

CONSTRUCTION AGREEMENT

LEE COUNTY, a political subdivision of the State of Florida, by and through its Board of County Commissioners, situated at 2115 Second St., Fort Myers, FL 33901 (the "County"), hereby contracts with AMERICAN INFRASTRUCTURE SERVICES, INC. (the "Contractor") of 11341 Lindbergh Blvd., Fort Myers, FL 33913 a Florida contractor licensed to perform all Work in the State of Florida in connection with the County's Solicitation No. B240297CJV Estero Boulevard Lighting and Sidewalk Improvements (the "Project"), as said Work is set forth in the Plans and Specifications prepared by Stantec, the "Engineer of Record," and other Contract Documents hereafter specified (the "Work").

The County and the Contractor, for the consideration herein set forth, agree as follows:

Section 1. Contract Documents.

A. The Contract Documents consist of this Agreement, the Exhibits described in Section 6 hereof, the legal advertisement, the instructions to bidders, the Proposal and Proposal Forms, the solicitation documents and any duly executed and issued addenda, the Contractor's proposal, Change Orders, Field Directive Change Orders, and amendments relating thereto. All of the foregoing Contract Documents are incorporated by reference and made a part of this Agreement with the exception of the solicitation which shall be incorporated to the extent that it does not conflict with the remainder of the Agreement (all of said documents including the Agreement sometimes being referred to herein as the "Contract Documents" or "Contract" and sometimes as the "Agreement"). A copy of the Contract Documents shall be maintained by Contractor at the Project Site at all times during the performance of the Work.

B. The Engineer of Record is the initial interpreter of the Contract Documents concerning design intent but is not the judge between the County and the Contractor. The County reserves the right to make final decisions considering the Engineer of Record's recommendations or interpretations of the Contract Documents. The Engineer of Record does not have authority to obligate or commit the County to fund additional expenditures or approve extensions of time over the approved Contract Time or Amount. However, the Engineer of Record's interpretation as to the intent of her or his design shall be final and not subject to interpretation by the County's staff.

C. The Construction Engineering and Inspection Consultant ("CEI Consultant") is the initial interpreter of the Contract Documents in all matters not concerning design intent. The CEI Consultant shall administer, monitor, test, sample, and inspect the Construction of the Project to ensure that the Project is constructed in reasonable conformity with the plans, specifications, and special provisions of the Contract Documents and shall observe the Contractor's work to determine the progress and quality of work, identify discrepancies, report significant discrepancies to the County, and direct the Contractor to correct such observed discrepancies. The County reserves the right to make final decisions considering the CEI Consultant's recommendations or

interpretations of the Contract Documents. The CEI Consultant may issue Field Directive Change Orders to the Contractor, but the CEI Consultant does not have authority to change the scope of the Project, obligate or commit the County to fund additional expenditures, or approve extensions of time over the approved Contract Time or Amount. The CEI Consultant shall consult with the Engineer of Record regarding any questions concerning the intent of the Project design.

D. Any Work that may be reasonably inferred from the Plan and Specifications as being required to produce the intended result shall be supplied whether or not it is specifically called for. In case of any inconsistency or conflict among the provisions of the Contract Documents, the order of precedence shall be as follows: (1) Change Orders; (2) the main body of the Agreement, including amendments; (3) the Exhibits to the Agreement; (4) Field Directive Change Orders; (5) the solicitation documents, including any addenda. Exhibit E, Article 5-2 provides the order of precedence for Specifications, Plans, Special Provisions, Technical Special Provisions, and other Project specifications. The Contract Documents represent the entire and integrated Agreement between the parties hereto, and supersede prior negotiations, representations, or agreements, either written or oral.

E. Work, materials or equipment described in words which have a well-known technical or trade meaning, shall be deemed to refer to such recognized standards.

F. The County shall furnish to the Contractor Contract Documents in electronic form and PDF file format.

G. The Contractor agrees to bind specifically every Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the County.

H. The Work to be provided by Contractor for the Project shall be under the general direction of the CEI Consultant, or their successor, who shall act as the County's representative during the term of this Agreement. If the County's representative is not a County employee, then County's representative is not authorized to issue changes to the Contract Amount, Contract Time, or Scope of Work without express approval by the County Director, County Manager, or Board of County Commissioners.

Section 2. Scope of Work.

A. The Contractor agrees to furnish and pay for all management, supervision, financing, labor, materials, tools, transportation, fuel, supplies, utilities, equipment and services of every kind and type necessary to diligently, timely, and fully perform and complete in a good and workmanlike manner the Work required by this Agreement.

B. The Work shall be prosecuted and administered in accordance with the Standard Specifications attached hereto and incorporated herein as Exhibit E.

Section 3. Contract Amount.

A. In consideration of the faithful performance by the Contractor of the covenants in this Contract to the full satisfaction and acceptance of the County, the County agrees to pay, or cause to be paid, to Contractor the following Contract Amount in accordance with the terms of this Agreement: \$3,122,738.05 or in words: Three Million, One Hundred Twenty-Two Thousand, Seven Hundred Thirty-Eight dollars, and Five Cents.

B. Measurement and payment provisions are provided in Division 1, Section 9 of the Standard Specifications attached hereto as Exhibit E.

Section 4. Bonds.

A. The Contractor shall provide and maintain through the life of the Contract, including the warranty period, Performance and Payment Bonds, in the form prescribed in the Exhibits to the Agreement, in the amount of 100% of the Contract Amount, the costs of which are to be paid by Contractor. If the Contract is increased by a Change Order, it shall be the Contractor's responsibility to ensure that the Performance and Payment Bonds are amended accordingly, and a copy of the amendment recorded by the Lee County Clerk of Court and forwarded to the County. The Performance and Payment Bonds shall be underwritten by a Surety authorized to do business in the State of Florida and otherwise acceptable to the County; provided, however, the Surety shall be rated as "A or better" as to general policy holders rating as reported in the most current Best Key Rating Guide, published by A.M. Best Company, Inc. and/or shall be approved by the County prior the issuance of such Bond, which approval shall not be unreasonably withheld.

B. Attorneys-in-fact who sign Bonds for County projects must file with such Bond a certified copy of their Power of Attorney to sign such Bond. All agents of Surety companies must list their name, address, and telephone number on all Bonds. The life of all Bonds provided to the County shall extend twelve (12) months beyond the date of final payment and shall contain a waiver of alternation to the terms of the Agreement, extensions of time and/or forbearance on the part of the County. The County shall not return or release the Bonds for a period of twelve (12) months after the date of final payment to allow time for claims against the Bonds during this period.

C. If the Surety for any Bond furnished by Contractor is declared bankrupt, becomes insolvent, its right to do business is terminated in the State of Florida, or it ceases to meet the requirements imposed by the Contract Documents, the Contractor shall, within five (5) calendar days thereafter, substitute at Contractor's cost another Bond and Surety, both of which shall be subject to the County's approval.

D. If the Contractor cannot obtain another Bond and Surety within five (5) calendar days, the County may accept and the Contractor shall submit an irrevocable letter of credit drawn on a Lee County, Florida bank until the Bond and Surety can be obtained.

E. In case of default on the part of the Contractor, the County will charge against the Contract/Performance Bond all expenses for services incidental to ascertaining and collecting losses under the Contract/Performance Bond, including accounting, engineering, and legal services, together with any and all costs incurred in connection with renegotiation of the Contract.

F. The Surety shall indemnify and provide defense for the County when called upon to do so for all claims or suits against the County, by third parties, pertaining to Contractor payment or performance issues arising out of the Contract where the Contractor has failed to timely provide the County such defense. It is expressly understood that the monetary limitation on the extent of the indemnification shall be the approved Contract amount, which shall be the original Contract amount as may be modified by subsequent Supplemental Agreements.

G. The principal and Surety executing the Contract/Performance Bond shall be liable to the County in any civil action that might be instituted by the County or any officer of the County authorized in such cases, for triple any amount in money or property the County might lose, or be overcharged, or otherwise be defrauded of by any wrongful or criminal act of the Contractor, their agent or their employees.

Section 5. Contract Time and Liquidated Damages

A. Time is of the essence in the performance of the Work under this Agreement. The Commencement Date is established in the Notice to Proceed to be issued by the County, and the Contractor must begin the Work within the number of days specified by the Notice to Proceed. Written Notice to Proceed is contingent upon and will be done subsequent to the Contractor fully satisfying the County's stated insurance and Bond submittal requirements. No Work shall be performed at the Project Site prior to the Commencement Date. Any Work performed by the Contractor prior to the Commencement Date shall be at the sole risk of the Contractor. Final Acceptance of the Work shall be achieved within Four Hundred (400) calendar days from the Commencement Date, and that time period shall be the Contract Time. The date of Final Acceptance of the Work (or designated portions thereof) is the date certified by the Director pursuant to Exhibit E, Article 5-11.

B. Prosecution and progress of the Work provisions are provided in Division 1, Section 8 of the Standard Specifications attached hereto as Exhibit E.

C. The County and the Contractor recognize that, since time is of the essence for this Agreement, the County will suffer financial loss if Final Acceptance of the Work is not achieved within the time specified above, as said time may be adjusted as provided

for herein. Should the Contractor fail to achieve Final Acceptance of the Work within the time period noted above, the County shall be entitled to assess the amount set forth in Article 8-10 of the Standard Specifications, as Liquidated Damages, but not as a penalty, for each calendar day thereafter until Final Acceptance is achieved. Final Acceptance of the Work shall be deemed to occur on the date the Director issues a written notice of Final Acceptance pursuant to the terms hereof. The Contractor hereby expressly waives and relinquishes any right which it may have to seek to characterize the above noted Liquidated Damages as a penalty, which the parties agree represents a fair and reasonable estimate of the County's actual damages at the time of contracting if the Contractor fails to achieve Final Acceptance of the Work in a timely manner.

D. When any period of time is referenced by days herein, it shall be computed to include the first day and last day of such period. All days shall mean calendar day and not business day.

E. Any agreed upon changes to the Contract Time must be accomplished by an approved, written Change Order in the form attached to this Agreement.

Section 6. Exhibits Incorporated.

The following documents are attached and expressly agreed as incorporated into and made a part of this Agreement:

- A. Legal Advertisement
- B. Invitation to Bid and all addenda, including the Project Plans
- C. Bid Form and Required Documents
- D. Form of Public Construction Performance and Payment Bond
- E. Standard Specifications
- F. Insurance Requirements, including Certificates of Insurance
- G. Form of Release and Affidavit
- H. Change Order Form
- I. Supplemental Specifications
- J. Special Provisions
- K. Technical Special Provisions
- L. FDOT and Lee County Design Standards
- M. Developmental Specifications
- N. Contractor's Background Screening Affidavit
- O. Other relevant forms

Section 7. Public Records.

A. In addition to other requirements provided herein, Contractor shall comply with public records laws embodied in Chapter 119, Florida Statutes, and specifically shall:

- A.1. Keep and maintain public records required by the County in order to perform the Scope of Services identified herein.

A.2. Upon request from the County provide the County with any requested public records or allow the requested records to be inspected or copied within a reasonable time by the County.

A.3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement term and thereafter if the Contractor does not transfer all records to the County.

A.4. Transfer, at no cost, to County all public records in possession of the Contractor upon termination of this Agreement and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the County, upon request from the County, in a format that is compatible with the information technology systems of the County. If the Contractor keeps and maintains public records upon the conclusion of this Agreement, the Contractor shall meet all applicable requirements for retaining public records that would apply to the County.

B. If Contractor does not comply with a public records request, the County shall treat that omission as a breach of this Agreement and enforce the Contract provisions accordingly. Additionally, if the Contractor fails to provide records when requested, the Contractor may be subject to penalties under Section 119.10, Florida Statutes, and reasonable costs of enforcement, including attorney fees.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 239-533-2221, 2115 SECOND STREET, FORT MYERS, FL 33901, PRRCustodian@leegov.com; <http://www.leegov.com/publicrecords>.

Section 8. Audit.

A. Upon execution of the Contract, the County reserves the right to conduct an audit of the Contractor's records pertaining to the Project. The County or its representatives may conduct an audit, or audits, at any time prior to final payment, or thereafter pursuant to 5-12 of the Standard Specifications. The County may also require submittal of the records from either the Contractor or any subcontractor or material supplier. As the County deems necessary, records include all books of account, supporting documents, and papers pertaining to the cost of performance of the Work.

B. The Contractor must retain all records pertaining to the Contract for a period of not less than ten (10) years from the date of the Director's final acceptance of the Project, unless a longer minimum period is otherwise specified. Upon request, make all

such records available to the County or its representative(s). For the purpose of this section, records include but are not limited to all books of account, supporting documents, and papers that the County deems necessary to ensure compliance with the provisions of the Contract Documents.

C. If the Contractor fails to comply with these requirements, the County may disqualify or suspend the Contractor from bidding on or working as a subcontractor on future Contracts.

D. The Contractor must ensure that the subcontractors provide access to their records pertaining to the project upon request by the County.

Section 9. Indemnification and Insurance.

A. Contractor agrees to save harmless, indemnify, and defend or, at the option of the County, pay the cost of defense, the County and its representative from any and all claims, losses, penalties, demands, judgments, and costs of suit, including attorneys' fees and paralegals' fees, for any expense, damage or liability incurred by any of them, whether for personal injury, property damage, direct or consequential damages, or economic loss, arising directly or indirectly on account of or in connection with the Work performed by Contractor under this Agreement or by any person, firm or corporation to whom any portion of the Work is subcontracted by Contractor or resulting from the use by Contractor, or by any one for whom Contractor is legally liable, of any materials, tools, machinery or other property of the County. The County and Contractor agree the first \$100.00 of the Contract Amount paid by the County to Contractor shall be given as separate consideration for this indemnification, and any other indemnification of the County by Contractor provided for within the Contract Documents, the sufficiency of such separate consideration being acknowledged by Contractor by Contractor's execution of the Agreement. The Contractor's obligation under this provision shall not be limited in any way by the agreed upon Contract Amount as shown in this Contract or the Contractor's limit of, or lack of, sufficient insurance protection.

B. The Contractor guaranties the payment of all just claims for materials, supplies, tools, or labor and other just claims against him or any subcontractor, in connection with the Contract. The Department's final acceptance and payment does not release the Contractor's bond until all such claims are paid or released.

C. Contractor shall obtain and carry, at all times during its performance under the Contract Documents, insurance of the types and in the amounts set forth in the Insurance Requirements attached to this Agreement. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and/or responsible risk retention group insurance companies which are registered with the State of Florida. Prior to execution of the Agreement, Contractor shall provide the County with properly executed Certificates of Insurance to evidence Contractor's compliance with the insurance requirements of the Contract Documents. Said Certificates of Insurance shall be on forms approved by the County. The Certificates of Insurance shall be personally,

manually signed by the authorized representatives of the insurance company/companies shown on the Certificates of Insurance, with proof that they are authorized representatives thereof. In addition, certified, true and exact copies of all insurance policies required hereunder shall be provided to the County, on a timely basis, when requested by the County.

D. The Certificates of Insurance and required insurance policies shall contain provisions that thirty (30) calendar days prior written notice by registered or certified mail shall be given to the County of any cancellation, intent not to renew, or reduction in the policies or coverages, except in the application of the aggregate limits provisions. In the event of a reduction in the aggregate limit of any policy, Contractor shall immediately take steps to have the aggregate limit reinstated to the full extent permitted under such policy.

E. To the extent multiple insurance coverage and/or County's self-insured retention may apply, any and all insurance coverage purchased by Contractor and its Subcontractors identifying the County as an additional named insured shall be primary. The acceptance by the County of any Certificate of Insurance does not constitute approval or agreement by the County that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate of Insurance is in compliance with the requirements of the Contract Documents. No Work shall commence at the Project Site unless and until the required Certificates of Insurance are received by the County.

F. The Contractor will be fully responsible for all acts and omissions of his Subcontractors and of persons directly or indirectly employed by them and of persons for whose acts they may be liable to the same extent that they are employed by him. Nothing in the Contract Documents shall create any contractual relationship between any Subcontractor and the County. The County may, upon request, furnish to any Subcontractor, to the extent practicable, evidence of amounts paid to the Contractor on account of specific Work done.

G. Contractor shall require each of its Subcontractors to procure and maintain, until the completion of the Subcontractor's work, insurance of the types and to the limits specified in the Insurance Requirements attached to this Agreement, unless such insurance requirements for the Subcontractor are expressly waived in writing by the County. All liability insurance policies, other than professional liability, workers' compensation, employer's liability and business auto liability policies, obtained by Contractor to meet the requirements of the Contract Documents shall name the County and Engineer of Record as additional insureds. If any insurance provided pursuant to the Contract Documents expires prior to the completion of the Work, renewal Certificates of Insurance and, if requested by the County, certified, true copies of the renewal policies, shall be furnished by Contractor within thirty (30) calendar days prior to the date of expiration.

H. Should, at any time, the Contractor not maintain the insurance coverages required herein, the County may terminate the Agreement or at its sole discretion shall be authorized to purchase such coverages and charge the Contractor for such coverages

purchased. The County shall be under no obligation to purchase such insurance, nor shall it be responsible for the coverages purchased or the insurance company or companies used. The decision of the County to purchase such insurance coverages shall in no way be construed to be a waiver of any of its rights under the Contract Documents.

I. Contractor shall submit to Engineer of Record a copy of all accident reports arising out of any injuries to its employees or those of any firm or individual to whom it may have subcontracted a portion of the Work, or any personal injuries or property damages arising or alleged to have arisen on account of any Work by Contractor under the Contract Documents.

Section 10. Compliance with Laws and Regulations

A. Contractor agrees to comply, at its own expense, with all federal, state, and local Laws and Regulations, including federal, state and local laws, codes, statutes, ordinances, rules, regulations and requirements applicable to the Project, including but not limited to those dealing with taxation, workers' compensation, equal employment and safety. If Contractor observes that the Contract Documents are at variance therewith, it shall promptly notify the County and Engineer of Record in writing.

B. Legal Requirements and provisions concerning Laws and Regulations to be observed are provided in Division 1, Section 7 of the Standard Specifications attached hereto as Exhibit E.

Section 11. Warranty

A. Contractor shall obtain and assign to the County all express warranties given to Contractor or any Subcontractors by any materialmen supplying materials, equipment or fixtures to be incorporated into the Project.

B. Contractor warrants to the County that any materials and equipment furnished under the Contract Documents shall be new unless otherwise specified, and that all Work shall be of good quality, free from all defects and in conformance with the Contract Documents. Contractor further warrants to the County that all materials and equipment furnished under the Contract Documents shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturers, fabricators, Suppliers or processors except as otherwise provided for in the Contract Documents. If, within one (1) year after Final Acceptance, any Work is found to be Defective or not in conformance with the Contract Documents, Contractor shall correct it promptly after receipt of written notice from the County. Contractor shall also be responsible for and pay for replacement or repair of adjacent materials or Work which may be damaged as a result of such replacement or repair. These warranties are in addition to those express or implied warranties to which the County is entitled as a matter of law.

C. The Contractor warrants and guarantees that title to all Work, materials and equipment covered by an application for progress payment, whether incorporated in the Project or not, will be passed to the County prior to the next application for progress payment, free and clear of all liens, claims, security interest and encumbrances; and that no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor or by any other person performing the Work at the site or furnishing materials and equipment for the Project subject to an agreement under which an interest therein or encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.

Section 12. Notices.

A. All notices required or made pursuant to this Agreement by the Contractor to the County shall be in writing and delivered by hand or by United States Postal Service, first class mail, postage pre-paid, return receipt requested, or by courier, addressed to the following:

Dave Harner, II
Lee County Manager
P.O. Box 398
Fort Myers, FL 33902

With copies addressed to each of the following:

David Murphy, Project Manager, P.O. Box 398, Fort Myers, FL 33902

Mary Tucker, Procurement Management Director, P.O. Box 398, Fort Myers, FL 33902

Robert Price, Department of Transportation Director, P.O. Box 398, Fort Myers, FL 33902

B. All notices required or made pursuant to this Agreement by the County to Contractor shall be made in writing and shall be delivered by hand, email, or by United States Postal Service, first class mail, postage pre-paid, return receipt requested, or by courier, addressed to the following:

American Infrastructure Services, Inc.

Attention: Doug McIntyre, President

11341 Lindbergh Blvd., Fort Myers, FL 33913

Telephone: 239-206-4411 Fax: 239-206-4412 Email: dmcintyre@ainfraserv.com

C. Either party may change its above noted address by giving written notice to the other party in accordance with the requirements of this Section.

Section 13. Modification.

No modification or change to the Agreement shall be valid or binding upon the parties unless in writing and executed by the appropriate parties intended to be bound by it.

Section 14. Successors and Assigns.

Subject to other provisions hereof, the Agreement shall be binding upon and shall inure to the benefit of the successors and assigns of the parties to the Agreement.

Section 15. No Waiver.

The failure of the County to enforce, at any time or for any period of time, any one or more of the provisions of the Agreement shall not be construed to be, and shall not be, a waiver of any such provision or provisions or of its right thereafter to enforce each and every such provision.

Section 16. Entire Agreement.

Each of the parties hereto agrees and represents that the Agreement comprises the full and entire agreement between the parties affecting the Work contemplated, and no other agreement or understanding of any nature concerning the same has been entered into or will be recognized, and that all negotiations, acts, Work performed, or payments made prior to the execution hereof shall be deemed merged in, integrated and superseded by the Agreement.

Section 17. Severability.

Should any provision of the Agreement be determined by a court to be unenforceable, such a determination shall not affect the validity or enforceability of any other section or part thereof.

[Remainder of this page left intentionally blank.]

IN WITNESS WHEREOF, the parties have executed this Agreement on the date(s) indicated below.

WITNESS:

CONTRACTOR:
AMERICAN INFRASTRUCTURE SERVICES, INC.

Signed By: Jalen Soto
Print Name: Jalen Soto

Signed By: Doug McIntyre
Print Name: Doug McIntyre

Title: President/Owner

Date: 8/16/2024

OWNER: LEE COUNTY

BOARD OF COUNTY COMMISSIONERS
OF LEE COUNTY, FLORIDA

Signed By: _____

Print Name: _____

Title: _____

Date: _____

ATTEST:
CLERK OF THE CIRCUIT COURT

BY: _____
DEPUTY CLERK

APPROVED AS TO FORM FOR THE
RELIANCE OF LEE COUNTY ONLY:

BY: _____
OFFICE OF THE COUNTY ATTORNEY

**EXHIBIT A
LEGAL ADVERTISEMENT**



Florida

PO Box 631244 Cincinnati, OH 45263-1244

GANNETT

AFFIDAVIT OF PUBLICATION

Monica Busbee
Lebc-Purchasing
2115 2Nd ST # 1
Fort Myers FL 33901-3012

**B240297CJV
Estero Boulevard Lighting and
Sidwalk Improvements
Invitation to Bid**

Lee County Procurement Management will receive sealed proposals in the Office of the Procurement Management Director, 2115 Second Street 1st Floor, Fort Myers, FL 33901 prior to 2:30 pm on Friday, May 24, 2024 from companies wishing to provide these goods/services to the County. No pre-solicitation meeting is scheduled. Solicitation documents and instructions may be secured from the website: www.leegov.com/procurement or by calling Procurement Management at (239) 533-8881.
April 23, 2024 10095637

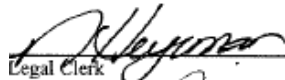
STATE OF WISCONSIN, COUNTY OF BROWN

Before the undersigned authority personally appeared, who on oath says that he or she is the Legal Advertising Representative of the News-Press, a daily newspaper published at Fort Myers in Lee County, Florida; that the attached copy of advertisement, being a Legal Ad in the matter of Public Notices, was published on the publicly accessible website of Lee County, Florida, or in a newspaper by print in the issues of, on:

04/23/2024

Affiant further says that the website or newspaper complies with all legal requirements for publication in chapter 50, Florida Statutes.

Subscribed and sworn to before me, by the legal clerk, who is personally known to me, on 04/23/2024



Legal Clerk



Notary, State of WI, County of Brown

8-21-26

My commission expires

Publication Cost: \$69.60
Order No: 10095637 # of Copies:
Customer No: 1124424 1
PO #:

THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

NICOLE JACOBS
Notary Public
State of Wisconsin

EXHIBIT B
INVITATION TO BID



Advertise Date: Tuesday, April 23, 2024

Lee County Board of County Commissioners
DEPARTMENT OF PROCUREMENT MANAGEMENT

Invitation to Bid (B)
DOT Construction Only

Solicitation No.: **B240297CJV**

Solicitation Name: **Estero Boulevard Lighting and Sidewalk Improvements**

Open Date/Time: **Friday, May 24, 2024** Time: **2:30 PM**

Location: **Lee County Procurement Management
2115 Second Street, 1st Floor
Fort Myers, FL 33901**

Procurement Contact: **Christy VanAllen** Title **Procurement Analyst**

Phone: **(239) 533-8839** Email: cvanallen@leegov.com

Requesting Dept. **Transportation**

Pre-Bid Conference: Type: No meeting scheduled at this time

All solicitation documents are available for download at
www.leegov.com/procurement



Advertisement Date: Tuesday, April 23, 2024

INTRODUCTIONS AND BACKGROUND

Notice to Bidder

Invitation to Bid (B) Construction

Lee County, Florida, is requesting bids from qualified individuals/firms for

B240297CJV Estero Boulevard Lighting and Sidewalk Improvements

Then and there to be publicly opened and read aloud for the purpose of selecting a vendor to furnish all necessary labor, services, materials, equipment, tools, consumables, transportation, skills, and incidentals required for Lee County, Florida, in conformance with the Solicitation Documents, which include technical Specifications and/or a Scope of Work.

Those individuals/firms interested in being considered for this Solicitation are instructed to submit, in accordance with the Specifications, their Bids, pertinent to this project prior to

2:30 PM Friday, May 24, 2024

to the office of the **Procurement Management Director, 2115 Second Street, 1st Floor, Fort Myers, Florida 33901**. The Invitation to Bid shall be received in a sealed envelope, prior to the time scheduled to receive Bid(s), and shall be clearly marked with the Solicitation name, Solicitation number, Bidder name, and contact information as identified in these Solicitation Documents.

The Scope of Work/Specifications for this solicitation is available from www.leegov.com/procurement. Bidders who obtain Scope of Work/Specifications from sources other than www.leegov.com/procurement are cautioned that the solicitation package may be incomplete. The County's official bidders list, addendum(s) and information must be obtained from www.leegov.com/procurement. It is the bidder's responsibility to check for posted information. The County may not accept incomplete Bids.

It has been determined that the specifications and scope of work within this solicitation are adequate to describe the product or services being requested. A pre-bid conference and site visit has not been scheduled for this solicitation. Questions regarding this solicitation are to be directed, in writing, to the individual listed below using the email address listed below or faxed to (239) 485 8383 during normal working hours.

Christy VanAllen cvanallen@leegov.com

Sincerely,

A blue ink handwritten signature, appearing to read "Adam Brooke", is written over a white background.

Adam Brooke, CPPC, CPPB
Procurement Manager

*WWW.leegov.Com/Procurement is the County's official posting site

Terms and Conditions

INVITATION TO BID (B) CONSTRUCTION

1. DEFINITIONS. Additional definitions may be found in the Draft Construction Agreement attached hereto.
 - 1.1. **Addendum/Addenda:** A written document used to modify the terms of a procurement instrument (such as an Invitation to Bid or Request for Proposals). An addendum is not to be confused with a contract "amendment."
 - 1.2. **Approved Alternate:** Solicitation documents may make reference of specific manufacturer(s) or product(s). These references serve only as a recommendation and a guide to minimum quality and performance. The references are not intended to exclude Approved Alternatives of other manufacturer(s) or product(s).
 - 1.3. **Award:** The determination of a successful Bidder(s) in response to this Solicitation.
 - 1.4. **Bid/Proposal Package:** An offer specifically given to the County in response to an informal or competitive procurement invitation issued by the County. This is also referred to as a "Response."
 - 1.5. **Bid Bond/Security:** Security in the form and amount required by the County pledging that the Bidder shall enter into a Contract with the County in accordance with the terms stated in its Bid.
 - 1.6. **Bidder:** Any individual, firm, partnership, joint venture, or corporation submitting a Bid for this project, acting directly or through an authorized representative.
 - 1.7. **County:** The Board of County Commissioners of Lee County, Florida, a political subdivision of the State of Florida, its successors, and assigns.
 - 1.8. **Contract/Agreement:** The written contract between the County and a successful Bidder pursuant to this Solicitation, a draft copy of which is attached hereto.
 - 1.9. **Contract Documents:** The documents listed in Section 1 of the attached draft Agreement.
 - 1.10. **Department of Procurement Management:** Shall mean the Lee County Department of Procurement Management.
 - 1.11. **Due Date and Time/Opening:** The date and time upon which a Bid or Proposal shall be submitted to, and actually received by, the Lee County Department of Procurement Management. Only Bids or Proposals received prior to the established date and time shall be considered.
 - 1.12. **Liquidated Damages:** Damages, usually in the form of monetary payment, agreed to by the parties to a contract which are due and payable as damages in the event of a breach of all or part of such contract. Liquidated Damages may be applied on a daily basis for as long as the breach is in effect.
 - 1.13. **Local Bidder:** Any Vendor whose physical business address, in the sole opinion of the County, is located within the boundaries of Lee County, Florida; at least two (2) fulltime employees in Lee County; and a Local Business Tax Receipt issued by Lee County at least one year prior to solicitation opening.
 - 1.14. **Responsible Bidder:** A Bidder submitting a Response who has the capability in all respects to perform fully the Contract requirements and the experience, capacity, facilities, equipment, credit, sufficient qualified personnel, and having the integrity and reliability with a record of timely and acceptable past performance that will ensure good faith performance.
 - 1.15. **Responsive Bidder:** A Bidder submitting a Response that substantially conforms with all material respects to the requirements and criteria set forth in this Solicitation.
 - 1.16. **Solicitation/Solicitation Documents:** This document, its attachments, and any document hereinafter incorporated by reference.
 - 1.17. **Work:** All labor, materials, equipment, and incidentals required to fully, finally, and properly complete the construction project described herein and otherwise fully, finally and properly comply with all terms and conditions of the Contract Documents.
2. ORDER OF PRECEDENCE
 - 2.1. In resolving conflicts, errors, and discrepancies among the provisions of the Contract Documents, the order of precedence shall be as follows
 - 2.1.1. Florida State Law as applied to County Purchasing
 - 2.1.2. Lee County Procurement Ordinance 22-06 & 23-21

- 2.1.3. Change Orders
- 2.1.4. Contract/Agreement including amendments and Exhibits
- 2.1.5. Field Directive Change Orders
- 2.1.6. The Solicitation Documents, including any Addenda

3. RULES, REGULATIONS, LAWS, ORDINANCES AND LICENSES

- 3.1. It shall be the responsibility of the Bidder to ensure compliance with all federal, state, or county codes, rules, regulations, or other requirements, as each may apply.
- 3.2. **Local Business Tax Account:** As applicable, anyone providing merchandise or services to the public within the jurisdiction of Lee County must obtain a Lee County business tax account to operate unless specifically exempted.
- 3.3. **License(s):** Bidder should provide, at the time of the opening of the Bid, licenses required for this product and/or service.

4. PREPARATION OF SUBMITTAL

- 4.1. **Sealed Bid:** Submission must be in a sealed envelope/box, and the outside of the submission should be marked with the following information (Sealed Bid Label Form is attached for your use):
 - 4.1.1. "Sealed Bid"
 - 4.1.2. Bid number
 - 4.1.3. Bid title
 - 4.1.4. Bid due date
 - 4.1.5. Name of the Bidder submitting the Bid
 - 4.1.6. Bidder's Contact e-mail and telephone number
- 4.2. **Bid submission shall:**
 - 4.2.1. Provide two (2) hard copies. Mark one "Original," one "Copy."
 - 4.2.2. Provide one (1) electronic flash drive set of the entire submission documents.
 - 4.2.3. Provide that the electronic submission document is one single Adobe PDF file in the same order as the original hard copy.
 - 4.2.4. Limit the color and number of images to avoid unmanageable file sizes.
 - 4.2.5. Not lock files.
- 4.3. **Submission Format:**
 - 4.3.1. Required Forms: complete and return **all** required forms. If the form is not applicable, please return with "Not Applicable" or "N/A" in large letters across the form.
 - 4.3.2. Failure to submit required or requested information may result in the Bidder being considered non-responsive.
 - 4.3.3. Execution of Bid: All documents must be signed by a corporate authorized representative, witnessed, and corporate and/or notary seals affixed, where applicable. All Bids shall be typed or printed in ink. The Bidder may not use erasable ink. All corrections made to the Bids shall be initialed.
 - 4.3.4. The County may request specific files be submitted in specialty format (i.e. Microsoft Excel, PowerPoint etc.). Vendor shall accommodate such specialty requests as stated or described herein. Should files not be provide in the format or quantity as requested Bidder may be deemed non-Responsive and therefore ineligible for award.
 - 4.3.5. The submission should not contain links to other web pages.
 - 4.3.6. Include any information requested by the County necessary to analyze your Bid, i.e., required submittals, literature, technical data, or financial statements.
 - 4.3.7. Bid Security/Bond(s), as applicable.
- 4.4. **Preparation Cost:** The Bidder is solely responsible for any and all costs associated with responding to this Solicitation. No reimbursement shall be made for any costs associated with the preparation and submittal of any Bid, or for any travel and per diem costs that are incurred by any Bidder.

5. RESPONSES RECEIVED LATE

- 5.1. It shall be the Bidder's sole responsibility to deliver the Bid submission to the Lee County Department of Procurement Management prior to or on the time and date required. All references to date and time herein reference Lee County, FL local time.
 - 5.2. Any Bids received after the stated time and date shall not be considered. Late Bids shall not be opened at the public opening.
 - 5.3. The Lee County Department of Procurement Management shall not be responsible for delays caused by the method of delivery such as, but not limited to internet, United States Postal Service, overnight express mail service(s), or delays caused by any other occurrence.
6. BIDDER REQUIREMENTS (unless otherwise noted)
- 6.1. **Responsive and Responsible Bidders:** Only Bids received from Responsive and Responsible Bidders shall be considered. The County reserves the right, before recommending any Award, to inspect the facilities and organization; or to take any other necessary action, such as background checks, to determine if the Bidder is satisfactorily able to perform and reserves the right to reject submission packages where evidence submitted, or investigation and evaluation indicates an inability for the Bidder to perform.
 - 6.1.1. Additional sources may be utilized to determine credit worthiness and ability to perform.
 - 6.1.2. Any Bidder or sub-contractor that will have access to County facilities or property may be required to be screened to a level that may include but is not limited to fingerprinting and a statewide criminal background check. There may be fees associated with these procedures. These costs are the responsibility of the Bidder or sub-contractor.
 - 6.1.3. Bidders are responsible for ensuring that any required background screening are conducted in accordance with Chapter 435. Bidders shall be aware, understand, and ensure compliance with the statutory requirements regarding background checks. FL Statutes Chapter 435 governs required background screenings for any employees, contractors, subcontractors, or agents of the Bidder who will have contact with any vulnerable person, as defined by statute, or who otherwise are required to undergo a Level 1 or Level 2 background screening in accordance with Florida law. Such requirements shall flow down to sub-contractors/consultants of the prime Bidder and prime Bidder shall ensure compliance with Chapter 435 of such parties.
 - 6.1.3.1. Documentation of such completed background screenings must be maintained for a period of no less than five (5) years and are subject to audit by Lee County at any time during such five (5) year period.
 - 6.2. **Past Performance:** A Bidder's past performance and prior dealings with Lee County (i.e., failure to meet specifications, poor workmanship, late delivery, etc.) may be reviewed. Poor or unacceptable past performance may result in Bidder disqualification.
 - 6.3. **Prohibition Against Considering Social, Political Or Ideological Interests in Government Contracting – F.S. 287.05701:** Bidders are hereby notified of the provisions of section 287.05701, Florida Statutes, as amended, that the County will not request documentation of or consider a Bidder's social, political, or ideological interests when determining if the Bidder is a responsible Bidder. Bidders are further notified that the County's governing body may not give preference to a Bidder based on the Bidder's social, political, or ideological interests.
7. PRE-BID CONFERENCE
- 7.1. A pre-bid conference will be held in the location, date, and time specified on the cover of this Solicitation. The cover will also note if the pre-bid conference is non-mandatory or mandatory. All prospective Bidders are encouraged to obtain and review the Solicitation Documents prior to the pre-bid conference so they may be prepared to discuss any questions or concerns they have concerning this project. All questions must be submitted formally in writing to the procurement staff noted on the first page of the Solicitation Documents. A formal response will be provided in the form of an Addendum (see "County Interpretation/Addendums" for additional information). If appropriate, a site visit may follow the pre-bid conference.
 - 7.2. **Non-Mandatory:** Pre-bid conferences are generally non-mandatory, but it is highly recommended that prospective Bidders participate.
 - 7.3. **Mandatory:** In the event a mandatory pre-bid conference is held, no Bids shall be considered by Bidders that fail to attend, and a Bid submitted by any such Bidder shall be considered **non-responsive**.

8. COUNTY INTERPRETATION/ADDENDUMS

- 8.1. Each Bidder shall examine the Solicitation 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 the Bid shall be made **in writing, submitted at least eight (8) calendar days prior to the date when the Bid is due.**
- 8.2. Response(s) will be in the form of an Addendum posted on www.lee.gov/procurement. It is solely the Bidder's responsibility to check the website for information. The Lee County Department of Procurement Management will send no notifications regarding postings associated with this solicitation.
- 8.3. All Addenda shall be incorporated into the Contract Documents.
- 8.4. The County shall not be responsible for oral interpretations given by any County employee, representative, agent, or other person. Interpretation of the meaning of the plans, Specifications, or any other Contract Document, or for correction of any apparent ambiguity, inconsistency, or error there in, shall be in writing. Issuance of a written Addendum by the County's Department of Procurement Management is the only official method whereby interpretation, clarification or additional information may be given.

9. QUALITY GUARANTEE/WARRANTY (as applicable)

- 9.1. Bidder will guarantee their work without disclaimers, unless otherwise specifically approved by the County, for a minimum of twelve (12) months from the date of final completion.
- 9.2. Unless otherwise specifically provided in the specifications, all equipment and materials and articles incorporated in the work covered by this contract shall be new, unused and of the most suitable grade for the purpose intended. Refurbished parts or equipment are not acceptable unless otherwise specified in the specifications. All warranties will begin from the date of final completion.
- 9.3. Unless otherwise specifically provided in the specifications, the equipment must be warranted for twelve (12) months, shipping, parts, and labor. Should the equipment be taken out of service for more than forty-eight (48) hours to have warranty work performed, a loaner machine of equal capability or better shall be provided for use until the repaired equipment is returned to service at no additional charge to the County.
- 9.4. If any product does not meet performance representation or other quality assurance representations as published by manufacturers, producers or distributors of such products or the specifications listed, the vendor shall pick up the product from the County at no expense to the County. The County reserves the right to reject any or all materials, if in its judgment the item reflects unsatisfactory workmanship or manufacturing or shipping damage. The vendor shall refund, to the County, any money which has been paid for same.

10. SUBSTITUTION(S)/APPROVED ALTERNATE(S)

- 10.1. Unless otherwise specifically provided in the Specifications, 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. If a Bidder wishes to make a substitution in the Specifications, the Bidder shall furnish to the County, **no later than ten (10) business days prior to the Bid opening date**, the name of the manufacturer, the model number, and other identifying data and information necessary to aid the County in evaluating the substitution. Such information is submitted through the Department of Procurement Management. Any such substitution shall be subject to County approval through the issuance of a written Addendum by the County's Department of Procurement Management. Substitutions shall be approved only if determined by the County to be an **Approved Alternate** to the prescribed Specifications.
- 10.2. A Bid containing a substitution is subject to disqualification if the substitution is not approved by the County. Items Bid must be identified by brand name, number, manufacturer, and model, and shall include full descriptive information, brochures, and appropriate attachments. Brand names are used for descriptive purposes only. An **Approved Alternate** product or service may be used.

11. ADDITIONS, REVISIONS AND DELETIONS

- 11.1. Additions, revisions, or deletions to the Terms and Conditions, specifications that change the intent of the solicitation will cause the solicitation to be non-responsive and the proposal will not be considered. The

Procurement Management Director shall be the sole judge as to whether or not any addition, revision, or deletion changes the intent of the solicitation.

12. NEGOTIATED ITEMS

- 12.1. Any item not outlined in the Scope of Work/Specifications may be subject to negotiations between the County and the successful Bidder.
- 12.2. After Award of this Bid, the County reserves the right to add or delete items/services at prices to be negotiated at the time of addition or deletion.
- 12.3. At contract renewal time(s) or in the event of significant industry wide market changes, the County may negotiate justified adjustments such as price, terms, etc., if in its sole judgment, the County considers such adjustments to be in their best interest.

13. CALCULATION ERRORS

- 13.1. In the event of multiplication/addition error(s), the unit price shall prevail, and the corrected sum shall be considered the bid price. All Bids will be reviewed mathematically and corrected, if necessary, using these standards, prior to further evaluation.

14. CONFIDENTIALITY

- 14.1. Bidders should be aware that all submissions provided are generally considered public records subject to public disclosure upon conclusion of the Solicitation process, and shall **not** be afforded confidentiality, unless otherwise provided by law.
- 14.2. If information is submitted with a Bid that is deemed “confidential,” the Bidder must stamp those pages of the submission that are considered confidential. The Bidder must provide sufficient documentation demonstrating why such documents should be deemed confidential in accordance with Florida law.
- 14.3. Lee County **will not reveal engineering estimates or budget amounts for a project** unless required by grant funding or unless it is in the best interest of the County. Pursuant to § 337.168, F.S.: A document or electronic file revealing the official cost estimate of the department of a project is confidential and exempt from the provisions of § 119.07(1), F.S. until the Contract for the project has been executed or until the project is no longer under active consideration.

15. CONFLICT OF INTEREST

- 15.1. **Business Relationship Disclosure Requirement:** The Award hereunder is subject to the provisions of Chapter 112, F.S. All Bidders must disclose with their submission the name of any officer, director or agent who is also an officer or employee of Lee County or any of its agencies or a spouse or child of such officers or employees. Furthermore, all Bidders must disclose the name of any County officers, employees, or spouses or children thereof who own directly or indirectly, an interest of five percent (5%) or more in the Bidder’s firm or any of its branches.
- 15.2. A Vendor that assisted in preparing and/or writing a scope of work and/or specifications may not submit a bid or proposal for County consideration on that project.

16. ANTI-LOBBYING CLAUSE (Cone of Silence)

- 16.1. Upon the issuance of the Solicitation, prospective Bidders, or any agent, representative or person acting at the request of said Bidder shall not have any contact, communicate with or discuss any matter relating in any way to the Solicitation with any commissioner, evaluation review committee, agent or employee of the County other than the Procurement Management Director or their designee. This prohibition begins with the issuance of any Solicitation and ends upon issuance of the Notice of Intended Decision, the rejection of all responses, or the termination of this competitive procurement. **If it is determined that improper communications were conducted, the Bidder may be declared non-responsible.**

17. ANTITRUST VIOLATION

- 17.1. A person or an affiliate who has been placed on the antitrust violator vendor list, available at [Antitrust Violator Vendor List / Vendor Registration and Vendor Lists / State Agency Resources / State Purchasing / Business Operations / Florida Department of Management Services - DMS \(myflorida.com\)](#), following a

conviction or being held civilly liable for an antitrust violation may not submit a bid, proposal, or reply for any new contract to provide any goods or services to Lee County; may not submit a bid, proposal, or reply for a new contract with Lee County for the construction or repair of a public building or public work; may not submit a bid, proposal, or reply on new leases of real property to Lee County; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a new contract with Lee County; and may not transact new business with Lee County.

18. DRUG FREE WORKPLACE

- 18.1.** The County encourages Drug Free Workplace programs.

19. FLORIDA CERTIFIED ENTERPRISES

- 19.1.** The County encourages the use of Florida Certified Enterprises such as Disadvantaged, Minority, Women, Veterans Business Enterprise (DBE, MBE, WBE, VBE) firms.
- 19.2.** Bidder/Proposer is requested to indicate whether the Firm and/or any proposed sub-consultants are a Florida Certified Enterprise. Lee County encourages the utilization and participation of DBE, MBE, WBE, VBE or similar in procurements, and evaluation proceedings will be conducted within the established guidelines regarding equal employment opportunity and nondiscriminatory action based upon the grounds of race, color, sex or national origin. Interested Florida Certified Enterprises such as Disadvantaged, Minority, Women, Veterans Business Enterprise (DBE, MBE, WBE, VBE) firms and similar are encouraged to submit.

20. ANTI-DISCRIMINATION/EQUAL EMPLOYMENT OPPORTUNITY

- 20.1.** The Bidder agrees to comply, at its own expense, with all federal, state, and local laws and regulations, including federal, state, and local laws, codes, statutes, ordinances, rules, regulations, and requirements applicable to the Work, including but not limited to those dealing with taxation, workers' compensation, equal employment and safety. Bidder acknowledges and agrees, in accordance with, the Rehabilitation Act of 1973 as amended, the Americans with Disabilities Act of 1990 (ADA), and the ADA Amendments Act of 2008 (ADAAA), that in performing the Work hereunder, no person on the grounds of race, religion, color, age, sex, national origin, disability or marital status shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination.
- 20.2.** The Bidder shall not discriminate against any employee or applicant for employment because of race, religion, color, age, sex, national origin, disability, or marital status. The Bidder shall make affirmative efforts to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, age, sex, national origin, disability, or marital status.
- 20.3.** The Bidder shall include the provisions of this section in every sub-contract under this Contract to ensure its provisions will be binding upon each sub-contractor. The Bidder shall take such actions in respect to any sub-contractor, as the contracting agency may direct, as a means of enforcing such provisions, including sanctions for non-compliance.
- 20.4.** An entity or affiliate who has been placed on the State of Florida's Discriminatory Vendor List (this list may be viewed by going to the Department of Management Services website at <http://www.dms.myflorida.com>) may not submit a Bid on a contract to provide goods or services to a public entity, may not submit a Bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit Bids on leases of real property to a public entity, may not award or perform work as a vendor, supplier, sub-contractor, or consultant under contract with any public entity, and may not transact business with any public entity.

21. SUB-CONTRACTORS

- 21.1.** The use of sub-contractors under this Solicitation requires prior written authorization from the County representative.

22. PROJECT GUIDELINES (as applicable)

22.1. The County has established the following guidelines, criteria, goals, objectives, constraints, schedule, budget and or requirements which shall serve as a guide to the Bidder(s) in performing the Work provided for pursuant to this Contract:

- 22.1.1.** No amount of Work is guaranteed upon the execution of a Contract.
- 22.1.2.** Rates and all other negotiated expenses shall remain in effect throughout the duration of the Contract period inclusive of any renewals unless otherwise specified herein.
- 22.1.3.** This Contract does not entitle any Bidder to exclusive rights to County contracts. The County reserves the right to perform any and all available required Work in-house or by any other means it so desires.
- 22.1.4.** In reference to vehicle travel, mileage and man-hours spent in travel, time is considered incidental to the Work and not an extra compensable expense.
- 22.1.5.** Lee County reserves the right to add or delete, at any time, any or all material, tasks or services associated with this Contract.
- 22.1.6.** Any Single Large Project: The County, in its sole discretion, reserves the right to separately solicit any project that is outside the scope of this Solicitation, whether through size, complexity or the dollar value.
- 22.1.7.** Background Check(s): The County is committed to maintaining a safe and secure environment. The following shall apply to the contractor, contractor employees, employees hired through a third-party staffing vendor, subcontractors and any other staffing that may be working in or around a County Facility, School, Library, and other locations as deemed necessary.
Upon written request by Lee County Procurement Management, the contractor at its expense must conduct a background check for each of its employees, as well as for the employees of its subcontractors, who will provide services to the County or have access to the County computer systems, through either onsite or remote access. Contractor employees, for the purpose of this requirement, include such temporary staff as office support, custodial service, and any third-party vendor. Background checks shall be conducted through the Florida Department of Law Enforcement and provided to Lee County Procurement Management Department at procurement@leegov.com. Background checks must be conducted prior to commencement of said project(s).

