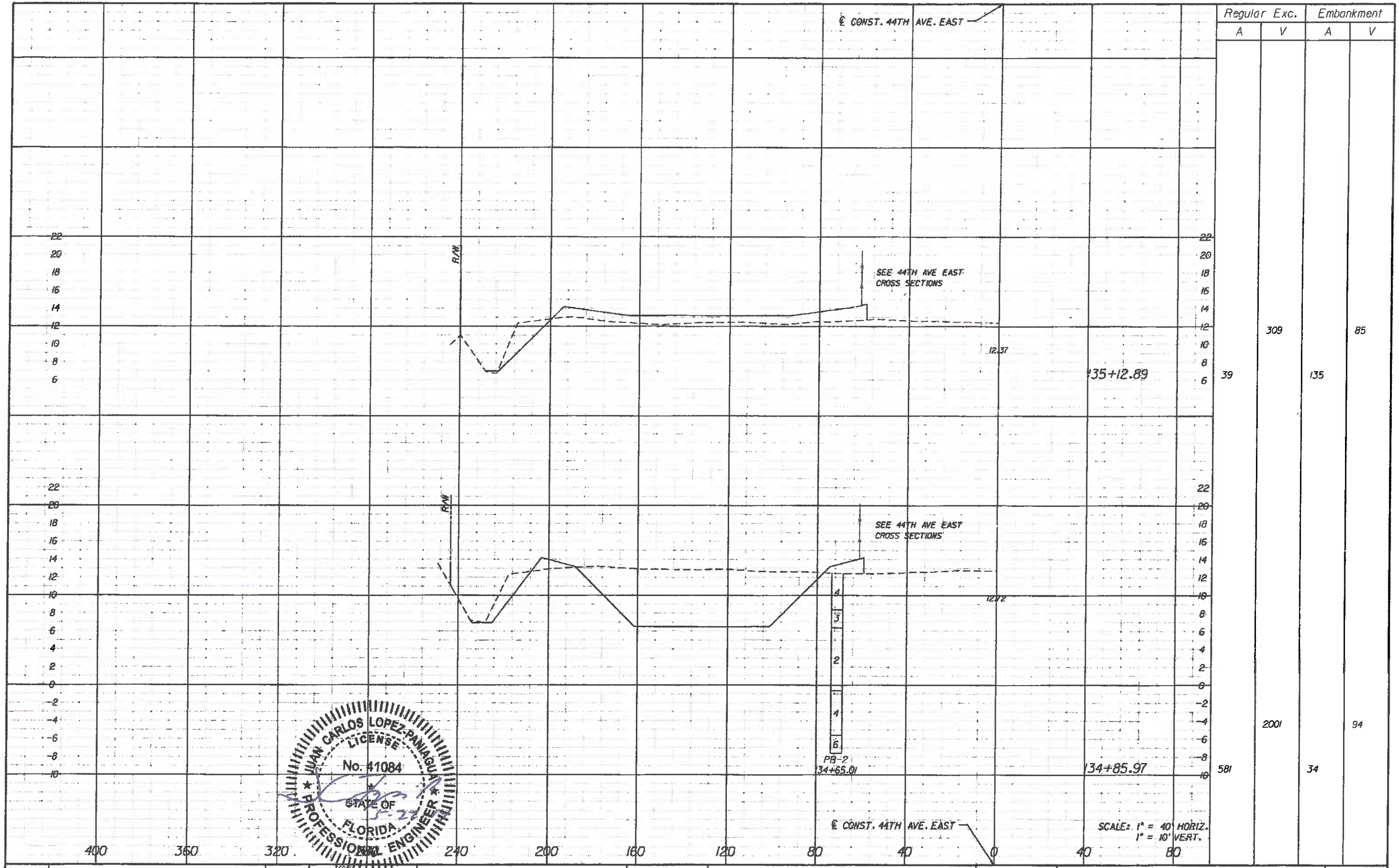

Regular Exc.		Embankment	
A	V	A	V
39	309	135	85
581	2001	34	94

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Employee-owned

HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of
Authorization No. 4213

DATE: 04/30/12
PROJECT NO.: 6071160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DETENTION POND WEST-3L CROSS SECTION

SHEET NO.: 85

2:33:00 PM 5/22/20<

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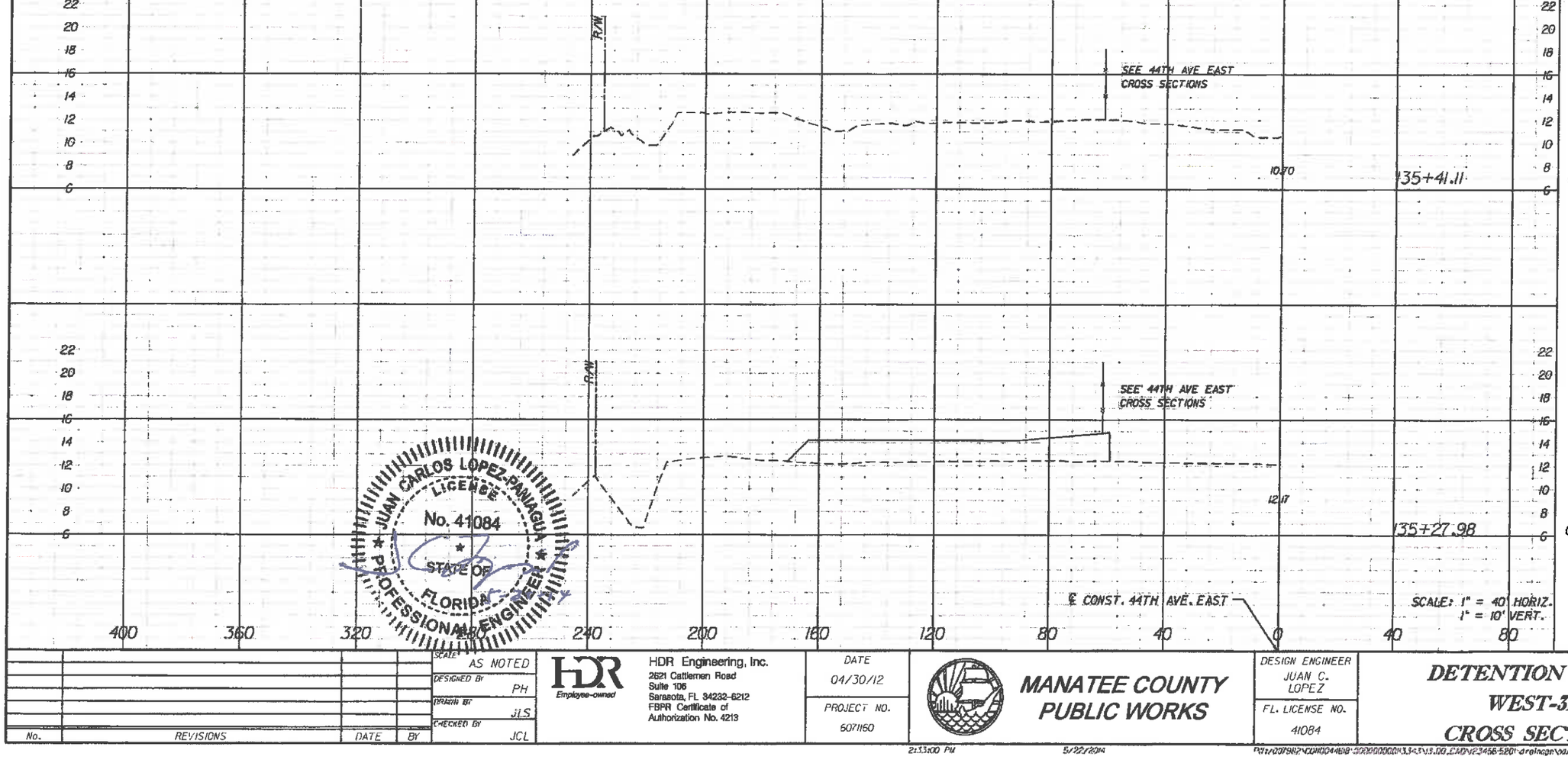
℄ CONST. 44TH AVE. EAST

SUMMARY OF EARTHWORK	
REGULAR EXCAVATION	4,976 CY
EMBANKMENT	1,762 CY



SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	0	52
0	11	0	97
0		210	

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY PH
DRAWN BY JLS
CHECKED BY JCL

HDR Employee-owned
HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of
Authorization No. 4213

DATE 04/30/12
PROJECT NO. 6071160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER JUAN C. LOPEZ
FL. LICENSE NO. 41084

DETENTION POND WEST-3L CROSS SECTION

SHEET NO. 86

2:53:00 PM 5/22/2014

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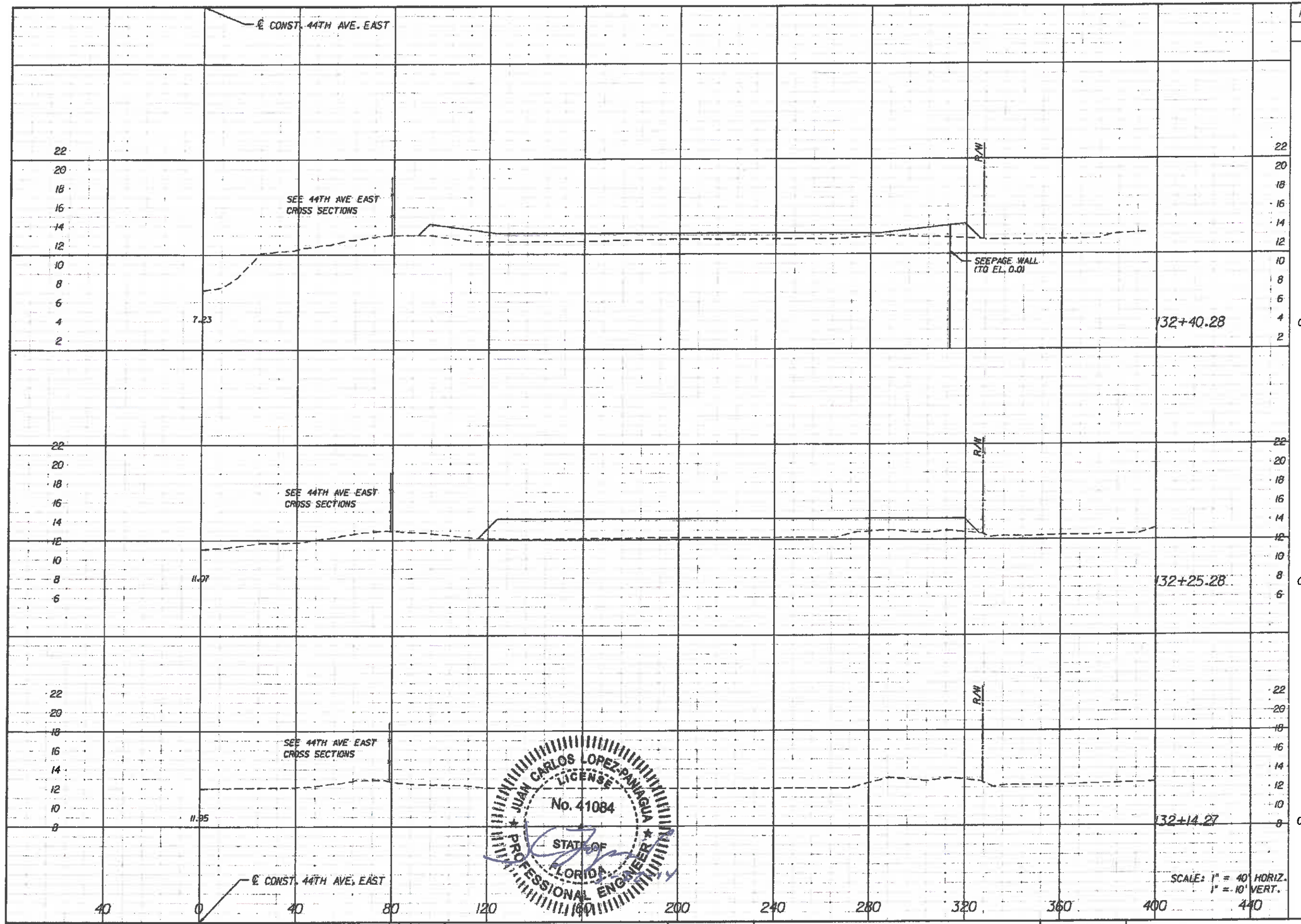

Regular Exc.		Embankment	
A	V	A	V
0	0	180	153
0	0	372	76
0	0	0	0
0		0	

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Employee-owned
HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of Authorization No. 4213

DATE: 04/30/12
PROJECT NO.: 607160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DETENTION POND WEST-3R CROSS SECTION

SHEET NO.: 87

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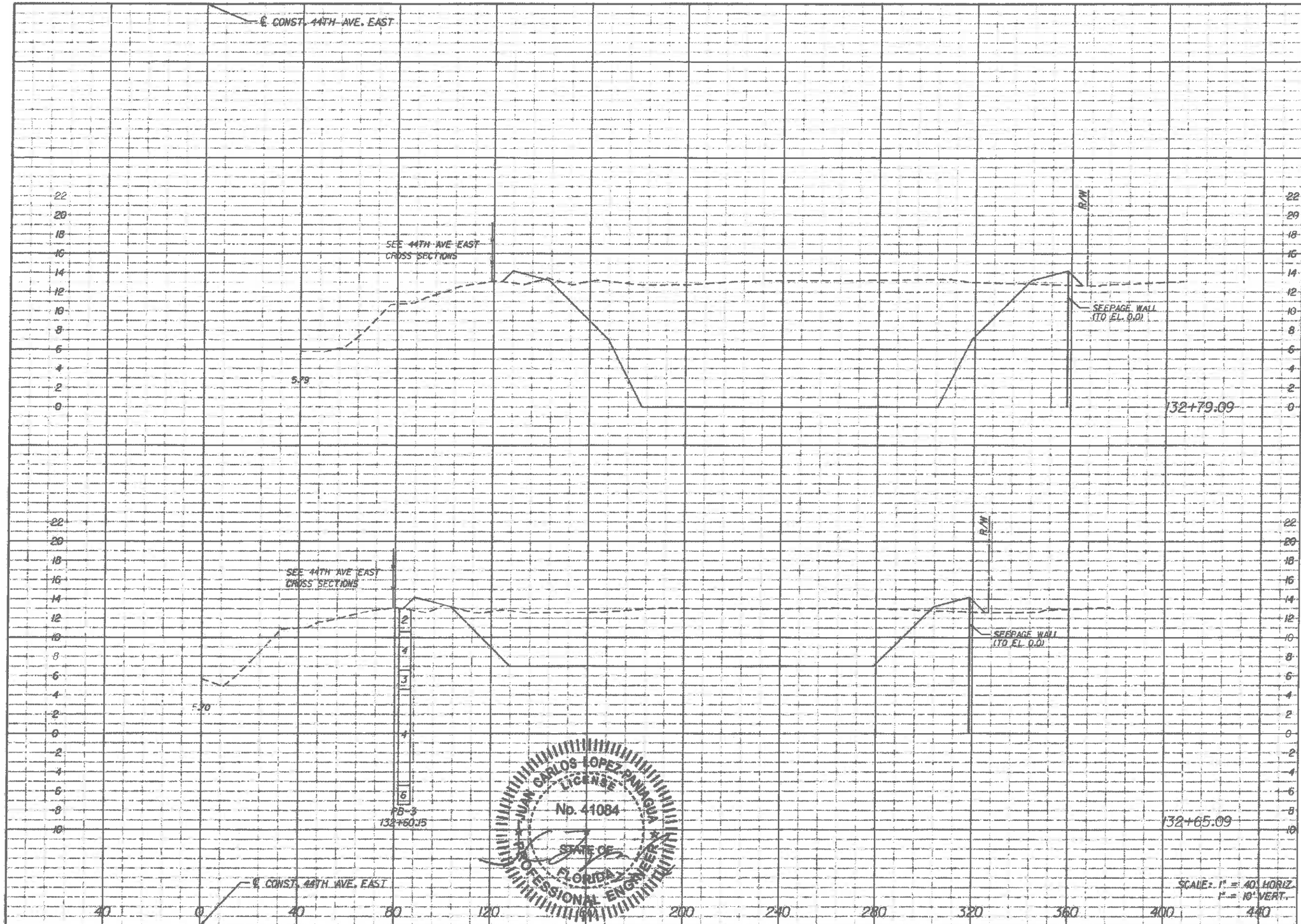

Regular Exc.		Embankment	
A	V	A	V
2021	790	32	17
1027	427	34	98

JUAN CARLOS LOPEZ-RANAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of Authorization No. 4213

DATE: 04/30/12
PROJECT NO.: 0121160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENCE NO.: 41084

DETENTION POND
WEST-3R
CROSS SECTION

SHEET NO.: 88

2:53:08 PM 5/22/2024
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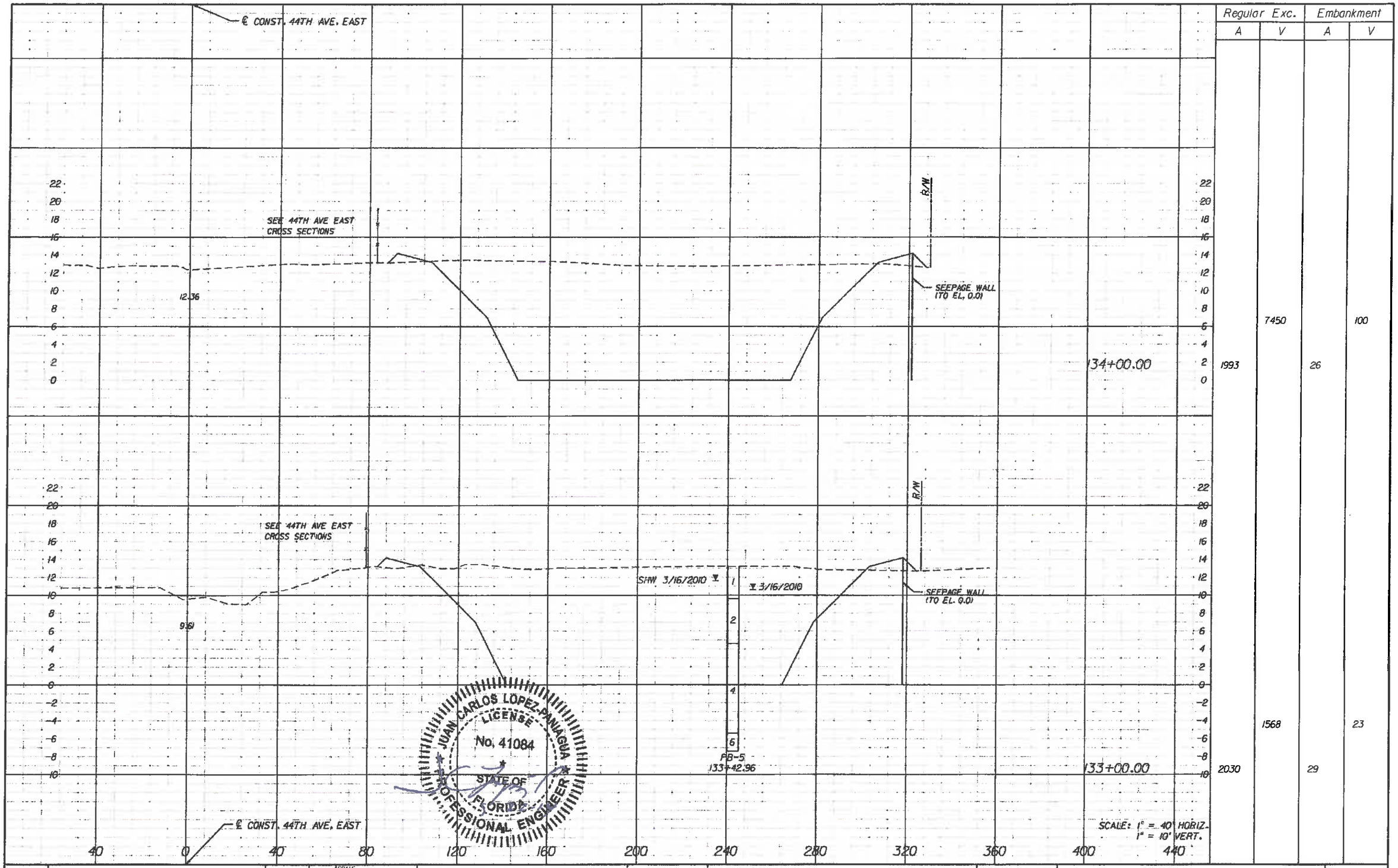

Regular Exc.		Embankment	
A	V	A	V
1993	7450	26	100
2030	1568	29	23

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of Authorization No. 4213

DATE: 04/30/12
PROJECT NO.: 6071160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DETENTION POND WEST-3R CROSS SECTION

SHEET NO.: 89

2:33:02 PM 5/22/2014
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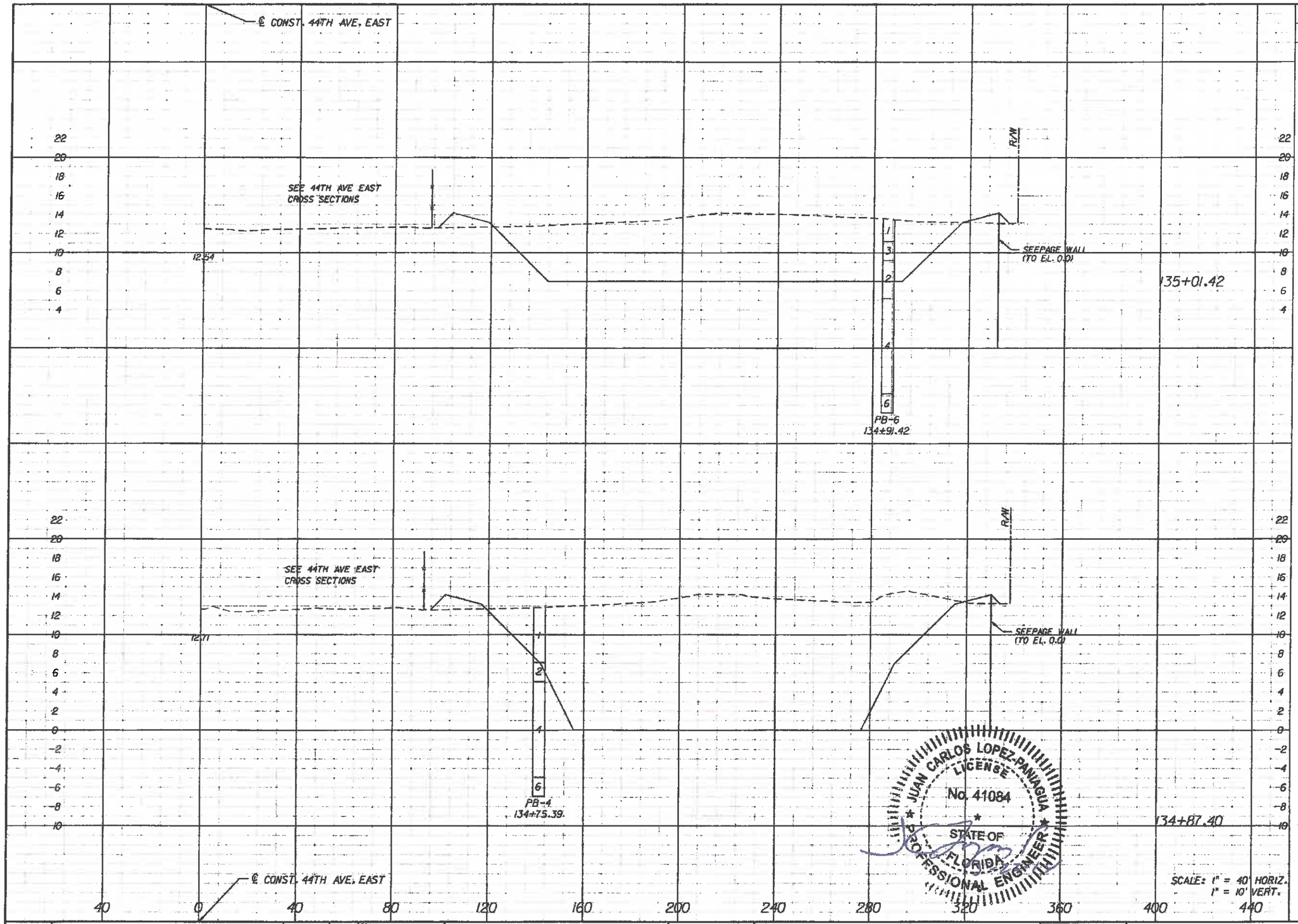

Regular Exc.		Embankment	
A	V	A	V
1130	835	31	15
2088	6604	28	87

JUAN CARLOS LOPEZ-PANAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY PH
DRAWN BY JLS
CHECKED BY JCL

HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of
Authorization No. 4213

DATE 04/30/12
PROJECT NO. 607160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER JUAN C. LOPEZ
FL. LICENSE NO. 41084

DETENTION POND WEST-3R CROSS SECTION

SHEET NO. 90

2:33:02 PM 5/22/2014

℄ CONST. 44TH AVE. EAST

SUMMARY OF EARTHWORK

REGULAR EXCAVATION	18,247 CY
EMBANKMENT	797 CY

SEE 44TH AVE EAST CROSS SECTIONS

9.72

R/W

135+51.79

SEE 44TH AVE EAST CROSS SECTIONS

10.68

R/W

SEEPAGE WALL (TO EL. 0.0)

135+41.32

SEE 44TH AVE EAST CROSS SECTIONS

12.19

R/W

SEEPAGE WALL (TO EL. 0.0)

135+26.27

℄ CONST. 44TH AVE. EAST

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

	Regular Exc.		Embankment	
	A	V	A	V
	0	0	0	59
	0	3	304	111
	11	525	94	58

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of Authorization No. 4213

DATE: 04/30/12
PROJECT NO.: 6071160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DETENTION POND WEST-3R CROSS SECTION

SHEET NO.: 91

2:33:03 PM 5/22/2014

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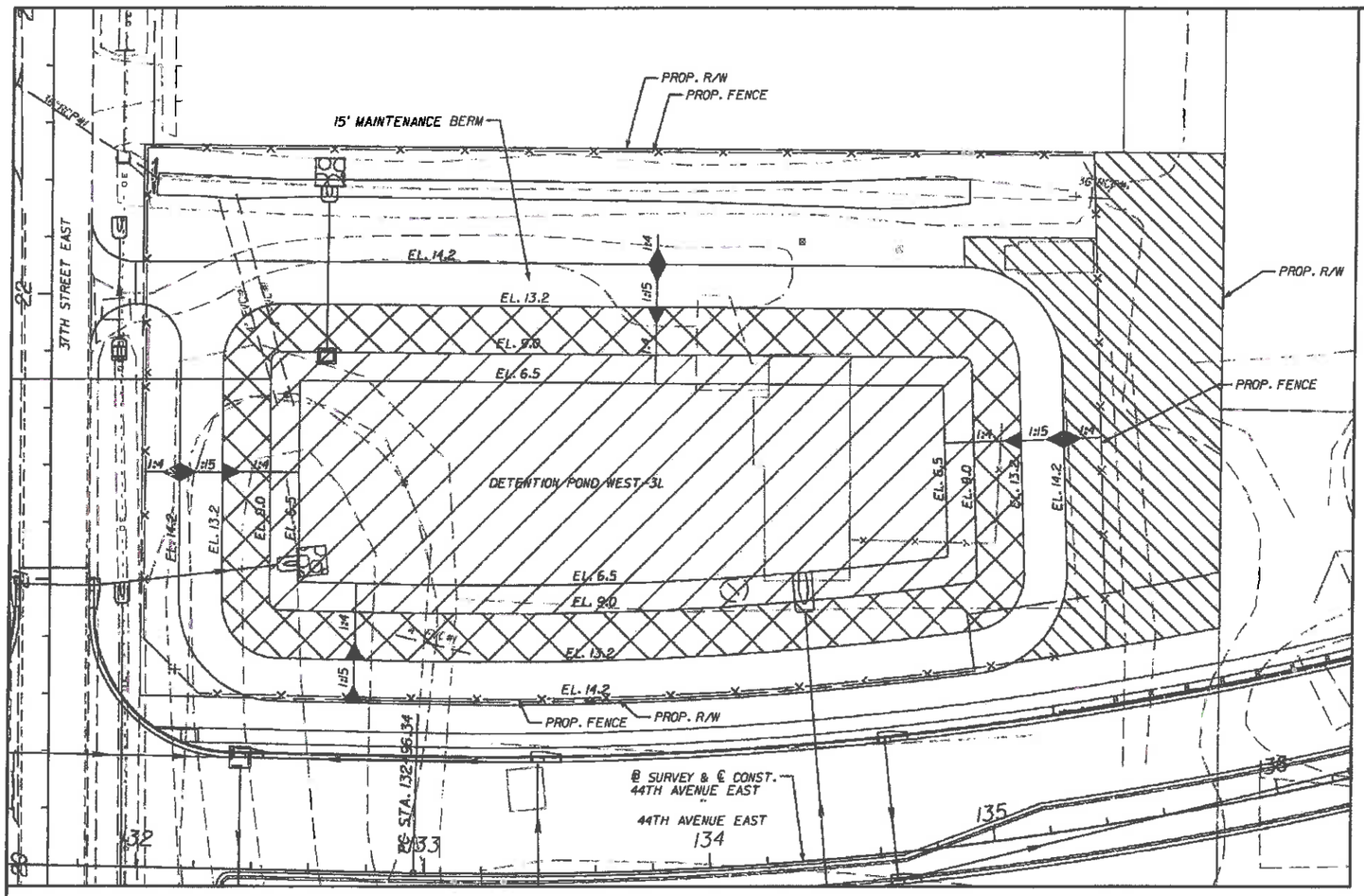

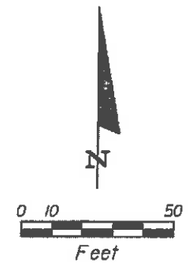

EXTERIOR BUFFER PLANTING / EXOTIC REMOVAL

INTERIOR BUFFER

LITTORAL ZONE

POND WEST-3L INTERIOR / EXTERIOR BUFFER PLANTINGS							
ZONE	COMMON NAME	SPECIES NAME	ACRES	ELEVATION	SIZE	SPACING	QUANTITY
EXTERIOR BUFFER	WAX MYRTLE	MYRICA CERIFERA	0.22	9.0-13.2	3-GAL	10 FT O.C.	50
	WALTER'S VIBURNUM	VIBURNUM OBOVATUM	0.22	9.0-13.2	3-GAL	10 FT O.C.	50
INTERIOR BUFFER	WALTER'S VIBURNUM	VIBURNUM OBOVATUM	0.27	9.0-13.2	3-GAL	5 FT O.C.	235
	SAND CORD GRASS	SPARTINA BAKERI	0.27	6.5-9.0	1-GAL	5 FT O.C.	235
LITTORAL	PICKEREL WEED	PONTEDERIA CORDATA	0.50	6.5-9.0	BR	3 FT O.C.	805
	BULL RUSH	SCIRPUS CALIFORNICUS	0.50	6.5-9.0	BR	3 FT O.C.	805
	ALLIGATOR FLAG	THALIA GENICULATA	0.50	6.5-9.0	BR	3 FT O.C.	805

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-23-

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JPH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DETENTION POND WEST-3L PLANTING PLAN SHEET

SHEET NO.: 92

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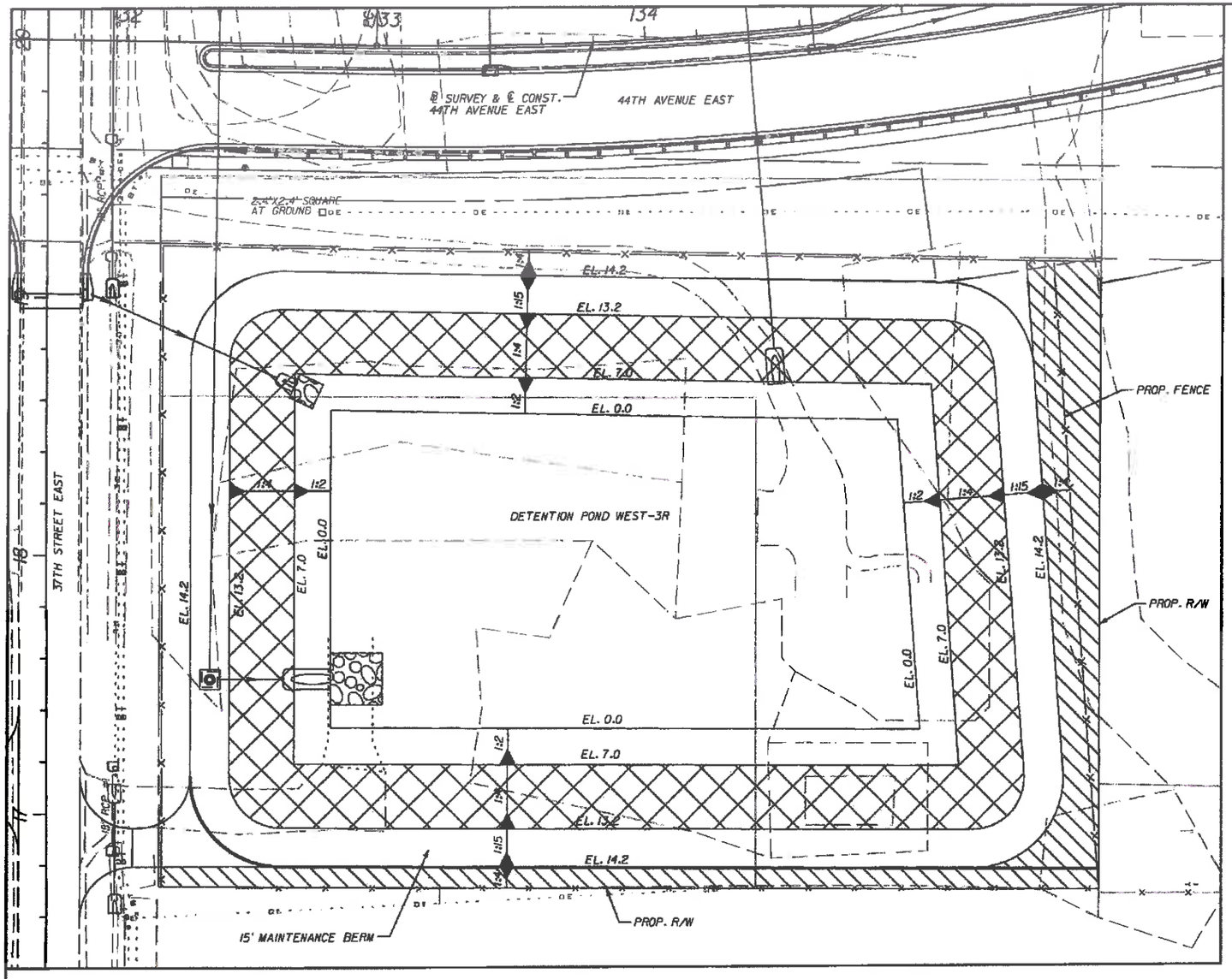

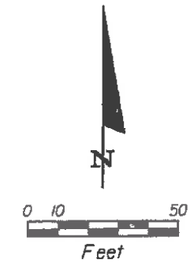

EXTERIOR BUFFER PLANTING / EXOTIC REMOVAL

INTERIOR BUFFER

POND WEST-3R INTERIOR / EXTERIOR BUFFER PLANTINGS

ZONE	COMMON NAME	SPECIES NAME	ACRES	ELEVATION	SIZE	SPACING	QUANTITY
EXTERIOR BUFFER	LIVE OAK	QUERCUS VIRGINIANA	0.18	14.2	3-GAL	10 FT O.C.	40
	WAX MYRTLE	MYRICA CERIFERA	0.18	14.2	3-GAL	10 FT O.C.	35
INTERIOR BUFFER	WALTER'S VIBURNUM	VIBURNUM OBOVATUM	0.51	7.0-13.2	3-GAL	5 FT O.C.	445
	SAND CORD GRASS	SPARTINA BAKERI	0.51	7.0-13.2	1-GAL	5 FT O.C.	445

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-22-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DETENTION POND WEST-3R PLANTING PLAN SHEET

SHEET NO.: 93

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@ SURVEY & ℄ CONST. 44TH AVENUE EAST

CONST. 36" PIPE

CONST. 42" PIPE

WL-H

CONST. 18" PIPE

CONST. 42" PIPE

CONST. 48" PIPE

CONST. 18" PIPE

CONST. 18" PIPE

CONST. 153' OF 24" PIPE

CONST. 19" x 30" ELLIP. PIPE

CONST. 6' HIGH TYPE B FENCE PER INDEX 802

STA. 20+00.00 @ SURVEY 37TH ST. EAST = STA. 13+89.79 ℄ CONST. 44TH AVE. EAST

CONST. 48" PIPE

EPL EASEMENT

EXIST. R/W

18" RCP

2'-0" x 2'-0" SQUARE AT GROUND

DETENTION POND - WEST-3R SEE PLAN SHEET FOR DETAILS

PB-3

EL. 12

EL. 11

EL. 10.5

AB-1

34' R

FL 9.0

EL. 9.0

AB-4

26' R

WETLAND MITIGATION SITE - SOUTH SEE PLAN SHEET FOR DETAILS

FLOODPLAIN MITIGATION SITE - WEST-2
BOTTOM EL. 9.0
100YR, 24HR EL 11.24
SOD ENTIRE FMS (BOTTOM AND SIDE SLOPES)

EL. 12.0

EL. 9.0

37TH STREET EAST

AB-3

EL. 9.5

EL. 10

AB-2

WL-1

PROP. R/W

REMOVE EXIST. FENCE

REMOVE 23" x 14" PIPE

CONST. 30 MIL PVC IMPERMEABLE LINER UNDER FLOODPLAIN MITIGATION SITE (SEE SECTION A - A)

REMOVE EXIST. DRIVEWAY AND REGRADE SWALE

AB-5

25' R

EL. 9.0

EL. 10.5

EL. 11

EL. 12

EL. 13

EL. 14

34' R

EL. 12.0

126+87.83
302.46' RT.

PROP. R/W

CONST. 6' HIGH GATE TYPE B DBL 10' SWING (20' OPENING)

131+45.20
297.70' RT.

CONST. 32' OF 14"x23" ELLIP. PIPE

CONST. 15' DRIVEWAY PER INDEX 515

℄ CONST. 37TH STREET EAST

0 10 50
Feet

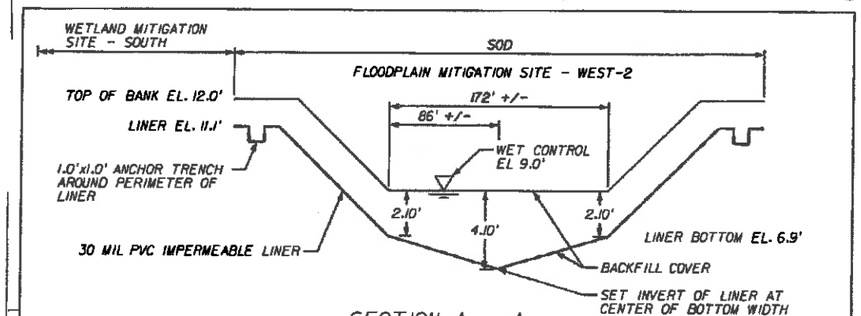
N

S-34A

STA. 129+80.00 (88.40' RT.)
CONST. 24" FLARED END SECTION W/ TOE WALL
INDEX NO. 270
FL 9.0
STA. 129+80.00 (69.50' LT.)
CONST. 24" FLARED END SECTION W/ TOE WALL
FL 9.0

S-36A

STA. 17+12.10 (22.70' LT.)
CONST. 32' OF 14"x23" ELLIP.
PIPE W/ (2)14"x23" MITERED END SECTIONS (1:4)
INDEX NO. 273
FL 11.7 (BK)
FL 11.4 (AH)



SECTION A - A
N.T.S.

POINT	STATION	OFFSET
A	18+90.57	231.92' LT.
B	19+24.57	197.15' LT.
C	19+21.41	61.36' LT.
D	18+95.42	35.96' LT.
E	17+47.03	35.94' LT.
F	17+21.02	61.97' LT.
G	17+21.06	197.97' LT.
H	17+55.05	231.94' LT.
I	17+19.95	49.00' LT.
J	17+04.95	49.00' LT.
K	17+04.95	30.55' LT.
L	16+84.94	10.55' LT.
M	17+39.94	10.53' LT.
N	17+19.95	30.53' LT.