23. TIEBREAKER

- 23.1.** Whenever two or more Bids, which are equal with respect to price, quality, and service, are received for procurement of commodities or contractual services, from Responsive and Responsible Bidders, the following steps shall be taken to establish the Award to the lowest Bidder. This method shall be used for all ties.
 - 23.1.1.** Step 1 - Local Bidder: Between a Local Bidder, and a non-Local Bidder, a Contract Award, or the first opportunity to negotiate, as applicable, shall be made to the Local Bidder. **If local preference is prohibited by the funding source, then step 2 will replace step 1.**
 - 23.1.2.** Step 2 - Drug Free Workplace: At the conclusion of step 1, if all is equal, the Bidder with a Drug Free Workplace program shall be given preference over a Bidder with no Drug Free Workplace program. The Contract Award, or the first opportunity to negotiate, as applicable, shall be made to the Bidder with the Drug Free Workplace program.
 - 23.1.3.** Step 3 - Coin Flip: At the conclusion of Step 1 and Step 2, if all is equal, the Contract Award, or the first opportunity to negotiate, as applicable, the final outcome shall be determined by the flip of a coin.
- 23.2.** When the tie has been broken pursuant to the above procedures, the Contract Award, or the first opportunity to negotiate, as applicable, shall be furnished to the prevailing Bidder.
- 23.3.** If an Award or negotiation is unsuccessful with the initial Bidder, Award or negotiations may commence with the next highest Bidder, utilizing the tiebreaker steps above to make the determination of next lowest Bidder, if necessary.

24. WITHDRAWAL OF BID

- 24.1.** No Bid may be withdrawn for a period of **180 calendar days** after the scheduled time for receiving submissions. A Bid may be withdrawn prior to the Solicitation opening date and time. Withdrawal requests must be made in writing to the Procurement Management Director, who will approve or disapprove the request.

- 24.2. After submissions are opened, but prior to Award of the Contract by the County Commission, the Procurement Management Director may allow the withdrawal of a Bid because of the mistake of the Bidder in the preparation of the submission document. In such circumstance, the decision of the Procurement Management Director to allow the submission withdrawal, although discretionary, shall be based upon a finding that the Bidder, by clear and convincing evidence, has met each of the following four tests:
- 24.2.1. The Bidder acted in good faith in submitting the Bid;
 - 24.2.2. The mistake in Bid preparation was of such magnitude that to enforce compliance by the Bidder would cause a severe hardship on the Bidder;
 - 24.2.3. The mistake was not the result of gross negligence or willful inattention by the Bidder; and
 - 24.2.4. The mistake was discovered and was communicated to the County prior to the County Commission having formally Awarded the Contract.

25. PROTEST RIGHTS

- 25.1. Any Bidder that has submitted a formal Response to Lee County, and who is adversely affected by an intended decision with respect to the Award, has the right to protest an intended decision posted by the County as part of the Solicitation process.
- 25.2. Notice of Intended Decision is posted on the Lee County Department of Procurement Management website (www.leegov.com/procurement). Bidders are solely responsible to check for information regarding the Solicitation.
- 25.3. Refer to the "Procurement Protest" section of the Lee County Procurement Ordinance 22-06 & 23-21 for a complete description of the protest process and associated requirements. The ordinance is posted on the Lee County website or may be obtained by contacting the Procurement Management Director.
- 25.4. In order to preserve the right to protest, a written "**Notice of Intent to File a Protest**" **must be filed with the Lee County Procurement Management Director within seventy-two (72) hours of Posting of the Notice of Intended Decision.**
 - 25.4.1. The notice shall clearly indicate all grounds being claimed for the protest.
 - 25.4.2. The notice must be physically received by the Procurement Management Director within the required time frame described above. No additional time will be granted for mailing.
- 25.5. Following receipt of the Notice of Intent to File a Protest, a "**Protest Bond**" and "**Formal Written Protest**" must be filed **within ten (10) business days** of Posting of the Notice of Intended Decision.
- 25.6. **Failure to follow the protest procedures requirement within the time frames as prescribed herein and in the Lee County Procurement Ordinance 22-06 & 23-21 shall constitute a waiver of the right to protest and shall bar any resulting claims.**

26. AUTHORITY TO UTILIZE BY OTHER GOVERNMENT ENTITIES

- 26.1. This procurement opportunity is also made available to any government entity. Pursuant to their own governing laws, and subject to the Agreement/Contract of the Bidder, other entities may be permitted to make purchases at the terms and conditions contained herein. The Lee County Board of County Commissioners shall not be financially responsible for the purchases of other entities from this Solicitation.

27. CONTRACT ADMINISTRATION

- 27.1. **Designated Contact:**
 - 27.1.1. The Awarded Bidder shall appoint a person(s) to act as a primary contact for all County departments. This person or their designee shall be readily available during normal working hours by phone or in person and shall be knowledgeable of the terms and procedures involved.
 - 27.1.2. Lee County requires that the Awarded Bidder provide the name of a contact person(s) and phone number(s) which will afford Lee County access twenty-four (24) hours per day, 365 days per year, in the event of major breakdowns or natural disasters.
- 27.2. **Basis of Award:**
 - 27.2.1. The County shall issue a Notice of Intended Decision to the lowest Responsive and Responsible Bidder who submits a Bid.
 - 27.2.2. In the event the lowest Responsive and Responsible Bid exceeds the architectural or engineering cost estimates or the amount of available funds, the County Administrator or designee may, when time or

economic considerations preclude re-bidding of Work of a reduced scope, negotiate an adjustment of the Scope of Work with the lowest Responsive and Responsible Bidder, in order to bring the Bid within the amount of available funds.

27.2.3. The County reserves the right to make Award(s) by individual item, group of items, all or none, or a combination thereof. The County reserves the right to reject any and all Bids or to waive any minor irregularity or technicality in the Bids received. Award shall be made to the lowest Responsive and Responsible Bidder(s) within the category chosen for basis of Award.

27.2.4. The County reserves the right to Award to one or multiple Bidders at the discretion of the requesting authority and approval of the Procurement Management Director.

27.3. Contract:

27.3.1. The Awarded Bidder will be required to enter into the Contract with the County and will be required to perform the Work in accordance with the Contract terms and conditions. The draft Contract is attached to this Solicitation and incorporated herein by reference. The Contract may be viewed online at <http://www.leegov.com/procurement/forms>.

27.4. Records:

27.4.1. Retention: The Bidder shall maintain such financial records and other records as may be prescribed by Lee County or by applicable federal and state laws, rules, and regulations. Unless otherwise stated in the Specifications, the Bidder shall retain these records for a period of ten (10) years after final payment, or until they are audited by Lee County, whichever event occurs first.

27.4.2. Right to Audit/Disclosure: These records shall be made available during the term of the Contract as well as the retention period. These records shall be made readily available to County personnel with reasonable notice and other persons in accordance with the Florida General Records Schedule. Awarded Bidder(s) are hereby informed of their requirement to comply with Chapter 119, F.S., specifically to:

27.4.2.1. Keep and maintain public records required by the County to perform the service.

27.4.2.2. Upon request from the County's custodian of public records, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided or as otherwise provided by law.

27.4.2.3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Contract term and following completion of the Contract if the contractor does not transfer the records to the County.

27.4.2.4. Upon completion of the Contract, transfer, at no cost, to the County all public records in possession of the Bidder or keep and maintain public records required by the County to perform the service. If the Bidder transfers all public records to the County upon completion of the Contract, the Bidder shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Bidder keeps and maintains public records upon completion of the Contract, the Bidder shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the County, upon request from the County's custodian of public records, in a format that is compatible with the information technology systems of the County.

27.4.3. Public Records: IF THE BIDDER HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE BIDDER'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THE CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 239-533-2221, 2115 SECOND STREET, FORT MYERS, FL 33901, Email at PRRCustodian@leegov.com or Visit <http://www.leegov.com/publicrecords>.

27.4.4. Ownership: It is understood and agreed that all documents, including detailed reports, plans, original tracings, specifications, and all data prepared or obtained by the successful Bidder in connection with its services hereunder, including any documents bearing the professional seal of the successful Bidder, shall be delivered to, and become the property of Lee County, prior to final payment to the successful Bidder or the termination of the Contract. This includes any electronic versions, such as CAD or other computer aided drafting programs.

27.5. Termination:

- 27.5.1. MATERIAL BREACH** A Contractor may be Terminated for Cause by the County, at the sole discretion of the Procurement Management Director, for failing to perform a contractual requirement or for a material breach of any term or condition. A material breach of a term or condition of the Agreement may include but is not limited to: 1. Contractor failure to perform services or deliver materials, supplies, or equipment by the date required or by an alternate date as mutually agreed in a written amendment to the Agreement; 2. Contractor failure to carry out any warranty or fails to perform or comply with any mandatory provision of the Agreement; 3. Contractor becomes insolvent or in an unsound financial condition so as to endanger performance hereunder; 4. Contractor becomes the subject of any proceeding under any law relating to bankruptcy, insolvency or reorganization, or relief from creditors and/or debtors that endangers the Contractor's proper performance hereunder; 5. Appointment of any receiver, trustee, or similar official for Contractor or any of the Contractor's property and such appointment endangers the Contractor's proper performance hereunder; 6. A determination that the Contractor is in violation of federal, state, or local laws or regulations and that such determination renders the Contractor unable to perform any aspect of the Agreement.
- 27.5.2. OPPORTUNITY TO CURE** In the event that Contractor fails to perform a contractual requirement or materially breaches any term or condition, the County may issue a written cure notice. The Contractor may have a period of time in which to cure. The County is not required to allow the Contractor to cure defects if the opportunity for cure is not feasible as, determined solely within the discretion of the County. Time allowed for cure shall not diminish or eliminate Contractor's liability for damages, or otherwise affect any other remedies available against Contractor under the Agreement or by law. If the breach remains after Contractor has been provided the opportunity to cure, the County may do any one or more of the following: 1. Exercise any remedy provided by law; 2. Terminate this Agreement and any related contracts or portions thereof; 3. Procure replacements and impose damages as set forth elsewhere in this Agreement, if applicable; 4. Impose actual or liquidated damages; 5. Suspend or bar Contractor from receiving future solicitations or other opportunities; 6. Require Contractor to reimburse the County for any loss or additional expense incurred as a result of default or failure to satisfactorily perform the terms of the Agreement.
- 27.5.3. TERMINATION FOR CAUSE** In the event the Procurement Management Director, in his/her sole discretion, determines that the Contractor has failed to comply with the conditions of this Agreement in a timely manner or is in material breach, the Procurement Management Director has the right to terminate this Agreement, in part or in whole. The Procurement Management Director shall notify the Contractor in writing of the need to take corrective action. If corrective action is not taken within thirty (30) calendar days or as otherwise specified by the Procurement Management Director, or if such corrective action is deemed by the County to be insufficient, the Agreement may be terminated. The County reserves the right to withhold further payments or prohibit the Contractor from incurring additional obligations of funds during investigation of the alleged breach and pending corrective action by the Contractor or a decision by the County to terminate the Agreement. In the event of termination, the County shall have the right to procure any replacement materials, supplies, services and/or equipment that are the subject of this Agreement on the open market. In addition, the Contractor shall be liable for damages as authorized by law including, but not limited to, any price difference between the original Agreement and the replacement or cover contract and all administrative costs directly related to the replacement contract, e.g., cost of the competitive bidding, mailing, advertising and staff time. If it is determined that: (1) the Contractor was not in material breach; or (2) failure to perform was outside of Contractor's or its subcontractor's control, fault or negligence, the termination shall be deemed to be a "Termination for Convenience." The rights and

remedies of the County provided in this Agreement are not exclusive and are in addition to any other rights and remedies provided by law.

- 27.5.4. TERMINATION FOR CONVENIENCE** Except as otherwise provided in this Agreement, the County, at the sole discretion of the Procurement Management Director, may terminate this Agreement, in whole or in part by giving thirty (30) calendar days written notice beginning on the second day after mailing to the Contractor. If this Agreement is so terminated, the County shall be liable only for payment required under this Agreement for properly authorized services rendered, or materials, supplies and/or equipment delivered to and accepted by the County prior to the effective date of Agreement termination. The County shall have no other obligation whatsoever to the Contractor for such termination.
- 27.5.5.** The Procurement Management Director may immediately terminate any Award resulting from this Solicitation for emergency purposes, as defined by the Lee County Procurement Ordinance 22-06 & 23-21.
- 27.5.6.** Any Bidder who has voluntarily withdrawn from a Solicitation without the County's mutual consent during the Contract period shall be barred from further County procurement for a **period of 180 calendar days**. The Bidder may apply to the Board for a waiver of this debarment. Such application for waiver of debarment must be coordinated with and processed by the Procurement Management Department.
- 27.5.7.** For a Contract over \$1,000,000, the County reserves the right to terminate an award of such contract upon information or belief of any of the following, when, applicable:
- 27.5.7.1. Bidder is found to have submitted a false certification as provided under § 287.135 (5), F.S.;
 - 27.5.7.2. Bidder has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List (§ 215.473, F.S.);
 - 27.5.7.3. Bidder has engaged in business operations in Cuba or Syria (§ 215.471, F.S.);
 - 27.5.7.4. Bidder has been placed on the Scrutinized Companies that Boycott Israel List or is engaged in a boycott of Israel (§ 215.4725, F.S.).
 - 27.5.7.5. The County reserves the right to review, on a case-by-case basis, and waive this stipulation if it is deemed to be advantageous to the County.

28. WAIVER OF CLAIMS

- 28.1.** Once the Contract associated with this Solicitation expires, or final payment has been requested and made, the Awarded Bidder shall have waived any claims against the County concerning such Contract, except those previously made in writing and identified by the Awarded Bidder as unsettled at the time of the final application for payment.

29. LEE COUNTY PAYMENT PROCEDURES

- 29.1.** Unless otherwise noted, all Awarded Bidders are requested to mail an original invoice to:
Lee County Finance Department
Post Office Box 2238
Fort Myers, FL 33902-2238
- 29.2.** All invoices shall be paid as directed by the Lee County payment procedure, unless otherwise stated in the Contract or detailed Specifications for this project.
- 29.3.** Lee County shall not be liable for requests for payment deriving from aid, assistance, or help by any individual, vendor, proposer, or Bidder for the preparation of these Specifications.

30. SAFETY DATA SHEETS (SDS) (as applicable)

- 30.1.** It is the Bidder's responsibility to provide Lee County with Safety Data Sheets on Bid materials, as may apply to this procurement.

31. BOND/SURETY

- 31.1. Bonding/Surety is required in accordance with the Lee County Procurement Ordinance 22-06 & 23-21.
- 31.2. **Bid Bond/Security: The Procurement Management Department shall determine if a Bid Bond shall be required for any Competitive Procurement.** Each Bidder shall submit **not less than five percent (5%) of the proposed dollar amount** (including applicable Alternates) as Bid Bond/Security. One **ORIGINAL** Bid Bond/Security shall be submitted to the County with each Bid submission. The Bid Bond/Security of the Bidder will be retained until the Bidder and the County have entered into the Contract, whereupon the Bid Bond/Security may be returned. The Bid Bond/Security of a Bidder whom the County believes to have a reasonable chance of receiving the Award may be retained by the County until the effective date of the Contract, whereupon any Bid Bonds/Securities furnished by a Bidder may be returned. The following types of Bid Security shall be accepted:
- 31.2.1. **A Certified Check or a Cashier's Check** in the amount of not less than five percent (5%) of the proposed dollar amount. Any Certified Check or Cashier's Check submitted in lieu of a Bid Bond shall be drawn on a solvent bank or trust company, made payable to Lee County Board of County Commissioners and shall have all necessary documentary revenue stamps attached (if required by law); or
- 31.2.2. **A Bid Bond** may be submitted on a Lee County paper Bid Bond Form. Such Bid Bond must be signed by all required parties, must be in the amount of not less than five percent (5%) of the proposed dollar amount (including Alternate(s) as applicable), and shall accompany each submission. The Bid Bond shall be issued by a surety authorized to do business and in good standing with the Florida Department of State.
- 31.3. **Performance and Payment Bond:** As further described in the Contract, the successful Bidder shall provide Performance and Payment Bonds in the amount of one hundred percent (100%) of the total Awarded Contract amount within **seven (7) calendar days** after notification by the County of the approval to award the Contract, the costs of which are to be paid by the successful Bidder. Such Performance and Payment Bonds shall be in the form prescribed by the Exhibits to the attached Contract. The Performance and Payment Bonds shall be underwritten by a surety authorized to do business in the State of Florida and otherwise acceptable to the County; provided, however, the surety shall be rated as "B" or better as reported in the most current Best's Key Rating Guide, published by A.M. Best Company, Inc. The successful Bidder shall record the Performance and Payment Bond with the Lee County Clerk of Courts, at its sole expense, and provide the original, recorded bond document to the County.
- 31.4. **A Clean Irrevocable Letter of Credit or Cash Bond** may be accepted by the County in lieu of the Public Payment and Performance Bond.
- 31.5. **Personal Checks are not acceptable to Lee County as a Bid Security.**
32. LOCAL VENDOR PREFERENCE
- 32.1. The Procurement Management Department will adhere to the Lee County Ordinance No. 22-06 & 23-21 and as may be amended from time to time (the County's "Local Vendor Preference"). It shall be at the discretion of the County Manager or Designee whether to apply Local Vendor Preference to any particular Solicitation.
- 32.2. The County's Local Vendor Preference, as it relates to Bidding preferences for local Vendors, is not applicable to Solicitations or Contracts when Commodities and/or Services may be provided in the event of an Emergency.
- 32.3. The County's Local Vendor Preference shall not apply in any procurement for Commodities or Services if the use of the Local Vendor Preference is prohibited by the terms of a grant or funding agreement or other prevailing law or policy.
33. INSURANCE (AS APPLICABLE)
- 33.1. Insurance shall be provided by the Awarded Bidder pursuant to the Specifications provided herein and/or in the Contract. Prior to execution of the Contract, a certificate of insurance (COI) complying with the Solicitation Documents shall be provided by the Bidder.
- 33.2. Insurance carriers providing coverage required herein shall be licensed to conduct business in the State of Florida and shall possess a current A.M. Best's Financial Strength Rating of "B or better."

End of Terms and Conditions

INSURANCE GUIDE



Lee County Insurance Requirements
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Minimum Insurance Requirements: *Risk Management in no way represents that the insurance required is sufficient or adequate to protect the vendors' interest or liabilities. The following are the required minimums the vendor must maintain throughout the duration of this contract. The County reserves the right to request additional documentation regarding insurance provided*

- a. **Commercial General Liability** - Coverage shall apply to premises and/or operations, products and completed operations, independent contractors, contractual liability exposures with minimum limits of:
 - \$1,000,000 per occurrence
 - \$2,000,000 general aggregate
 - \$1,000,000 products and completed operations
 - \$1,000,000 personal and advertising injury

- b. **Business Auto Liability** - The following Automobile Liability will be required and coverage shall apply to all owned, hired and non-owned vehicles use with minimum limits of:
 - \$1,000,000 combined single limit (CSL); or
 - \$500,000 bodily injury per person
 - \$1,000,000 bodily injury per accident
 - \$500,000 property damage per accident

- c. **Workers' Compensation** - Statutory benefits as defined by FS 440 encompassing all operations contemplated by this contract or agreement to apply to all owners, officers, and employees regardless of the number of employees. Workers Compensation exemptions may be accepted with written proof of the State of Florida's approval of such exemption. Employers' liability will have minimum limits of:
 - \$500,000 per accident
 - \$500,000 disease limit
 - \$500,000 disease – policy limit

****The required minimum limit of liability shown in a. and b. may be provided in the form of "Excess Insurance" or "Commercial Umbrella Policies." In which case, a "Following Form Endorsement" will be required on the "Excess Insurance Policy" or "Commercial Umbrella Policy."***



Lee County Insurance Requirements

Verification of Coverage:

1. Coverage shall be in place prior to the commencement of any work and throughout the duration of the contract. A certificate of insurance will be provided to the Risk Manager for review and approval. The certificate shall provide for the following:

a. **Under the Description of Operations, the following must read as listed:**

“Lee County, a political subdivision and Charter County of the State of Florida, its agents, employees, and public officials are automatic additional insureds and includes an automatic waiver of subrogation with regard to general liability. The certificate holder is an additional insured on a primary and noncontributory basis with regards to general liability.”

b. **The certificate holder must read as follows:**

Lee County, a political subdivision and Charter County of the State of Florida
P.O. Box 398
Fort Myers, Florida 33902

Special Requirements:

1. An appropriate "Indemnification" clause shall be made a provision of the contract.
2. It is the responsibility of the general contractor to ensure that all subcontractors comply with all insurance requirements.

SPECIAL CONDITIONS

These are conditions that are in relation to this Solicitation only and have not been included in the County's standard Terms and Conditions or the Scope of Work and Specifications.

1. TERM

1.1. From the Notice to Proceed or the Purchase Order date, whichever applies, the timeframe for completion of all Work to Final Acceptance shall be **400 CALENDAR DAYS**.

2. LIQUIDATED DAMAGES

2.1. In accordance with the terms set forth in the Agreement, should the Contractor fail to achieve Final Acceptance of the Work within the time period stated in the Agreement, the County shall be entitled to assess the amount set forth in Article 8-10 of Exhibit E Standard Specifications, as Liquidated Damages, but not as a penalty, for each calendar day thereafter until Final Acceptance is achieved.

3. MINIMUM QUALIFICATIONS

3.1. Work must be performed by or in the presence of, and under the responsible charge of, an employee of the licensed electrical Contractor and that holds a current IMSA Roadway Lighting Technician Level I certification or higher.

3.1.1. Form 9 must be completed and submitted with Vendor's bid package.

4. BASIS OF AWARD

4.1. The basis of award shall be determined by the lowest *Project Total* of the most responsive, responsible, and qualified Contractor meeting all bid specifications.

4.2. The County reserves the right to reject any bids or portion of the bid with just cause, which shall include, but not be limited to, an "unbalanced bid," to the detriment of the County. An "unbalanced bid" shall include excessive unit pricing, other unfair pricing for materials or labor, or a disproportionate allocation of cost to the County for the actual construction performed.

4.3. Contractor shall bid all line items as listed within the Bid Schedule. Failure to bid all line items may deem Contractor as non-responsive.

5. LOCAL PREFERENCE

5.1. The Lee County Local Vendor Preference shall be included as part of the award process for this project. As such, Lee County at its sole discretion may choose to award a preference to any qualified Local Vendor.

6. STATUTORY COMPLIANCE

6.1. Lee County and the awarded contractor confirm that, upon execution of the Agreement, the parties will comply with the requirements for timely payment for purchases of construction services, as defined by Section 218.735, Florida Statutes.

End of Special Conditions

SCOPE OF WORK AND SPECIFICATIONS

1. GENERAL SCOPE OF WORK SUMMARY

1.1 Lee County Board of County Commissioners seeks to contract with a qualified Contractor to perform Street lighting, concrete sidewalk, and Conduit improvements on Estero Blvd from Crescent Street to Big Carlos Pass in the Town of Fort Myers Beach, Florida. Work will consist of the following:

- 102 Street light poles
- Remove and replace Concrete Sidewalk
- 2100 LF of conduit both open cuts and directional drills
- 56,000 LF of lighting conductors – No 8-6
- 99 Pull Boxes
- 17 Load Centers
- Maintenance of Traffic

1.2 All work performed is to follow Federal, State, Local, OSHA, and County mandated regulations and specifications for associated work.

1.3 The scope of work is further defined and detailed within the exhibits found attached to the draft contract agreement affixed to this solicitation package as well as within the plans associated with this project. Contractor is responsible for reviewing all documentation associated with this project.

End of Scope of Work and Specifications

LEE COUNTY DOCUMENT MANAGEMENT FORM

For

B240297CJV Estero Boulevard Lighting and Sidewalk Improvements

These forms are required as indicated below and all required forms should be submitted with the Bidder’s/Proposer’s submission package. If it is determined that forms in this selection are not applicable to your company or solicitation they should be marked “N/A or Not Applicable” across the form in large letters and returned with your submission package.

FORM #	TITLE / DESCRIPTION	REQUIRED STATUS (Required, Not Required, If Applicable)	VENDOR CHECK-OFF
1	Solicitation Response Form	Required	
1a	Bid/Proposal Form	Required	
N/A	Business Relationship Disclosure Requirement	If Applicable	
2	Affidavit Certification Immigration Laws	Required	
3	Reference Survey <i>*(Requested after opening of lowest Bidder only)</i>	Required	
4	Negligence or Breach of Contract Disclosure Form	Required	
5	Sub-Contractor List	Required	
6	Public Entity Crime Form	Required	
7	Trench Safety	Required	
8	Bid Bond	Required	
9	Minimum Qualifications Requirements	Required	
*	Proposal Label	Required	

It is the Bidder’s/Proposer’s responsibility to review the submittal request in its entirety and ensure that all submittal requirements are included within their submission package. Failure to submit required forms may deem your company as non-responsive.

FORMS DESCRIPTION & INSTRUCTIONS

INVITATION TO BID

This table provides a brief list, description, and instructions regarding the standard requested forms that should be submitted with all bids or proposals. This is not intended to be an all-inclusive list of forms required for your submission, but rather a guide to assist in completion of the County's standard forms. Bidders/Proposers should utilize the Lee County Document Management Form for a complete list of all forms required for project submission.

<u>Form #</u>	<u>Title/Description</u>
1	<p><i>Solicitation Response Form</i></p> <p>All signatures must be by a corporate authorized representative, witnessed, and corporate and/or notary seal (as applicable.) The corporate or mailing address must match the company information as it is listed with the Florida Department of State Division of Corporations. Attach a copy of the webpage(s) from http://www.sunbiz.org as certification of this required information. Sample attached for your reference.</p> <p>Verify that all Addenda and tax identification number have been provided.</p>
1a	<p><i>Bid/Proposal Form</i></p> <p>This form is used to provide itemization of project cost. A more detailed "schedule of values" may be requested by the County.</p>
N/A	<p><i>Business Relationship Disclosure Requirement</i></p> <p>Sections 112.313(3) and 112.313(7), F.S., prohibit certain business relationships on the part of public officers and employees, their spouses, and their children. If this <u>disclosure is applicable, the Bidder must request the form entitled "INTEREST IN COMPETITIVE BID FOR PUBLIC BUSINESS"</u> (Required by § 112.313(12)(b), F.S.) to be completed and <u>returned with the Solicitation Response</u>. It is the Bidder's responsibility to request the form and disclose this relationship; failure to do so may result in being declared non-responsive.</p> <p>NOTICE: UNDER THE PROVISIONS OF § 112.317, F.S., A FAILURE TO MAKE ANY REQUIRED DISCLOSURE CONSTITUTES GROUNDS FOR, AND MAY BE PUNISHED BY, ONE OR MORE OF THE FOLLOWING: IMPEACHMENT, REMOVAL OR SUSPENSION FROM OFFICE OR EMPLOYMENT, DEMOTION, REDUCTION IN SALARY, REPRIMAND, OR A CIVIL PENALTY NOT TO EXCEED \$10,000.00.</p>
2	<p><i>Affidavit Certification Immigration Laws</i></p> <p>Submission of this form constitutes acknowledgement that the Bidder is in compliance in regard to all applicable immigration laws.</p>
3	<p><i>Reference Survey</i></p> <p>Provide this form to reference respondents. <u>For Bids, this form will be requested from the apparent low Bidder prior to the award. (Not required to submit with bid)</u></p> <ol style="list-style-type: none"> 1. Section 1: Bidder/Proposer to complete with <u>reference respondent's</u> information prior to providing to them for their response. (This is not the Bidder/Proposer's information.) 2. Section 2: Enter the name of the Bidder/Proposer; provide the project information in which the reference respondent is to provide a response. 3. The <u>reference respondent</u> should complete "Section 3." 4. Section 4: The reference respondent to print and sign name 5. Three (3) Reference responses are to be provided upon request. 6. Failure to obtain reference surveys may make your company non-responsive.

4 *Negligence or Breach of Contract Disclosure Form*

The form may be used to disclose negligence or breach of contract litigation that your company may have been a part of over the past ten (10) years. You may need to duplicate this form to list all history. If the Bidder has more than ten (10) lawsuits, you may narrow them to litigation of the company or subsidiary submitting the Solicitation Response. Include, at a minimum, litigation for similar projects completed in the State of Florida. Final outcome should include in whose favor the litigation was settled and whether a monetary amount was awarded. The settlement amount may remain anonymous.

If you have **no litigation**, enter “None” in the first “type of incident” block of the form. Please do not write N/A on this form.

5 *Sub-Contractor/Consultant List*

To be completed and returned when sub-contractor/consultants are to be utilized and are known at the time of the submission.

6 *Public Entity Crime Form*

Any person or affiliate, as defined by statute, who has been placed on the convicted vendor list following a conviction for a public entity crime, may not submit a Bid on a Contract to provide any goods or services to the County; may not submit a Bid on a contract with the County for the construction or repair of a public building or a public work; may not submit Bids or leases of real property to the County; may not be Awarded or perform Work as a contractor, supplier, subcontractor, or consultant under a contract with the County, and may not transact business with the County in excess of \$25,000.00 for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

7 *Trench Safety*

Typically required in construction projects where trench excavations are in excess of 5 feet deep per Florida Trench Safety Act (90-96, Laws of Florida)

8 *Bid Bond*

Guarantee to County that Bidder/Proposer will take on job if selected.

9 *Minimum Qualifications Requirements*

States the minimum qualifications the Bidder/Proposer is required to meet in order to be considered for award or evaluation.

***** *Bid/Proposal Label*

Self-explanatory. Please affix to the outside of the sealed submission documents.

***** *Include any licenses or certifications requested*

Local Business Tax Account (as applicable) issued by City and/or County entity. This is necessary for all Florida vendors.

It is the Bidder’s responsibility to ensure the Solicitation Response is mailed or delivered in time to be received no later than the specified opening date and time. (If Solicitation is not received prior to the deadline, it cannot be considered or accepted)

Form 1 – Solicitation Response Form



LEE COUNTY PROCUREMENT MANAGEMENT
SOLICITATION RESPONSE FORM

Date Submitted: Bid Due Date: 5/24/2024

SOLICITATION IDENTIFICATION: B240297CJV

SOLICITATION NAME: Estero Boulevard Lighting and Sidewalk Improvements

COMPANY NAME:

NAME & TITLE: (TYPED OR PRINTED)

BUSINESS ADDRESS: (PHYSICAL)

CORPORATE OR MAILING ADDRESS:

[] SAME AS PHYSICAL

ADDRESS MUST MATCH SUNBIZ.ORG

E-MAIL ADDRESS:

PHONE NUMBER: FAX

NOTE REQUIREMENT: IT IS THE SOLE RESPONSIBILITY OF THE BIDDER/PROPOSER TO CHECK THE LEE COUNTY PROCUREMENT MANAGEMENT WEB SITE FOR ANY ADDENDA ISSUED FOR THIS PROJECT. THE COUNTY WILL POST ADDENDA TO THIS WEB PAGE BUT WILL NOT NOTIFY.

By responding to this sealed Solicitation, the Bidder/Proposer makes all representations required by the instructions and further warrants and represents that: Bidder/Proposer has examined copies of all the Solicitation Documents and of the following Addenda:

No. Dated: No. Dated: No. Dated:
No. Dated: No. Dated: No. Dated:

Taxpayer Identification Number:

(1) Employer Identification Number -OR- (2) Social Security Number:

** Lee County collects your social security number for tax reporting purposes only

Please submit a copy of your registration from the website www.sunbiz.org establishing your firm as authorized (including authorized representatives) to conduct business in the State of Florida, as provided by the Florida Department of State, Division of Corporations. (a sample is attached for your reference)

1 Collusion Statement: Lee County, Florida. The undersigned, as Bidder/Proposer, hereby declares that no person or other persons, other than the undersigned, are interested in this Solicitation as principal, and that this Solicitation is submitted without collusion with others; and that they have carefully read and examined the Specifications or Scope of Work, and with full knowledge of all conditions under which the services herein is contemplated must be furnished, hereby Bid and agree to furnish this service according to the requirements set out in the Solicitation Documents, Specifications or Scope of Work for said service for the prices as listed on the County provided price sheet or (CCNA) agree to negotiate prices in good faith if a contract is Awarded.

2 Scrutinized Companies Certification: Section 287.135, F.S, entitled "Prohibition against contracting with scrutinized companies" prohibits agencies from contracting with companies, for goods or services over \$1,000,000, that are on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, Scrutinized Companies that Boycott Israel List, have been engaged in a boycott of Israel, or been engaged in business operations in Cuba or Syria. The County reserves the right to review, on a case-by-case basis, and waive this stipulation if it is deemed advantageous to the County.

As the person authorized to sign on behalf of Respondent, I hereby certify that the company identified above is in compliance with Section 287.135, F.S. I understand that submission of a false certification may subject company to contract termination, civil penalties, attorney's fees, and/or costs.

Form 1 – Solicitation Form, Page 2

3 Business Relationship Disclosure Requirement: Sections 112.313(3) and 112.313(7), F.S., prohibit certain business relationships on the part of public officers and employees, their spouses, and their children. See Part III, Chapter 112, F.S., and/or the brochure entitled "A Guide to the Sunshine Amendment and Code of Ethics for Public Officers, Candidates and Employees" for more details on these prohibitions. However, Section 112.313(12), F.S., provides certain limited exemptions to the above-referenced prohibitions, including one where the business is awarded under a system of sealed, competitive bidding; the public official has exerted no influence on bid negotiations or specifications; and where disclosure is made, prior to or at the time of the submission of the bid, of the official's or his/her spouse's or child's interest and the nature of the intended business. The Commission on Ethics has promulgated this form for such disclosure, if and when applicable to a public officer or employee.

If this disclosure is applicable, the Bidder must request form “INTEREST IN COMPETITIVE BID FOR PUBLIC BUSINESS” (Required by 112.313(12)(b), F.S.) to be completed and returned with Solicitation Response. It is the Bidder/proposer’s responsibility to disclose this relationship, failure to do so could result in being declared non-responsive.

Business Relationship Applicable (request form) **Business Relationship NOT Applicable**

4 Disadvantaged, Minority, Women, Veterans Business Enterprise (DBE, MBE, WBE, VBE) **Yes** **No**
Proposer? If yes, please attach a current certificate.

ALL SUBMISSIONS MUST BE EXECUTED BY AN AUTHORIZED AUTHORITY OF THE BIDDER/PROPOSER. WITNESSED AND SEALED (AS APPLICABLE)

Company Name (Name printed or typed)



Authorized Representative Name (printed or typed)

(Affix Corporate Seal, as applicable)

Authorized Representative’s Title (printed or typed)

Witnessed/Attested by: (Witness/Secretary name and title printed or typed)

Authorized Representative’s Signature

Witness/Secretary Signature

Any blank spaces on the form(s), qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County’s form may result in the submission being declared non-responsive by the County.

Bidders may not adjust or modify County-authored data as provided within the Bid Schedule. Bids received with modified data may deem the Bidder as non-responsive and ineligible for award.

Detail by Entity Name
Florida Profit Corporation
Bill's Widget Corporation

Filing Information
Document Number 655555
FE/EIN Number 5111111111
Date Filed 09/22/1980
State FL
Status ACTIVE
Last Event AMENDED AND RESTATED ARTICLES
Event Date Filed 07/25/2006
Event Effective Date NONE

Principal Address
555 N Main Street
Your Town, USA 99999
Changed 02/11/2012

Mailing Address
555 N Main Street
MYour Town, USA 99999
Changed 02/11/2012

Registered Agent Name & Address
My Registered Agent
111 Registration Road
Registration, USA99999
Name Changed: 12/14/2006
Address Changed: 12/14/2006

Officer/Director Detail
Name & Address
Title P
President, First
555 AVENUE
Anytown, USA99999
Title V
President, Second
555 AVENUE
Anytown, USA99999

Sample Only

Form 1a – Bid/Proposal Form (not applicable for CCNA solicitations)



Lee County Procurement Management
BID/PROPOSAL FORM

Company Name: _____

Solicitation # B240297CJV **Solicitation Name** Estero Boulevard Lighting and Sidewalk Improvements

This page serves as a header/placeholder only. Please refer to the Excel document provided with the solicitation for the complete Bid Schedule. The Excel document contains formulas for convenience; however, it is the Contractor’s responsibility to verify all pricing and calculations are CORRECT. Lee County is not responsible for errors in formulas or calculations contained within Excel document(s).

REMINDER: In the event there is a discrepancy between the total quoted amount, or the extended amounts and the unit prices quoted, the unit prices will prevail, and the corrected sum will be considered the quoted price.

The County will only accept bids submitted on bid forms provided by the County. Bids submitted on other forms, other than those provided by the County, will deem Bidder as non-responsive and ineligible for award.

Bidders may not adjust or modify County-authored data as provided within the Bid Schedule. Bids received with modified data may deem the Bidder as non-responsive and ineligible for award.

PLEASE ENSURE you have provided a printed copy of the Bid Schedule with your hard copy submission packages and provided the excel version with your digital submission package.

PRICING

Pricing shall be inclusive of all labor, equipment, supplies, overhead, profit, materials, and any other incidental costs required to perform and complete all work as specified herein.

Form 2 – Affidavit Certification of Immigration Laws



AFFIDAVIT CERTIFICATION IMMIGRATION LAWS

SOLICITATION NO.: **B240297CJV**

SOLICITATION NAME: **Esterio Boulevard Lighting and Sidewalk Improvements**

LEE COUNTY WILL NOT INTENTIONALLY AWARD COUNTY CONTRACTS TO ANY CONTRACTOR WHO KNOWINGLY EMPLOYS UNAUTHORIZED ALIEN WORKERS, CONSTITUTING A VIOLATION OF THE EMPLOYMENT PROVISIONS CONTAINED IN 8 U.S.C. SECTION 1324 a(e) {SECTION 274A(e) OF THE IMMIGRATION AND NATIONALITY ACT (“INA”).

LEE COUNTY MAY CONSIDER THE EMPLOYMENT BY ANY CONTRACTOR OF UNAUTHORIZED ALIENS A VIOLATION OF SECTION 274A(e) OF THE INA. **SUCH VIOLATION BY THE RECIPIENT OF THE EMPLOYMENT PROVISIONS CONTAINED IN SECTION 274A(e) OF THE INA SHALL BE GROUNDS FOR UNILATERAL CANCELLATION OF THE CONTRACT BY LEE COUNTY.** PROPOSER ATTESTS THAT THEY ARE FULLY COMPLIANT WITH ALL APPLICABLE IMMIGRATION LAWS (SPECIFICALLY TO THE 1986 IMMIGRATION ACT AND SUBSEQUENT AMENDMENTS).

BY REGISTERING AS A VENDOR, SUBMITTING A RESPONSE TO A SOLICITATION, OR ENTERING INTO A CONTRACT, IF YOU ARE OBLIGATED TO COMPLY WITH THE PROVISIONS OF SECTION 448.095, FLA. STAT., "EMPLOYMENT ELIGIBILITY." FURTHER, BY YOUR REGISTRATION AS A VENDOR, RESPONSE TO A SOLICITATION, ENTERING INTO A CONTRACT, YOU AFFIRM AND REPRESENT THAT YOU ARE REGISTERED WITH THE E-VERIFY SYSTEM AND ARE USING SAME, AND WILL CONTINUE TO USE SAME AS REQUIRED BY SECTION 448.095, F.S. COMPLIANCE WITH SECTION 448.095 INCLUDES, BUT IS NOT LIMITED TO, UTILIZATION OF THE E-VERIFY SYSTEM TO VERIFY THE WORK AUTHORIZATION STATUS OF ALL NEWLY HIRED EMPLOYEES, AND REQUIRING ALL SUBCONTRACTORS TO PROVIDE AN AFFIDAVIT ATTESTING THAT THE SUBCONTRACTOR DOES NOT EMPLOY, CONTRACT WITH, OR SUBCONTRACT WITH, AN UNAUTHORIZED ALIEN. FAILURE TO COMPLY WILL LEAD TO TERMINATION AS A VENDOR, DISQUALIFYING YOU FOR AWARD OF A SOLICITATION, DENIAL OF ENTERING INTO A CONTRACT AND/OR, CANCELLATION OF AN ACTIVE CONTRACT, OR IF YOUR SUBCONTRACTOR KNOWINGLY VIOLATES THE STATUTE, THE SUBCONTRACT MUST BE TERMINATED IMMEDIATELY. ANY CHALLENGE TO TERMINATION UNDER THIS PROVISION MUST BE FILED WITH THE DEPARTMENT OF PROCUREMENT MANAGEMENT NO LATER THAN 20 CALENDAR DAYS AFTER THE DATE OF TERMINATION. IF TERMINATED FOR A VIOLATION OF THE STATUTE BY THE VENDOR, THE VENDOR MAY NOT BE ALLOWED TO DO BUSINESS WITH THE COUNTY OR BE AWARDED A SOLICITATION OR CONTRACT FOR A PERIOD OF 1 YEAR AFTER THE DATE OF TERMINATION. ALL COSTS INCURRED TO INITIATE AND SUSTAIN THE AFOREMENTIONED PROGRAMS SHALL BE THE RESPONSIBILITY OF THE VENDOR.

Company Name: _____

Signature Title Date

STATE OF _____
COUNTY OF _____

The foregoing instrument was signed and acknowledged before me, by means of physical presence or online notarization, this _____ day of _____ 20____, by _____ who has produced

(Print or Type Name)

_____ as identification.

(Type of Identification)

Notary Public Signature

Printed Name of Notary Public

Notary Commission Number/Expiration

The signee of this Affidavit guarantee, as evidenced by the sworn affidavit required herein, the truth and accuracy of this affidavit to interrogatories hereinafter made. **LEE COUNTY RESERVES THE RIGHT TO REQUEST SUPPORTING DOCUMENTATION, AS EVIDENCE OF SERVICES PROVIDED, AT ANY TIME.**

Form 3 - Reference Survey

**Lee County Procurement Management
Reference Survey**

****REQUIRED OF THE LOWEST APPARENT BIDDER ONLY****

Reference surveys submitted can be a maximum of twelve (12) months old. If using a previous reference, Proposers must clearly identify the project name and number the reference is being submitted for.

Project Name & Number: _____

Section 1	Reference Respondent Information	Please return completed form to:	
FROM:	_____	Bidder/Proposer:	
COMPANY:	_____	Due Date:	
PHONE #:	_____	Total # Pages:	1
FAX #:	_____	Phone #:	Fax #:
EMAIL:	_____	Bidder/Proposer E-Mail:	

Section 2	Enter Bidder/Proposer Information , as applicable Similar Performed Project (Bidder/Proposer to enter details of a project performed for above reference respondent)		
Bidder/Proposer Name:	_____		
Reference Project Name:	Project Address:	Project Cost:	
_____	_____	_____	
Summarize Scope:	_____		

You as an individual or your company has been given as a reference on the project identified above. Please provide your responses in Section 3 below.

Section 3		Indicate: "Yes" or "No"
1. Did this company have the proper resources and personnel by which to get the job done?		
2. Were any problems encountered with the company's work performance?		
3. Were any change orders or contract amendments issued, other than owner initiated?		
4. Was the job completed on time?		
5. Was the job completed within budget?		
6. On a scale of one to ten, ten being best, how would you rate the overall work performance, considering professionalism; final product; personnel; resources. Rate from 1 to 10. (10 being highest)		
7. If the opportunity were to present itself, would you rehire this company?		
8. Please provide any additional comments pertinent to this company and the work performed for you:		

Section 4	Please submit non-Lee County employees as references
------------------	---

Reference Name (Print Name) _____

Reference Signature _____

Form 4 – Negligence, Breach and/or Non-Compliance Disclosure Form



ALLEGED NEGLIGENCE/BREACH OF CONTRACT/NON-COMPLIANCE WITH GOVERNMENTAL REGULATION FORM

“Please fill in the form below. Provide details for each incident of alleged negligence, breach of contract or non-compliance with governmental regulation that has occurred over the past 10 years. Examples of non-compliance with governmental regulation include but are not limited to zoning violations, code enforcement violations, civil or criminal citations, denial, or revocation of permits. Provide details for all entities currently or previously owned in whole or in part by the proposer in the last 10 years. Please complete in chronological order with the most recent incident starting on page 1. Please do not modify this form (expansion of spacing allowed) or submit your own variation.”

Company Name: _____

Type of Incident <i>Alleged Negligence, Breach of Contract, or Non-Compliance</i>	Incident Date And Date Filed	Plaintiff <i>(Company, person, entity-acted against your company or state if your company initiated the action)</i>	Case Number	Court <i>(Name of State and County)</i>	Project <i>(Address and Name)</i>	Allegation <i>(Stated reason your company was accused of negligence, breach of contract or non-compliance of governmental regulation or the allegations your company made)</i>	Final Outcome <i>(Who prevailed and how)</i>

Make as many copies of this sheet as necessary to **provide a 10-year history** of the requested information. If there is no action pending or action taken in the last 10 years, complete the **company name and write “NONE” in the first “Type of Incident” box** of this page and return with your proposal package. This form should also include the primary partners listed in your proposal. Do not include litigation with your company as the plaintiff. Final outcome should include who prevailed and what method of settlement was made. If a monetary settlement was made the amount may remain anonymous.

Proposals may be declared “non-responsive” due to omissions of “Negligence or Breach of Contract” on this disclosure form. Additionally, proposals may be declared “not responsible” due to past or pending lawsuits that are relevant to the subject procurement such that they call into question the ability of the proposer to assure good faith performance. This determination may be made by the Procurement Management Director, after consulting with the County Attorney.

Page Number: _____ Of _____ Total pages



SUB-CONTRACTOR/CONSULTANT LIST

Sub-Contractor/Consultant Company Name	Area Of Work	Point Of Contact Or Project Supervisor	Contact Info Phone or Email	Qualified DBE, MBE, WBE, VBE or Similar	Amount or Percentage of Total

Please include sub-contractor/consultant name, area of work (i.e., mechanical, electrical, etc.) and a **valid** phone number and/or email. Also include the dollar value or percentage that the sub-contractor/consultant will be performing. If sub-contractor/consultant qualifies as a current certificate Florida Certified Business Enterprise such as MBE, WBE, DBE, VBE or similar please indicate such above and provide proof of

Public Entity Crime Form

This form must be signed and sworn to in the presence of a notary public or other officer authorized to administer oaths.

1. This sworn statement is submitted to _____
(Print name of the public entity)

by _____
(Print individual's name and title)

for _____
(Print name of entity submitting sworn statement)

whose business address is _____

(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: On the attached sheet.) Required as per IRS Form W-9.

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

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

4. I understand that "affiliate" as defined in Section 287.133(1)(a), Florida Statutes, means:
1. A predecessor or successor of a person convicted of a public entity crime:
or:
2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those offices, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of the affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not fair market value under an arm's length Agreement/Contract, shall be a facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding thirty-six (36) months shall be considered an affiliate.

5. I understand that a "person" as defined in Section 287.133(1) (c), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of the entity.

6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting those sworn statement. (Please indicate which statement applies)

_____ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, member, or agents who are active in management of the entity, or an affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, member, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearing and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. (Attach a copy of the final order)

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

(Signature)

(Date)

STATE OF _____

COUNTY OF _____

Sworn to (or affirmed) and subscribed before me, by means of physical presence or online notarization, this _____ day of _____ 20____, by _____ who has produced
(Print or Type Name)

_____ as identification.
(Type of Identification)

Notary Public Signature

Printed Name of Notary Public

Notary Commission Number/Expiration

TRENCH SAFETY

Contractor/vendor acknowledges that included in the appropriate Solicitation items of the Solicitation and in the total Solicitation price are costs for complying with the Florida Trench Safety Act (90-96, Laws of Florida) effective October 1, 1990. The contractor/vendor further identifies the costs of such compliance to be summarized below:

	Trench Safety Measure (Description)	Units of Measure (LF, SF)	Unit (Quantity)	Unit Cost	Extended Cost
.....					
A.	_____	_____	_____	_____	_____
B.	_____	_____	_____	_____	_____
C.	_____	_____	_____	_____	_____
D.	_____	_____	_____	_____	_____
TOTAL \$ _____					

If applicable, the contractor/vendor certifies that all trench excavation done within its control in excess of five feet (5') in depth shall be in accordance with the Florida Department of Transportation's Special Provisions Article 125-1 and Sub-article 125-4.1 (TRENCH EXCAVATION SAFETY SYSTEM AND SHORING, SPECIAL-TRENCH EXCAVATION).

Failure to complete the above may result in the Solicitation being declared non-responsive.

(Signature)

(Company Name)

STATE OF _____
COUNTY OF _____

The foregoing instrument was signed and acknowledged before me, by means of physical presence or online notarization, this _____ day of _____ 20____, by _____ who has produced

(Print or Type Name)

_____ as identification.
(Type of Identification)

(NOTARY PUBLIC)

My Commission Expires: _____

BID BOND

Complete EITHER Lee County Paper Bid Bond OR provide cashier's check

KNOW ALL MEN BY THESE PRESENTS, that we

_____ as Principal, and
(BIDDER'S Name)

_____ a corporation licensed to do
(Surety's Name)

business under the laws of the State of Florida as a Surety, are held and firmly bound unto LEE COUNTY BOARD OF COUNTY COMMISSIONERS, LEE COUNTY, FLORIDA, a political subdivision of the State of Florida,

in the SUM OF _____
for the payment whereof, well and truly to be made, we bind ourselves, our heirs, successors, personal representatives, and assigns, jointly and severally, firmly, by these presents.

SIGNED AND SEALED this _____ day of _____, _____

WHEREAS, said Principal is herewith submitting a Bid/Proposal for the project know as:

B240279CJV – Estero Boulevard Lighting and Sidewalk Improvements

NOW, THEREFORE, the condition of the above obligation is such that if said Principal shall be Awarded the Contract upon said Bid/Proposal within the specified time and shall enter into a written Contract, satisfactory in form, provide an acceptable Public Performance and Payment Bond from a Surety acceptable to the County and provide other insurance as may be required to the County within seven (7) calendar days after the written Notice of Intent to Award date, or within such extended period as the County may grant, then this obligation shall be null and void; otherwise said Principal and Surety shall pay to said County in money the difference between the amount of the Bid of said Principal and the amount for which said County may legally contract with another party to perform said Work, if the latter amount be in excess of the former, together with any expenses and reasonable attorney's fees incurred by said County if suit be brought hereon, but in no event shall said Surety's liability exceed the penal sum hereof plus such expenses and attorney's fees. For purposes of unsuccessful bid protests filed by the Principal herein, this obligation shall bind the Surety to pay costs and damages associated with the bid protest or delays to the project upon a finding from the Board of County Commissioners for Lee County that the bid protest was frivolous and/or lacked merit. The liability of the Surety shall not exceed the penal sum of the bid bond.

Witness as to Principal:

_____ (SEAL)
(Principal)

(By) _____

Printed Name

Witness as to Surety:

_____ (SEAL)
(Surety's Name)

(By-As Attorney-in-Fact, Surety)

Affix Corporate Seals and attach proper Power of Attorney for Surety.



MINIMUM QUALIFICATION REQUIREMENTS
FOR
B240297CJV Estero Boulevard
Lighting and Sidewalk Improvements

Bidder(s)/Proposer(s) must meet the minimum qualification requirements as specified in the following form to qualify for consideration of award. This form must be completed and returned with the proposal submittal along with any supporting documentation where requested and/or indicated herein.

The County reserves the right, in their sole judgment, to determine to its satisfaction whether the Bidder(s)/Proposer(s) has met the minimum qualification requirements as specified herein. The determination shall be based upon the examination of the Minimum Qualification Requirements form and associated supportive documentation (if any requested).

An affirmative determination shall be a prerequisite for award of the contract to the Bidder(s)/Proposer(s). A negative determination shall result in disqualification of the proposal, in which event the County shall exclude the proposal from the evaluation or consideration process and therefore deeming the Bidder(s)/Proposer(s) ineligible for award.

1. LICENSING AND CERTIFICATION:

Work must be performed by or in the presence of, and under the responsible charge of, an employee of the licensed electrical Contractor and that holds a current IMSA Roadway Lighting Technician Level I certification or higher.

Does at least one member of your Firm hold a current IMSA Roadway Lighting Technician Level I certification or higher? _____ **YES** _____ **NO**

If YES, provide details as requested below:

NAME: _____
POSITION TITLE: _____
LENGTH OF EMPLOYMENT
(IN CURRENT POSITION): _____
LICENSE NUMBER: _____
LICENSURE DATE: _____

Authorized Bidder/Proposer Signature

Date:

Authorized Bidder/Proposer Name (Print or Type)

Sealed Bid Label

Cut along the outer border and affix this label to your sealed solicitation envelope to identify it as a “Sealed Bid”.

SEALED BID DOCUMENTS • DO NOT OPEN	
BID No.:	B240279CJV
BID TITLE:	Estero Boulevard Lighting and Sidewalk Improvements
DATE DUE:	Friday, May 24, 2024
TIME DUE:	Prior to: 2:30 PM
SUBMITTED BY:	_____ (Name of Company)
e-mail address	Telephone
DELIVER TO:	Lee County Procurement Management 2115 Second Street, 1 st Floor Fort Myers FL 33901



***Notice: The Date Due/Bid Due Date/Opening Date as stated on this label and other forms contained herein may have been updated via issuance of Addenda against this project. It is the sole responsibility of the Contractor to monitor the County project webpage for any updates to the Date Due/Bid Due Date/Opening Date via Addenda. This label nor other original forms may not be updated. Contractor may strike through and update Date Due/Bid Due Date/Opening Date at their discretion to match any updates to this date that have been published via Addenda.**

Submission received after the time and date of the Date Due/Bid Due Date/Opening Date will not be acceptable at the sole discretion of the County.

PLEASE PRINT CLEARLY



PROCUREMENT MANAGEMENT DEPARTMENT
BID/PROPOSAL FORM

COMPANY NAME: _____

SOLICITATION: _____

Having carefully examined the Contract Documents, Contractor/Vendor proposes to furnish the following which meeting these specifications.

PRICING

Pricing shall be inclusive of all labor, equipment, supplies, overhead, profit, material, and any other incidental costs required to perform and complete all work as specified in the Contract Documents. All Unit Prices will be bid at the nearest whole penny. The Excel document contains formulas for convenience, however it is the Contractor's/Vendor's responsibility to verify all pricing and calculations are CORRECT. Lee County is not responsible for errors in formulas or calculations contained within Excel document(s).

LUMP SUM PRICING: The Contractor performing the work agrees to complete the project for a fixed amount – no more or less, as stated on the Bid/Price Proposal Form. The lump sum price shall be inclusive of all labor, equipment, supplies, overhead, profit, materials, and any other incidental costs required to perform and complete all work, as specified within the scope, technical specifications, and construction documents.

In the event there is a discrepancy between a subtotal or total amount and the unit prices and extended amounts, the unit prices will prevail and the corrected extension(s) and total(s) will be considered the price.

The County will only accept bids submitted on bid forms provided by the County. Bids submitted on other forms, other than those provided by the County, will be deemed non-responsive and ineligible for award.

****Bidders may not adjust or modify County-authored data as provided within the Bid Schedule. Bids received with modified data may deem the Bidder as non-responsive and ineligible for award.****

Estero Boulevard Sidewalk and Lighting Improvements

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
101-1	MOBILIZATION	LS	1		\$0.00
102-1	MAINTENANCE OF TRAFFIC	LS	1		\$0.00
104-10-3	SEDIMENT BARRIER	LF	4830		\$0.00
104-18	INLET PROTECTION SYSTEM	EA	48		\$0.00
110-4-10	REMOVAL OF EXISTING CONCRETE	SY	509.9		\$0.00
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	347.4		\$0.00
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	1335		\$0.00
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	367		\$0.00
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVEGROUND	LF	390		\$0.00
635-2-11	PULL & SPLICE BOX, F&I, 17" x 30" COVER SIZE	EA	99		\$0.00
639-1-112	ELECTRICAL POWER SERVICE, F&I, OVERHEAD, METER PURCHASED BY CONTRACTOR	AS	14		\$0.00
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	3		\$0.00
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	85		\$0.00
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE (12')	EA	20		\$0.00
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE (36')	EA	13		\$0.00
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8 - 6	LF	56276		\$0.00
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA	17		\$0.00
715-511-130	LIGHT POLE COMPLETE-SPECIAL DESIGN, F&I, SINGLE ARM SHOULDER MOUNT, ALUMINIUM, 30'	EA	102		\$0.00
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, FURNISH AND INSTALL, CONVENTIONAL	EA	17		\$0.00
Project Total					\$0.00



Procurement Management Department
2115 Second Street, 1st Floor
Fort Myers, FL 33901
Main Line: (239) 533-8881
Fax Line: (239) 485-8383
www.leegov.com/procurement

Posted Date: May 1, 2024

Solicitation No.: B240297CJV

Solicitation Name: Estero Boulevard Lighting and Sidewalk Improvements

Subject: Addendum Number 1

The following represents clarification, additions, deletions, and/or modifications to the above referenced bid. This addendum shall hereafter be regarded as part of the solicitation. Items not referenced herein remain unchanged, including the response date. Words, phrases or sentences with a strikethrough represent deletions to the original solicitation. Underlined words and bolded, phrases or sentences represent additions to the original solicitation.

1. ATTACHMENT

- A. Attachment A – 100 Amp Load Center Detail – 10.11.23
- B. Attachment B – Revised Bid Schedule

2. CLARIFICATION

- A. None of the existing conduit was verified after Hurricane Ian and post-hurricane activities. The Contractor shall be responsible for blowing out and verifying the conduits integrity. In the event the conduit is found to be compromised and in need of repair the contractor will be paid utilizing the appropriate conduit pay item(s) (630-2-11 or 630-2-12). The blowing out and verifying of the conduits is incidental the total project costs.
- B. None of the existing pull boxes was verified after Hurricane IAN and post-hurricane activities. In the event a pull box is deemed as needing replaced the contractor will be paid utilizing the appropriate pull box pay item (635-2-11).

3. MODIFICATIONS

- A. The following is a modification to the Pay Item Quantity shown in the Lighting Plans:
 - i. Quantity for pay item 715-500-1 is changed **from 17 EA to 102 EA**.
 - 1. Each proposed light pole shall have a pole cable distribution system.
- B. The following is a modification to the Pay Item Quantities shown in the Lighting Plans in the event conduit and/or pull boxes were compromised during the hurricane. The new totals include the original design material and possible material necessary for replacement due to storm damage:
 - i. Pay Item 630-2-11 quantity is changed **from 1335 LF to 1,785 LF**.
 - ii. Pay Item 630-2-12 quantity is changed **from 367 LF to 15,367 LF**.
 - iii. Pay Item 635-2-11 quantity is changed **from 99 to 142 EA**.
- C. **Add** the following Pay Item Number and Quantity:
 - i. 635-2-50 with a quantity of 40 EA is added to the project.
 - 1. This pay item is used only for cleaning out an existing lighting pull box due to sediment from the hurricane. If the pull box has been damaged, see Clarification (B.) above.

- D. Refer to Exhibit I – Supplemental Specifications, Division II Construction Details, Section 102 Maintenance of Traffic, Article 104-2. **Add the following paragraph:**
- i. Contractor shall only close roadway lanes/ bike lanes and or sidewalks with a County-approved temporary traffic control plan (TTCP). Two lanes of traffic are to always remain open from 6 AM to 8 PM. A single lane closure may be implemented by the Contractor with County approved TTCP which shall include flagging operations.
- E. Refer to Exhibit I – Supplemental Specifications, Division II Construction Details, Section 102 Maintenance of Traffic, Article 104-2. **Add the following paragraph:**
- i. Contractor shall only close roadway lanes, bike lanes, and/or sidewalks with a County-approved temporary traffic control plan (TTCP). Two lanes of traffic are to always remain open from 8 PM to 6 AM. A single lane closure may be implemented by the Contractor with a County-approved TTCP which shall include flagging operations. Any proposed night work must be pre-approved by the County. Contractor-provided lighting for night work activities shall meet County turtle lighting criteria.
- F. Refer to Standard Specifications, Division I General Requirements and Covenants, Section 8-4.1.1. Holiday and Weekend Work.:
- i. **Delete** “72 hours” in the second line. **Replace with** “Ten (10) working days”.
 - ii. All Holiday and Weekend work requested by the Contractor must be pre-approved by the County.
 1. If holiday or weekend work is approved, work shall be limited to above groundwork only.
- G. Refer to Standard Specifications, Division I General Requirements and Covenants, Section 8-4.1.1. Holiday and Weekend Work. **Add the following paragraph:**
- i. The County shall designate up to five (5) additional special event days per year in the contract. These event days will be determined by the County, and the County will advise the Contractor of these days, no less than ten (10) working days prior to the event. No work shall be performed on these days without expressed written consent by the County. If special event day work is approved, work shall be limited to above groundwork only. The Contractor shall prepare the job site for these events as directed by the County. No additional compensation will be paid for these special events.
- H. The following are modifications to the Pay Item Footnotes in the Lighting Plans:
- i. Item 1 “ALL CONDUCTORS SHALL USE XLP INSULATION” under Pay Item 715-1-12 is hereby **deleted**.
 1. All conductors shall meet the Lee County Specifications.
 - ii. Pay Item Notes for 630-2-11, 630-2-12 and 635-2-11 are hereby **deleted**.
 1. Lee County Specifications shall be followed for pull boxes and conduit (open trench and directional bore installation).
 - iii. The last sentence in pay item footnote for 715-511-130 is here by **deleted**.
 1. The Contractor is not limited to HAPCO and Valmont products. Flagpoles and P&K Pole products are not prohibited. All products shall meet Lee County Specifications.
 - iv. Pay Item 639-1-112 shall follow the specifications 639-1-122.
 1. See (H).(v.) below for additional information.
 - v. Pay Item Note for 639-1-122 and 715-7-11 shall be **replaced** with the following:
 1. 639-1-112, 639-1-122, 715-7-11: Power service assembly shall be mounted with the load center as shown in “Attachment A” detail. The power service assembly shall be three wire, single phase 120/240VAC.
 - a. Roadway street lighting electric service shall be mounted on one (1) - twelve (12) foot FDOT type P-IIA service pole and one (1) thirty-six (36) foot FDOT type P-IIB service pole for 639-1-112 or roadway street lighting electric service shall be

mounted on two (2) - twelve (12) foot FDOT type P-IIA service poles for 639-1-122.

- b. A minimum 100 AMP 600 VAC rated NEMA 4x non-fusible single throw safety switch disconnect (square D VHU363NDSGL) shall be installed on the concrete service poles, on the lineside of the meter socket.
- c. All roadway street lighting electrical services shall be metered. Meter socket shall be a 200 AMP lever bypass NEMA 3r aluminum enclosure rated for outdoor use (MILBANK UAP9551-X-QG-HSP). Meter socket shall be installed on the load side of safety switch disconnect on the concrete service poles.
- d. A minimum 100 AMP 600 vac rated NEMA 4x fusible single throw safety switch disconnect (square d vh363ndsgl) shall be installed on the concrete service poles, on the loadside of the meter socket.
- e. Roadway street lighting load center enclosure cabinet shall be installed on the concrete service poles.
- f. Roadway street lighting load center enclosure cabinet shall be stainless steel NEMA 3r rainproof enclosure and approved by Lee County DOT Traffic.
- g. Roadway street lighting load center with needed components:
 - i. Square D night-master long version (8903_SQH63_V02)
 - ii. 2 pole fuse block, compatible with FRS-R fuses, one (1) per each circuit (four (4) circuits max per load center)
 - iii. One (1) 120/240 VAC SPD (ASCO 420120SP05NWSJ10) or (HESCO PRO120-2S-A) (mounted internally)
 - iv. One (1) current photoelectric mounting bracket (MB-PECTL)
 - v. One (1) Intermatic 120/240VAC twist lock photocell (LED4536SC) (photocell shall be mounted externally on top left of night-master, when facing night-master access door)

I. The following is the modification to the conduit notes on sheet L-7:

- i. Reference to XLP insulation is hereby **deleted**. All conductors shall meet the Lee County Specifications.

3. QUESTIONS/ANSWERS

1.	Per "Signed B240297CJV Estero Blvd Lighting and Sidewalk Improvements" bid docs sheet 17 of Special Conditions, Work to Final Acceptance shall be 400 calendar days. Per Exhibit J Special Provisions, Contract Time is 210 calendar days.
Answer	The draft contract included in the bid package is a SAMPLE only, and details are not project-specific. The final acceptance time of the contract for this project will be as stated in the Special Conditions.
2.	I cannot find the amount of liquidated damages per day.
Answer	See solicitation document titled B240297CJV Crosswalk Lighting Specs, Exhibit E Standard Specifications, Section 8 Prosecution and Progress, Article 8-10 Liquidated Damages for Failure to Complete the Work for liquidated damages schedule. (page 85)

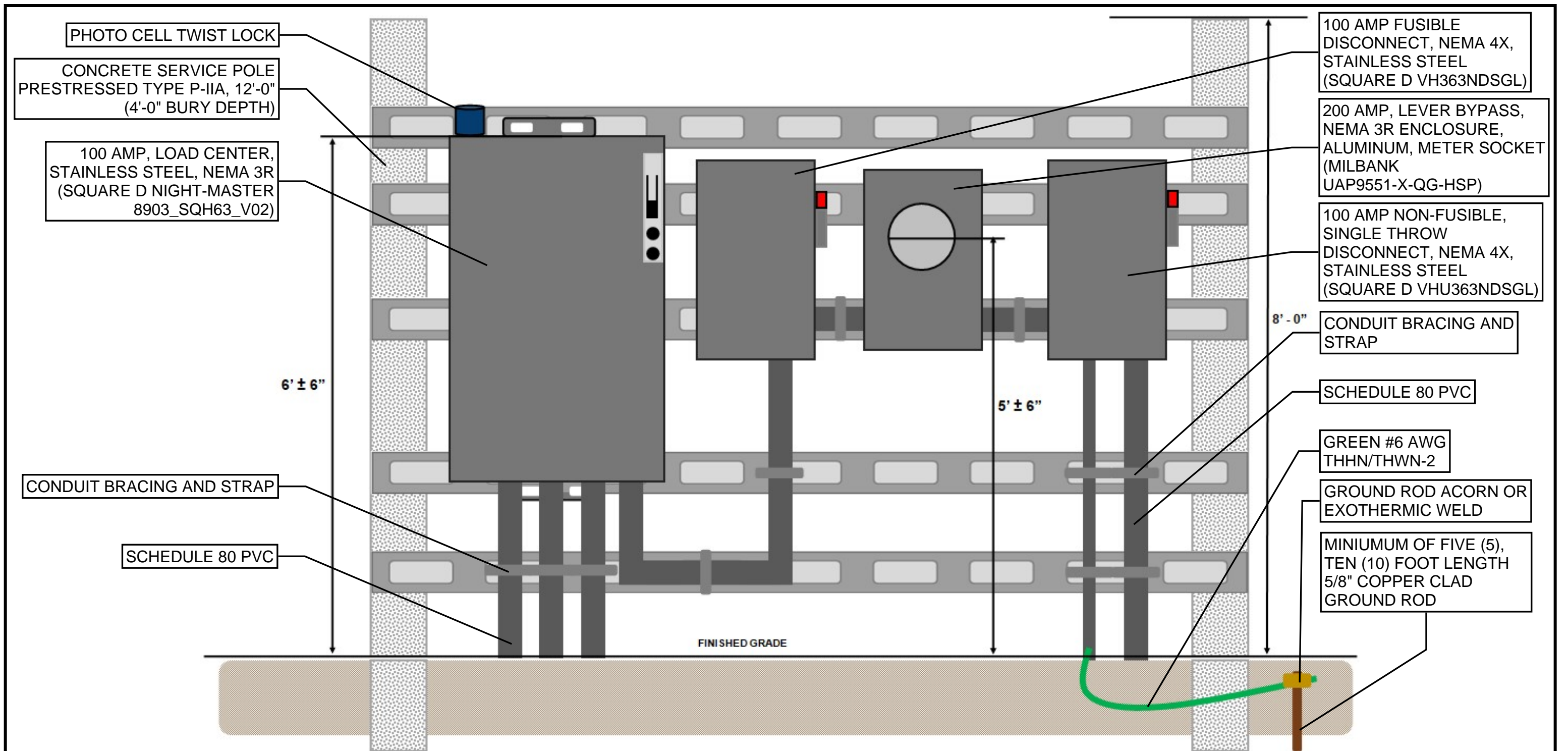
3.	Pay item note 715-1-12 on sheet L-6 calls out XLP insulation for all conductors. Plan sheet L-7 calls out XLP insulation only for No. 6 ground conductor. Please advise.
Answer	See section 3. Modifications, Paragraph H(i).
4.	Traffic will need to be shifted to allow for concrete removal, setting of foundations and light poles, and concrete pouring. Are there any restrictions involved with this? It is assumed an MOT plan will be submitted by the Contractor showing at a minimum FDOT Standard Indices to be used in regards to lane shifts or pedestrian detours.
Answer	Contractor to refer to the specification requiring the Contractor to provide a traffic control plan for approval. Refer to this addendum for additional clarification on lane closure restrictions.
5.	Is there a designated Contractor staging area provided for materials and equipment?
Answer	If the Contractor requires a staging area other than the Estero Blvd right of way, the Contractor will be responsible for securing the area and providing proof of authorization to use the particular parcel to the County. Note any staging of material or equipment in the Estero Blvd right of way will not be allowed to impede or hinder vehicle, bicycle or pedestrian traffic.

BIDDER/PROPOSER IS ADVISED, YOU ARE REQUIRED TO ACKNOWLEDGE RECEIPT OF THIS ADDENDUM WHEN SUBMITTING A BID/PROPOSAL. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN THE BIDDER/PROPOSER BEING CONSIDERED NON-RESPONSIVE.

ALL OTHER TERMS AND CONDITIONS OF THE SOLICITATION DOCUMENTS ARE AND SHALL REMAIN THE SAME.

Christy VanAllen

Christy VanAllen, Procurement Analyst
Direct Line: 239-533-8839
Lee County Procurement Management



Within 150' of Electrical Service Feed

REVISION
10/11/2023

Street lighting Service Point Detail
Load Center, Secondary Voltage with Meter

Lee County Department of Transportation - Traffic

INDEX NO.
21

SHEET NO.
1 of 1

DRAWN BY: RYAN KIRSCH



ADDENDUM #1 ATTACHMENT B REVISED BID SCHEDULE

COMPANY NAME: _____

SOLICITATION: _____

Having carefully examined the Contract Documents, Contractor/Vendor proposes to furnish the following which meeting these specifications.

PRICING

Pricing shall be inclusive of all labor, equipment, supplies, overhead, profit, material, and any other incidental costs required to perform and complete all work as specified in the Contract Documents. All Unit Prices will be bid at the nearest whole penny. The Excel document contains formulas for convenience, however it is the Contractor's/Vendor's responsibility to verify all pricing and calculations are CORRECT. Lee County is not responsible for errors in formulas or calculations contained within Excel document(s).

LUMP SUM PRICING: The Contractor performing the work agrees to complete the project for a fixed amount – no more or less, as stated on the Bid/Price Proposal Form. The lump sum price shall be inclusive of all labor, equipment, supplies, overhead, profit, materials, and any other incidental costs required to perform and complete all work, as specified within the scope, technical specifications, and construction documents.

In the event there is a discrepancy between a subtotal or total amount and the unit prices and extended amounts, the unit prices will prevail and the corrected extension(s) and total(s) will be considered the price.

The County will only accept bids submitted on bid forms provided by the County. Bids submitted on other forms, other than those provided by the County, will be deemed non-responsive and ineligible for award.

****Bidders may not adjust or modify County-authored data as provided within the Bid Schedule. Bids received with modified data may deem the Bidder as non-responsive and ineligible for award.****

Estero Boulevard Sidewalk and Lighting Improvements

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
101-1	MOBILIZATION	LS	1		\$0.00
102-1	MAINTENANCE OF TRAFFIC	LS	1		\$0.00
104-10-3	SEDIMENT BARRIER	LF	4830		\$0.00
104-18	INLET PROTECTION SYSTEM	EA	48		\$0.00
110-4-10	REMOVAL OF EXISTING CONCRETE	SY	509.9		\$0.00
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	347.4		\$0.00
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	1785		\$0.00
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	15367		\$0.00
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVEGROUND	LF	390		\$0.00
635-2-11	PULL & SPLICE BOX, F&I, 17" x 30" COVER SIZE	EA	142		\$0.00
635-2-50	PULL & SPLICE BOX, REPAIR	EA	40		\$0.00
639-1-112	ELECTRICAL POWER SERVICE, F&I, OVERHEAD, METER PURCHASED BY CONTRACTOR	AS	14		\$0.00
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	3		\$0.00
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	85		\$0.00
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE (12')	EA	20		\$0.00
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE (36')	EA	13		\$0.00
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8 - 6	LF	56276		\$0.00
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA	17		\$0.00
715-511-130	LIGHT POLE COMPLETE-SPECIAL DESIGN, F&I, SINGLE ARM SHOULDER MOUNT, ALUMINIUM, 30'	EA	102		\$0.00
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, FURNISH AND INSTALL, CONVENTIONAL	EA	102		\$0.00
Total					\$0.00

EXHIBIT C
BID FORM AND REQUIRED DOCUMENTS

ORIGINAL



Advertise Date: Tuesday, April 23, 2024

Lee County Board of County Commissioners
DEPARTMENT OF PROCUREMENT MANAGEMENT

Invitation to Bid (B)
DOT Construction Only

Solicitation No.: B240297CJV

Solicitation Name: Estero Boulevard Lighting and Sidewalk Improvements

Open Date/Time: Friday, May 24, 2024 Time: 2:30 PM

Location: Lee County Procurement Management
2115 Second Street, 1st Floor
Fort Myers, FL 33901

Procurement Contact: Christy VanAllen Title Procurement Analyst

Phone: (239) 533-8839 Email: cvanallen@leegov.com

Requesting Dept. Transportation

Pre-Bid Conference:

Type: No meeting scheduled at this time

Type text here

All solicitation documents are available for download at
www.leegov.com/procurement

Form 1 – Solicitation Response Form



LEE COUNTY PROCUREMENT MANAGEMENT
SOLICITATION RESPONSE FORM

Date Submitted: May 24th 2024 Bid Due Date: 5/24/2024

SOLICITATION IDENTIFICATION: B240297CJV

SOLICITATION NAME: Estero Boulevard Lighting and Sidewalk Improvements

COMPANY NAME: American Infrastructure Services INC

NAME & TITLE: (TYPED OR PRINTED) Doug McIntyre, President

BUSINESS ADDRESS: (PHYSICAL) 11341 Lindbergh Blvd, Fort Myers, FL 33913

CORPORATE OR MAILING ADDRESS: [X] SAME AS PHYSICAL

ADDRESS MUST MATCH SUNBIZ.ORG

E-MAIL ADDRESS: Bids@ainfraserv.com dmcintyre@ainfraserv.com

PHONE NUMBER: (239) 206-4411 FAX (239) 206-4412

NOTE REQUIREMENT: IT IS THE SOLE RESPONSIBILITY OF THE BIDDER/PROPOSER TO CHECK THE LEE COUNTY PROCUREMENT MANAGEMENT WEB SITE FOR ANY ADDENDA ISSUED FOR THIS PROJECT. THE COUNTY WILL POST ADDENDA TO THIS WEB PAGE BUT WILL NOT NOTIFY.

By responding to this sealed Solicitation, the Bidder/Proposer makes all representations required by the instructions and further warrants and represents that: Bidder/Proposer has examined copies of all the Solicitation Documents and of the following Addenda:

No. 1 Dated: 05/01/24 No. Dated: No. Dated: No. Dated:

Taxpayer Identification Number:

(1) Employer Identification Number -OR- (2) Social Security Number:

** Lee County collects your social security number for tax reporting purposes only

Please submit a copy of your registration from the website www.sunbiz.org establishing your firm as authorized (including authorized representatives) to conduct business in the State of Florida, as provided by the Florida Department of State, Division of Corporations. (a sample is attached for your reference)

1 Collusion Statement: Lee County, Florida. The undersigned, as Bidder/Proposer, hereby declares that no person or other persons, other than the undersigned, are interested in this Solicitation as principal, and that this Solicitation is submitted without collusion with others; and that they have carefully read and examined the Specifications or Scope of Work, and with full knowledge of all conditions under which the services herein is contemplated must be furnished, hereby Bid and agree to furnish this service according to the requirements set out in the Solicitation Documents, Specifications or Scope of Work for said service for the prices as listed on the County provided price sheet or (CCNA) agree to negotiate prices in good faith if a contract is Awarded.

2 Scrutinized Companies Certification: Section 287.135, F.S, entitled "Prohibition against contracting with scrutinized companies" prohibits agencies from contracting with companies, for goods or services over \$1,000,000, that are on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, Scrutinized Companies that Boycott Israel List, have been engaged in a boycott of Israel, or been engaged in business operations in Cuba or Syria. The County reserves the right to review, on a case-by-case basis, and waive this stipulation if it is deemed advantageous to the County.

As the person authorized to sign on behalf of Respondent, I hereby certify that the company identified above is in compliance with Section 287.135, F.S. I understand that submission of a false certification may subject company to contract termination, civil penalties, attorney's fees, and/or costs.

2024 FLORIDA PROFIT CORPORATION ANNUAL REPORT

DOCUMENT# P15000057603

Entity Name: AMERICAN INFRASTRUCTURE SERVICES, INC.

Current Principal Place of Business:

11341 LINDBERGH BLVD.
FT. MYERS, FL 33913

Current Mailing Address:

11341 LINDBERGH BLVD.
FT. MYERS, FL 33913 US

FEI Number: 47-4436189

Certificate of Status Desired: No

Name and Address of Current Registered Agent:

MCINTYRE, BARTON
11341 LINDBERGH BLVD.
FORT MYERS, FL 33913 US

The above named entity submits this statement for the purpose of changing its registered office or registered agent, or both, in the State of Florida.

SIGNATURE:

Electronic Signature of Registered Agent

Date

Officer/Director Detail :

Title S.
Name GULF TO HIGHLANDS LLC
Address PO BOX 1065
City-State-Zip: ESTERO FL 33929

Title PRESIDENT
Name MCINTYRE, E. D
Address PO BOX 1065
City-State-Zip: ESTERO FL 33929

Title VP
Name INFRASERV CONSULTING, LLC
Address 337 STEERFORTH COURT
City-State-Zip: NAPLES FL 34110

Title TREASURER
Name DARDAS, RICHARD J
Address 337 STEERFORTH COURT
City-State-Zip: NAPLES FL 34110

Title D
Name DIVINE EQUITY PROPERTIES LLC
Address 15620 KINROSS CIRCLE
City-State-Zip: FORT MYERS FL 33912

I hereby certify that the information indicated on this report or supplemental report is true and accurate and that my electronic signature shall have the same legal effect as if made under oath; that I am an officer or director of the corporation or the receiver or trustee empowered to execute this report as required by Chapter 607, Florida Statutes; and that my name appears above, or on an attachment with all other like empowered.

SIGNATURE: E.D. MCINTYRE

PRESIDENT

01/18/2024

Electronic Signature of Signing Officer/Director Detail

Date

Form 1a – Bid/Proposal Form (not applicable for CCNA solicitations)



Lee County Procurement Management
BID/PROPOSAL FORM

Company Name: American Infrastructure Services INC

Solicitation # B240297CJV **Solicitation Name** Estero Boulevard Lighting and Sidewalk Improvements

This page serves as a header/placeholder only. Please refer to the Excel document provided with the solicitation for the complete Bid Schedule. The Excel document contains formulas for convenience; however, it is the Contractor's responsibility to verify all pricing and calculations are CORRECT. Lee County is not responsible for errors in formulas or calculations contained within Excel document(s).

REMINDER: In the event there is a discrepancy between the total quoted amount, or the extended amounts and the unit prices quoted, the unit prices will prevail, and the corrected sum will be considered the quoted price.

The County will only accept bids submitted on bid forms provided by the County. Bids submitted on other forms, other than those provided by the County, will deem Bidder as non-responsive and ineligible for award.

Bidders may not adjust or modify County-authored data as provided within the Bid Schedule. Bids received with modified data may deem the Bidder as non-responsive and ineligible for award.

PLEASE ENSURE you have provided a printed copy of the Bid Schedule with your hard copy submission packages and provided the excel version with your digital submission package.

PRICING

Pricing shall be inclusive of all labor, equipment, supplies, overhead, profit, materials, and any other incidental costs required to perform and complete all work as specified herein.

Lee County
Estero Blvd Midblock Crosswalk Lighting Plans
From South of Crescent St to Big Carlos Pass
Bid Schedule

05/24/2024

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
101-1	MOBILIZATION	LS	1	\$117,864.00	\$117,864.00
102-1	MAINTENANCE OF TRAFFIC	LS	1	\$63,545.00	\$63,545.00
104-10-3	SEDIMENT BARRIER	LF	4830	\$3.65	\$17,629.50
104-18	INLET PROTECTION SYSTEM	EA	48	\$182.00	\$8,736.00
110-4-10	REMOVAL OF EXISTING CONCRETE	SY	509.9	\$55.00	\$28,044.50
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	347.4	\$164.00	\$56,973.60
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	1785	\$13.20	\$23,562.00
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	15367	\$21.10	\$324,243.70
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVEGROUND	LF	390	\$27.50	\$10,725.00
635-2-11	PULL & SPLICE BOX, F&I, 17" x 30" COVER SIZE	EA	142	\$1,370.00	\$194,540.00
635-2-50	PULL & SPLICE BOX, REPAIR	EA	40	\$670.00	\$26,800.00
639-1-112	ELECTRICAL POWER SERVICE, F&I, OVERHEAD, METER PURCHASED BY CONTRACTOR	AS	14	\$3,280.00	\$45,920.00
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	3	\$4,040.00	\$12,120.00
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	85	\$7.35	\$624.75
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE (12')	EA	20	\$1,980.00	\$39,600.00
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE (36')	EA	13	\$2,460.00	\$31,980.00
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8 - 6	LF	56276	\$2.50	\$140,690.00
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA	17	\$23,000.00	\$391,000.00
715-511-130	LIGHT POLE COMPLETE-SPECIAL DESIGN, F&I, SINGLE ARM SHOULDER MOUNT, ALUMINIUM, 30'	EA	102	\$14,700.00	\$1,499,400.00
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, FURNISH AND INSTALL, CONVENTIONAL	EA	102	\$870.00	\$88,740.00
				Total	\$3,122,738.05

Form 1 – Solicitation Form, Page 2

3 **Business Relationship Disclosure Requirement:** Sections 112.313(3) and 112.313(7), F.S., prohibit certain business relationships on the part of public officers and employees, their spouses, and their children. See Part III, Chapter 112, F.S., and/or the brochure entitled "A Guide to the Sunshine Amendment and Code of Ethics for Public Officers, Candidates and Employees" for more details on these prohibitions. However, Section 112.313(12), F.S., provides certain limited exemptions to the above-referenced prohibitions, including one where the business is awarded under a system of sealed, competitive bidding; the public official has exerted no influence on bid negotiations or specifications; and where disclosure is made, prior to or at the time of the submission of the bid, of the official's or his/her spouse's or child's interest and the nature of the intended business. The Commission on Ethics has promulgated this form for such disclosure, if and when applicable to a public officer or employee.

If this disclosure is applicable, the Bidder must request form "INTEREST IN COMPETITIVE BID FOR PUBLIC BUSINESS" (Required by 112.313(12)(b), F.S.) to be completed and returned with Solicitation Response. It is the Bidder/proposer's responsibility to disclose this relationship, failure to do so could result in being declared non-responsive.

Business Relationship Applicable (request form) Business Relationship NOT Applicable

4 Disadvantaged, Minority, Women, Veterans Business Enterprise (DBE, MBE, WBE, VBE) Proposer? If yes, please attach a current certificate. Yes No

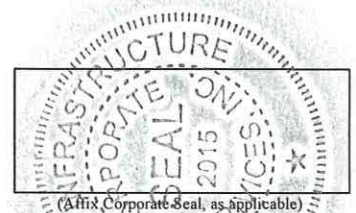
ALL SUBMISSIONS MUST BE EXECUTED BY AN AUTHORIZED AUTHORITY OF THE BIDDER/PROPOSER. WITNESSED AND SEALED (AS APPLICABLE)

American Infrastructure Services INC
Company Name (Name printed or typed)

Doug McIntyre
Authorized Representative Name (printed or typed)

President
Authorized Representative's Title (printed or typed)

Authorized Representative's Signature



[Handwritten Signature]
Witnessed/Attested by: (Witness/Secretary name and title printed or typed)

[Handwritten Signature]
Witness/Secretary Signature

Any blank spaces on the form(s), qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's form may result in the submission being declared non-responsive by the County.

Bidders may not adjust or modify County-authored data as provided within the Bid Schedule. Bids received with modified data may deem the Bidder as non-responsive and ineligible for award.

Form 2 – Affidavit Certification of Immigration Laws



AFFIDAVIT CERTIFICATION IMMIGRATION LAWS


SOLICITATION NO.: **B240297CJV**

SOLICITATION NAME: **Estero Boulevard Lighting and Sidewalk Improvements**

LEE COUNTY WILL NOT INTENTIONALLY AWARD COUNTY CONTRACTS TO ANY CONTRACTOR WHO KNOWINGLY EMPLOYS UNAUTHORIZED ALIEN WORKERS, CONSTITUTING A VIOLATION OF THE EMPLOYMENT PROVISIONS CONTAINED IN 8 U.S.C. SECTION 1324 a(e) {SECTION 274A(e) OF THE IMMIGRATION AND NATIONALITY ACT ("INA").

LEE COUNTY MAY CONSIDER THE EMPLOYMENT BY ANY CONTRACTOR OF UNAUTHORIZED ALIENS A VIOLATION OF SECTION 274A(e) OF THE INA. **SUCH VIOLATION BY THE RECIPIENT OF THE EMPLOYMENT PROVISIONS CONTAINED IN SECTION 274A(e) OF THE INA SHALL BE GROUNDS FOR UNILATERAL CANCELLATION OF THE CONTRACT BY LEE COUNTY.** PROPOSER ATTESTS THAT THEY ARE FULLY COMPLIANT WITH ALL APPLICABLE IMMIGRATION LAWS (SPECIFICALLY TO THE 1986 IMMIGRATION ACT AND SUBSEQUENT AMENDMENTS).

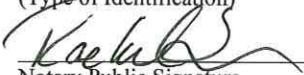
BY REGISTERING AS A VENDOR, SUBMITTING A RESPONSE TO A SOLICITATION, OR ENTERING INTO A CONTRACT, IF YOU ARE OBLIGATED TO COMPLY WITH THE PROVISIONS OF SECTION 448.095, FLA. STAT., "EMPLOYMENT ELIGIBILITY." FURTHER, BY YOUR REGISTRATION AS A VENDOR, RESPONSE TO A SOLICITATION, ENTERING INTO A CONTRACT, YOU AFFIRM AND REPRESENT THAT YOU ARE REGISTERED WITH THE E-VERIFY SYSTEM AND ARE USING SAME, AND WILL CONTINUE TO USE SAME AS REQUIRED BY SECTION 448.095, F.S. COMPLIANCE WITH SECTION 448.095 INCLUDES, BUT IS NOT LIMITED TO, UTILIZATION OF THE E-VERIFY SYSTEM TO VERIFY THE WORK AUTHORIZATION STATUS OF ALL NEWLY HIRED EMPLOYEES, AND REQUIRING ALL SUBCONTRACTORS TO PROVIDE AN AFFIDAVIT ATTESTING THAT THE SUBCONTRACTOR DOES NOT EMPLOY, CONTRACT WITH, OR SUBCONTRACT WITH, AN UNAUTHORIZED ALIEN. FAILURE TO COMPLY WILL LEAD TO TERMINATION AS A VENDOR, DISQUALIFYING YOU FOR AWARD OF A SOLICITATION, DENIAL OF ENTERING INTO A CONTRACT AND/OR, CANCELLATION OF AN ACTIVE CONTRACT, OR IF YOUR SUBCONTRACTOR KNOWINGLY VIOLATES THE STATUTE, THE SUBCONTRACT MUST BE TERMINATED IMMEDIATELY. ANY CHALLENGE TO TERMINATION UNDER THIS PROVISION MUST BE FILED WITH THE DEPARTMENT OF PROCUREMENT MANAGEMENT NO LATER THAN 20 CALENDAR DAYS AFTER THE DATE OF TERMINATION. IF TERMINATED FOR A VIOLATION OF THE STATUTE BY THE VENDOR, THE VENDOR MAY NOT BE ALLOWED TO DO BUSINESS WITH THE COUNTY OR BE AWARDED A SOLICITATION OR CONTRACT FOR A PERIOD OF 1 YEAR AFTER THE DATE OF TERMINATION. ALL COSTS INCURRED TO INITIATE AND SUSTAIN THE AFOREMENTIONED PROGRAMS SHALL BE THE RESPONSIBILITY OF THE VENDOR.

Company Name: American Infrastructure Services INC
 Doug McIntyre, President May 24th 2024
Signature Title Date

STATE OF FLORIDA
COUNTY OF LEE

The foregoing instrument was signed and acknowledged before me, by means of physical presence or online notarization, this 24th day of May 2024, by Doug McIntyre who has produced (Print or Type Name)

SELF as identification.
(Type of Identification)


Notary Public Signature

Rachel Spurrier
Printed Name of Notary Public

HH320513 10-10-26
Notary Commission Number/Expiration



The signee of this Affidavit guarantee, as evidenced by the sworn affidavit required herein, the truth and accuracy of this affidavit to interrogatories hereinafter made. **LEE COUNTY RESERVES THE RIGHT TO REQUEST SUPPORTING DOCUMENTATION, AS EVIDENCE OF SERVICES PROVIDED, AT ANY TIME.**

Form 3 - Reference Survey

Lee County Procurement Management
Reference Survey

****REQUIRED OF THE LOWEST APPARENT BIDDER ONLY****

Reference surveys submitted can be a maximum of twelve (12) months old. If using a previous reference, Proposers must clearly identify the project name and number the reference is being submitted for.

Project Name & Number: B240297CJV - Estero Boulevard Lighting and Sidewalk Improvements

Section 1	Reference Respondent Information	Please return completed form to:	
FROM:	_____	Bidder/Proposer:	
COMPANY:	_____	Due Date:	
PHONE #:	_____	Total # Pages:	1
FAX #:	_____	Phone #:	Fax #:
EMAIL:	_____	Bidder/Proposer E-Mail:	

Section 2	Enter Bidder/Proposer Information, as applicable Similar Performed Project (Bidder/Proposer to enter details of a project performed for above reference respondent)		
Bidder/Proposer Name:	American Infrastructure Services INC		
Reference Project Name:	Project Address:	Project Cost:	
B240297CJV - Estero Boulevard Lighting and Sidewalk Improvements			
Summarize Scope:			

You as an individual or your company has been given as a reference on the project identified above. Please provide your responses in Section 3 below.

Section 3		Indicate: "Yes" or "No"
1. Did this company have the proper resources and personnel by which to get the job done?		
2. Were any problems encountered with the company's work performance?		
3. Were any change orders or contract amendments issued, other than owner initiated?		
4. Was the job completed on time?		
5. Was the job completed within budget?		
6. On a scale of one to ten, ten being best, how would you rate the overall work performance, considering professionalism; final product; personnel; resources. Rate from 1 to 10. (10 being highest)		
7. If the opportunity were to present itself, would you rehire this company?		
8. Please provide any additional comments pertinent to this company and the work performed for you:		

Section 4 Please submit non-Lee County employees as references

Doug McIntyre
Reference Name (Print Name)


Reference Signature

Form 4 – Negligence, Breach and/or Non-Compliance Disclosure Form



ALLEGED NEGLIGENCE/BREACH OF CONTRACT/NON-COMPLIANCE WITH GOVERNMENTAL REGULATION FORM

“Please fill in the form below. Provide details for each incident of alleged negligence, breach of contract or non-compliance with governmental regulation that has occurred over the past 10 years. Examples of non-compliance with governmental regulation include but are not limited to zoning violations, code enforcement violations, civil or criminal citations, denial, or revocation of permits. Provide details for all entities currently or previously owned in whole or in part by the proposer in the last 10 years. Please complete in chronological order with the most recent incident starting on page 1. Please do not modify this form (expansion of spacing allowed) or submit your own variation.”

Company Name: American Infrastructure Services INC

Type of Incident <i>Alleged Negligence, Breach of Contract, or Non-Compliance</i>	Incident Date And Date Filed	Plaintiff <i>(Company, person, entity- acted against your company or state if your company initiated the action)</i>	Case Number	Court <i>(Name of State and County)</i>	Project <i>(Address and Name)</i>	Allegation <i>(Stated reason your company was accused of negligence, breach of contract or non- compliance of governmental regulation or the allegations your company made)</i>	Final Outcome <i>(Who prevailed and how)</i>
N/A							

Make as many copies of this sheet as necessary to provide a 10-year history of the requested information. If there is no action pending or action taken in the last 10 years, complete the company name and write “NONE” in the first “Type of Incident” box of this page and return with your proposal package. This form should also include the primary partners listed in your proposal. Do not include litigation with your company as the plaintiff. Final outcome should include who prevailed and what method of settlement was made. If a monetary settlement was made the amount may remain anonymous.

Proposals may be declared “non-responsive” due to omissions of “Negligence or Breach of Contract” on this disclosure form. Additionally, proposals may be declared “not responsible” due to past or pending lawsuits that are relevant to the subject procurement such that they call into question the ability of the proposer to assure good faith performance. This determination may be made by the Procurement Management Director, after consulting with the County Attorney.

Page Number: _____ Of _____ Total pages



SUB-CONTRACTOR/CONSULTANT LIST

N/A SELF PERFORMED

Sub-Contractor/Consultant Company Name	Area Of Work	Point Of Contact Or Project Supervisor	Contact Info Phone or Email	Qualified DBE, MBE, WBE, VBE or Similar	Amount or Percentage of Total

Please include sub-contractor/consultant name, area of work (i.e., mechanical, electrical, etc.) and a **valid** phone number and/or email. Also include the dollar value or percentage that the sub-contractor/consultant will be performing. If sub-contractor/consultant qualifies as a current certificate Florida Certified Business Enterprise such as MBE, WBE, DBE, VBE or similar please indicate such above and provide proof of

Public Entity Crime Form

This form must be signed and sworn to in the presence of a notary public or other officer authorized to administer oaths.

1. This sworn statement is submitted to American Infrastructure Services INC
(Print name of the public entity)
- by Doug McIntyre, President
(Print individual's name and title)
- for American Infrastructure Services INC
(Print name of entity submitting sworn statement)
- whose business address is 11341 Lindbergh Blvd, Fort Myers, FL 3391
- (If applicable) its Federal Employer Identification Number (FEIN) is 474436189

(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: On the attached sheet.) Required as per IRS Form W-9.

2. I understand that a "public entity crime" as defined in Section 287.133(1) (g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including but not limited to, a bid or contract for goods or services to be provided to any public entity or agency or political subdivision or any other state or of the United States, and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
3. I understand that "convicted" or "conviction" as defined in Section 287.133(1) (b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that "affiliate" as defined in Section 287.133(1)(a), Florida Statutes, means:
1. A predecessor or successor of a person convicted of a public entity crime;
 - or:
 2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those offices, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of the affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not fair market value under an arm's length Agreement/Contract, shall be a facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding thirty-six (36) months shall be considered an affiliate.
5. I understand that a "person" as defined in Section 287.133(1) (c), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of the entity.
6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting those sworn statement. *(Please indicate which statement applies)*

Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, member, or agents who are active in management of the entity, or an affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, member, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearing and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. (Attach a copy of the final order)

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

[Signature]
(Signature)

May 24th 2024
(Date)

STATE OF FLORIDA

COUNTY OF LEE

Sworn to (or affirmed) and subscribed before me, by means of physical presence or online notarization, this 24th day of May 2024, by Doug McIntyre who has produced
(Print or Type Name)

SELF as identification.
(Type of Identification)

[Signature]
Notary Public Signature

Rachel Spurrier
Printed Name of Notary Public



HH320513 10-10-26
Notary Commission Number/Expiration

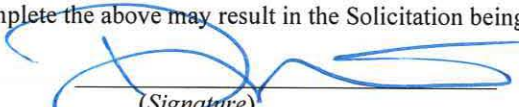
TRENCH SAFETY

Contractor/vendor acknowledges that included in the appropriate Solicitation items of the Solicitation and in the total Solicitation price are costs for complying with the Florida Trench Safety Act (90-96, Laws of Florida) effective October 1, 1990. The contractor/vendor further identifies the costs of such compliance to be summarized below:

	Trench Safety Measure (Description)	Units of Measure (LF, SF)	Unit (Quantity)	Unit Cost	Extended Cost
A.	Training	1	1	\$500	--
B.					
C.					
D.					
TOTAL \$				500.00	

If applicable, the contractor/vendor certifies that all trench excavation done within its control in excess of five feet (5') in depth shall be in accordance with the Florida Department of Transportation's Special Provisions Article 125-1 and Sub-article 125-4.1 (TRENCH EXCAVATION SAFETY SYSTEM AND SHORING, SPECIAL-TRENCH EXCAVATION).

Failure to complete the above may result in the Solicitation being declared non-responsive.



 (Signature)
 American Infrastructure Services INC

 (Company Name)

STATE OF FLORIDA
 COUNTY OF LEE

The foregoing instrument was signed and acknowledged before me, by means of physical presence or online notarization, this 24th day of May 2024, by Doug McIntyre who has produced

SELF as identification. (Print or Type Name)
 (Type of Identification)



 (NOTARY PUBLIC)

My Commission Expires: 10-10-26



BID BOND

Complete EITHER Lee County Paper Bid Bond OR provide cashier's check

KNOW ALL MEN BY THESE PRESENTS, that we

American Infrastructure Services, Inc. as Principal, and
(BIDDER'S Name)

Swiss Re Corporate Solutions America * a corporation licensed to do
(Surety's Name) * **Insurance Corporation**

business under the laws of the State of Florida as a Surety, are held and firmly bound unto LEE COUNTY BOARD OF COUNTY COMMISSIONERS, LEE COUNTY, FLORIDA, a political subdivision of the State of Florida,

in the SUM OF **5% Five Percent of Amount Bid**

for the payment whereof, well and truly to be made, we bind ourselves, our heirs, successors, personal representatives, and assigns, jointly and severally, firmly, by these presents.