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
F.L. LICENSE NO.: 41084

FLOODPLAIN MITIGATION SITE WEST-2 PLAN SHEET

SHEET NO.: 94

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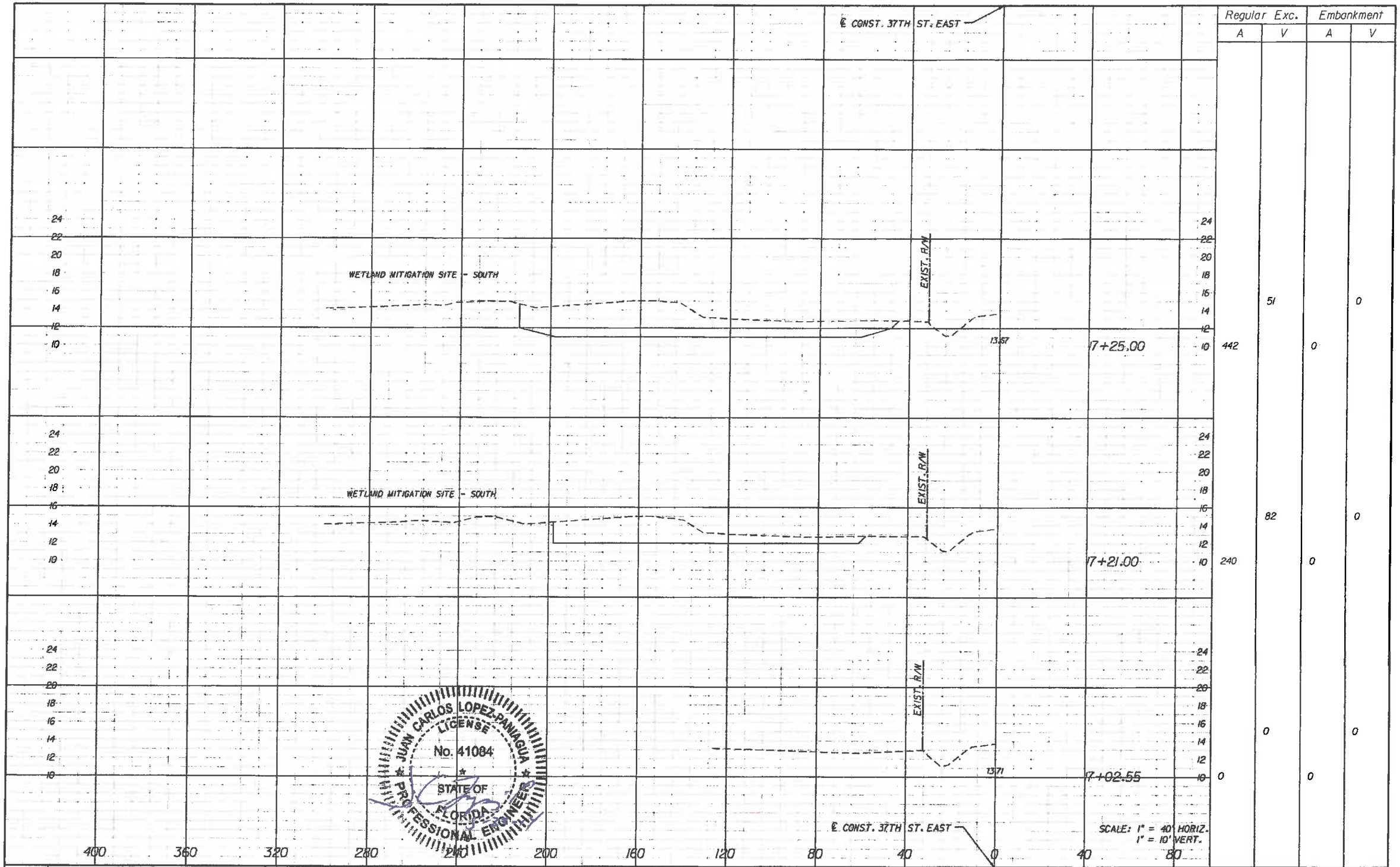

	Regular Exc.		Embankment	
	A	V	A	V
17+25.00	442	51	0	0
17+21.00	240	82	0	0
17+02.55	0	0	0	0

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER

					SCALE: AS NOTED	HDR Employee-owned	HDR Engineering, Inc. 2621 Cattlemen Road Suite 106 Sarasota, FL 34232-6212 FBPR Certificate of Authorization No. 4213	DATE: 04/30/12	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER: JUAN C. LOPEZ	FLOODPLAIN MITIGATION SITE - WEST-2 CROSS SECTIONS
					DESIGNED BY: PH			PROJECT NO.: 60/1160		FL. LICENSE NO.: 41084	SHEET NO.: 95
					DRAWN BY: JLS						
No.	REVISIONS	DATE	BY		CHECKED BY: JCL						

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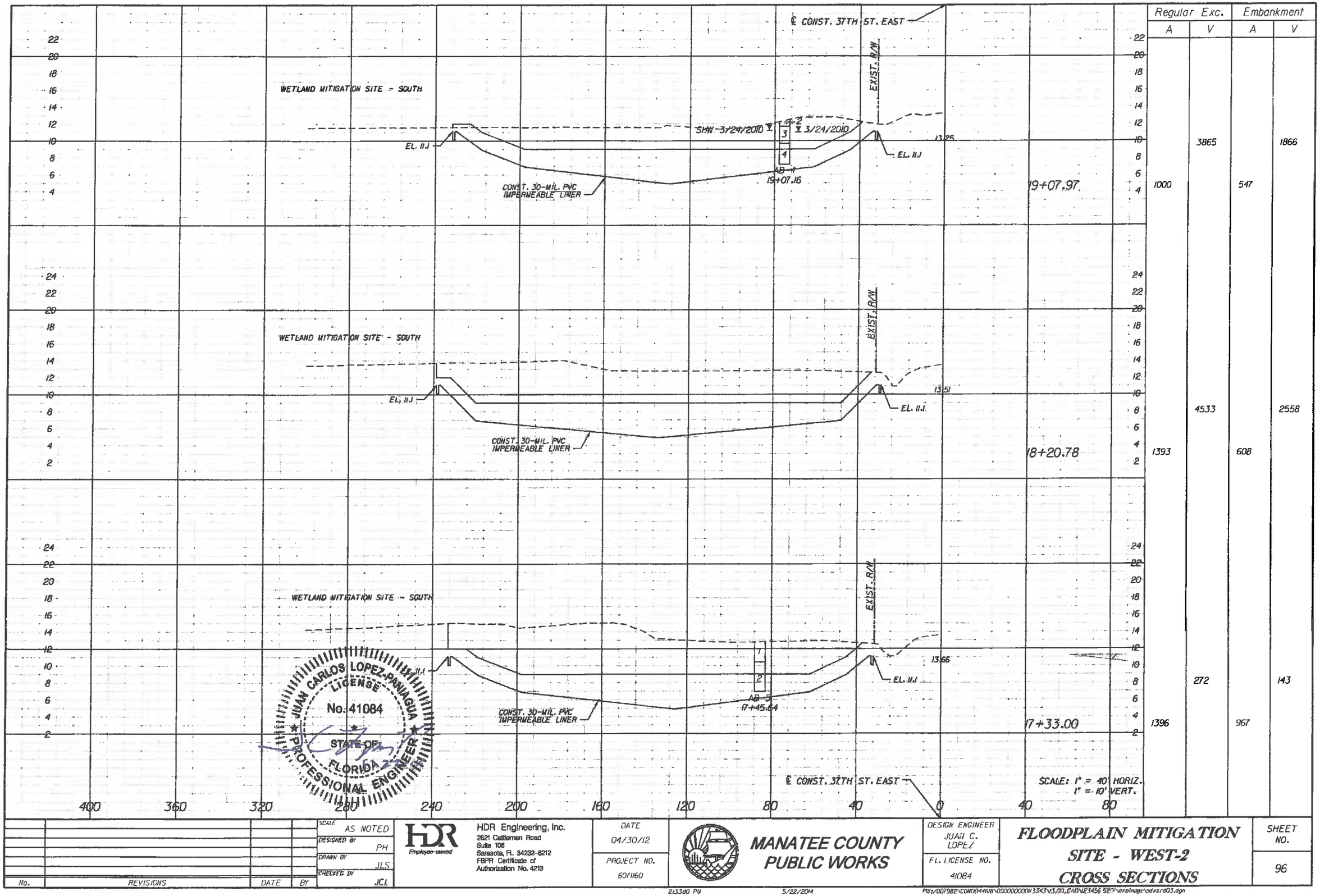

	Regular Exc.		Embankment	
	A	V	A	V
19+07.97	1000	3865	547	1866
18+20.78	1393	4533	608	2558
17+33.00	1396	272	967	143

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Employee-owned

HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of
Authorization No. 4213

DATE: 04/30/12
PROJECT NO.: 60/1160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

FLOODPLAIN MITIGATION SITE - WEST-2 CROSS SECTIONS

SHEET NO.: 96

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Regular Exc.		Embankment	
A	V	A	V
0	0	0	1
4	5	28	2
68	158	4	81

SUMMARY OF EARTHWORK

REGULAR EXCAVATION	8,966 CY
EMBANKMENT	4,651 CY

℄ CONST. 37TH ST. EAST

EXIST. R/W

13.15

19+20.98

WETLAND MITIGATION SITE - SOUTH

EXIST. R/W

13.11

19+19.98

WETLAND MITIGATION SITE

EXIST. R/W

13.02

19+15.98

JUAN CARLOS LOPEZ-PANIAGUA
LICENSED
No. 41084
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

℄ CONST. 37TH ST. EAST

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of
Authorization No. 4213

DATE: 04/30/12
PROJECT NO.: 6071160

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

FLOODPLAIN MITIGATION
SITE - WEST-2
CROSS SECTIONS

SHEET NO.: 97

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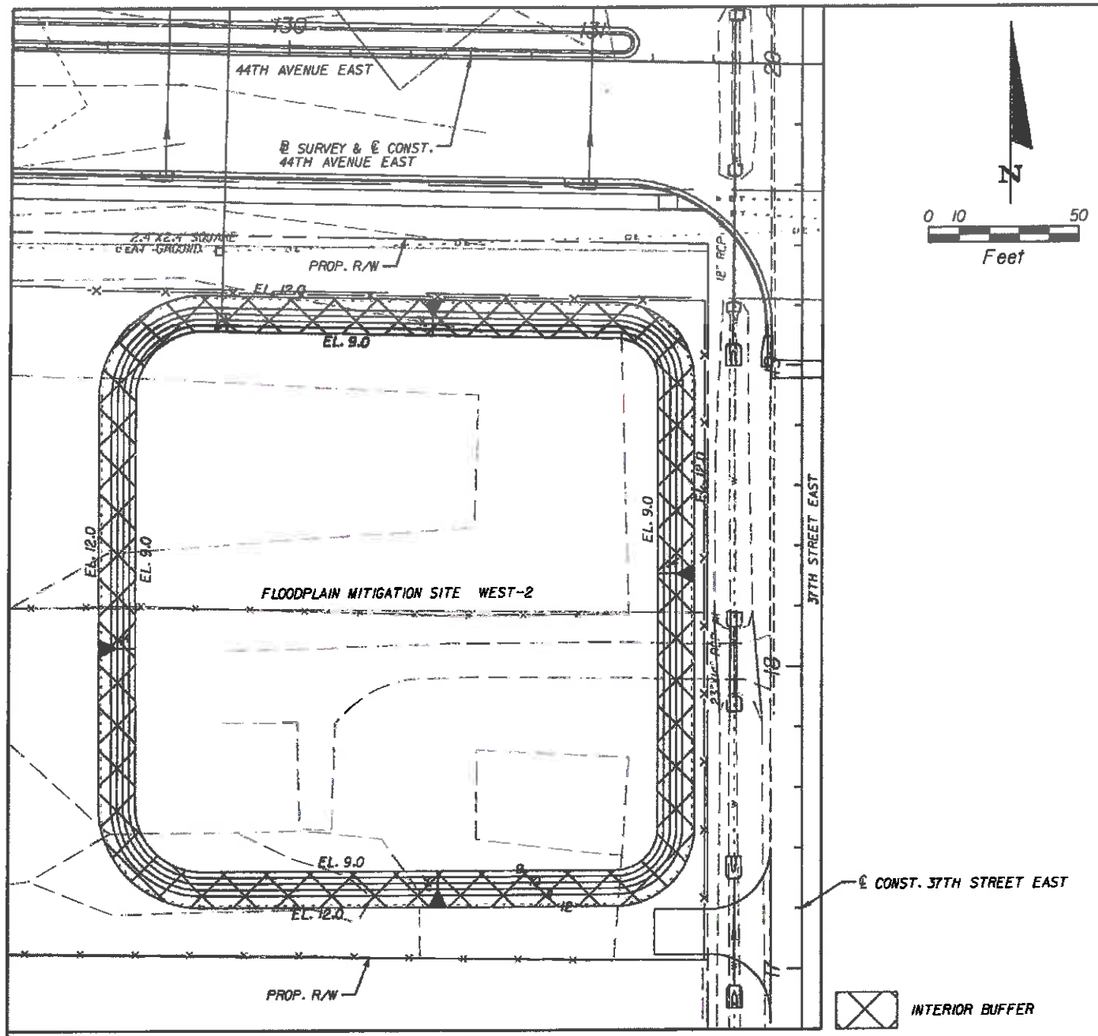

FLOODPLAIN MITIGATION SITE WEST-2 BUFFER PLANTINGS							
ZONE	COMMON NAME	SPECIES NAME	ACRES	ELEVATION	SIZE	SPACING	QUANTITY
INTERIOR BUFFER	WALTER'S VIBURNUM	VIBURNUM OBOVATUM	0.19	9.0-12.0	3-GAL	5 FT O.C.	330
	MAINTAINED SOD		0.70	9.0	NA	NA	NA

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

FLOODPLAIN MITIGATION SITE WEST-2 PLANTING PLAN SHEET

SHEET NO.: 98

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STA. 146+91.61 ℄ SURVEY & ℄ CONST. 44TH AVE. E.
STA. 1000+00.00 ℄ POND EAST

89°29'27"

1000+60.00
0.00' LT.

1000 1001 1002 1003 1004 1005 1006 1007

A

2' BYPASS DITCH

6' HIGH TYPE B FENCE

PROP. R/W

1004+67.51
0.00' RT.

N 0° 02' 14" W

CONST. 24" PIPE (S-104)

CONST. 36" PIPE

CONST. 18" PIPE (S-71)

CONST. 36" PIPE

EL. 13.8

CONST. 24" PIPE

EL. 15.8

2-POND EAST

20' MAINT. BERM

EL. 13.8

EL. 13.6

EL. 13.4

EL. 9.0

EL. 6.7

S-121

PBI5

PBI3

ABI0

ABI2

11.6' R

DETENTION POND - EAST-2
BOTTOM EL. 6.7
CONTROL EL. 9.00
TREATMENT EL. 9.75
DHW 25YR, 24HR EL. 12.16
100YR, 24HR EL. 12.79
AVG. AMBIENT SHWT EL. 12.8
AREA AT TOB EL. 13.8 = 1.48 AC.
SOD TO EL. 9.0

EL. 13.8 EL. 9.0 EL. 6.7 EL. 6.7 EL. 9.0 EL. 13.8 EL. 15.8

1:10 1:4 1:4 1:10 1:4

20' MAINT. BERM

6' HIGH TYPE B FENCE

PROP. R/W

B

20' MAINT. BERM

CONST. 36" PIPE

ABI3

PBI4

ABI1

PBI2

EL. 6.7

EL. 9.0

CONST. 25 LF OF 48" PIPE

EL. 13.8

EL. 13.8

20' MAINT. BERM

S-70

S-100

EL. 15.8

EL. 13.6

EL. 13.4

2' BYPASS DITCH

1000+57.63
266.91' RT.

CONST. 280 LF OF 48" PIPE

1004+67.51
266.91' RT.

CONST. 6' HIGH GATE TYPE B
DBL 10' SWING (20' OPENING)

PROP. R/W

6' HIGH TYPE B FENCE

PROP. R/W

POINT	STATION	OFFSET
A	1001+09.57	75.68' RT.
B	1001+21.18	64.08' RT.
C	1003+85.78	64.25' RT.
D	1003+97.37	75.86' RT.
E	1003+97.30	186.93' RT.
F	1003+85.69	198.52' RT.
G	1001+21.09	198.35' RT.
H	1001+09.50	186.74' RT.

S-100
STA. 1003+32.87 (241.36' RT.)
CONST. MANHOLE TYPE 8 (J-BOTTOM)
ALT B (6' x 6')
INDEX NO. 200, 201
TOP EL. 15.3
FL 6.8 (BK)
FL 6.8 (AH)
STA. 1003+33.12 (213.36' RT.)
CONST. 48" MITERED END SECTION (1:4)
FL. 6.7
INDEX NO. 272

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER

0 10 50
Feet

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

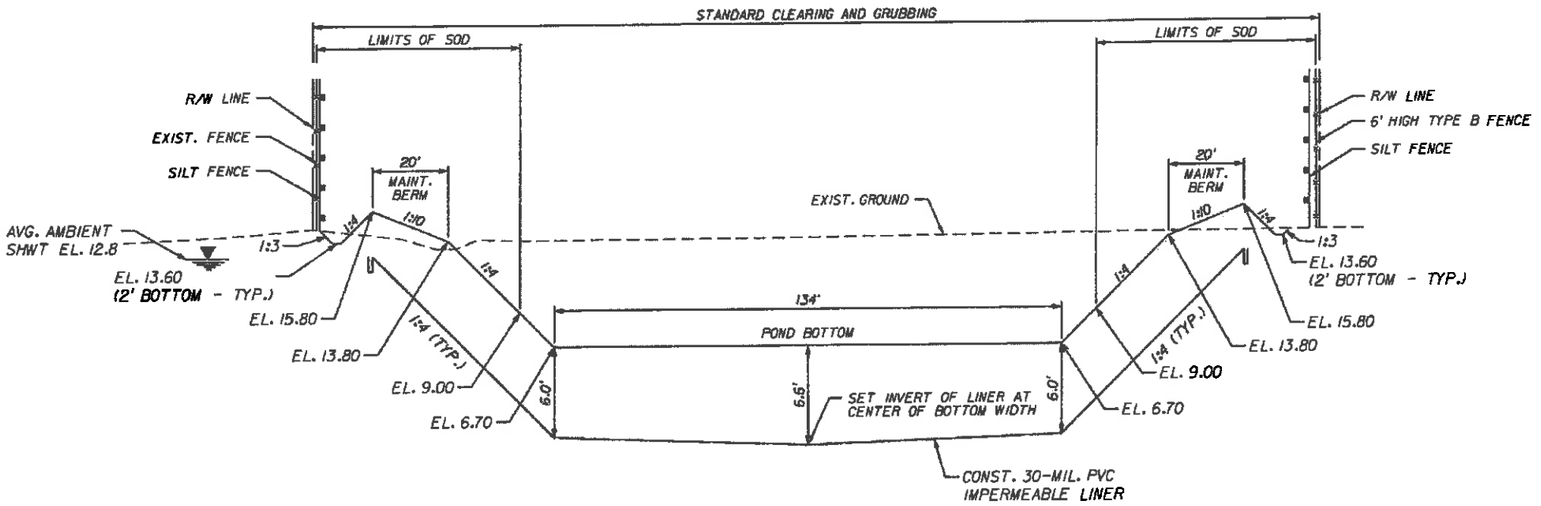
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

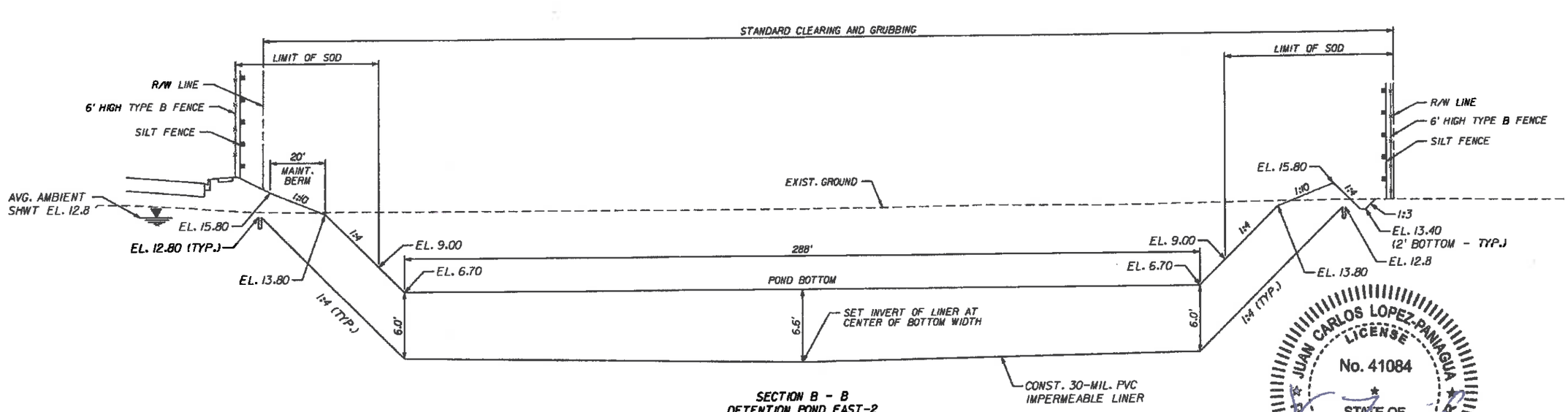
DETENTION POND PLAN SHEET - EAST-2

SHEET NO.: 99

2:32:08 PM 5/22/2014



SECTION A - A
DETENTION POND EAST-2



SECTION B - B
DETENTION POND EAST-2

IMPERMEABLE POND LINEAR MUST BE CONSTRUCTED/PLACED ON CLEAN GRANULAR FILL, FREE OF DELETEROUS MATERIAL WHICH MAY PUNCTURE OR DAMAGE THE LINEAR.

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607160

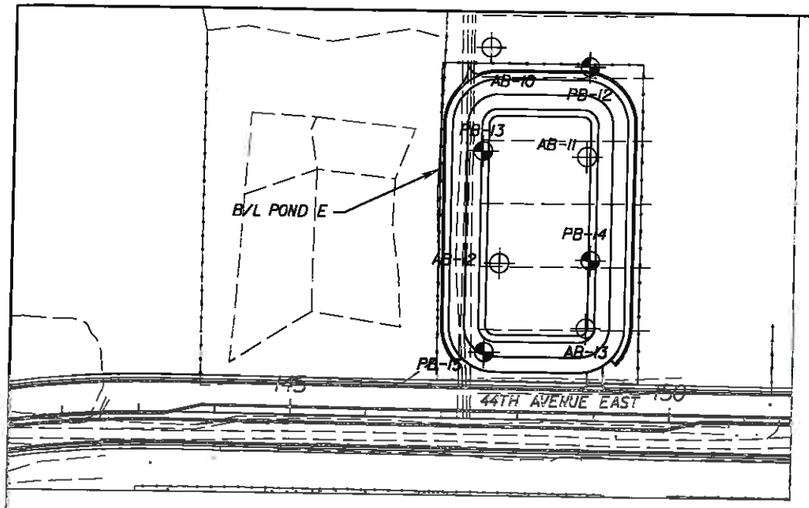
Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

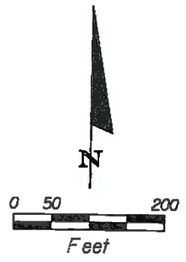
DETENTION POND TYPICAL SECTIONS - EAST-2

SHEET NO.: 100

2:34:00 PM 5/22/2014



BORING LOCATION PLAN



LEGEND

1. GRAY TO BROWN FINE SAND TO FINE SAND WITH SILT (A-3)
2. GRAY TO BROWN FINE SAND TO FINE SAND WITH SILT WITH LIMEROCK FRAGMENTS OR WITH SHELL FRAGMENTS (A-1-b/A-3)
3. GRAY TO DARK GRAY TO BROWN SILTY TO CLAYEY SAND (A-2-4/A-2-6)
4. LIGHT GRAY TO DARK GRAY SANDY SILT TO PALE BROWN TO WHITE SILTY CLAY OCCASIONALLY CALCAREOUS WITH LIMESTONE FRAGMENTS (A-4/A-6/A-7-6)
5. DARK GRAY TO BLACK ORGANIC SILTY TO CLAYEY SAND TO ORGANIC SANDY CLAY OCCASIONALLY WITH WOOD (A-8)
6. WEATHERED LIMESTONE

▽ GROUNDWATER TABLE

▼ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE

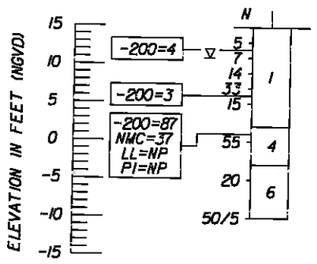
⊕ APPROXIMATE SPT BORING LOCATION

⊕ APPROXIMATE AUGER BORING LOCATION

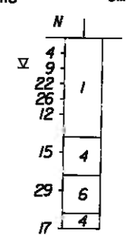
A-3	AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND/OR LABORATORY TESTING
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
GNE	GROUNDWATER NOT ENCOUNTERED
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
C/L CONST. 37TH	CENTERLINE CONSTRUCTION 37TH STREET EAST
C/L CONST. 39TH	CENTERLINE CONSTRUCTION 39TH STREET EAST
B/L POND E	BASELINE POND EAST

NOTES:
1. BASED ON A REVIEW OF THE "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER, WEST-CENTRAL FLORIDA" MAPS PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER AT THE PROJECT SITE RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. THE SPT BORINGS PERFORMED ALONG THE ALIGNMENT DID NOT ENCOUNTER AN ARTESIAN FLOW CONDITION DURING THE FIELD EXPLORATION. THE CONTRACTOR'S TOOLS AND CONSTRUCTION METHODS SHOULD BE PREPARED TO HANDLE A POTENTIOMETRIC SURFACE CONDITION OF UP TO +20 FT, NGVD 29, AT NO ADDITIONAL COST TO THE COUNTY.
2. HARD SANDY SILT AND WEATHERED LIMESTONE WERE ENCOUNTERED WITHIN THE SPT BORINGS AND SOME OF THE AUGER BORINGS WERE TERMINATED DUE TO REFUSAL. EXCAVATION INTO AND THROUGH THESE MATERIALS MAY BE DIFFICULT AND MAY REQUIRE SPECIALIZED EQUIPMENT. THE CONTRACTOR SHOULD BE PREPARED FOR EXCAVATION INTO AND THROUGH THESE MATERIALS. VARIATIONS IN THE DEPTH OF THESE MATERIALS SHOULD BE ANTICIPATED.
3. THE LEGEND PROVIDED ON THIS SHEET INCLUDES SOIL STRATA ENCOUNTERED WITHIN SOIL BORINGS COMPLETED FOR BOTH THE ROADWAY ALIGNMENT AND PONDS ASSOCIATED WITH THE EXTENSION OF 44TH AVENUE EAST. ALTHOUGH STRATUM 5 WAS NOT ENCOUNTERED WITHIN THE TEST BORINGS COMPLETED FOR THE PONDS, STRATUM 5 IS BEING INCLUDED WITHIN THE POND SOIL SURVEY LEGEND IN ORDER TO MAINTAIN CONSISTENCY WITH THE PROJECT ROADWAY SOIL SURVEY.
4. AN ASTERISK (*) ADJACENT TO THE BORING NUMBER INDICATES THAT THE STATION, OFFSET AND ELEVATION OF THE BORING ARE APPROXIMATE AND WERE ESTIMATED USING MICROSTATION FILES IN CONJUNCTION WITH GPS COORDINATES OBTAINED IN THE FIELD BY THE PROJECT SURVEYOR.

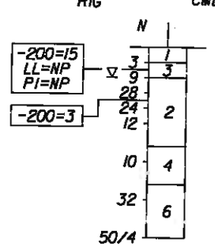
BOR *	PB-12*
STA.	1004+63
REF.	B/L POND E
OFF	195 RT
ELEV.	14.8
DATE	1/31/2012
DRILLER	ED BRUMFIELD
HAMMER	AUTOMATIC
RIG	CME-55



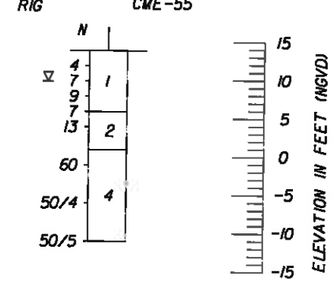
BOR *	PB-13*
STA.	1003+51
REF.	B/L POND E
OFF	57 RT
ELEV.	14.5
DATE	1/31/2012
DRILLER	ED BRUMFIELD
HAMMER	AUTOMATIC
RIG	CME-55



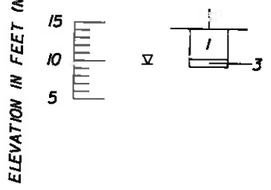
BOR *	PB-14*
STA.	1002+08
REF.	B/L POND E
OFF	200 RT
ELEV.	13.8
DATE	1/31/2012
DRILLER	ED BRUMFIELD
HAMMER	AUTOMATIC
RIG	CME-55



BOR *	PB-15*
STA.	1000+87
REF.	B/L POND E
OFF	63 RT
ELEV.	13.9
DATE	1/31/2012
DRILLER	ED BRUMFIELD
HAMMER	AUTOMATIC
RIG	CME-55

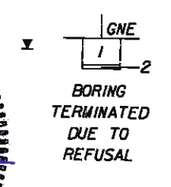


BOR *	AB-10*
STA.	1004+87
REF.	B/L POND E
OFF	65 RT
ELEV.	14.4
DATE	3/10/2012



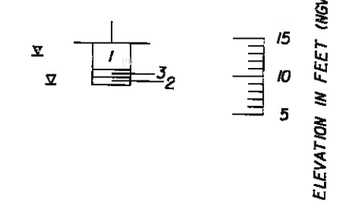
BOR *	AB-11*
STA.	1003+45
REF.	B/L POND E
OFF	193 RT
ELEV.	14.8
DATE	3/10/2012

BOR *	AB-12*
STA.	1002+04
REF.	B/L POND E
OFF	81 RT
ELEV.	13.9
DATE	3/10/2012



BORING TERMINATED DUE TO REFUSAL

BOR *	AB-13*
STA.	1001+19
REF.	B/L POND E
OFF	196 RT
ELEV.	14.2
DATE	3/10/2012



	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	16 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

ERICK M FREDERICK LICENSE No 63920 STATE OF FLORIDA PROFESSIONAL ENGINEER 5/27/14

No.	REVISIONS	DATE	BY

SCALE
DESIGNED BY JRS
DRAWN BY BJS
CHECKED BY EMF

ERICK M. FREDERICK, P.E.
P.E. LICENSE NUMBER 63920
TIERRA INC
7351 TEMPLE TERRACE HIGHWAY, TAMPA, FL. 33637
CERTIFICATE OF AUTHORIZATION: 6486

DATE 05/27/14
PROJECT NO. 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER ERICK M. FREDERICK
FL. LICENSE NO. 63920

DETENTION POND
POND SOIL SURVEY - EAST-2

SHEET NO. 101

5:23:31 PM 5/22/2014

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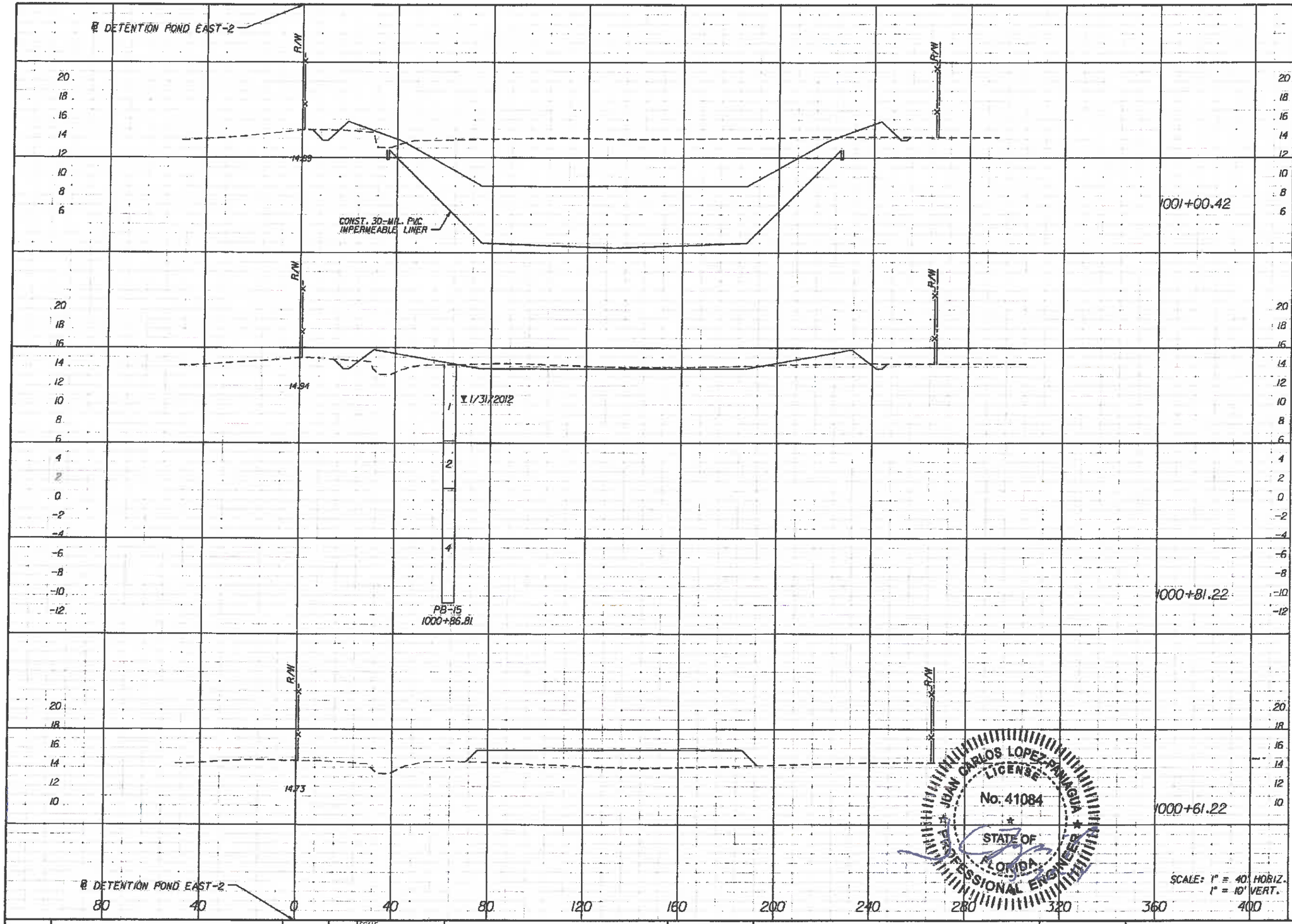


	Regular Exc.		Embankment	
	A	V	A	V
1001+00.42	1731	631	1032	394
1000+81.22	45	17	77	99
1000+61.22	0	0	191	0

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

SCALE: AS NOTED	HDR Engineering, Inc. 5426 Bay Center Drive Suite 400 Tampa, FL 33609-3444 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14	DESIGN ENGINEER: JUAN C. LOPEZ
DESIGNED BY: PH		PROJECT NO.: 607160	FL. LICENSE NO.: 41084
DRAWN BY: JLS			
CHECKED BY: JCL			

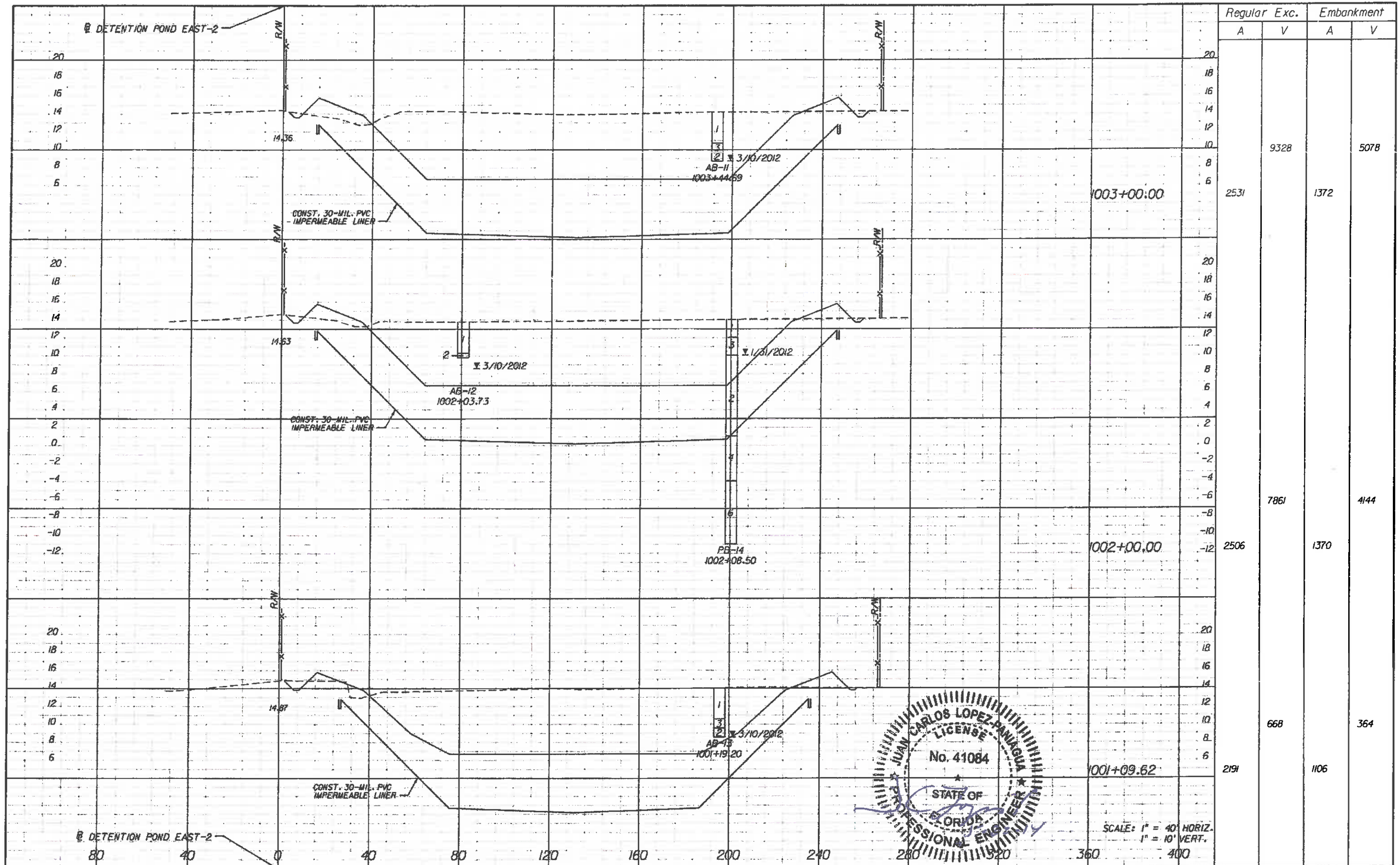
Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DETENTION POND EAST-2 CROSS SECTIONS

SHEET NO. 102

No.	REVISIONS	DATE	BY

2:33:21 PM 5/22/2014 P:\x\607912\CDH\0446IB\0000000001\3343\1.00_C4D\123456.5PB\drainage\ddsrdf1.dgn



	Regular Exc.		Embankment	
	A	V	A	V
1003+00.00	2531	9328	1372	5078
1002+00.00	2506	7861	1370	4144
1001+09.62	2191	668	1106	364

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY PH
DRAWN BY JLS
CHECKED BY JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14
PROJECT NO. 60/1160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER JUAN C. LOPEZ
FL. LICENSE NO. 41084

DETENTION POND EAST-2 CROSS SECTIONS

SHEET NO. 103

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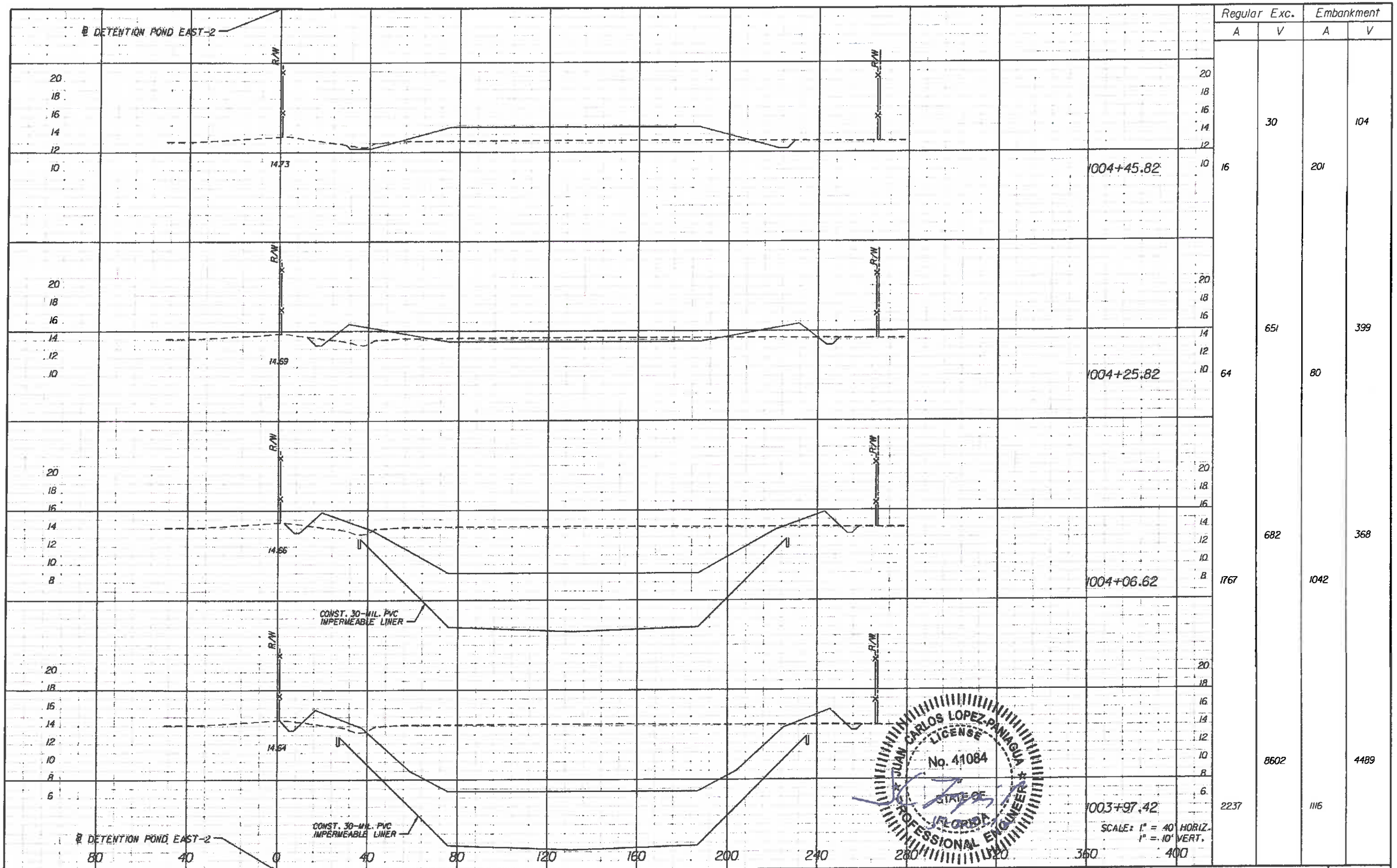


Regular Exc.		Embankment	
A	V	A	V
16	30	201	104
64	651	80	399
1767	682	1042	368
2237	8602	1116	4489

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607.1160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DETENTION POND EAST-2 CROSS SECTIONS

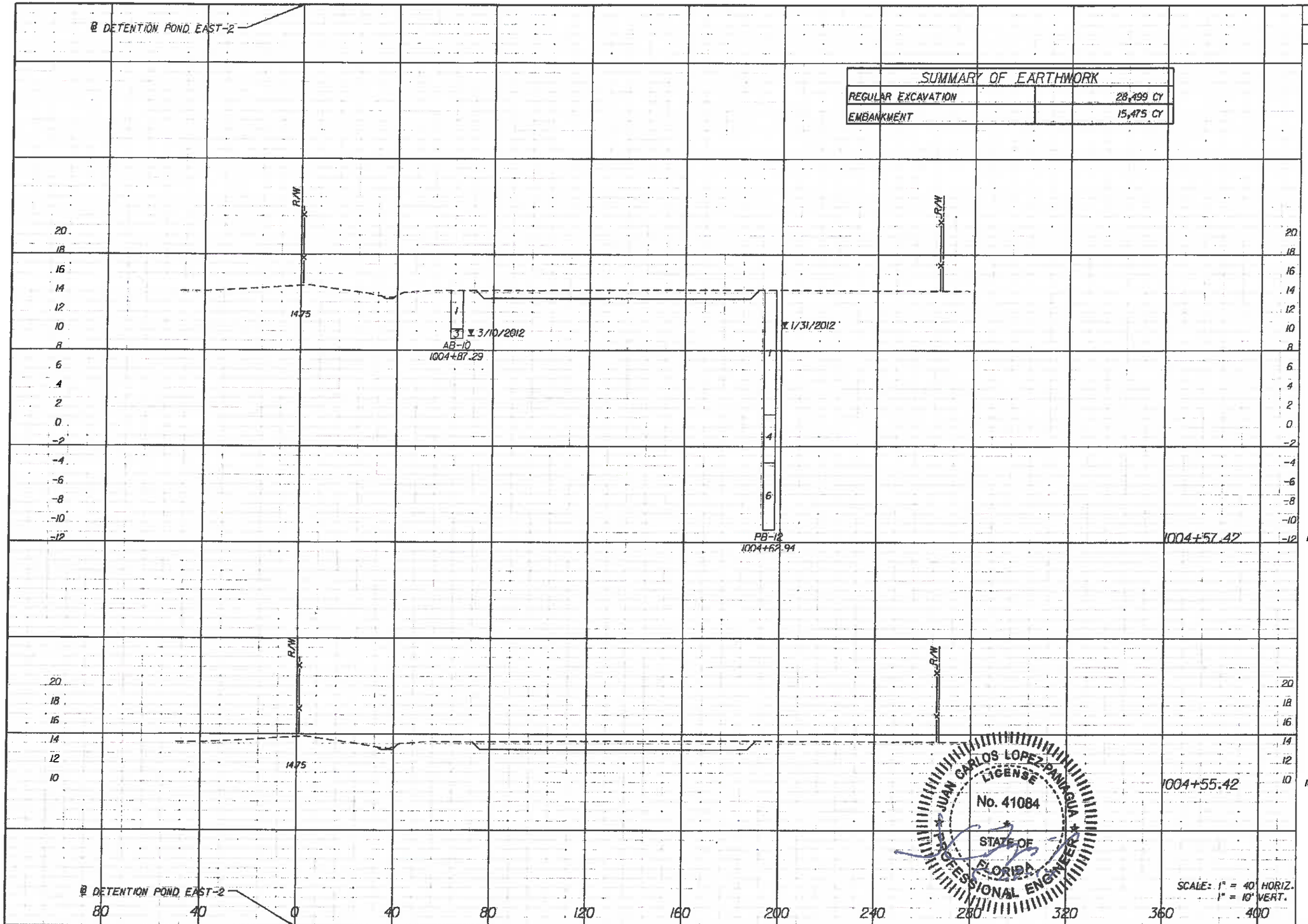
SHEET NO.: 104

2:3:1:24 PM 5/22/2014

@ DETENTION POND EAST-2

SUMMARY OF EARTHWORK

REGULAR EXCAVATION	28,499 CY
EMBANKMENT	15,475 CY



Regular Exc.		Embankment	
A	V	A	V
	8		0
102		0	
	21		36
103		0	

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

DETENTION POND EAST-2 CROSS SECTIONS

SHEET NO.: 105

P:\33285 PH 5/22/2014 P:\60798P\COM03460\2060001\001133\133.20_CAD\234565801\drainage\Detail01.dgn

S-120
STA. 23+00.94 (289.57' LT.)
CONST. 24" MITERED END SECTION (1:4)
FL 7.5
STA. 23+51.24 (289.50' LT.)
CONST. 24" MITERED END SECTION (1:4)
FL 7.5
INDEX NO. 272

23+24.92
347.55' LT.