SIGNED AND SEALED this 24th day of May, 2024


WHEREAS, said Principal is herewith submitting a Bid/Proposal for the project know as:

B240279CJV – Estero Boulevard Lighting and Sidewalk Improvements

NOW, THEREFORE, the condition of the above obligation is such that if said Principal shall be Awarded the Contract upon said Bid/Proposal within the specified time and shall enter into a written Contract, satisfactory in form, provide an acceptable Public Performance and Payment Bond from a Surety acceptable to the County and provide other insurance as may be required to the County within seven (7) calendar days after the written Notice of Intent to Award date, or within such extended period as the County may grant, then this obligation shall be null and void; otherwise said Principal and Surety shall pay to said County in money the difference between the amount of the Bid of said Principal and the amount for which said County may legally contract with another party to perform said Work, if the latter amount be in excess of the former, together with any expenses and reasonable attorney's fees incurred by said County if suit be brought hereon, but in no event shall said Surety's liability exceed the penal sum hereof plus such expenses and attorney's fees. For purposes of unsuccessful bid protests filed by the Principal herein, this obligation shall bind the Surety to pay costs and damages associated with the bid protest or delays to the project upon a finding from the Board of County Commissioners for Lee County that the bid protest was frivolous and/or lacked merit. The liability of the Surety shall not exceed the penal sum of the bid bond.

Witness as to Principal:


(By)

 (SEAL)
(Principal)
DOUG MCINTYRE
Printed Name

Swiss Re Corporate Solutions America Insurance Corporation

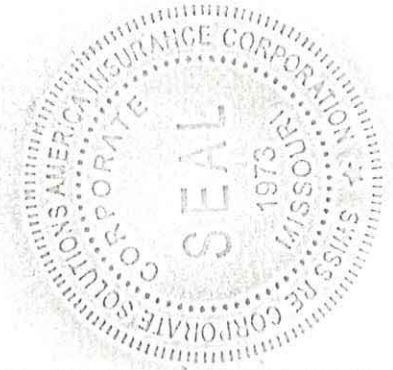
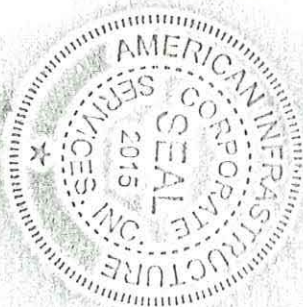
Witness as to Surety:


Kari Schmor, Account Executive

(SEAL)
(Surety's Name)


(By-As Attorney-in-Fact, Surety)
James N. Congelio, Attorney-In-Fact

Affix Corporate Seals and attach proper Power of Attorney for Surety.



SWISS RE CORPORATE SOLUTIONS

SWISS RE CORPORATE SOLUTIONS AMERICA INSURANCE CORPORATION ("SRCSAIC")
SWISS RE CORPORATE SOLUTIONS PREMIER INSURANCE CORPORATION ("SRCSPIC")
WESTPORT INSURANCE CORPORATION ("WIC")

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT SRCSAIC, a corporation duly organized and existing under laws of the State of Missouri, and having its principal office in the City of Kansas City, Missouri, and SRCSPIC, a corporation organized and existing under the laws of the State of Missouri and having its principal office in the City of Kansas City, Missouri, and WIC, organized under the laws of the State of Missouri, and having its principal office in the City of Kansas City, Missouri, each does hereby make, constitute and appoint:

JAMES C. CONGELIO and JAMES N. CONGELIO

JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

TWO HUNDRED MILLION (\$200,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both SRCSAIC and SRCSPIC at meetings duly called and held on the 18th of November 2021 and WIC by written consent of its Executive Committee dated July 18, 2011.

"RESOLVED, that any two of the President, any Managing Director, any Senior Vice President, any Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is, authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Corporation bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Corporation; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Corporation may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Corporation when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."



By Erik Janssens, Senior Vice President of SRCSAIC & Senior Vice President of SRCSPIC & Senior Vice President of WIC

By Gerald Jagrowski, Vice President of SRCSAIC & Vice President of SRCSPIC & Vice President of WIC



IN WITNESS WHEREOF, SRCSAIC, SRCSPIC, and WIC have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers

this 24TH day of MAY, 20 23

State of Illinois
County of Cook

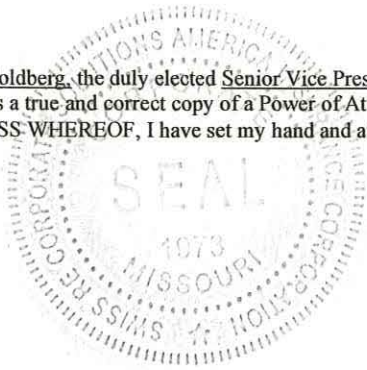
Swiss Re Corporate Solutions America Insurance Corporation
Swiss Re Corporate Solutions Premier Insurance Corporation
Westport Insurance Corporation

On this 24TH day of MAY, 20 23, before me, a Notary Public personally appeared Erik Janssens, Senior Vice President of SRCSAIC and Senior Vice President of SRCSPIC and Senior Vice President of WIC and Gerald Jagrowski, Vice President of SRCSAIC and Vice President of SRCSPIC and Vice President of WIC, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.



Christina Manisco, Notary

I, Jeffrey Goldberg, the duly elected Senior Vice President and Assistant Secretary of SRCSAIC and SRCSPIC and WIC, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said SRCSAIC and SRCSPIC and WIC, which is still in full force and effect. IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 24th day of May, 20 24.



Jeffrey Goldberg, Senior Vice President & Assistant Secretary of SRCSAIC and SRCSPIC and WIC



**MINIMUM QUALIFICATION REQUIREMENTS
FOR
B240297CJV Estero Boulevard
Lighting and Sidewalk Improvements**

Bidder(s)/Proposer(s) must meet the minimum qualification requirements as specified in the following form to qualify for consideration of award. This form must be completed and returned with the proposal submittal along with any supporting documentation where requested and/or indicated herein.

The County reserves the right, in their sole judgment, to determine to its satisfaction whether the Bidder(s)/Proposer(s) has met the minimum qualification requirements as specified herein. The determination shall be based upon the examination of the Minimum Qualification Requirements form and associated supportive documentation (if any requested).

An affirmative determination shall be a prerequisite for award of the contract to the Bidder(s)/Proposer(s). A negative determination shall result in disqualification of the proposal, in which event the County shall exclude the proposal from the evaluation or consideration process and therefore deeming the Bidder(s)/Proposer(s) ineligible for award.

1. LICENSING AND CERTIFICATION:

Work must be performed by or in the presence of, and under the responsible charge of, an employee of the licensed electrical Contractor and that holds a current IMSA Roadway Lighting Technician Level I certification or higher.

Does at least one member of your Firm hold a current IMSA Roadway Lighting Technician Level I certification or higher?

 X YES NO

If YES, provide details as requested below:

NAME: Wendy Lee Melgoza
POSITION TITLE: Signal Lighting Tech
LENGTH OF EMPLOYMENT
(IN CURRENT POSITION): 3
LICENSE NUMBER: #RR_86218
LICENSURE DATE: 10/18/2022 - 10/18/2025

Authorized Bidder/Proposer Signature

May 24th 2024

Date:

Doug McIntyre, President American Infrastructure Services INC

Authorized Bidder/Proposer Name (Print or Type)



Wendy Lee Melgoza

is hereby certified as a

IMSA Roadway Lighting Technician Level I

by completing all requirements and examination for certification
on 10/18/2022

Valid thru 10/18/2025
Certification #RR_86218

Toby Cummings - Executive Director



Local Business Tax Receipt

AMERICAN INFRASTRUCTURE SERVICES INC
AMERICAN INFRASTRUCTURE SERVICES INC
11341 LINDBERGH BLVD
FORT MYERS, FL 33913

Dear Business Owner:

Your **2022 - 2023** Lee County Local Business Tax Receipt is attached below for account number / receipt:
number: **1043458 / 1603053**

If there is a change in one of the following, refer to the instructions on the back of this receipt.

- Business name
- Ownership
- Physical location
- Business closed

This is not a bill. Detach the bottom portion and display in a public location.

I hope you have a successful year.

Sincerely,

Lee County Tax Collector

**2022-2023
LEE COUNTY LOCAL BUSINESS TAX RECEIPT**

Account Number: 1043458
Receipt Number: 1603053
State License Number:

Location:
11341 LINDBERGH BLVD
FORT MYERS, FL 33913

AMERICAN INFRASTRUCTURE SERVICES INC
AMERICAN INFRASTRUCTURE SERVICES INC
11341 LINDBERGH BLVD
FORT MYERS, FL 33913

Account Expires: September 30, 2023

May engage in the business of:
CONSULTANT
THIS LOCAL BUSINESS TAX RECEIPT IS NON REGULATORY

Payment Information:
PAID DP-00-00433253 09/19/2022
\$ 50.00



Procurement Management Department
2115 Second Street, 1st Floor
Fort Myers, FL 33901
Main Line: (239) 533-8881
Fax Line: (239) 485-8383
www.leegov.com/procurement

Posted Date: May 1, 2024

Solicitation No.: B240297CJV

Solicitation Name: Estero Boulevard Lighting and Sidewalk Improvements

Subject: Addendum Number 1

The following represents clarification, additions, deletions, and/or modifications to the above referenced bid. This addendum shall hereafter be regarded as part of the solicitation. Items not referenced herein remain unchanged, including the response date. Words, phrases or sentences with a strikethrough represent deletions to the original solicitation. Underlined words and bolded, phrases or sentences represent additions to the original solicitation.

1. ATTACHMENT

- A. Attachment A – 100 Amp Load Center Detail – 10.11.23
- B. Attachment B – Revised Bid Schedule

2. CLARIFICATION

- A. None of the existing conduit was verified after Hurricane Ian and post-hurricane activities. The Contractor shall be responsible for blowing out and verifying the conduits integrity. In the event the conduit is found to be compromised and in need of repair the contractor will be paid utilizing the appropriate conduit pay item(s) (630-2-11 or 630-2-12). The blowing out and verifying of the conduits is incidental the total project costs.
- B. None of the existing pull boxes was verified after Hurricane IAN and post-hurricane activities. In the event a pull box is deemed as needing replaced the contractor will be paid utilizing the appropriate pull box pay item (635-2-11).

3. MODIFICATIONS

- A. The following is a modification to the Pay Item Quantity shown in the Lighting Plans:
 - i. Quantity for pay item 715-500-1 is changed **from** 17 EA **to** 102 EA.
 - 1. Each proposed light pole shall have a pole cable distribution system.
- B. The following is a modification to the Pay Item Quantities shown in the Lighting Plans in the event conduit and/or pull boxes were compromised during the hurricane. The new totals include the original design material and possible material necessary for replacement due to storm damage:
 - i. Pay Item 630-2-11 quantity is changed **from** 1335 LF **to** 1,785 LF.
 - ii. Pay Item 630-2-12 quantity is changed **from** 367 LF **to** 15,367 LF.
 - iii. Pay Item 635-2-11 quantity is changed **from** 99 **to** 142 EA.
- C. **Add** the following Pay Item Number and Quantity:
 - i. 635-2-50 with a quantity of 40 EA is added to the project.
 - 1. This pay item is used only for cleaning out an existing lighting pull box due to sediment from the hurricane. If the pull box has been damaged, see Clarification (B.) above.

- D. Refer to Exhibit I – Supplemental Specifications, Division II Construction Details, Section 102 Maintenance of Traffic, Article 104-2. **Add the following paragraph:**
- i. Contractor shall only close roadway lanes/ bike lanes and or sidewalks with a County-approved temporary traffic control plan (TTCP). Two lanes of traffic are to always remain open from 6 AM to 8 PM. A single lane closure may be implemented by the Contractor with County approved TTCP which shall include flagging operations.
- E. Refer to Exhibit I – Supplemental Specifications, Division II Construction Details, Section 102 Maintenance of Traffic, Article 104-2. **Add the following paragraph:**
- i. Contractor shall only close roadway lanes, bike lanes, and/or sidewalks with a County-approved temporary traffic control plan (TTCP). Two lanes of traffic are to always remain open from 8 PM to 6 AM. A single lane closure may be implemented by the Contractor with a County-approved TTCP which shall include flagging operations. Any proposed night work must be pre-approved by the County. Contractor-provided lighting for night work activities shall meet County turtle lighting criteria.
- F. Refer to Standard Specifications, Division I General Requirements and Covenants, Section 8-4.1.1. Holiday and Weekend Work.:
- i. **Delete** “72 hours” in the second line. **Replace with** “Ten (10) working days”.
 - ii. All Holiday and Weekend work requested by the Contractor must be pre-approved by the County.
 1. If holiday or weekend work is approved, work shall be limited to above groundwork only.
- G. Refer to Standard Specifications, Division I General Requirements and Covenants, Section 8-4.1.1. Holiday and Weekend Work. **Add the following paragraph:**
- i. The County shall designate up to five (5) additional special event days per year in the contract. These event days will be determined by the County, and the County will advise the Contractor of these days, no less than ten (10) working days prior to the event. No work shall be performed on these days without expressed written consent by the County. If special event day work is approved, work shall be limited to above groundwork only. The Contractor shall prepare the job site for these events as directed by the County. No additional compensation will be paid for these special events.
- H. The following are modifications to the Pay Item Footnotes in the Lighting Plans:
- i. Item 1 “ALL CONDUCTORS SHALL USE XLP INSULATION” under Pay Item 715-1-12 is hereby **deleted**.
 1. All conductors shall meet the Lee County Specifications.
 - ii. Pay Item Notes for 630-2-11, 630-2-12 and 635-2-11 are hereby **deleted**.
 1. Lee County Specifications shall be followed for pull boxes and conduit (open trench and directional bore installation).
 - iii. The last sentence in pay item footnote for 715-511-130 is here by **deleted**.
 1. The Contractor is not limited to HAPCO and Valmont products. Flagpoles and P&K Pole products are not prohibited. All products shall meet Lee County Specifications.
 - iv. Pay Item 639-1-112 shall follow the specifications 639-1-122.
 1. See (H.)(v.) below for additional information.
 - v. Pay Item Note for 639-1-122 and 715-7-11 shall be **replaced** with the following:
 1. 639-1-112, 639-1-122, 715-7-11: Power service assembly shall be mounted with the load center as shown in “Attachment A” detail. The power service assembly shall be three wire, single phase 120/240VAC.
 - a. Roadway street lighting electric service shall be mounted on one (1) - twelve (12) foot FDOT type P-IIA service pole and one (1) thirty-six (36) foot FDOT type P-IIB service pole for 639-1-112 or roadway street lighting electric service shall be

mounted on two (2) - twelve (12) foot FDOT type P-IIA service poles for 639-1-122.

- b. A minimum 100 AMP 600 VAC rated NEMA 4x non-fusible single throw safety switch disconnect (square D VHU363NDSGL) shall be installed on the concrete service poles, on the lineside of the meter socket.
- c. All roadway street lighting electrical services shall be metered. Meter socket shall be a 200 AMP lever bypass NEMA 3r aluminum enclosure rated for outdoor use (MILBANK UAP9551-X-QG-HSP). Meter socket shall be installed on the load side of safety switch disconnect on the concrete service poles.
- d. A minimum 100 AMP 600 vac rated NEMA 4x fusible single throw safety switch disconnect (square d vh363ndsgl) shall be installed on the concrete service poles, on the loadside of the meter socket.
- e. Roadway street lighting load center enclosure cabinet shall be installed on the concrete service poles.
- f. Roadway street lighting load center enclosure cabinet shall be stainless steel NEMA 3r rainproof enclosure and approved by Lee County DOT Traffic.
- g. Roadway street lighting load center with needed components:
 - i. Square D night-master long version (8903_SQH63_V02)
 - ii. 2 pole fuse block, compatible with FRS-R fuses, one (1) per each circuit (four (4) circuits max per load center)
 - iii. One (1) 120/240 VAC SPD (ASCO 420120SP05NWSJ10) or (HESCO PRO120-2S-A) (mounted internally)
 - iv. One (1) current photoelectric mounting bracket (MB-PECTL)
 - v. One (1) Intermatic 120/240VAC twist lock photocell (LED4536SC) (photocell shall be mounted externally on top left of night-master, when facing night-master access door)

I. The following is the modification to the conduit notes on sheet L-7:

- i. Reference to XLP insulation is hereby **deleted**. All conductors shall meet the Lee County Specifications.

3. QUESTIONS/ANSWERS

1.	Per "Signed B240297CJV Estero Blvd Lighting and Sidewalk Improvements" bid docs sheet 17 of Special Conditions, Work to Final Acceptance shall be 400 calendar days. Per Exhibit J Special Provisions, Contract Time is 210 calendar days.
Answer	The draft contract included in the bid package is a SAMPLE only, and details are not project-specific. The final acceptance time of the contract for this project will be as stated in the Special Conditions.
2.	I cannot find the amount of liquidated damages per day.
Answer	See solicitation document titled B240297CJV Crosswalk Lighting Specs, Exhibit E Standard Specifications, Section 8 Prosecution and Progress, Article 8-10 Liquidated Damages for Failure to Complete the Work for liquidated damages schedule. (page 85)

3.	Pay item note 715-1-12 on sheet L-6 calls out XLP insulation for all conductors. Plan sheet L-7 calls out XLP insulation only for No. 6 ground conductor. Please advise.
Answer	See section 3. Modifications, Paragraph H(i).
4.	Traffic will need to be shifted to allow for concrete removal, setting of foundations and light poles, and concrete pouring. Are there any restrictions involved with this? It is assumed an MOT plan will be submitted by the Contractor showing at a minimum FDOT Standard Indices to be used in regards to lane shifts or pedestrian detours.
Answer	Contractor to refer to the specification requiring the Contractor to provide a traffic control plan for approval. Refer to this addendum for additional clarification on lane closure restrictions.
5.	Is there a designated Contractor staging area provided for materials and equipment?
Answer	If the Contractor requires a staging area other than the Estero Blvd right of way, the Contractor will be responsible for securing the area and providing proof of authorization to use the particular parcel to the County. Note any staging of material or equipment in the Estero Blvd right of way will not be allowed to impede or hinder vehicle, bicycle or pedestrian traffic.

BIDDER/PROPOSER IS ADVISED, YOU ARE REQUIRED TO ACKNOWLEDGE RECEIPT OF THIS ADDENDUM WHEN SUBMITTING A BID/PROPOSAL. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN THE BIDDER/PROPOSER BEING CONSIDERED NON-RESPONSIVE.

ALL OTHER TERMS AND CONDITIONS OF THE SOLICITATION DOCUMENTS ARE AND SHALL REMAIN THE SAME.

Christy VanAllen

Christy VanAllen, Procurement Analyst
 Direct Line: 239-533-8839
 Lee County Procurement Management

EXHIBIT D
PUBLIC CONSTRUCTION PERFORMANCE AND PAYMENT BOND

By this bond, we [Name of Contractor], as **Principal**, and [Name of Surety], as **Surety**, are bound to **Lee County Board of County Commissioners**, a political subdivision of the State of Florida, herein called **Owner**, in the sum of **[Total Contract Price]**, for payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally.

THE CONDITION OF THIS BOND IS that is that if Principal:

1. Performs this contract dated _____, 20___, between Principal and Owner for construction of improvements known as **[Name of Project]** located at **[Street Address or Legal Description]**, under Lee County Solicitation No. [Solicitation number], the contract being made a part of this bond by reference, at 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 Owner all losses, damages, expenses, costs, and attorney's fees, including appellate proceedings, that Owner 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 do not affect Surety's obligation under this bond.

	OWNER	PRINCIPAL	SURETY
NAME	Lee County Board of County Commissioners	American Infrastructure Services, Inc.	[Name of Surety]
ADDRESS	2115 Second St. Fort Myers, FL 33901	11341 Lindbergh Blvd., Fort Myers, FL 33913	[Principal Business Address of Surety]
PHONE NUMBER	239-533-2221	:239-206-4411	[Principal Business Phone of Surety]

[The remainder of this page intentionally left blank.]

BOND NO. [Surety to enter bond #]

[Name of Contractor]

DATED THIS _____ DAY
OF _____, 2_____

By: _____
[Printed Name and Title of Signer]

STATE OF _____
COUNTY OF _____

The foregoing instrument was sworn to (or affirmed) and subscribed before me by means of physical presence or online notarization, this ____ day of _____, _____, by [name of person acknowledging].

(NOTARY SEAL)

Signature of Notary Public
[Name of Notary Typed, Printed, or Stamped]

Personally Known _____ OR Produced Identification _____
Type of Identification Produced:

[Name of Surety]

DATED THIS _____ DAY
OF _____, 2_____

By: _____
[Printed Name] as Attorney in Fact

Address: _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was sworn to (or affirmed) and subscribed before me by means of physical presence or online notarization, this ____ day of _____, _____, by [name of person acknowledging].

(NOTARY SEAL)

Signature of Notary Public
[Name of Notary Typed, Printed, or Stamped]

Personally Known _____ OR Produced Identification _____
Type of Identification Produced:

EXHIBIT E
STANDARD SPECIFICATIONS

The Standard Specifications comprise Divisions I, II and III as noted below:

1. Division I General Requirements and Covenants, Sections 1-9 as included herein.
2. Division II-Construction Details and Division III-Materials refer to the FY 2024-25 edition of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, available at the following link:

<http://www.fdot.gov/programmanagement/Implemented/SpecBooks/>

DIVISION I

General Requirements and Covenants

SECTION 1 DEFINITIONS AND TERMS

1-1 General.

These Specifications are written to the bidder, prior to award of the Contract, and to the Contractor. Within Divisions I and II of the specifications, sentences that direct the Contractor to perform work are written in the active voice-imperative mood. These directions to the Contractor are written as commands. In the imperative mood, the subject “the bidder” or “the Contractor” is understood.

All other requirements to be performed by others, with the exception of the Method of Measurement and the Basis of Payment Articles, have been written in the active voice, but not in the imperative mood. Sentences written in the active voice identify the party responsible for performing the action. For example, “The Engineer will determine the density of the compacted material.” Certain requirements of the Contractor may also be written in the active voice, rather than active voice-imperative mood.

Division III of the Specifications (Materials) is written in the passive voice writing style.

1-2 Abbreviations.

The following abbreviations, when used in the Contract Documents, represent the full text shown.

AAN	American Association of Nurserymen, Inc.
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGC	The Associated General Contractors of America, Inc.
AGMA	American Gear Manufacturers Association
AIA	American Institute of Architects
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute, Inc.
AREA	American Railway Engineering Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWG	American Wire Gauge
AWPA	American Wood Preservers Association
AWS	American Welding Society
AWWA	American Water Works Association
CRSI	Concrete Reinforcing Steel Institute
EASA	Electrical Apparatus Service Association
EPA	Environmental Protection Agency of the United States Government
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration

FSS	Federal Specifications and Standards
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IPCEA	Insulated Power Cable Engineers Association
ISO	International Organization for Standards
MASH	AASHTO Manual for Assessing Safety Hardware
MUTCD	Manual on Uniform Traffic Control Devices
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NIST	National Institute for Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
OSHA	Occupational Safety and Health Administration
SAE	Society of Automotive Engineers
SI	International System of Units
SSPC	Society of Protective Coatings
UL	Underwriters' Laboratories

Each of the above abbreviations, when followed by a number or letter designation, or combination of numbers and letters, designates a specification, test method, or other code or recommendation of the particular authority or organization shown.

Use standards, specifications, test methods, or other codes as specified in the current edition at the time of the bid opening.

1-3 Definitions.

The following terms, when used in the Contract Documents, have the meaning described.

Advertisement.

The public announcement, as required by law, inviting bids for work to be performed or materials to be furnished, usually issued as “Notice to Contractors,” or “Notice to Bidders.”

Article.

The numbered prime subdivision of a Section of these Specifications.

Bidder.

An individual, firm, or corporation submitting a proposal for the proposed work.

Bridge.

A structure, including supports, erected over a depression or over an obstruction such as water, highway or railway, or for elevated roadway, for carrying traffic or other moving loads, and having a length, measured along the center of the roadway, of more than 20 feet between the inside faces of end supports. A multiple-span box culvert is considered a bridge, where the length between the extreme ends of the openings exceeds 20 feet.

Calendar day.

Every day shown on the calendar, ending and beginning at midnight.

Contract.

The term “Contract” means the entire and integrated agreement between the parties thereunder and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract Documents form the Contract between the Department and the Contractor setting forth the obligations of the parties thereunder, including, but not limited to, the performance of the Work and the basis of payment.

Contract Bond.

The security furnished by the Contractor and the surety as a guaranty that the Contractor shall fulfill the terms of the Contract and pay all legal debts pertaining to the construction of the project.

Contract Claim (Claim).

A written demand submitted to the Department by the Contractor in compliance with 5-12.3 seeking additional monetary compensation, time, or other adjustments to the Contract, the entitlement or impact of which is disputed by the Department.

Contract Documents.

The term “Contract Documents” includes: Advertisement for Proposal, Proposal, Certification as to Publication and Notice of Advertisement for Proposal, Appointment of Agent by Nonresident Contractors, Noncollusion Affidavit, Warranty Concerning Solicitation of the Contract by Others, Resolution of Award of Contract, Executed Form of Contract, Performance Bond and Payment Bond, Specifications, Plans (including revisions thereto issued during construction), Estimated Quantities Report, Standard Plans, Addenda, or other information mailed or otherwise transmitted to the prospective bidders prior to the receipt of bids, work orders and supplemental agreements, all of which are to be treated as one instrument whether or not set forth at length in the form of contract.

Note: As used in Sections 2 and 3 only, Contract Documents do not include work orders, and supplementary agreements. As used in Section 2 only, Contract Documents also do not include Resolution of Award of Contract, Executed Form of Contract, and Performance and Payment Bond.

Contract Letting.

The date that the Department opened the bid proposals.

Contract Time.

The number of calendar days allowed for completion of the Contract work, including authorized time extensions.

Contractor.

The individual, firm, joint venture, or company contracting with the Department to perform the work.

Contractor’s Engineer of Record.

A Professional Engineer registered in the State of Florida, other than the Engineer of Record or his subcontracted consultant, who undertakes the design and drawing of components of the permanent structure as part of a redesign or Cost Savings Initiative Proposal, or for repair

designs and details of the permanent work. The Contractor's Engineer of Record may also serve as the Specialty Engineer.

The Contractor's Engineer of Record must be an employee of a pre-qualified firm. The firm shall be pre-qualified in accordance with the Rules of the Department of Transportation, Chapter 14-75. Any Corporation or Partnership offering engineering services must hold a Certificate of Authorization from the Florida Department of Business and Professional Regulation.

As an alternate to being an employee of a pre-qualified firm, the Contractor's Engineer of Record may be a Department-approved Specialty Engineer. For items of the permanent work declared by the State Construction Office to be "major" or "structural", the work performed by a Department-approved Specialty Engineer must be checked by another Department-approved Specialty Engineer. An individual Engineer may become a Department-approved Specialty Engineer if the individual meets the Professional Engineer experience requirements set forth within the individual work groups in Chapter 14-75, Rules of the Department of Transportation, Florida Administrative Code. Department-approved Specialty Engineers are listed on the State Construction Website. Department-approved Specialty Engineers will not be authorized to perform redesigns or Cost Savings Initiative Proposal designs of items fully detailed in the Plans.

Controlling Work Items.

The activity or work item on the critical path having the least amount of total float. The controlling item of work will also be referred to as a Critical Activity.

Culverts.

Any structure not classified as a bridge that provides an opening under the roadway.

Delay.

Any unanticipated event, action, force or factor which extends the Contractor's time of performance of any controlling work item under the Contract. The term "delay" is intended to cover all such events, actions, forces or factors, whether styled "delay", "disruption", "interference", "impedance", "hindrance", or otherwise, which are beyond the control of and not caused by the Contractor, or the Contractor's subcontractors, materialmen, suppliers or other agents. This term does not include "extra work".

Department.

State of Florida Department of Transportation.

Developmental Specification.

See definition for Specifications.

Engineer.

The Director, Office of Construction, acting directly or through duly authorized representatives; such representatives acting within the scope of the duties and authority assigned to them.

Note: In order to avoid cumbersome and confusing repetition of expressions in these Specifications, it is provided that whenever anything is, or is to be done, if, as, or, when, or where "acceptable, accepted, approval, approved, authorized, condemned, considered necessary, contemplated, deemed necessary, designated, determined, directed, disapproved, established,

given, indicated, insufficient, ordered, permitted, rejected, required, reserved, satisfactory, specified, sufficient, suitable, suspended, unacceptable, or unsatisfactory,” it shall be understood as if the expression were followed by the words “by the Engineer,” “to the Engineer,” or “of the Engineer.”

Engineer of Record.

The Professional Engineer or Engineering Firm registered in the State of Florida that develops the criteria and concept for the project, performs the analysis, and is responsible for the preparation of the Plans and Specifications. The Engineer of Record may be Departmental in-house staff or a consultant retained by the Department.

The Contractor shall not employ the Engineer of Record as the Contractor’s Engineer of Record or as a Specialty Engineer.

Equipment.

The machinery and equipment, together with the necessary supplies for upkeep and maintenance thereof, and all other tools and apparatus necessary for the construction and acceptable completion of the work.

Estimated Quantities Report.

The Estimated Quantities Report contains pay item and quantity information for the project. When the Plans do not adequately describe quantity related information, refer to the Estimated Quantities Report.

Extra Work.

Any “work” which is required by the Engineer to be performed and which is not otherwise covered or included in the project by the existing Contract Documents, whether it be in the nature of additional work, altered work, deleted work, work due to differing site conditions, or otherwise. This term does not include a “delay”.

Federal, State, and Local Rules and Regulations.

The term “Federal, State and Local Rules and Regulations” includes: any and all Federal, State, and Local laws, bylaws, ordinances, rules, regulations, orders, permits, or decrees including environmental laws, rules, regulations, and permits.

Highway, Street, or Road.

A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

Holidays.

Days designated by the State Legislature or Cabinet as holidays, which include, but are not limited to, New Year’s Day, Martin Luther King’s Birthday, Memorial Day, Independence Day, Labor Day, Veterans’ Day, Thanksgiving Day and the following Friday, and Christmas Day.

Inspector.

An authorized representative of the Engineer, assigned to make official inspections of the materials furnished and of the work performed by the Contractor.

Laboratory.

The official testing laboratory used by the Department.

Major Item of Work.

Any item of work having an original Contract value in excess of 5% of the original Contract amount.

Materials.

Any substances to be incorporated in the work under the Contract.

Median.

The portion of a divided highway or street separating the traveled ways for traffic moving in opposite directions.

Plans.

The plans sheets and digital models (2D and 3D) provided as contract documents, including reproductions thereof, showing the location, character, dimensions, and details of the work.

Proposal (Bid, Bid Proposal).

The offer of a bidder, on the prescribed form, to perform the work and to furnish the labor and materials at the prices quoted.

Proposal Form.

The official form or the electronically generated bid item sheets on which the Department requires formal bids to be prepared and submitted for the work.

Proposal Guaranty.

The security furnished by the bidder as guaranty that the bidder will enter into the Contract for the work if the Department accepts the proposal.

Request for Correction.

A document initiated by the Contractor proposing a method for correction of work that is not in compliance with the Contract Documents. The Request for Correction is submitted to the Engineer for review and disposition.

Request for Information.

A document initiated by the Contractor that is submitted to the Engineer for interpretation of a Contract Document provision, the meaning of which is not clear to the Contractor. The Request for Information is submitted to the Engineer for review and disposition.

Request for Modification.

A document initiated by the Contractor requesting to modify the Contract Documents, that is submitted to the Engineer for review and disposition.

Right-of-Way.

The land that the Department has title to, or right of use, for the road and its structures and appurtenances, and for material pits furnished by the Department.

Roadbed.

The portion of the roadway occupied by the subgrade and shoulders.

Roadway.

The portion of a highway within the limits of construction.

Secretary.

Secretary of Transportation, State of Florida Department of Transportation, acting directly or through an assistant or other representative authorized by him; the chief officer of the Department of Transportation.

Section.

A numbered prime division of these Specifications.

Special Event.

Any event, including but not limited to, a festival, fair, run or race, motorcade, parade, civic activity, cultural activity, charity or fund drive, sporting event, or similar activity designated in the Contract Documents.

Special Provisions.

See definition for Specifications.

Specialty Engineer.

A Professional Engineer registered in the State of Florida, other than the Engineer of Record or his subcontracted consultant, who undertakes the design and drawing preparation of components, systems, or installation methods and equipment for specific temporary portions of the project work or for special items of the permanent works not fully detailed in the Plans and required to be furnished by the Contractor. The Specialty Engineer may also provide designs and details, repair designs and details, or perform Engineering Analyses for items of the permanent work declared by the State Construction Office to be “minor” or “non-structural”.

For items of work not specifically covered by the Rules of the Department of Transportation, a Specialty Engineer is qualified if he has the following qualifications:

1. Registration as a Professional Engineer in the State of Florida.
2. The education and experience necessary to perform the submitted design as required by the Florida Department of Business and Professional Regulation.

Specifications.

The directions, provisions, and requirements contained herein, together with all stipulations contained in the Contract Documents, setting out or relating to the method and manner of performing the work, or to the quantities and qualities of materials and labor to be furnished under the Contract.

Standard Specifications: “Standard Specifications for Road and Bridge Construction” an electronic book, applicable to all Department Contracts containing adopted requirements, setting out or relating to the method or manner of performing work, or to the quantities and qualities of materials and labor.

Supplemental Specifications: Approved additions and revisions to the Standard Specifications, applicable to all Department Contracts.

Special Provisions: Specific clauses adopted by the Department that add to or revise the Standard Specifications or supplemental specifications, setting forth conditions varying from or additional to the Standard Specifications applicable to a specific project.

Technical Special Provisions: Specifications, of a technical nature, prepared, signed, and sealed by an Engineer registered in the State of Florida other than the State Specifications Engineer or his designee, that are made part of the Contract as an attachment to the Contract Documents.

Developmental Specification: A specification developed around a new process, procedure, or material.

Standard Plans.

“Standard Plans for Road and Bridge Construction”, an electronic book describing and detailing aspects of the Work. Where the term Design Standards appears in the Contract Documents, it will be synonymous with Standard Plans.

Standard Specifications.

See definition for Specifications.

State.

State of Florida.

Subarticle.

A headed and numbered subdivision of an Article of a Section of these Specifications.

Subgrade.

The portion of the roadbed immediately below the base course or pavement, including below the curb and gutter, valley gutter, shoulder and driveway pavement. The subgrade limits ordinarily include those portions of the roadbed shown in the Plans to be constructed to a design bearing value or to be otherwise specially treated. Where no limits are shown in the Plans, the subgrade section extends to a depth of 12 inches below the bottom of the base or pavement and outward to 6 inches beyond the base, pavement, or curb and gutter.

Substructure.

All of that part of a bridge structure below the bridge seats, including the parapets, backwalls, and wingwalls of abutments.

Superintendent.

The Contractor’s authorized representative in responsible charge of the work.

Superstructure.

The entire bridge structure above the substructure, including anchorage and anchor bolts, but excluding the parapets, backwalls, and wingwalls of abutments.

Supplemental Agreement.

A written agreement between the Contractor and the Department, and signed by the surety, modifying the Contract within the limitations set forth in these Specifications.

Supplemental Specifications.

See definition for Specifications.

Surety.

The corporate body that is bound by the Contract Bond with and for the Contractor and responsible for the performance of the Contract and for payment of all legal debts pertaining thereto.

Technical Special Provisions.

See definition for Specifications.

Traveled Way.

The portion of the roadway for the movement of vehicles, exclusive of shoulders and bicycle lanes.

Unilateral Payment.

A payment of money made to the Contractor by the Department pursuant to Section 337.11(12), Florida Statutes (2009), for sums the Department determines to be due to the Contractor for work performed on the project, and whereby the Contractor by acceptance of such payment does not waive any rights the Contractor may otherwise have against the Department for payment of any additional sums the Contractor claims are due for the work.

Work.

All labor, materials and incidentals required to execute and complete the requirements of the Contract including superintendence, use of equipment and tools, and all services and responsibilities prescribed or implied.

Work Order.

A written agreement between the Contractor and the Department modifying the Contract within the limitations set forth in these Specifications. Funds for this agreement are drawn against the Initial Contingency Pay Item or a Contingency Supplemental Agreement.

Working Day.

Any calendar day on which the Contractor works or is expected to work in accordance with the approved work progress schedule.

SECTION 2 PROPOSAL REQUIREMENTS AND CONDITIONS

2-1 Reserved

2-2 Reserved

2-3 Interpretation of Estimated Quantities.

2-3.1 Lump Sum Contracts: The Contractor is responsible for the determination of the quantities for those items constructed within the authorized plan limits or dimensions.

The County does not assume any responsibility for any incidental information in bid documents that may be construed as a quantity of work and/or materials.

2-3.2 Contracts other than Lump Sum: For those items constructed within authorized plan limits or dimensions, use the quantities shown in the Plans and in the Proposal Form as the basis of the bid. The County will also use these quantities for final payment as limited by the provisions for the individual items. For those items having variable final pay quantities that are dependent on actual field conditions, use and measurement, the quantities shown in the Plans and in the Proposal Form are approximate and provide only a basis for calculating the bid upon which the County will award the Contract. Where items are listed for payment as lump sum units and the Plans show estimates of component quantities, the County is responsible for the accuracy of those quantities limited to the provisions of 9-3.3. Where items are listed for payment as lump sum units and the Plans do not show estimates of component quantities, the Contractor is solely responsible for their own estimates of such quantities.

The County may increase, decrease, or omit the estimated quantities of work to be done or materials to be furnished.

2-4 Examination of Plans, Specifications, Special Provisions and Site of Work.

The Contractor is responsible for examining the Contract Documents and the site of the proposed Work carefully before submitting a Proposal for the Work contemplated. Contractor shall investigate the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of all Contract Documents.

The County does not guarantee the details pertaining to borings, as shown in the Contract Documents, 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 and pavement core data, where available, and make their own interpretation of the subsoil investigations and other preliminary data and shall base their bid solely on their own opinion of the conditions likely to be encountered.

The Contractor's submission of a Proposal is prima facie evidence that the Contractor has made an examination as described in this Article.

2-5 Reserved

2-6 Reserved

2-7 Reserved

2-8 Reserved

2-9 Reserved

2-10 Reserved

2-11 Reserved

2-12 Material, Samples and Statement.

The County may require that the Contractor furnish a statement of the origin, composition, and manufacture of any and all materials to be used in the construction of the work, together with samples that may be subjected to the tests provided for in these Specifications to determine the materials' quality and fitness for the work.

SECTION 3

RESERVED

SECTION 4 SCOPE OF THE WORK

4-1 Intent of Contract.

The intent of the Contract is to provide for the construction and completion in every detail of the Work described in the Contract. Furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the Contract Documents.

4-2 Work not covered by Standard Specifications.

Proposed construction and any contractual requirements not covered by these Standard Specifications may be covered by Contract Plan notes or by Supplemental Specifications or Special Provisions for the Contract, and all requirements of such Supplemental Specifications or Special Provisions shall be considered as a part of these Specifications.

4-3 Alteration of Plans or of Character of Work.

4-3.1 General: The Director reserves the right to make, at any time prior to or during the progress of the work, such increases or decreases in quantities, whether a significant change or not, and such alterations in the details of construction, whether a substantial change or not, including but not limited to alterations in the grade or alignment of the road or structure or both, as may be found necessary or desirable by the Director. Such increases, decreases or alterations shall not constitute a breach of Contract, shall not invalidate the Contract, nor release the Surety from any liability arising out of this Contract or the Surety bond. Minor increases, decreases or alterations that do not change the scope of the Project, the Project cost, or the Contract Time may be initially authorized in a Field Directive Change Order. The Contractor agrees to perform the work, as altered, the same as if it had been a part of the original Contract. All Field Directive Change Orders shall be approved as a Supplemental Agreement pursuant to 4-3.4 prior to Project close-out.

The term “significant change” applies only when:

1. The Director determines that the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction, or

2. A major item of work, as defined in 1-3, is increased in excess of 125% or decreased below 75% of the original Contract quantity. The County will apply any price adjustment for an increase in quantity only to that portion in excess of 125% of the original Contract item quantity in accordance with 4-3.2 below. In the case of a decrease below 75% the County will only apply a price adjustment for the additional costs that are a direct result of the reduction in quantity.

In (1) above, the determination by the Director shall be conclusive. If the determination is challenged by the Contractor in any proceeding, the Contractor must establish by clear and convincing proof that the determination by the Director was without any reasonable basis.

4-3.2 Increase, Decrease or Alteration in the Work: The Director reserves the right to make alterations in the character of the work which involve a substantial change in the nature of the design or in the type of construction or which materially increases or decreases the cost or time

of performance. Such alteration shall not constitute a breach of Contract, shall not invalidate the Contract or release the Surety.

Notwithstanding that the Contractor shall have no formal right whatsoever to any extra compensation or time extension deemed due by the Contractor for any cause unless and until the Contractor follows the procedures set forth in 5-12.2 for preservation, presentation and resolution of the claim, the Contractor may at any time, after having otherwise timely submitted a notice of intent to claim or preliminary time extension request pursuant to 5-12.2 and 8-7.3.2, submit to the County a request for equitable adjustment of compensation or time or other dispute resolution proposal. The Contractor shall in any request for equitable adjustment of compensation, time, or other dispute resolution proposal certify under oath and in writing, in accordance with the formalities required by Florida law, that the request is made in good faith, that any supportive data submitted is accurate and complete to the Contractor's best knowledge and belief, and that the amount of the request accurately reflects what the Contractor in good faith believes to be the County's responsibility. Such certification must be made by an officer or director of the Contractor with the authority to bind the Contractor. Any such certified statements of entitlement and costs shall be subject to the audit provisions set forth in 5-12.14. While the submittal or review of a duly certified request for equitable adjustment shall neither create, modify, nor activate any legal rights or obligations as to the Contractor or the County, the County will review the content of any duly certified request for equitable adjustment or other dispute resolution proposal, with any further action or inaction by the County thereafter being in its sole discretion. Any request for equitable adjustment that fails to fully comply with the certification requirements will not be reviewed by the County.

The monetary compensation provided for below constitutes full and complete payment for such additional work and the Contractor shall have no right to any additional monetary compensation for any direct or indirect costs or profit for any such additional work beyond that expressly provided below. The Contractor shall be entitled to a time extension only to the extent that the performance of any portion of the additional work is a controlling work item and the performance of such controlling work item actually extends completion of the project due to no fault of the Contractor. All time related costs for actual performance of such additional work are included in the compensation already provided below and any time extension entitlement hereunder will be without additional monetary compensation. The Contractor shall have no right to any monetary compensation or damages whatsoever for any direct or indirect delay to a controlling work item arising out of or in any way related to the circumstances leading up to or resulting from additional work (but not relating to the actual performance of the additional work, which is paid for as otherwise provided herein), except only as provided for under 5-12.6.2.1.

4-3.2.1 Allowable Costs for Extra Work: The Director may direct in writing that extra work be done and, at the Director's sole discretion, the Contractor will be paid pursuant to an agreed Supplemental Agreement or in the following manner:

1. Labor and Burden: The Contractor will receive payment for actual costs of direct labor and burden for the additional or unforeseen work. Labor includes foremen actually engaged in the work; and will not include project supervisory personnel nor necessary on-site clerical staff, except when the additional or unforeseen work is a controlling work item and the performance of such controlling work item actually extends completion of the project due to no fault of the Contractor. Compensation for project supervisory personnel, but in no case higher than a Project Manager's position, shall only be for the pro-rata time such supervisory personnel spent on the contract. In no case shall an officer or director of the Company, nor those persons who own

more than 1% of the Company, be considered as project supervisory personnel, direct labor or foremen hereunder.

Payment for burden shall be limited solely to the following:

Table 4-3.2.1	
Item	Rate
FICA	Rate established by Law
FUTA/SUTA	Rate established by Law
Medical Insurance	Actual
Holidays, Sick & Vacation benefits	Actual
Retirement benefits	Actual
Workers Compensation	Rates based on the National Council on Compensation Insurance basic rate tables adjusted by Contractor's actual experience modification factor in effect at the time of the additional work or unforeseen work.
Per Diem	Actual but not to exceed State of Florida's rate
Insurance*	Actual
*Compensation for Insurance is limited solely to General Liability Coverage and does not include any other insurance coverage (such as, but not limited to, Umbrella Coverage, Automobile Insurance, etc.).	

At the Pre-construction conference, certify to the Director the following:

- a. A listing of on-site clerical staff, supervisory personnel and their pro-rated time assigned to the contract,
- b. Actual Rate for items listed in Table 4-3.2.1,
- c. Existence of employee benefit plan for Holiday, Sick and Vacation benefits and a Retirement Plan, and,
- d. Payment of Per Diem is a company practice for instances when compensation for Per Diem is requested.

Such certification must be made by an officer or director of the Contractor with authority to bind the Contractor. Timely certification is a condition precedent to any right of the Contractor to recover compensations for such costs, and failure to timely submit the certification will constitute a full, complete, absolute and irrevocable waiver by the Contractor of any right to recover such costs. Any subsequent changes shall be certified to the Director as part of the cost proposal or seven calendar days in advance of performing such extra work.

2. Materials and Supplies: For materials accepted by the Director and used on the project, the Contractor will receive the actual cost of such materials incorporated into the work, including Contractor paid transportation charges (exclusive of equipment as hereinafter set forth). For supplies reasonably needed for performing the work, the Contractor will receive the actual cost of such supplies.

3. Equipment: For any machinery or special equipment (other than small tools), including fuel and lubricant, the Contractor will receive 100% of the "Rental Rate Blue Book" for the actual time that such equipment is in operation on the work, and 50% of the "Rental Rate Blue Book" for the time the equipment is directed to standby and remain on the project site,

to be calculated as indicated below. The equipment rates will be based on the latest edition (as of the date the work to be performed begins) of the “Rental Rate Blue Book for Construction Equipment” as published by EquipmentWatch division of Informa Business Media, Inc., using all instructions and adjustments contained therein and as modified below. On all projects, the Director will adjust the rates using regional adjustments and Rate Adjustment Tables according to the instructions in the “Rental Rate Blue Book.”

Allowable Equipment Rates will be established as set out below:

- a. Allowable Hourly Equipment Rate = Monthly Rate/176 x Adjustment Factors x 100%.
- b. Allowable Hourly Operating Cost = Hourly Operating Cost x 100%.
- c. Allowable Rate Per Hour = Allowable Hourly Equipment Rate + Allowable Hourly Operating Cost.
- d. Standby Rate = Allowable Hourly Equipment Rate x 50%.

The Monthly Rate is The Basic Machine Rate Plus Any Attachments. Standby rates will apply when equipment is not in operation and is directed by the Director to standby at the project site when needed again to complete work and the cost of moving the equipment will exceed the accumulated standby cost. Standby rates will not apply on any day the equipment operates for eight or more hours. Standby payment will be limited to only that number of hours which, when added to the operating time for that day equals eight hours. Standby payment will not be made on days that are not normally considered work days on the project.

The County will allow for the cost of transporting the equipment to and from the location at which it will be used. If the equipment requires assembly or disassembly for transport, the County will pay for the time to perform this work at the rate for standby equipment.

Equipment may include vehicles utilized only by Labor, as defined above.

4. Indirect Costs, Expenses, and Profit: Compensation for all indirect costs, expenses, and profit of the Contractor, including but not limited to overhead of any kind, whether jobsite, field office, division office, regional office, home office, or otherwise, is expressly limited to the greater of either (a) or (b) below:

a. Solely a mark-up of 17.5% on the payments in (1) through (3), above.

1. Bond: The Contractor will receive compensation for any premium for acquiring a bond for such additional or unforeseen work at the original Contract bond rate paid by the Contractor. No compensation for bond premium will be allowed for additional or unforeseen work paid by the County via initial contingency pay item.

2. The Contractor will be allowed a markup of 10% on the first \$50,000 and a markup of 5% on any amount over \$50,000 on any subcontract directly related to the additional or unforeseen work. Any such subcontractor mark-up will be allowed only by the prime Contractor and a first tier subcontractor, and the Contractor must elect the markup for any eligible first tier subcontractor to do so.

b. Solely the formula set forth below and only as applied solely as to such number of calendar days of entitlement that are in excess of ten cumulative calendar days as defined below.

$$D = \frac{A \times C}{B}$$

Where A = Original Contract Amount

B = Original Contract Time

C = 8%

D = Average Overhead Per Day

Cumulative Calendar Days is defined as the combined total number of calendar days granted as time extensions due to either extra work, excluding overruns to existing contract items, that extend the duration of the project or delay of a controlling work item caused solely by the County, or the combined total number of calendar days for which a claim of entitlement to a time extension due to delay of a controlling work item caused solely by the County is otherwise ultimately determined to be in favor of the Contractor.