23+25.17
299.54' LT.

DRAINAGE EASEMENT

22+81.13
299.60' LT.

22+81.07
279.60' LT.

S-120

23+25.27
279.54' LT.

SELLER'S PIT
SHW EL. = 7.5
100YR EL. = 11.80

CONST. 43' OF 24" PIPE

PROP. R/W

28+35.91
346.00' LT.

EL. 12.0

EL. 13.0

EL. 7.5

18.4' R

AB16

AB14

AB18

AB15

AB17

26+36.49
236.61' LT.

28+36.49
236.00' LT.

POINT	STATION	OFFSET
A	23+62.27	290.06' LT.
B	23+80.70	308.43' LT.
C	25+78.91	308.16' LT.
D	25+97.29	289.74' LT.
E	25+96.97	60.91' LT.
F	25+78.55	42.54' LT.
G	24+23.21	42.75' LT.
H	24+04.84	61.18' LT.
I	24+04.88	94.50' LT.
J	23+71.94	149.11' LT.
K	23+62.10	165.43' LT.

EL. 11.0

EL. 7.5

61.6' R

FLOODPLAIN MITIGATION SITE - FMS EAST-2
BOTTOM EL. 7.5
AVG. AMBIENT SHWT EL. 11.4
100YR, 24HR EL 11.80
AREA AT TOB EL 12.0 = 1.79 AC.
SOD FMS (BOTTOM AND SIDE SLOPES)

WETLAND LIMITS

EXIST. 35' INGRESS/EGRESS EASEMENT

CONST. 6' HIGH GATE TYPE B
DBL 10' SWING (20' OPENING)

℄ CONST. 39TH ST. EAST

22 23 24 25 26 28

23+26.77
10.00' RT.

PROP. R/W

EXIST. EOP

26+37.77
10.00' RT.

EXIST. R/W

0 10 50
Feet

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

FLOODPLAN MITIGATION SITE
PLAN SHEET - EAST-2

SHEET NO.: 106

2:32:28 PM 5/22/2014
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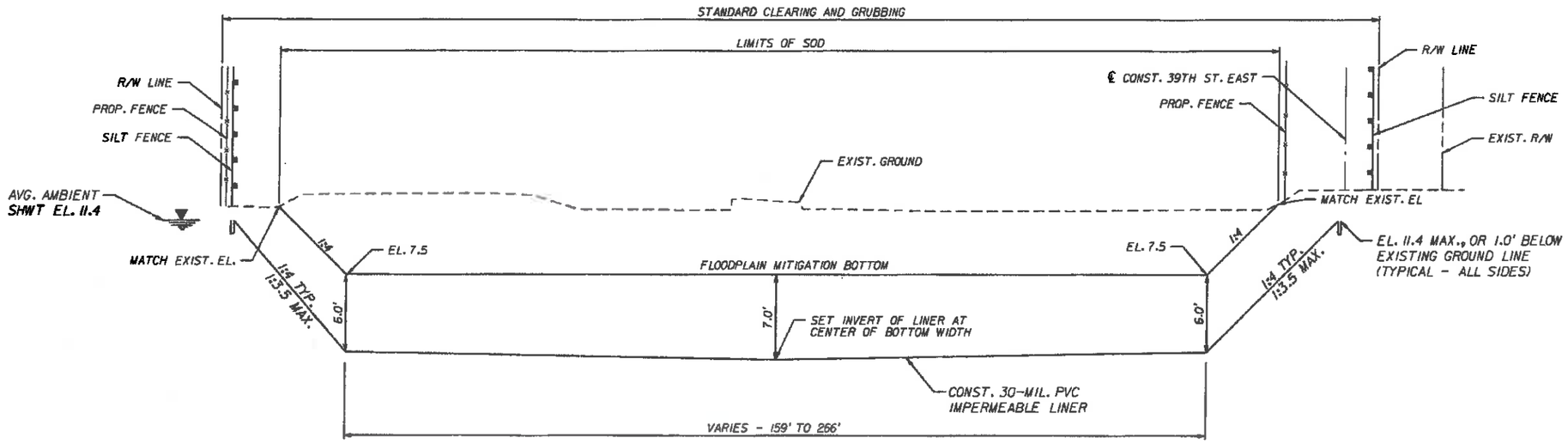
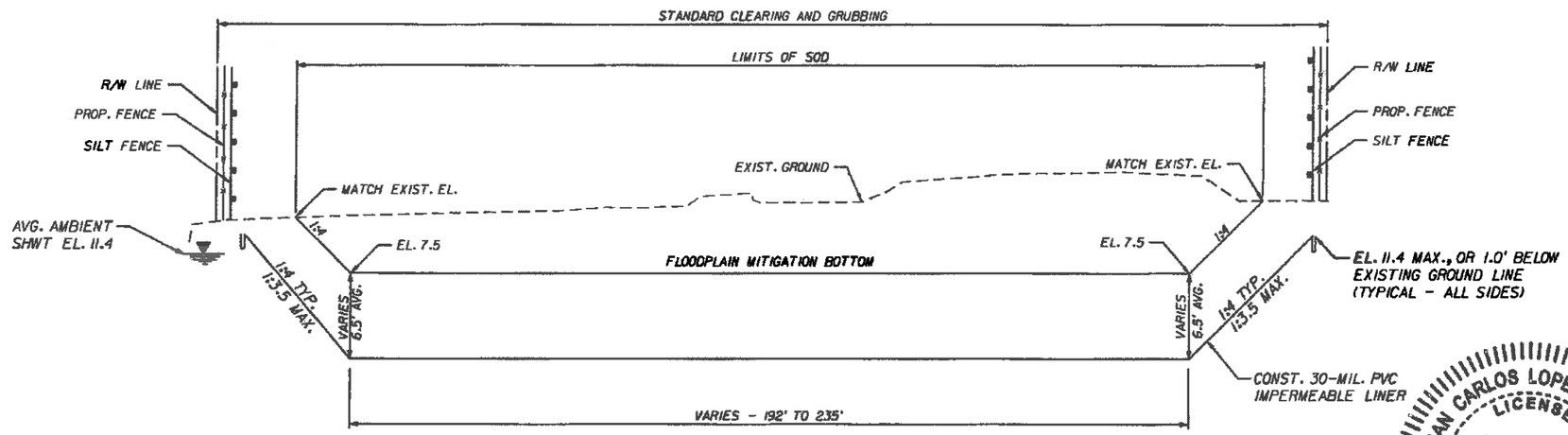


SECTION A - A
FLOODPLAIN MITIGATION SITE EAST - 2



SECTION B - B
FLOODPLAIN MITIGATION SITE - EAST-2

IMPERMEABLE POND LINEAR MUST BE CONSTRUCTED/PLACED ON CLEAN GRANULAR FILL, FREE OF DELETEROUS MATERIAL WHICH MAY PUNCTURE OR DAMAGE THE LINEAR.

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-22-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

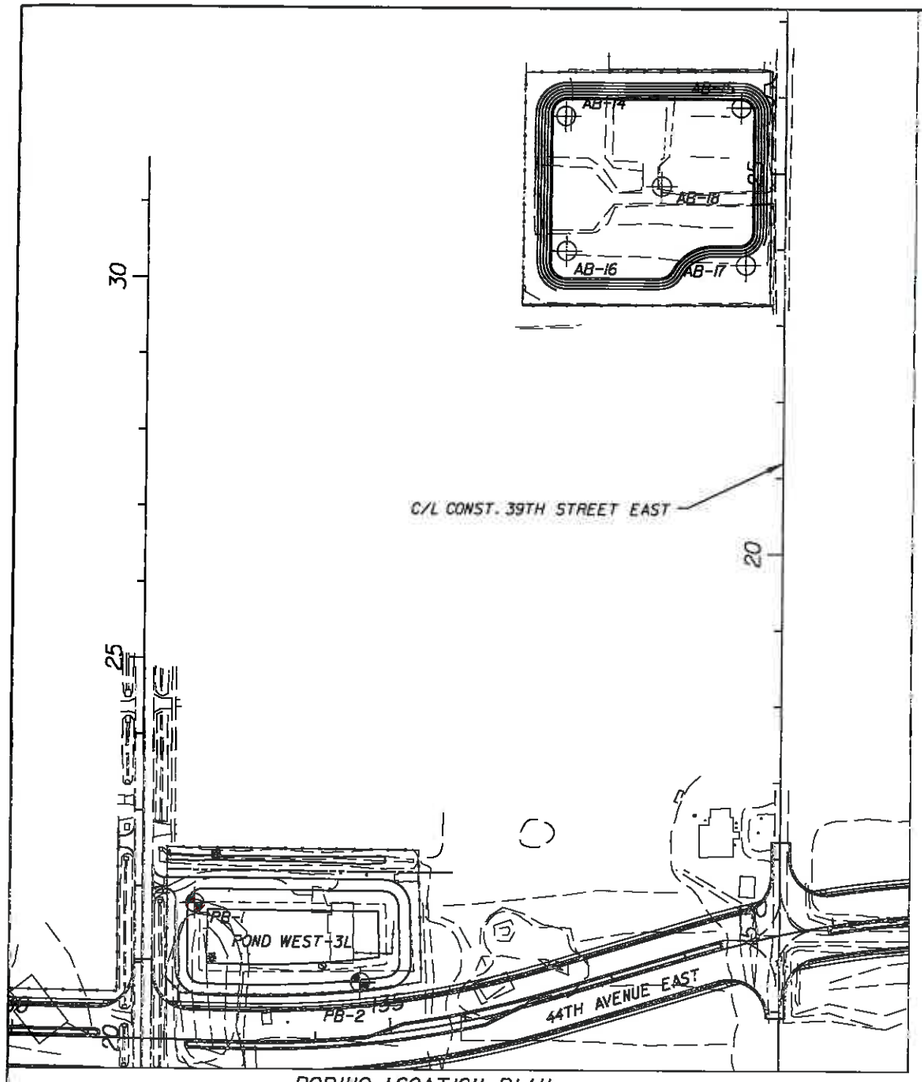
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

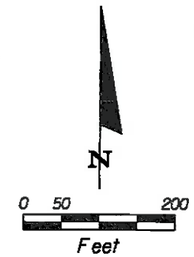
FLOODPLAIN MITIGATION SITE TYPICAL SECTIONS - EAST-2

SHEET NO.: 107

2:33:54 PM 5/22/2014



BORING LOCATION PLAN



LEGEND

1. GRAY TO BROWN FINE SAND TO FINE SAND WITH SILT (A-3)
2. GRAY TO BROWN FINE SAND TO FINE SAND WITH SILT WITH LIMEROCK FRAGMENTS OR WITH SHELL FRAGMENTS (A-1-b/A-3)
3. GRAY TO DARK GRAY TO BROWN SILTY TO CLAYEY SAND (A-2-4/A-2-6)
4. LIGHT GRAY TO DARK GRAY SANDY SILT TO PALE BROWN TO WHITE SILTY CLAY OCCASIONALLY CALCAREOUS WITH LIMESTONE FRAGMENTS (A-4/A-6/A-7-6)
5. DARK GRAY TO BLACK ORGANIC SILTY TO CLAYEY SAND TO ORGANIC SANDY CLAY OCCASIONALLY WITH WOOD (A-8)
6. WEATHERED LIMESTONE

▽ GROUNDWATER TABLE

▼ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE

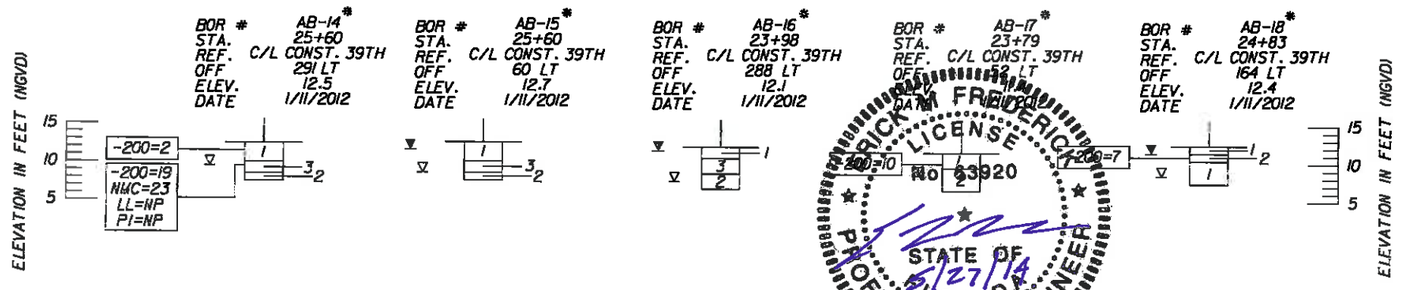
⊕ APPROXIMATE SPT BORING LOCATION

⊕ APPROXIMATE AUGER BORING LOCATION

A-3	AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND/OR LABORATORY TESTING
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
GNE	GROUNDWATER NOT ENCOUNTERED
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
C/L CONST. 37TH	CENTERLINE CONSTRUCTION 37TH STREET EAST
C/L CONST. 39TH	CENTERLINE CONSTRUCTION 39TH STREET EAST
B/L POND E	BASELINE POND EAST

NOTES:

1. BASED ON A REVIEW OF THE "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER, WEST-CENTRAL FLORIDA" MAPS PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER AT THE PROJECT SITE RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. THE SPT BORINGS PERFORMED ALONG THE ALIGNMENT DID NOT ENCOUNTER AN ARTESIAN FLOW CONDITION DURING THE FIELD EXPLORATION. THE CONTRACTOR'S TOOLS AND CONSTRUCTION METHODS SHOULD BE PREPARED TO HANDLE A POTENTIOMETRIC SURFACE CONDITION OF UP TO +20 FT, NGVD 29, AT NO ADDITIONAL COST TO THE COUNTY.
2. HARD SANDY SILT AND WEATHERED LIMESTONE WERE ENCOUNTERED WITHIN THE SPT BORINGS AND SOME OF THE AUGER BORINGS WERE TERMINATED DUE TO REFUSAL. EXCAVATION INTO AND THROUGH THESE MATERIALS MAY BE DIFFICULT AND MAY REQUIRE SPECIALIZED EQUIPMENT. THE CONTRACTOR SHOULD BE PREPARED FOR EXCAVATION INTO AND THROUGH THESE MATERIALS. VARIATIONS IN THE DEPTH OF THESE MATERIALS SHOULD BE ANTICIPATED.
3. THE LEGEND PROVIDED ON THIS SHEET INCLUDES SOIL STRATA ENCOUNTERED WITHIN SOIL BORINGS COMPLETED FOR BOTH THE ROADWAY ALIGNMENT AND PONDS ASSOCIATED WITH THE EXTENSION OF 44TH AVENUE EAST. ALTHOUGH STRATUM 5 WAS NOT ENCOUNTERED WITHIN THE TEST BORINGS COMPLETED FOR THE PONDS, STRATUM 5 IS BEING INCLUDED WITHIN THE POND SOIL SURVEY LEGEND IN ORDER TO MAINTAIN CONSISTENCY WITH THE PROJECT ROADWAY SOIL SURVEY.
4. AN ASTERISK (*) ADJACENT TO THE BORING NUMBER INDICATES THAT THE STATION, OFFSET AND ELEVATION OF THE BORING ARE APPROXIMATE AND WERE ESTIMATED USING MICROSTATION FILES IN CONJUNCTION WITH GPS COORDINATES OBTAINED IN THE FIELD BY THE PROJECT SURVEYOR.



	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS - RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	16 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

ERICK M. FREDERICK LICENSE No. 63920 STATE OF FLORIDA PROFESSIONAL ENGINEER 5/27/14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JRS
DRAWN BY: BJS
CHECKED BY: EMF

E.O.R.: ERICK M. FREDERICK, P.E. LICENSE NUMBER 63920
TIERRA INC
7351 TEMPLE TERRACE HIGHWAY, TAMPA, FL. 33637
CERTIFICATE OF AUTHORIZATION: 6486

DATE: 05/27/14
PROJECT NO.: 607160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ERICK M. FREDERICK
FL. LICENSE NO.: 63920

FLOODPLAIN MITIGATION SITE POND SOIL SURVEY - EAST-2

SHEET NO.: 108

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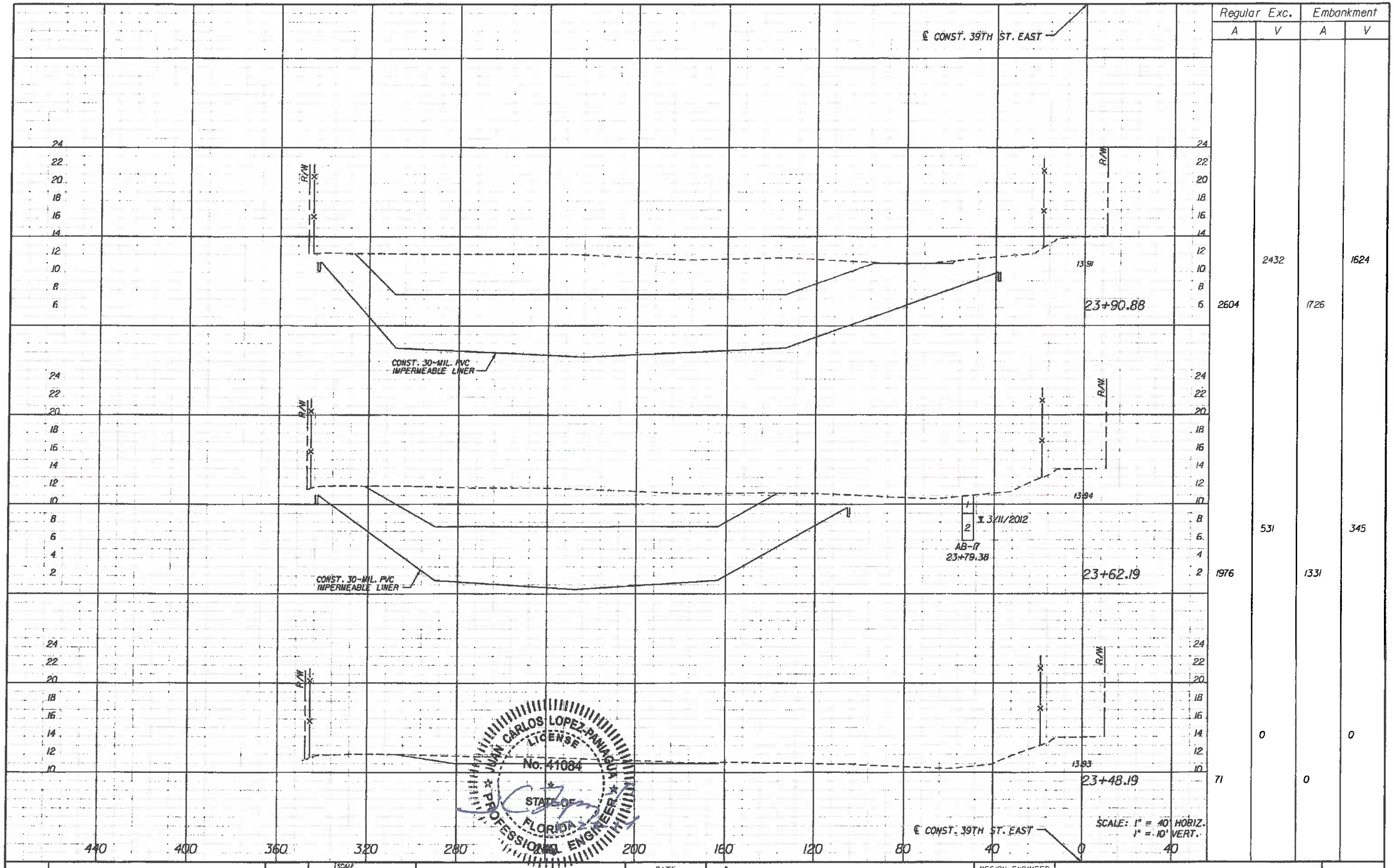

	Regular Exc.		Embankment	
	A	V	A	V
	2604	2432	1726	1624
	1976	531	1331	345
	71	0	0	0

I 3/11/2012

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 60/1160

Manatee County FLORIDA

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

FLOODPLAIN MITIGATION SITE - EAST-2 CROSS SECTIONS

SHEET NO.: 109

2:33:35 PM 5/22/2014

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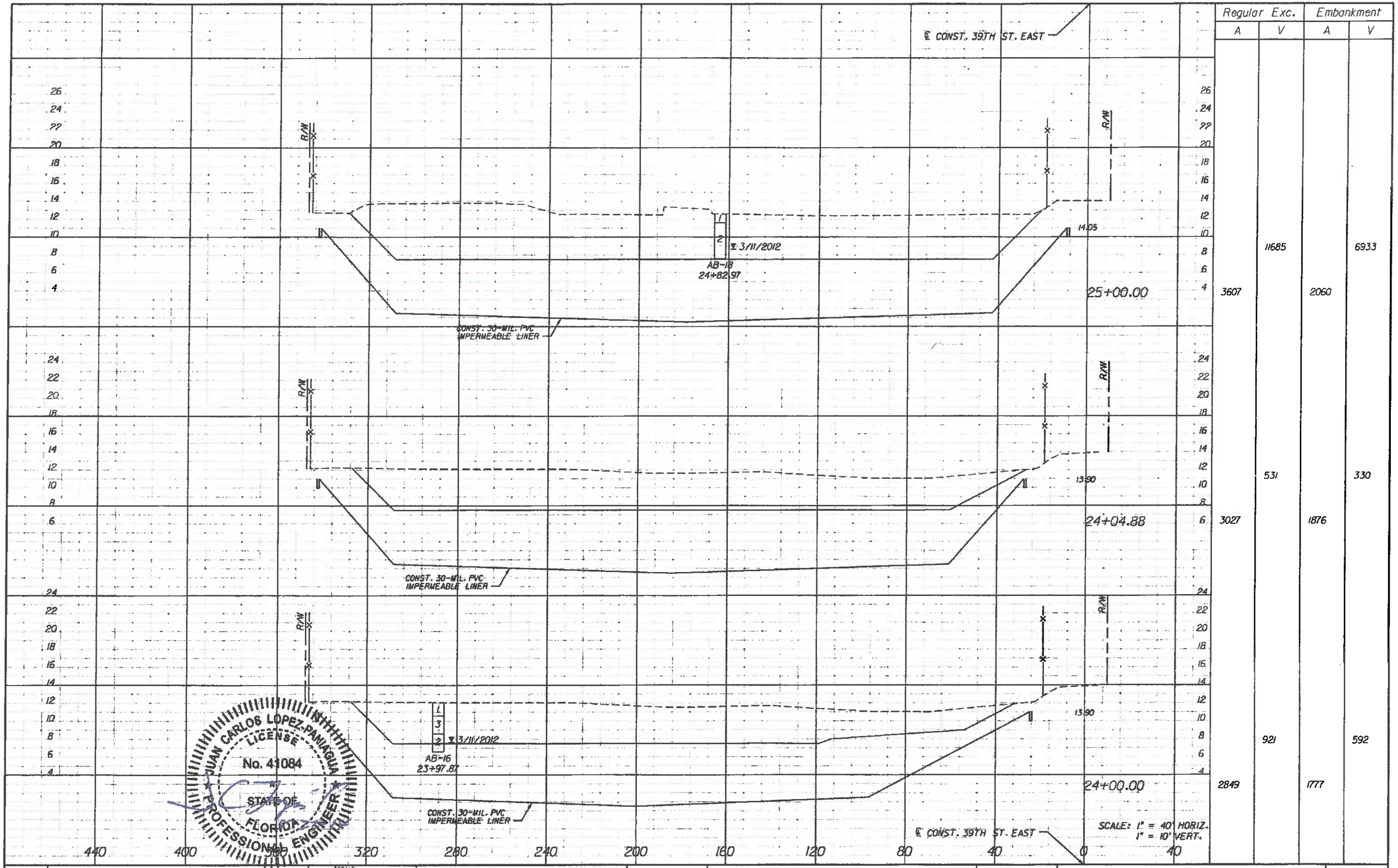


Regular Exc.		Embankment	
A	V	A	V
3607	11685	2060	6933
3027	531	1876	330
2849	921	1777	592

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

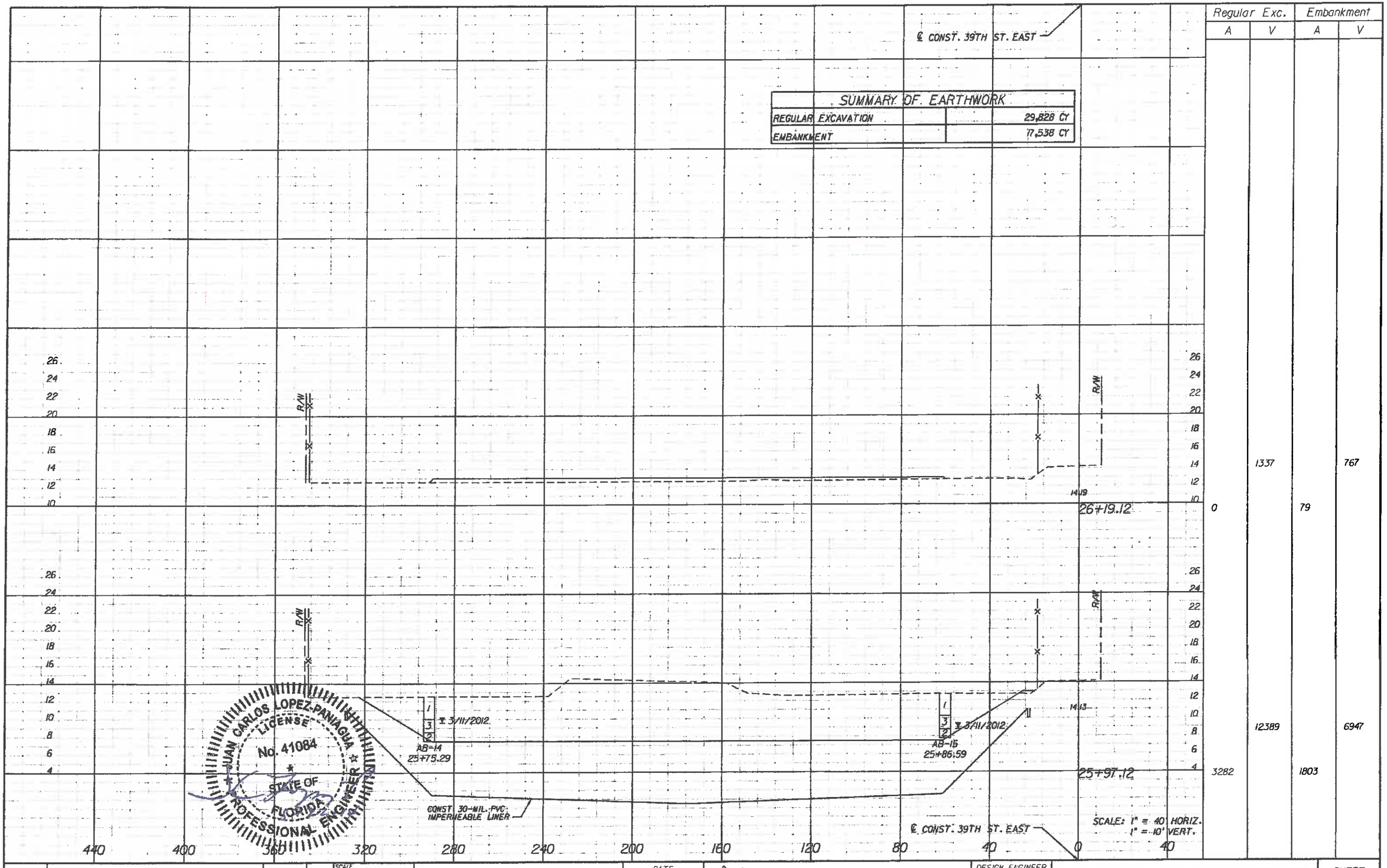
FLOODPLAIN MITIGATION
SITE - EAST-2
CROSS SECTIONS

SHEET NO.: 110

2:33:36 PM 5/22/2014

Regular Exc.		Embankment	
A	V	A	V
0	1337	79	767
	12389		6947
3282		1803	

SUMMARY OF EARTHWORK	
REGULAR EXCAVATION	29,828 CY
EMBANKMENT	17,538 CY



JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

FLOODPLAIN MITIGATION SITE - EAST-2 CROSS SECTIONS

SHEET NO.: III

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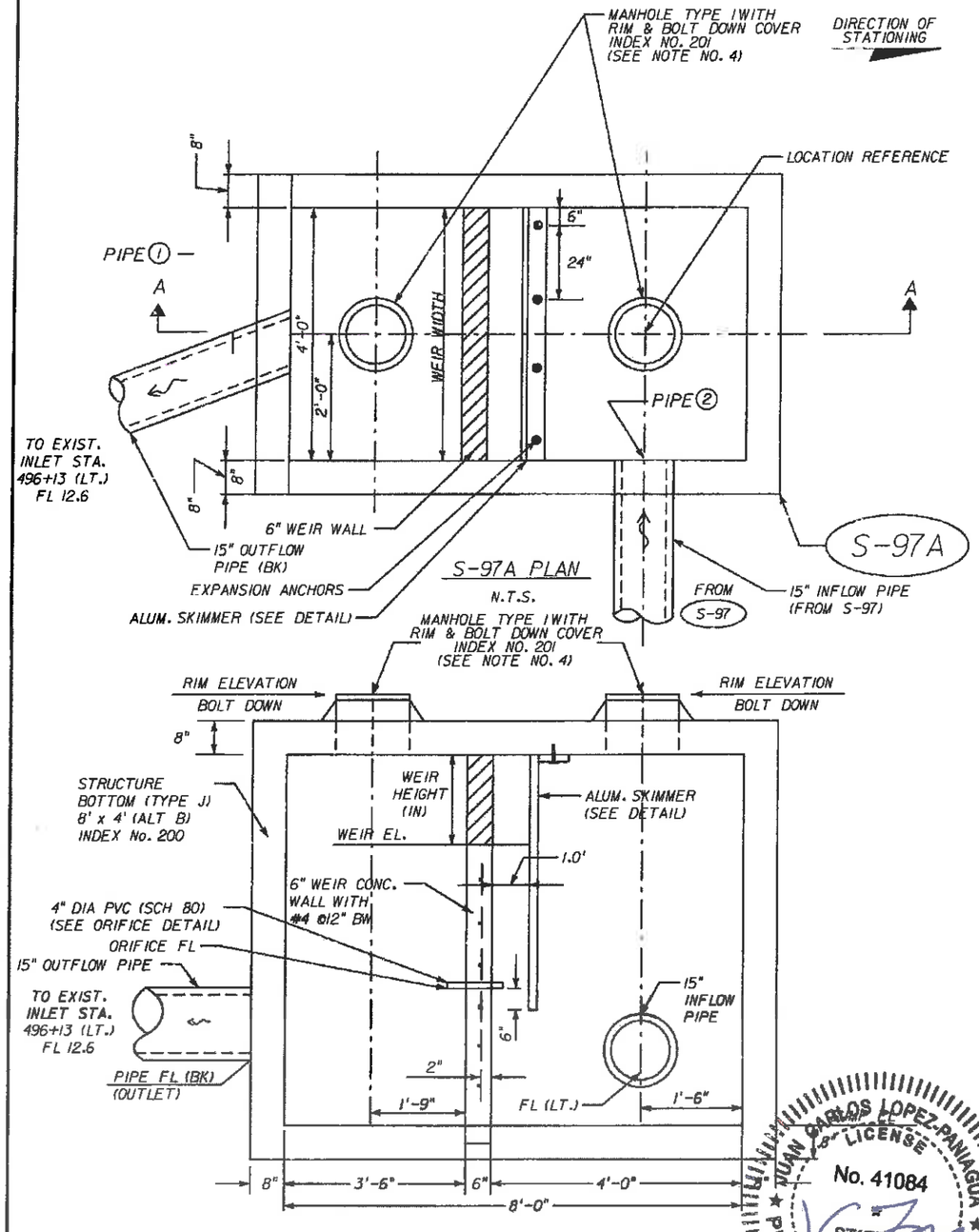
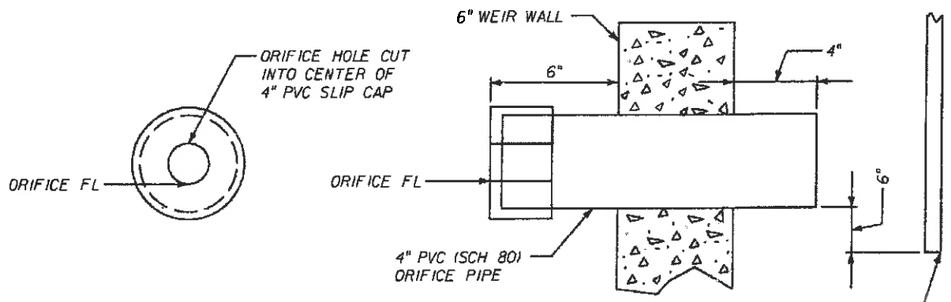


S-97A PLAN

N.T.S.

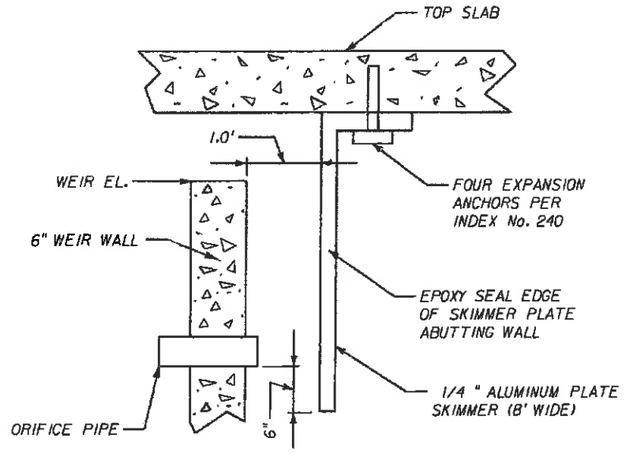
SECTION A-A

N.T.S.



ORIFICE DETAIL

N.T.S.



SKIMMER DETAIL

N.T.S.

NOTES:

1. PAYMENT FOR ALL MATERIALS AND INSTALLATION INCIDENTAL TO THE CONSTRUCTION OF MANHOLE TYPE SPECIAL, INCLUDING STRUCTURE BOTTOM, ORIFICE, MANHOLE RISER, ALUMINUM SKIMMER, FITTINGS AND INTERNAL WEIR WALL SHALL BE INCLUDED IN THE UNIT PRICE FOR MANHOLE TYPE SPECIAL (<10').
2. CONTRACTOR SHALL SUBMIT STRUCTURAL DESIGN & SHOP DRAWINGS FOR MANHOLE TYPE SPECIAL (<10').
3. FOR ADDITIONAL DETAILS, SEE INDEX No.'s 200, 201 & 240.
4. MANHOLE TYPE SPECIAL SHALL USE TWO (2) EACH RING W/BOLTED COVER, "TYPE USF 367" WITH MANATEE COUNTY LOGO PER STANDARD 203.1 AS MANUFACTURED BY US FOUNDRY OR APPROVED EQUAL, INCLUDED IN THE COST FOR MANHOLE TYPE SPECIAL.

MANHOLE TYPE (SPECIAL) ELEVATIONS AND DIMENSIONS

STR No.	STA.	OFFSET	ORIFICE FL	ORIFICE DIA. (IN)	MH RIM EL.	WEIR EL.	WEIR HEIGHT (IN)	WEIR WIDTH (IN)	PIPE ① DIA	PIPE ① FL	PIPE ② DIA	PIPE ② FL	SUMP EL.	POND
S-97A	497+50	28.10' LT.	14.50	0.65	16.75	15.00	7.0	48.0	15"	12.7	15"	12.7	10.0	GAP-1

S-97A MANHOLE TYPE (SPECIAL) DETAIL

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

SPECIAL DETAIL
MANHOLE TYPE (SPECIAL)

SHEET NO.: 112

2:32:00 PM 5/22/2014

P:\Projects\CW004461B\000000000\334343.00.CAD\12456 S20 drainage detail.dgn

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

SUMMARY OF CONTROL STRUCTURES

STRUCTURE NO.	STATION	OFFSET	TYPE	INDEX	GRATE EL (ft)	WEIR EL (ft)	WEIR LENGTH (In)	PIPE SIZE (In)	PIPE FL (ft)	ORIFICE DIAMETER (In)	ORIFICE ELEVATION (ft)	LITTORAL SHELF ELEVATION (ft)	REMARKS	BOTTOM OF SKIMMER (ft)	POND
S-43B	132+61.40	180.20' (LT.)	D DBI	232	12.20	9.70	2	24	7.0	2.50	9.00	6.5	24" MES (1:4) INCLUDES 1 STAFF GAUGE	8.25	WEST-3L
	132+60.60	236.10' (LT.)	MES	272					6.8						
S-121	1001+07.09	63.17' RT.	D DBI	232	12.80	9.75	6	24	8.1	2.12	9.00	6.7	INCLUDES 1 STAFF GAUGE	8.25	EAST-2
									–						
S-110	172+02.00	14.60' (LT.)	D DBI	232	15.80	15.10	30	18	12.3	0.81	14.50	13.50	DBL 18" MES (1:4)	14.0	POND B-1
			MES	273					12.2						

CONTROL STRUCTURE NOTES:

1. PAYMENT FOR ALL MATERIALS AND INSTALLATION ARE INCIDENTAL TO THE CONSTRUCTION OF THE SPECIFIED INLET, TYPE D (MODIFY) – SHEET STEEL SKIMMER PANELS, SKIMMER POSTS, HARDWARE, CONCRETE AND PVC (SCH) 80 PIPE AND PIPE FITTINGS, AND CONCRETE DITCH PAVEMENT SHALL BE INCLUDED IN THE UNIT PRICE FOR INLET TYPE (MODIFIED) (<10) (EA.), AND MANHOLE TYPE (SPECIAL) <10' FOR POND GAP-1.

2. SKIMMER BLADES SHALL BE FABRICATED FROM STEEL SHEET (10 GAGE) FLAT PLATE AND ANGLES. ALL JOINTS WILL BE BOLTED, USING STAINLESS STEEL BOLTS IN ACCORDANCE WITH INDEX 240.

3. FOR ADDITIONAL DETAILS, SEE FDOT STANDARD INDEX NOS. 200, 201, 232, AND 240.

JUAN CARLOS LOPEZ-RIVERA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

STAFF GAUGE AND BENCHMARK NOTES

1. ONE STAFF GAUGE AND ONE BENCHMARK SHALL BE LOCATED WITHIN ONE HUNDRED-FEET (100 FT.) OF EACH STORMWATER POND WEIR (INLET TYPE MODIFIED), AND IN PLAIN SIGHT. THE BENCHMARKS SHALL BE LOCATED IN AN AREA ACCESSIBLE DURING SEVERE HIGH WATER CONDITIONS AND AS NEAR AS PRACTICAL TO THE STORMWATER RETENTION POND ACCESS GATE.

2. THE STAFF GAUGE BENCHMARKS SHALL BE MANUFACTURED OF MATERIALS DESCRIBED IN THE FDOT LOCATION SURVEY MANUAL. A STAFF GAUGE BENCHMARK SHALL BE SET SPECIFICALLY FOR THE WATER LEVEL MEASUREMENT STAFF GAUGE.

3. THE STAFF GAUGE FACE SHALL BE EASILY READABLE FROM A DISTANCE OF ONE HUNDRED-FEET (100 FT.). THE CONTRACTOR SHALL CERTIFY THAT THE MATERIALS USED TO CONSTRUCT THE STAFF GAUGE AND THE MARKING MATERIAL USED TO DELINEATE INCREMENTS SHALL WITHSTAND THE EFFECTS OF WEATHER, INCLUDING ULTRAVIOLET RAYS, FOR FIVE YEARS.

4. THE FACE OF THE STAFF GAUGE SHALL BE WHITE, THE PERMANENT POOL ELEVATION SHALL BE DESIGNATED AS ZERO. HATCH MARKS (10TH OF FEET) AND NUMBERS, TO SIX FEET ABOVE, SHALL BE BLACK IN COLOR. HATCH MARKS AND NUMBERS BELOW ZERO, TO FIVE FEET BELOW, SHALL BE IN RED. WHOLE FEET INCREMENTS SHALL BE NUMBERED.

5. THE CONTRACTOR IS TO ANCHOR THE STAFF GAUGE SYSTEM TO A FOUNDATION CONSTRUCTED IN THE POND BOTTOM. THE STAFF GAUGE ANCHORING SYSTEM SHALL BE DESIGNED TO WITHSTAND IMPACT FORCES ASSOCIATED WITH MAINTENANCE OPERATIONS. SHOP DRAWING REVIEW AND APPROVAL SHALL BE REQUIRED.

6. THE CONTRACTOR SHALL INSTALL THE STAFF GAUGE IN SUCH A MANNER THAT THE FINAL POSITION OF THE STAFF GAUGE ESTABLISHES THE ZERO STAFF GAUGE NUMERAL WITH THE PERMANENT POOL ELEVATION, WITH CERTIFICATION TO THE ESTABLISHED BENCHMARK PROVIDED BY A PROFESSIONAL SURVEYOR REGISTERED IN THE STATE OF FLORIDA.

7. PRICE AND PAYMENT FOR THE STAFF GAUGES AND FOR THE BENCHMARKS WILL BE INCLUDED IN THE BID PRICE FOR INLET TYPE D (MODIFY) (<10') AND MANHOLE TYPE (SPECIAL) <10' FOR POND GAP-1. PRICE AND PAYMENT WILL INCLUDE ALL COSTS ASSOCIATED WITH ESTABLISHING THE STAFF GAUGE AND BENCHMARK IN ACCORDANCE WITH THE PLANS.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

MODIFIED DETAIL CONTROL STRUCTURES

SHEET NO.: 113

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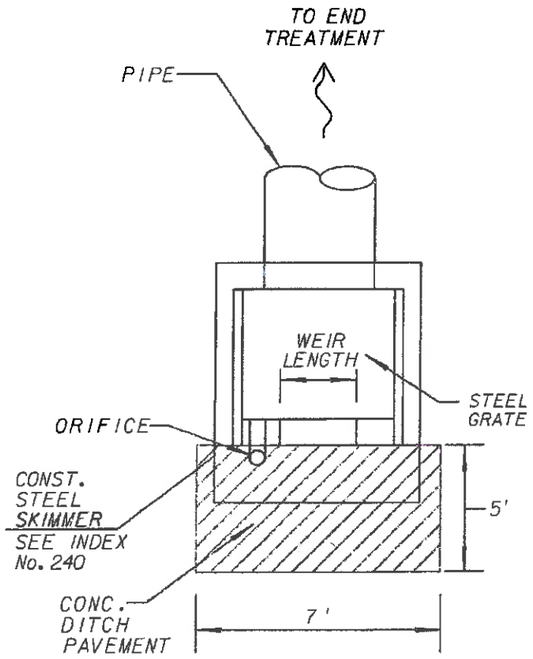
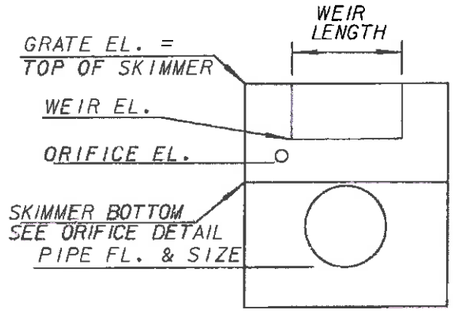
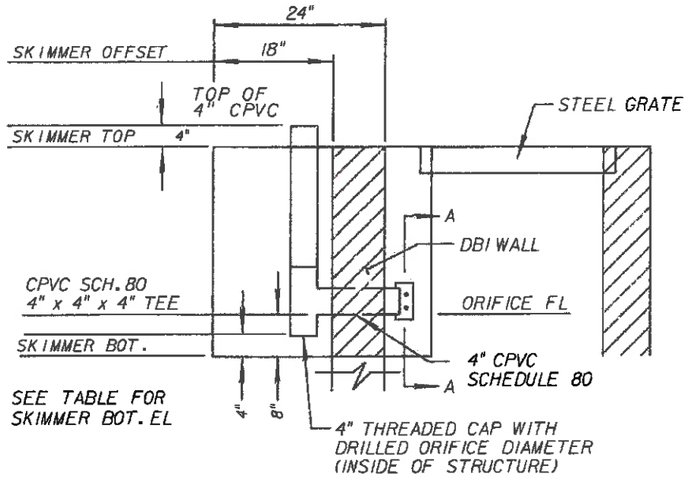


PLAN VIEW
(NTS)



ELEVATION VIEW
(NTS)



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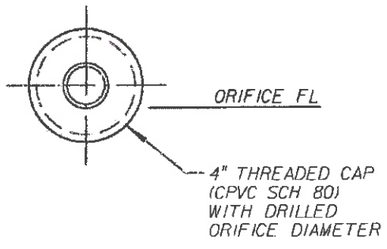
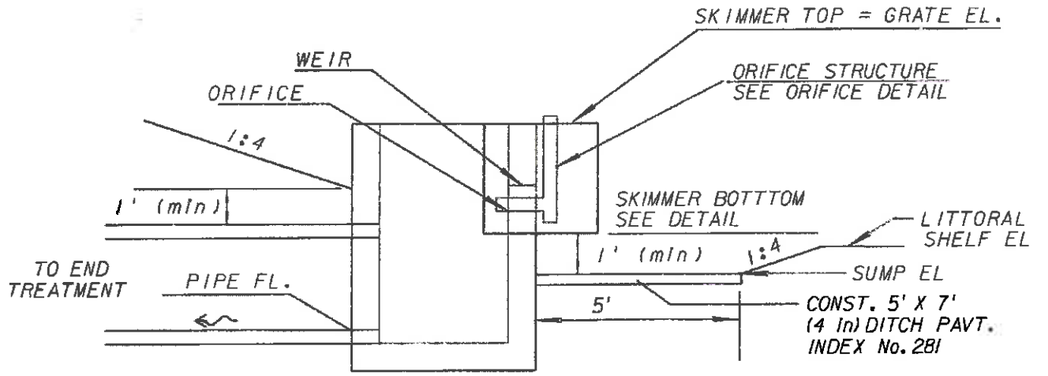
(NTS)



SECTION A-A
(NTS)



SECTION VIEW

OUTLET STRUCTURE DETAIL

DBI (NTS)

NOTE: STRUCTURE SKIMMERS, ORIFICE PIPES, FITTINGS AND CONCRETE APRON TO BE INCLUDED WITH COST DRAINAGE STRUCTURE INLET TYPE D (MODIFY) < 10'.

JUAN CARLOS LOPEZ-PANAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER 5-22-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

MODIFIED DETAIL CONTROL STRUCTURES

SHEET NO.: 114

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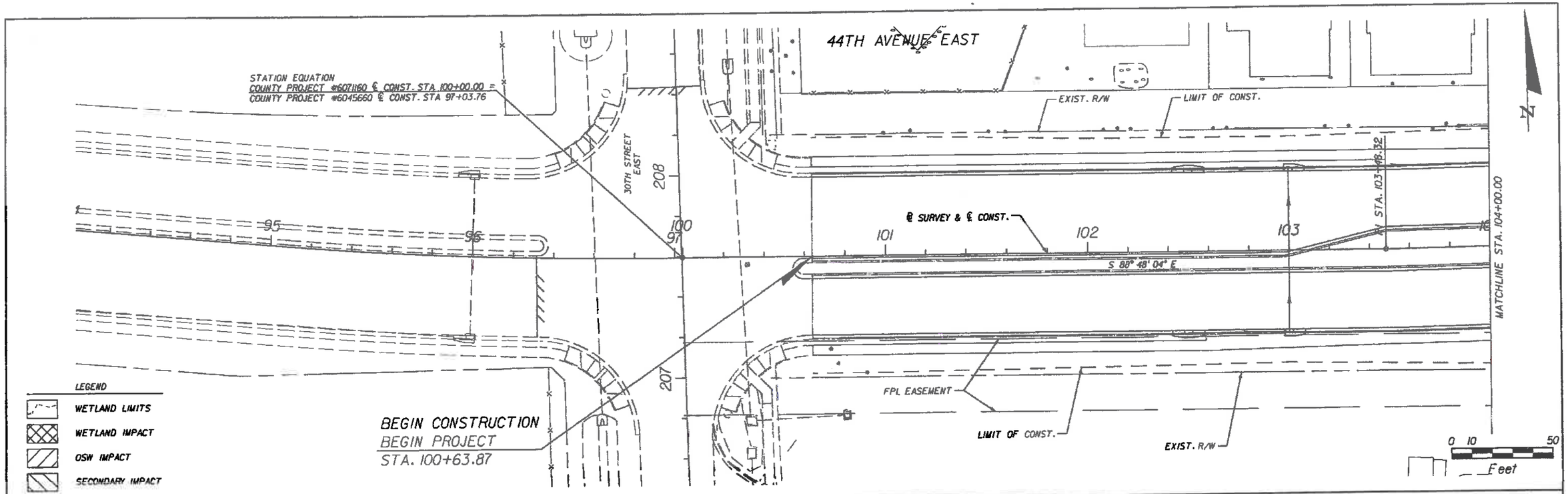
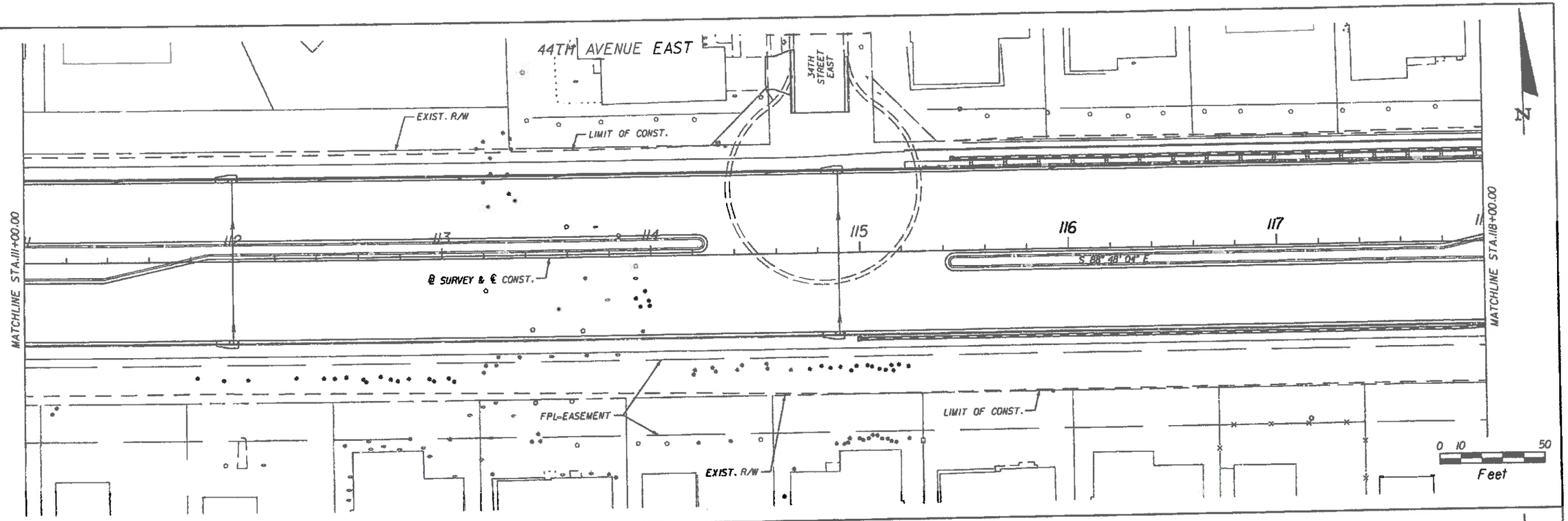


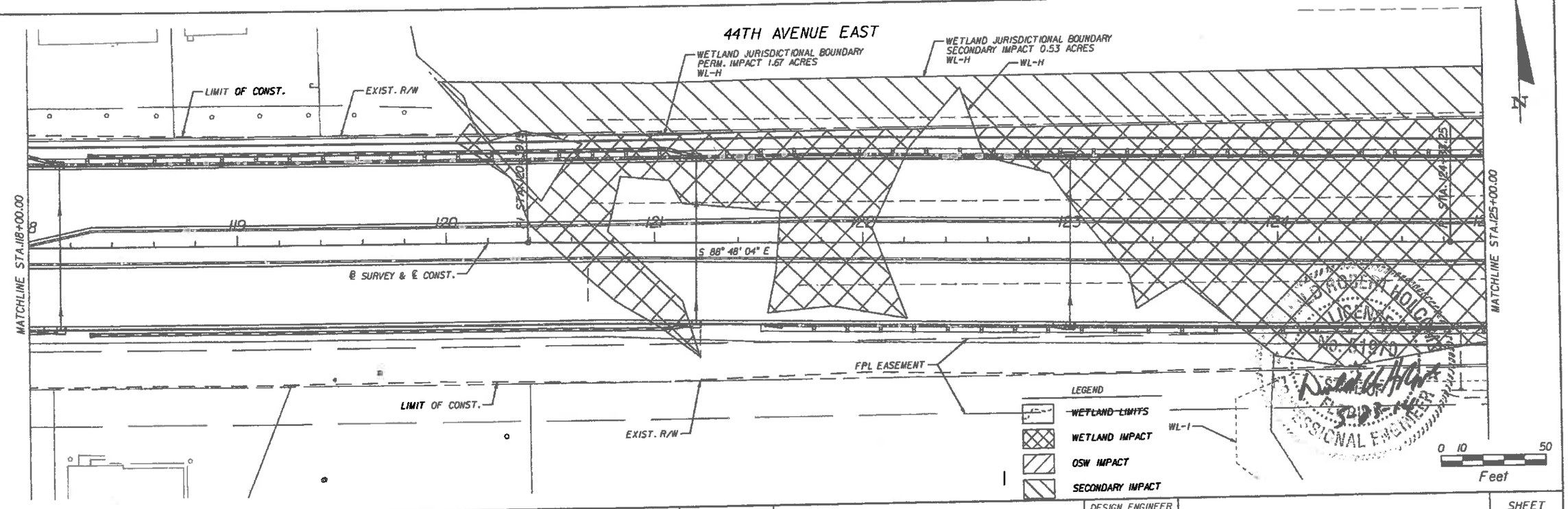
DONALD ROBERT HOLCOMB
LICENSE
No. 51970
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SCALE: AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14	MANATEE COUNTY PUBLIC WORKS
DESIGNED BY: JLS		PROJECT NO.: 6071160	
DRAWN BY: JHC			
CHECKED BY: DRH			

DESIGN ENGINEER	WETLAND IMPACT SHEET	SHEET NO.
DONALD R. HOLCOMB	STA. 100+64.00 TO STA. 111+00.00	115
FL. LICENSE NO. 51970		

REVISIONS	DATE	BY





SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

REVISIONS | DATE | BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 607160

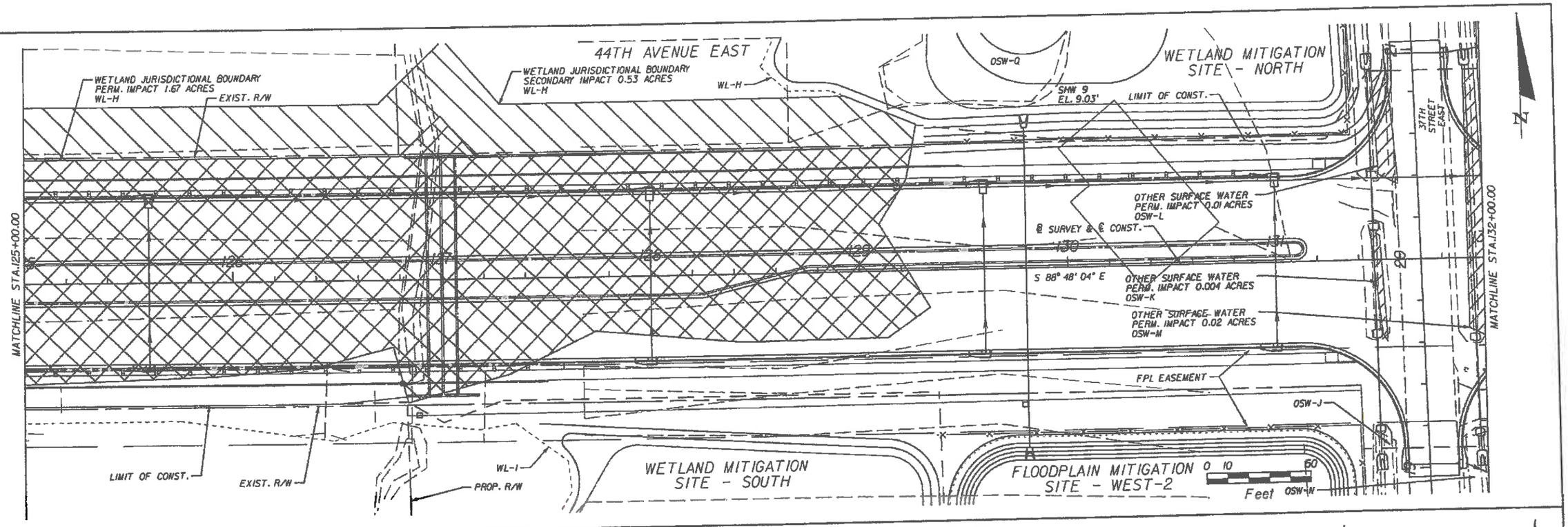
Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

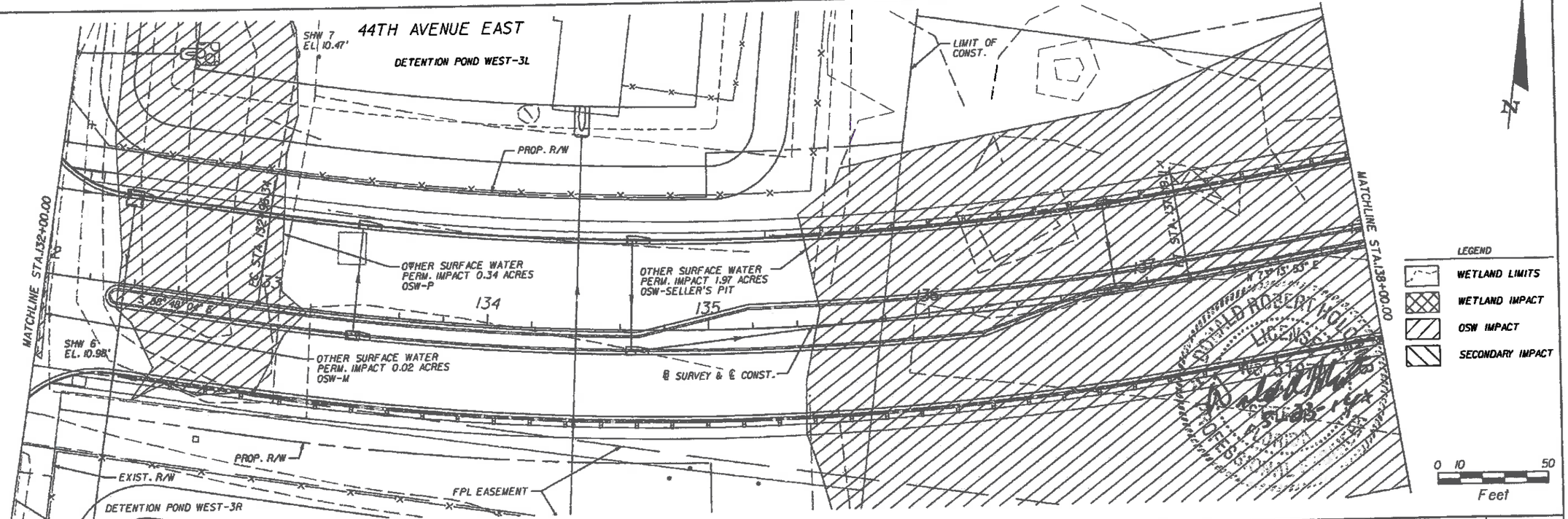
DESIGN ENGINEER DONALD R. HOLCOMB

FL. LICENSE NO. 51970

WETLAND IMPACT SHEET
STA. 111+00.00 TO STA. 125+00.00

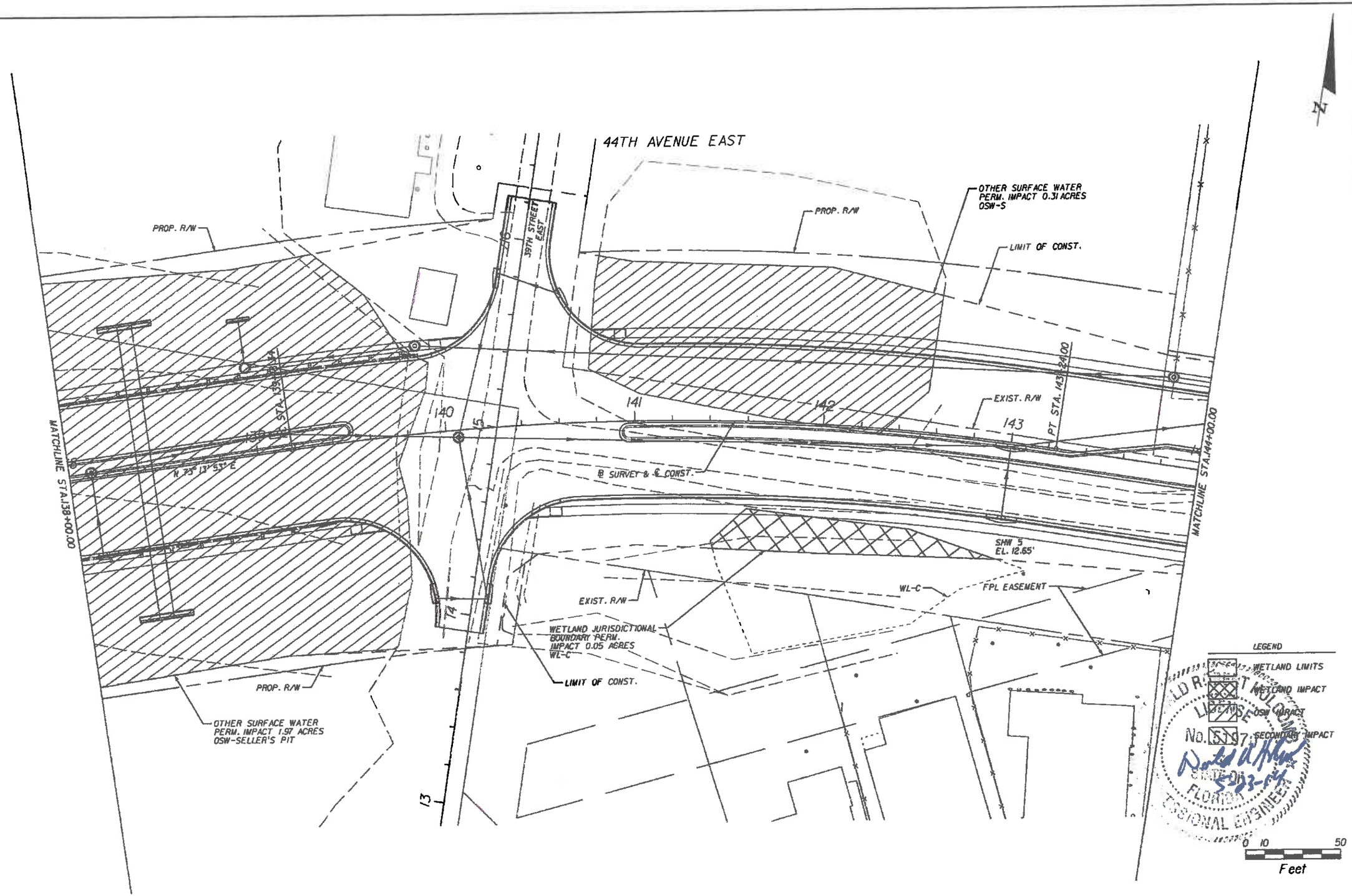
SHEET NO. 116





				SCALE AS NOTED DESIGNED BY JLS DRAWN BY JHC CHECKED BY DRH	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE 05/27/14 PROJECT NO. 6071160	Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER		SHEET NO.
DONALD R. HOLCOMB FL. LICENSE NO. 51970	WETLAND IMPACT SHEET STA. 125+00.00 TO STA. 138+00.00	117



DONALD R. HOLCOMB LICENSE No. 51970 STATE OF FLORIDA PROFESSIONAL ENGINEER
Donald R. Holcomb 5-23-14

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE	05/27/14
PROJECT NO.	6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER	DONALD R. HOLCOMB
FL. LICENSE NO.	51970

WETLAND IMPACT SHEET
STA. 138+00.00 TO STA. 144+00.00

SHEET NO. 118

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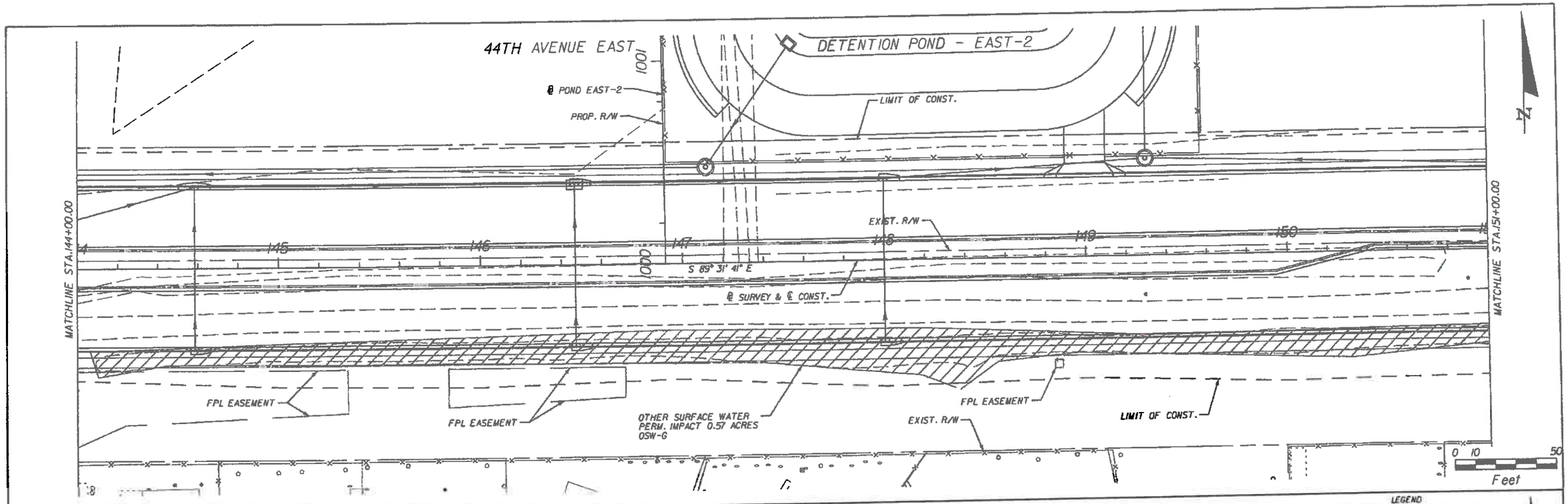


SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

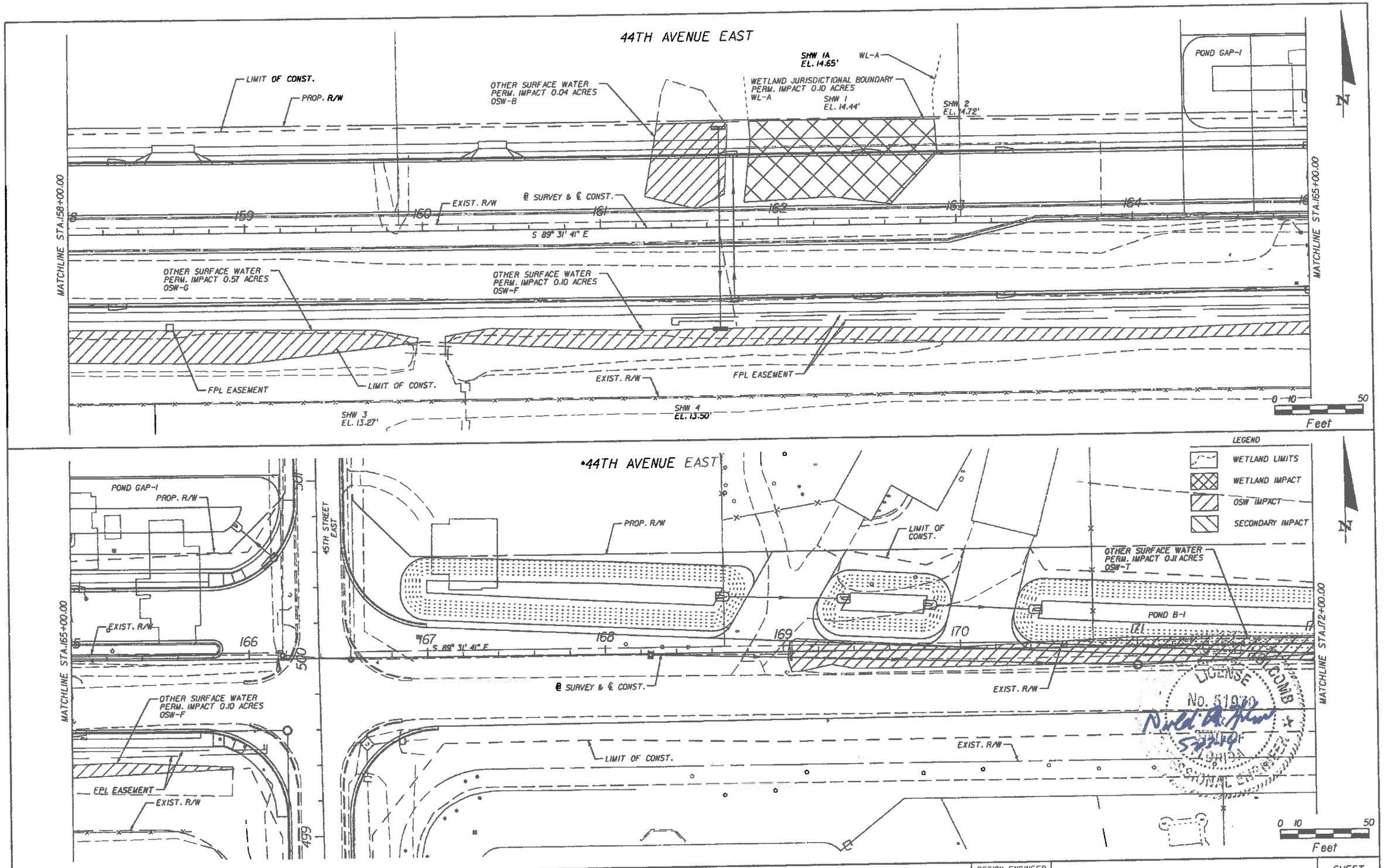
DATE	05/27/14
PROJECT NO.	607160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER	DONALD R. HOLCOMB
FL. LICENSE NO.	51970

WETLAND IMPACT SHEET
STA. 144+00.00 TO STA. 158+00.00

SHEET NO. 119



				SCALE: AS NOTED DESIGNED BY: JLS DRAWN BY: JHC CHECKED BY: DRH	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14 PROJECT NO.: 6071160	Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS
No.	REVISIONS	DATE	BY				

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

WETLAND IMPACT SHEET
STA. 158+00.00 TO STA. 172+00.00

SHEET NO.: 120

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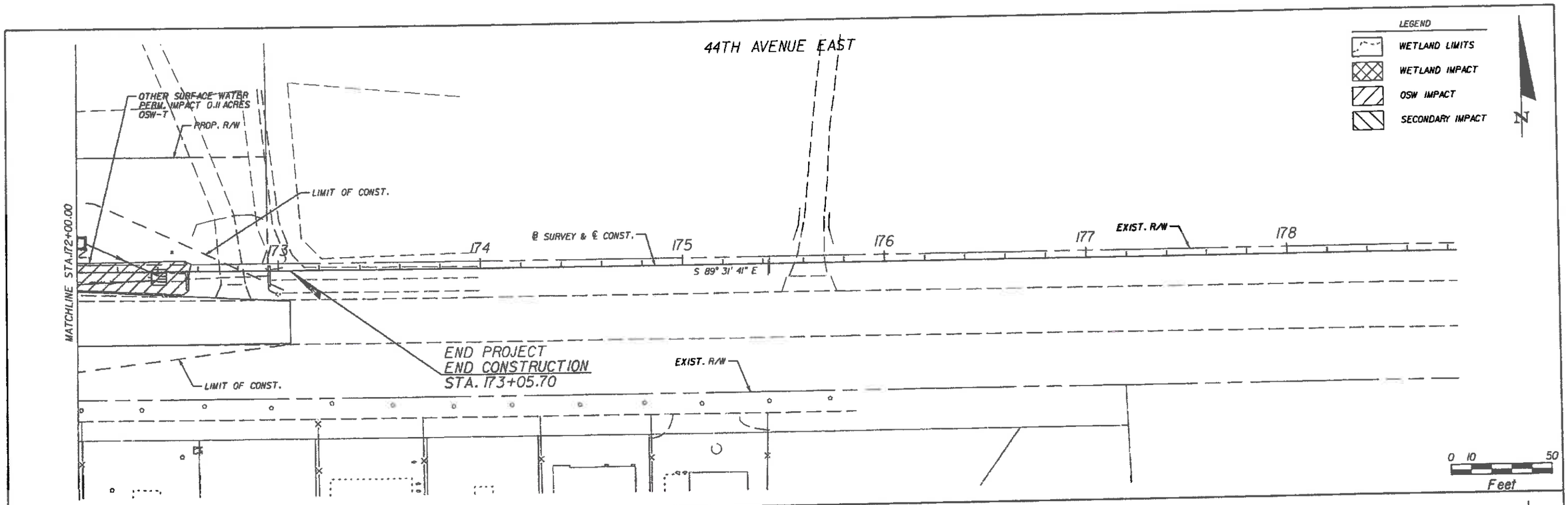
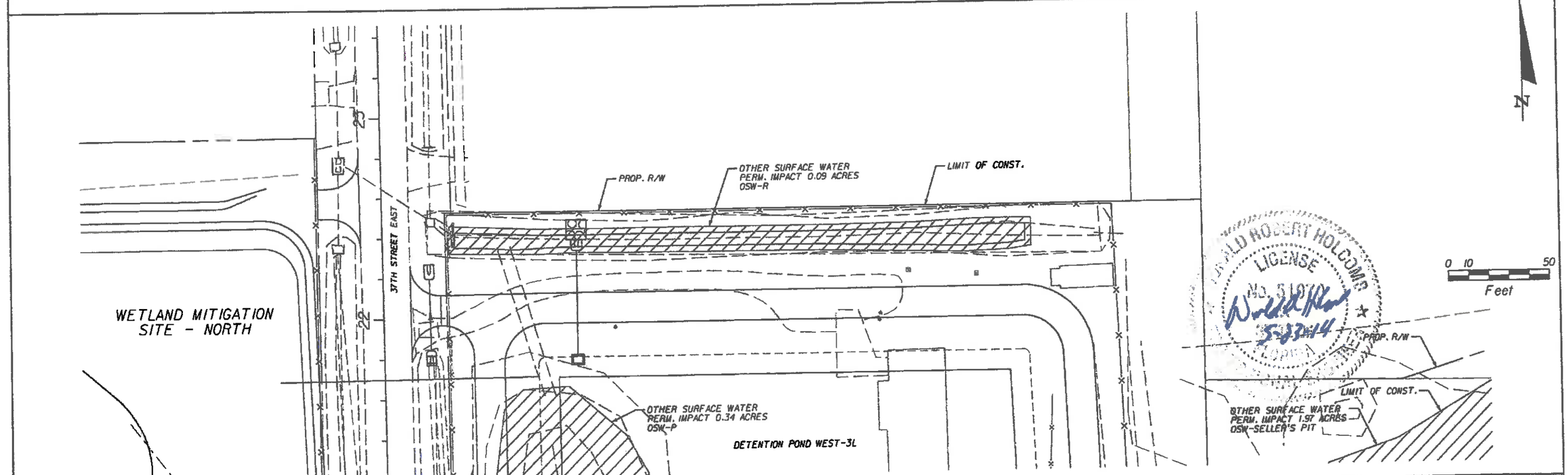
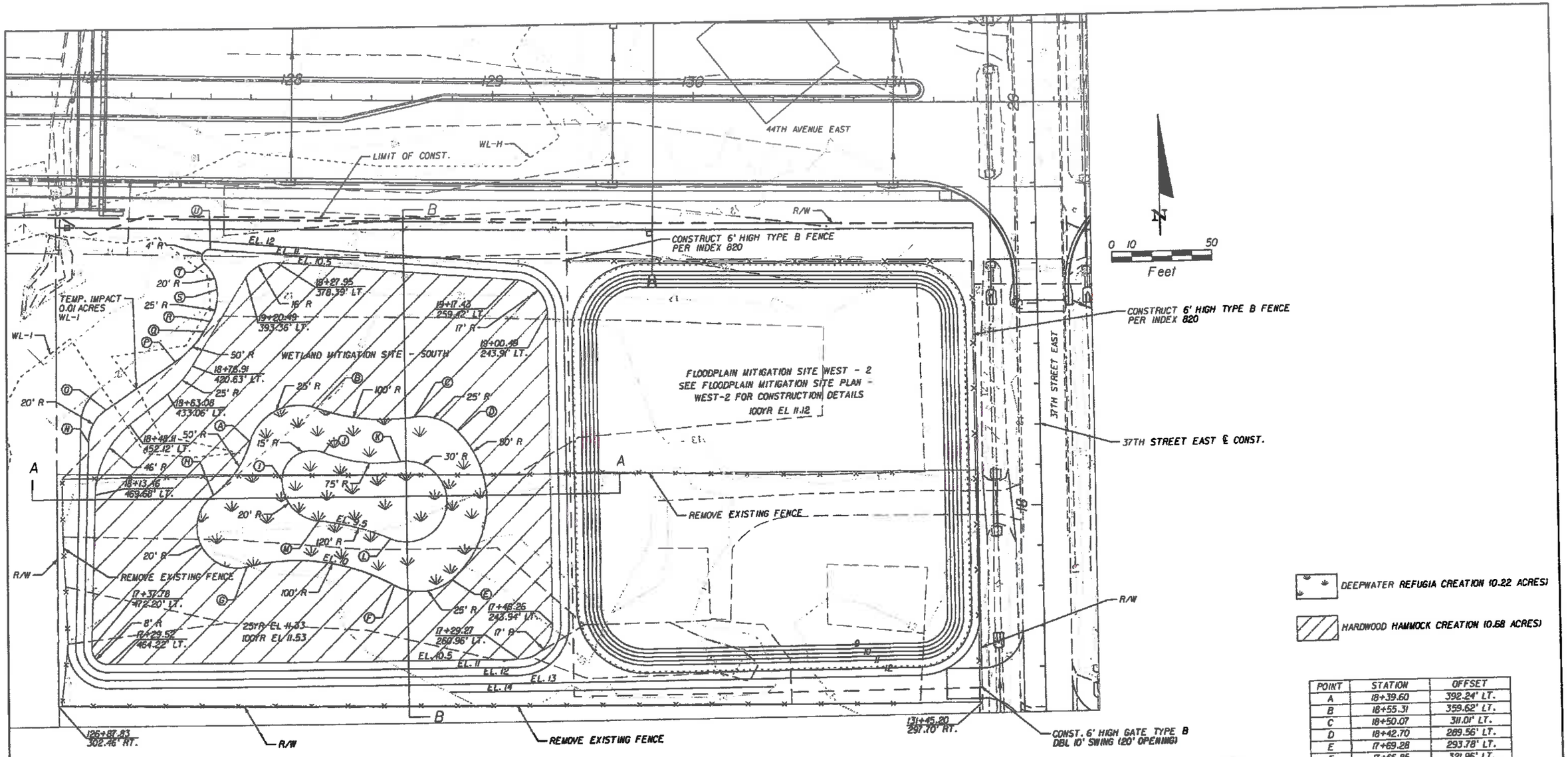




DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
STATE OF FLORIDA
5-27-14

				SCALE: AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14	DESIGN ENGINEER: DONALD R. HOLCOMB
				DESIGNED BY: JLS		PROJECT NO.: 6071160	FL. LICENSE NO.: 51970
				DRAWN BY: JHC		Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS	WETLAND IMPACT SHEET STA. 172+00.00 TO STA. 179+00.00
REVISIONS		DATE	BY	CHECKED BY: DRH			SHEET NO. 121



PLANTING AND DESIGN SPECIFICATIONS								
ZONE	COMMON NAME	SPECIES NAME	ACRES	ELEVATION	SIZE	SPACING	ZONE%	QUANTITY
INTERIOR FORESTED BASIN	BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	0.06	9.5	3-GAL	10 FT O.C.	50%	15
	SWAMP TUPELO	NYSSA SYLVATICA VAR BIFLORA		9.5	7-GAL	10 FT O.C.	50%	15
	POP ASH	FRAXINUS CAROLINIANA	0.16	10.0	7-GAL	10 FT O.C.	100%	70
HARDWOOD HAMMOCK	SWEET BAY	MAGNOLIA VIRGINIANA	0.68	10.5	7-GAL	10 FT O.C.	25%	75
	WATER OAK	QUERCUS NIGRA		10.5	7-GAL	10 FT O.C.	25%	75
	DAHOON HOLLY	ILEX CASSINE		10.5	7-GAL	10 FT O.C.	25%	75
	SWEETGUM	LIQUIDAMBAR STYRACIFLUA		10.5	7-GAL	10 FT O.C.	25%	75
TRANSITIONAL	SUGARBERRY	CELTIS LAEVIGATA	0.09	10.5-11.0	7-GAL	10 FT O.C.	25%	10
	WALTER'S VIBURNUM	VIBURNUM OBOVATUM		10.5-11.0	7-GAL	10 FT O.C.	25%	10
	AMERICAN ELM	ULMUS AMERICANA		10.5-11.0	7-GAL	10 FT O.C.	50%	20
BUFFER	LIVE OAK	QUERCUS VIRGININA	LINEAR ROW	11.0+	7-GAL	15 FT LINEAR	50%	25
	SLASH PINE	PINUS ELLIOTTI		11.0+	7-GAL	15 FT LINEAR	50%	25

POINT	STATION	OFFSET
A	18+39.60	392.24' LT.
B	18+55.31	359.62' LT.
C	18+50.07	311.01' LT.
D	18+42.70	289.56' LT.
E	17+69.28	293.78' LT.
F	17+66.85	321.96' LT.
G	17+77.08	394.61' LT.
H	18+12.76	410.95' LT.
I	18+19.73	376.91' LT.
J	18+33.13	356.20' LT.
K	18+28.10	318.06' LT.
L	17+89.92	323.47' LT.
M	17+99.21	358.96' LT.
N	18+39.66	472.81' LT.
O	18+55.58	463.99' LT.
P	18+79.07	429.10' LT.
Q	18+94.03	414.64' LT.
R	18+99.07	411.48' LT.
S	19+14.88	407.80' LT.
T	19+27.94	414.01' LT.
U	19+34.84	410.92' LT.