No compensation, whatsoever, will be paid to the Contractor for any jobsite overhead and other indirect impacts when the total number of calendar days granted for time extension due to delay of a controlling work item caused solely by the County is, or the total number of calendar days for which entitlement to a time extension due to delay of a controlling work item caused solely by the County is otherwise ultimately determined in favor of the Contractor to be, equal to or less than ten calendar days and the Contractor also fully assumes all monetary risk of any and all partial or single calendar day delay periods, due to delay of a controlling work item caused solely by the County, that when combined together are equal to or less than ten calendar days and regardless of whether monetary compensation is otherwise provided for hereunder for one or more calendar days of time extension entitlement for each calendar day exceeding ten calendar days. All calculations under this provision shall exclude weather days, Holidays, and Special Events.

Further, for (a) or (b) above, in the event there are concurrent delays to one or more controlling work items, one or more being caused by the County and one or more being caused by the Contractor, the Contractor shall be entitled to a time extension for each day that a controlling work item is delayed by the County but shall have no right to nor receive any monetary compensation for any indirect costs for any days of concurrent delay.

4-3.2.2 Subcontracted Work: Compensation for the additional or unforeseen work performed by a subcontractor shall be limited solely to that provided for in 4-3.2.1 (1), (2), (3) and (4)(a). In addition, the Contractor compensation is expressly limited to the greater of the total provided in either 4-3.2.1(4)(a) or (4)(b), except that the Average Overhead Per-Day calculation is as follows:

$$D_s = \frac{A_s \times C}{B}$$

Where A_s = Original Contract Amount minus Original

Subcontract amounts(s)*

B = Original Contract Time

C = 8%

D_s = Average Overhead Per-Day

* deduct Original Subcontract Amount(s) of subcontractor(s) performing the work

The subcontractor may receive compensation for any premium for acquiring a bond for the additional or unforeseen work; provided, however, that such payment for additional subcontractor bond will only be paid upon presentment to the County of clear and convincing proof that the subcontractor has actually submitted and paid for separate bond premiums for such additional or unforeseen work in such amount and that the subcontractor was required by the Contractor to acquire a bond.

The Contractor shall require the subcontractor to submit a certification, in accordance with 4-3.2.1 (1), as part of the cost proposal and submit such to the Director. Such certification must be made by an officer or director of the subcontractor with authority to bind the subcontractor. Timely certification is a condition precedent to any right of the Contractor to recover compensation for such subcontractor costs, and failure to timely submit the certification will constitute a full, complete, absolute and irrevocable waiver by the Contractor of any right to recover such subcontractor costs.

4-3.3 No Waiver of Contract: Changes made by the Director will not be considered to waive any of the provisions of the Contract, nor may the Contractor make any claim for loss of anticipated profits because of the changes, or by reason of any variation between the approximate quantities and the quantities of work actually performed. All work shall be performed as directed by the Director and in accordance with the Contract Documents.

4-3.4 Conditions Requiring a Supplemental Agreement or Unilateral Payment: A Supplemental Agreement or Unilateral Payment will be used to clarify the Plans and Specifications of the Contract; to provide for unforeseen work, grade changes, or alterations in the Plans which could not reasonably have been contemplated or foreseen in the original Plans and Specifications; to change the limits of construction to meet field conditions; to provide a safe and functional connection to an existing pavement; to settle documented Contract claims; to make the project functionally operational in accordance with the intent of the original Contract and subsequent amendments thereto.

A Supplemental Agreement or Unilateral Payment may be used to expand the physical limits of the project only to the extent necessary to make the project functionally operational in accordance with the intent of the original Contract. The cost of any such agreement extending the physical limits of the project shall not exceed \$100,000 or 10% of the original Contract price, whichever is greater.

Except for Work included within a Field Directive Change Order, perform no work to be covered by a Supplemental Agreement or Unilateral Payment before written authorization is received from the Director. The Director's written authorization will set forth sufficient work information to allow the work to begin. The work activities, terms and conditions will be reduced to written Supplemental Agreement or Unilateral Payment form promptly thereafter. No payment will be made on a Supplemental Agreement or Unilateral Payment prior to the County's approval of the document.

4-3.5 Extra Work: Extra work authorized in writing by the Director will be paid in accordance with the formula in 4-3.2. Such payment will be the full extent of all monetary compensation entitlement due to the Contractor for such extra work. Any entitlement to a time extension due to extra work will be limited solely to that provided for in 4-3.2 for additional work.

4-3.6 Connections to Existing Pavement, Drives and Walks: Generally adhere to the limits of construction at the beginning and end of the project as detailed in the Plans. However, if the Director determines that it is necessary to extend the construction in order to make suitable connections to existing pavement, the Director will authorize such a change in writing.

For necessary connections to existing walks and drives that are not indicated in the Plans, the Director will submit direction regarding the proper connections in accordance with the Standard Plans.

4-3.7 Differing Site Conditions: During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the Contract, or if unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the Contract are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the Contractor disturbs the conditions or performs the affected work.

Upon receipt of written notification of differing site conditions from the Contractor, the Director will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the Contract, an adjustment will be made, excluding loss of anticipated profits, and the Contract will be modified in writing accordingly. The Director will notify the Contractor whether or not an adjustment of the Contract is warranted.

The Director will not allow a Contract adjustment for a differing site condition unless the Contractor has submitted the required written notice.

The Director will not allow a Contract adjustment under this clause for any effects caused to any other County or non-County projects on which the Contractor may be working.

4-3.8 Changes Affecting Utilities: The Contractor shall be responsible for identifying and assessing any potential impacts to a utility that may be caused by the changes proposed by the Contractor, and the Contractor shall at the time of making the request for a change notify the County in writing of any such potential impacts to utilities.

County approval of a Contractor proposed change does not relieve the Contractor of sole responsibility for all utility impacts, costs, delays or damages, whether direct or indirect, resulting from Contractor initiated changes in the design or construction activities from those in the original Contract Specifications, Design Plans (including Traffic Control Plans) or other Contract Documents and which effect a change in utility work different from that shown in the Utility Plans, joint project agreements or utility relocation schedules.

4-3.9 Cost Savings Initiative Proposal:

4-3.9.1 Intent and Objective:

1. This Subarticle applies to any cost reduction proposal (hereinafter referred to as a Proposal) that the Contractor initiates and develops for the purpose of refining the Contract to increase cost effectiveness or significantly improve the quality of the end result. County Potential Proposals will be discussed as an agenda item at the pre-construction meeting. This Subarticle does not, however, apply to any such proposal unless the Contractor identifies it at the time of its submission to the County as a proposal submitted pursuant to this Subarticle.

2. The County will consider Proposals that would result in net savings to the County by providing a decrease in the cost of the Contract. Proposals must result in savings without impairing essential functions and characteristics such as safety, service, life, reliability, economy of operation, ease of maintenance, aesthetics and necessary standard design features.

However, nothing herein prohibits the Contractor from submitting Proposals when the required functions and characteristics can be combined, reduced or eliminated because they are nonessential or excessive. The County will not recognize the Contractor's correction of plan errors that result in a cost reduction, as a Proposal.

3. The County shall have the right to reject, at its discretion, any Proposal submitted that proposes a change in the design of the pavement system or that would require additional right-of-way. Pending the County's execution of a formal supplemental agreement implementing an approved Proposal, the Contractor shall remain obligated to perform the work in accordance with the terms of the existing Contract. The County may grant time extensions to allow for the time required to develop and review a Proposal.

4. For potential Proposals not discussed at the Cost Savings Initiative Workshop, a mandatory concept meeting will be held for the Contractor and County to discuss the potential Proposal prior to development of the Proposal.

4-3.9.2 Subcontractors: The County encourages the Contractor to include the provisions of this Subarticle in Contracts with subcontractors and to encourage submission of Proposals from subcontractors. However, it is not mandatory to submit Proposals to the County or to accept or transmit subcontractor proposed Proposals to the County.

4-3.9.3 Data Requirements: As a minimum, submit the following information with each Proposal:

1. a description of the difference between the existing Contract requirement, including any time extension request, and the proposed change, and the comparative advantages and disadvantages.

2. separate detailed cost estimates for both the existing Contract requirement and the proposed change. Break down the cost estimates by pay item numbers indicating quantity increases or decreases and deleted pay items. Identify additional proposed work not covered by pay items within the Contract, by using pay item numbers in the Basis of Estimates Manual. In preparing the estimates, include overhead, profit, and bond within pay items in the Contract. Separate pay item(s) for the cost of overhead, profit, and bond will not be allowed.

3. an itemization of the changes, deletions or additions to Plan details, plan sheets, Standard Plans and Specifications that are required to implement the Proposal if the County adopts it. Submit preliminary plan drawings sufficient to describe the proposed changes.

4. engineering or other analysis in sufficient detail to identify and describe specific features of the Contract that must be changed if the County accepts the Proposal with a proposal as to how these changes can be accomplished and an assessment of their effect on other project elements. The County may require that engineering analyses be performed by a prequalified consultant in the applicable class of work. Support all design changes that result from the Proposal with drawings and computations signed and sealed by the Contractor's Engineer of Record. Written documentation or drawings will be submitted clearly delineating the responsibility of the Contractor's Engineer of Record.

5. the date by which the County must approve the Proposal to obtain the total estimated cost reduction during the remainder of the Contract, noting any effect on the Contract completion time or delivery schedule.

6. a revised project schedule that would be followed upon approval of the Proposal. This schedule would include submittal dates and review time for the County and Peer reviews.

4-3.9.4 Processing Procedures: Submit Proposals to the Director or his duly authorized representative. The County will process Proposals expeditiously; however, the County is not liable for any delay in acting upon a Proposal submitted pursuant to this Subarticle. The Contractor may withdraw, in whole or in part, a Proposal not accepted by the County within the period specified in the Proposal. The County is not liable for any Proposal development cost in the case where the County rejects or the Contractor withdraws a Proposal.

The Director is the sole judge of the acceptability of a Proposal and of the estimated net savings in construction costs from the adoption of all or any part of such proposal. In determining the estimated net savings, the County reserves the right to disregard the Contract bid prices if, in the judgment of the Director, such prices do not represent a fair measure of the value of work to be performed or to be deleted.

Prior to approval, the Director may modify a Proposal, with the concurrence of the Contractor, to make it acceptable. If any modification increases or decreases the net savings resulting from the Proposal, the County will determine the Contractor's fair share upon the basis of the Proposal as modified and upon the final quantities. The County will compute the net savings by subtracting the revised total cost of all bid items affected by the Proposal from the total cost of the same bid items as represented in the original Contract.

Prior to approval of the Proposal that initiates the supplemental agreement, submit acceptable Contract-quality plan sheets revised to show all details consistent with the Proposal design.

4-3.9.5 Computations for Change in Contract Cost of Performance: If the Proposal is adopted, the Contractor's share of the net savings as defined hereinafter represents full compensation to the Contractor for the Proposal.

The County will not include its costs to process and implement a Proposal in the estimate. However, the County reserves the right, where it deems such action appropriate, to require the Contractor to pay the County's cost of investigating and implementing a Proposal as a condition of considering such proposal. When the County imposes such a condition, the Contractor shall accept this condition in writing, authorizing the County to deduct amounts payable to the County from any monies due or that may become due to the Contractor under the Contract.

4-3.9.6 Conditions of Acceptance for Major Design Modifications of Category 2 Bridges: A Proposal that proposes major design modifications of a category 2 bridge, as determined by the Director, shall have the following conditions of acceptance:

All bridge Plans relating to the Proposal shall undergo an independent peer review conducted by a single independent engineering firm referred to for the purposes of this article as the Independent Review Engineer who is not the originator of the Proposal design, and is pre-qualified by the County in accordance with Rule 14-75, Florida Administrative Code. The independent peer review is intended to be a comprehensive, thorough verification of the original work, giving assurance that the design is in compliance with all County requirements. The Independent Review Engineer's comments, along with the resolution of each comment, shall be submitted to the County. The Independent Review Engineer shall sign and seal the submittal cover letter stating that all comments have been adequately addressed and the design is in compliance with the County requirements. If there are any unresolved comments the Independent Review Engineer shall specifically list all unresolved issues in the signed and sealed cover letter.

The Contractor shall designate a primary engineer responsible for the Proposal design and as such will be designated as the Contractor's Engineer of Record for the

Proposal design. The County reserves the right to require the Contractor's Engineer of Record to assume responsibility for design of the entire structure.

New designs and independent peer reviews shall be in compliance with all applicable County, FHWA and AASHTO criteria requirements including bridge load ratings.

4-3.9.7 Sharing Arrangements: If the County approves a Proposal, the Contractor shall receive 50% of the net reduction in the cost of performance of the Contract as determined by the final negotiated agreement between the Contractor and the County. The net reduction will be determined by subtracting from the savings of the construction costs the reasonable documented engineering costs incurred by the contractor to design and develop a Proposal. The reasonable documented engineering costs will be paid by the County. Engineering costs will be based on the consultant's certified invoice and may include the costs of the Independent Review Engineer in 4-3.9.6. The total engineering costs to be subtracted from the savings to determine the net reduction will be limited to 25% of the construction savings and shall not include any markup by the Contractor or the costs for engineering services performed by the Contractor.

4-3.9.8 Notice of Intellectual Property Interests and County's Future Rights to a Proposal:

4-3.9.8.1 Notice of Intellectual Property Interests: The Contractor's Proposal submittal shall identify with specificity any and all forms of intellectual property rights that either the Contractor or any officer, shareholder, employee, consultant, or affiliate, of the Contractor, or any other entity who contributed in any measure to the substance of the Contractor's Proposal development, have or may have that are in whole or in part implicated in the Proposal. Such required intellectual property rights notice includes, but is not limited to, disclosure of any issued patents, copyrights, or licenses; pending patent, copyright or license applications; and any intellectual property rights that though not yet issued, applied for or intended to be pursued, could nevertheless otherwise be subsequently the subject of patent, copyright or license protection by the Contractor or others in the future. This notice requirement does not extend to intellectual property rights as to stand-alone or integral components of the Proposal that are already on FDOT's Approved Product List (APL) or Standard Plans, or are otherwise generally known in the industry as being subject to patent or copyright protection.

4-3.9.8.2 County's Future Rights to a Proposal: Notwithstanding 7-3 nor any other provision of the Standard Specifications, upon acceptance of a Proposal, the Contractor hereby grants to the County and its contractors (such grant being expressly limited solely to any and all existing or future County construction projects and any other County projects that are partially or wholly funded by or for the County) a royalty-free and perpetual license under all forms of intellectual property rights to manufacture, to use, to design, to construct, to disclose, to reproduce, to prepare and fully utilize derivative works, to distribute, display and publish, in whole or in part, and to permit others to do any of the above, and to otherwise in any manner and for any purpose whatsoever do anything reasonably necessary to fully utilize any and all aspects of such Proposal on any and all existing and future construction projects and any other County projects.

Contractor shall hold harmless, indemnify and defend the County and its contractors and others in privity therewith from and against any and all claims, liabilities, other obligations or losses, and reasonable expenses related thereto (including reasonable attorneys' fees), which are incurred or are suffered by any breach of the foregoing grants, and regardless of whether such intellectual property rights were or were not disclosed by the Contractor pursuant to 4-3.9.8.1, unless the County has by express written exception in the Proposal

acceptance process specifically released the Contractor from such obligation to hold harmless, indemnify and defend as to one or more disclosed intellectual property rights.

4-4 Unforeseeable Work.

When the County requires work that is not covered by a price in the Contract and such work does not constitute a “Significant Change” as defined in 4-3.1, and the County finds that such work is essential to the satisfactory completion of the Contract within its intended scope, the County will make an adjustment to the Contract. The Director will determine the basis of payment for such an adjustment in a fair and equitable amount.

4-5 Rights in and Use of Materials Found on the Site of the Work.

4-5.1 Ownership and Disposal of Existing Materials: Take ownership and dispose of all materials that are not designated as the property of other parties, in both roadway and structures, found on the right-of-way, and all material in structures designated for removal. Such materials do not include earth or other excavated material required for the construction of the project. During construction, the Contractor may use materials from existing structures that are required to be removed and that are designated to remain the property of the County. Do not cut or otherwise damage such material during removal unless the Director gives permission to do so. Store material in an accessible location as the Director directs. The County is not responsible for the quality or quantity of any material salvaged.

4-5.2 Ornamental Trees and Shrubs: Take ownership of all ornamental trees or shrubs existing in the right-of-way that are required to be removed for the construction operations and which are not specifically designated in the Plans to be reset, or to be removed by others prior to the construction operations.

4-6 Final Cleaning Up of Right-of-Way.

Upon completion of the work, and before the County accepts the work and makes final payment, remove from the right-of-way and adjacent property all falsework, equipment, surplus and discarded materials, rubbish and temporary structures; restore in an acceptable manner all property, both public and private, that has been damaged during the prosecution of the work; and leave the waterways unobstructed and the roadway in a neat and presentable condition throughout the entire length of the work under Contract. Do not dispose of materials of any character, rubbish or equipment, on abutting property, with or without the consent of the property owners. The Director will allow the Contractor to temporarily store equipment, surplus materials, usable forms, etc., on a well-kept site owned or leased by the Contractor, adjacent to the project. However, do not place or store discarded equipment, materials, or rubbish on such a site.

Shape and dress areas adjacent to the project right-of-way that were used as plant sites, materials storage areas or equipment yards when they are no longer needed for such purposes. Restore these areas in accordance with 7-11.1 and 7-11.2. Grass these areas when the Director directs.

SECTION 5 CONTROL OF THE WORK

5-1 Plans and Working Drawings.

5-1.1 Contract Documents: Have available the Contract Documents on the worksite at all times.

5-1.2 County Plans: Plans consist of general drawings showing such details as are necessary to give a comprehensive idea of the construction contemplated. In general, roadway plans will show alignment, profile grades, typical sections and general plan view details. Cross sectional views maybe provided or created from provided surface models. In general, structure plans will show in detail all dimensions of the work contemplated. When the structure plans do not show the dimensions in detail, they will show general features and such details as are necessary to give a comprehensive idea of the structure.

Elevations and B.M. Datum shown are North American Vertical Datum 1988 (NAVD-1988), National Geodetic Vertical Datum of 1929 (NGVD-1929), or other datum as noted in the Plans.

5-1.3 Alterations in Plans: The County will issue, in writing, all authorized alterations affecting the requirements and information given on the approved Plans.

The existing surface is a combination of the following:

1. The natural ground or the original ground line,
2. The bottom of the existing pavement,
3. The bottom of existing features removed by clearing and grubbing,
4. The bottom of the existing base, if the base is to be removed,

The finished graded surface includes the completed grades of side slopes, unpaved shoulders, and the bottom of the base for flexible or rigid pavement.

5-1.4 Shop Drawings:

5-1.4.1. Definitions: In addition to the definitions below, also refer to Section 1, Definitions and Terms.

1. Bracing: Temporary structural member(s) placed between beams, girders, piles, precast columns, etc. to provide stability during construction activities.

2. Construction Affecting Public Safety: Construction that may jeopardize public safety such as structures and construction operations spanning over or adjacent to functioning vehicular roadways, pedestrian walkways, railroads, navigable waterways and walls supporting fill sections or excavations immediately adjacent to functioning roadways. Construction Affecting Public Safety may also apply to the construction or demolition of a bridge with continuous beams or girders if traffic is being placed under one of the spans within the unit. It does not apply to those areas of the site outside the limits of normal public access. Adjacent as used above applies to any project or property where normal construction operations could impact functioning vehicular roadways, pedestrian walkways, railroads, and navigable waterways.

3. Contractor Originated Designs: Items which the Contract Documents require the Contractor to design, detail and incorporate into the permanent works.

4. Detailer: The steel detailer that prepares the steel shop drawings for the fabrication, geometry and fit-up for all steel members in accordance with the Plans.

5. Falsework: Any temporary construction work used to support the permanent structure until it becomes self-supporting. Falsework includes steel or timber beams, girders, columns, bracing, piles and foundations, and any proprietary equipment including modular shoring frames, post shores, and adjustable horizontal shoring.

6. Formwork: Any structure or mold used to retain plastic or fluid concrete in its designated shape until it hardens. Formwork may be comprised of common materials such as wood or metal sheets, battens, soldiers and walers, ties, proprietary forming systems such as

stay-in-place metal forms, and proprietary supporting bolts, hangers and brackets. Formwork may be either permanent formwork requiring a shop drawing submittal such as stay-in-place metal or concrete forms, or may be temporary formwork which requires certification by the Specialty Engineer for Construction Affecting Public Safety and for Major and Unusual Structures.

7. Major and Unusual Structures: Bridges of complex design. Generally, this includes the following types of structures:

- a. Bridges with an individual span longer than 300 feet.
- b. Structurally continuous superstructures with spans over 150 feet.
- c. Steel box and plate girder bridges.
- d. Concrete or steel straddle piers and straddle pier caps.
- e. Steel truss bridges including proprietary pedestrian steel truss spans not satisfying the Category 1 conditions of FDOT Design Manual 266.4.
- f. Concrete segmental, post-tensioned girder bridges and post-tensioned substructures.
- g. Cable stayed, extradosed or suspension bridges.
- h. Arch bridges.
- i. Tunnels.
- j. All movable bridges (including specifically structural, electrical and mechanical components).
- k. Rehabilitation, widening, lengthening or jacking of any of the above structures.

8. Permanent Works: All the permanent structures and parts thereof required of the completed Contract.

9. QA/QC Shop Drawing Check Points: The Engineer of Record is responsible for conducting a review of all shop drawings regardless of whether the shop drawing is originated by the Engineer of Record or by others. QA/QC Shop Drawing Check Prints shall consist of highlighting items that the EOR is able to verify based on the EOR's plans and design information on each sheet reviewed. Each sheet shall be initialed by the reviewer. QA/QC Shop Drawing Check Prints shall be submitted to the Department along with the stamped Shop Drawing.

10. Scaffolding: An elevated work platform used to support workers, materials and equipment, but not intended to support the structure.

11. Shop Drawings: A shop drawing is a drawing or set of drawings produced by the contractor, supplier, manufacturer, subcontractor, or fabricator for prefabricated components. Shop drawings also include all working drawings, erection plans, associated trade literature, material cut-sheets, calculations, schedules, erection manuals, geometry control manuals and other manuals and similar documents submitted by the Contractor to define some portion of the project work. The type of work includes both permanent and temporary works as appropriate to the project.

12. Shoring: A component of falsework such as horizontal, vertical or inclined support members. In this Section, this term is interchangeable with falsework.

13. Special Erection Equipment: Includes launching gantries, beam and winch equipment, form travelers, segment lifters, beam shifters, erection trusses, launching noses or similar items made purposely for construction of the structure. It does not apply to commonly available proprietary construction equipment such as cranes.

14. Temporary Works: Any temporary construction work necessary for the construction of the permanent works. This includes but is not limited to bracing, falsework, formwork, scaffolding, shoring, stability towers, strong-backs, counterweights, temporary earthworks, sheeting, cofferdams, and special erection equipment.

5-1.4.2 Shop Drawing Submittal and Review Requirements: See table below for shop drawing submittal and review requirements.

Table 5-1 Submittal and Review Requirements					
Shop Drawing for:	Originated by Specialty Engineer Not Signed and Sealed	Originated by Detailer Not Signed and Sealed	Originated by Specialty Engineer Signed and Sealed	Originated by Contractor's EOR Signed and Sealed	Requires Review, QA/QC Shop Drawing Check prints and disposition stamp by Design EOR
Steel Fabrication Drawings		Originator			Reviewer
Steel Erection Plan			Originator		Reviewer
Geometry Control Manual				Originator	Reviewer
Segmental Erection Manual				Originator	Reviewer
Segmental Shop Drawings					Reviewer
Post-tensioning Mock-up Plan			Originator		Reviewer
Post-tensioning Systems ₁			Originator		Reviewer
Pretensioned Prestressed Concrete Products Containing FRP Bars or Strands Excluding Standard Piles and Sheet Piles			Originator		Reviewer
Temporary Works Affecting Public Safety ₂			Originator		Reviewer

Table 5-1
Submittal and Review Requirements

Shop Drawing for:	Originated by Specialty Engineer Not Signed and Sealed	Originated by Detailer Not Signed and Sealed	Originated by Specialty Engineer Signed and Sealed	Originated by Contractor's EOR Signed and Sealed	Requires Review, QA/QC Shop Drawing Check prints and disposition stamp by Design EOR
Demolition Plans of Bridges with Continuous Beams or Girders Where One Span Within the Unit is Over Traffic			Originator		Reviewer
Prefabricated Bridge Elements and System Connection Mock-Up Plans			Originator		Reviewer
Bridge Formwork Including SIP Forms			Originator		Reviewer
Construction Equipment Placed on Existing Bridges				Originator	Reviewer
Bridge components not fully detailed in the Plans, i.e. post-tensioning details, handrails, temporary operating systems for movable bridges etc.				Originator	Reviewer
Retaining Wall Systems			Originator		Reviewer

Table 5-1
Submittal and Review Requirements

Shop Drawing for:	Originated by Specialty Engineer Not Signed and Sealed	Originated by Detailer Not Signed and Sealed	Originated by Specialty Engineer Signed and Sealed	Originated by Contractor's EOR Signed and Sealed	Requires Review, QA/QC Shop Drawing Check prints and disposition stamp by Design EOR
Precast Box Culverts			Originator		Reviewer
Non-standard structures and components for drainage, lighting, signalization and signing			Originator		Reviewer
Building structures			Originator ³		Reviewer ⁴
Non-standard crash cushions and other nonstructural items			Originator		Reviewer
Design and structural details furnished by the Contractor in compliance with the Contract				Originator	Reviewer
Material or Product Cut-Sheets	Originator				Reviewer

1. Include integration details of the post-tensioning system.
2. Does not include formwork complying with Standard Plans, Index 102-600 (concrete placement is not permitted directly over traffic). Also, does not include critical temporary walls that are fully detailed in the plans unless redesigned by the Contractor. Does not include specialized equipment if traffic is removed from under equipment while equipment is being loaded, launched, and while loads are being transported by equipment.
3. In lieu of a Specialty Engineer, originator may be a licensed Architect.
4. In lieu of the Design Engineer of Record, the reviewer may be the Design Architect of Record.

5-1.4.3 Schedule of Submittals: Prepare and submit a schedule of submittals that identifies the work for which shop drawings apply. For each planned submittal, define the type, and approximate number of drawings or other documents that are included and the planned submittal date, considering the processing requirements herein. Submit the schedule of submittals to the CEI Consultant within 60 days of the start of the Contract, and prior to the submission of any shop drawings.

Coordinate subsequent submittals with construction schedules to allow sufficient time for review, resubmittal and approval prior to beginning fabrication as necessary.

5-1.4.4 Style, Numbering, and Material of Submittals:

5-1.4.4.1 Drawings: Submit all shop drawings that are necessary to complete the structure in compliance with the design shown in the Plans. Prepare all shop drawings using the same units of measure as those used in the Plans. Consecutively number each sheet in the submittal series, and indicate the total number in the series (i.e., 1 of 12, 2 of 12 . . . 12 of 12). Include on each sheet the following items as a minimum requirement: the complete Project Number, Financial Project Identification Number (if applicable), Bridge Number(s), drawing title and number, a title block showing the names of the fabricator or producer and the Contractor for which the work is being done, the initials of the person(s) responsible for the drawing, the date on which the drawing was prepared, the location of the item(s) within the project, the Contractor's approval stamp with date and initials, and, when applicable, the documents shall be signed and sealed by the Specialty Engineer or Contractor's Engineer of Record. A re-submittal will be requested when any of the required information is not included.

Shop drawings shall be submitted in Portable Document Format (PDF) files, formatted on sheets 11 by 17 inches.

5-1.4.4.2 Other Documents: Submit PDF files of other documents such as trade literature, catalogue information, calculations, and manuals formatted on sheets no larger than 11 by 17 inches. Clearly label and number each sheet in the submittal to indicate the total number of sheets in the series (i.e., 1 of 12, 2 of 12 . . . 12 of 12).

Prepare all documents using the same units of measure as the Plans and include a Table of Contents cover sheet. List on the cover sheet the total number of pages and appendices, and include the complete Project Number, Financial Project Identification Number (if applicable), a title referencing the submittal item(s), the name of the firm and person(s) responsible for the preparation of the document, the Contractor's approval stamp with date and initials, and, when applicable, the documents shall be signed and sealed by the Specialty Engineer or Contractor's Engineer of Record.

Submit appropriately prepared and checked calculations and manuals that clearly outline the design criteria. Include on the internal sheets the complete Financial Project Identification Number and the initials of the person(s) responsible for preparing and checking the document.

Clearly label trade literature and catalogue information on the front cover with the title, Financial Project Identification Number, date and name of the firm and person(s) responsible for that document.

5-1.4.5 Submittal Paths:

5-1.4.5.1 General: Shop drawings are not required for items on the Approved Products List used as intended in the relevant Standard Plans and Standard Specifications. For non-prequalified items, details of the submittal path and protocol to be followed will be established by the CEI Consultant and communicated at the preconstruction conference.

Shop drawing review will be performed by the Engineer of Record for the project feature associated with each submittal and communicated through the CEI Consultant. Shop drawing submittals shall include other information such as catalog data, procedure manuals, fabrication/welding procedures, and maintenance and operating procedures when required by the work. Submit material certifications and material tests to the CEI Consultant. The Contractor is responsible for checking and verifying any necessary field dimensions required in the development of shop drawings.

5-1.4.5.2 Building Structures: Submit shop drawings, and all correspondence related to building structures to the CEI Consultant for review and approval.

5-1.4.5.3 Contractor-Originated Design: Submit shop drawings and applicable calculations to the CEI Consultant for review. The shop drawings and applicable calculations must be signed and sealed by the Specialty Engineer or the Contractor's Engineer of Record. Submit in accordance with the requirements of 5-1.4.1 through 5-1.4.3, as appropriate.

5-1.4.5.4 Temporary Works: For Construction Affecting Public Safety, submit to the CEI Consultant shop drawings and the applicable calculations for the design of special erection equipment, bracing, falsework, scaffolding, etc. The shop drawings and applicable calculations must be signed and sealed by the Specialty Engineer. Submit in accordance with the requirements of 5-1.4.1 through 5-1.4.3, as appropriate.

5-1.4.5.5 Demolition Plans of Bridges with Continuous Beams or Girders when Traffic is Under Any of the Spans of the Unit During Demolition Activities: For demolition plans of bridges with continuous beams or girders when traffic is placed under any of the spans of the unit during demolition activities, the Specialty Engineer shall prepare signed and sealed demolition plans and applicable calculations including a step-by-step sequence of demolition, etc. Clearly denote any traffic restrictions for all demolition steps. Submit in accordance with the requirements of 5-1.4. 1 through 5-1.4. 3, as appropriate.

5-1.4.5.6 Falsework Founded on Shallow Foundations: When vertical displacement limits are provided in the Plans for falsework founded on shallow foundations such as spread footings and mats, submit to the CEI Consultant shop drawings and applicable calculations of the falsework system including subsurface conditions and settlement estimates. The shop drawings and applicable calculations must be signed and sealed by the Specialty Engineer. Submit in accordance with the requirements of 5-1.4.5.1 through 5-1.4.5.3, as appropriate.

5-1.4.5.7 Formwork and Scaffolding: The Contractor is solely responsible for the safe installation and use of all formwork and scaffolding. The County does not require any formwork or scaffolding submittals unless such work would be classified as Construction Affecting Public Safety. For formwork, scaffolding, or other temporary works affecting public safety; develop the required designs in accordance with the AASHTO Guide Design Specifications for Bridge Temporary Works, the AASHTO Construction Handbook for Bridge Temporary Works, and Chapter 11 of the Structures Design Guidelines (SDG) using wind loads specified in the SDG.

5-1.4.5.8 Beam, Girder and Column Temporary Bracing: The Contractor is solely responsible for ensuring stability of beams, girders and columns during all handling, storage, shipping and erection. Adequately brace beams, girders and columns to resist wind, weight of forms and other temporary loads, especially those eccentric to the vertical axis of the products, considering actual beam geometry and support conditions during all stages of erection and deck construction. At a minimum, provide temporary bracing at each end of each beam or girder. Develop the required bracing designs in accordance with the AASHTO LRFD

Bridge Design Specifications (LRFD) and Chapter 11 of the SDG using wind loads specified in the SDG. For information not included in the SDG or LRFD, refer to the AASHTO Guide Design Specifications for Bridge Temporary Works and the AASHTO Construction Handbook for Bridge Temporary Works.

For Construction Affecting Public Safety, when temporary bracing requirements are shown in the Plans, submit plans and calculations signed and sealed by a Specialty Engineer for the design of temporary bracing members and connections based on the forces shown in the Plans. In addition, submit a written certification that construction loads do not exceed the assumed loads shown in the Plans.

For Construction Affecting Public Safety, when temporary bracing requirements are not shown in the Plans or an alternate temporary bracing system is proposed, submit plans and calculations signed and sealed by a Specialty Engineer including the stability analysis and design of temporary bracing members and connections.

5-1.4.5.9 Erection Plan, Geometry Control Manual and Erection

Manual: Submit, for the Director's review, an Erection Plan that meets the specific requirements of Sections 450, 452 and 460 and this section. Submit in writing for the Engineer's review, an Erection Manual and Geometry Control Manual that meets the specific requirements of Section 462 and this Section. For all Erection Plans and Erection Manuals refer to Standard Plans, Index-102- 600 for construction activities not permitted over traffic. For construction activities not covered in Index 102-600, clearly denote what additional construction steps are not allowed over traffic.

5-1.4.5.10 Other Miscellaneous Design and Structural Details

Furnished by the Contractor in Compliance with the Contract: The CEI Consultant shall review all shop drawings and the applicable calculations for miscellaneous design and structural details as required by the Contract. The shop drawings and applicable calculations will be signed and sealed by the Specialty Engineer. Submit in accordance with the requirements of 5-1.4.1 through 5-1.4.3, as appropriate.

5-1.4.5.10 Project Shop Drawing Package:

Upon completion of the work, but prior to authorization of final payment, the Contractor shall furnish the Director one complete, indexed and cataloged PDF file containing all of the Contractors, Subcontractors, and manufacturers shop drawings and catalog data as finally checked and reviewed by the Director with all modifications accepted by the Director subsequent thereto, showing the work as actually completed.

5-1.4.6 Processing of Shop Drawings:

5-1.4.6.1 Contractor Responsibility for Accuracy and Coordination of

Shop Drawings: Coordinate, schedule, and control all submittals, with a regard for the required priority, including those of the various subcontractors, suppliers, and engineers, to provide for an orderly and balanced distribution of the work.

Coordinate, review, date, stamp, approve and sign all shop drawings prepared by the Contractor or agents (subcontractor, fabricator, supplier, etc.) prior to submitting them to the CEI Consultant. Submittal of the drawings confirms verification of the work requirements, units of measurement, field measurements, construction criteria, sequence of assembly and erection, access and clearances, catalog numbers, and other similar data. Indicate on each series of drawings the specification section and sheet or drawing number of the Contract Plans to which the submission applies. Indicate on the shop drawings all deviations from the

Contract drawings and itemize all deviations in the letter of transmittal. Likewise, whenever a submittal does not deviate from the Contract Plans, clearly state so in the submittal.

Schedule the submission of shop drawings to allow for a 45 calendar day review period for all submittals associated with a category 2 bridge; tolling components identified in the current FDOT General Tolling Requirements (GTR) Part 3; and the tolling-related signing, DMS and ITS infrastructure. Schedule the submission of shop drawings to allow for a 25 calendar day review period for all other items. The review period commences upon the CEI Consultant's receipt of the valid submittal or valid re-submittal and terminates upon the transmittal of the submittal back to the Contractor. A valid submittal includes all the minimum requirements outlined in 5-1.4.4.

Submit shop drawings to facilitate expeditious review. The Contractor is discouraged from transmitting voluminous submittals of shop drawings at one time. For submittals transmitted in this manner, allow for the additional review time that may result.

Only shop drawings distributed with the approval stamps are valid and all work that the Contractor performs in advance of approval will be at the Contractor's risk. Work affecting Public Safety may not be performed prior to approval of appropriate submittals and work may not proceed at the Contractor's risk.

5-1.4.6.2 Scope of Review by Engineer of Record: The Engineer of Record's review of the shop drawings is for conformity to the requirements of the Contract Documents and to the intent of the design. The Engineer of Record's review of shop drawings which include means, methods, techniques, sequences, and construction procedures are limited to the effects on the permanent works. The Engineer of Record's review of submittals which include means, methods, techniques, sequences, and construction procedures does not include an in-depth check for the ability to perform the work in a safe or efficient manner.

5-1.4.6.3 Special Review by Engineer of Shop Drawings for Construction Affecting Public Safety: The Engineer may request copies of shop drawings related to Construction Affecting Public Safety for review and comment. When shop drawings are requested do not proceed with construction of the permanent works until receiving the Engineer's written approval.

5-1.4.7 Other Requirements for Shop Drawings for Bridges:

5-1.4.7.1 Shop Drawings for Structural Steel and Miscellaneous Metals: Submit shop drawings for structural steel and miscellaneous metals. Shop drawings shall consist of shop and erection drawings, welding procedures, and other working plans, showing details, dimensions, sizes of material, and other information necessary for the complete fabrication and erection of the metal work.

5-1.4.7.2 Shop Drawings for Concrete Structures: Submit shop drawings for concrete components that are not cast-in-place and are not otherwise exempted from submittal requirements. Also, submit shop drawings for all details that are required for the effective execution of the concrete work and are not included in the Contract Documents such as: special erection equipment, masonry layout diagrams, and diagrams for bending reinforcing steel, in addition to any details required for concrete components for the permanent work.

5-1.4.7.3 Shop Drawings for Major and Unusual Structures: In addition to any other requirements, within 60 days from the Notice to Proceed, submit information to the Director outlining the integration of the Major and Unusual Structure into the overall approach to the project. Where applicable to the project, include, but do not limit this information to:

1. The overall construction program for the duration of the Contract. Clearly show the Milestone dates. (For example, the need to open a structure by a certain time for traffic operations.)

2. The overall construction sequence. The order in which individual structures are to be built, the sequence in which individual spans of girders or cantilevers are erected, and the sequence in which spans are to be made continuous, and the order that components are to be installed (such as mechanical and electrical devices in moveable bridges).

3. The general location of any physical obstacles to construction that might impose restraints or otherwise affect the construction, and an outline of how to deal with such obstacles while building the structure(s). (For example, obstacles might include road, rail and waterway clearances, temporary diversions, transmission lines, utilities, property, and the Contractor's own temporary works, such as haul roads, cofferdams, plant clearances and the like.)

4. The approximate location of any special lifting equipment in relation to the structure, including clearances required for the operation of the equipment. (For example, crane positions, operating radii and the like.)

5. The approximate location of any temporary falsework, and the conceptual outline of any special erection equipment. Provide the precise locations and details of attachments, fixing devices, loads, etc. in later detailed submittals.

6. An outline of the handling, transportation, and storage of fabricated components, such as girders or concrete segments. Provide the precise details in later detailed submittals.

7. Any other information pertinent to the proposed scheme or intended approach.

Clearly and concisely present the above information on as few drawings as possible in order to provide an overall, integrated summary of the intended approach to the project. The County will use these drawings for information, review planning, and to assess the Contractor's approach in relation to the intent of the original design. Submittal to and receipt by the Director does not constitute any County acceptance or approval of the proposals shown thereon. Include the details of such proposals on subsequent detailed shop drawing submittals. Submit timely revisions and re-submittals for all variations from these overall scheme proposals.

5-1.4.8 Cost of Shop Drawings: Include the cost of shop drawings submittal in the Contract prices for the work requiring the shop drawings. The County will not pay the Contractor additional compensation for such drawings.

5-1.5 Certifications:

5-1.5.1 Special Erection Equipment: Prior to its use, ensure that the Specialty Engineer personally inspects the special erection equipment and submits a written certification to the Director that the equipment has been fabricated in accordance with the submitted drawings and calculations. In addition, after assembly, ensure that the Specialty Engineer observes the equipment in use and submits a written certification to the Director that such equipment is being used as intended and in accordance with the submitted drawings and calculations. In each case, the Specialty Engineer must sign and seal the letter of certification.

5-1.5.2 Falsework and Shoring Requiring Shop Drawings: After its erection or installation but prior to the application of any superimposed load, ensure that a Specialty Engineer or a designee inspects the falsework and certifies to the Director in writing that the falsework has been constructed in accordance with the materials and details shown on the submitted drawings and calculations. The letter of certification must be signed and sealed by the Specialty Engineer.

Where so directed in the shop drawings, ensure all welds are performed by welders qualified under AWS D1.5 for the type of weld being performed.

5-1.5.3 Temporary Formwork: For Construction Affecting Public Safety and for Major and Unusual Structures, prior to the placement of any concrete, ensure that a Specialty Engineer or a designee inspects the formwork and submits a written certification to the Director that the formwork has been constructed to safely withstand the superimposed loads to which it will be subjected. The Specialty Engineer must sign and seal the letter of certification.

5-1.5.4 Erection: For Construction Affecting Public Safety, submit an erection plan signed and sealed by the Specialty Engineer to the Director at least four weeks prior to erection commencing. Include, as part of this submittal, signed and sealed calculations and details for any falsework, bracing or other connection supporting the structural elements shown in the erection plan. Unless otherwise specified in the Plans, erection plans are not required for simple span precast prestressed concrete girder bridges with spans of 170 feet or less.

At least two weeks prior to beginning erection, conduct a Pre-erection meeting to review details of the plan with the Specialty Engineer that signed and sealed the plan, and any Specialty Engineers that may inspect the work and the Director.

After erection of the elements, but prior to opening of the facility below the structure, ensure that a Specialty Engineer or a designee has inspected the erected member. Ensure that the Specialty Engineer has submitted a written certification to the Director that the structure has been erected in accordance with the signed and sealed erection plan.

For structures without temporary supports but with temporary girder bracing systems, perform, as a minimum, weekly inspections of the bracing until all the diaphragms and cross frames are in place. For structures with temporary supports, perform daily inspections until the temporary supports are no longer needed as indicated in the erection plans. Submit written documentation of the inspections to the Director within 24 hours of the inspection.

5-1.6 Request for Correction: For work that the Contractor constructs incorrectly or does not meet the requirements of the Contract Documents, the Contractor has the prerogative to submit an acceptance proposal to the Director for review and disposition. The acceptance proposal shall describe the error or defect and either describe remedial action for its correction or propose a method for its acceptance. In either case, the acceptance proposal shall address structural integrity, aesthetics, maintainability, and the effect on Contract Time. The County will judge any such proposal for its effect on these criteria and for its effect on Contract Administration.

When the Director judges that a proposal infringes on the structural integrity or maintainability of the structure, the Contractor's Engineer of Record will perform a technical assessment and submit it to the Director for approval. Do not take any corrective action without the Director's written approval.

Carry out all approved corrective construction measures at no expense to the County.

Notwithstanding any disposition of the compensation aspects of the defective work, the Director's decision on the technical merits of a proposal is final.

5-1.7 Request for Information: Submit Requests for Information in writing to the Director to request clarification where a provision, detail or drawing in the Contract Documents seems to have more than one meaning, have an unclear meaning, or have conflicts between Plans and Specifications. A Request for Information is not considered a Notice of Claim. Notices of Claim must be submitted in accordance with 5-12.2.

5-1.8 Request for Modification: Where the Director allows the Contractor to make modifications to the permanent works for the purposes of expediting the Contractor's chosen construction methods, the Contractor shall submit proposals to the Director for review and approval prior to modifying the works. Submit proposals for minor modifications under the shop drawing process. Indicate on all drawings the deviations from the Contract Documents and itemize all deviations in the letter of transmittal. Major modifications must be submitted as a Cost Savings Initiative Proposal.

Minor modifications are those items that, in the opinion of the Director, do not significantly affect the quantity of measured work, or the integrity or maintainability of the structure or its components.

The Director's decision on the delineation between a minor and a major modification and the disposition of a proposal is final.

5-2 Coordination of Contract Documents.

These Specifications, the Plans, Special Provisions, and all supplementary documents are integral parts of the Contract Documents; a requirement occurring in one is as binding as though occurring in all. All parts of the Contract Documents are complementary and describe and provide for a complete work. In addition to the work and materials specified in the Specifications as being included in any specific pay item, include in such pay items additional, incidental work, not specifically mentioned, when so shown in the Plans, or if indicated, or obvious and apparent, as being necessary for the proper completion of the work under such pay item and not stipulated as being covered under other pay items.

In cases of discrepancy, the governing order of the documents is as follows:

1. Special Provisions.
 2. Technical Special Provisions.
 3. Plans.
 4. Standard Plans.
 5. Developmental Specifications.
 6. Supplemental Specifications.
 7. Standard Specifications.
- Computed dimensions govern over scaled dimensions.

5-3 Conformity of Work with Contract Documents.

Perform all work and furnish all materials in reasonably close conformity with the lines, grades, models, dimensions, and material requirements, including tolerances, as specified in the Contract Documents.

In the event that the Director finds that the Contractor has used material or produced a finished product that is not in reasonably close conformity with the Contract Documents, but that the Contractor has produced reasonably acceptable work, the Director will determine if the County will accept the work in place. In this event, the Director will document the basis of acceptance by Contract modification, which provides for an appropriate reduction in the Contract price for such work or materials included in the accepted work as deemed necessary to conform to the determination based on engineering judgment.

In the event that the Director finds that the Contractor has used material or produced a finished product that is not in reasonably close conformity with the Contract Documents, and that the Contractor has produced an inferior or unsatisfactory product, the Contractor shall remove and replace or otherwise correct the work or materials at no expense to the County.

For base and surface courses, the County will allow the finished grade to vary as much as 0.1 foot from the grade shown in the Plans, provided that the Contractor's work meets all templates and straightedge requirements and contains suitable transitions.

5-4 Errors or Omissions in Contract Documents.

Do not take advantage of any apparent error or omission discovered in the Contract Documents, but immediately notify the Director in writing of such discovery. The Director will then make such corrections and interpretations as necessary to reflect the actual spirit and intent of the Contract Documents.

5-5 Authority of the Director.

Perform all work to the satisfaction of the Director.

The Director will decide all questions, difficulties, and disputes, of whatever nature, that may arise relative to the interpretation of the Plans, construction, prosecution, and fulfillment of the Contract, and as to the character, quality, amount, and value of any work done, and materials furnished, under or by reason of the Contract.

5-6 Authority and Duties of Director's Assistants.

The Director may appoint such assistants and representatives as desired. These assistants and representatives are authorized to inspect all work done and all materials furnished. Such inspection may extend to all or any part of the work and to the manufacture, preparation, or fabrication of the materials to be used. Such assistants and representatives are not authorized to revoke, alter, or waive any requirement of these Specifications. Rather, they are authorized to call to the attention of the Contractor any failure of the work or materials to meet the Contract Documents, and have the authority to reject materials or suspend the work until any questions at issue can be referred to and decided by the Director. The Director will immediately submit written notification to the Contractor of any such suspension of the work, stating in detail the reasons for the suspension. The presence of the inspector or other assistant in no way lessens the responsibility of the Contractor.

5-7 Engineering and Layout.

5-7.1 Control Points Furnished by the County: The Director will provide control points at various locations along the project alignment (Begin Project, End Project, PIs, PTs, etc.) and benchmarks along the line of the project to facilitate the proper layout of the work. Control points and benchmarks provided by the engineer, if any, will be indicated in the Plans. Preserve all control points and benchmarks that the County furnishes. Any points carelessly or willfully disturbed or destroyed shall be reset at the sole expense of the Contractor.

As an exception to the above, for projects where the Plans do not show a centerline or other survey control line for construction of the work (e.g., resurfacing, safety modifications, etc.) the Director may provide only points marking the beginning and ending of the project, and all exceptions.

Prior to commencing the work, the Contractor shall perform a quality control check of all horizontal and vertical control points provided by the County and carefully compare all lines depicted in the plans with existing lines and levels, and shall call any discrepancies to the attention of the Director for resolution. Upon resolution of any discrepancies, the Contractor shall submit a letter to the County accepting the control points and bench marks for use. In any event, the Contractor shall be responsible for the accuracy of the Work and shall make good any work

performed in error, at no cost to the County. All construction surveying and layout work to be provided herein shall be coordinated with and subject to the approval of the Director.