DONALD ROBERT HOLCOMB LICENSE No. 51970 STATE OF FLORIDA PROFESSIONAL ENGINEER

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

NO.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of Authorization No. 4213

DATE 05/27/14

PROJECT NO. 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER DONALD R. HOLCOMB

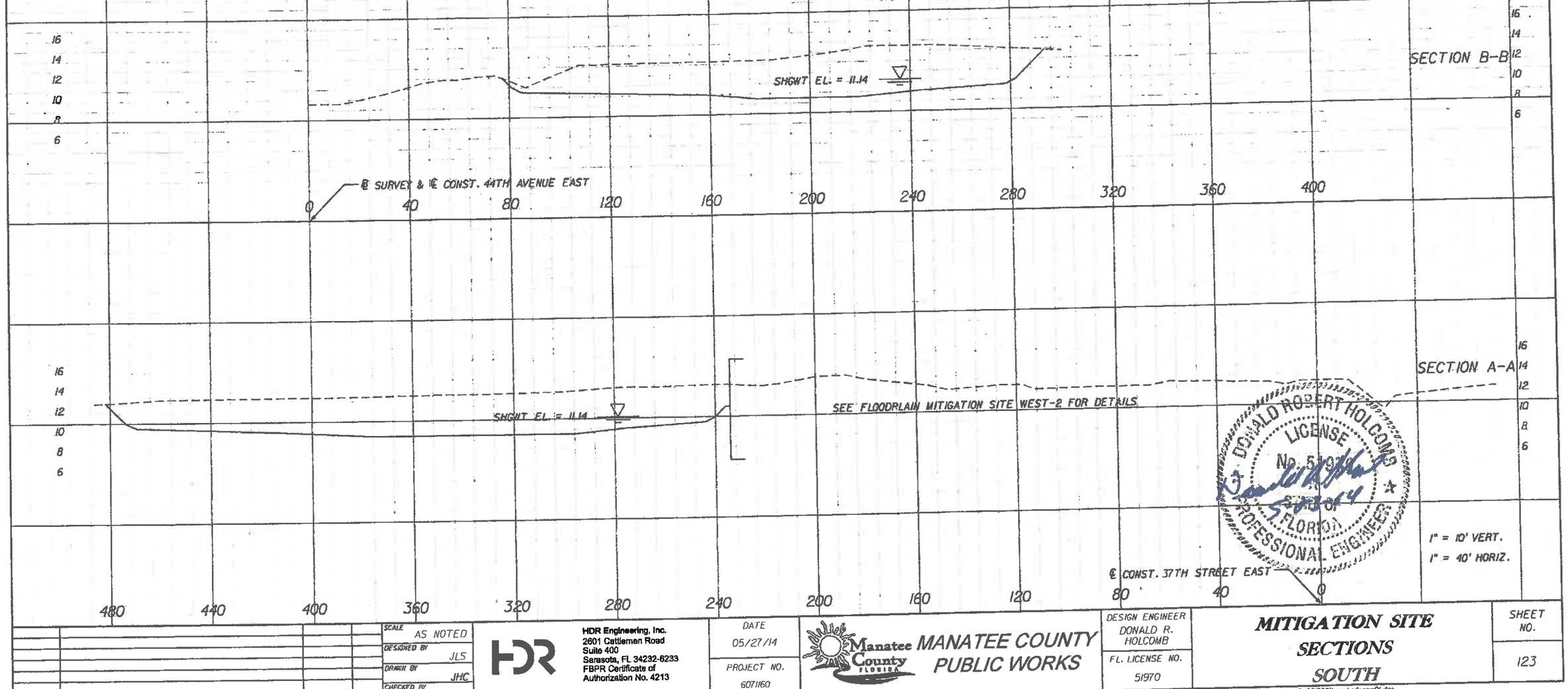
FL. LICENSE NO. 51970

WETLAND MITIGATION SITE PLAN SHEET SOUTH

SHEET NO. 122

SUMMARY OF EARTHWORK

REGULAR EXCAVATION	5,397 CY
EMBANKMENT	1 CY



DONALD ROBERT HOLCOMB
LICENSE
No. 51970
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

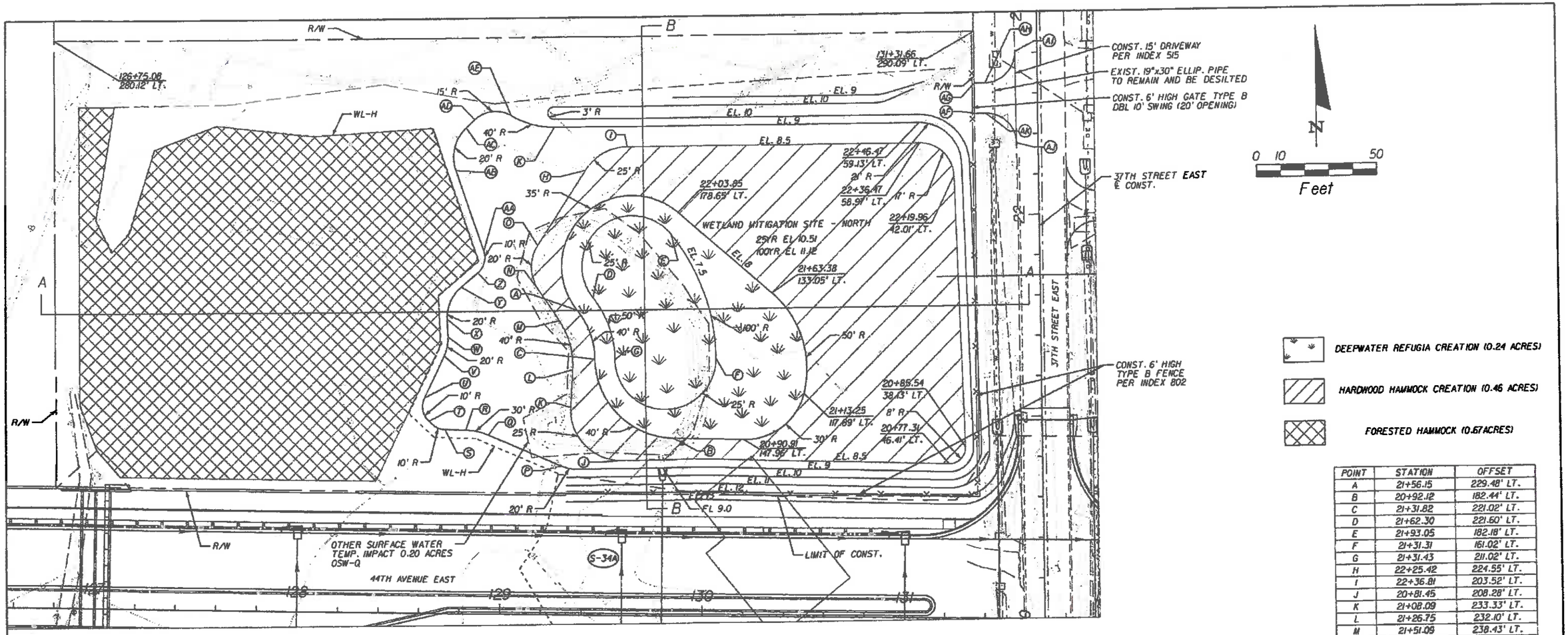
DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

MITIGATION SITE SECTIONS SOUTH

SHEET NO.: 123



POINT	STATION	OFFSET
A	21+56.15	229.48' LT.
B	20+92.12	182.44' LT.
C	21+31.82	221.02' LT.
D	21+62.30	221.60' LT.
E	21+93.05	182.18' LT.
F	21+31.31	161.02' LT.
G	21+31.43	211.02' LT.
H	22+25.42	224.55' LT.
I	22+36.81	203.52' LT.
J	20+81.45	208.28' LT.
K	21+08.09	233.33' LT.
L	21+26.75	232.10' LT.
M	21+51.09	238.43' LT.
N	21+66.73	248.54' LT.
O	21+88.48	248.52' LT.
P	20+79.07	238.37' LT.
Q	20+94.91	274.14' LT.
R	20+97.46	285.15' LT.
S	20+97.85	295.36' LT.
T	21+02.04	303.37' LT.
U	21+13.65	305.43' LT.
V	21+34.33	295.31' LT.
W	21+43.69	293.28' LT.
X	21+52.55	293.54' LT.
Y	21+68.40	64.36' LT.
Z	21+75.40	278.17' LT.
AA	21+86.19	275.14' LT.
AB	22+26.14	288.43' LT.
AC	22+47.12	283.04' LT.
AD	22+51.12	278.72' LT.
AE	22+52.88	260.64' LT.
AF	22+50.47	31.37' LT.
AG	22+65.47	31.36' LT.
AH	22+65.47	26.00' LT.
AJ	22+80.59	11.00' LT.
AJ	22+35.59	10.65' LT.
AK	22+50.47	25.65' LT.

PLANTING AND DESIGN SPECIFICATIONS

ZONE	COMMON NAME	SPECIES NAME	ACRES	ELEVATION	SIZE	SPACING	ZONE%	QUANTITY
INTERIOR FORESTED BASIN	BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	0.10	7.5	3-GAL	10 FT O.C.	50%	25
	SWAMP TUPELO	NYSSA SYLVATICA VAR BIFLORA		7.5	7-GAL	10 FT O.C.	50%	25
	POP ASH	FRAXINUS CAROLINIANA	0.14	8.0	7-GAL	10 FT O.C.	100%	60
HARDWOOD HAMMOCK	SWEET BAY	MAGNOLIA VIRGINIANA	0.46	8.5	7-GAL	10 FT O.C.	25%	50
	WATER OAK	QUERCUS NIGRA		8.5	7-GAL	10 FT O.C.	25%	50
	DAHOON HOLLY	ILEX CASSINE		8.5	7-GAL	10 FT O.C.	25%	50
	SWEETGUM	LIQUIDAMBAR STYRACIFLUA		8.5	7-GAL	10 FT O.C.	25%	50
TRANSITIONAL	SUGARBERRY	CELTIS LAEVIGATA	0.28	8.5-9.0	7-GAL	10 FT O.C.	25%	30
	WALTER'S VIBURNUM	VIBURNUM OBOVATUM		8.5-9.0	7-GAL	10 FT O.C.	25%	30
	AMERICAN ELM	ULMUS AMERICANA		8.5-9.0	7-GAL	10 FT O.C.	50%	60
BUFFER	LIVE OAK	QUERCUS VIRGININA	LINEAR ROW	9.0+	7-GAL	15 FT LINEAR	50%	25
	SLASH PINE	PINUS ELLIOTTI		9.0+	7-GAL	15 FT LINEAR	50%	25

DONALD ROBERT HOLCOMB LICENSE No. 51970 STATE OF FLORIDA PROFESSIONAL ENGINEER
5-13-14

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of Authorization No. 4213

DATE 05/27/14

PROJECT NO. 607116O

Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

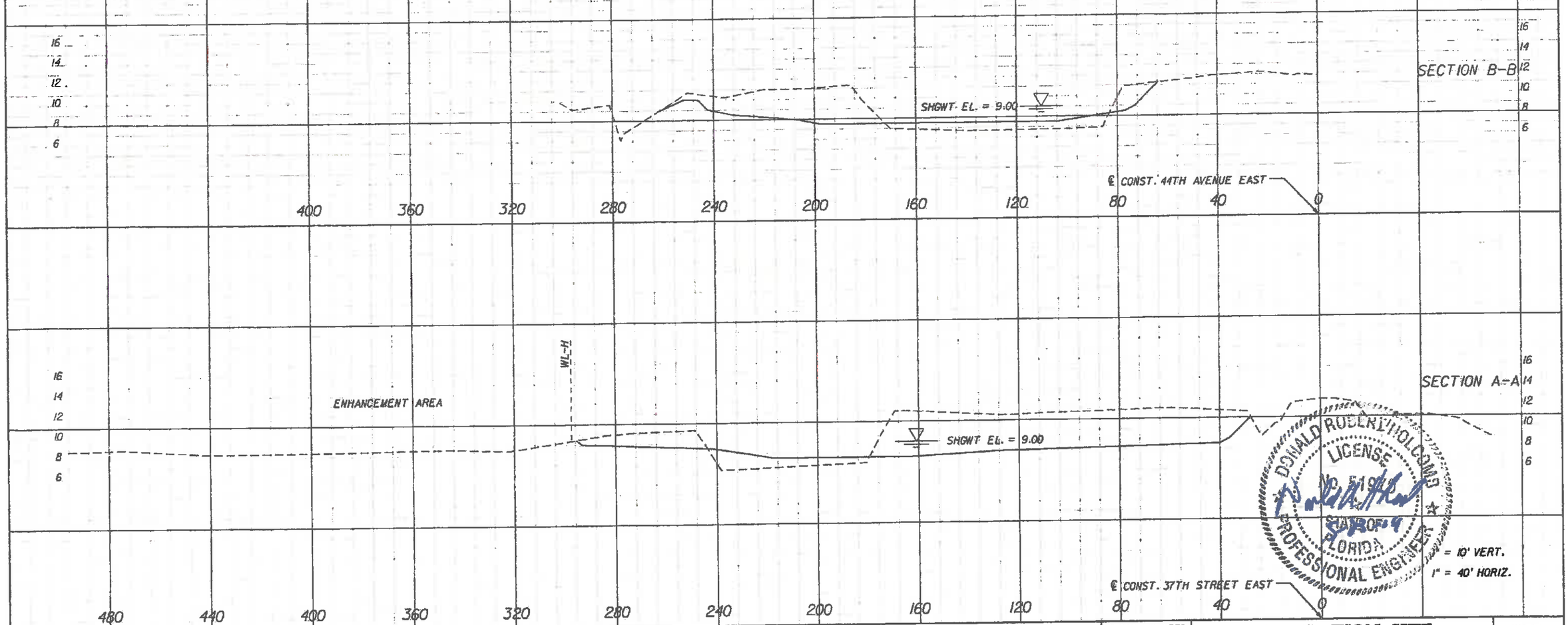
DESIGN ENGINEER DONALD R. HOLCOMB

FL. LICENSE NO. 51970

WETLAND MITIGATION SITE PLAN SHEET NORTH

SHEET NO. 124

SUMMARY OF EARTHWORK	
REGULAR EXCAVATION	4,301 CY
EMBANKMENT	244 CY



DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

1" = 10' VERT.
1" = 40' HORIZ.

SCALE	AS NOTED
DESIGNED BY	JLS
DRAWN BY	JHC
CHECKED BY	DRH

REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE	05/27/14
PROJECT NO.	6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER	DONALD R. HOLCOMB
FL. LICENSE NO.	51970

MITIGATION SITE SECTIONS NORTH

SHEET NO. 125

WETLAND MITIGATION SITE NOTES

1. ALL WORK WITHIN THE PARCEL LIMITS SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK, AND SHALL ADHERE TO THE CONDITIONS AND STIPULATIONS OF ALL PERMITS GOVERNING THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF ANY FINES / ADMINISTRATIVE COSTS INCURRED BY THE OWNER FOR PERMIT VIOLATIONS.

2. THE CONSTRUCTION AREAS INDICATED IN THESE PLANS ARE APPROXIMATE. ANY MINOR DEVIATIONS SHALL BE ADAPTED IN THE FIELD, AS DIRECTED BY AN ONSITE WETLAND SCIENTIST FAMILIAR WITH THE PERMIT CONDITIONS AND PROJECT DESIGN AND DESIGNATED TO OVERSEE THE RESTORATION AND ENHANCEMENT EFFORT.

3. FIELD CONDITIONS MAY NECESSITATE SLIGHT ALIGNMENT AND GRADE DEVIATIONS TO AVOID OBSTACLES AND / OR NATIVE TREES, AS DIRECTED BY THE OWNER'S REPRESENTATIVE OR ONSITE WETLAND SCIENTIST.

4. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY IF CONFLICTS BETWEEN THE DRAWINGS AND THE ACTUAL CONDITIONS ARE DISCOVERED.

5. CONTRACTOR SHALL MAINTAIN A SET OF PLANS TO MARK ANY FIELD DEVIATIONS AND SHALL DELIVER THESE PLANS TO THE OWNER'S REPRESENTATIVE UPON COMPLETION OF CONSTRUCTION. FINAL PAYMENT SHALL NOT BE MADE UNTIL THIS REQUIREMENT IS SATISFIED.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS NOT PROVIDED, BUT OTHERWISE REQUIRED, FROM GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE PROJECT SITE OR ACTIVITIES.

7. CLEANUP ACTIVITIES SHALL BE ACCOMPLISHED BY THE CONTRACTOR AS DIRECTED BY THE OWNER'S REPRESENTATIVE INCLUDING REMOVAL OF TRASH, DEBRIS, RUBBLE, SPOIL, AND / OR CONSTRUCTION MATERIALS. ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE. ALL MATERIALS REMOVED SHALL BE DISPOSED OF IN A LAWFUL MANNER.

8. THE CONTRACTOR SHALL ENDEAVOR TO PROTECT PRIVATE PROPERTY. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE CORRECTED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE. REIMBURSEMENT SHALL NOT BE MADE FOR THIS WORK.

9. ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS OR PROPERTY CAUSED BY THE CONTRACTORS HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE OR FACILITY OWNER. REIMBURSEMENT SHALL NOT BE MADE FOR THIS WORK.

10. THE CONTRACTOR SHALL ADHERE TO ALL WATER QUALITY STANDARDS PURSUANT TO SECTION 62-302 F.A.C.

11. THE CONTRACTOR SHALL ENSURE THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL BARRIERS SUCH AS SILT SCREEN AND FLOATING TURBIDITY BARRIERS, AS REQUIRED BY THE SITE CONDITIONS, AS ESTABLISHED IN THE CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (PER NPDES REQUIREMENTS), AND AS APPROVED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION. PERMIT APPLICATIONS / FEES AND THE INSTALLATION, MAINTENANCE, AND REMOVAL OF BARRIERS SHALL BE INCLUDED IN THE BID PRICE. FAILURE TO INSTALL OR PROPERLY MAINTAIN SUCH BARRIERS MAY RESULT IN ENFORCEMENT ACTIONS, WHICH MAY INCLUDE CITATIONS, AS PROVIDED BY CHAPTERS 40D-A AND 40D-40, F.A.C.

12. EROSION AND SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND ENHANCEMENT / RESTORATION OF THE SITE HAS BEEN COMPLETED.

13. ALL AREAS DISTURBED BY EARTHMOVING ACTIVITIES (SPOIL, STUMP, OR RUBBLE REMOVAL) SHALL BE RETURNED TO THE EXISTING GRADE OR TO THE ELEVATIONS SPECIFIED BY THE DESIGN.

14. PLANTING IN THE RESTORATION / ENHANCEMENT AREAS SHALL BE SUPERVISED BY THE ONSITE WETLAND SCIENTIST FAMILIAR WITH THE PERMIT CONDITIONS AND PROJECT DESIGN AND PLANT LAYOUT SHALL BE DETERMINED BY THE POST RESTORATION / ENHANCEMENT LANDSCAPE CONDITIONS. DAMAGE OR REMOVAL OF HEALTHY NATIVE TREES OR PALMS SHALL BE AVOIDED IF PRACTICABLE.

15. WHEN FEASIBLE, TRANSPLANTING OF PALMS OR OTHER NATIVE TREES OR SHRUBS LOCATED WITHIN THE CONSTRUCTION ZONE SHALL BE CONSIDERED.

16. PERIMETER GRADES SHALL MATCH EXISTING ELEVATIONS AT UPLAND BOUNDARIES, TIE INTO WETLAND BOUNDARIES, AND MATCH ELEVATION 4.1 FT NGVD29 ALONG THE BRADEN RIVER. NO EARTHWORK SHALL BE CONDUCTED BELOW THE 4.1 FT NGVD ELEVATION WITHOUT PRIOR COORDINATION WITH FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

DONALD R. HOLCOMB LICENSE NO. 51970 STATE OF FLORIDA PROFESSIONAL ENGINEER

SCALE	AS NOTED	DESIGNED BY	JLS
DRAWN BY	JHC	CHECKED BY	DRH

REVISIONS | DATE | BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 6071160

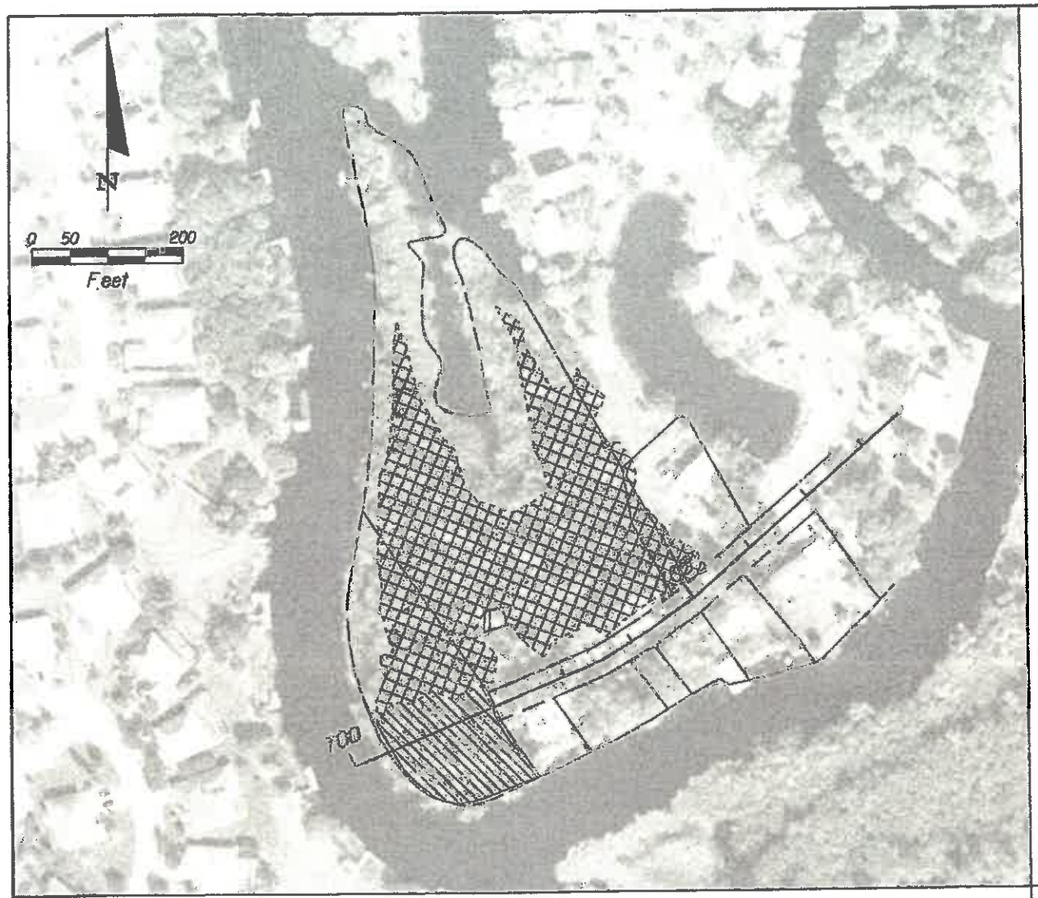
Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

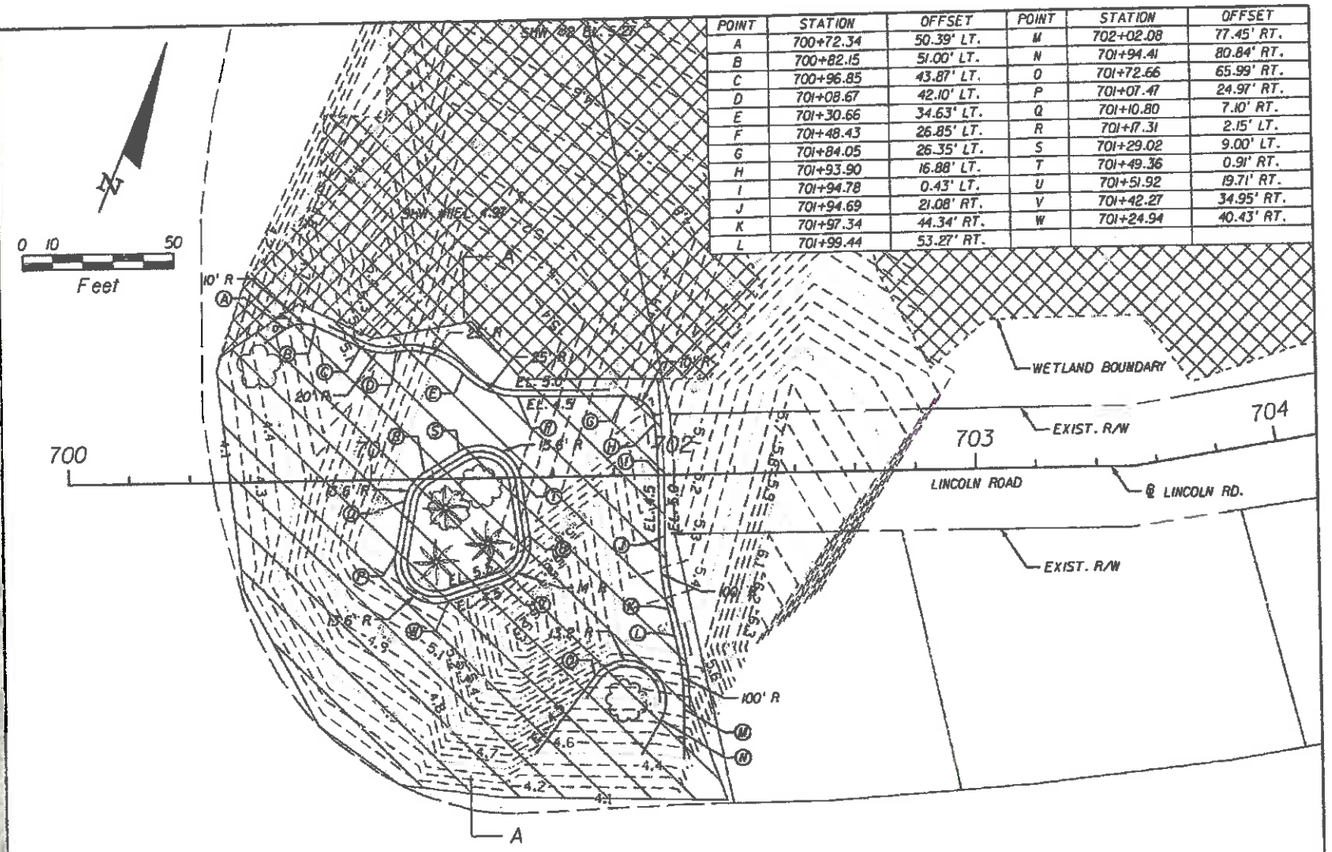
DESIGN ENGINEER DONALD R. HOLCOMB

FL. LICENSE NO. 51970

WETLAND MITIGATION SITE NOTES
WALKER CREWS PRESERVE

SHEET NO. 126





POINT	STATION	OFFSET	POINT	STATION	OFFSET
A	700+72.34	50.39' LT.	M	702+02.08	77.45' RT.
B	700+82.15	51.00' LT.	N	701+94.41	80.84' RT.
C	700+96.85	43.87' LT.	O	701+72.66	65.99' RT.
D	701+08.67	42.10' LT.	P	701+07.47	24.97' RT.
E	701+30.66	34.63' LT.	Q	701+10.80	7.10' RT.
F	701+48.43	26.85' LT.	R	701+17.31	2.15' LT.
G	701+84.05	26.35' LT.	S	701+29.02	9.00' LT.
H	701+93.90	16.88' LT.	T	701+49.36	0.91' RT.
I	701+94.78	0.43' LT.	U	701+51.92	19.71' RT.
J	701+94.69	21.08' RT.	V	701+42.27	34.95' RT.
K	701+97.34	44.34' RT.	W	701+24.94	40.43' RT.
L	701+99.44	53.27' RT.			

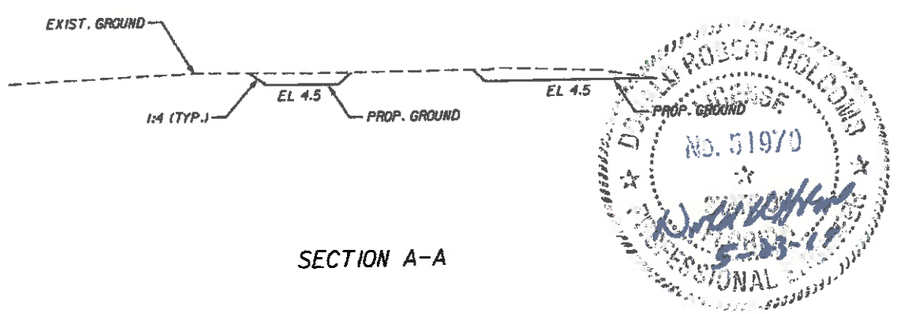
FORESTED ENHANCEMENT AREA (2.47 ACRES)
-REMOVE EXOTICS
-REMOVE / REGRADE SPOIL
-REMOVE DEBRIS / TRASH
-REPLANT BARE ZONES

REGRADED RESTORATION AREA (0.46 ACRES)
-REGRADE DOWN TO EL. 4.5 NGVD

SUPPLEMENTAL PLANTING PLAN						
ZONE	COMMON NAME	SPECIES NAME	ACRES	ELEVATION	SIZE	QUANTITY
LOWER FORESTED INTERIOR ZONES	BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	2.47	4.1-5.3	1-GAL	75
	SWEET BAY	MAGNOLIA VIRGINIANA		4.1-5.3	7-GAL	50
	WATER OAK	QUERCUS NIGRA		4.1-5.3	7-GAL	50
	DAHOON HOLLY	ILEX CASSINE		4.1-5.3	7-GAL	75
HIGHER FORESTED INTERIOR ZONES	SWEETGUM	LIQUIDAMBAR STYRACIFLUA		4.1-5.3	7-GAL	50
	AMERICAN ELM	ULMUS AMERICANA		4.1-5.3	7-GAL	75
	WALTER'S VIBURNUM	VIBURNUM OBOVATUM		4.1-5.3	3-GAL	50
	FLORIDA PRIVET	FORESTIERA SEGREGATA		4.1-5.3	3-GAL	50
BUFFER	LIVE OAK	QUERCUS VIRGINIA	ROAD	4.1-5.3	3-GAL	25
MINIMAL EARTHWORK MAY BE NECESSARY TO REMOVE DEBRIS/RUBBLE AND RESTORE NATURAL ELEVATIONS						500

PLANTING PLAN						
ZONE	COMMON NAME	SPECIES NAME	ACRES	ELEVATION	SIZE	QUANTITY
BRADEN RIVER EDGE	BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	0.46	4.1-5.3	3-GAL	50
	DAHOON HOLLY	ILEX CASSINE		4.1-5.3	7-GAL	50
INTERIOR	SWEET BAY	MAGNOLIA VIRGINIANA		4.1-5.3	7-GAL	50
	WATER OAK	QUERCUS NIGRA		4.1-5.3	7-GAL	50
	AMERICAN ELM	ULMUS AMERICANA		4.1-5.3	7-GAL	50
OUTER PERIMETER	SWEETGUM	LIQUIDAMBAR STYRACIFLUA		4.1-5.3	7-GAL	25
	WALTER'S VIBURNUM	VIBURNUM OBOVATUM		4.1-5.3	3-GAL	25
	FLORIDA PRIVET	FORESTIERA SEGREGATA		4.1-5.3	3-GAL	25
DESIGN ELEVATION (4.6 FT NGVD29) BASED ON BRADEN RIVER (OHW 4.1FT) & WETLAND SHW (5.0 TO 5.2 FT)						325

SUMMARY OF EARTHWORK	
REGULAR EXCAVATION	352 CY
EMBANKMENT	3 CY



SECTION A-A

DONALD ROBERT HOLCOMB
LICENSE
No. 51970
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-23-14

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

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Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE	05/27/14
PROJECT NO.	6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER	DONALD R. HOLCOMB
FL. LICENSE NO.	51970

WETLAND MITIGATION SITE
PLAN SHEET
WALKER CREWS PRESERVE

SHEET NO. 127

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STORM WATER POLLUTION PREVENTION PLAN FOR 44TH AVENUE EAST
COUNTY: MANATEE

I. SITE DESCRIPTION:

(1) THE PROJECT CONSISTS OF NEW CONSTRUCTION OF 44th AVENUE EAST FROM 30th STREET EAST TO 45th STREET EAST IN MANATEE COUNTY, FLORIDA. THE NEW ROADWAY EXTENSION WILL CONSIST OF A 4-LANE DIVIDED URBAN (CURB AND GUTTER) ROADWAY WITH TWO 12-FEET WIDE TRAVEL LANES, 4-FEET WIDE BIKE LANE AND 5-FEET WIDE SIDEWALK IN EACH DIRECTION. THE ROADWAY WILL BE DRAINED BY STORMDRAIN SYSTEM TO WET DETENTION STORMWATER PONDS FOR TREATMENT AND ATTENUATION. THE PROJECT ALSO INCLUDES ADJACENT SITES FOR WETLAND MITIGATION AND INFORMAL FLOODPLAIN VOLUME COMPENSATION.

(2) SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:

(a) THE CONTRACTOR SHALL BE REQUIRED TO PREPARE A SITE SPECIFIC EROSION AND SEDIMENT CONTROL PLAN ALONG WITH A DETAILED CONSTRUCTION SCHEDULE TO INDICATE DATES OF MAJOR GRADING ACTIVITIES AND DETERMINE SEQUENCES OF TEMPORARY AND PERMANENT SOIL DISTURBING ACTIVITIES ON ALL PORTIONS OF THE PROJECT.
(b) THE CONTRACTOR WILL BE REQUIRED TO MODIFY THE PLAN OR MATERIALS TO ADAPT TO SEASONAL VARIATIONS, CONSTRUCTION ACTIVITY VARIATIONS, OR AS DIRECTED BY THE ENGINEER.
(c) APPLICABLE EROSION AND SEDIMENT CONTROL DEVICES AND IMPLEMENTATION PROCEDURES ARE SUPPLIED IN THE FDOT STANDARD INDEXES 100 THROUGH 106 AND THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEW MANUAL (E&SC MANUAL).
(d) THE ENGINEER IS RESPONSIBLE FOR DETERMINING IF ANY MODIFICATIONS OR ADDITIONAL CONTROLS ARE REQUIRED AND TO OBTAIN DEPLOYMENT SCHEDULES FOR THE IMPLEMENTATION OF ALL ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES FROM THE CONTRACTOR.

(3) GENERAL NOTES:
(a) ALL EROSION AND SEDIMENT CONTROL DEVICES FOR EACH PHASE OF WORK ARE TO BE INSTALLED PRIOR TO BEGINNING WORK ON THAT PHASE.
(b) INSTALL EROSION AND SEDIMENT CONTROL DEVICES WHERE LISTED IN THE CONTRACTOR'S APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR PERIMETER CONTROLS BEFORE THE LAND IS DISTURBED.
(c) PROVIDE SEDIMENT BARRIERS WHERE LISTED IN THE CONTRACTOR'S APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR DITCH/SWALE CHECK DAMS DURING CONSTRUCTION.
(d) PROVIDE INLET PROTECTION SYSTEMS AT INLET OPENINGS.
(e) COVER OR STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE.
(f) DO NOT DISTURB AN AREA UNTIL IT IS NECESSARY FOR CONSTRUCTION TO PROCEED.
(g) TIME CONSTRUCTION ACTIVITIES TO LIMIT IMPACT FROM SEASONAL CLIMATE CHANGES OR WEATHER EVENTS.
(h) DO NOT REMOVE PERIMETER CONTROLS UNTIL ALL UPSTREAM AREAS ARE FULLY STABILIZED AND PERMANENT VEGETATION IS ESTABLISHED.

(4) PROJECT AREAS:
THE ESTIMATED TOTAL PROJECT AREA IS 37.74 ACRES. THE ESTIMATED AREA TO BE DISTURBED DURING CONSTRUCTION ACTIVITIES IS 37.74 ACRES.

(5) RUNOFF COEFFICIENTS BEFORE Cw (B), DURING Cw (D) AND AFTER Cw (A) CONSTRUCTION:

RUNOFF COEFFICIENT FOR: GRASSED SHOULDERS ADJACENT TO ROADWAY: C = 0.35
IMPERVIOUS ROADWAYS AND PAVED SHOULDER: C = 0.95
DISTURBED AREAS, EXPOSED SOIL, ETC., DURING CONSTRUCTION: C = 0.67

WEIGHTED RUNOFF COEFFICIENT:
BEFORE: Cw (B) = 0.52 DURING: Cw (D) = VARIES FROM 0.52 TO 0.83 AFTER: Cw (A) = 0.83

THE RUNOFF COEFFICIENT DURING CONSTRUCTION, Cw (D), IS CALCULATED ASSUMING THAT THE MAXIMUM ALLOWABLE AREA OF SOIL IS DISTURBED DURING CONSTRUCTION AND THE REMAINING AMOUNT IS THE EXISTING IMPERVIOUS AND GRASSED SHOULDER AREAS.

(6) DESCRIPTION OF SOIL OR QUALITY OF DISCHARGE:
THE SOIL CHARACTERISTICS ARE TYPICALLY EAU GALLIE SANDS (HSG B/D) WITH SEASONAL HIGH GROUNDWATER (SHWT) DEPTH OF 0 TO 1-FOOT. THE SUGARHOUSE CREEK FLOWWAY EXHIBITS BRADENTON AND WABASSO SANDS (HSG B/D) WITH SEASONAL HIGH GROUNDWATER (SHWT) DEPTH OF 0 TO 1-FOOT

(7) ESTIMATED DRAINAGE AREA AND AVERAGE SLOPE OF DRAINAGE FOR EACH OUTFALL:
(a) DRAINAGE MAPS OR MAPS WITH APPROPRIATE CONTOURS: TO BE INCLUDED WITH THESE SHEETS.

(8)
RECEIVING WATERS:
THE ONSITE RUNOFF FROM 30th STREET TO WEST OF 45th STREET IS CONVEYED THROUGH PROPOSED STORMDRAIN SYSTEMS TO PROPOSED STORMWATER TREATMENT POND EAST-3 AND POND WEST-3R /3L.
POND EAST-3 OUTFALLS TO AN EXISTING BORROW PIT (SELLERS PIT) THAT FLOWS TO SUGARHOUSE CREEK.
POND WEST-3R / 3L OUTFALLS TO AN EXISTING LATERAL DITCH THAT FLOWS TO SUGARHOUSE CREEK.
POND GAP-1 TREATS 45th STREET DRAINAGE VIA AN EXISTING STORMDRAIN SYSTEM TO GAP CREEK.
POND B-1 TREATS THE 44th AVENUE / 45th STREET INTERSECTION DRAINAGE, WITH OUTFALL TO AN EXISTING ROADSIDE DITCH FLOWING TO THE BRADEN RIVER.

(9)
THE PROJECT'S OUTFALLS (SUGARHOUSE CREEK, GAP CREEK AND UNNAMED DITCH TO BRADEN RIVER) ARE NOT 303(d) LISTED, IMPAIRED WATERS FOR PARAMETERS SUCH AS TOTAL SUSPENDED SOLIDS (TSS), TURBIDITY, NUTRIENTS, DISSOLVED OXYGEN, FECAL COLIFORM, ETC.
(10)
OUTFALL LOCATIONS: (TEMPORARY AND PERMANENT)
(a) POND WEST-3L OUTFALL: LAT. 27°27'44" N LONG. 82°30'37" W
(b) POND EAST-2 OUTFALL: LAT. 27°13'51" N LONG. 82°30'51" W
(c) POND GAP-1 OUTFALL: LAT. 27°27'40" N LONG. 82°30'24" W
(d) POND B-1 OUTFALL: LAT. 27°27'43" N LONG. 82°30'13" W
(e) FMS EAST-2 OUTFALL: LAT. 27°27'51" N LONG. 82°30'52" W

(11)
WETLAND AND/OR SURFACE WATER IMPACTS ARE LIMITED TO THE AREAS DESCRIBED IN THE APPROVED PERMITS FOR THE PROJECT.

(12)
DESCRIPTION OF STORMWATER MANAGEMENT: (EXISTING/PROPOSED)
(a)
PRESENTLY, EXISTING DRAINAGE RUNOFF FROM 30th STREET TO 37th STREET TYPICALLY FLOWS FROM WEST TO EAST VIA DITCHES AND OVERLAND SHEET FLOW TO SUGARHOUSE CREEK FLOW WAY. RUNOFF FROM 37th STREET TO 45th STREET SHEET FLOWS TO AN EXISTING BORROW PIT (SELLERS PIT) AND OUTFALLS TO SUGARHOUSE CREEK. THE PONDS WILL DISCHARGE TO THE SAME WATER COURSES AS THE EXISTING DRAINAGE PATTERNS. THE OFFSITE FLOW WILL BE MAINTAINED.
(b)
OFF-SITE RUNOFF SHOULD BE DIVERTED AWAY OR THROUGH THE CONSTRUCTION AREA, IF POSSIBLE. THIS ADDITIONAL FLOW, IF NOT DIVERTED, CAN ADD VOLUME AND SIZE TO STRUCTURAL PRACTICES, REQUIRING MORE FREQUENT MAINTENANCE AND LIMITING EFFECTIVENESS OF EROSION AND SEDIMENT CONTROLS.
(c)
THE CONTRACTOR WILL PROVIDE POLLUTION CONTROL BY IMPLEMENTING DUST CONTROL DURING ALL PHASES OF CONSTRUCTION. SEDIMENT CONTROL WILL BE ACCOMPLISHED BY USING STREET OR VACUUM SWEEPERS.
(d)
STORMWATER RUNOFF SHALL BE CONVEYED TO EITHER TEMPORARY SEDIMENT BASINS, CONTAINMENT SYSTEMS AND/OR TO PERMANENT STORMWATER MANAGEMENT FACILITIES (TREATMENT AND ATTENUATION PONDS). THE PROPOSED SEDIMENT BASINS, CONTAINMENT SYSTEMS AND/OR STORMWATER MANAGEMENT FACILITIES SHALL BE CONSTRUCTED DURING THE INITIAL PHASE OF CONSTRUCTION AND USED DURING CONSTRUCTION OF THE ROADWAY. THE OUTFALL STRUCTURES ARE TO BE PLUGGED WHEN TEMPORARY SEDIMENT BASINS, CONTAINMENT SYSTEMS OR PERMANENT STORMWATER MANAGEMENT FACILITIES ARE USED FOR EROSION AND SEDIMENT CONTROL.

(e)
THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT UNAUTHORIZED MATERIALS FROM ENTERING WETLANDS, WATERWAYS, OTHER SURFACE WATERS OR WATERS OF THE U.S.

II. CONTROLS:
SEDIMENT AND EROSION CONTROLS

THE CONTRACTOR SHALL PROVIDE SEDIMENT AND EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPS) IN ACCORDANCE WITH THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL.
(1)
WATER QUALITY MONITORING:
(a)
WATER QUALITY MONITORING SHALL BE CONDUCTED IN ACCORDANCE WITH THE SPECIAL CONDITIONS OF ANY ENVIRONMENTAL PERMIT OR BY THE CONTRACTOR UPON THE OBSERVATION THAT WATER QUALITY STANDARDS MAY BE VIOLATED BY THE CONTRACTOR'S ACTIVITIES. MONITORING LOCATIONS MAY BE SPECIFIED IN THE ENVIRONMENTAL PERMIT OR MAY BE DESIGNATED BY THE CONTRACTOR AND APPROVED BY THE PROJECT ADMINISTRATOR.
(b)
THE PROJECT ADMINISTRATOR WILL BE RESPONSIBLE FOR MONITORING ANY ACTIVITIES FOR VIOLATION OF WATER QUALITY STANDARDS AS THEY RELATE TO TURBIDITY (29 NTU'S ABOVE BACKGROUND OR 1 NTU ABOVE BACKGROUND FOR DIRECT DISCHARGES TO OFW'S).
(c)
IF WATER QUALITY STANDARDS ARE VIOLATED, CONSTRUCTION SHALL BE STOPPED IMMEDIATELY, THE ENVIRONMENTAL PERMIT CONDITIONS FOLLOWED AND EROSION AND SEDIMENT CONTROL DEVICES RE-EVALUATED AND APPROVED BY THE ENGINEER PRIOR TO ANY CONTINUATION OF ACTIVITY. MONITORING ACTIVITIES AND TURBIDITY READINGS SHALL BE RECORDED ON THE CONSTRUCTION INSPECTION REPORT AND CONTINUED UNTIL TURBIDITY READINGS FALL BELOW AN ACCEPTABLE LEVEL (29 NTU'S ABOVE BACKGROUND OR 1 NTU ABOVE BACKGROUND FOR DIRECT DISCHARGES TO OFW'S).
(d)
WATER QUALITY MONITORING MAY BE CONDUCTED DURING ANY PHASE OF CONSTRUCTION AS DIRECTED BY THE ENGINEER.
(2) STABILIZATION PRACTICES:
(a)
STABILIZATION MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO MAINTAINING, ESTABLISHING AND USING VEGETATION, APPLYING MULCHES, SODDING, SEEDING, BMP'S AND THE USE OF ROLLED EROSION CONTROLLED PRODUCTS. WHEN CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, SIDE SLOPES SHALL BE STABILIZED WITH PERFORMANCE SODDING OR SEEDING OR ANY OTHER APPROVED METHOD OF STABILIZATION INCLUDED IN THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEW MANUAL (E&SC MANUAL).

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

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FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN NOTES

SHEET NO.: 128

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(b) STABILIZATION SHALL TAKE PLACE AS SOON AS PRACTICAL IN PORTIONS OF THE PROJECT WHERE CONSTRUCTION ACTIVITIES HAVE CEASED, BUT NO LATER THAN 7 DAYS AFTER ANY CONSTRUCTION ACTIVITY CEASES EITHER TEMPORARILY OR PERMANENTLY.
(c) ALL EROSION CONTROL DEVICES SHALL BE INSTALLED ACCORDING TO THE CONTRACT DOCUMENTS, AND THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN.
(d) ANY TEMPORARY MATERIAL USED FOR POLLUTION OR EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT AND FINAL STABILIZATION OF THE PROJECT HAS BEEN ACHIEVED.
(e) SEDIMENT BARRIERS SHOULD BE USED ALONG THE LENGTH OF THE PROJECT WHERE THE GROUND SLOPES AWAY FROM THE RIGHT OF WAY OR WHERE THERE IS POTENTIAL FOR SEDIMENT TO BE DIRECTED OFF-SITE. PARTICULAR CARE SHOULD BE USED WHEN THERE ARE WETLANDS OR WATERS OF THE U.S. ARE INVOLVED. SEDIMENT BARRIERS SHOULD BE USED AROUND THE PERIMETER OF STOCKPILE AREAS.
(f) SPACING OF SEDIMENT BARRIERS USED AS DITCH OR SWALE CHECKS/DAMS SHOULD BE BASED UPON THE HEIGHT OF THE BARRIER AND THE SLOPE OF THE DITCH OR SWALE.
(g) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING SOIL TRACKING PREVENTION SYSTEMS OR PROCEDURES AS NEEDED.

(3) STRUCTURAL PRACTICES FOR EROSION AND SEDIMENT CONTROL:

(a) ROLLED EROSION CONTROL PRODUCTS (ARTIFICIAL COVERINGS)

PURPOSE: TO PROTECT DISTURBED SLOPE SURFACES AGAINST EROSION DUE TO RAINFALL OR FLOWING WATER.

(1) USED FOR PAUSES IN CONSTRUCTION DUE TO INCLEMENT WEATHER OR OTHER CIRCUMSTANCES. COULD INCLUDE NATURAL OR SYNTHETIC FIBER MATS, PLASTIC SHEETING OR NETS.
(2) USED FOR EROSION CONTROL THAT FACILITATES PLANT GROWTH WHILE PERMANENT GRASS IS ESTABLISHED. COULD INCLUDE BIODEGRADABLE EROSION CONTROL BLANKETS INSTALLED ON A SEEDED AREA, ON FILL SLOPES OR IN DITCHES.
(3) USED TO STABILIZE DRAINAGE CHANNELS. CONSULT E&SC MANUAL TO DETERMINE CORRECT PRODUCT TYPE FOR CHANNEL STABILIZATION.

(b) RUNOFF CONTROL STRUCTURE (TEMPORARY SLOPE DRAIN)

PURPOSE: TO PROTECT HILLSIDE SURFACES AGAINST EROSION DUE TO CONCENTRATED FLOW OF RUNOFF WATER.

(1) USED ON FILL SLOPES AND CUT SLOPES TO REDUCE SEDIMENT TRANSPORT AND COULD INCLUDE TEMPORARY SLOPE DRAINS, GRASS-LINED CHANNELS, ROCK-LINED CHANNELS AND CHECK DAMS.
(2) RUNOFF CONTROL STRUCTURES TYPICALLY DISCHARGE TO A SEDIMENT BASIN.

(c) SEDIMENT BASIN (CONTAINMENT SYSTEM)

PURPOSE: A CONTAINMENT SYSTEM IS DESIGNED TO DETAIN AN ADEQUATE VOLUME OF RUNOFF, REDUCE THE VELOCITY OF FLOW THROUGH THE SYSTEM, ALLOW FOR SETTLEMENT OF SUSPENDED SOLIDS AND REGULATE THE DISCHARGE RATE FROM THE SEDIMENT BASIN.

(1) SEDIMENT BASINS MUST BE PLACED IN STRATEGIC LOCATIONS WITHIN THE ACTIVE AREAS OF CONSTRUCTION. CONTRIBUTING AREA AND SIZE OF TARGET SOIL PARTICLE WILL DICTATE WHETHER THE SEDIMENT BASIN WILL BE TYPE I, TYPE 2 OR TYPE 3 SYSTEM.
(2) THE USE OF SMALLER PRE-SEDIMENTATION BASINS USED IN CONJUNCTION WITH LARGER PERMANENT RETENTION/DETENTION PONDS ARE EFFECTIVE IN CAPTURING LARGER VOLUMES OF SEDIMENTS. THIS TECHNIQUE REQUIRES PERIODICALLY SCHEDULED REMOVAL OF THE ACCUMULATED SEDIMENTS.

(d) SEDIMENT BARRIERS (TEMPORARY CONSTRUCTION SITE BMP'S)

PURPOSE: SEDIMENT BARRIERS EITHER OBSTRUCT FLOW OR PREVENT THE PASSAGE OF WATER WHILE CONSTRUCTION ACTIVITIES OCCUR. SMALLER SEDIMENT BARRIERS MAY FUNCTION AS A SMALL SEDIMENT CONTAINMENT SYSTEM OR AS A METHOD TO REDUCE FLOW VELOCITY.

(1) THESE CONSTUCTION BMP'S CAN INCLUDE SEDIMENT BARRIERS, SYNTHETIC BALES, STAKED SILT FENCE, TURBIDITY BARRIER, STORM SEWER INLET PROTECTION, ROCK BAGS, AND GEOSYNTHETIC BARRIERS, SUCH AS "GUTTER BUDDY" OR GUTTER GATOR" SEDIMENT CONTIANMENT SYSTEMS.
(2) APPROPRIATE LOCATIONS INCLUDE SITE PERIMETER, BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION, BELOW THE TOE OF EXPOSED AND ERODIBLE SLOPES, ALONG THE TOE OF STREAM AND CHANNEL BANKS, AROUND DRAINS AND INLETS LOCATED IN LOWPOINTS OR THE DOWNSTREAM EDGE OF AREAS UNDERGOING VERTICAL OR BOX CULVERT CONSTRUCTION ACTIVITIES.
(3) INAPPROPRIATE LOCATIONS FOR THESE SAME MEASURES INCLUDE PARALLEL TO A HILLSIDE CONTOUR, IN CHANNELS WITH CONCENTRATED FLOW (UNLESS PROPERLY REINFORCED), UPSTREAM OR DOWNSTREAM OF CULVERTS WITH CONCENTRATED FLOW, IN FRONT OF OR AROUND INLETS ON A GRADE WITH CONCENTRATED FLOW OR IN FLOWING STREAMS.

(e) FLOATING TURBIDITY BARRIER

PURPOSE: USED IN PERMANENT BODIES OF WATER TO RETAIN SEDIMENT AND FLOATING DEBRIS FROM A CONSTRUCTION AREA SO THAT REMOVAL OR CONTAINMENT OF THE MATERIAL IS POSSIBLE. THEY ARE ALSO USED TO CONTROL MIGRATION OF SUSPENDED SEDIMENTS.

(1) TYPE I, LIGHT DUTY, IS USED WHERE THERE IS LITTLE OR NO CURRENT, NO WIND AND NO WAVE ACTION.
(2) TYPE II, MODERATE DUTY, IS USED WITH SOME CURRENT (<3.5 FT. PER SECOND) AND SOME EXPOSURE TO WIND.
(3) TYPE III, HEAVY DUTY, IS USED WITH GREATER CURRENT (3.5-5.0 FT. PER SECOND), MODERATE WIND AND WAVE ACTION.
(4) BARRIER MUST BE ATTACHED AT BOTH ENDS AND WEIGHTED ON THE BOTTOM.
(5) MULTIPLE LINES OF BARRIER MAY BE USED IN SOME CIRCUMSTANCES FOR ADDITIONAL PROTECTION.
(6) STANDARD PANELS FOR WATER DEPTHS ARE 5.0'. ADDITIONAL PANELS CAN BE USED FOR WATER DEPTHS > 5.0'.

(f) STAKED TURBIDITY BARRIER

PURPOSE: THIS ITEM IS COMMONLY USED IN AREAS WHERE CONTINUOUS CONSTRUCTION ACTIVITIES CHANGE THE NATURAL CONTOURS AND DRAINAGE RUNOFF PATTERNS.

(1) COMMONLY USED IN LAKES AND STREAMS AS A SEDIMENT CONTAINMENT SYSTEM. SHOULD NOT BE USED WHERE WATER CURRENTS MOVE THE CURTAIN AND DISLODGE COLLECTED SEDIMENTS.
(2) MAXIMUM DEPTH OF PANEL IS 3'-8''.
(3) POST MUST BE A MINIMUM LENGTH OF 5.0' AND A MINIMUM OF 10" OF FABRIC MUST BE IMBEDDED IN THE GROUND.

(g) INLET PROTECTION SYSTEM

PURPOSE: ANY OF A NUMBER OF SEDIMENT BARRIERS THAT EITHER PREVENT SEDIMENT FROM ENTERING AN INLET OR TRAP THE SEDIMENTS ONCE THEY ENTER THE INLET.

(1) TYPICAL APPLICATIONS INCLUDE ROCK BAGS, FRAME AND FILTER BARRIERS, CURB INLET "SUMP" BARRIER, CURB INLET DIVERSION BERM, CURB AND GUTTER SEDIMENT CONTAINMENT SYSTEM OR CURB INLET INSET, SUCH AS "GUTTER BUDDY" OR "GUTTER GATOR" SEDIMENT CONTAINMENT SYSTEM.
(2) SHOULD BE INSTALLED ONLY WHEN CONSTRUCTION ACTIVITIES ARE ON-GOING AND ONLY WHERE SUMP CONDITIONS EXIST.
(3) SHOULD NOT BE USED WHEN CONSTRUCTION IS COMPLETE AND SHOULD NOT BE USED IN AREAS WHERE FLOODING COULD ENCROACH INTO THE TRAVEL LANES.

(h) SOIL TRACKING PREVENTION DEVICE

PURPOSE: TEMPORARY STRUCTURES TO ASSIST WITH THE REMOVAL OF SOIL MATERIAL CAPTURED ON VEHICLE TIRES BEFORE THE VEHICLES ENTER THE ROADWAY.

(1) USE ONE DEVICE PER MILE WITH A MINIMUM OF TWO PER PROJECT.
(2) USE ADDITIONAL DEVICES FOR CONSRUCTION AREAS THAT ARE NOT ADJACENT TO THE ROAD RIGHT OF WAY AND NO ACCESS IS PROVIDED THROUGH A SOIL TRACKING PREVENTION DEVICE.
(3) RRR PROJECTS SHOULD BE HANDLED ON A CASE BY CASE BASIS.

(4) CHEMICAL TREATMENTS FOR EROSION AND SEDIMENT CONTROL:

(a) CHEMICAL TREATMENT - POLYACRYLAMIDES (PAM AND PAM BLENDS)

PURPOSE: REDUCE SOIL EROSION THROUGH SOIL BINDING, USED AS A WATER TREATMENT ADDITIVE TO REMOVE SUSPENDED SOLIDS FROM RUNOFF, PROVIDES APPROPRIATE MEDIUM FOR GROWTH OF VEGETATION FOR STABILIZATION AND INCREASES INFILTRATION BY INCREASING SIZE OF SOIL PARTICLE.

(1) CAN BE USED ON DISTURBED SOILS. CAN BE USED IN CONJUNCTION WITH OTHER BMP'S TO ENHANCE PERFORMANCE. CAN BE APPLIED IN DISSOLVED FORM WITH WATER, CAN BE USED AS A DRY POWDER, CAN BE USED IN GRANULAR FORM OR MAY BE USED IN THE FORM OF LOG LOGS.
(2) HIGHER CONCENTRATIONS OF PAM'S DON'T INCREASE THE EFFECTIVENESS OF THE PRODUCT.
(3) ACTIVELY WORKED AREAS WILL REQUIRE REAPPLICATION TO REMAIN EFFECTIVE.
(4) PAM SHOULD NOT BE USED WHERE THE IS A POTENTIAL FOR EQUIPMENT CLOGGING OR TOXICITY IS A CONCERN.

CARLOS LOPEZ-PANIAGUA LICENSE No. #1084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

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DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN NOTES

SHEET NO.: 129

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(b) CHEMICAL TREATMENT - ALUM

PURPOSE: REMOVE SUSPENDED SOLIDS AND POLLUTANTS BY ENMESHMENT AND ABSORPTION INTO ALUM. COLLECT FLOCS OF SUSPENDED SEDIMENTS IN RUNOFF AND STORE THEM IN SEDIMENT BASINS OR STORMWATER MANAGEMENT FACILITIES.

(1) ALUM IS INJECTED INTO THE FLOW STREAM CONTAINING TURBID WATER. INJECTION IS CONTROLLED BY VARIABLE SPEED CHEMICAL PUMP TO FEED ALUM AT MULTIPLE TREATMENT POINTS. ALUM TREATMENT IS EFFECTIVE IN TREATMENT OF RUNOFF THAT CONTAINS LIMEROCK FROM UNPAVED SURFACES.
(2) ALUM TREATMENT REQUIRES CLOSE MONITORING OF DOSAGE. COMBINATION WITH OTHER COMPOUNDS MAY VIOLATE TOXICITY REQUIREMENTS AND THE USE OF ALUM MAY LOWER Ph LEVELS.
NOTE: THIS PAY ITEM IS CONSIDERED A CONTRACTOR'S OPTION FOR SEDIMENT CONTROL ISSUES THAT ARE PROJECT/SITE SPECIFIC. NOT TO BE USED IN THE DESIGN PROCESS WITHOUT CONTACTING LARRY RITCHIE IN THE STATE CONSTRUCTION OFFICE.

(5) DEWATERING OPERATIONS (OPTIONAL - BASED ON PROJECT APPLICABILITY):

DESCRIPTION: DEWATERING OPERATIONS ARE PRACTICES THAT MANAGE THE DISCHARGE OF TURBID WATER WHEN WATERS OTHER THAN STORMWATER AND ACCUMULATED SURFACE WATERS MUST BE REMOVED FROM A LOCATION SO THAT CONSTRUCTION WORK MAY BE ACCOMPLISHED. THESE WATERS CAN INCLUDE GROUNDWATER, WATER FROM COFFERDAMS, WATER DIVERSIONS AND WATERS USED DURING CONSTRUCTION THAT MUST BE REMOVED FROM A WORK AREA.

(a) ENVORONMENTAL AGENCIES ARE ESPECIALLY CONCERNED WITH THE PROTECTION OF WETLANDS FROM DRAWDOWN EFFECTS, PROTECTING RECEIVING BODIES FROM SEDIMENTATION AND POSSIBLE CAPACITY LIMITATIONS.
(b) THREE PRIMARY METHODS OF DEWATERING COMMONLY USED IN FLORIDA ARE RIM-DITCHING, SOCK/PIPE/HORIZONTAL WELLS AND WELL-POINT SYSTEMS.
(c) METHODS FOR CONTAINING SEDIMENTATION CAN INCLUDE A COMBINATION OF BMP'S AND SEDIMENT TRAPS, SEDIMENT BASINS, GRAVITY BAG FILTERS, WEIR TANKS, DEWATERING TANKS, SAND MEDIA/PRESSURIZED BAGS AND CHEMICAL TREATMENTS.

(6) COASTAL OPERATIONS (OPTIONAL - BASED UPON PROJECT LOCATION):

DESCRIPTION: CONSTRUCTION SITES IN COASTAL AREAS PRESENT UNIQUE CHALLENGES DUE TO HIGHER WIND SPEEDS, SALINE LADEN AIR MOISTURE AND WAVE ACTION THAT REQUIRE USING APPROPRIATE EROSION CONTROL TECHNIQUES THAT CAN WITHSTAND THESE ELEMENTS.

(a) PARTICULAR CONCERNS DURING THE DEVELOPMENT OF EROSION CONTROL PLANS IN COASTAL OPERATIONS CAN INCLUDE THE RESISTANCE OF EROSION CONTROL MATERIALS TO SALT WATER, HIGH WATER TABLES, SOIL COMPACTION AND SITE DEVELOPMENT DUE TO THE TYPICAL SANDY SOILS LOCATED IN THESE AREAS AND SOIL STABILIZING VEGETATION MUST BE SALT TOLERANT.
(b) HIGH ENERGY ENVIRONMENT SHOULD BE CONSIDERED WHEN SELECTING EROSION CONTROL DEVICES. FREQUENT MAINTENANCE IS NORMALLY REQUIRED FOR EROSION CONTROL DEVICES AND TIDAL FLUCTUATIONS MUST BE CONSIDERED WHEN SELECTING THE METHODS OF EROSION CONTROL.
(c) TEMPORARY CONTROL TECHNOLOGIES FOR THE COASTAL ENVIRONMENT COULD INCLUDE THE USE OF COMPOST/WOOD MULCHING, HYDRAULIC MULCHING, SOIL BINDERS AND TEMPORARY HYDROSEEDING.
(d) PERMANENT CONTROLS COULD INCLUDE THE USE OF POLYMER-ENHANCED ARMORING, PRESERVING EXISTING VEGETATION WHEN POSSIBLE, ESTABLISHING PERMANENT SALT-TOLERANT VEGETATION, CONSTRUCTION SITE BARRIERS (SHEET PILES/CONCRETE WALLS/EARTHERN BERMS), NATURAL /SYNTHETIC GEOTEXTILES, MATS, OR GEOGRIDS.

III. OTHER CONTROLS:
(1) WASTE DISPOSAL:
(a) THE CONTRACTOR WILL PROVIDE LITTER CONTROL AND COLLECTION WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION ACTIVITIES.
(b) ALL FERTILIZER AND CHEMICAL CONTAINERS SHALL BE DISPOSED OF BY THE CONTRACTOR ACCORDING TO EPA'S STANDARD PRACTICES AS DETAILED BY THE MANUFACTURER.
(c) NO SOLID MATERIALS, INCLUDING BUILDING AND CONSTRUCTION MATERIALS, SHALL BE DISCHARGED TO WETLANDS OR BURIED ON SITE.
(d) ALL SANITARY WASTE WILL BE COLLECTED FROM PORTABLE UNITS BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE REGULATIONS.

(2) OFF-SITE VEHICLE TRACKING - WILL BE CONTROLLED BY THE FOLLOWING METHODS:
(a) LOADED HAUL TRUCKS ARE TO BE COVERED BY A TARPAULIN AT ALL TIMES.
(b) EXCESS DIRT ON ROAD WILL BE REMOVED DAILY.

(3) STATE AND FEDERAL REGULATIONS: PERMITS WILL BE REQUIRED FROM THE FOLLOWING AGENCIES:

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT ERP NO. (PENDING)
U.S. ARMY CORPS OF ENGINEERS PERMIT NO. (PENDING)

(4) NON-STORMWATER (INCLUDING SPILL REPORTING):
THE CONTRACTOR WILL PROVIDE MANATEE COUNTY WITH AN EROSION AND SEDIMENT CONTROL PLAN THAT WILL INCLUDE SPILL CONTAINMENT, REPORTING, AND RESPONSES. THE PLAN SHALL SPECIFY WHAT MANAGEMENT PRACTICES AND CONTAINMENT METHODS WILL BE USED TO PREVENT POTENTIAL POLLUTANTS (FUEL, LUBRICANTS, HERBICIDES, ETC.) FROM SPILLING ONTO THE SOIL OR INTO THE SURFACE WATERS. IF A SPILL DOES OCCUR, OR IF CONTAMINATED SOIL OR GROUNDWATER IS ENCOUNTERED, CONTACT SIA MOLLANAZAR, MANATEE COUNTY PUBLIC WORKS AT (941) 708-7487.

IV. MAINTENANCE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIRS OF ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVAL OF EROSION AND SEDIMENT CONTROL DEVICES WHEN NOTICE OF TERMINATION IS MAILED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND PROPER DISPOSAL OF SEDIMENT BUILDUP THROUGH THE LIFE OF THE INSTALLED EROSION AND SEDIMENT CONTROL DEVICES.

(1) ALL CONTROL MEASURES WILL BE MAINTAINED DAILY BY THE CONTRACTOR AND ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF NOTICE.
(2) SODDING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
(3) SYNTHETIC BALES SHALL BE MAINTAINED TO ENSURE THEIR USEFULNESS AND NOT BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE.
(4) STAKED SILT FENCES SHALL BE REPLACED EVERY TWELVE (12) MONTHS OR WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE.
(5) STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED TO PREVENT CLOGGING OF ROCK BEDDING WHICH MAY IMPEDE THE USEFULNESS OF THE STRUCTURE.

V. INSPECTION:

(1) THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAUGES ON THE PROJECT SITE AND RECORD WEEKLY RAINFALL IN ACCORDANCE WITH THE NPDES PERMIT.
(2) ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSPECTED DAILY BY CONTRACTOR'S PERSONNEL WHO ARE F.D.E.P. CERTIFIED STORMWATER MANAGEMENT INSPECTORS.
(3) THE CONTRACTOR SHALL COMPLETE ALL SWPPP INSPECTION REPORT FORMS REQUIRED FOR THE NPDES PERMIT.

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN NOTES

SHEET NO.: 130

VI. WATER QUALITY MONITORING:

(1) MONITORING FOR TURBIDITY AS MEASURED IN NEPHELOMETRIC TURBIDITY UNITS (NTUs) SHALL BE CONDUCTED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SAMPLING WILL COMMENCE 24 HOURS BEFORE INITIATION OF CONSTRUCTION ACTIVITIES AND WILL BE CONDUCTED ACCORDING TO THE APPROVED WATER QUALITY MONITORING PLAN AS SUBMITTED BY THE CONTRACTOR. SEE THE SWFWMD ERP FOR WATER QUALITY MONITORING SITE LOCATIONS.

(A.) A MINIMUM OF SEVEN (7) WATER QUALITY MONITORING SITES AND FOUR (4) BACKGROUND CHECK SITES WILL BE ESTABLISHED AS SHOWN IN THE PERMIT.

(B.) THE BACKGROUND SITES WILL BE MARKED BY TEMPORARY BUOYS AND SHALL BE MAINTAINED FOR THE DURATION OF THE SAMPLING PROGRAM. THESE SITES CANNOT BE CHANGED WITHOUT SPECIFIC WRITTEN AUTHORIZATION FROM THE SWFWMD SARASOTA REGULATION DEPARTMENT.

(2) THE FOLLOWING INFORMATION MUST BE RECORDED FOR EACH SAMPLE TAKEN IN A MONITORING REPORT:

(A.) SITE NUMBER;
(B.) DATES AND TIME OF DAY WHEN SAMPLE WAS COLLECTED;
(C.) TOTAL DEPTH AND SAMPLE DEPTH;
(D.) ANTECEDENT WEATHER CONDITIONS, INCLUDING WIND DIRECTION AND VELOCITY; AND,
(E.) TIDAL STAGE AND/OR FLOW DIRECTION.

(3) IN ADDITION TO THE ABOVE MENTIONED, EACH MONITORING REPORT MUST INCLUDE THE FOLLOWING:

(A.) A STATEMENT OF METHODOLOGY INCLUDING TYPES OF SAMPLING EQUIPMENT AND ANALYTICAL INSTRUMENTATION, PRESERVATION, AND HANDLING;
(B.) PERMIT NUMBER;
(C.) A MAP INDICATING NUMBERED LOCATIONS OF ALL SAMPLING SITES;
(D.) COPIES OF THE QUALITY ASSURANCE/QUALITY CONTROL LOG; AND,
(E.) A STATEMENT BY THE QUALITY CONTROL OFFICER AS TO THE AUTHENTICITY OF THE DATA.

(4) ALL TURBIDITY MONITORING REPORTS SHALL BE SUBMITTED TO THE SARASOTA REGULATION DEPARTMENT OF THE DISTRICT, ATTENTION ENVIRONMENTAL MANAGER WITHIN SEVEN DAYS OF SAMPLE COLLECTION. ALL CORRESPONDENCE SHOULD INCLUDE THE PERMITTEE NAME AND PERMIT NUMBER. FAILURE TO SUBMIT REPORTS IN A TIMELY MANNER CONSTITUTES A VIOLATION OF THE PERMIT AND MAY BE GROUNDS FOR REVOCATION.

(5) THE FOLLOWING QA/QC PROTOCOL IS REQUIRED FOR EACH SAMPLE COLLECTED:

(A.) ALL TURBIDITY ANALYSIS SHALL BE PERFORMED ON INSTRUMENTS THAT CAN PERFORM NEPHELOMETRIC MEASUREMENTS;
(B.) THE INSTRUMENT MUST BE CALIBRATED EACH MORNING AND EACH TIME THE INSTRUMENT IS TURNED ON, AND RECALIBRATED EVERY FOUR HOURS THEREAFTER;
(C.) CALIBRATIONS MUST BE PERFORMED AGAINST A BLANK SAMPLE, AND AT LEAST ONE FORMALIN OR GEL-TYPE STANDARD. THE STANDARD VALUE SHOULD BE IN THE SAME RANGE AS THE SAMPLE READINGS.
(D.) ALL CALIBRATION PROCEDURES MUST BE RECORDED IN A PERMANENT LOG BOOK, AND COPIES MUST BE SUBMITTED WITH THE DATA; AND,
(E.) DATE AND TIME OF COLLECTION, DATE AND TIME OF ANALYSES, WARM-UP TIME, AND THE NAME OF THE ANALYST MUST BE INCLUDED IN THE LOG.

(6) IF 29 NTUs EXCEED BACKGROUND AMBIENT WATER QUALITY, ALL CONSTRUCTION ACTIVITIES SHALL IMMEDIATELY CEASE. ANY VIOLATIONS SHALL BE IMMEDIATELY REPORTED TO THE DISTRICT AT (941) 377-3722. THE VIOLATION REPORT SHALL INCLUDE THE DESCRIPTION OF THE CORRECTIVE ACTIONS BEING TAKEN OR PROPOSED TO BE TAKEN. IF VIOLATIONS ARE NOTED AFTER NORMAL BUSINESS HOURS, ON HOLIDAYS OR ON WEEKENDS, THE REPORT SHALL BE MADE TO THE DISTRICT AS SOON AS NORMAL BUSINESS HOURS RESUME. A COPY OF ALL MONITORING DATA SHEETS, WHICH INDICATE VIOLATIONS, SHALL BE FORWARDED IMMEDIATELY TO THE SARASOTA REGULATION DEPARTMENT OF THE DISTRICT, ATTENTION ENVIRONMENTAL MANAGER AND INCLUDE A COPY TO (SWFWMD) MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS, INFRASTRUCTURE ENGINEERING DIVISION: ATTN. SIA MOLLANAZAR (941) 708-7487.

(7) WHEN A TURBIDITY VIOLATION IS FOUND, CONSTRUCTION OPERATIONS MAY NOT RESUME UNTIL A COMPLIANCE INSPECTION BY DISTRICT PERSONNEL HAS BEEN CONDUCTED AND A SET OF SAMPLES HAS BEEN TAKEN WHICH DEMONSTRATES THAT WATER QUALITY STANDARDS DESIGNATED ABOVE ARE NO LONGER EXCEEDED. INTERIM SAMPLES TAKEN FOLLOWING THE VIOLATION SHALL BE TAKEN IN THE SAME MANNER AS THE ROUTINE MONITORING AND THE SAME LOCATIONS. IF SAMPLES DEMONSTRATE THE WATER QUALITY STANDARDS SPECIFIED ABOVE FOR TURBIDITY ARE STILL BEING VIOLATED, SAMPLING SHALL CONTINUE AT TWO-HOUR INTERVALS UNTIL THE INTERIM SAMPLES DEMONSTRATE THAT NO VIOLATION IS OCCURRING.

(8) FAILURE TO REPORT VIOLATIONS OR TO FOLLOW CORRECT PROCEDURES BEFORE RESUMING WORK WILL CONSTITUTE GROUNDS FOR REVOCATION OF THE DISTRICT PERMIT AND MAY ALSO RENDER THE PERMITTEE SUBJECT TO ENFORCEMENT ACTION.

VII. TRACKING AND REPORTING:

(1) THE CONTRACTOR SHALL SUBMIT A WEEKLY REPORT TO THE COUNTY DOCUMENTING THE DAILY INSPECTIONS AND MAINTENANCE OR REPAIRS TO THE EROSION AND SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL MAINTAIN ALL REQUIRED REPORTS AND COMPLETE ALL SWPPP INSPECTION FORMS.

(2) PREPARATION OF ALL THE CONTRACTOR'S REPORTS OF INSPECTION, MAINTENANCE AND REPAIRS REQUIRED FOR THE CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION, SHALL BE INCLUDED IN THE INDIVIDUAL COSTS OF THE EROSION AND SEDIMENT CONTROL DEVICES OF THE PROJECT.

(3) THE CONTRACTOR SHALL USE THE FDOT'S STANDARD SWPPP CONSTRUCTION INSPECTION REPORT FORM # 650-040-03, FOR DAILY INSPECTIONS.

JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
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CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
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DATE: 05/27/14
PROJECT NO.: 6071160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN NOTES

SHEET NO.: 131

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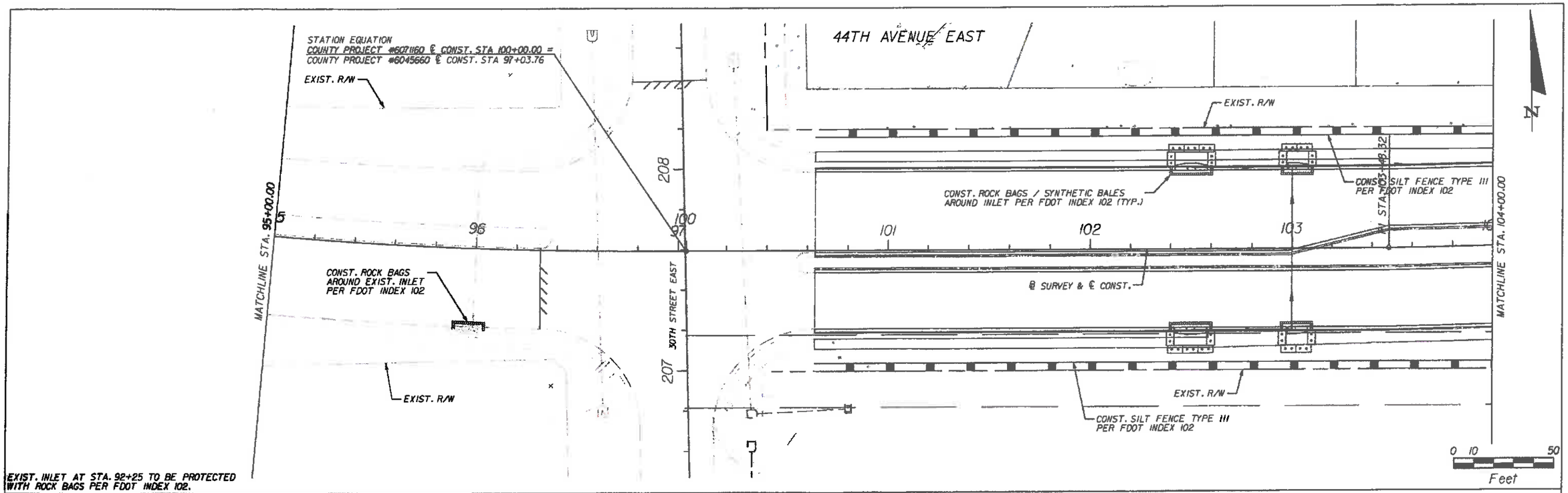
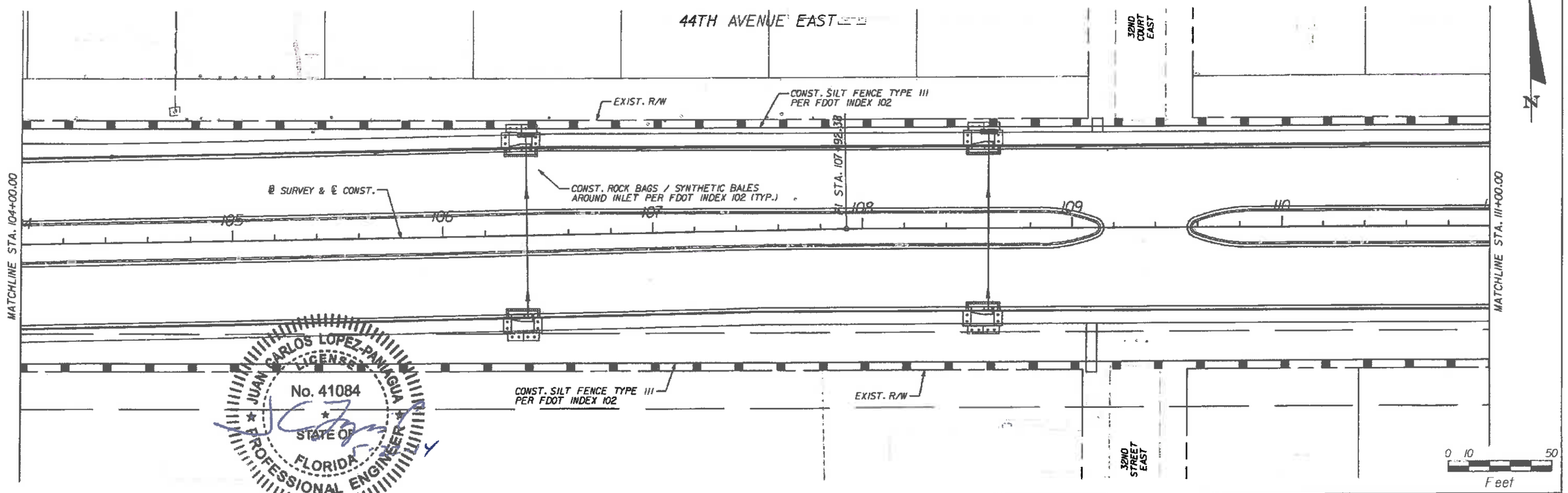


EXIST. INLET AT STA. 92+25 TO BE PROTECTED WITH ROCK BAGS PER FDOT INDEX 102.



JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER JUAN C. LOPEZ
FL. LICENSE NO. 41084

STORMWATER POLLUTION PREVENTION PLAN STA. 95+00 TO STA. 111+00

SHEET NO. 132

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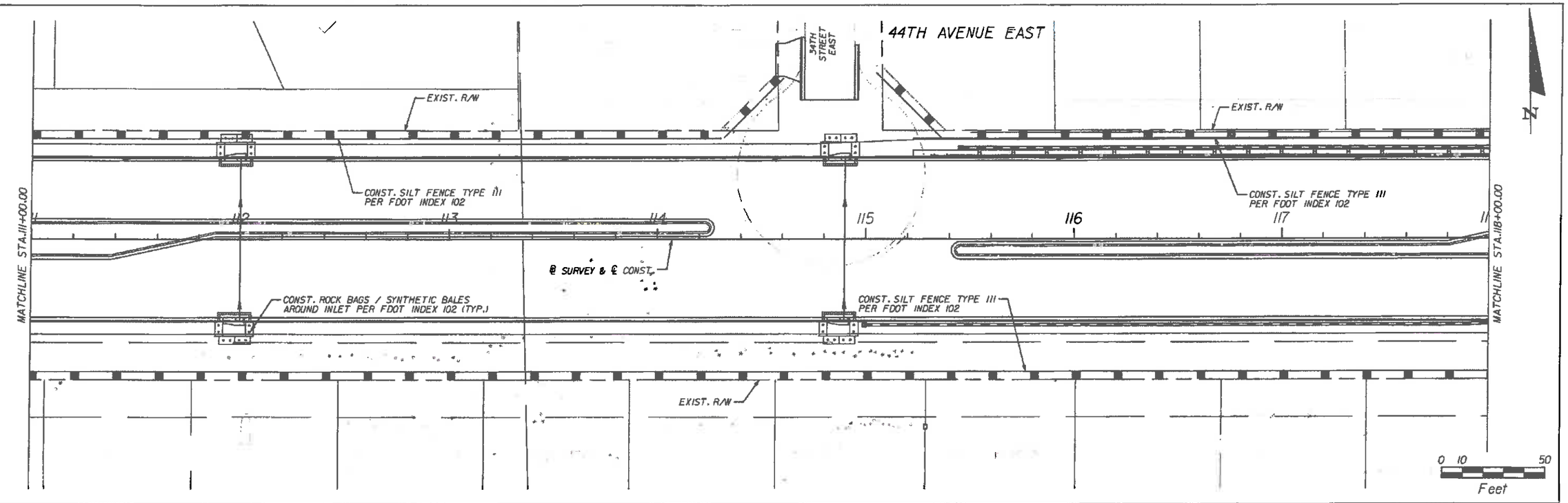

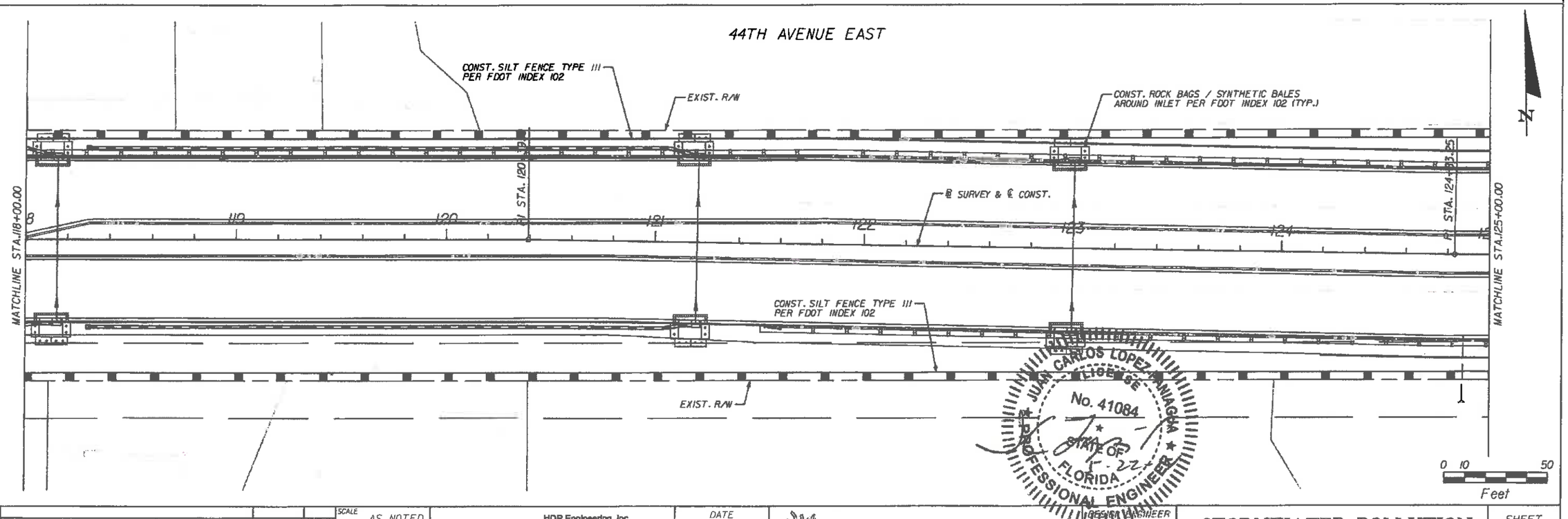

JUAN CARLOS LOPEZ-ARANGA
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

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Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

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FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN
STA. 111+00.00 TO STA. 125+00.00

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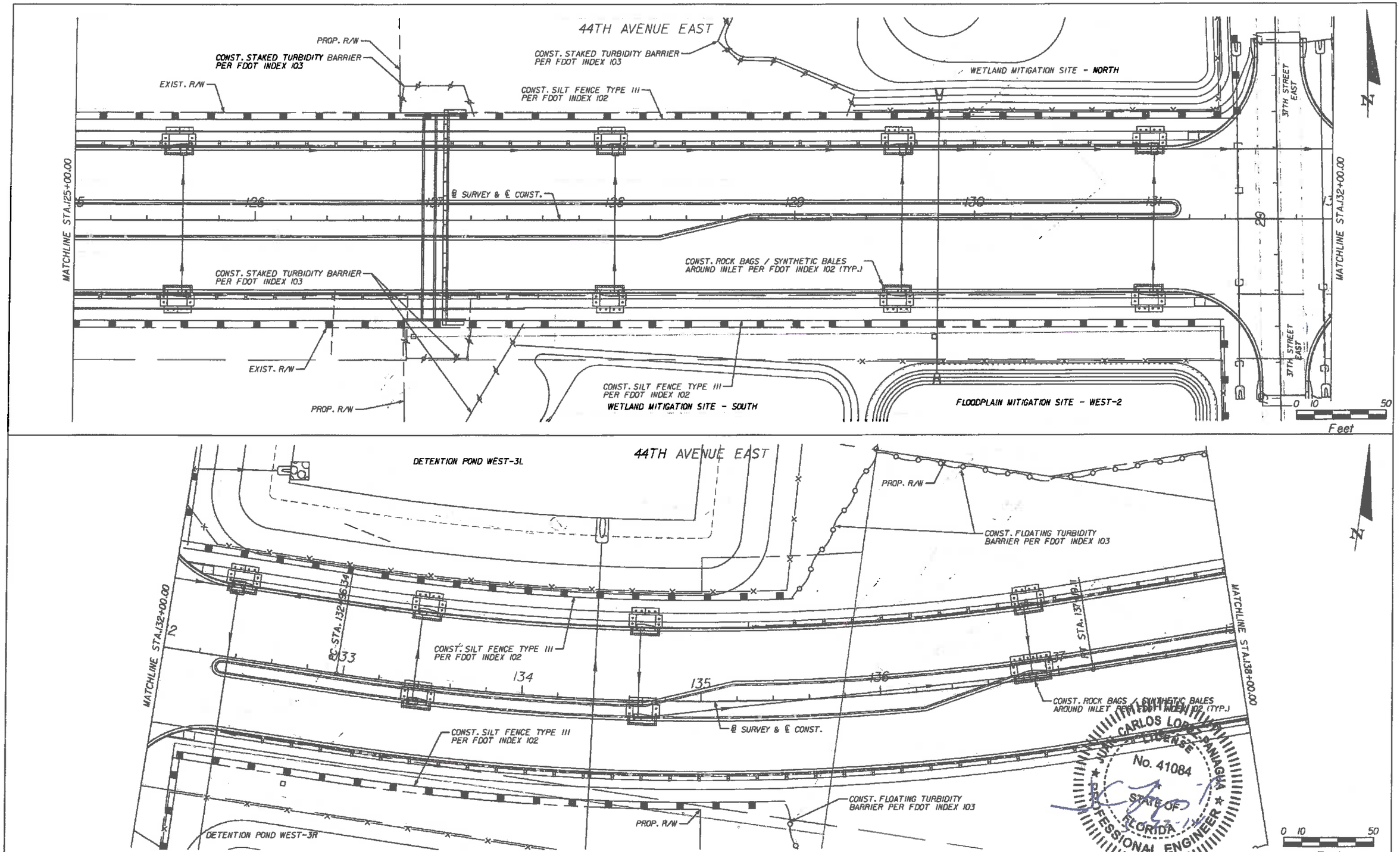

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PROJECT NO.: 607160

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

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FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN
STA. 125+00.00 TO STA. 138+00.00