5-7.1.1 Third Party Survey Monumentation: The Contractor is responsible for the protection and preservation of any third party survey monumentation (National Geodetic Survey points, property corners, etc.) located within the project limits. Any points carelessly or willfully disturbed or destroyed shall be reset at the sole expense of the Contractor. Any third party survey monumentation designated by the Director to be removed and re-established will be paid for at the unit prices set forth in the Contract, or if no such item exists in accordance with Section 4-3.2.1.

5-7.2 Furnishing of Stake Materials: Furnish all stakes, templates, and other materials necessary for establishing and maintaining the lines and grades necessary for control and construction of the work.

5-7.3 Layout of Work: Utilizing the control points and bench marks furnished by the County and accepted by the Contractor in accordance with 5-7.1, establish all horizontal and vertical controls necessary to construct the work in conformity to the Contract Documents. Perform all calculations required, and set all stakes needed such as grade stakes, offset stakes, reference point stakes, slope stakes, and other reference marks or points necessary to provide lines and grades for construction of all roadway, bridge, and miscellaneous items.

When performing utility construction as part of the project, establish all horizontal and vertical controls necessary to carry out such work.

5-7.4 Specific Staking Requirements: When performing new base construction as part of the project, set stakes to establish lines and grades for subgrade, base, curb, and related items at intervals along the line of the work. If Automated Machine Guidance is utilized, set stakes as needed. If Automated Machine Guidance is not utilized, set stakes no greater than 50 feet on tangents and 25 feet on curves. Set grade stakes at locations that the Director directs to facilitate checking of subgrade, base, and pavement elevations in crossovers, intersections, and irregular shaped areas.

For bridge construction stakes and other control, set references at sufficiently frequent intervals to ensure construction of all components of a structure in accordance with the lines and grades shown in the Plans.

For projects where the Plans do not show a centerline or other survey control line for construction of the work (resurfacing, safety modifications, etc.), provide only such stakes as necessary for horizontal and vertical control of work items.

For resurfacing and resurfacing-widening type projects, establish horizontal controls adequate to ensure that the asphalt mix added matches with the existing pavement. In tangent sections, set horizontal control points at 100-foot intervals by an instrument survey. In curve sections, set horizontal control points at 25-foot intervals by locating and referencing the centerline of the existing pavement. Alternate intervals may be used on resurfacing projects with prior written approval of the Director.

Establish by an instrument survey, and mark on the surface of the finished pavement at 25-foot intervals, the points necessary for striping of the finished roadway. As an exception, for resurfacing and resurfacing/widening projects, establish these points in the same manner as used for horizontal control of paving operations. Mark the pavement with white paint. If performing striping, the Director may approve an alternate method for layout of striping provided that the Contractor achieves an alignment equal to or better than the alignment that would be achieved using an instrument survey.

For projects that include temporary or permanent striping of “no passing zones”, provide the location and length of these zones as shown in the Plans, except projects where the vertical or horizontal alignment is new or altered from preconstruction alignment. For projects that consist of new or altered vertical or horizontal alignment, the County will provide the location and length of the "no passing zones" during construction. For these projects, submit written notification to the Director not less than 21 calendar days prior to beginning striping.

For all projects, set a station identification stake at each right-of-way line at 100-foot intervals and at all locations where a change in right-of-way width occurs, or as otherwise approved by the Director. Mark each of these stakes with painted numerals, of a size readable from the roadway, corresponding to the project station at which it is located. As an exception to the above, for projects where Plans do not show right-of-way lines, set station identification stakes at locations and intervals appropriate to the type of work being done. For resurfacing and resurfacing/widening projects, set station identification stakes at 200-foot intervals, or as otherwise approved by the Director.

5-7.4.1 As-Built Drawings and Certified Surveys: The Contractor shall maintain one record copy of all specifications, plans, addenda, and shop drawings on site and in good order, annotated in red to depict all changes made during construction and exact location of underground or otherwise concealed components of the project, and any modifications to material types from that specified in the bid plans and specifications (“red line documents”). All subsurface improvements shall be as-built prior to backfilling. As-built red line plans shall be maintained on 11-inch by 17-inch prints and red line annotations shall be completed in a neat draftsman-like manner.

As-built red lines shall include both authorized and unauthorized changes to all project features, including but not limited to: horizontal pavement dimensions; finished pavement grades; finish dimensions, elevations, and alignment of all storm sewer, drainage structures, ponds, water main, sanitary sewer, force main, service lines, conduit, wiring, traffic loops, and signal interconnects; signal poles; light poles; and signs.

Demonstrating proper maintenance of as-built drawings shall be a precedent to each progress payment. The Contractor shall make available to Director, at any time requested, as-built information through the date of the request. If the Director determines the as-built information is inaccurate, inadequate, or untimely payment may be withheld until such time that the Contractor cures any noted deficiencies.

Upon completion of all work, but prior to authorization of final payment, the Contractor shall deliver to the Director one complete set as-built red line documents and certified surveys providing verification of all as-built dimensions and grades for review and approval. The certified survey shall include, but not be limited to:

1. Level Circuit: the survey shall include a final bench mark level circuit indicating the accuracy of vertical closure.
2. Control structure bench marks: the Contractor shall establish and document the location and elevation of bench marks on or within 100-feet of each control structure constructed or modified as part of the project. Each control structure bench mark elevation shall be clearly and permanently indicated on the bench mark.
3. Cross-sections: as-built finished cross-sections shall be performed at intervals not exceeding 100 feet, extending from right-of-way to right-of-way, but also including temporary or permanent easements

as may be applicable. Cross sections shall include all elevation break points, and shall include edge of pavement and centerlines for all pavements.

4. Discharge structures: structure identification number, type, locations (latitude and longitude), dimensions, and elevations of all, including weirs, bleeders, orifices, gates, pumps, pipes, and oil and grease skimmers.
5. Side bank and underdrain filters, or exfiltration trenches: locations, dimensions and elevations of all, including clean-outs, pipes, connections to control structures and points of discharge to receiving waters.
6. Storage areas for treatment and attenuation: storage area identification number, dimensions, elevations, contours, or cross-sections of all, sufficient to determine stage-storage relationships of the storage area and the permanent pool depth and volume below the control elevation for normally wet systems.
7. System grading: dimensions, elevations, contours, and final grades or cross-sections to determine contributing drainage areas, flow directions, and conveyance of runoff to the system discharge points.
8. Conveyance: dimensions, elevations, contours, final grades or cross-sections of systems utilized to divert off-site runoff around or through the new system.
9. Water levels: existing water elevations and the date recorded.
10. South Florida Water Management District (SFWMD): as-built surveys shall conform to any additional requirements and special conditions listed in the SFWMD's Environmental Resource Permit and any applicable local permit(s).
11. Bridge clearances: for projects under the authority of a U.S. Coast Guard bridge permit, as-built clearances as described in the U.S. Coast Guard Owner's Certification of Bridge Completion. For bridges spanning roadways, provide a full as-built clearance envelope across the full width of the lower roadway(s).
12. Projects under the authority of a U.S. Army Corps of Engineers permit: as-built surveys shall satisfy all of the requirements and special conditions listed in the U.S. Army Corps of Engineers permit.

All as-built survey information shall be signed and sealed by a licensed Professional Surveyor and Mapper duly registered in the State of Florida. No direct payment will be made for the cost of preparing, maintaining, and furnishing as-built plans and surveys as specified in this Article, the costs thereof shall be included in other items of work.

5-7.5 Personnel, Equipment, and Record Requirements: Employ only competent personnel and use only suitable equipment in performing layout work. Do not engage the services of any person or persons in the employ of the County for performance of layout work. All construction surveying and layout work, including dimensions and elevations associated with as-builts, shall be completed under the responsible charge of a licensed Professional Surveyor and Mapper duly registered in the State of Florida.

Keep adequate field notes and records while performing as layout work. Make these field notes and records available for the Director's review as the work progresses, and submit to the Director at the time of completion of the project. The Director's inspection, checking, or acceptance of the Contractor's field notes or layout work does not relieve the Contractor of his responsibility to achieve the lines, grades, and dimensions shown in the Contract Documents.

Prior to final acceptance of the project, mark, in a permanent manner on the surface of the completed work, all horizontal control points originally furnished by the County.

5-7.6 Global Navigation Satellite Systems (GNSS) Work Plan: If used, submit a comprehensive written GNSS Work Plan to the Director for County review and acceptance at the preconstruction conference or at least 30 days before starting work using GNSS. Update the plan as necessary during construction and notify the County of all changes. The GNSS Work Plan shall describe how GNSS enabled Automated Machine Guidance technology will be integrated into other technologies employed on the project. At a minimum, the GNSS Work Plan will include the following:

1. Designate which portions of the Contract will be done using GNSS enabled Automated Machine Guidance and which portions will be constructed using conventional survey methodology.

2. Describe the manufacturer, model, and software version of the GNSS equipment.

3. Provide information on the qualifications of Contractor staff. Include formal training and field experience. Designate a single staff person as the primary contact for GNSS technology issues.

4. Describe how project control will be established. Include a list and map showing control points enveloping the site.

5. Describe site calibration procedures. Include a map of the control points used for site calibration and control points used to validate the site calibration. Describe the frequency of site calibration and how site calibration will be documented. At a minimum, verify the site calibration twice daily.

6. Describe the Contractor's quality control procedures for verifying mechanical calibration and maintenance of construction and guidance equipment. Include the frequency and type of verification performed to ensure the constructed grades conform to the Contract Documents.

Keep on site and provide upon request, a copy of the project's most up to date GNSS Work Plan at the project site.

5-7.7 Payment: Include the cost of performing layout work as described above in the Contract unit prices for the various items of work that require layout.

5-8 Contractor's Supervision.

5-8.1 Prosecution of Work: Give the work the constant attention necessary to ensure the scheduled progress, and cooperate fully with the Director and with other contractors at work in the vicinity.

5-8.2 Contractor's Superintendent: Maintain a competent superintendent at the site at all times while work is in progress to act as the Contractor's agent. Provide a superintendent who is a competent superintendent capable of properly interpreting the Contract Documents and is thoroughly experienced in the type of work being performed. Provide a superintendent with the full authority to receive instructions from the Director and to execute the orders or directions of

the Director, including promptly supplying any materials, tools, equipment, labor, and incidentals that may be required. Provide such superintendence regardless of the amount of work sublet.

Provide a superintendent who speaks and understands English, and maintain at least one other responsible person who speaks and understands English, on the project during all working hours.

5-8.3 Supervision for Emergencies: Provide a responsible person, who speaks and understands English, and who is available at or reasonably near the worksite on a 24-hour basis, seven days a week. Designate this person as the point of contact for emergencies and in cases that require immediate action to maintain traffic or to resolve any other problem that might arise. Submit the phone numbers and names of personnel designated to be contacted in cases of emergencies, along with a description of the project location, to the Florida Highway Patrol and all other local law enforcement agencies.

5-9 General Inspection Requirements.

5-9.1 Cooperation by Contractor: Do not perform work or furnish materials without obtaining inspection by the Director. Provide the Director with safe means of access to the work, so the Director can determine whether the work performed and materials used are in accordance with the requirements and intent of the Contract Documents. For bridge projects with construction operations accessible only by watercraft, provide safe passage and transport to facilitate the Engineer's inspection of the Work. If the Director so requests at any time before final acceptance of the work, remove or uncover such portions of the finished work as directed. After examination, restore the uncovered portions of the work to the standard required by the Contract Documents. If the Director determines that the work so exposed or examined is unacceptable, perform the uncovering or removal, and the replacing of the covering or making good of the parts removed, at no expense to the County. However, if the Director determines that the work thus exposed or examined is acceptable, the County will pay for the uncovering or removing, and the replacing of the covering or making good of the parts removed in accordance with Section 4-4.

5-9.2 Failure of Director to Reject Work During Construction: If, during or prior to construction operations, the Director fails to reject defective work or materials, whether from lack of discovery of such defect or for any other reason, such initial failure to reject in no way prevents the later rejection when such defect is discovered, or obligates the County to final acceptance. The County is not responsible for losses suffered due to any necessary removals or repairs of such defects.

5-9.3 Failure to Remove and Renew Defective Materials and Work: If the Contractor fails or refuses to remove and renew any defective materials used or work performed, or to make any necessary repairs in an acceptable manner and in accordance with the requirements of the Contract within the time indicated in writing, the Director has the authority to repair, remove, or renew the unacceptable or defective materials or work as necessary, all at the Contractor's expense. The County will obtain payment for any expense it incurs in making these repairs, removals, or renewals, that the Contractor fails or refuses to make, by deducting such expenses from any moneys due or which may become due the Contractor, or by charging such amounts against the Contract bond.

5-9.4 Inspection by Federal Government: When the United States Government or the State of Florida pays a portion of the cost of construction, its representatives may inspect the construction work as they deem necessary. However, such inspection will in no way make the Federal Government or the State of Florida a party to the Contract.

5-10 Final Inspection.

5-10.1 Maintenance until Acceptance: Maintain all Work until the Director has given final acceptance in accordance with 5-11.

5-10.2 Inspection for Acceptance: Upon submittal of written notification that all Contract Work, or all Contract Work on the portion of the Contract scheduled for acceptance, has been completed, the Director will make an inspection for acceptance. The inspection will be made within seven days of such notification. If the Director finds that all work has been satisfactorily completed, the County will consider such inspection as the final inspection. If any or all of the Work is found to be unsatisfactory, the Director will detail the remedial work required to achieve acceptance. Immediately perform such remedial work. Subsequent inspections will be made on the remedial work until the Director accepts all Work.

Upon satisfactory completion of the Work, the County will submit written notice of acceptance, either partial or final, to the Contractor.

Until final acceptance in accordance with 5-11, replace or repair any damage to the accepted Work. Payment of such work will be as provided in 7-14.

5-10.3 Partial Acceptance: At the Director's sole discretion, the Director may accept any portion of the Work under the provisions of 5-10.2.

5-10.4 Conditional Acceptance: The Director will not make, or consider requests for conditional acceptance of a project.

5-11 Final Acceptance.

When, upon completion of the final construction inspection of the entire project, the Director determines that the Contractor has satisfactorily completed the work, the Director will submit written notice of final acceptance to the Contractor.

5-12 Claims by Contractor.

5-12.1 General: When the Contractor deems that extra compensation or a time extension is due beyond that agreed to by the Director, whether due to delay, additional work, altered work, differing site conditions, breach of Contract, or for any other cause, the Contractor shall follow the procedures set forth herein for preservation, presentation and resolution of the claim.

Submission of timely notice of intent to file a claim, preliminary time extension request, time extension request, and the certified written claim, together with full and complete claim documentation, are each a condition precedent to the Contractor bringing any circuit court, arbitration, or other formal claims resolution proceeding against the County for the items and for the sums or time set forth in the Contractor's certified written claim. The failure to provide such notice of intent, preliminary time extension request, time extension request, certified written claim and full and complete claim documentation within the time required shall constitute a full, complete, absolute and irrevocable waiver by the Contractor of any right to additional compensation or a time extension for such claim.

5-12.2 Notice of Claim:

5-12.2.1 Claims For Extra Work: Where the Contractor deems that additional compensation or a time extension is due for work or materials not expressly provided for in the Contract or which is by written directive expressly ordered by the Director pursuant to 4-3, the Contractor shall submit written notification to the Director of the intention to make a claim for additional compensation before beginning the work on which the claim is based, and if seeking a time extension, the Contractor shall also submit a preliminary request for time extension pursuant to 8-7.3.2 within ten calendar days after commencement of a delay and a request for Contract Time

extension pursuant to 8-7.3.2 within thirty calendar days after the elimination of the delay. If such written notification is not submitted and the Director is not afforded the opportunity for keeping strict account of actual labor, material, equipment, and time, the Contractor waives the claim for additional compensation or a time extension. Such notice by the Contractor, and the fact that the Director has kept account of the labor, materials and equipment, and time, shall not in any way be construed as establishing the validity of the claim or method for computing any compensation or time extension for such claim. On projects with an original Contract amount of \$3,000,000 or less within 90 calendar days after final acceptance of the project in accordance with 5-11, and on projects with an original Contract amount greater than \$3,000,000 within 180 calendar days after final acceptance of the project in accordance with 5-11, the Contractor shall submit full and complete claim documentation as described in 5-12.3 and duly certified pursuant to 5-12.9. However, for any claim or part of a claim that pertains solely to final estimate quantities disputes the Contractor shall submit full and complete claim documentation as described in 5-12.3 and duly certified pursuant to 5-12.9, as to such final estimate claim dispute issues, within 90 or 180 calendar days, respectively, of the Contractor's receipt of the County's final estimate.

If the Contractor fails to submit a certificate of claim as described in 5-12.9, the County will so notify the Contractor in writing. The Contractor shall have ten calendar days from receipt of the notice to resubmit the claim documentation, without change, with a certificate of claim as described in 5-12.9, without regard to whether the resubmission is within the applicable 90 or 180 calendar day deadline for submission of full and complete claim documentation. Failure by the Contractor to comply with the ten-calendar day notice shall constitute a waiver of the claim.

5-12.2.2 Claims For Delay: Where the Contractor deems that additional compensation or a time extension is due on account of delay, differing site conditions, breach of Contract, or any other cause other than for work or materials not expressly provided for in the Contract (Extra Work) or which is by written directive of the Director expressly ordered by the Director pursuant to 4-3, the Contractor shall submit a written notice of intent to the Director within ten days after commencement of a delay to a controlling work item expressly notifying the Director that the Contractor intends to seek additional compensation, and if seeking a time extension, the Contractor shall also submit a preliminary request for time extension pursuant to 8-7.3.2 within ten calendar days after commencement of a delay to a controlling work item, as to such delay and providing a reasonably complete description as to the cause and nature of the delay and the possible impacts to the Contractor's work by such delay, and a request for Contract Time extension pursuant to 8-7.3.2 within thirty calendar days after the elimination of the delay. On projects with an original Contract amount of \$3,000,000 or less within 90 calendar days after final acceptance of the project in accordance with 5-11, and on projects with an original Contract amount greater than \$3,000,000 within 180 calendar days after final acceptance of the project in accordance with 5-11, the Contractor shall submit full and complete documentation as described in 5-12.3 and duly certified pursuant to 5-12.9.

If the Contractor fails to submit a certificate of claim as described in 5-12.9, the County will so notify the Contractor in writing. The Contractor shall have ten calendar days from receipt of the notice to resubmit the claim documentation, without change, with a certificate of claim as described in 5-12.9, without regard to whether the resubmission is within the applicable 90 or 180 calendar day deadline for submission of full and complete claim documentation. Failure by the Contractor to comply with the ten-calendar day notice shall constitute a waiver of the claim.

There shall be no Contractor entitlement to any monetary compensation or time extension for any delays or delay impacts, whatsoever, that are not to a controlling work item,

and then as to any such delay to a controlling work item entitlement to any monetary compensation or time extension shall only be to the extent such is otherwise provided for expressly under 4-3 or 5-12, except that in the instance of delay to a non-controlling item of work the Contractor may be compensated for the direct costs of idle labor or equipment only, at the rates set forth in 4-3.2.1(1) and (3), and then only to the extent the Contractor could not reasonably mitigate such idleness.

If the Contractor provides the written notice of intent, the preliminary request for time extension, and the request for Contract Time extension in compliance with the aforementioned time and content requirements, the Contractor's claim for delay to a controlling work item will be evaluated as of the date of the elimination of the delay even if the Contractor's performance subsequently overcomes the delay. If the claim for delay has not been settled, the Contractor must also comply with 5-12.3 and 5-12.9 to preserve the claim.

5-12.3 Content of Written Claim: As a condition precedent to the Contractor being entitled to additional compensation or a time extension under the Contract, for any claim, the Contractor shall submit a certified written claim to the County which will include for each individual claim, at a minimum, the following information:

1. A detailed factual statement of the claim providing all necessary dates, locations, and items of work affected and included in each claim;
2. The date or dates on which actions resulting in the claim occurred or conditions resulting in the claim became evident;
3. Identification of all pertinent documents and the substance of any material oral communications relating to such claim and the name of the persons making such material oral communications;
4. Identification of the provisions of the Contract which support the claim and a statement of the reasons why such provisions support the claim, or alternatively, the provisions of the Contract which allegedly have been breached and the actions constituting such breach;
5. A detailed compilation of the amount of additional compensation sought and a breakdown of the amount sought as follows:
 - a. documented additional job site labor expenses;
 - b. documented additional cost of materials and supplies;
 - c. a list of additional equipment costs claimed, including each piece of equipment and the rental rate claimed for each;
 - d. any other additional direct costs or damages and the documents in support thereof;
 - e. any additional indirect costs or damages and all documentation in support thereof.
6. A detailed compilation of the specific dates and the exact number of calendar days sought for a time extension, the basis for entitlement to time for each day, all documentation of the delay, and a breakout of the number of days claimed for each identified event, circumstance or occurrence.

Further, the Contractor shall be prohibited from amending either the bases of entitlement or the amount of any compensation or time stated for any and all issues claimed in the Contractor's written claim submitted hereunder, and any circuit court, arbitration, or other formal claims resolution proceeding shall be limited solely to the bases of entitlement and the amount of any compensation or time stated for any and all issues claimed in the Contractor's written claim submitted hereunder. This shall not, however, preclude a Contractor from withdrawing or reducing

any of the bases of entitlement and the amount of any compensation or time stated for any and all issues claimed in the Contractor's written claim submitted hereunder at any time.

5-12.4 Action on Claim: The Director will respond in writing on projects with an original Contract amount of \$3,000,000 or less within 90 calendar days of receipt of a complete claim submitted by a Contractor in compliance with 5-12.3, and on projects with an original Contract amount greater than \$3,000,000 within 120 calendar days of receipt of a complete claim submitted by a Contractor in compliance with 5-12.3. Failure by the Director to respond to a claim in writing within 90 or 120 days, respectively, after receipt of a complete claim submitted by the Contractor in compliance with 5-12.3 constitutes a denial of the claim by the Director. If the Director finds the claim or any part thereof to be valid, such partial or whole claim will be allowed and paid for to the extent deemed valid and any time extension granted, if applicable, as provided in the Contract. No circuit court proceedings on any claim, or a part thereof, may be filed until after final acceptance per 5-11 of all Contract work by the County or denial hereunder, whichever occurs last.

5-12.5 Pre-Settlement and Pre-Judgment Interest: Entitlement to any pre-settlement or pre-judgment interest on any claim amount determined to be valid subsequent to the County's receipt of a certified written claim in full compliance with 5-12.3, whether determined by a settlement or a final ruling in formal proceedings, the County shall pay to the Contractor simple interest calculated at the Prime Rate (as reported by the Wall Street Journal as the base rate on corporate loans posted by at least 75% of the nation's 30 largest banks) as of the 60th calendar day following the County's receipt of a certified written claim in full compliance with 5-12.3, such interest to accrue beginning 60 calendar days following the County's receipt of a certified written claim in full compliance with 5-12.3 and ending on the date of final settlement or formal ruling.

5-12.6 Compensation for Extra Work or Delay:

5-12.6.1 Compensation for Extra Work: Notwithstanding anything to the contrary contained in the Contract Documents, the Contractor shall not be entitled to any compensation beyond that provided for in 4-3.2.

5-12.6.2 Compensation for Delay: Notwithstanding anything to the contrary contained in the Contract Documents, the additional compensation set forth in 5-12.6.2.1 shall be the Contractor's sole monetary remedy for any delay other than to perform extra work caused by the County unless the delay shall have been caused by acts constituting willful or intentional interference by the County with the Contractor's performance of the work and then only where such acts continue after Contractor's written notice to the County of such interference. The parties anticipate that delays may be caused by or arise from any number of events during the term of the Contract, including, but not limited to, work performed, work deleted, supplemental agreements, work orders, disruptions, differing site conditions, utility conflicts, design changes or defects, time extensions, extra work, right-of-way issues, permitting issues, actions of suppliers, subcontractors or other contractors, actions by third parties, suspensions of work by the Director pursuant to 8-6.1, shop drawing approval process delays, expansion of the physical limits of the project to make it functional, weather, weekends, holidays, special events, suspension of Contract Time, or other events, forces or factors sometimes experienced in construction work. Such delays or events and their potential impacts on the performance by the Contractor are specifically contemplated and acknowledged by the parties in entering into this Contract, and shall not be deemed to constitute willful or intentional interference with the Contractor's performance of the work without clear and convincing proof that they were the result of a deliberate act, without reasonable and good-faith basis, and specifically intended to disrupt the Contractor's performance.

5-12.6.2.1 Compensation for Direct Costs, Indirect Costs, Expenses, and Profit thereon, of or from Delay: For any delay claim, the Contractor shall be entitled to monetary compensation for the actual idle labor (including supervisory personnel) and equipment, and indirect costs, expenses, and profit thereon, as provided for in 4-3.2.1(4) and solely for costs incurred beyond what reasonable mitigation thereof the Contractor could have undertaken.

5-12.7 Mandatory Claim Records: After submitting to the Director a notice of intent to file a claim for extra work or delay, the Contractor must keep daily records of all labor, material and equipment costs incurred for operations affected by the extra work or delay. These daily records must identify each operation affected by the extra work or delay and the specific locations where work is affected by the extra work or delay, as nearly as possible. The Director may also keep records of all labor, material and equipment used on the operations affected by the extra work or delay. The Contractor shall, once a notice of intent to claim has been timely filed, and not less than weekly thereafter as long as appropriate, submit the Contractor's daily records to the Director and be likewise entitled to receive the County's daily records. The daily records to be submitted hereunder shall be done at no cost to the recipient.

5-12.8 Claims for Acceleration: The County shall have no liability for any constructive acceleration of the work, nor shall the Contractor have any right to make any claim for constructive acceleration nor include the same as an element of any claim the Contractor may otherwise submit under this Contract. If the Director gives express written direction for the Contractor to accelerate its efforts, such written direction will set forth the prices and other pertinent information and will be reduced to a written Contract Document promptly. No payment will be made on a Supplemental Agreement for acceleration prior to the County's approval of the documents.

5-12.9 Certificate of Claim: When submitting any claim, the Contractor shall certify under oath and in writing, in accordance with the formalities required by Florida law, that the claim is made in good faith, that the supportive data are accurate and complete to the Contractor's best knowledge and belief, and that the amount of the claim accurately reflects what the Contractor in good faith believes to be the County's liability. Such certification must be made by an officer or director of the Contractor with the authority to bind the Contractor.

5-12.10 Non-Recoverable Items: The parties agree that for any claim the County will not have liability for the following items of damages or expense:

1. Loss of profit, incentives or bonuses;
2. Any claim for other than extra work or delay;
3. Consequential damages, including, but not limited to, loss of bonding capacity, loss of bidding opportunities, loss of credit standing, cost of financing, interest paid, loss of other work or insolvency;
4. Acceleration costs and expenses, except where the County has expressly and specifically directed the Contractor in writing "to accelerate at the County's expense"; nor
5. Attorney fees, claims preparation expenses and costs of litigation.

5-12.11 Exclusive Remedies: Notwithstanding any other provision of this Contract, the parties agree that the County shall have no liability to the Contractor for expenses, costs, or items of damages other than those which are specifically identified as payable under 5-12. In the event any legal action for additional compensation, whether on account of delay, acceleration, breach of contract, or otherwise, the Contractor agrees that the County's liability will be limited to those items which are specifically identified as payable in 5-12.

5-12.12 Settlement Discussions: The content of any discussions or meetings held between the County and the Contractor to settle or resolve any claims submitted by the Contractor against

the County shall be inadmissible in any legal, equitable, or administrative proceedings brought by the Contractor against the County for payment of such claim.

5-12.13 Personal Liability of Public Officials: In carrying out any of the provisions of the Contract, Director or any of their respective employees or agents, there shall be no liability on behalf of any employee, officer or official of the County for which such individual is responsible, either personally or as officials or representatives of the County. It is understood that in all such matters such individuals act solely as agents and representatives of the County.

5-12.14 Auditing of Claims: All claims filed against the County shall be subject to audit at any time following the filing of the claim, whether or not such claim is part of a suit pending in the Courts of this State. The audit may be performed, at the County's sole discretion, by employees of the County or by any independent auditor appointed by the County, or both. The audit may begin after ten days written notice to the Contractor, subcontractor, or supplier. The Contractor, subcontractor, or supplier shall make a good faith effort to cooperate with the auditors. As a condition precedent to recovery on any claim, the Contractor, subcontractor, or supplier must retain sufficient records, and provide full and reasonable access to such records, to allow the County's auditors to verify the claim and failure to retain sufficient records of the claim or failure to provide full and reasonable access to such records shall constitute a waiver of that portion of such claim that cannot be verified and shall bar recovery thereunder. Further, and in addition to such audit access, upon the Contractor submitting a written claim, the County shall have the right to request and receive, and the Contractor shall have the affirmative obligation to submit to the County any and all documents in the possession of the Contractor or its subcontractors, materialmen or suppliers as may be deemed relevant by the County in its review of the basis, validity or value of the Contractor's claim.

Without limiting the generality of the foregoing, the Contractor shall upon written request of the County make available to the County's auditors, or upon the County's written request, submit at the County's expense, any or all of the following documents:

1. Daily time sheets and foreman's daily reports and diaries;
2. Insurance, welfare and benefits records;
3. Payroll register;
4. Earnings records;
5. Payroll tax return;
6. Material invoices, purchase orders, and all material and supply acquisition contracts;
7. Material cost distribution worksheet;
8. Equipment records (list of company owned, rented or other equipment used);
9. Vendor rental agreements and subcontractor invoices;
10. Subcontractor payment certificates;
11. Canceled checks for the project, including, payroll and vendors;
12. Job cost report;
13. Job payroll ledger;
14. General ledger, general journal, (if used) and all subsidiary ledgers and journals together with all supporting documentation pertinent to entries made in these ledgers and journals;
15. Cash disbursements journal;

16. Financial statements for all years reflecting the operations on this project;
17. Income tax returns for all years reflecting the operations on this project;
18. All documents which reflect the Contractor's actual profit and overhead during the years this Contract was being performed and for each of the five years prior to the commencement of this Contract;
19. All documents related to the preparation of the Contractor's bid including the final calculations on which the bid was based;
20. All documents which relate to each and every claim together with all documents which support the amount of damages as to each claim;
21. Worksheets used to prepare the claim establishing the cost components for items of the claim including, but not limited to, labor, benefits and insurance, materials, equipment, subcontractors, and all documents that establish which time periods and individuals were involved, and the hours and rates for such individuals.

5-13 Recovery Rights, Subsequent to Final Payment.

The County reserves the right, if it discovers an error in the partial or final estimates, or if it discovers that the Contractor performed defective work or used defective materials, after the final payment has been made, to claim and recover from the Contractor or his surety, or both, by process of law, such sums as may be sufficient to correct the error or make good the defects in the work and materials.

SECTION 6 CONTROL OF MATERIALS

6-1 Acceptance Criteria.

6-1.1 General: Acceptance of materials is based on the following criteria. All requirements may not apply to all materials. Use only materials in the work that meet the requirements of these Specifications. The Director may inspect and test any material, at points of production, distribution and use.

6-1.2 Sampling and Testing: Use the FDOT's current sample identification and tracking system to provide related information and attach the information to each sample. Restore immediately any site from which material has been removed for sampling purposes to the pre-sampled condition with materials and construction methods used in the initial construction, at no additional cost to the County.

Ensure when a material is delivered to the location as described in the Contract Documents, there is enough material delivered to take samples, at no expense to the County.

6-1.2.1 Pretest by Manufacturers: Submit certified manufacturer's test results to the Director for qualification and use on County projects. Testing will be as specified in the Contract Documents. The County may require that manufacturers submit samples of materials for independent verification purposes.

6-1.2.2 Point of Production Test: Test the material during production as specified in the Contract Documents.

6-1.2.3 Point of Distribution Test: Test the material at Distribution facilities as specified in the Contract Documents.

6-1.2.4 Point of Use Test: Test the material immediately following placement as specified in the Specifications. After delivery to the project, the County may require the retesting of materials that have been tested and accepted at the source of supply, or may require the testing of materials that are to be accepted by manufacturer certification. The County may reject all materials that, when retested, do not meet the requirements of these Specifications.

6-1.3 Certification:

6-1.3.1 Manufacturer Material Certification: Submit material certifications for all materials to the Director for approval when required by the Specifications. Materials will not be considered for payment when not accompanied by a material certification. Sample material certification forms are available on FDOT's website at the following URL: <https://www.fdot.gov/materials/administration/resources/library/publications/certifications/sampleforms.shtm>. Ensure that the material certification follows the format of the sample form, is submitted on the manufacturer's letterhead and is signed by a legally responsible person employed by the manufacturer.

6-1.3.1.1 FDOT Approved Product List: This list provides assurance to Contractors, consultants, designers, and Department personnel that specific products and materials are approved for use on Department facilities. The Department will limit the Contractor's use of products and materials that require use of APL items to those listed on the APL effective at the time of placement. Where the terms Qualified Products List (QPL) appear in the Contract Documents, they will be synonymous with Approved Product List (APL).

Manufacturers seeking to have a product evaluated for the APL must submit an application, available on the Department's website at the following URL:

<https://www.fdot.gov/programmanagement/ProductEvaluation/Default.shtm>. Applications must include the following documentation:

1. Supporting documentation as required by the Specifications, Standard Plans, and APL approval process. A sample may be requested to verify the product, in accordance with the specifications.

2. A photograph displaying the product as shipped with packaging.

3. A list displaying all components within the shipped packaging, if applicable.

4. Installation instructions and materials, if applicable.

5. Product packaging or product labels as required by the

Specifications.

6. Construction material percentages and country source of

materials.

7. Last two manufacturing steps and country of

manufacture.

8. Manufacturer name and material designation (product name, product model/part number/style number, etc.) must be as identified on the product, product packaging, and product labels.

9. Applications must be signed by a legally responsible person employed by the manufacturer of the product.

Required test reports must be conducted by an independent laboratory or other independent testing facility. Required drawings and calculations must be signed and sealed by a Professional Engineer licensed in the State of Florida.

Products that have successfully completed the Department's evaluation process are eligible for inclusion on the APL. Manufacturers are required to submit requests to the Department for approval of any modifications or alterations made to a product listed on the APL. This includes, but is not limited to, design, raw material, or manufacturing process modifications. Modification or alteration requests must be submitted along with supporting documentation that the product continues to meet Section 6, the Specification, or Standard Plans requirements. A product sample and additional product testing and documentation may be required for the modification evaluation. Any marked variations from original test values, failure to notify the Department of any modifications or alterations, or any evidence of inadequate performance of a product may result in removal of the product from the APL.

Manufacturers must submit supporting documentation to the Department for a periodic review and re-approval of their APL products on or before the product's original approval anniversary. APL products that are not re-approved may be removed from the APL. Documentation requirements for the product review and re-approval, including schedule and criteria, are available on the Department's website at the following URL:

<https://www.fdot.gov/programmanagement/ProductEvaluation/Default.shtm>.

6-1.3.2 Contractor Installation Certification: Submit installation certifications as required by the Contract Documents.

6-2 Applicable Documented Authorities Other Than Specifications.

6-2.1 General: Details on individual materials are identified in various material specific Sections of the Specifications that may refer to other documented authorities for requirements. When specified, meet the requirements as defined in such references.

6-2.2 Test Methods: Methods of sampling and testing materials are in accordance with the Florida Methods (FM). If an FM does not exist for a particular test, perform the testing in accordance with the method specified in the Specification. When test methods or other standards are referenced in the Specifications without identification of the specific time of issuance, use the most current issuance, including interims or addendums thereto, at the time of bid opening.

6-2.3 Construction Aggregates: Aggregates used on County projects must be in accordance with Rule-14-103,-FAC.

6-3 Storage of Materials and Samples.

6-3.1 Method of Storage: Store materials in such a manner as to preserve their quality and fitness for the work, to facilitate prompt inspection, and to minimize noise impacts on sensitive receivers. More detailed specifications concerning the storage of specific materials are prescribed under the applicable Specifications. The County may reject improperly stored materials.

6-3.2 Use of Right-of-Way for Storage: If the Director allows, the Contractor may use a portion of the right-of-way for storage purposes and for placing the Contractor's plant and equipment. Use only the portion of the right-of-way that is outside the clear zone, which is the portion not required for public vehicular or pedestrian travel. When used, restore the right-of-way to pre-construction condition at no additional cost to the County or as specified in the Contract Documents. Provide any additional space required at no expense to the County.

6-3.3 Responsibility for Stored Materials: Accept responsibility for the protection of stored materials. The County is not liable for any loss of materials, by theft or otherwise, or for any damage to the stored materials.

6-3.4 Storage Facilities for Samples: Provide facilities for storage of samples as described in the Contract Documents and warranted by the test methods and Specifications.

6-4 Defective Materials.

Materials not meeting the requirements of these Specifications will be considered defective. The Director will reject all such materials, whether in place or not. Remove all rejected material immediately from the site of the work and from storage areas, at no expense to the County.

Do not use material that has been rejected, until the Director has approved the material's use. Upon failure to comply promptly with any order of the Director made under the provisions of this Article, the Director has the authority to have the defective material removed and replaced by other forces and deduct the cost of removal and replacement from any moneys due or to become due the Contractor.

6-4.1 Engineering Analysis: As an exception to the above, within 30 calendar days of the termination of the LOT or rejection of the material, the Contractor may submit to the Director a proposed Engineering Analysis Scope to determine the disposition of the material. The Engineering Analysis Scope must contain at a minimum:

1. Description of the defective materials.
2. Supporting information, testing or inspection reports with nonconformities, pictures, drawings, and accurately dimensioned deficiency maps as necessary. For cracked elements, provide drawings showing the location, average width, depth, length, and termination points of each crack along the surfaces. Provide the distance from each termination point to a fixed reference point on the component, such as beam end or edge of flange.
3. Proposed approach of investigation and analysis.
4. Name and credentials of the proposed Specialty Engineer or Contractor's Engineer of Record who will perform the engineering analysis.

5. Proposed testing laboratories, qualified in accordance with Section 105-7.

Upon approval of the Engineering Analysis Scope by the Director, the Specialty Engineer or Contractor's Engineer of Record may perform the engineering analysis as defined in the approved scope and submit a signed and sealed Engineering Analysis Report (EAR) to the Director. The EAR must contain at a minimum:

1. The approved Engineering Analysis Scope.
2. Any investigations performed and the associated results obtained.
3. Analysis and conclusion.
4. Proposed disposition of the material, addressing the performance and durability of the proposed action.

Provide as appropriate:

1. Written evidence of a previously approved comparable deficiency and its repair.
2. Documented research demonstrating the effectiveness of the proposed repair.
3. Engineering calculations.

A Specialty Engineer, who is an independent consultant, or the Contractor's Engineer of Record as stated within each individual Section shall perform any such analysis within 45 calendar days of the Director's approval of the Engineering Analysis Scope, complete and submit the EAR. The EAR must be signed and sealed by the Specialty Engineer or the Contractor's Engineer of Record that performed the engineering analysis. Allow for a 45 calendar day review period for all EARs associated with a category 2 bridge; tolling components identified in the current FDOT General Tolling Requirements (GTR) Part 3; and the tolling-related signing, DMS and ITS infrastructure. Allow for a 25 calendar day review period for all other items. The Director will determine the final disposition of the material after review of the EAR. No additional monetary compensation or time extension will be granted for the impact of any such analysis or review.

6-5 Products and Source of Supply.

6-5.1 Source of Supply—Convict Labor (Designated Federal-Aid Contracts Only): Do not use materials that were produced after July 1, 1991, by convict labor for Federal-aid highway construction projects unless the prison facility has been producing convict-made materials for Federal-aid highway construction projects before July 1, 1987.

Use materials that were produced prior to July 2, 1991, by convicts on Federal-aid highway construction projects free from the restrictions placed on the use of these materials by 23 U.S.C. 114. The County will limit the use of materials produced by convict labor for use in Federal-aid highway construction projects to:

1. Materials produced by convicts on parole, supervised release, or probation from a prison or,
2. Materials produced in a qualified prison facility.

The amount of such materials produced for Federal-aid highway construction during any 12-month period shall not exceed the amount produced in such facility for use in such construction during the 12-month period ending July 1, 1987.

6-5.2 Source of Supply (Designated State or Federal-Aid Contracts Only): Comply with Section 70914 of Public Law No. 117-58, §§ 70901-52, also known as the Infrastructure

Investment and Jobs Act (IIJA), Public Law 117-58, which includes the Build America, Buy America Act (BABA). Domestic compliance for all affected products will be listed on the APL.

6-5.2.1 Steel and Iron: Use steel and iron manufactured in the United States, in accordance with the Buy America provisions of 23 CFR 635.410, as amended. Ensure that all manufacturing processes for this material occur in the United States. As used in this specification, a manufacturing process is any process that modifies the chemical content, physical shape or size, or final finish of a product, beginning with the initial melting and continuing through the final shaping and coating. If a steel or iron product is taken outside the United States for any manufacturing process, it becomes foreign source material. When using steel or iron materials as a component of any manufactured product (e.g., concrete pipe, prestressed beams, corrugated steel pipe, etc.), these same provisions apply. Foreign steel and iron may be used when the total actual cost of such foreign materials does not exceed 0.1% of the total Contract amount or \$2,500, whichever is greater. These requirements are applicable to all steel and iron materials incorporated into the finished work but are not applicable to steel and iron items that the Contractor uses but does not incorporate into the finished work. Submit a certification from the manufacturer of steel or iron, or any product containing steel or iron, stating that all steel or iron furnished or incorporated into the furnished product was produced and manufactured in the United States or a statement that the product was produced within the United States except for minimal quantities of foreign steel and iron valued at \$ (actual cost). Submit each such certification to the Director prior to incorporating the material or product into the project. Prior to the use of foreign steel or iron materials on a project, submit invoices to document the actual cost of such material, and obtain the Director's written approval prior to incorporating the material into the project.

6-5.2.2 Manufactured Products: Use Manufactured Products that are consumed in, incorporated into, or affixed to an infrastructure project that are manufactured in the United States, in accordance with BABA requirements and applicable waivers.

6-5.2.3 Construction Materials: Use non-ferrous metals, plastic and polymer-based products, glass, lumber, and drywall articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project that are manufactured in the United States, in accordance with BABA requirements.

6-5.2.4 Exemptions to Build America, Buy America: Temporary devices, equipment, and other items removed at or before the completion of the project are exempt from BABA funding eligibility requirements. Aggregates, cementitious materials, and aggregate binding agents or additives are exempted from BABA funding eligibility requirements.

6-5.3 Contaminated, Unfit, Hazardous, and Dangerous Materials: Do not use any material that, after approval and/or placement, has in any way become unfit for use. Do not use materials containing any substance that has been determined to be hazardous by the State of Florida County of Environmental Protection or the U.S. Environmental Protection Agency (EPA). Provide workplaces free from serious recognized hazards and to comply with occupational safety and health standards, as determined by the U.S. County of Labor Occupational Safety and Health Administration (OSHA).

SECTION 7
LEGAL REQUIREMENTS AND
RESPONSIBILITY TO THE PUBLIC

7-1 Laws to be Observed.

7-1.1 General: Become familiar with and comply with all Laws and Regulations, including all Federal, State, and Local Rules and Regulations that control the action or operation of those engaged or employed in the work or that affect material used. Pay particular attention called to the safety regulations promulgated by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). In addition, comply with Chapter 403, of the Florida Statutes, regarding control of air pollution. Direct special attention to that portion of Chapter 62-256, Rules of the Department of Environmental Protection, Florida Administrative Code, pertaining to open burning in land clearing operations. Where work or structures included in the Contract are in “Navigable Waters of the U.S.,” (reference 33 of the Code of Federal Regulations, Part 329); “Waters of the U.S.,” (reference 33 of the Code of Federal Regulations, Parts 323 and 328); or “Waters of the State,” (reference Part 4, Chapters 253 and 373 of the Florida Statutes and Section 62-340 of the Florida Administrative Code); comply with the regulatory provisions of Section 404 of the Federal Clean Water Act of 1977; Sections 9 and 10 of the Federal River and Harbor Act of 1899; Chapter 161 of the Florida Statutes; and any local authority having jurisdiction over such waters.

Obtain certification from the Construction Industry Licensing Board as required by Part I, Chapter 489, of the Florida Statutes, regardless of exemptions allowed by subsection 489.103, prior to removing underground pollutant storage tanks. Dispose of tanks and pollutants in accordance with the requirements and regulations of any Federal, State, or local, agency having jurisdiction.

Prior to building construction or renovation, submit current registrations or certifications issued by the Florida Construction Industry Licensing Board in accordance with Chapter 489, for the appropriate category of construction.

Corporations must be registered with the State of Florida, Department of State, Division of Corporations, and hold a current State Corporate Charter Number in accordance with Chapter 607, Florida Statutes.

The Contractor or the authorized subcontractor applying the roofing material must be licensed or be an approved dealer and applicator of the proposed roofing material.

Indemnify, defend, and save harmless the County and all of its officers, agents, and employees, in the amount of the Contract price, against all claims or liability arising from or based on the violation of any such Federal, State, and Local Rules and Regulations, whether by himself or his employees.

The Contractor shall comply with all environmental permits, including measures identified in the National Pollutant Discharge Elimination System (NPDES) Stormwater Pollution Prevention Plan and Sediment and Erosion Control Plan for the work. The Contractor’s attention is also directed to the applicable regulations of the South Florida Water Management District.

The Lee County Noise Control Ordinance is in effect regulating noise generated from construction activity associated with the project. The Contractor shall comply with the requirements therein.

The Contractor shall exert every reasonable and diligent effort to ensure that all labor employed by the Contractor and his subcontractors for work on the project work

harmoniously and compatibly with all labor used by other building and construction contractors now or hereafter on the site of the work covered by this Contract. Include this provision in all subcontracts, and require all subcontractors to include it in their subcontracts with others. However, do not interpret or enforce this provision so as to deny or abridge, on account of membership or non-membership in any labor union or labor organization, the right of any person to work as guaranteed by Article I, Section 6 of the Florida Constitution.

Comply with Chapter 556 of the Florida Statutes during the performance of excavation or demolition operations.

The Executive Order 11246 Electronic version, dated September 24, 1965 is posted on FDOT's website at the following URL address:

https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/programmanagement/implemented/urlinspecs/files/deo112468a91904c88e94148b94569982fdff3d2.pdf?sfvrsn=6b78d1d6_2

Take responsibility to obtain the information posted on this website up through five calendar days before the opening of bids and comply with the provisions contained in Executive Order 11246.

If the FDOT's website cannot be accessed, contact the FDOT's Specifications Office Web Coordinator at (850) 414-4101.

7-1.2 Plant Quarantine Regulations: The U.S. Department of Agriculture and the Florida Department of Agriculture and Consumer Services have issued quarantine regulations pertaining to control of the nematodes of citrus, Rule 5B-44, Florida Administrative Code, and other plant pests. Contact the local (or other available) representatives of the Animal and Plant Health Inspection Service of the U.S. Department of Agriculture, and the Division of Plant Industry of the Florida Department of Agriculture and Consumer Services to ascertain all current restrictions regarding plant pests that are imposed by these agencies. Keep advised of current quarantine boundary lines throughout the construction period.

These restrictions may affect operations in connection with such items as clearing and grubbing, earthwork, grassing and mulching, sodding, landscaping, and other items which might involve the movement of materials containing plant pests across quarantine lines.

Obtain quarantine regulations and related information from the following:

Animal and Plant Health Inspection Service
U.S. Department of Agriculture
3029 Lake Alfred Road
Winter Haven, Florida 33881

Director, Division of Plant Industry
Florida Department of Agriculture and Consumer Services
Post Office Box 147100
Gainesville, Florida 32614-7100

7-1.3 Introduction or Release of Prohibited Aquatic Plants, Plant Pests, or Noxious Weeds: Do not introduce or release prohibited aquatic plants, plant pests, or noxious weeds into the project limits as a result of clearing and grubbing, earthwork, grassing and mulching, sodding, landscaping, or other such activities. Immediately notify the Director upon discovery of all prohibited aquatic plants, plant pests, or noxious weeds within the project limits. Do not move prohibited aquatic plants, plant pests, or noxious weeds within the project limits or to locations outside of the project limits without the Director's permission. Maintain all borrow material

brought onto the project site free of prohibited aquatic plants, plant pests, noxious weeds, and their reproductive parts. Refer to Rule 16C-52 and Rule 5B-57, of the Florida Administrative Code for the definition of prohibited aquatic plants, plant pests, and noxious weeds.

7-1.4 Compliance with Federal Endangered Species Act and other Wildlife Regulations: The Federal Endangered Species Act requires that the County investigate the potential impact to a threatened or endangered species prior to initiating an activity performed in conjunction with a road construction project. If the County's investigation determines that there is a potential impact to a protected, threatened or an endangered species, the County will conduct an evaluation to determine what measures may be necessary to mitigate such impact. When mitigation measures and/or special conditions are necessary, these measures and conditions will be addressed in the Contract Documents or in permits as identified in 7-2.1.