SHEET NO.: 134

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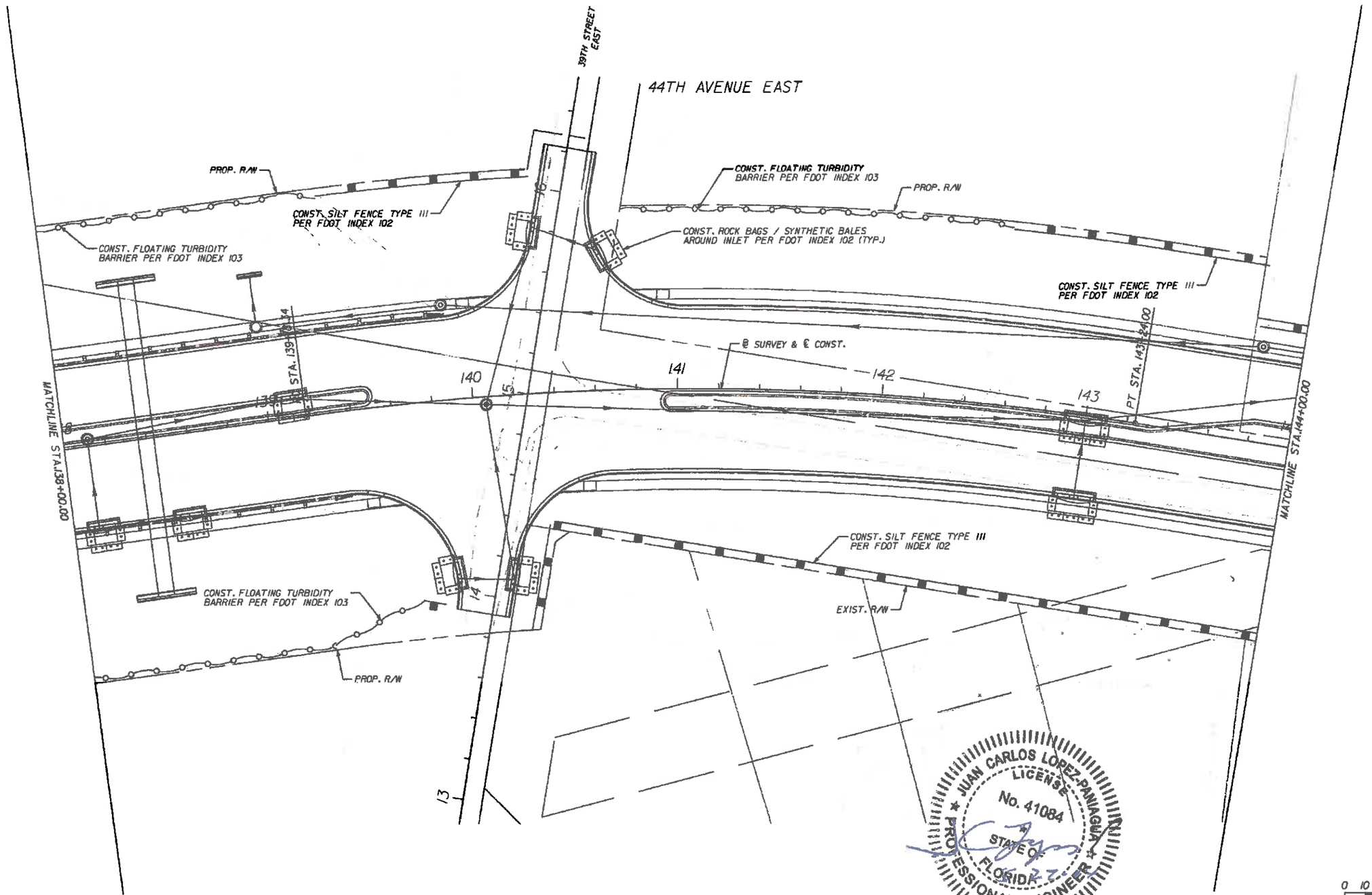

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Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN
STA. 138+00.00 TO STA. 144+00.00

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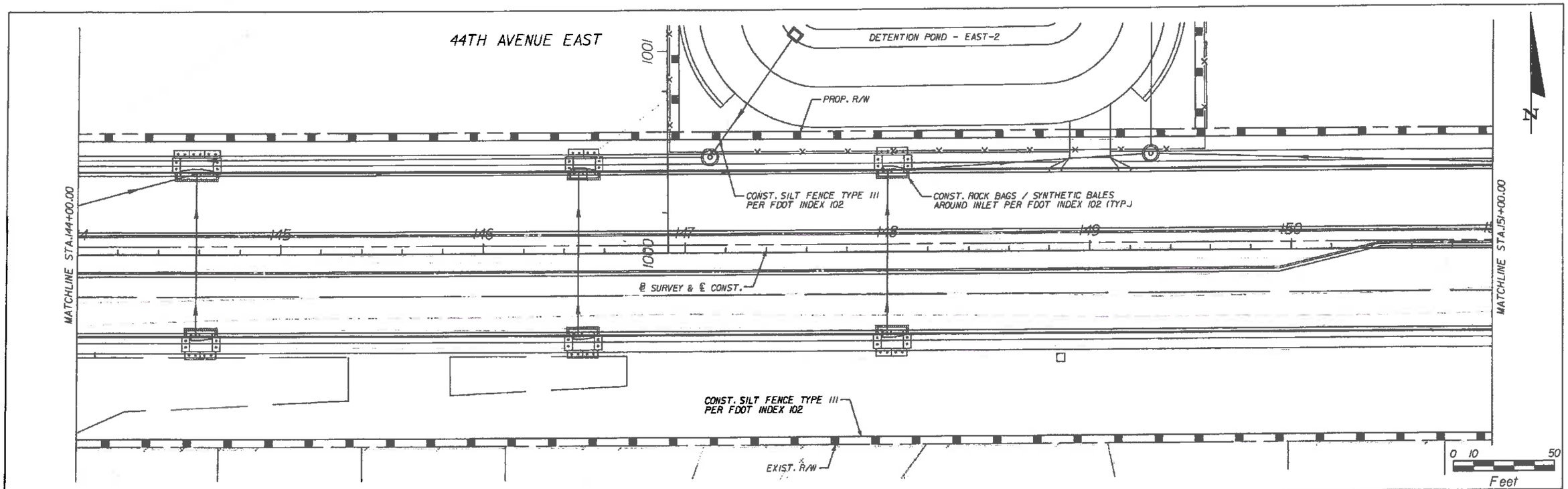

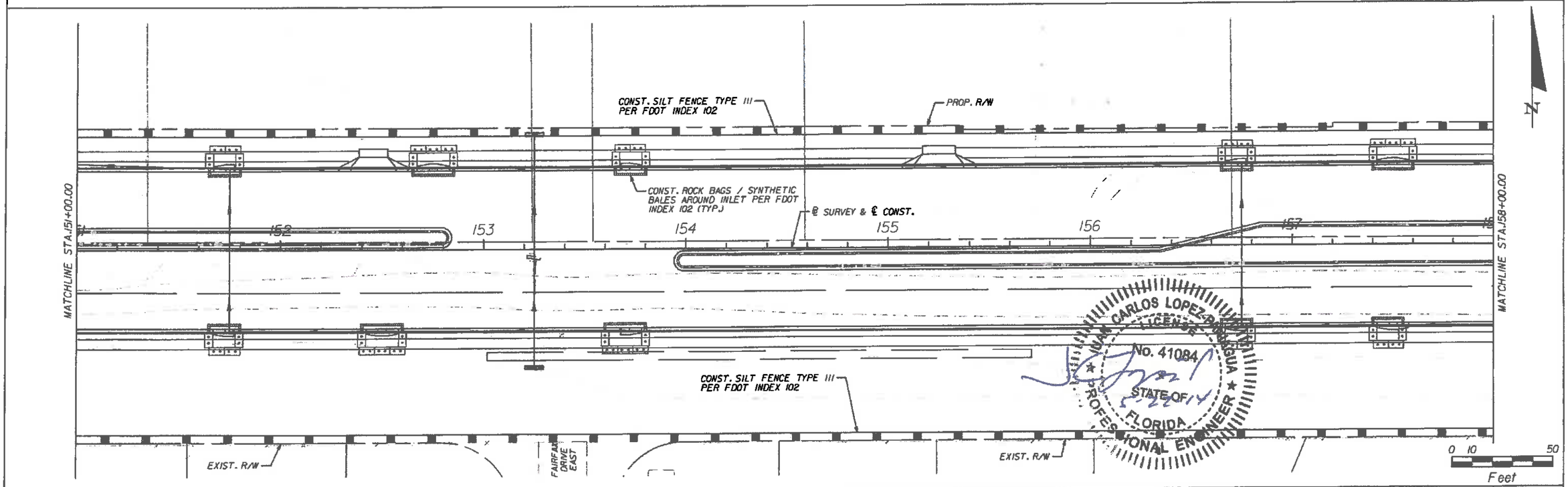

JUAN CARLOS LOPEZ LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

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HDR Engineering, Inc.
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DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN
STA. 144+00.00 TO STA. 158+00.00

SHEET NO.: 136

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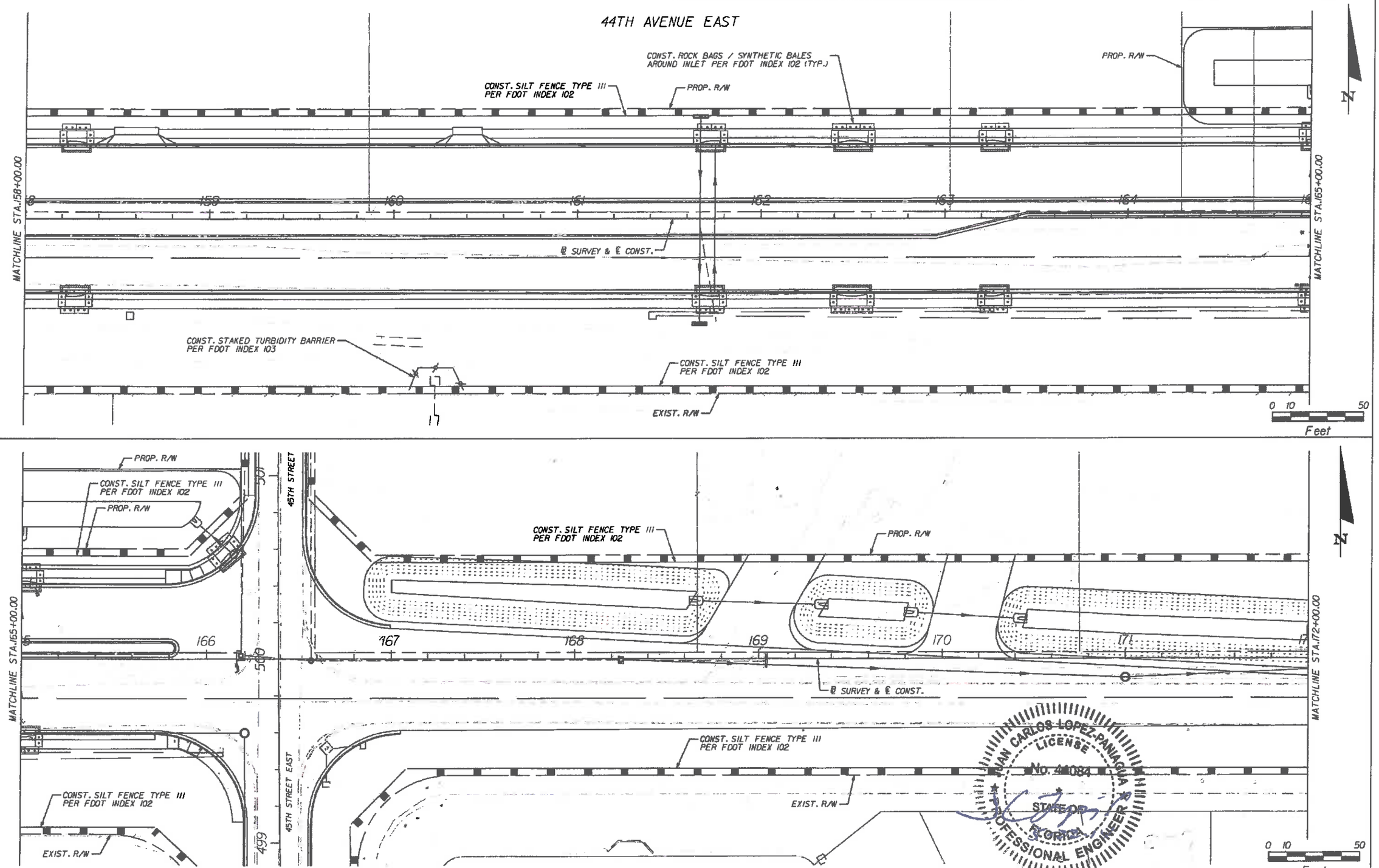

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Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLITION PREVENTION PLAN
STA. 158+00.00 TO STA. 172+00.00

SHEET NO.: 137

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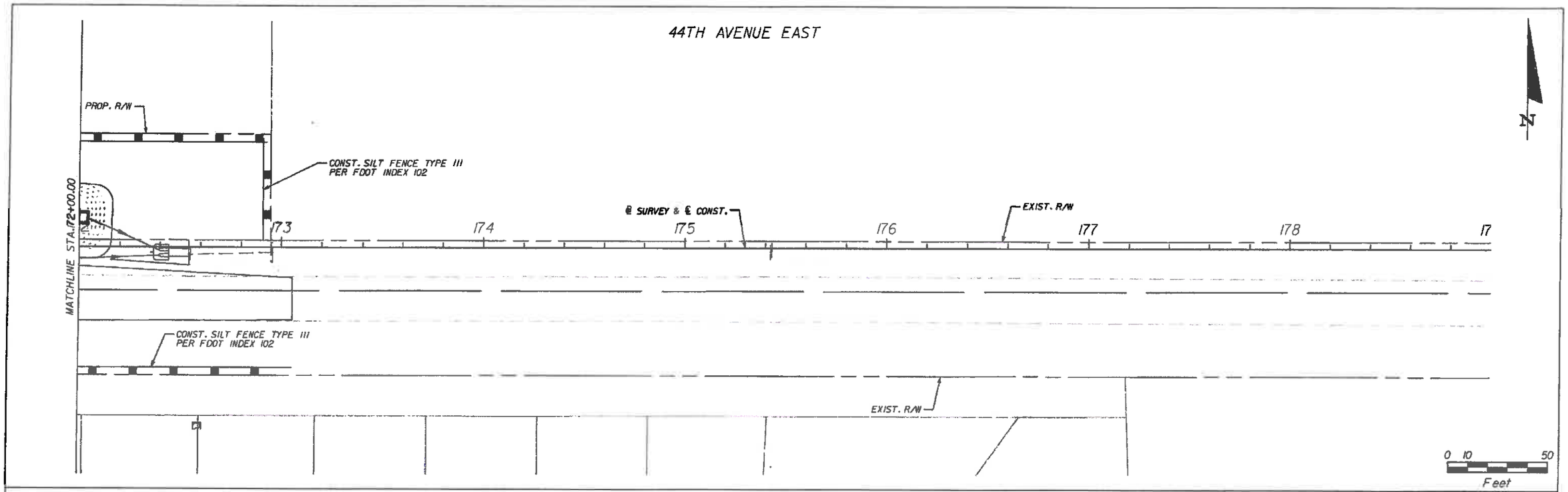

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

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HDR Engineering, Inc.
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Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN
STA. 172+00.00 TO STA. 179+00.00

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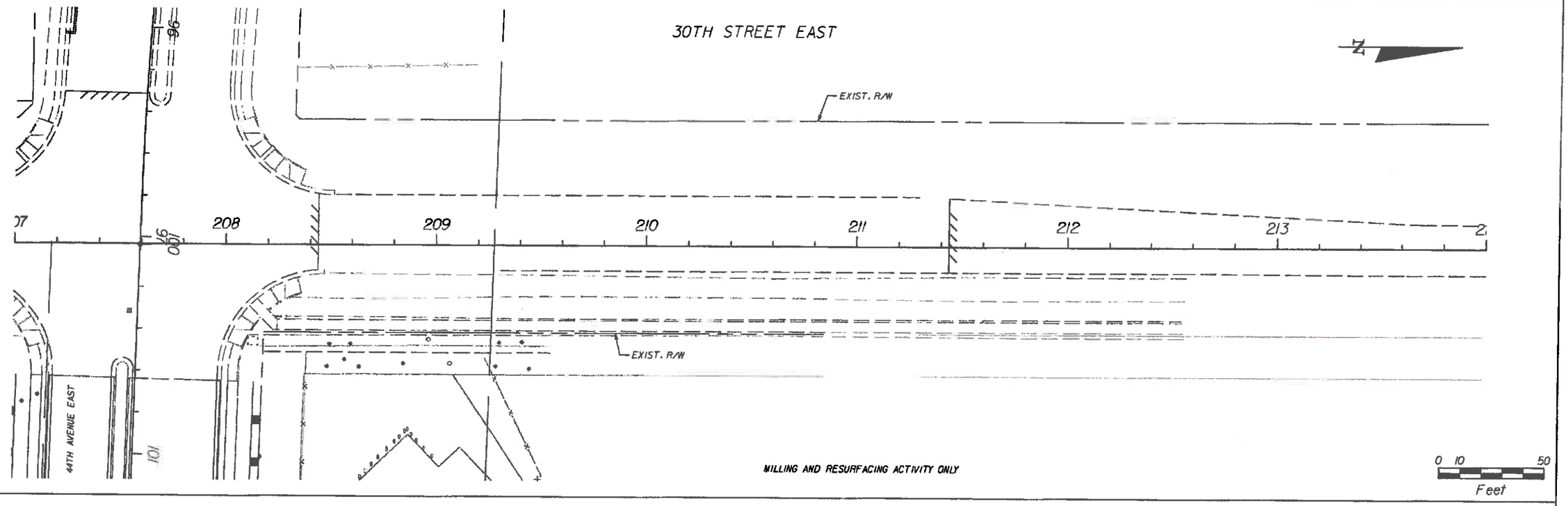

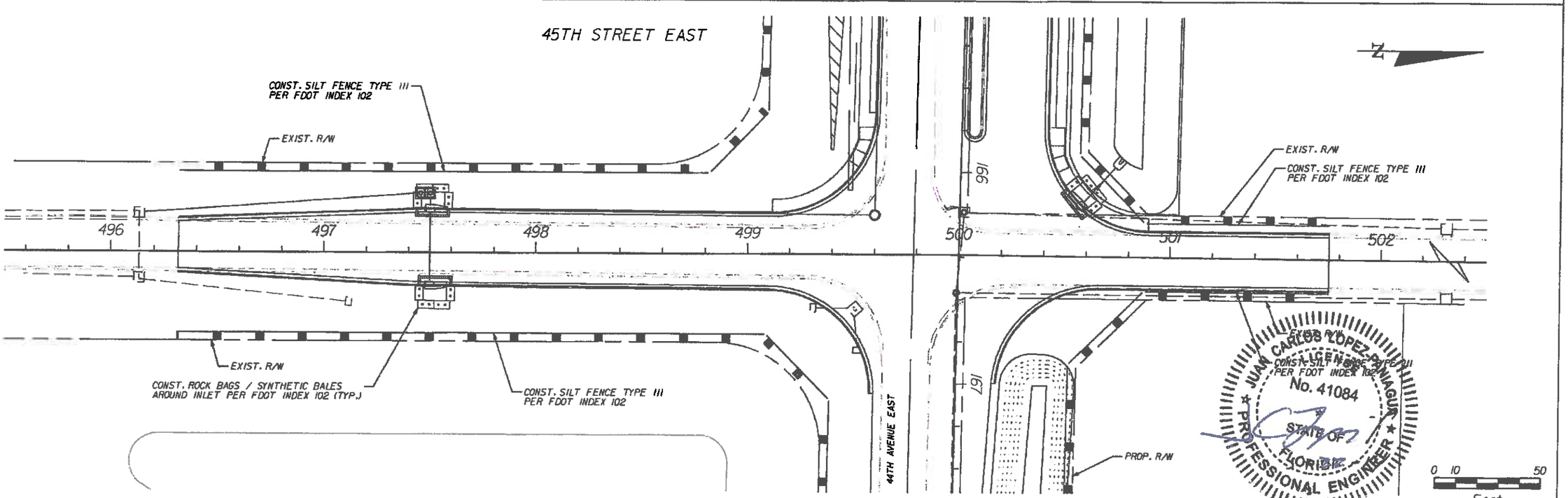

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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HDR Engineering, Inc.
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Authorization No. 4213

DATE: 05/27/14
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Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN SIDE STREETS

SHEET NO.: 139

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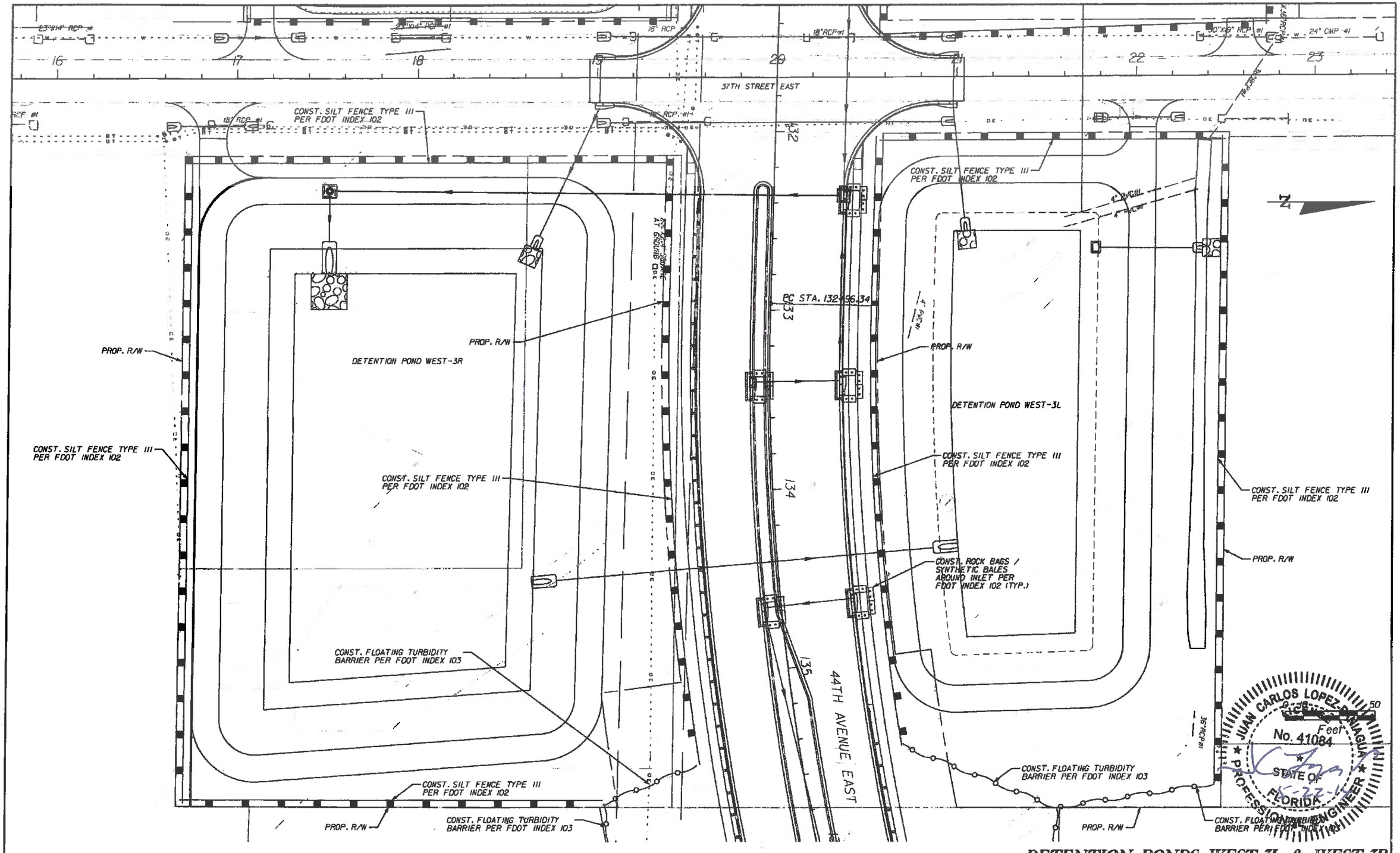

DETENTION PONDS WEST-3L & WEST-3R

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
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PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN

SHEET NO.: 140

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CONST. ROCK BAGS / SYNTHETIC BALES AROUND INLET PER FDOT INDEX 102 (TYP.)

CONST. SILT FENCE TYPE III PER FDOT INDEX 102

1000 1001 1002 1003 1004 1005 1006 1007

44TH AVENUE EAST

DETENTION POND - EAST-2

CONST. SILT FENCE TYPE III PER FDOT INDEX 102

CONST. SILT FENCE TYPE III PER FDOT INDEX 102

CONST. SILT FENCE TYPE III PER FDOT INDEX 102

N

JUAN CARLOS LOPEZ-PANIAGUA LICENSE No. 41084 STATE OF FLORIDA PROFESSIONAL ENGINEER

0 10 50 Feet

DETENTION POND EAST-2

No.	REVISIONS	DATE	BY

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PROJECT NO.: 6071160

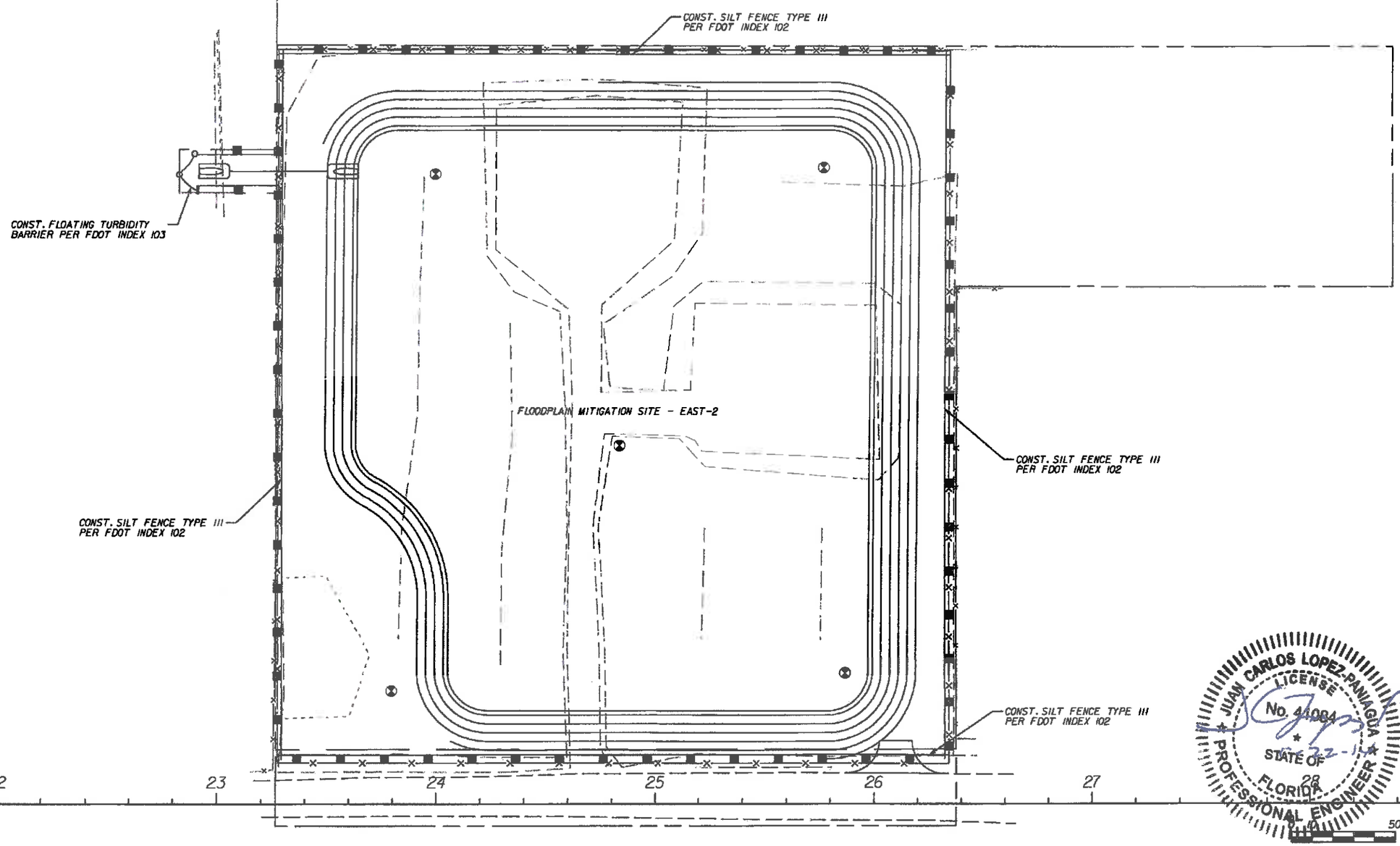
Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN

SHEET NO.: 141

2:35:05 PM 5/22/2014



JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

FLOODPLAN MITIGATION SITE
EAST-2

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

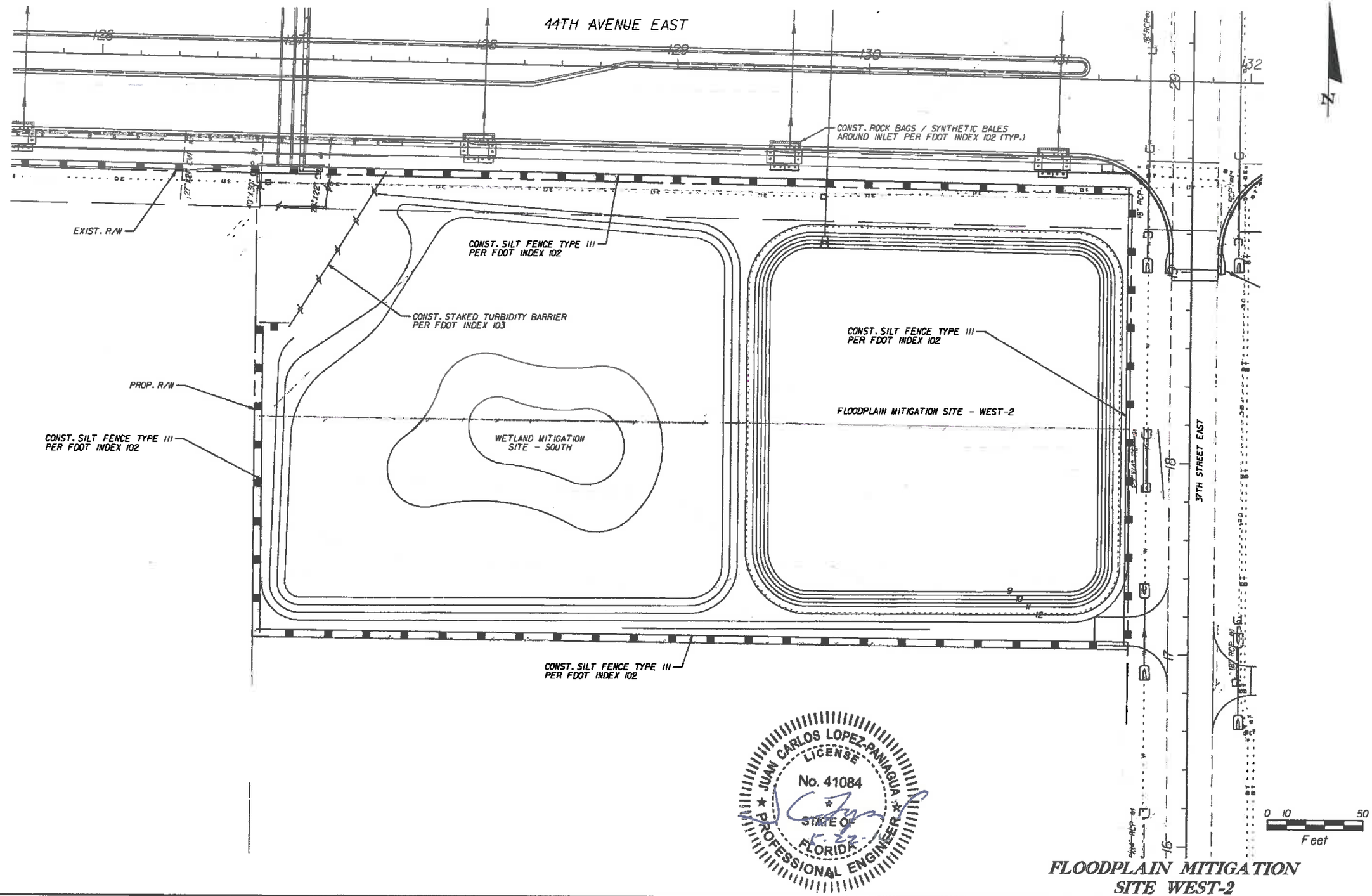
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN

SHEET NO.: 142

2:35:28 PM 5/22/2014



JUAN CARLOS LOPEZ-PANIAGUA
LICENSE
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER

FLOODPLAIN MITIGATION SITE WEST-2

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

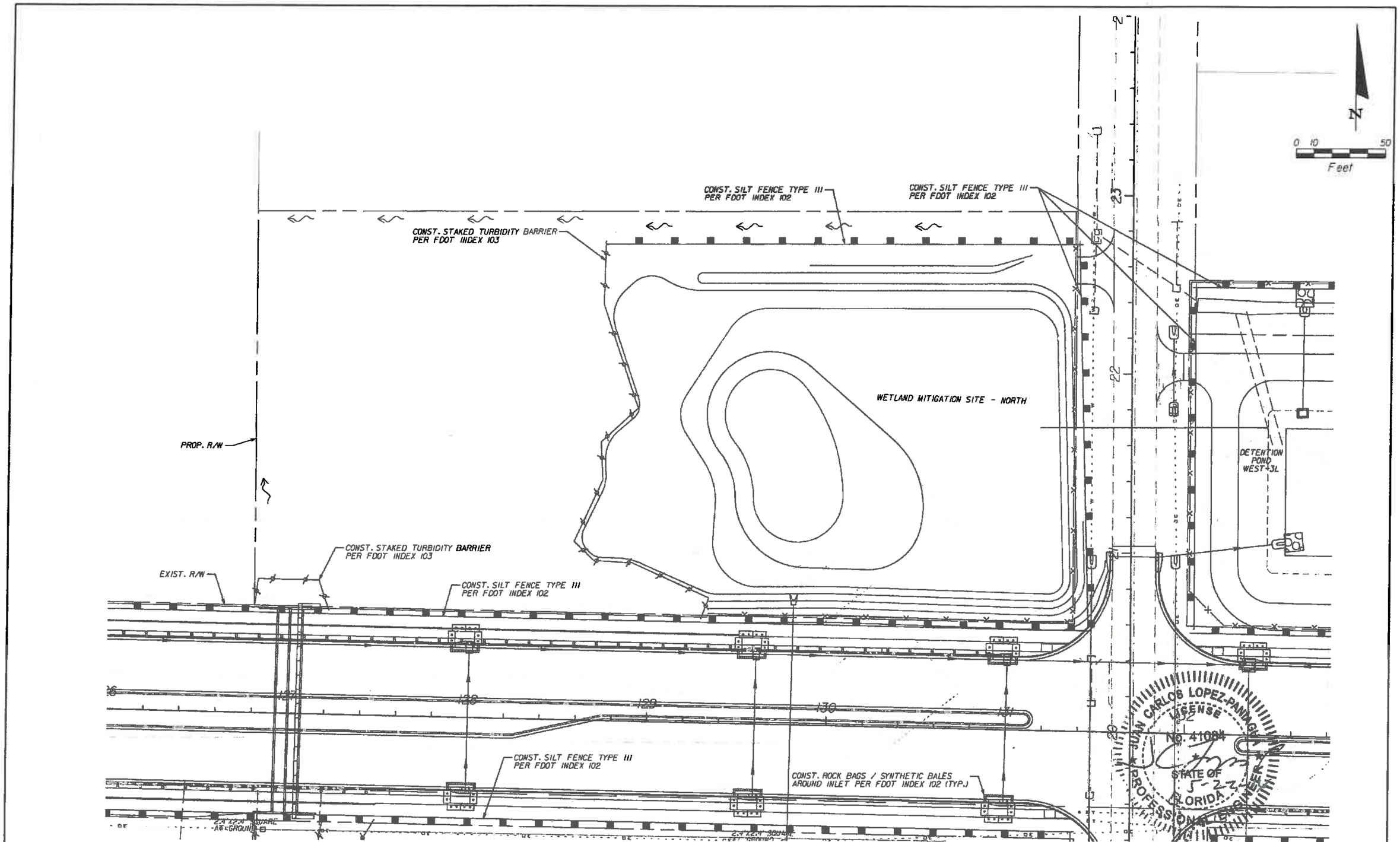
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN

SHEET NO.: 143

2:35:10 PM 5/22/2014
P:\r\607932\CDM\044619\000000000013343\3.00_CAD\2345\5201\roadway\swpprdtl.dgn



WETLAND MITIGATION SITE NORTH

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN

SHEET NO.: 144

2:35:16 PM 5/22/2014
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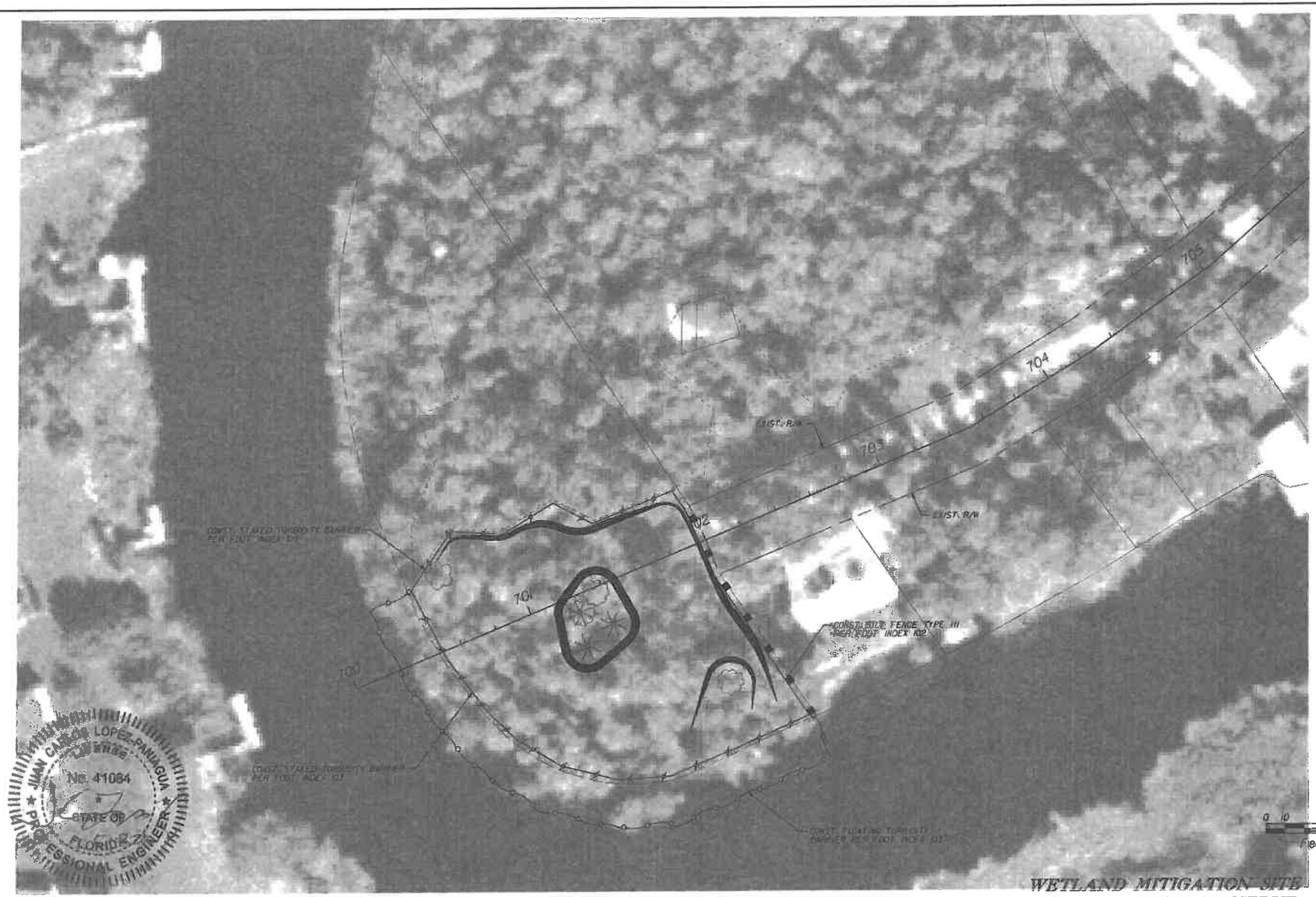


JUAN CARLOS LOPEZ-PANIAGUA
No. 41084
STATE OF FLORIDA
PROFESSIONAL ENGINEER

WETLAND MITIGATION SITE
WALKER CREWS PRESERVE

NO.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: PH
DRAWN BY: JLS
CHECKED BY: JCL

HDR Engineering, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 00110

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JUAN C. LOPEZ
FL. LICENSE NO.: 41084

STORMWATER POLLUTION PREVENTION PLAN

SHEET NO.: 145

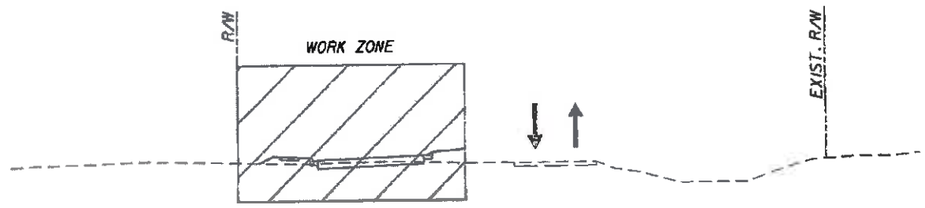
PLOTTED: 5/22/2014

TRAFFIC CONTROL GENERAL NOTES

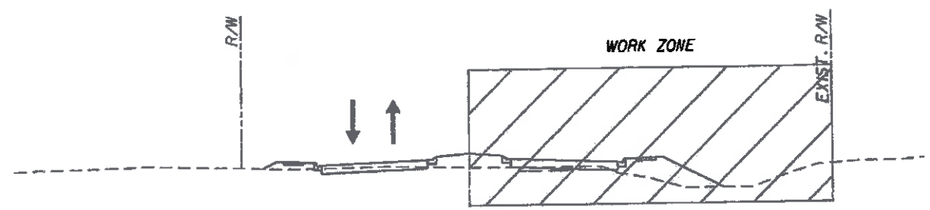
1. THE COST OF MAINTENANCE OF TRAFFIC OPERATIONS SHALL BE INCLUDED UNDER THE LUMP SUM PAY ITEM, UNLESS A SEPARATE PAY ITEM IS PROVIDED.
2. CONTRACTOR SHALL MAINTAIN SUFFICIENT TRAVEL WAYS TO PROVIDE INGRESS AND EGRESS AS WELL AS SAFE BARRICADES TO ALL PROPERTIES WITHIN THE PROJECT AREA AT ALL TIMES.
3. TRAFFIC CONDITIONS, ACCIDENTS, AND OTHER UNFORESEEN EMERGENCY CONDITIONS MAY REQUIRE THE COUNTY TO RESTRICT OR REMOVE LANE CLOSURES OR CHANNELIZATIONS SHOWN IN THE PLANS. THE CONTRACTOR SHALL RESPOND AND PROVIDE ADJUSTMENTS AS DIRECTED BY THE COUNTY WITHOUT DELAY UNDER THESE CONDITIONS. THE CONTRACTOR SHALL ALSO RESPOND WITHIN TIME CONSTRAINTS OUTLINED IN THE STANDARD SPECIFICATIONS UPON NOTIFICATION BY THE COUNTY TO ANY REQUESTS FOR CORRECTION, IMPROVEMENT, OR MODIFICATION TO THE TRAFFIC CONTROL PLAN AND/OR DEVICES. ALL COSTS SHALL BE INCLUDED IN THE BID PRICE FOR MAINTENANCE OF TRAFFIC.
4. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2009) AND FDOT DESIGN STANDARDS (JANUARY 2010).
5. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN TEMPORARY DRAINAGE AND EROSION CONTROL FACILITIES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE COUNTY. POSITIVE DRAINAGE OFF OF THE TRAVELED ROADWAY SHALL BE MAINTAINED AT ALL TIMES.
6. FOR SIDE STREET INTERSECTIONS, LANE CLOSURE SHALL BE LIMITED TO ONE LANE AT ALL TIMES, EXCEPT FOR SPECIFIED DETOURS. AT A MINIMUM, ONE-LANE, TWO-WAY OPERATION SHALL BE MAINTAINED THROUGH THE USE OF FLAGGERS. TWO-LANE, TWO-WAY OPERATION SHALL BE MAINTAINED DURING PERIODS OF LANE CLOSURE RESTRICTIONS AND WHEN CONSTRUCTION ACTIVITIES ARE BEYOND THE LIMITS OF THE INTERSECTIONS.