In addition, in cases where certain protected, threatened or endangered species are found or appear within close proximity to the project boundaries, the County has established guidelines that will apply when interaction with certain species occurs, absent of any special mitigation measures or permit conditions otherwise identified for the project.

These guidelines are posted at the following URL address:

https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/programmanagement/implemented/urlinspecs/files/endangeredwildlifeguidelines.pdf?sfvrsn=e27baf3f_4.

Take responsibility to obtain this information and take all actions and precautions necessary to comply with the conditions of these guidelines during all project activities.

Prior to establishing any off-project activity in conjunction with a project, notify the Director of the proposed activity. Covered activities include but are not necessarily limited to borrow pits, concrete or asphalt plant sites, disposal sites, field offices, and material or equipment storage sites. Include in the notification the Project Number, Financial Project ID, a description of the activity, the location of the site by township, range, section, county, and city, a site location map including the access route, the name of the property owner, and a person to contact to arrange a site inspection. Submit this notification at least 30 days in advance of planned commencement of the off-site activity, to allow for the County to conduct an investigation without delaying job progress.

Do not perform any off-project activity without obtaining written clearance from the Director. In the event the County's investigation determines a potential impact to a protected, threatened or endangered species and mitigation measures or permits are necessary, coordinate with the appropriate resource agencies for clearance, obtain permits and perform mitigation measures as necessary. Immediately notify the Director in writing of the results of this coordination with the appropriate resource agencies. Additional compensation or time will not be allowed for permitting or mitigation, associated with Contractor initiated off-project activities. The Contractor shall maintain at the jobsite written proof of authorization for the use of any off-project property in conjunction with the project. All off-project properties shall be maintained in a neat and orderly fashion and then restored to the property owner's satisfaction upon terminating the use associated with the project.

7-1.5 Occupational Safety and Health Requirements: The Contractor shall take all precautions necessary for the protection of life, health, and general occupational welfare of all persons, including employees of both the Contractor and the County, until the Contractor has completed the work required under the Contract as provided in 5-10 and 5-11.

Comply at all times with applicable Federal, State, and local laws, provisions, and policies governing safety and health, including 29 CFR 1926, including all subsequent revisions and updates.

7-1.6 Discovery of an Unmarked Human Burial: When an unmarked human burial is discovered, immediately cease all activity that may disturb the unmarked human burial and notify the Director. Do not resume activity until specifically authorized by the Director.

7-1.7 Insecticides, Herbicides and Fertilizers:

7-1.7.1 Insecticides and Herbicides: Use products found on the following website, <http://state.ceris.purdue.edu/>, approved by the Florida Department of Agriculture and Consumer Services. The use of restricted products is prohibited. Do not use any products in the sulfonylurea family of chemicals. Herbicide application by broadcast spraying is not allowed.

Procure any necessary licenses, pay all charges and fees, and give all notices necessary for lawful performance of the work.

Ensure that all insecticides and herbicides are applied in accordance with Chapter 5E-9, Florida Administrative Code. Submit a copy of current certificates to the Director upon request.

Ensure that employees who work with herbicides comply with all applicable Federal, State, and local regulations.

Comply with all regulations and permits issued by any regulatory agency within whose jurisdiction work is being performed. Post all permit placards in a protected, conspicuous location at the work site.

Acquire any permits required for work performed on the rights-of-way within the jurisdiction of National Forests in Florida. Contact the Local National Forest Ranger District, or the United States Department of Agriculture (USDA) office for the proper permits and subsequent approval.

Acquire all permits required for aquatic plant control as outlined in Chapter 62C-20, Florida Administrative Code, Rules of the Florida Department of Environmental Protection. Contact the Regional Field Office of Bureau of Invasive Plant Management of the Florida Department of Environmental Protection for proper permits and subsequent approval. If application of synthetic organo-auxin herbicides is necessary, meet the requirements of Chapter 5E-2, Florida Administrative Code.

7-1.7.2 Fertilizer: Ensure that all employees applying fertilizer, possess a current Florida Department of Agriculture and Consumer Services Commercial Applicator license in accordance with Section 482.1562, F.S. Upon request, submit the current certificates to the Director.

7-1.8 Compliance with Section 4(f) of the USDOT Act (Designated State or Federal-Aid Contracts Only): Section 4(f) of the USDOT Act prohibits the U. S. Secretary of Transportation from approving a project which requires the use of publicly owned land of a public park, recreation area or a wildlife and waterfowl refuge, or of any historic site of national, state, or local significance unless there is no prudent or feasible alternative to using that land and the program or project includes all possible planning to minimize the harm to the site resulting from the use.

Before undertaking any off-project activity associated with any federally assisted undertaking, ensure that the proposed site does not represent a public park, recreation area, wildlife or waterfowl refuge, or a historic site (according to the results of the Cultural Resources Survey discussed in 120-6.2). If such a site is proposed, notify the Director and provide a description of

the proposed off-site activity, Project Number, Financial Project ID, the location of the site by township, range, section, a county or city map showing the site location, including the access route and the name of the property. It is the Contractor's responsibility to submit justification for use of Section 4(f) property that is sufficient for the County, the Florida Department of Transportation and the Federal Highway Administration to make a Section 4(f) determination. Submit this notification sufficiently in advance of planned commencement of the off-site activity to allow a reasonable time for the Director to conduct an investigation without delaying job progress. Do not begin any off-project activity without obtaining written clearance from the Director.

7-1.9 Reserved.

7-2 Permits and Licenses.

7-2.1 General: Pursuant to Section 218.80, Florida Statutes, the County will pay for all County permits and fees, including license fees, permit fees, impact fees or inspection fees applicable to the Work. Contractor is not responsible for paying for permits issued by the County wherein the Work is to be performed, but is responsible for acquiring all other permits. The County may require the Contractor to deliver internal budget transfer documents to applicable County agencies when the Contractor is acquiring permits. Except for permits procured by the County, as incorporated by Special Provision expanding this Subarticle, if any, the Contractor will procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work.

The County will also acquire any modifications or revisions to an original permit incorporated by Special Provision to this Subarticle when the Contractor requires such modifications or revisions to complete the construction operations specified in the Plans or Special Provisions and within the right-of-way limits.

Acquire all permits for work performed outside the right-of-way or easements for the project.

In carrying out the work in the Contract, when under the jurisdiction of any environmental regulatory agency, comply with all regulations issued by such agencies and with all general, special, and particular conditions relating to construction activities of all permits issued to the County as though such conditions were issued to the Contractor. Post all permit placards in a protected location at the worksite.

The Contractor shall be fully responsible for the execution and adherence to all directives, instructions, conditions, special conditions, and limiting conditions contained in permits specifically issued for the Work and which pertain to or affect the construction phase of this project, and shall be solely responsible for issuance of any Notices required thereby.

In case of a discrepancy between any permit condition and other Contract Documents, the more stringent condition shall prevail.

7-2.2 Work or Structures in Navigable Waters of the U.S., Waters of the U.S., and Waters of the State: In general, one or more governmental agencies will exercise regulatory authority over work or structures, including related construction operations, in all tidal areas (channelward of the mean high water lines on the Atlantic and Gulf Coast); in the ocean and gulf waters to the outer limits of the continental shelf; in all rivers, streams, and lakes to the ordinary high water line; in marshes and shallows that are periodically inundated and normally characterized by aquatic vegetation capable of growth and reproduction; in all artificially created channels and canals used for recreational, navigational, or other purposes that are connected to navigable waters; and in all tributaries of navigable waters up to their headwaters.

Whenever the work under or incidental to the Contract requires structures or dredge/fill/construction activities in “Navigable Waters of the U.S.,” “Waters of the U.S.,” and “Waters of the State,” the Federal, State, county, and local regulatory agencies may require the County to obtain a permit. For such dredge/fill /construction specified in the Plans to be accomplished within the limits of the project, or for any dredge/fill/construction within the limits of County-furnished borrow areas, the County will procure the necessary permits prior to advertising for bids.

7-2.3 Reserved.

7-3 Patented Devices, Materials and Processes.

Include all royalties and costs arising from patents, trademarks, and copyrights, in any way involved in the work in the Contract price. Whenever using any design, device, material, or process covered by letters patent or copyright, obtain the right for such use by suitable legal agreement with the patentee or owner of the copyright. File a copy of such agreement with the Director. However, whether or not such agreement is made or filed as noted, the Contractor and the surety in all cases shall indemnify, defend, and save harmless, the County from all claims for infringement by reason of the use of any such patented design, device, material, or process on work under the Contract, and shall indemnify the County for all costs, expenses, and damages that it may be obliged to pay by reason of any such infringement, at any time during the prosecution or after the completion of the work.

7-4 Right-of-Way Furnished by the County.

Except as otherwise stipulated in these Specifications or as shown in the Plans, the County will furnish all rights-of-way necessary for the proper completion of the work at no expense to the Contractor.

Should County-furnished areas for obtaining borrow material, contain limerock material do not remove such material from the pit unless the Director gives specific approval.

Use of County owned right-of-way for the purpose of equipment or material storage, lay-down facilities, pre-cast material fabrication sites, batch plants for the production of asphalt, concrete or other construction related materials, or other similar activities, shall require advance written approval by the County prior to making use of said County owned right of way. Use of County owned right of way for these purposes is expressly limited to the storage of equipment and materials for the Project or production of materials or products for the Project. As a precedence to Final Acceptance of the project, any County owned right-of-way used by the Contractor shall be restored to the condition existing prior to construction, or as otherwise approved by the Director.

The County reserves the right to allow parties other than the Contractor, upon presentation of a duly authorized and satisfactory Lee County Department of Transportation Right-of-Way Permit, to perform work within the limits of construction. In all such instances, the Contractor will afford parties bearing such permits reasonable accommodation for the proper execution of the work described under the permit, including the right to store materials and equipment. All parties authorized to perform work within the right-of-way shall make, in an acceptable manner, all necessary repairs due to such work ordered by the Director and shall be subject to the conditions specified in Section 11-12 of the Lee County Administrative Code, as amended.

7-5 Reserved.

7-6 Sanitary Provisions.

The Contractor shall provide and maintain, in a neat and sanitary condition, such accommodations for the use of his employees as are necessary to comply with the requirements and regulations of the State and local boards of health. Commit no public nuisance.

7-7 Control of the Contractor's Equipment.

7-7.1 Traffic Interference: Do not allow equipment, while it is on or traversing a road or street, to unreasonably interfere with traffic.

7-7.2 Overloaded Equipment: Do not operate on any road, street or bridge including a County owned temporary bridge, any hauling unit or equipment loaded in excess of:

1. the maximum weights specified in the Florida Highway Patrol, Commercial Motor Vehicle Manual (Trucking Manual), or
2. lower weight limits legally established and posted for any section of road or bridge by FDOT, the County or other local authorities.

The governmental unit having jurisdiction over a particular road or bridge may provide exceptions by special permit under the provisions of 7-7.3.

This restriction applies to all roads and bridges inside and outside the Contract limits as long as these roads and bridges are open for public use. The Contractor may overload roads and bridges which are to be demolished after they are permanently closed to the public. The Contractor is responsible for all loss or damages resulting from equipment operated on a structure permanently closed to the public.

7-7.3 Crossings: Where it is necessary to cross an existing road or street, including specifically the existing traveled lanes of a divided highway within the limits of the project, obtain permits from the County, for crossing overloaded or oversized equipment. Cross existing roads or streets only at Director-designated points. The Director may require the Contractor to protect the pavement or Roadway at the crossing by using lumber, planks, or fill. Provide flagging and watchman service, or approved signal devices, for the protection of traffic at all such crossings, in accordance with an approved written plan for that activity. Movement of equipment around the project site must be in accordance with requirements of the Standard Plans and not create an undue hazard to the traveling public or workers.

7-7.4 Protection from Damage by Tractor-Type Equipment: Take positive measures to ensure that tractor-type equipment does not damage the road. If any such damage should occur, repair it without delay, at no expense to the County and subject to the Director's approval.

7-7.5 Contractor's Equipment on Bridge Structures: The Contractor's Engineer of Record shall analyze the effect of imposed loads on bridge structures, including County owned temporary bridges, within the limits of a construction contract, resulting from the following operations:

1. Overloaded Equipment as defined in 7-7.2:
 - a. Operating on or crossing over completed bridge structures.
 - b. Operating on or crossing over partially completed bridge structures.
2. Equipment within legal load limits:
 - a. Operating on or crossing over partially completed bridge structures.
3. Construction cranes:
 - a. Operating on completed bridge structures.
 - b. Operating on partially completed bridge structures.

4. Asphalt Milling Equipment:

a. In excess of 90,000 lbs crossing bridge structures.

b. Less than 90,000 lbs crossing bridge structures listed on the overweight routing map CRN-2 located on the Office of Maintenance Over-Weight Dimension Permits website at <https://www.fdot.gov/maintenance/owod-permit-documents#BlanketAttachments>.

Any pipe culvert(s) or box culvert(s) qualifying as a bridge under 1-3 is excluded from the requirements above.

A completed bridge structure is a bridge structure in which all elemental components comprising the load carrying assembly have been completed, assembled, and connected in their final position. The components to be considered shall also include any related members transferring load to any bridge structure.

The Contractor's Engineer of Record shall determine the effect that equipment loads have on the bridge structure and develop the procedures for using the loaded equipment without exceeding the structure's design load capacity.

Submit to the County for approval the design calculations, layout drawings, and erection drawings showing how the equipment is to be used so that the bridge structure will not be overstressed. The Contractor's Engineer of Record shall sign and seal the drawings and the cover sheet of the calculations for the County's Record Set.

7-7.6 Posting of the Legal Gross Vehicular Weight: Display the maximum legal gross weight, as specified in the Florida Uniform Traffic Code, in a permanent manner on each side of any dump truck or dump type tractor-trailer unit hauling embankment material, construction aggregates, road base material, or hot bituminous mixture to the project over any public road or street. Display the weight in a location clearly visible to the scale operator, in numbers that contrast in color with the background and that are readily visible and readable from a distance of 50 feet.

7-8 Structures over Navigable Waters.

7-8.1 Compliance with Federal and Other Regulations: When working on structures in, adjacent to, or over, navigable waters, observe all regulations and instructions of Federal and other authorities having control over such waters. Do not obstruct navigation channels without permission from the proper authority, and provide and maintain navigation lights and signals in accordance with the Federal requirements for the protection of the structure, of false work, and of navigation.

When working on moveable bridges, requests for temporarily changing the operating requirements for the moveable bridge must be submitted in writing to the appropriate Coast Guard District Bridge Branch, 90 days before the start of any action.

For all other bridges, notify the appropriate Coast Guard District Bridge Branch, at least 60 days prior to the start of any operations including construction and 30 days prior to any channel operations, closures, or opening restrictions.

When work platforms are indicated in the permit for construction, submit work platform construction plans to the appropriate Coast Guard District for approval. Obtain approval prior to beginning construction on the platform.

7-8.2 Maintenance of Channel: Where the work includes the excavation of a channel or other underwater areas to a required section, maintain the section from shoaling or other encroachment until final acceptance of the project.

In the event of accidental blocking of the navigation channel, immediately notify the U.S. Coast Guard of the blockage and upon removal of the blockage.

7-9 Use of Explosives.

When using explosives for the prosecution of the work, exercise the utmost care not to endanger life or property, including new work. The Contractor is responsible for all damage resulting from the use of explosives. Any use of explosives shall be subject to the prior written authorization of the Director.

Store all explosives in a secure manner in compliance with all laws and ordinances, and clearly mark all such storage places with the words: "DANGEROUS - EXPLOSIVES". Place such storage in the care of a competent watchman. Where no local laws or ordinances apply, provide storage satisfactory to the Director and, in general, not closer than 1,000 feet from the road or from any building, camping area, or place of human occupancy.

Notify each public utility company having structures in proximity to the site of the work of the intention to use explosives. Give such notice sufficiently in advance to enable the companies to take precautionary steps to protect their property from injury.

7-10 Forest Protection.

7-10.1 Compliance with State and Federal Regulations: In carrying out work within or adjacent to State or National forests or parks, comply with all of the regulations of the State or Federal authority having jurisdiction, governing the protection of and the carrying out of work in forests or parks, and observe all sanitary laws and regulations with respect to the performance of work in these areas. Keep the areas in an orderly condition, dispose of all refuse, and obtain permits for the construction, installation, and maintenance of any construction camps, living quarters, stores, warehouses, sanitary facilities, and other structures; all in accordance with the requirements of the forest or park official.

7-10.2 Prevention and Suppression of Forest Fires: Take all reasonable precautions to prevent and suppress forest fires. Require employees and subcontractors, both independently and at the request of forest officials, to do all reasonably within their power to prevent and suppress forest fires. Assist in preventing and suppressing forest fires, and make every possible effort to notify a forest official at the earliest possible moment of the location and extent of all fires. Extinguish the fire if practicable.

7-11 Preservation of Existing Property.

7-11.1 General: Preserve from damage all existing property within the project limits of or in any way affected by the Work, the removal or destruction of which is not specified in the Plans. This applies to, but is not limited to, public and private property, public and private utilities (except as modified by the provisions of 7-11.5), trees, shrubs, crops, sod, signs, monuments, fences, guardrail, pipe and underground structures, Intelligent Transportation Systems (ITS) facilities, traffic control signals and devices, highway lighting, and public highways (except natural wear and tear of highway resulting from legitimate use thereof by the Contractor).

County owned underground facility locations shown in the Plans are approximate. Unless otherwise shown in the Plans, County owned underground facilities will not be located by the County nor through notification to "Sunshine 811". Locate all fiber optic cables. Provide a fiber optic cable locator in accordance with Section 633.

Whenever the Contractor's activities damage such existing property, immediately restore it to a condition equal to or better than that existing at the time such damage occurred, at no expense to the County. Temporary repairs may be used to immediately restore ITS facilities and traffic control signals and devices. Permanent repairs to ITS facilities and traffic control signals and devices shall be made within 90 days of any temporary repairs and prior to final

acceptance of the project. Submit permanent ITS facility repair plans to the Director prior to beginning repair work.

Protect existing bridges during the entire construction period from damage caused by the Work. Immediately repair, at no expense to the County, all damage to existing bridges caused by the Work, prior to continuing the Work. The County will not require the Contractor to provide routine repairs or maintenance for such structures.

Direct special attention to the protection of all geodetic monuments, horizontal or vertical, and Public Land Survey Corners located within the project. If any geodetic monument or Public Land Survey Corner, located within the project, is at risk of being damaged or destroyed, immediately notify the Director. Locate and replace any damaged or destroyed geodetic monuments or Public Land Survey Corners under the direction of a Professional Surveyor and Mapper registered in the State of Florida.

Whenever the actions of a third party damage such existing property and is not otherwise due to any fault or activities of the Contractor, either restore it to a condition equal to or better than that existing at the time such damage occurred or provide access and coordinate with the County's maintenance Contractor in accordance with 8-4.4 as directed by the Director. The County will compensate the Contractor for the costs associated with the repairs for restoring the existing property in accordance with 4-4. Theft and vandalism are considered damage caused by a third party.

7-11.2 Failure to Restore Damaged Existing Property: In case of failure on the part of the Contractor to restore such property, bridge, road or street, or to make good such damage or injury, the Director may, upon 48 hours notice, proceed to repair, rebuild, or otherwise restore such property, road, or street as may be deemed necessary, and the County will deduct the cost thereof from any monies due or which may become due the Contractor under the Contract. Nothing in this clause prevents the Contractor from receiving proper compensation for the removal, damage, or replacement of any public or private property, not shown in the Plans, that is made necessary by alteration of grade or alignment. The Director will authorize such work, provided that the Contractor, or his employees or agents, have not, through their own fault, damaged such property.

7-11.3 Contractor's Use of Streets and Roads:

7-11.3.1 Street and Road System: When hauling materials or equipment to the project over roads and bridges on the State Highway System, State park road system, county road system, or city street system, and such use causes damage, immediately, at no expense to the County, repair such road or bridge to as good a condition as before the hauling began.

The County may modify the above requirement in accordance with any agreement the Contractor might make with the governmental unit having jurisdiction over a particular road or bridge, provided that the Contractor submits written evidence of such agreement to the Director.

7-11.3.2 Reserved.

7-11.3.3 Within the Limits of a Construction Project: The County will not allow the operation of equipment or hauling units of such weight as to cause damage to previously constructed elements of the project, including but not necessarily limited to bridges, drainage structures, base course, and pavement. Do not operate hauling units or equipment loaded in excess of the maximum weights specified in 7-7.2 on existing pavements that are to remain in place (including pavement being resurfaced), cement-treated subgrades and bases, concrete pavement, any course of asphalt pavement, and bridges. The Director may allow exceptions to these weight

restrictions for movement of necessary equipment to and from its worksite, for hauling of offsite fabricated components to be incorporated into the project, and for crossings as specified in 7-7.3.

7-11.4 Operations within Railroad Right-of-Way: Submit written advanced notification of the flagging services and railroad right-of-way access required, construction timeframe, and duration to the Engineer and District Rail Office at least 45 calendar days prior to beginning any operation within the limits of the railroad right-of-way or the adjoining 15 feet. Operations include the movement of employees, equipment, and trucks in areas other than public crossings or any traffic signal work within 500 feet of a signalized at-grade railroad crossing. The Railroad Company will notify the District Rail Office when flaggers are available for use in project scheduling.

No operations shall be conducted that affect railroad operations and property without written approval from the railroad.

7-11.4.1 Notification to the Railroad Company: Submit written notification to the Engineer, District Rail Office and the authorized Railroad Representative at least 72 hours before beginning any operation within the limits of the railroad right-of-way; any operation requiring movement of employees, trucks, or other equipment across the tracks of the railroad company at locations other than an established public crossing; and any other work that may affect railroad operations or property.

7-11.4.1.1 Florida East Coast Railway (FEC): Contact the FEC Signal Office at 904-279-3182 and FEC Railway at 1-800-342-1131, ext. 2377 in addition to the requirements in Section 7-11.4.1.

7-11.4.2 Contractor's Responsibilities: Unless instructed otherwise in writing by the Railroad Company, do not perform work within or adjacent to the railroad right-of-way without a flagger present (including temporary lane closures, lane shifts or detours). Comply with requirements deemed necessary by the railroad company's authorized representative to safeguard the railroad's property and operations.

The Contractor is responsible for all damages, delays, or injuries and all suits, actions, or claims brought on account of damages or injuries resulting from the Contractor's operations within or adjacent to railroad company right-of-way. The work includes all items necessary to relieve the flagger from providing protective services.

Costs incurred by the Railroad Company for Contractor-caused delays that adversely impact railway operations will be forwarded to the Contractor for payment. If the Contractor fails to pay said cost, the Department will deduct the amount from payments owed to the Contractor.

7-11.4.2.1 CSXT: Comply with the Construction Submission Criteria of the CSXT Public Project Information document and Construction Requirements sections of the CSXT Pipeline and Wireline Design and Construction Specifications prior to beginning work. These documents are available at the following URL:

<https://www.fdot.gov/programmanagement/Implemented/URLinSpecs/CSXT.shtm> .

Perform no work within the limits of the railroad right-of-way on CSXT holidays (except with permission of CSXT for emergencies such as natural disasters). CSXT holidays are New Year's Day, President's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the following Friday, Christmas Eve, Christmas Day, and New Year's Eve. Holidays falling on Saturday are observed on Friday and those falling on Sunday are observed on Monday.

7-11.4.2.2 Norfolk Southern (NS): Comply with the NS Special Provisions for Protection of Railway Interests (Appendix E) and the Construction Requirements (Appendix 4.3) of the NS Public Projects Manual document prior to beginning and during all work. These documents are available at the following

URL: http://www.nscorp.com/content/dam/nscorp/ship/shipping-tools/Public_Projects_Manual.pdf.

7-11.4.2.3 FEC: Complete the On-Track Contractor Roadway Worker Training Course for FEC Railway. Contact FEC Railway at 1-800-342-1131 for training information.

7-11.4.2.4 South Florida Rail Corridor (SFRC): Complete the On-Track Contractor Roadway Worker Training Course for South Florida Regional Transportation Authority (SFRTA) Railway. Contact SFRTA at 954-788-7920 for training information.

7-11.4.3 Watchman or Flagging Services: The railroad company will furnish protective services (i.e., watchman or flagging services) to ensure the safety of railroad operations during certain periods of the project. The Contractor will reimburse the railroad company for the cost thereof. Schedule work that affects railroad operations so as to minimize the need for protective services by the railroad company.

Submit construction schedules and schedule changes to the Engineer and District Rail Office which include an estimated start date, weekly construction schedule, daily hours of operation, and the calendar day duration for which flagging services will be necessary to perform work activities within railroad right-of-way in accordance with 8-3.2.

7-11.4.3.1 Central Florida Rail Corridor (CFRC) and SFRC: The Department will furnish protective services (i.e., watchman or flagging services) to ensure the safety of railroad operations.

7-11.5 Utilities:

7-11.5.1 Arrangements for Protection or Adjustment: Do not commence work at points where the construction operations are adjacent to utility facilities until all necessary arrangements have been made for removal, temporary removal, relocation, de-energizing, deactivation or adjustment with the utility facilities owner to protect against damage that might result in expense, loss, disruption of service, or other undue inconvenience to the public or to the owners. The Contractor is solely and directly responsible to the owners and operators of such properties for all damages, injuries, expenses, losses, inconveniences, or delays caused by the Contractor's operations.

Do not request utility removal, temporary removal, relocation, de-energizing, deactivation, or adjustment when work can be accomplished within the utility work schedules. In the event that removal, temporary removal, relocation, de-energizing, deactivation, or adjustment of a utility or a particular sequence of timing in the relocation of a utility is necessary and has not been addressed in a utility work schedule, the Director will determine the necessity for any such utility work. Coordinate such work as to cause the least impediment to the overall construction operations and utility service. The County is not responsible for utility removal, temporary removal, relocation, de-energizing, deactivation, or adjustment work where such work is determined not necessary by the Director or done solely for the benefit or convenience of the utility owner or its contractor, or the Contractor.

7-11.5.2 Cooperation with Utility Owners: Cooperate with the owners of all underground or overhead utility lines in their removal and rearrangement operations in order that these operations may progress in a reasonable manner, that duplication or rearrangement work

may be reduced to a minimum, and that services rendered by the utility owners will not be unnecessarily interrupted.

In the event of interruption of water or other utility services as a result of accidental breakage, exposure, or lack of support, promptly notify the proper authority and cooperate with the authority in the prompt restoration of service. If water service is interrupted and the Contractor is performing the repair work, the Contractor shall work continuously until the service is restored. Do not begin work around fire hydrants until the local fire authority has approved provisions for continued service.

7-11.5.3 Utility Adjustments: Certain utility adjustments and reconstruction work may be underway during the progress of the Contract. Cooperate with the various utility construction crews who are maintaining utility service. Exercise due caution when working adjacent to relocated utilities. The Contractor shall repair all damage to the relocated utilities resulting from his operations at no expense to the County. The requirements of 7-11.1 and 7-11.5.2 outline the Contractor's responsibility for protecting utility facilities. The County will include in the Contract the utility authorities who are scheduled to perform utility work on the project.

7-11.5.4 Weekly Meetings: Conduct weekly meetings on the job site with all the affected utility companies and the Director in attendance to coordinate project construction and utility relocation. Submit a list of all attendees one week in advance to the Director for approval.

Submit the approved Work Progress Schedule and Work Plan for the project, as specified in 8-3.2, to document the schedule and plan for road construction and utility adjustments.

When utility relocations no longer affect construction activities, the Contractor may discontinue the meetings with the Director's approval.

7-12 Reserved.

7-13 Reserved.

7-13.1 Reserved.

7-13.2 Reserved.

7-13.3 Reserved.

7-13.4 Insurance for Protection of Utility Owners: When the Contract involves work on or in the vicinity of utility-owned property or facilities, the utility shall be added along with the County as an Additional Insured on the policy/ies procured pursuant to subsection 7-13.2 above.

7-14 Contractor's Responsibility for Work.

The Contractor will take charge and custody of the Work, and take every necessary precaution against damage to the Work, by the action of the elements, third parties, or from any other cause whatsoever, until the County's final acceptance of the Work. The Contractor will rebuild, repair, restore, and make good all damage to any portion of the Work occasioned by any of the above causes before final acceptance of the Contract.

The County will have no obligation to pay any reimbursement for damage caused by the execution or nonexecution of the Work by the Contractor or its sub-contractors, or damage the Contractor was negligent in preventing.

The County may, at its sole discretion, reimburse the Contractor for the repair of damage to the Work not caused by a third party and due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to Acts of God, of the public enemy, or of governmental authorities.

7-15 Opening Sections of the Project to Traffic.

Whenever any section of the project is in acceptable condition for use, the Director may direct the Contractor to open it to vehicular or pedestrian traffic. The County's direction to open a section of the project does not constitute an acceptance of the project, or any part thereof, or waive any Contract provisions. Perform all necessary repairs or renewals, on any section of the project thus opened to traffic under direction from the Director, due to defective material or work or to any cause other than ordinary wear and tear, pending completion and the Director's acceptance of the project, or other work, at no expense to the County.

7-16 Wage Rates for Federal-Aid Projects (Designated Federal-Aid Contracts Only).

For all projects that include Federal-aid participation, the Special Provisions contain requirements with regard to payment of predetermined minimum wages. Predetermined Wage Rate Decisions (U.S. County of Labor provided Wage Rate Tables) exist for Heavy, Highway, and Building Construction Projects.

7-17 Supplemental Agreements.

Supplemental Agreements (Change Orders) shall be authorized in accordance with Procurement Policies adopted by the Lee County Board of County Commissioners.

7-18 Scales for Weighing Materials.

7-18.1 Applicable Regulations: When determining the weight of material for payment, use scales meeting the requirements of Chapter 531 of Florida Statutes, pertaining to specifications, tolerances, and regulations, as administered by the Bureau of Weights and Measures of the Florida Department of Agriculture.

7-18.2 Base for Scales: Place such scales on a substantial horizontal base to provide adequate support and rigidity and to maintain the level of the scales.

7-18.3 Protection and Maintenance: Maintain all scale parts in proper condition as to level and vertical alignment, and fully protect them against contamination by dust, dirt, and other matter that might affect their operation.

7-19 Source of Forest Products.

As required by Section 255.2575 of the Florida Statutes, where price, fitness and quality are equal, and when available, use only timber, timber piling, or other forest products that are produced and manufactured in the State of Florida. This provision does not apply to Federal-aid projects.

7-20 Regulations of Air Pollution from Asphalt Plants.

7-20.1 General: Perform all work in accordance with all Federal, State, and local laws and regulations regarding air pollution and burning. In particular, pay attention to Chapters 62-210 and 62-256, Rules of the Department of Environmental Protection, Florida Administrative Code, and to any part of the State Implementation Plan applicable to the project. See also 110-9.2 regarding burning of debris.

7-20.2 Dust Control: Control dust during the storage and handling of dusty materials by wetting, covering, or other means as approved by the Director.

7-20.3 Asphalt Material: Use only emulsified asphalt, unless otherwise stated in the Plans and allowed by Chapter 62-210, Rules of the Department of Environmental Protection, Florida

Administrative Code. Store and handle asphalt materials and components so as to minimize unnecessary release of hydrocarbon vapors.

7-20.4 Asphalt Plants: Operate and maintain asphalt plants in accordance with Chapter 62-210, Rules of the Department of Environmental Protection, Florida Administrative Code. Provide the plant site with a valid permit as required under Chapter 62-210 prior to start of work.

7-21 Dredging and Filling.

Section 370.033 of the Florida Statutes, requires that all persons, who engage in certain dredge or fill activities in the State of Florida, obtain a certificate of registration from the Florida Department of Environmental Protection, Tallahassee, Florida 32301, and that they keep accurate logs and records of all such activities for the protection and conservation of the natural resources. Obtain details as to the application of this law from the Department of Environmental Protection.

7-22 Available Funds.

All funds for payment by the County under this Contract are subject to the availability of an annual appropriation for this purpose by the County. In the event of nonappropriation of funds by the County for the work provided under this Contract, the County will terminate the Contract, without termination charge or other liability, on the last day of the then current fiscal year or when the appropriation made for the then-current year for the services covered by this Agreement has been expended, whichever event occurs first. If at any time funds are not appropriated for the continuance of this Agreement, cancellation shall be accepted by the Contractor upon 30 days prior written notice, but failure to give such notice shall be of no effect and the County shall not be obligated under this Contract beyond the date of termination.

7-23 Contractor's Motor Vehicle Registration (Designated State Aid Projects Only).

The Contractor shall provide the County with proof that all motor vehicles operated or caused to be operated by such Contractor are registered in compliance with Chapter 320 of the Florida Statutes. Submit such proof of registration on FDOT Form 700-010-52 to the County.

The County will not make payment to the Contractor until the required proof of registration is on file with the Department.

If the Contractor fails to register any motor vehicle that he operates in Florida, pursuant to Chapter 320 of the Florida Statutes, the Department may disqualify the Contractor from bidding, or the Department may suspend and revoke the Contractor's certificates of qualification.

7-24 Disadvantaged Business Enterprise Program.

The County encourages the inclusion of Disadvantage Business Enterprise (DBE) participants as defined and certified by FDOT. The Contractor shall submit to the County with the final payment documents a DBE Participation Certification, indicating all DBE Subcontractor(s) and amount(s) utilized for the project. If the Contractor did not utilize the DBE firm(s) listed on the Bid Proposal, a letter of justification shall be submitted along with the DBE Participation Certification.

7-25 On-The-Job Training Requirements (Designated Federal Aid Contracts Only).

As part of the Contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The Contractor shall provide On-The-Job Training aimed at developing full journeymen in the type of trade or job classification involved in the work. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this Section. Ensure that, when feasible, 25% of trainees in each occupation are in their first year of training. The Contractor shall incorporate the requirements of this Section into such subcontract.

The number of trainees will be estimated on the number of calendar days of the contract, the dollar value, and the scope of work to be performed. The trainee goal will be finalized at a Post-Preconstruction Trainee Evaluation Meeting and the goal will be distributed among the work classifications based on the following criteria:

1. Determine the number of trainees on Federal Aid Contract:

a. No trainees will be required for contracts with a Contract Time allowance of less than 275 calendar days.

b. If the Contract Time allowance is 275 calendar days or more, the number of trainees shall be established in accordance with the following chart:

Estimated Contract Amount	Trainees Required
\$2,000,000 or less	0
Over \$2,000,000 to \$4,000,000	2
Over \$4,000,000 to \$6,000,000	3
Over \$6,000,000 to \$12,000,000	5
Over \$12,000,000 to \$18,000,000	7
Over \$18,000,000 to \$24,000,000	9
Over \$24,000,000 to \$31,000,000	12
Over \$31,000,000 to \$37,000,000	13
Over \$37,000,000 to \$43,000,000	14
Over \$43,000,000 to \$49,000,000	15
Over \$49,000,000 to \$55,000,000	16
Over \$55,000,000 to \$62,000,000	17
Over \$62,000,000 to \$68,000,000	18
Over \$68,000,000 to \$74,000,000	19
Over \$74,000,000 to \$81,000,000	20
Over \$81,000,000 to \$87,000,000	21
Over \$87,000,000 to \$93,000,000	22
Over \$93,000,000 to \$99,000,000	23
Over \$99,000,000 to \$105,000,000	24
Over \$105,000,000 to \$112,000,000	25
Over \$112,000,000 to \$118,000,000	26
Over \$118,000,000 to \$124,000,000	27
Over \$124,000,000 to \$130,000,000	28
Over \$130,000,000 to *	
*One additional trainee per \$6,000,000 of estimated Construction Contract amount over \$130,000,000	

Further, if the Contractor or subcontractor requests to utilize banked trainees as discussed later in this Section, a Banking Certificate will be validated at this meeting allowing credit to the Contractor for previously banked trainees. Banked credits of prime Contractors working as Subcontractors may be accepted for credit. The Contractor's Project Manager, the CEI Consultant and the Director will attend this meeting. Within ten days after the Post-Preconstruction Training Evaluation Meeting, the Contractor shall submit to the County for approval an On-The-Job Training Schedule indicating the number of trainees to be trained in each selected classification and the portion of the Contract Time during which training of each trainee is to take place. This schedule may be subject to change if any of the following occur:

1. When a start date on the approved On-The-Job Training Schedule has been missed by 14 or more days;
2. When there is a change in previously approved classifications; or
3. When replacement trainees are added due to voluntary or involuntary termination

The revised schedule will be resubmitted to and approved by the Director.

The following criteria will be used in determining whether or not the Contractor has complied with this Section as it relates to the number of trainees to be trained:

1. Credit will be allowed for each trainee that is both enrolled and satisfactorily completes training on this Contract. Credit for trainees, over the established number for this Contract, will be carried in a "bank" for the Contractor and credit will be allowed for those surplus trainees in subsequent, applicable projects. A "banked" trainee is described as an employee who has been trained on a project, over and above the established goal, and for which the Contractor desires to preserve credit for utilization on a subsequent project.

2. Credit will be allowed for each trainee that has been previously enrolled in the County's approved training program on another contract and continues training in the same job classification and completes their training on a different contract.

3. Credit will be allowed for each trainee who, due to the amount of work available in their classification, is given the greatest practical amount of training on the contract regardless of whether or not the trainee completes training.

4. Credit will be allowed for any training position indicated in the approved On-The-Job Training Schedule, if the Contractor can demonstrate that a good faith effort to provide training in that classification was made.

5. No credit will be allowed for a trainee whose employment by the Contractor is involuntarily terminated unless the Contractor can clearly demonstrate good cause for this action.

Training and upgrading of minorities, women and economically disadvantaged persons toward journeyman status is a primary objective of this Section. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. If a non-minority male is enrolled into the On-The-Job Training Program, the On-The-Job Training Notification of Personnel Action Form notifying the District Contract Compliance Manager of such action shall be accompanied by a disadvantaged certification or a justification for such action acceptable to the County. The Contractor will be given an opportunity and will be responsible for demonstrating the steps that it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Section. This training is not intended, and shall not be used, to discriminate against any applicant for training, whether a minority, woman or disadvantaged person.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journeyman status, or have been employed as a journeyman. The Contractor may satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established at the Post-Preconstruction Trainee Evaluation Meeting and approved by the County. Graduation to journeyman status will be based upon satisfactory completion of a Proficiency Demonstration set up at the completion of training and established for the specific training classification, completion of the minimum hours in a training classification range, and the employer's satisfaction that the trainee does meet journeyman status in the classification of training. Upon reaching journeyman status, the following documentation must be forwarded to the Director:

1. Trainee Enrollment and Personnel Action Form
2. Proficiency Demonstration Verification Form indicating completion of each standard established for the classification signed by representatives of both the Contractor and the County.

The County and the Contractor shall establish a program that is tied to the scope of the work in the project and the length of operations providing it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classifications concerned, by at least, the minimum hours prescribed for a training classification. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal Aid highway construction contract. Approval or acceptance of a training schedule shall be obtained from the County prior to commencing work on the classifications covered by the program.

A voluntary On-The-Job Training Program is available to a Contractor which has been awarded a state funded project. Through this program, the Contractor will have the option to train employees on state funded projects for "banked credit" as discussed previously in this provision, to be utilized on subsequent Federal Aid Projects where training is required. Those Contractors availing themselves of this opportunity to train personnel on state funded projects and bank trainee hours for credit shall comply with all training criteria set forth in this Section for Federal Aid Projects; voluntary banking may be denied by the County if staff is not available to monitor compliance with the training criteria.

It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial type positions. Training is permissible in lower level management positions such as office engineers, estimators, etc., where the training is oriented toward construction applications. Training in the laborer classifications, except Common/General Laborer, may be permitted provided that significant and meaningful training is provided and approved by the Director.

When approved in advance by the Director, credit will be given for training of persons in excess of the number specified herein under the current contract or a Contractor will be allowed to bank trainees who have successfully completed a training program and may apply those trainees to a training requirement in subsequent project(s) upon approval of the Director. This credit will

be given even though the Contractor may receive training program funds from other sources, provided such other source do not specifically prohibit the Contractor from receiving other form of compensation. Offsite training is permissible as long as the training is an integral part of an approved training program and does not compromise a significant part of the overall training. Credit for offsite training indicated above may only be made to the Contractor when it does one or more of the following and the trainees are concurrently employed on a Federal Aid Project:

1. Contributes to the cost of the training,
2. Provides the instruction to the trainee,
3. Pays the trainee's wages during the offsite training period.

The Contractor shall compensate the trainee at no less than the laborer rate established in the Contract at the onset of training. The compensation rate will be increased to the journeyman's wage upon graduation from the training program for the remainder of the time the trainee works in the classification in which they were trained.

The Contractor shall furnish the trainee a copy of the program they will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed. The Contractor shall enroll a trainee in one training classification at a time to completion before the trainee can be enrolled in another classification on the same project.

The Contractor shall maintain records to document the actual hours each trainee is engaged in training on work being performed as a part of this Contract.

The Contractor shall submit to the Director a copy of an On-The-Job Training Notification of Personnel Action form no later than seven days after the effective date of the action when the following actions occur: a trainee is transferred on the project, transferred from the project to continue training on another contract, completes training, is upgraded to journeyman status or voluntary terminates or is involuntary terminated from the project.

The Contractor shall furnish to the Director a copy of a Monthly Time Report for each trainee. The Monthly Time Report for each month shall be submitted no later than the tenth day of the subsequent month. The Monthly Time Report shall indicate the phases and sub-phases of the number of hours devoted to each proficiency.

Highway or Bridge Carpenter Helper, Mechanic Helper, Rodman/Chainman, and Timekeeper classifications will not be approved for the On-The-Job Training Program.

The number of trainees may be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment.

The Contractor will have fulfilled the responsibilities of this Specification when acceptable training has been provided to the trainee as specified above.

SECTION 8 PROSECUTION AND PROGRESS

8-1 Subletting or Assigning of Contracts.

Do not, sell, transfer, assign or otherwise dispose of the Contract or Contracts or any portion thereof, or of the right, title, or interest therein, without prior written consent of the County. If the Contractor chooses to sublet any portion of the Contract, the Contractor must submit a written request to sublet work on Form 6-Subcontractor List contained in the Proposal.

The Contractor shall provide the Director a list of all proposed subcontractors and major material suppliers at the preconstruction conference. A revised list shall be distributed each time a modification thereto is made.

Execute all agreements to sublet work in writing and include all pertinent provisions and requirements of the Contract. All other agreements must be in writing and reference all applicable Contract provisions. Upon request, submit to the County a copy of the subcontract and agreement. The subletting of work does not relieve the Contractor or the surety of their respective liabilities under the Contract.

The County recognizes a subcontractor only in the capacity of an employee or agent of the Contractor, and the Director may require the Contractor to remove the subcontractor as in the case of an employee.

8-2 Reserved.

8-3 Prosecution of Work.

8-3.1 Compliance with Time Requirements: Commence work in accordance with the accepted working schedule and provide sufficient labor, materials and equipment to complete the work within the time limit(s) set forth in the proposal. Should the Contractor fail to furnish sufficient and suitable equipment, forces, and materials, as necessary to prosecute the work in accordance with the required schedule, the Director may withhold all estimates that are, or may become due, or suspend the work until the Contractor corrects such deficiencies.

8-3.2 Submission of Contract Schedule: Within 21 calendar days after Contract award or at the preconstruction conference, whichever is earlier, submit to the Director a Contract Schedule for the project. The Director will review and respond to the Contractor within 15 calendar days of receipt.

Provide a Contract Schedule that shows the various activities of work in sufficient detail to demonstrate a reasonable and workable plan to complete the project within the Contract Time. Show the order and interdependence of activities and the sequence for accomplishing the work. Describe all activities in sufficient detail so that the Director can readily identify the work and measure the progress on of each activity. Show each activity with a beginning work date, a duration, and an ending work date. Include activities for procurement, fabrication, and delivery of materials, plant, and equipment, and review time for shop drawings and submittals. Include milestone activities when milestones are required by the Contract Documents. In a project with more than one phase, adequately identify each phase and its completion date, and do not allow activities to span more than one phase.

Conduct sufficient liaison and provide sufficient information to indicate coordination activities with utility owners that have facilities within the limits of construction requiring adjustment.

Submit a working plan with the Contract Schedule, consisting of a concise written description of the construction plan.

The Director will return inadequate Contract Schedules to the Contractor for corrections. Resubmit a corrected schedule within 15 calendar days from the date of the Director's return transmittal.

Submit an updated Contract Schedule, for Director's acceptance, with each application for payment. The Director will review the updated schedule and respond within 7 calendar days of receipt.

By acceptance of the Contract Schedule, the Director does not endorse or otherwise certify the validity or accuracy of the activity durations or sequencing of activities. The Director will use the accepted schedule as the baseline against which to measure the progress.

If the Contractor fails to finalize either the initial or a revised Contract Schedule in the time specified, the Director will withhold all Contract payments until the Director accepts the schedule.

The Contract Schedule may indicate a completion date in advance of the expiration of Contract Time. However, the County will not be liable in any way for the Contractor's failure to complete the project prior to the expiration of Contract Time. Any additional costs, including extended overhead incurred between the Contractor's scheduled completion date and the expiration of Contract Time, shall be the responsibility of the Contractor. The Contractor shall not be entitled to claim or recover any such cost from the County.

8-3.3 Beginning Work: Do not commence work under the Contract until after the County has issued a written Notice to Proceed. The Contract Time shall commence to run from the date specified in the Notice to Proceed. Issuance of the Notice to Proceed is contingent upon and will be done subsequent to the Contractor fully satisfying the County's stated insurance and bond submittal requirements. Until the Contractor receives the Department's Notice to Proceed, the Contractor is advised that the County will not be liable for any expenses which the Contractor may incur relative to the Contract before the written Notice to Proceed is issued.

8-3.4 Provisions for Convenience of Public: Schedule construction operations so as to minimize any inconvenience to adjacent businesses or residences. Where necessary, the Director may require the Contractor to first construct the work in any areas along the project where inconveniences caused by construction operations would present a more serious handicap. In such critical locations, where there is no assurance of continuous effective prosecution of the work once the construction operations are begun, the Director may require the Contractor to delay removal of the existing (usable) facilities.

8-3.5 Preconstruction Conference: County After the award of the Contract but prior to the issuance of the written Notice-to-Proceed, a conference will be held to establish lines of communication; procedures for handling shop drawings, requests for information, applications for payment, and other submissions; and to establish a working understanding between the parties as to the Contractor's project management responsibilities.

Present at the conference will be the Contractor and his subcontractors, utility companies, CEI Consultant and the Director. The time and place of this conference will be set by the Director. The Contractor shall be represented at the conference by a person duly authorized to speak on behalf of and represent the Contractor, together with all of the Contractor's supervisory personnel who will be assigned to the project. The Contractor shall submit the following minimum information to the Director for his review and approval on or prior to the date established for the pre-construction conference:

- a. Name of the Contractor's proposed project manager.
- b. Name of the Contractor's proposed full-time superintendent.
- c. Name of the Contractor's representative for implementing and maintaining the Maintenance of Traffic Plan during construction.
- d. Personnel qualifications as may be requested by the County.
- e. Listing/qualifications of the Contractor's proposed subcontractors.
- f. Project Schedule.
- g. Traffic Control Plan/Maintenance of Traffic Plan.
- h. Applicable quality control plan(s).
- i. Name/qualifications of Contractor's Registered Professional Surveyor and Mapper in responsible charge of project layout.
- j. Name/qualifications of Contractor's quality control technician.
- k. Schedule and plan for prevention, control and abatement of erosion and water pollution per Section 104-5 of the Standard Specifications.

8-3.6 Progress Meetings: The Contractor shall attend regular progress meetings with and between the County's field representatives and those of the Contractor, subcontractors, utility companies, CEI Consultant and other parties having an interest in the Contract. The progress meetings shall be hosted by the County and shall be held at locations to be mutually agreed upon by the County and the Contractor at no less than two week intervals. The purpose of such meetings shall include, but not to be limited to, discussing all general aspects of the project and specifically addressing problem areas, schedules, progress payments, etc. The CEI Consultant shall be responsible for the preparation and distribution of the minutes.

8-4 Limitations of Operations.

8-4.1 Night Work: During active nighttime operations, furnish, place and maintain lighting sufficient to permit proper workmanship and inspection. Use lighting with 5 ft-cd minimum intensity. Arrange the lighting to prevent interference with traffic or produce undue glare to property owners. Operate such lighting only during active nighttime construction activities. Provide a light meter to demonstrate that the minimum light intensity is being maintained.

Lighting may be accomplished by the use of portable floodlights, standard equipment lights, existing street lights, temporary street lights, or other lighting methods approved by the Director.

Submit a lighting plan at the Preconstruction Conference for review and acceptance by the Director. Submit the plan as a PDF file, in the same scale as the Plans, and formatted on 11 inch by 17 inch sheets. Do not start night work prior to the Director's acceptance of the lighting plan.