TRAFFIC CONTROL PHASING NOTES

1. MILL AND RESURFACE 44TH AVENUE EAST (EB LANES) FROM STA. 91+01.00 TO STA. 96+31.48 AND 30TH STREET EAST FROM STA. 208+43.83 TO STA. 211+43.77 USING INDEXES 607 AND 619.
2. THE SEGMENT OF 44TH AVENUE EAST FROM STA. 100+09.72 TO STA. 140+00.00 IS UNDEVELOPED CURRENTLY AND CAN BE BUILT WITHOUT ANY DISRUPTION TO EXISTING TRAFFIC PATTERNS. SIDE STREET WORK ZONE SIGNAGE AND BARRICADES WILL BE INSTALLED, BUT TRAFFIC WILL NOT BE ALLOWED ON NEWLY CONSTRUCTED PAVEMENT UNTIL THE PROJECT IS COMPLETE.
3. THE SEGMENT OF 44TH AVENUE EAST FROM STA. 140+00.00 TO STA. 173+05.70 HAS EXISTING TRAFFIC AND PROVIDES ACCESS TO PROPERTIES AND SIDE STREETS.
   A. LOCAL TRAFFIC SHALL HAVE ACCESS ALONG 44TH AVENUE EAST AND 39TH STREET EAST, SOUTH OF 44TH AVENUE EAST, AT ALL TIMES. SEE THE DETOUR PLAN SHEET FOR THIS AREA FOR DETAILS.
   B. THE INTENT OF PHASE I IS TO MAINTAIN LOCAL TRAFFIC ON THE EXISTING ROADWAY WHILE CONSTRUCTING NEW PAVEMENT AND DRAINAGE FEATURES.
   C. THE INTENT OF PHASE II IS TO SHIFT LOCAL TRAFFIC TO THE NEWLY CONSTRUCTED PAVEMENT FROM PHASE I WHILE CONSTRUCTING THE REMAINING PAVEMENT AND SIDE SLOPES.



PHASE I - FROM STA. 140+00.00 TO STA. 173+05.70



PHASE II - FROM STA. 140+00.00 TO STA. 173+05.70

TRAFFIC CONTROL PLAN NOTES

1. THIS PROJECT SHOULD BE BROKEN INTO TWO SEGMENTS AS DESCRIBED IN THE PHASING NOTES ON THIS SHEET.
2. THERE IS ONE EXISTING INTERSECTION, 45TH STREET EAST AND 44TH AVENUE EAST, THAT WILL BE SEVERELY IMPACTED WITH CONSTRUCTION. SEE THE DETOUR PLAN SHEET FOR THIS INTERSECTION FOR DETAILS.
3. THERE IS ONE FUTURE INTERSECTION, 37TH STREET EAST AND 44TH AVENUE EAST, THAT WILL BE SEVERELY IMPACTED WITH CONSTRUCTION. SEE THE DETOUR PLAN SHEET FOR THIS INTERSECTION FOR DETAILS.
4. THE 45TH STREET EAST AND 37TH STREET EAST DETOURS SHALL NOT OCCUR AT THE SAME TIME.
5. 44TH AVENUE FROM 39TH STREET EAST TO 45TH STREET EAST SHALL BE CLOSED DURING CONTRUCTION. 44TH AVENUE EAST WILL ONLY BE OPEN TO LOCAL TRAFFIC. SEE DETOUR PLAN SHEET FOR DETAILS.

FLORIDA LICENSED No. 51970 5-22-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

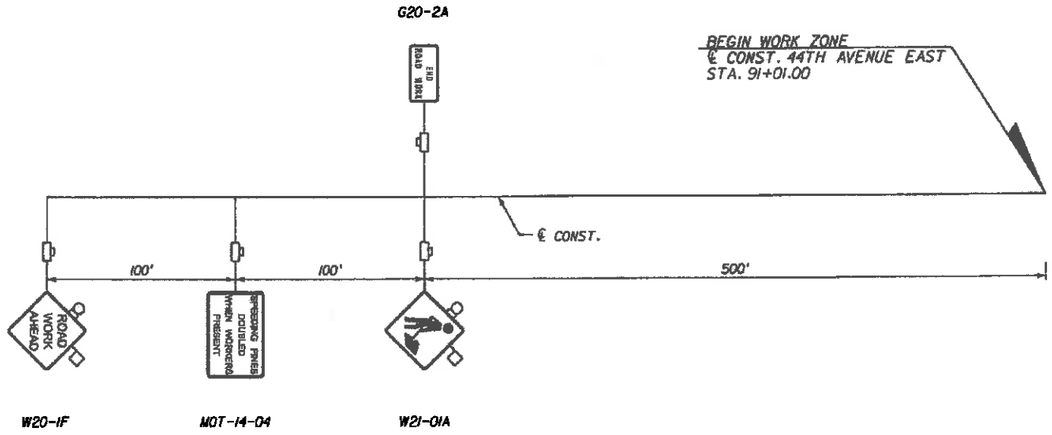
DATE: 05/27/14
PROJECT NO.: 607160

MANATEE COUNTY PUBLIC WORKS

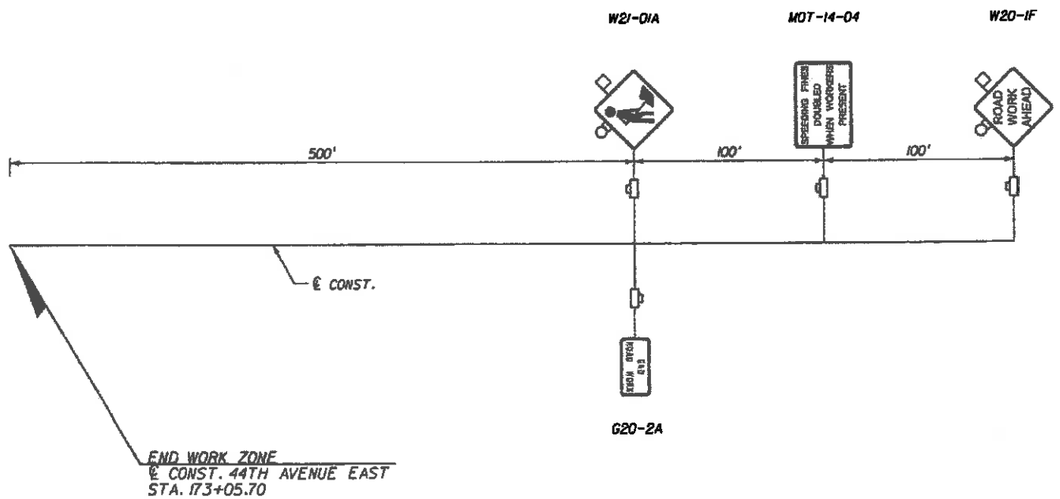
DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

TRAFFIC CONTROL PLAN GENERAL NOTES

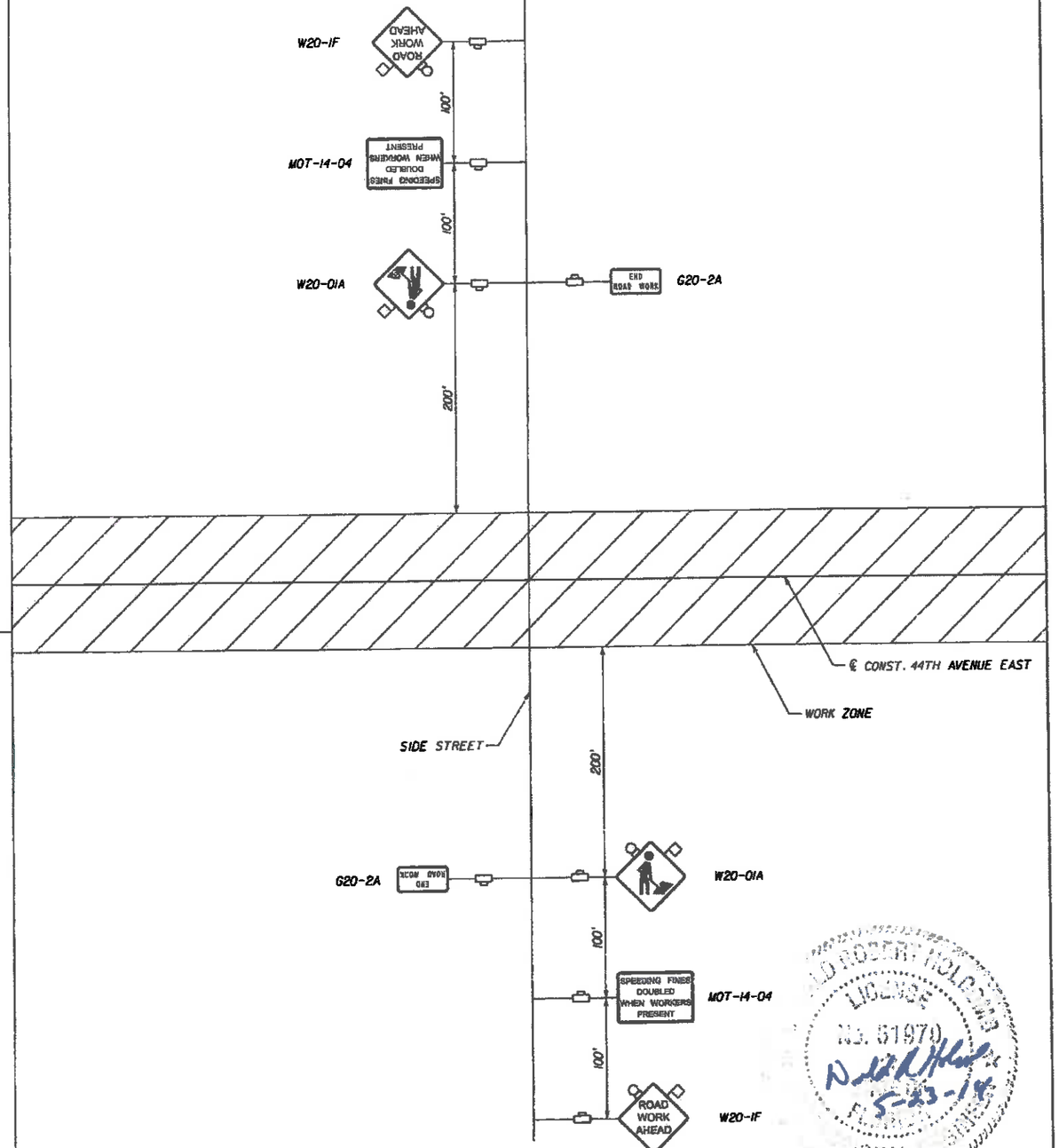
SHEET NO.: 146



44TH AVENUE EAST
BEGIN CONSTRUCTION



44TH AVENUE EAST
END CONSTRUCTION



ADVANCED WORK ZONE SIGNAGE
30TH STREET EAST, 37TH STREET EAST, 39TH STREET EAST, AND 45TH STREET EAST

TYPE III BARRICADES (WITH STEADY BURN LIGHT) AND ROAD CLOSED SIGNS SHALL BE LOCATED AS NEEDED AT 30TH STREET EAST, 37TH STREET EAST, 39TH STREET EAST, AND 45TH STREET EAST TO ENSURE TRAFFIC DOES NOT ENTER THE CONSTRUCTIN ZONE.

TYPE III BARRICADES (WITH STEADY BURN LIGHT) AND ROAD CLOSED SIGNS SHALL BE LOCATED AT 32ND COURT EAST, 32ND STREET EAST, AND 34TH STREET EAST TO ENSURE TRAFFIC DOES NOT ENTER THE CONSTRUCTIN ZONE.

DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
5-23-14
STATE OF FLORIDA

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

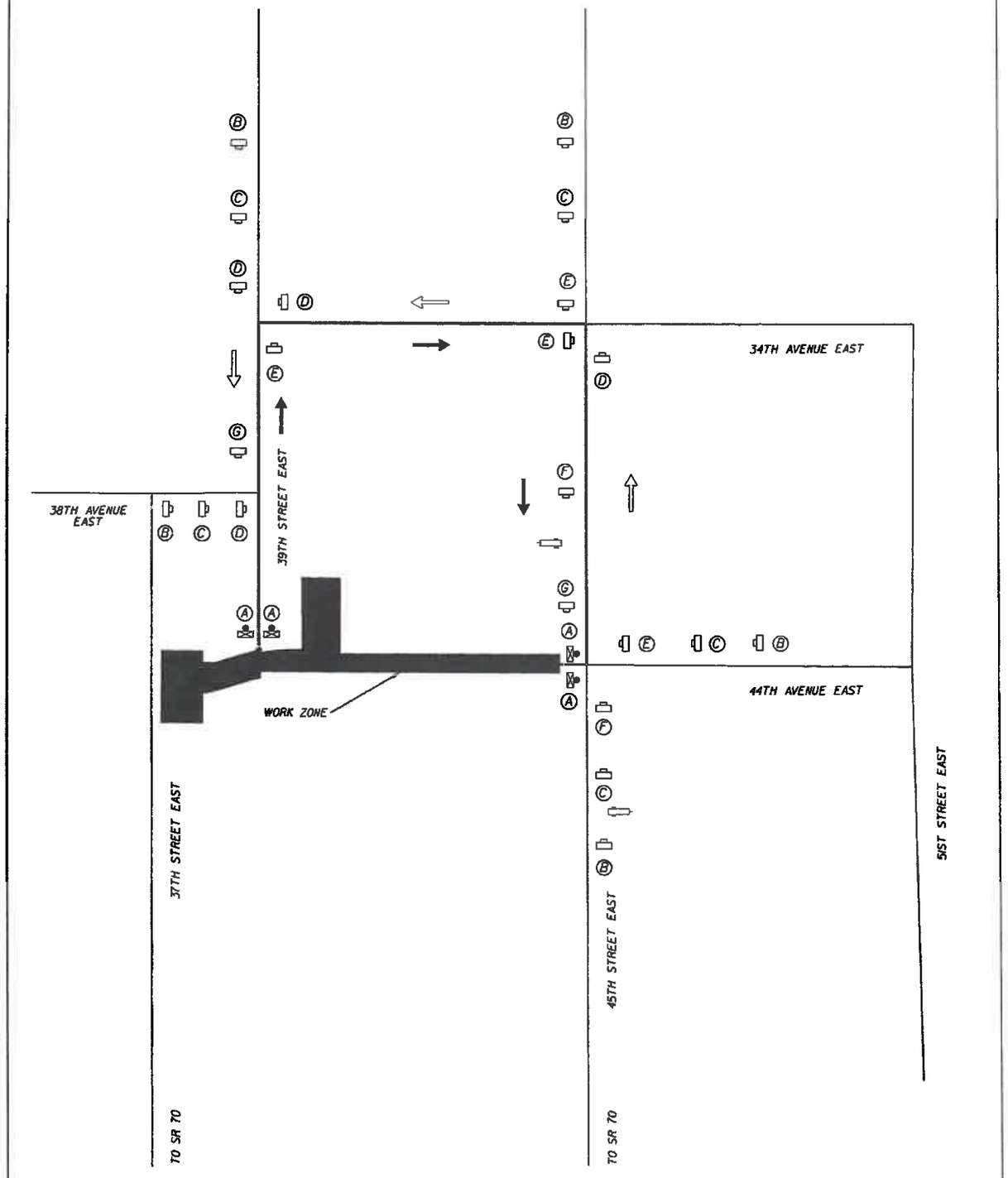
DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

ADVANCED WARNING SIGNAGE

SHEET NO.: 147



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- Detour For Traffic Originally Using EB 44th Avenue East
- Detour For Traffic Originally Using WB 44th Avenue East
- Work Zone Sign
- Type III Barricade (With Steady Burning Light)
- Sign With 18" x 18" (Min.) Orange Flag And Type B Light
- Portable Changeable (Variable) Message Sign

PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) INSTALLED 14 DAYS PRIOR TO ROAD CLOSURE

PCMS TO READ:

MESSAGE 1

4	4	T	H		A	V	E
C	L	O	S	E	D		

MESSAGE 2

		F	R	O	M		
		M	M	/	D	D	
T	O		M	M	/	D	D

DONALD ROBERT HOLCOMB
LICENSE
NO. 51970
STATE OF FLORIDA
PROFESSIONAL ENGINEER
FL 5-23-14

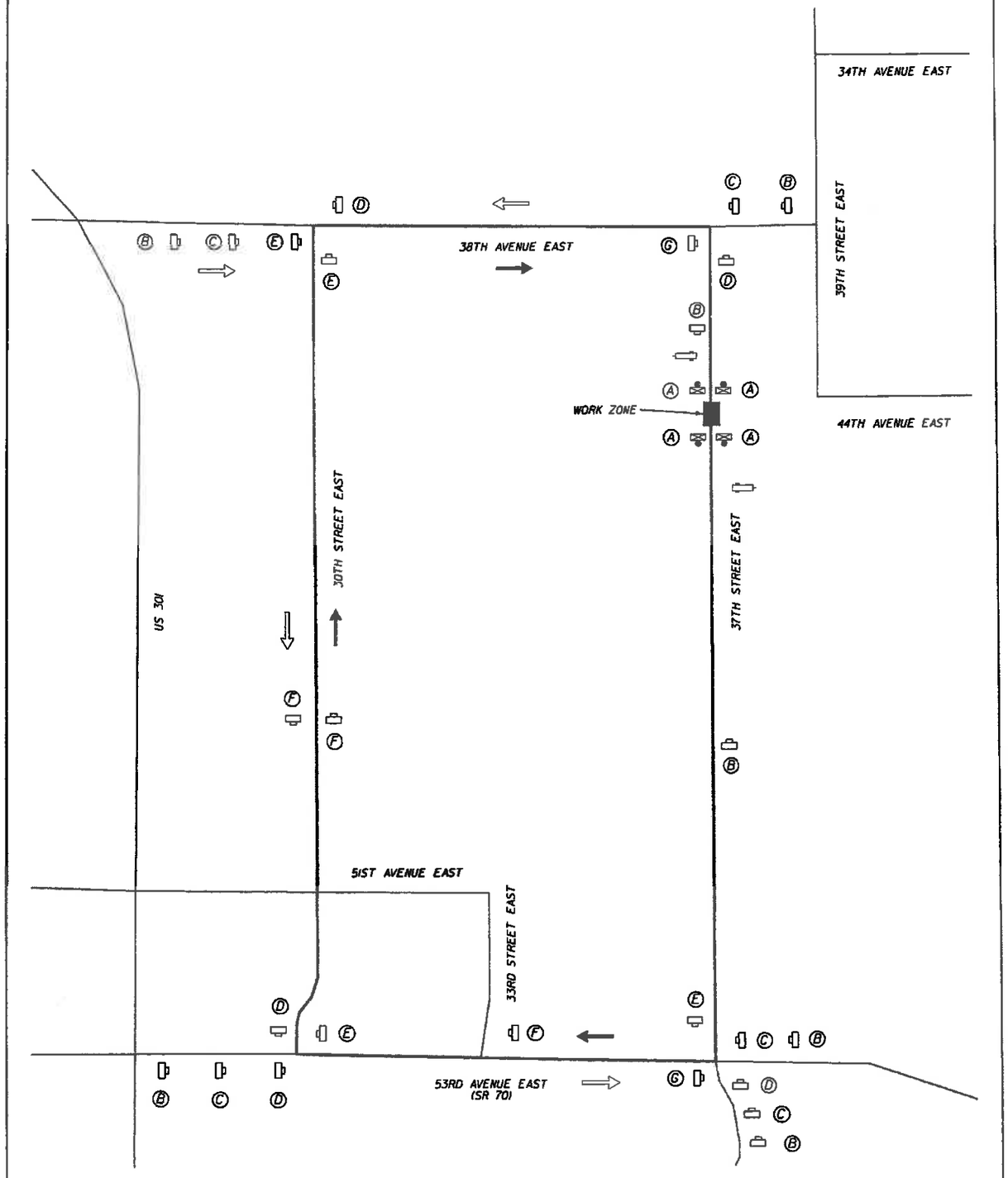
				SCALE	AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE 05/27/14
				DESIGNED BY	JLS		PROJECT NO. 6071160
				DRAWN BY	JHC		
No.	REVISIONS	DATE	BY	CHECKED BY	DRH		

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO. 51970

44TH AVENUE EAST DETOUR PLAN

SHEET NO. 148



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Detour For Traffic Originally Using NB 37th Street East

Detour For Traffic Originally Using SB 37th Street East

Work Zone Sign

Type III Barricade (With Steady Burning Light)

Sign With 18" x 18" (Min.) Orange Flag And Type B Light

Portable Changeable (Variable) Message Sign

PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) INSTALLED 14 DAYS PRIOR TO ROAD CLOSURE

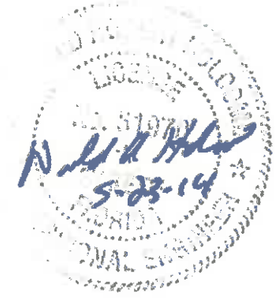
PCMS TO READ:

MESSAGE 1

3	7	T	H		S	T	
C	L	O	S	E	D		

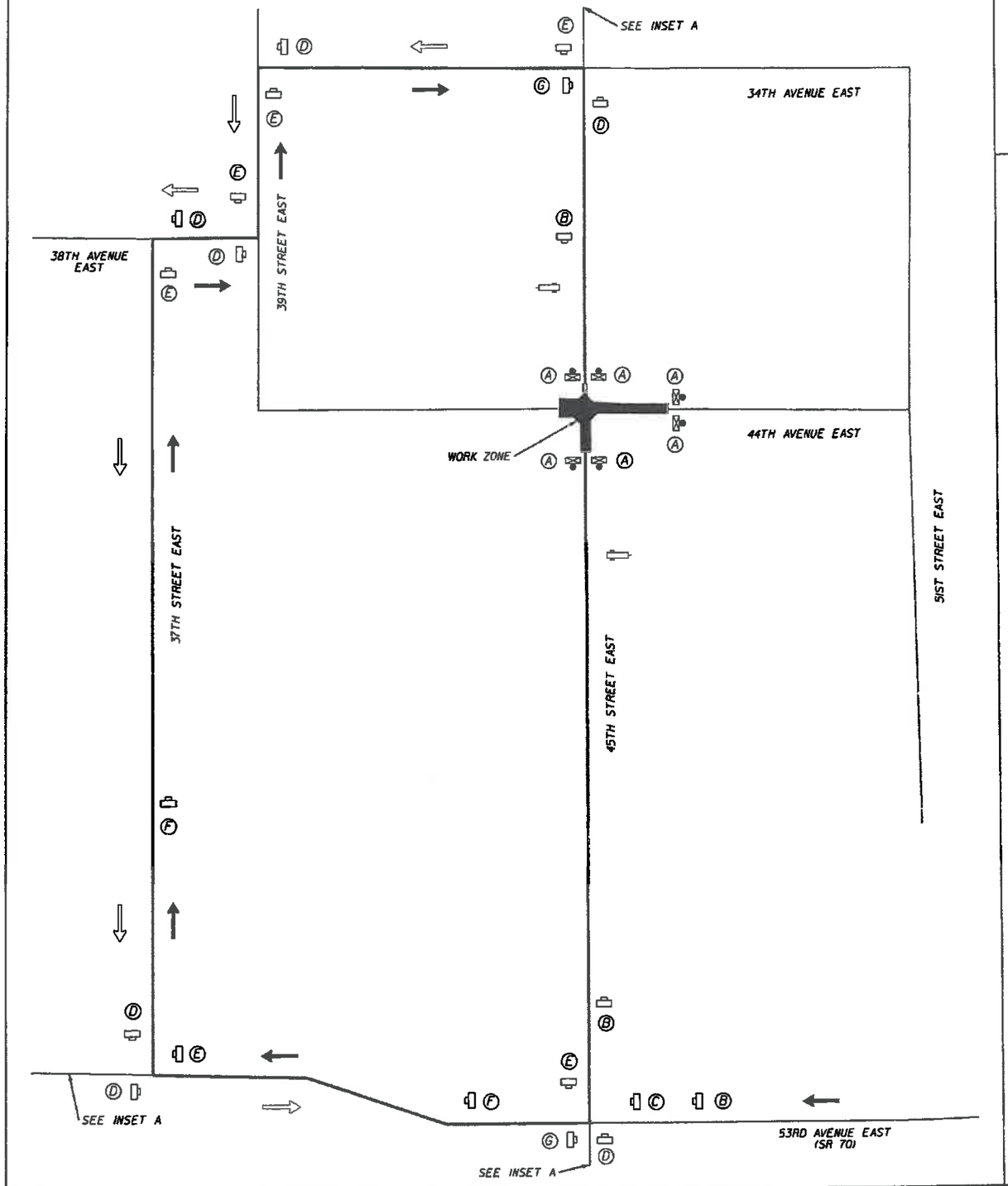
MESSAGE 2

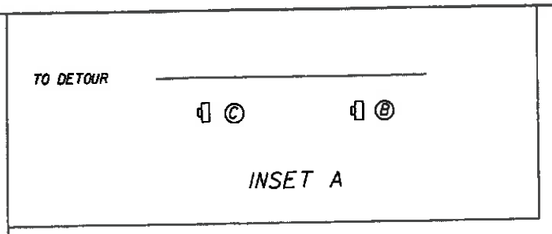
		F	R	O	M		
		M	M	/	D	D	
T	O		M	M	/	D	D

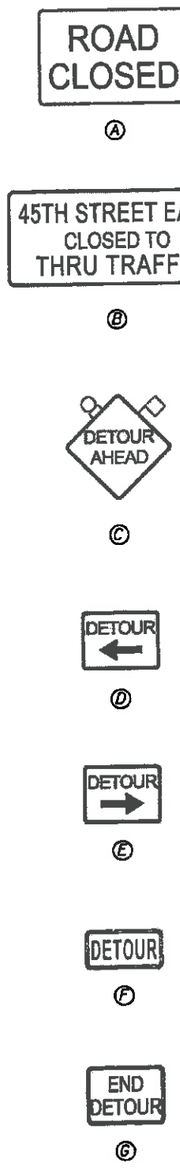


No.	REVISIONS	DATE	BY	SCALE: AS NOTED DESIGNED BY: JLS DRAWN BY: JHC CHECKED BY: DRH	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213

DATE: 05/27/14 PROJECT NO.: 6071160	Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER: DONALD R. HOLCOMB FL. LICENSE NO.: 51970	37TH STREET EAST DETOUR PLAN	SHEET NO.: 149







Detour For Traffic Originally Using NB 45th Street East

Detour For Traffic Originally Using SB 45th Street East

Work Zone Sign

Type III Barricade (With Steady Burning Light)

Sign With 18" x 18" (Min.) Orange Flag And Type B Light

Portable Changeable (Variable) Message Sign

PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) INSTALLED 14 DAYS PRIOR TO ROAD CLOSURE

PCMS TO READ:

MESSAGE 1

4	5	T	H		S	T	
I	N	T					
C	L	O	S	E	D		

MESSAGE 2

		F	R	O	M		
		M	M	/	D	D	
T	O		M	M	/	D	D

SCALE	AS NOTED		
DESIGNED BY	JLS		
DRAWN BY	JHC		
CHECKED BY	DRH		

No.	REVISIONS	DATE	BY

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 607160

Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER DONALD R. HOLCOMB

FL. LICENSE NO. 51970

45TH STREET EAST DETOUR PLAN

SHEET NO. 150

44TH AVENUE EAST

30TH STREET EAST

1 - 2" HDPE
3 - 1-1/4" HDPE W/ FOC / TO REMAIN
VERIZON

FOC HH / TO REMAIN
VERIZON

FOC HUB / TO REMAIN
VERIZON

EXIST. R/W

BURIED SERVICE WIRE / TO BE ABANDONED
VERIZON

@ SURVEY & ℄ CONST.

24" WM / TO REMAIN
MANATEE COUNTY

2 - 1-1/4" HDPE W/ FOC / TO REMAIN
VERIZON

FPL EASEMENT

2.4'X2.4' SQUARE AT GROUND

4" PVC W/ FOC / TO REMAIN
VERIZON

1 - 4" PVC
1 - BURIED COPPER CABLE / TO REMAIN
VERIZON

BEGIN PROJECT
STA. 100+63.87

SEE WATER MAIN COMPONENT PLAN SET
FOR PROPOSED WATER MAIN

6" PVC FM / TO REMAIN
MANATEE COUNTY

OE / TO REMAIN
FPL TRANSMISSION

EXIST. R/W

N STA. 103+69.32

MATCHLINE STA. 104+00.00

28.00'

60.00'

28.00'

60.00'

0 10 50
Feet

208 207 100 97 95 96 101 102 103

BEGIN PROJECT
STA. 100+63.87

32.57

EXIST. GROUND

PI +50.00
EL. 32.00

(+)0.300% (+)0.300%

PROFILE GRADE LINE

32.19

30.7

SHGWT EL. = 29.3

SEE WATER MAIN COMPONENT PLAN SET
FOR PROPOSED WATER MAIN

35 30 25 20

100 101 102 103 104

LICENSED PROFESSIONAL ENGINEER
STATE OF FLORIDA
DONALD R. HOLCOMB
51970
8-23-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

UTILITY ADJUSTMENT SHEET

SHEET NO.: 151

44TH AVENUE EAST

32ND COURT EAST

32ND STREET EAST

BURIED SERVICE WIRE / TO BE ABANDONED VERIZON

EXIST. R/W

℄ SURVEY & ℄ CONST.

℄ STA. 107+94.38

6" PVC WM / TO BE REPLACED MANATEE COUNTY

MATCHLINE STA. 104+00.00

MATCHLINE STA. 111+00.00

60.00'

28.00'

105 106 107 108 109 110

FPL EASEMENT

2.4'X2.4' SQUARE AT GROUND

EXIST. R/W

OE / TO REMAIN FPL TRANSMISSION

0 10 50

Feet

N

35

30

25

20

PI +84.53
EL. 38.71

(+) 0.300%

(-) 0.300%

PROFILE GRADE LINE

PI +30.00
EL. 31.38

(-) 0.300%

(-) 0.600%

32.19

30.7

29.86

28.7

EXIST. GROUND

SHWT EL. = 27.6

104 105 106 107 108 109 110 111

STATE OF FLORIDA
DONALD R. HOLCOMB
NO. 51970
5-23-14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO.: 607116O

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO.: 51970

UTILITY ADJUSTMENT SHEET

SHEET NO.: 152

44TH AVENUE EAST

BURIED SERVICE WIRE / TO BE ABANDONED
VERIZON

EXIST. R/W

8" PVC WM / TO BE REPLACED
MANATEE COUNTY

℄ SURVEY & ℄ CONST.

MATCHLINE STA. 111+00.00

MATCHLINE STA. 118+00.00

60.00'
28.00'
28.00'
60.00'
39.00'
28.00'
60.00'

111 112 113 114 115 116 117 118

FPL EASEMENT

2-4"Ø SQUARE AT GROUND

2-4"Ø SQUARE AT GROUND

2-4"Ø SQUARE AT GROUND

OE / TO REMAIN
FPL TRANSMISSION

EXIST. R/W

0 10 50
Feet

N

135' V.C.

+32.51 EL. 28.36
28.32
28.18
28.01
PI 1+00.00 EL. 27.96
27.62
27.38
27.13
+67.49 EL. 27.03

29.86
28.7
21.30
23.7

PROFILE GRADE LINE

EXIST. GROUND

(-) 0.600%

(-) 1.378%

SHGWT EL. = 23.6

30
25
20
15

LICENSED PROFESSIONAL ENGINEER
51970
STATE OF FLORIDA
Donald R. Holcomb
Sept-19

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE: 05/27/14
PROJECT NO. 6071160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: DONALD R. HOLCOMB
FL. LICENSE NO. 51970

UTILITY ADJUSTMENT SHEET

SHEET NO. 153

44TH AVENUE EAST

EXIST. R/W

℄ SURVEY & ℄ CONST.

MATCHLINE STA. 118+00.00

MATCHLINE STA. 125+00.00

60.00'
28.00'
28.00'
60.00'

119 120 121 122 123 124

℄ STA. 120+93.25

℄ STA. 124+93.25

FPL EASEMENT

2.4'X2.4' SQUARE AT-GROUND

2.4'X2.4' SQUARE AT-GROUND

2.4'X2.4' SQUARE ABAGROUND

OE / TO REMAIN FPL TRANSMISSION

EXIST. R/W

0 10 50
Feet

PROFILE GRADE LINE

EXIST. GROUND

DHW25 EL. = 16.40

135' V.C.

+45.43 EL. 17.68

17.49

17.26

17.05

16.88

16.74

16.63

16.55

+80.43 EL. 16.55

PI +12.93 EL. 16.75

(-)1.378%

(+)0.300%

21.30

20.7

18.6

6.81

25
20
15
10

118 119 120 121 122 123 124 125

				SCALE	AS NOTED		
				DESIGNED BY	JLS		
				DRAWN BY	JHC		
				CHECKED BY	DRH		
No.	REVISIONS	DATE	BY				

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 6071160

Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER DONALD R. HOLCOMB

FL. LICENSE NO. 51970

UTILITY ADJUSTMENT SHEET

SHEET NO. 154

DONALD R. HOLCOMB LICENSE NO. 51970 STATE OF FLORIDA 5-23-14 FINAL

44TH AVENUE EAST

PROP. R/W

EXIST. R/W

PROP. R/W

OTV / TO REMAIN
BRIGHT HOUSE NETWORKS

OE / TO REMAIN
FPL DISTRIBUTION

37TH STREET EAST

FOC HH / TO BE REMOVED
VERIZON

@ SURVEY & ℄ CONST.

4" PVC W/ COPPER CABLE / TO BE REMOVED
VERIZON

1-1/4" HDPE / TO BE REMOVED
VERIZON

MATCHLINE STA. 125+00.00

MATCHLINE STA. 132+00.00

60.00'

28.00'

28.00'

60.00'

104.35'

60.00'

126 127 128 129 130 131

2'-4"X2'-4" SQUARE AT GROUND

2'-4"X2'-4" SQUARE AT GROUND

COPPER PEDESTAL #4416 / TO BE REMOVED
VERIZON

OE / TO REMAIN
FPL TRANSMISSION

PROP. R/W

EXIST. R/W

6" UNK WM / TO REMAIN
MANATEE COUNTY

37TH STREET EAST

0 10 50
Feet

N

PROFILE GRADE LINE

PI +00.00
EL. 14.09

(-) 0.300%

100 YR EL. = 11.25 (DS)
100 YR EL. = 11.52 (US)

EXIST. GROUND

SHW EL. (+) = 9.0

16.81

8.6

11.4

15

10

5

0

125 126 127 128 129 130 131 132

No.	REVISIONS	DATE	BY	SCALE AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE 05/27/14	Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER DONALD R. HOLCOMB	UTILITY ADJUSTMENT SHEET	SHEET NO. 155
				DESIGNED BY JLS		PROJECT NO. 607/160		FL. LICENSE NO. 51970		
				DRAWN BY JHC						
				CHECKED BY DRH						

5-23-14

44TH AVENUE EAST

PROP. R/W

PROP. R/W

PROP. R/W

PROP. R/W

PROP. R/W

PROP. R/W

60.00'

60.00'

104.35'

MATCHLINE STA. 132+00.00

PC STA. 132+96.34

133

134

135

136

137

STA. 137+18.11

MATCHLINE STA. 138+00.00

110.00'

28.00'

40.00'

115.00'

FOC DROP / TO BE REMOVED
VERIZON

COPPER PEDESTAL #4415 / TO BE REMOVED
VERIZON

4" PVC W/ COPPER CABLE / TO BE REMOVED
VERIZON

1-1/4" HDPE / TO BE REMOVED
VERIZON

@ SURVEY & ℄ CONST.

2"x12"x4' SQUARE AT GROUND

OE

OE / TO REMAIN
FPL TRANSMISSION

FPL EASEMENT

18'

0 10 50
Feet

N

PI +00.00
EL. 14.09

(+)0.300X

11.4

15.69

SHW EL. (@B) = 10.5

EXIST. GROUND

100 YR EL. = 11.80 (DS)
100 YR EL. = 11.81(US)

PROFILE GRADE LINE

15

10

5

0

132

133

134

135

136

137

138

Donald R. Holcomb
5-23-14

No.	REVISIONS	DATE	BY	SCALE: AS NOTED DESIGNED BY: JLS DRAWN BY: JHC CHECKED BY: DRH	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE: 05/27/14 PROJECT NO.: 6071160	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER: DONALD R. HOLCOMB FL. LICENSE NO.: 51970	UTILITY ADJUSTMENT SHEET	SHEET NO.: 156

44TH AVENUE EAST

PROP. R/W

39TH STREET EAST

OT / TO REMAIN VERIZON

PROP. R/W

4" HDPE W/ 208 LF OF COPPER CABLE / PROPOSED VERIZON

@ SURVEY & ℄ CONST.

BURIED COPPER CABLE / TO BE REMOVED VERIZON

EXIST. R/W

PT STA. 143+24.00

MATCHLINE STA. 138+00.00

MATCHLINE STA. 144+00.00

COPPER PEDESTAL #414-2.4 / TO BE REMOVED VERIZON

2.4'X2.4' SQUARE AT GROUND GE

BURIED SERVICE WIRE / TO BE REMOVED VERIZON

OF / TO REMAIN FPL DISTRIBUTION

OF / TO REMAIN FPL TRANSMISSION

FPL EASEMENT

EXIST. R/W

COPPER PEDESTAL / PROPOSED VERIZON

BURIED SERVICE WIRE / TO REMAIN VERIZON

OF / TO REMAIN FPL DISTRIBUTION

PROP. R/W

N

0 10 50

Feet

PI +00.00 EL. 16.49

(+) 0.300% (-) 0.300%

PROFILE GRADE LINE

(-) 0.300% (+) 0.300%

PI +00.00 EL. 15.59

SHGWT EL. = 12.9

EXIST. GROUND

SHW EL. = 7.5

15.89

15.89

2.8

0 5 10 15

138 139 140 141 142 143 144

FLORIDA LICENSED PROFESSIONAL ENGINEER NO. 51970 Donald R. Holcomb 5-27-14

No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	JLS
DRAWN BY	JHC
CHECKED BY	DRH

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233
FBPR Certificate of
Authorization No. 4213

DATE 05/27/14

PROJECT NO. 6071160

Manatee County FLORIDA MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER DONALD R. HOLCOMB

FL. LICENSE NO. 51970

UTILITY ADJUSTMENT SHEET

SHEET NO. 157

44TH AVENUE EAST

PROP. R/W

@ SURVEY & ℄ CONST.

EXIST. R/W

MATCHLINE STA. 144+00.00

MATCHLINE STA. 151+00.00

60.00'

28.00'

28.00'

95.45'

40.00'

1001

1000

145 146 147 148 149 150

2.4'X2.4' SQUARE AT GROUND

FPL EASEMENT

FPL EASEMENT

OE / TO REMAIN
FPL TRANSMISSION

BTV / TO REMAIN
BRIGHT HOUSE NETWORKS

EXIST. R/W

0 10 50
Feet

PROFILE GRADE LINE

PI +50.00
EL. 16.94

PI +00.00
EL. 17.69

(+) 0.300% (+) 0.300% (+) 0.300% (-) 0.300%

EXIST. GROUND

SHGWT EL. = 13.3

SHGWT EL. = 14.3

15.89

17.39

14.6

16.1

20 15 10 5

144 145 146 147 148 149 150 151

No.	REVISIONS	DATE	BY	SCALE AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE 05/27/14	DESIGN ENGINEER DONALD R. HOLCOMB
				DESIGNED BY JLS		PROJECT NO. 607/160	FL. LICENSE NO. 51970
				DRAWN BY JHC			
				CHECKED BY DRH			

MANATEE COUNTY PUBLIC WORKS

UTILITY ADJUSTMENT SHEET

SHEET NO. 158

44TH AVENUE EAST

36" WM / TO REMAIN
MANATEE COUNTY

2" BTV CONDUIT / PROPOSED
BRIGHT HOUSE NETWORKS

PROP. R/W

COPPER PEDESTAL #4215 / TO BE REMOVED
VERIZON

2" BTV CONDUIT / PROPOSED
BRIGHT HOUSE NETWORKS

COPPER PEDESTAL #4219 / TO BE REMOVED
VERIZON

℄ SURVEY & ℄ CONST.

EXIST. R/W

BTV / TO BE REMOVED
BRIGHT HOUSE NETWORKS

2"x2" SQUARE
AT GROUND

FPL EASEMENT

BTV / TO REMAIN
BRIGHT HOUSE NETWORKS

2 - 2" BTV CONDUIT / PROPOSED
BRIGHT HOUSE NETWORKS

OE / TO REMAIN
FPL TRANSMISSION

BURIED COPPER CABLE / TO BE REMOVED
VERIZON

8" PVC WM / TO REMAIN
MANATEE COUNTY

FAIRFAX DRIVE EAST

EXIST. R/W

MATCHLINE STA. 144+00.00

MATCHLINE STA. 151+00.00

60.00'
28.00'
40.00'
95.45'

0 10 50
Feet

N

PROFILE GRADE LINE

EXIST. GROUND

SHGWT EL. = 14.3

PI +50.00 EL. 16.94
PI +50.00 EL. 16.94
PI +75.00 EL. 16.30
PI +00.00 EL. 16.53
PI +00.00 EL. 17.69
PI +50.00 EL. 16.94
PI +50.00 EL. 16.94

(+)0.300%
(-)0.300%
(+)0.920%
(-)0.300%
(+)0.300%
(-)0.300%
(+)0.300%
(-)0.300%
(+)0.300%

17.39
16.1
15.4
17.09

DONALD ROBERT HOLCOMB
LICENSE NO. 51970
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-05-14

SCALE AS NOTED	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233 FBPR Certificate of Authorization No. 4213	DATE 05/27/14	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER DONALD R. HOLCOMB	UTILITY ADJUSTMENT SHEET	SHEET NO. 159
DESIGNED BY JLS		PROJECT NO. 6071160		FL. LICENSE NO. 51970		
DRAWN BY JHC						
CHECKED BY DRH						

No.	REVISIONS	DATE	BY