During active nighttime operations, furnish, place and maintain variable message signs to alert approaching motorists of lighted construction zones ahead. Operate the variable message signs only during active construction activities.

Include compensation for lighting for night work in the Contract prices for the various items of the Contract. Take ownership of all lighting equipment for night work.

8-4.1.1 Holiday and Weekend Work: If work is authorized by the Director on holidays, weekends, or nights the Contractor shall notify the Director 72 hours in advance of the time and date on which the Contractor or any of his subcontractors propose to perform work during

such time periods to afford the Director ample time to effectively schedule his inspection personnel in accordance with the Contractor's timetable.

8-4.2 Sequence of Operations: Do not open up work to the prejudice of work already started. The Director may require the Contractor to finish a section on which work is in progress before starting work on any additional section. Specific requirements pertaining to the sequence of operations for constructing the project and maintaining traffic shall be included in the Contractor's work progress schedule.

8-4.3 Interference with Traffic: At all times conduct the work in such manner and in such sequence as to ensure the least practicable interference with traffic. Operate all vehicles and other equipment safely and without hindrance to the traveling public. Park all private vehicles outside the clear zone. Place materials stored along the roadway so as to cause no obstruction to the traveling public as possible.

Where existing pavement is to be widened and stabilizing is not required, prevent any open trench from remaining after working hours by scheduling operations to place the full thickness of widened base by the end of each day. Do not construct widening strips simultaneously on both sides of the road, except where separated by a distance of at least 1/4 mile along the road and where either the work of excavation has not been started or the base has been completed.

8-4.4 Coordination with other Contractors: Sequence the Work and dispose of materials so as not to interfere with the operations of other Contractors engaged upon adjacent work; coordinate the Work, including the placement of work zone signs and temporary traffic control device, to that of others in a proper manner, in accordance with the spirit of the Contract Documents; and perform the work in the proper sequence in relation to that of other Contractors; all as may be directed by the Director.

Each Contractor is responsible for any damage done by it or its agents to the adjoining work being performed by another contractor.

8-4.5 Drainage: Conduct the operations and maintain the work in such condition to provide adequate drainage at all times. Do not obstruct existing functioning storm sewers, gutters, ditches, and other run-off facilities. Maintain all existing storm sewers, gutters, ditches, and other run-off facilities in an operable condition as necessary to provide adequate drainage at all times.

8-4.6 Fire Hydrants: Keep fire hydrants on or adjacent to the highway accessible to fire apparatus at all times, and do not place any material or obstruction within 15 feet of any fire hydrant.

8-4.7 Protection of Structures: Do not operate heavy equipment close enough to pipe headwalls or other structures to cause their displacement.

8-4.8 Fencing: Erect permanent fence as a first order of business on all projects that include fencing where the Director determines that the fencing is necessary to maintain the security of livestock on adjacent property, or for protection of pedestrians who are likely to gain access to the project from adjacent property.

8-4.9 Contaminated Materials: When the construction operations encounter or expose any abnormal condition that may indicate the presence of a contaminated material, discontinue such operations in the vicinity of the abnormal condition and notify the Director immediately. Be alert for the presence of tanks or barrels; discolored or stained earth, metal, wood, ground water; visible fumes; abnormal odors; excessively hot earth; smoke; or other conditions that appear abnormal as possible indicators of the presence of contaminated materials. Treat these conditions with extraordinary caution.

Make every effort to minimize the spread of any contaminated materials into uncontaminated areas.

Do not resume the construction operations in the vicinity of the abnormal conditions until so directed by the Director.

Dispose of the contaminated material in accordance with the requirements and regulations of any Local, State, or Federal agency having jurisdiction. Where the Contractor performs work necessary to dispose of contaminated material, and the Contract does not include pay items for disposal, the County will pay for this work as provided in 4-4.

The County agrees to hold harmless and indemnify the Contractor for damages when the Contractor discovers or encounters contaminated materials or pollutants during the performance of services for the County when the presence of such materials or pollutants were unknown or not reasonably discoverable. Such indemnification agreement is only effective if the Contractor immediately stops work and notifies the County of the contaminated material or pollutant problem.

Such indemnification agreement is not valid for damages resulting from the Contractor's willful, wanton, or intentional conduct or the operations of Contaminated and Hazardous Material Contractors.

8-5 Qualifications of Contractor's Personnel.

Provide competent, careful, and reliable superintendents, foremen, and workmen. Provide workmen with sufficient skill and experience to properly perform the work assigned to them. Provide workmen engaged on special work, or skilled work, such as bituminous courses or mixtures, concrete bases, pavements, or structures, or in any trade, with sufficient experience in such work to perform it properly and satisfactorily and to operate the equipment involved. Provide workmen that shall make due and proper effort to execute the work in the manner prescribed in the Contract Documents, or the Director may take action as prescribed below.

The Contractor shall assign a full-time superintendent to routinely and constantly supervise, manage, plan, monitor, schedule, and control the construction operations on behalf of the Contractor. Trade workers will not be considered to be a full-time superintendent. The Contractor's superintendent shall be present on the project at all times when the Contractor's work crews, or work crews of other parties authorized by the Director, are engaged in any activity whatsoever associated with the project. Should the Contractor fail to comply with the above condition, the Director may, at his discretion, deduct from the Contractor's partial monthly payment estimate, the amount of \$250 per hour for each hour lacking adequate superintendence. This deduction is to account for the County's loss of adequate supervision, not as a penalty, but as liquidated damages for services not rendered.

It is prohibited as a conflict of interest for a Contractor to subcontract with a Consultant to perform Contractor Quality Control when the Consultant is under contract with the County to perform work on any project described in the Contractor's Contract with the County. Prior to approving a Consultant for Contractor Quality Control, the Contractor shall submit to the County a Certificate from the proposed Consultant certifying that no conflict of interest exists.

Whenever the Director determines that any person employed by the Contractor is incompetent, unfaithful, intemperate, disorderly, or insubordinate, the Director will provide written notice and the Contractor shall discharge the person from the work. Do not employ any discharged person on the project without the written consent of the Director. If the Contractor fails to remove such person or persons, the Director may withhold all estimates that are or may become due, or suspend the work until the Contractor complies with such orders. Protect, defend,

indemnify, and hold the County, its agents, officials, and employees harmless from all claims, actions, or suite arising from such removal, discharge, or suspension of employees.

8-6 Temporary Suspension of Contractor's Operations.

8-6.1 Authority to Suspend Contractor's Operations: The Director has the authority to suspend the Contractor's operations, wholly or in part. The Director will order such suspension in writing, giving in detail the reasons for the suspension. Contract Time will be charged during all suspensions of Contractor's operations. The County may grant an extension of Contract Time in accordance with 8-7.3.2 when determined appropriate in the County's sole judgment.

No additional compensation or time extension will be paid or granted to the Contractor when the operations are suspended for the following reasons:

1. The Contractor fails to comply with the Contract Documents.
2. The Contractor fails to carry out orders given by the Director.
3. The Contractor causes conditions considered unfavorable for continuing

the Work.

Immediately comply with any suspension order. Do not resume operations until authorized to do so by the Director in writing. Any operations performed by the Contractor, and otherwise constructed in conformance with the provisions of the Contract, after the issuance of the suspension order and prior to the Director's authorization to resume operations will be at no cost to the County. Further, failure to immediately comply with any suspension order will also constitute an act of default by the Contractor and is deemed sufficient basis in and of itself for the County to declare the Contractor in default, in accordance with 8-9, with the exception that the Contractor will not have ten calendar days to correct the conditions for which the suspension was ordered.

8-6.1.1 State of Emergency: The Director has the authority to suspend the Contractor's operations, wholly or in part, pursuant to a Governor's Declaration of a State of Emergency. The Director will order such suspension in writing, giving in detail the reasons for the suspension. Contract Time will be charged during all suspensions of Contractor's operations. The County, at its sole discretion, may grant an extension of Contract Time and reimburse the Contractor for specific costs associated with such suspension. Further, in such instances, the County's determination as to entitlement to either time or compensability will be final, unless the Contractor can prove by clear and convincing evidence to a Disputes Review Board that the County's determination was without any reasonable factual basis.

8-6.2 Prolonged Suspensions: If the Director suspends the Contractor's operations for an indefinite period, store all materials in such manner that they will not obstruct or impede the traveling public unnecessarily or become damaged in any way. Take every reasonable precaution to prevent damage to or deterioration of the work performed. Provide suitable drainage of the roadway by opening ditches, shoulder drains, etc., and provide any temporary structures necessary for public travel through the project.

8-6.3 Permission to Suspend Contractor's Operations: Do not suspend operations or remove equipment or materials necessary for completing the work without obtaining the Director's written permission. Submit all requests for suspension of operations in writing to the Director, and identify specific dates to begin and end the suspension. The Contractor is not entitled to any additional compensation for suspension of operations during such periods.

8-6.4 Suspension of Contractor's Operations - Holidays and Special Events: Unless the Contractor submits a written request to work during one or more days of a Holiday or Special Event at least ten calendar days in advance of the beginning date of the Holiday or Special Event

and receives written approval from the Director, the Contractor shall not work on the following days: Martin Luther King, Jr. Day; Memorial Day; the Saturday and Sunday immediately preceding Memorial Day; Independence Day; Independence Day (Observed); Labor Day; the Friday, Saturday, and Sunday immediately preceding Labor Day; Veterans Day; Veterans Day (Observed); the Wednesday immediately preceding Thanksgiving Day; Thanksgiving Day; the Friday, Saturday and Sunday immediately following Thanksgiving Day; December 24 through January 2, inclusive; and Special Events noted in the Plans. Contract Time will be charged during these Holiday and Special Event periods. Contract Time will be adjusted in accordance with 8-7.3.2. The Contractor is not entitled to any additional compensation beyond any allowed Contract Time adjustment for suspension of operations during such Holiday and Special Event periods.

During such suspensions, remove all equipment and materials from the clear zone, except those required for the safety of the traveling public and retain sufficient personnel at the job site to properly meet the requirements of Sections 102 and 104. The Contractor is not entitled to any additional compensation for removal of equipment from clear zones or for compliance with Section 102 and Section 104 during such Holiday and Special Event periods.

8-7 Computation of Contract Time.

8-7.1 General: Perform the contracted work fully, entirely, and in accordance with the Contract Documents within the Contract Time specified in the proposal, or as may be extended in accordance with the provisions herein below.

The County considers in the computation of the Contract Time the effect that utility relocation and adjustments have on job progress and the scheduling of construction operations required in order to adequately maintain traffic, as detailed in the Plans or as scheduled in the Special Provisions.

8-7.2 Date of Beginning of Contract Time: The date on which Contract Time begins is either the date on which the Contractor actually begins work, or the date for beginning the charging of Contract Time as set forth in the proposal; whichever is earlier.

8-7.3 Adjusting Contract Time:

8-7.3.1 Increased Work: The County may grant an extension of Contract Time when it increases the Contract amount due to overruns in original Contract items, adds new work items, or provides for unforeseen work. The County will base the consideration for granting an extension of Contract Time on the extent that the time normally required to complete the additional designated work delays the Contract completion schedule.

8-7.3.2 Contract Time Extensions: The County may grant an extension of Contract Time when a controlling item of work is delayed by factors not reasonably anticipated or foreseeable at the time of bid. The County may allow such extension of time only for delays occurring during the Contract Time period or authorized extensions of the Contract Time period. When failure by the County to fulfill an obligation under the Contract results in delays to the controlling items of work, the County will consider such delays as a basis for granting a time extension to the Contract.

Whenever the Director suspends the Contractor's operations, as provided in 8-6, for reasons other than the fault of the Contractor, the Director will grant a time extension for any delay to a controlling item of work due to such suspension. The County will not grant time extensions to the Contract for delays due to the fault or negligence of the Contractor.

The County does not include an allowance for delays caused by the effects of inclement weather or suspension of Contractor's operations as defined in 8-6.4, in establishing Contract Time. The Director will continually monitor the effects of weather and, when found

justified, grant time extensions on either a bimonthly or monthly basis. The Director will not require the Contractor to submit a request for additional time due to the effects of weather.

The County will grant time extensions, on a day for day basis, for delays caused by the effects of rains or other inclement weather conditions, related adverse soil conditions or suspension of operations as defined in 8-6.4 that prevent the Contractor from productively performing controlling items of work resulting in:

1. The Contractor being unable to work at least 50% of the normal work day on pre-determined controlling work items; or

2. The Contractor must make major repairs to work damaged by weather, provided that the damage is not attributable to the Contractor's failure to perform or neglect; and provided that the Contractor was unable to work at least 50% of the normal workday on pre-determined controlling work items.

When the County grants a time extension due to rains or other inclement weather, the Contractor shall submit any objection to the additional time in writing within ten calendar days from receipt of written notice from the Engineer. Failure to submit a written appeal within ten calendar days from receipt of the written notice shall constitute a waiver of any and all rights to appeal the County's decision at a later time.

No additional compensation will be made for delays caused by the effects of inclement weather.

The County will consider the delays in delivery of materials or component equipment that affect progress on a controlling item of work as a basis for granting a time extension if such delays are beyond the control of the Contractor or supplier. Such delays may include an area-wide shortage, an industry-wide strike, or a natural disaster that affects all feasible sources of supply. In such cases, the Contractor shall submit substantiating letters from a representative number of manufacturers of such materials or equipment clearly confirming that the delays in delivery were the result of an area-wide shortage, an industry-wide strike, etc. No additional compensation will be made for delays caused by delivery of materials or component equipment.

The County will not consider requests for time extension due to delay in the delivery of custom manufactured equipment such as traffic signal equipment, highway lighting equipment, etc., unless the Contractor submits documentation that he placed the order for such equipment in a timely manner, the delay was caused by factors beyond the manufacturer's control, and the lack of such equipment caused a delay in progress on a controlling item of work. No additional compensation will be paid for delays caused by delivery of custom manufactured equipment.

The County will consider the effect of utility relocation and adjustment work on job progress as the basis for granting a time extension only if all the following criteria are met:

1. Delays are the result of either utility work that was not detailed in the Plans, or utility work that was detailed in the Plans but was not accomplished in reasonably close accordance with the schedule included in the Contract Documents.

2. Utility work actually affected progress toward completion of controlling work items.

3. The Contractor took all reasonable measures to minimize the effect of utility work on job progress, including cooperative scheduling of the Contractor's operations with the scheduled utility work at the preconstruction conference and providing

adequate advance notification to utility companies as to the dates to coordinate their operations with the Contractor's operations to avoid delays.

The Department will consider requests for time extension due to delay in work operations within the limits of the railroad right-of-way, the adjoining 15 feet, or determined by the Railroad or Department to be able to potentially foul the tracks regardless of distance from railroad right-of-way on job progress as the basis for granting a time extension only if all the following criteria are met:

1. Delays are due to a lack of availability of Railroad protective services as required by 7-11.4.

2. Work within the limits of the railroad right-of-way or the adjoining 15 feet actually impacted progress toward completion of controlling work items.

3. The Contractor took all reasonable measures to minimize the effect of work operations within the limits of the railroad right-of-way or the adjoining 15 feet on job progress, including compliance with all provisions of 7-11.4 and 5-12, and cooperative scheduling of the Contractor's operations.

As a condition precedent to an extension of Contract Time the Contractor must submit to the Director:

A preliminary request for an extension of Contract Time must be submitted in writing to the Director within ten calendar days after the commencement of a delay to a controlling item of work. If the Contractor fails to submit this required preliminary request for an extension of Contract Time, the Contractor fully, completely, absolutely and irrevocably waives any entitlement to an extension of Contract Time for that delay. In the case of a continuing delay only a single preliminary request for an extension of Contract Time will be required. Each such preliminary request for an extension of Contract Time shall include as a minimum the commencement date of the delay, the cause of the delay, and the controlling item of work affected by the delay.

Furthermore, the Contractor must submit to the Director a request for a Contract Time extension in writing within 30 days after the elimination of the delay to the controlling item of work identified in the preliminary request for an extension of Contract Time. Each request for a Contract Time extension shall include as a minimum all documentation that the Contractor wishes the County to consider related to the delay, and the exact number of days requested to be added to Contract Time. If the Contractor contends that the delay is compensable, then the Contractor shall also be required to submit with the request for a Contract Time extension a detailed cost analysis of the requested additional compensation. If the Contractor fails to submit this required request for a Contract Time extension, with or without a detailed cost analysis, depriving the Director of the timely opportunity to verify the delay and the costs of the delay, the Contractor waives any entitlement to an extension of Contract Time or additional compensation for the delay.

Upon timely receipt of the preliminary request of Contract Time from the Contractor, the Director will investigate the conditions, and if it is determined that a controlling item of work is being delayed for reasons beyond the control of the Contractor the Director will take appropriate action to mitigate the delay and the costs of the delay. Upon timely receipt of the request for a Contract Time extension the Director will further investigate the conditions, and if it is determined that there was an increase in the time or the cost of performance of the controlling item of work beyond the control of the Contractor, then an adjustment of Contract Time will be

made, and a monetary adjustment will be made, excluding loss of anticipated profits, and the Contract will be modified in writing accordingly.

The existence of an accepted schedule, including any required update(s), as stated in 8-3.2, is a condition precedent to the Contractor having any right to the granting of an extension of Contract Time or any monetary compensation arising out of any delay. Contractor failure to have an accepted schedule, including any required update(s), for the period of potential impact, or in the event the currently accepted schedule and applicable updates do not accurately reflect the actual status of the project or fail to accurately show the true controlling or non-controlling work activities for the period of potential impact, will result in any entitlement determination as to time or money for such period of potential impact being limited solely to the County's analysis and identification of the actual controlling or non-controlling work activities. Further, in such instances, the County's determination as to entitlement as to either time or compensability will be final, unless the Contractor can prove by clear and convincing evidence to a Disputes Review Board that the County's determination was without any reasonable factual basis.

8-8 Reserved

8-9 Default and Termination of Contract.

8-9.1 Determination of Default: The following acts or omissions constitute acts of default and, except as to subparagraphs 9 and 11, the County will give notice, in writing, to the Contractor and his surety for any delay, neglect or default, if the Contractor:

1. fails to begin the work under the Contract within the time specified in the Notice to Proceed;
2. fails to perform the work with sufficient workmen and equipment or with sufficient materials to ensure prompt completion of the Contract;
3. performs the work unsuitably, or neglects or refuses to remove materials or to perform anew such work that the Director rejects as unacceptable and unsuitable;
4. discontinues the prosecution of the work, or fails to resume discontinued work within a reasonable time after the Director notifies the Contractor to do so;
5. becomes insolvent or is declared bankrupt, or files for reorganization under the bankruptcy code, or commits any act of bankruptcy or insolvency, either voluntarily or involuntarily;
6. allows any final judgment to stand against him unsatisfied for a period of ten calendar days;
7. makes an assignment for the benefit of creditors;
8. fails to comply with Contract requirements regarding minimum wage payments or EEO requirements;
9. fails to comply with the Director's written suspension of work order within the time allowed for compliance and which time is stated in that suspension of work order; or
10. for any other cause whatsoever, fails to carry on the work in an acceptable manner, or if the surety executing the bond, for any reasonable cause, becomes unsatisfactory in the opinion of the County.
11. fails to comply with 3-9.

For a notice based upon reasons stated in subparagraphs (1) through (8) and (10): if the Contractor, within a period of ten calendar days after receiving the notice described above, fails to correct the conditions of which complaint is made, the County will, upon written certificate

from the Director of the fact of such delay, neglect, or default and the Contractor's failure to correct such conditions, have full power and authority, without violating the Contract, to take the prosecution of the work out of the hands of the Contractor and to declare the Contractor in default.

If the Contractor, after having received a prior notice described above for any reason stated in subparagraph (2), (3), (4), (5), (6) or (8), commits a second or subsequent act of default for any reason covered by the same subparagraph (2), (3), (4), (5), (6) or (8) as stated in the prior notice, and regardless whether the specific reason is the same, then, regardless of whether the Contractor has cured the deficiency stated in that prior notice, the County will, upon written certificate from the Director of the fact of such delay, neglect or default and the Contractor's failure to correct such conditions, have full power and authority, without any prior written notice to the Contractor and without violating the Contract, to take the prosecution of the work out of the hands of the Contractor and to declare the Contractor in default.

Regarding subparagraph (9), if the Contractor fails to comply with the Director's written suspension of work order within the time allowed for compliance and which time is stated in that suspension of work order, the County will, upon written certificate from the Director of the fact of such delay and the Contractor's failure to correct that condition, have full power and authority, without violating the Contract, to immediately take the prosecution of the work out of the hands of the Contractor and to declare the Contractor in default.

Regarding subparagraph (11), if the Contractor fails to comply with 3-9, the County will have full power and authority, without violating the Contract, to immediately take the prosecution of the work out of the hands of the Contractor and to declare the Contractor in default.

The County has no liability for anticipated profits for unfinished work on a Contract that the County has determined to be in default.

Notwithstanding the above, the County shall have the right to declare the Contractor (or its "affiliate") in default and immediately terminate this Contract, without any prior notice to the Contractor, in the event the Contractor (or its "affiliate") is at any time "convicted" of a "contract crime," as these terms are defined in Section 337.165(1), Florida Statutes. The County's right to default the Contractor (or its "affiliate") for "conviction" of a "contract crime" shall extend to and is expressly applicable to any and all County Contracts that were either advertised for bid; for which requests for proposals or letters of interest were requested; for which an intent to award was posted or otherwise issued; or for which a Contract was entered into, after the date that the underlying or related criminal indictment, criminal information or other criminal charge was filed against the Contractor (or its "affiliate") that resulted in the "conviction." In the event the County terminates this Contract for this reason, the Contractor shall hereby forfeit any claims for additional compensation, extra time, or anticipated profits. The Contractor shall only be paid for any completed work up to the date of termination. Further, the Contractor shall be liable for any and all additional costs and expenses the County incurs in completing the Contract work after such termination.

8-9.2 Termination of Contract for Convenience: The County may terminate the entire Contract or any portion thereof, if the Director determines that a termination is in the County's interest. The Director will deliver to the Contractor a Written Notice of Termination specifying the extent of termination and the effective date.

When the County terminates the entire Contract, or any portion thereof, before the Contractor completes all items of work in the Contract, the County will make payment for the actual number of units or items of work that the Contractor has completed, at the Contract unit price, and according to the formulas and provisions set forth in 4-3.2 for items of work partially

completed, and such payments will constitute full and complete compensation for such work or items. No payment of any kind or amount will be made for items of work not started. The County will not consider any claim for loss of anticipated profits, or overhead of any kind (including home office and jobsite overhead or other indirect impacts) except as provided in 4-3.2 for partially completed work.

The County will consider reimbursing the Contractor for actual cost of mobilization (when not otherwise included in the Contract) including moving equipment to the job where the volume of the work that the Contractor has completed is too small to compensate the Contractor for these expenses under the Contract unit prices.

The County may purchase at actual cost acceptable materials and supplies procured for the work, that the County has inspected, tested, and approved and that the Contractor has not incorporated in the work. Submit the proof of actual cost, as shown by receipted bills and actual cost records, at such points of delivery as the Director may designate.

Termination of a contract or a portion thereof, under the provisions of this Subarticle, does not relieve the Contractor or the surety of its responsibilities for the completed portion of the Contract or its obligations for and concerning any just claims arising out of the work performed.

All Contractor claims for additional payment, due to the County’s termination of the entire Contract or any portion thereof, must meet the requirements of 5-12.

8-9.3 Completion of Work by County: Upon declaration of default, the County will have full authority to appropriate or use any or all suitable and acceptable materials and equipment on the site and may enter into an agreement with others to complete the work under the Contract, or may use other methods to complete the work in an acceptable manner. The County will charge all costs that the County incurs because of the Contractor’s default, including the costs of completing the work under the Contract, against the Contractor. If the County incurs such costs in an amount that exceeds the sum that would have been payable under the Contract, then the Contractor and the surety shall be liable and shall pay the County the amount of the excess.

If, after the ten day notice period and prior to any action by the County to otherwise complete the work under the Contract, the Contractor establishes his intent to prosecute the work in accordance with the County’s requirements, then the County may allow the Contractor to resume the work, in which case the County will deduct from any monies due or that may become due under the Contract, any costs to the County incurred by the delay, or from any reason attributable to the delay.

8-10 Liquidated Damages for Failure to Complete the Work.

8-10.1 Reserved.

8-10.2 Amount of Liquidated Damages: Applicable liquidated damages are the amounts established in the following schedule:

Original Contract Amount ..Daily Charge Per Calendar Day	
\$299,999 and under.....	\$980
\$300,000 but less than \$2,000,000.....	\$1,699
\$2,000,000 but less than \$5,000,000.....	\$2,650
\$5,000,000 but less than \$10,000,000.....	\$3,819
\$10,000,000 but less than \$20,000,000.....	\$4,687
\$20,000,000 but less than \$40,000,000.....	\$7,625
\$40,000,000 and over.....	\$10,467 plus 0.00005 of any

amount over \$40 million (Round to nearest whole dollar)

..... The Engineer may approve adjustments to the liquidated damages amounts in accordance with the Construction Project Administration Manual (CPAM) provided all contract work is complete.

8-10.3 Determination of Number of Days of Default: For all contracts, regardless of whether the Contract Time is stipulated in calendar days or working days, the Director will count default days in calendar days.

8-10.4 Conditions under which Liquidated Damages are Imposed: If the Contractor or, in case of his default, the surety fails to complete the work within the time stipulated in the Contract, or within such extra time that the County may have granted then the Contractor or, in case of his default, the surety shall pay to the County, not as a penalty, but as liquidated damages, the amount so due as determined in 8-10.2.

8-10.5 Right of Collection: The County has the right to apply, as payment on such liquidated damages, any money the County owes the Contractor.

8-10.6 Allowing Contractor to Finish Work: The County does not waive its right to liquidated damages due under the Contract by allowing the Contractor to continue and to finish the work, or any part of it, after the expiration of the Contract Time.

8-10.7 Completion of Work by County: In the case of a default of the Contract and the completion of the work by the County, the Contractor and his surety are liable for the liquidated damages under the Contract, but the County will not charge liquidated damages for any delay in the final completion of the County's performance of the work due to any unreasonable action or delay on the part of the County.

8-11 Release of Contractor's Responsibility.

The County considers the Contract complete when the Contractor has completed all work and the County has accepted the work. The County will then release the Contractor from further obligation except as set forth in his bond, and except as provided in 5-13.

8-12 Recovery of Damages Suffered by Third Parties.

In addition to the damages provided for in 8-10.2 and pursuant to Section 337.18 of the Florida Statutes, when the Contractor fails to complete the work within the Contract Time the County may recover from the Contractor amounts that the County pays for damages suffered by third parties unless the failure to timely complete the work was caused by the County's act or omission.

SECTION 9 MEASUREMENT AND PAYMENT

9-1 Measurement of Quantities.

9-1.1 Measurement Standards: The Director will measure all work completed under the Contract in accordance with the United States Standard Measures.

9-1.2 Method of Measurements: The Director will take all measurements horizontally or vertically.

9-1.3 Determination of Pay Areas:

9-1.3.1 Final Calculation: When measuring items paid for on the basis of area of finished work, where the pay quantity is designated to be determined by calculation, the Director will use lengths and widths in the calculations based on the station to station dimensions shown in the Plans; the station to station dimensions actually constructed within the limits designated by the Director; or the final dimensions measured along the surface of the completed work within the neat lines shown in the Plans or designated by the Director. The Director will use the method or combination of methods of measurement that reflect, with reasonable accuracy, the actual surface area of the finished work as the Director determines.

9-1.3.2 Plan Quantity: When measuring items paid for on the basis of area of finished work, where the pay quantity is designated to be the plan quantity, the Director will determine the final pay quantity based on the plan quantity subject to the provisions of 9-3.2. Generally, the Director will calculate the plan quantity using lengths based on station to station dimensions and widths based on neat lines shown in the Plans.

9-1.4 Construction Outside Authorized Limits: The Director will not pay for surfaces constructed over a greater area than authorized, or for material that the Contractor has moved from outside of slope stakes and lines shown in the Plans, except where the Director provides written instruction for the Contractor to perform such work.

9-1.5 Truck Requirements: Provide all trucks with numbers and certify that all trucks used have a manufacturer's certification or permanent decal showing the truck capacity rounded to the nearest tenth of a cubic yard placed on both sides of the truck. This capacity will include the truck body only and any side boards added will not be included in the certified truck body capacity. Ensure the lettering and numbers are legible for identification purposes at all times.

9-1.6 Ladders and Instrument Stands for Bridge Projects: On bridge projects, in order to facilitate necessary measurements, provide substantial ladders to the tops of piers and bents, and place and move such ladders as the Director directs.

For bridge projects crossing water or marshy areas, supply fixed stands for instrument mounting and measurements, in accordance with the details stipulated in the Specifications for the project.

9-2 Scope of Payments.

9-2.1 Items Included in Payment: Accept the compensation as provided in the Contract as full payment for furnishing all materials and for performing all work contemplated and embraced under the Contract; also for all loss or damage arising out of the nature of the work or from the action of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its final acceptance; also for all other costs incurred under the provisions of Division I.

For any item of work contained in the proposal, except as might be specifically provided otherwise in the basis of payment clause for the item, include in the Contract unit price (or lump sum price) for the pay item or items the cost of all labor, equipment, materials, tools and incidentals required for the complete item of work, including all requirements of the Section specifying such item of work, except as specifically excluded from such payments.

9-2.1.1 Reserved

9-2.1.2 Bituminous Material: Prepare a Contractor's Certification of Quantities, using the FDOT's current approved form for Superpave Asphalt Base, Driveway Asphalt Base, Asphalt Treated Permeable Base, Superpave Asphaltic Concrete, Miscellaneous Asphalt Pavement, Asphalt Concrete Friction Course, and Asphalt Rubber Membrane Interlayer pay items. Submit this certification to the Director no later than Twelve O'clock noon Monday after the estimate cut-off or as directed by the Director, based on the quantity of asphalt produced and accepted on the roadway per Contract. Ensure the certification includes the Project Number, Contract Number, Financial Project Identification (FPID) Number (if applicable), Certification Date and Number, the period the certification represents and the tons produced for each asphalt pay item.

On Contracts having an original Contract Time of more than 365 calendar days, or more than 5,000 tons of asphalt concrete, the County will adjust the bid unit price for bituminous material, excluding cutback and emulsified asphalt to reflect increases or decreases in the Asphalt Price Index (API) of bituminous material from that in effect during the month in which bids were received. The Contractor will not be given the option of accepting or rejecting this adjustment. Bituminous adjustments will be made only when the current API (CAPI) varies by more than 5% of the API prevailing in the month when bids were received (BAPI), and then only on the portion that exceeds 5%.

The County will determine the API for each month by averaging quotations in effect on the first day of the month at all terminals that could reasonably be expected to furnish bituminous material to projects in the State of Florida.

The API will be available on the Construction Office website before the 15th day of each month at the following URL:
<https://www.fdot.gov/construction/fuel-Bit/Fuel-Bit.shtm> .

Payment on progress estimates will be adjusted to reflect adjustments in the prices for bituminous materials in accordance with the following:

$$\text{\$ Adjustment} = (\text{ID})(\text{Gallons})$$

Where ID = Index Difference = [CAPI - 0.95(BAPI)] when the API has decreased between the month of bid and month of this progress estimate.

Where ID = Index Difference = [CAPI - 1.05(BAPI)] when the API has increased between the month of bid and month of this progress estimate.

Payment will be made on the current progress estimate to reflect the index difference at the time work was performed.

For asphalt concrete items payable by the ton or square yard, the number of gallons will be determined assuming a mix design with 6.25% liquid asphalt weighing 8.58 pounds per gallon.

For asphalt concrete items payable by the cubic yard, the number of gallons will be determined assuming a mix design with 3% liquid asphalt weighing 8.58 pounds per gallon.

9-2.2 Non-Duplication of Payment: In cases where the basis of payment clause in these Specifications relating to any unit price in the bid schedule requires that the unit price cover and

be considered compensation for certain work or material essential to the item, the County will not measure or pay for this same work or material under any other pay item that may appear elsewhere in these Specifications.

9-3 Compensation for Altered Quantities.

9-3.1 General: When alteration in Plans or quantities of work not requiring a supplemental agreement as hereinbefore provided for are offered and performed, the Contractor shall accept payment in full at Contract unit bid prices for the actual quantities of work done, and no allowance will be made for increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor, resulting either directly from such alterations, or indirectly from unbalanced allocation among the Contract items of overhead expense on the part of the bidder and subsequent loss of expected reimbursement therefore, or from any other cause.

Compensation for alterations in Plans or quantities of work requiring supplemental agreements shall be stipulated in such agreement, except when the Contractor proceeds with the work without change of price being agreed upon, the Contractor shall be paid for such increased or decreased quantities at the Contract unit prices bid in the Proposal for the items of work. If no Contract unit price is provided in the Contract, and the parties cannot agree as to a price for the work, the Contractor agrees to do the work in accordance with 4-3.2.

9-3.2 Payment Based on Plan Quantity:

9-3.2.1 Error in Plan Quantity: As used in this Article, the term “substantial error” is defined as the smaller of (1) or (2) below:

1. a difference between the original plan quantity and final quantity of more than 5%,
2. a change in quantity which causes a change in the amount payable of more than \$5,000.

On multiple job Contracts, changes made to an individual pay item due to substantial errors will be based on the entire Contract quantity for that pay item.

Where the pay quantity for any item is designated to be the original plan quantity, the County will revise such quantity only in the event that the County determines it is in substantial error. In general, the County will determine such revisions by final measurement, plan calculations, or both, as additions to or deductions from plan quantities.

In the event that either the County or the Contractor contends that the plan quantity for any item is in error and additional or less compensation is thereby due, the claimant shall submit, at their own expense, evidence of such in the form of acceptable and verifiable measurements or calculations. The County will not revise the plan quantity solely on the basis of a particular method of construction that the Contractor selects. For earthwork items, the claimant must note any differences in the existing surfaces from that shown in the Plan that would result in a substantial error to the plan quantity, and must be properly documented by appropriate verifiable level notes, acceptable to both the Contractor and the County, prior to disturbance of the existing surface by construction operations. The claimant shall support any claim based upon a substantial error for differences in the existing surface by documentation as provided above.

9-3.2.2 Authorized Changes in Limits of Work: Where the County designates the pay quantity for any item to be the original plan quantity and authorizes a plan change which results in an increase or decrease in the quantity of that item, the County will revise the plan quantity accordingly. In general, the County will determine such revisions by final measurement, plan calculations or both.

9-3.2.3 Specified Adjustments to Pay Quantities: Do not apply the limitations specified in 9-3.2.1 and 9-3.2.2 to the following:

1. Where these Specifications or Special Provisions provide that the County determines the pay quantity for an item on the basis of area of finished work adjusted in accordance with the ratio of measured thickness to nominal thickness.

2. Where these Specifications provide for a deduction due to test results falling outside of the allowable specified tolerances.

3. To payment for extra length fence posts, as specified in 550-6.3.

9-3.3 Lump Sum Quantities:

9-3.3.1 Error in Lump Sum Quantity: Where the County designates the pay quantity for an item to be a lump sum and the Plans show an estimated quantity, the County will adjust the lump sum compensation only in the event that either the Contractor submits satisfactory evidence or the County determines and furnishes satisfactory evidence that the lump sum quantity shown is in substantial error as defined in 9-3.2.1.

9-3.3.2 Authorized Changes in Work: Where the County designates the pay quantity for an item to be a lump sum and the Plans show an estimated quantity, the County will adjust compensation for that item proportionately when an authorized plan change is made which results in an increase or decrease in the quantity of that item. When the Plans do not show an estimated plan quantity or the applicable specifications do not provide adjustments for contingencies, the County will compensate for any authorized plan change resulting in an increase or decrease in the cost of acceptably completing the item by establishing a new unit price through a supplemental agreement as provided in 4-3.2.

9-3.4 Deviation from Plan Dimensions: If the Contractor fails to construct any item to Plan or to authorized dimensions within the specified tolerances, the Director, at his discretion will: require the Contractor to reconstruct the work to acceptable tolerances at no additional cost to the County; accept the work and provide the Contractor no pay; or accept the work and provide the Contractor a reduced final pay quantity or reduced unit price. The County will not make reductions to final pay quantities for those items designated to be paid on the basis of original plan quantity or a lump sum quantity under the provisions of this Article unless such reduction results in an aggregate monetary change per item of more than \$100, except that for earthwork items, the aggregate change must exceed \$5,000 or 5% of the original plan quantity, whichever is smaller. If, in the opinion of the Director, the Contractor has made a deliberate attempt to take advantage of the construction tolerances as defined in 120-12.1 to increase borrow excavation in fill sections or to decrease the required volume of roadway or lateral ditch excavation or embankment, the County will take appropriate measurements and will apply reductions in pay quantities. The County will not use the construction tolerance, as defined in 120-12.1, as a pay tolerance. The construction tolerance is not to be construed as defining a revised authorized template.

9-4 Deleted Work.

The County will have the right to cancel the portions of the Contract relating to the construction of any acceptable item therein, by making an adjustment in payment to the Contractor of a fair and equitable amount covering the value of all cancelled work less all items of cost incurred prior to the date that the Director cancels the work.

9-5 Partial Payments.

9-5.1 General: The Director will make partial payments on monthly estimates based on the amount of work that the Contractor completes during the month (including delivery of certain

materials, as specified herein below). The Director will make approximate monthly payments, and the County will correct all partial estimates and payments in the subsequent estimates and in the final estimate and payment.

The County will base the amount of such payments on the total value of the work that the Contractor has performed to the date of the estimate, based on the quantities completed and the Contract prices, less payments previously made and less any retainage withheld.

Contract amount is defined as the original Contract amount adjusted by approved supplemental agreements.

9-5.1.1 Applications for Payment: On or before the 25th day of each month, the Contractor shall submit six notarized copies of its monthly application for payment to the CEI Consultant for Work performed during the previous month. Each application for payment shall be accompanied by the certifications described in 9-5.6. The County shall not be required to make payment until and unless these certifications are furnished by the Contractor.

Invoices received after the 25th day of each month shall be considered for payment as part of the next month's application. Within ten calendar days of receipt of each application for payment, the CEI Consultant will either:

1. indicate his approval of the requested amount;
2. indicate his approval of only a portion of the requested payment, stating in writing his reasons therefore; or
3. return the application for payment to the Contractor indicating, in writing, the reason for refusing to approve payment and the action necessary to make the payment request proper.

In the event of a total denial and return of the application for payment by the CEI Consultant, the Contractor may make the necessary corrections and resubmit the application for payment. The County shall, within thirty calendar days after County approval of an application for payment, pay the Contractor the amounts so approved. Provided, however, in no event shall the County be obligated to pay any amount greater than that portion of the application for payment approved by the CEI Consultant. Monthly payments to the Contractor shall in no way imply or constitute approval or acceptance of Contractor's Work.

9-5.1.2 Retainage: The County shall retain five percent of the gross amount of each monthly application for payment or five percent of the portion thereof approved by the CEI Consultant for payment, whichever is less. Such sums shall be accumulated and released to the Contractor with final payment.

Retainage will be determined for each job on multiple job Contracts. The County will not accept Securities, Certificates of Deposit or letters of credit as a replacement for retainage. Amounts withheld will not be released until payment of the final estimate.

9-5.2 Reserved

9-5.3 Withholding Payment:

9-5.3.1 Withholding Payment for Defective Work: If the County discovers any defective work or material prior to the final acceptance, or if the County has a reasonable doubt as to the integrity of any part of the completed work prior to final acceptance, then the County will not allow payment for such defective or questioned work until the Contractor has remedied the defect and removed any causes of doubt.

9-5.3.2 Withholding Payment for Failure to Comply: The County will withhold progress payments from the Contractor if he fails to comply with any or all of the following, as applicable, within 60 days after beginning work:

1. Comply with and submit required documentation relating to prevailing wage rate provisions, Equal Employment Opportunity, On-The-Job Training, and Affirmative Action;

2. Comply with the requirement to report all necessary information, including actual payments to DBEs, all other subcontractors and major suppliers, through the Internet based Equal Opportunity Reporting System;

3. Comply with or make a good faith effort to ensure employment opportunity for minorities and females in accordance with the required contract provisions for Federal Aid Construction Contracts, and

4. Comply with or make a good faith effort to meet On-The-Job Training goals.

The County will withhold progress payments until the Contractor has satisfied the above conditions.

9-5.3.3 Withholding Payment for Other Reasons: The County may withhold any payments otherwise due Contractor under this Agreement or any other agreement between the County and the Contractor, to such extent as may be necessary in the County's opinion to protect it from loss as a result of:

1. Third party claims filed or reasonable evidence indicating probable filing of such claims;

2. Failure of the Contractor to make payment properly to Subcontractors or for labor, materials, or equipment;

3. Reasonable doubt that the Work can be completed for the unpaid balance of the Contract amount;

4. Reasonable indication that the Work will not be completed within the Contract Time;

5. Unsatisfactory prosecution of the Work by the Contractor;

6. Failure to provide accurate and current red line documents, as-built drawings, or certified surveys;

7. Any other material breach of the Contract Documents.

If these conditions are not remedied or removed, the County may, after three calendar days' written notice, rectify the same at Contractor's expense. The County also may offset against any sums due Contractor the amount of any liquidated or unliquidated obligations of Contractor to the County.

9-5.4 Release of Retainage After Acceptance: When the Contractor has furnished the County with all submittals required by the Contract, such as invoices, DBE Participation Certification, properly executed and notarized Release and Affidavit, duly executed Surety's consent to final payment, EEO reports, materials certifications, certification of materials procured, etc., (excluding Contractor's letter of acceptance of final amount due and Form 21-A release) and the Director has determined that the measurement and computation of pay quantities is correct, the County may reduce the retainage to two percent of the Contract plus any amount that the County elects to deduct for defective work as provided in 9-5.3.

The County will not allow a semifinal estimate under the provisions of the above paragraphs unless the time elapsing between (1) acceptance of the project and receipt of all test

reports, invoices, etc., and (2) submission of the final estimate to the Contractor for acceptance, exceeds or is expected to exceed 30 days.

The County may deduct from payment estimates any sums that the Contractor owes to the County on any account. Where more than one project or job (separate project number) is included in the Contract, the County will distribute the reduced retainage as provided in the first paragraph of this subarticle to each separate project or job in the ratio that the Contract value of the work for the particular job bears to the total Contract amount.

9-5.5 Partial Payments for Delivery of Certain Materials:

9-5.5.1 General: The County will allow partial payments for new materials that will be permanently incorporated into the project and are stockpiled in approved locations in the project vicinity. Stockpile materials so that they will not be damaged by the elements and in a manner that identifies the project on which they are to be used.

The following conditions apply to all payments for stockpiled materials:

1. There must be reasonable assurance that the stockpiled material will be incorporated into the specific project on which partial payment is made.

2. The stockpiled material must be approved as meeting applicable specifications.

3. The total quantity for which partial payment is made shall not exceed the estimated total quantity required to complete the project.

4. The Contractor shall submit to the Director certified invoices to document the value of the materials received. The amount of the partial payment will be determined from invoices for the material up to the unit price in the Contract.

5. Delivery charges for materials delivered to the jobsite will be included in partial payments if properly documented.

6. Partial payments will not be made for materials which were stockpiled prior to award of the Contract for a project.

9-5.5.2 Partial Payment Amounts: The following partial payment restrictions apply:

1. Partial payments less than \$5,000 for any one month will not be processed.

2. Partial payments for structural steel and precast prestressed items will not exceed 85% of the bid price for the item. Partial payments for all other items will not exceed 75% of the bid price of the item in which the material is to be used.

3. Partial payment will not be made for aggregate and base course material received after paving or base construction operations begin except when a construction sequence designated by the County requires suspension of paving and base construction after the initial paving operations, partial payments will be reinstated until the paving and base construction resumes.

9-5.5.3 Off Site Storage: If the conditions of 9-5.5.1 are satisfied, partial payments will be allowed for materials stockpiled in approved in-state locations. Additionally, partial payments for materials stockpiled in approved out-of-state locations will be allowed if the conditions of 9-5.5.1 and the following conditions are met:

1. Furnish the County a Materials Bond stating the supplier guarantees to furnish the material described in the Contract to the Contractor and County. Under this bond, the Obligor shall be the material supplier and the Obligees shall be the Contractor and the Lee County

Board of County Commissioners. The bond shall be in the full dollar amount of the bid price for the materials described in the contract.

2. The following clauses must be added to the construction Contract between the Contractor and the supplier of the stockpiled materials:

“Notwithstanding anything to the contrary, <supplier> will be liable to the Contractor and Lee County, Florida County<supplier> default in the performance of this agreement.”

“Notwithstanding anything to the contrary, this agreement, and the performance bond issued pursuant to this agreement, does not alter, modify, or otherwise change the Contractor’s obligation to furnish the materials described in this agreement to Lee County, Florida County.”

3. The agreement between the Contractor and the supplier of the stockpiled materials must include provisions that the supplier will store the materials and that such materials are the property of the Contractor.

9-5.6 Certification of Payment to Subcontractors: The term “subcontractor,” as used herein, includes persons or firms furnishing materials or equipment incorporated into the work or stockpiled for which the County has made partial payment and firms working under equipment-rental agreements. The Contractor is required to pay all subcontractors for satisfactory performance of their Contracts before the County will make a further progress (partial) payment. The Contractor shall also return all retainage withheld to the subcontractors within 30 days after the subcontractor’s work is satisfactorily complete, as determined by the County. Prior to receipt of any progress (partial) payment, the prime contractor shall certify that all subcontractors having an interest in the Contract were paid for satisfactory performance of their Contracts and that the retainage is returned to subcontractors within 30 days after satisfactory completion of the subcontractor’s work. Submit this certification in the form designated by the County.

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

The Contractor shall indemnify and provide defense for the County when called upon to do so for all claims or suits against the County, by third parties, pertaining to Contractor payment or performance issues arising out of the Contract. It is expressly understood that the monetary limitation on the extent of the indemnification shall be the approved Contract amount, which shall be the original Contract amount as may be increased by subsequent Supplemental Agreements.

9-6 Record of Construction Materials.

9-6.1 General: For all construction materials used in the construction of the project, (except materials exempted by 9-6.2), preserve for the County’s inspection the invoices and records of the materials for a period of three years from the date of completion of the project. Apply this requirement when subcontractors purchase materials, and obtain the invoices and other materials records from the subcontractors. By providing the materials, the Contractor certifies that all invoices will be maintained for the required period.

9-6.2 Non-Commercial Materials: The provisions of 9-6.1 do not apply to materials generally classed as non-commercial, such as fill materials, local sand, sand-clay, or local materials used as stabilizer.

9-7 Disputed Amounts Due the Contractor.

The County reserves the right to withhold from the final estimate any disputed amounts between the Contractor and the County. The County will release all other amounts due, as provided in 9-8.

9-8 Acceptance and Final Payment.

9-8.1 Acceptance and Final Payment Documents: Whenever the Contractor has completely performed the work provided for under the Contract and the Director has performed a final inspection and made final acceptance (as provided in 5-10 and 5-11), and subject to the terms of 8-11, the Director will prepare a final estimate showing the value of the work as soon as the Director makes the necessary measurements and computations. The Director will correct all prior estimates and payments in the final estimate and payment. The County will pay the estimate, less any sums that the County may have deducted or retained under the provisions of the Contract, as soon as practicable after final acceptance of the work, along with all executed supplemental agreements received after final acceptance.

If the Contractor fails to furnish all required Contract Documents as listed in (1) through (9) below within 90 days of the County's offer of final payment or request for refund of overpayment, the County will not issue Acceptance and remaining retainage will continue to be withheld..

1. The Contractor has agreed in writing to accept the balance due or refund the overpayment, as determined by the County, as full settlement of his account under the Contract and of all claims in connection therewith, or the Contractor, has through the use of the Qualified Acceptance Letter, accepted the balance due or refunded the overpayment, as determined by the County, with the stipulation that his acceptance of such payment or the making of such refund does not constitute any bar, admission, or estoppel, or have any effect as to those payments in dispute or the subject of a pending claim between the Contractor and the County. To receive payment based on a Qualified Acceptance Letter, define in writing the dispute or pending claim with full particular of all items of all issues in dispute, including itemized amounts claimed for all particulars of all items, and submit it as part of the Qualified Acceptance Letter. The Contractor further agrees, by submitting a Qualified Acceptance Letter that any pending or future claim or suit is limited to those particulars, including the itemized amounts, defined in the original Qualified Acceptance Letter, and that he will commence with any such arbitration claim or suit within 820 calendar days from and after the time of final acceptance of the work and that his failure to file a formal claim within this period constitutes his full acceptance of the Director's final estimate and payment. The overpayment refund check from the Contractor, if required, will be considered a part of any Acceptance Letter executed.

2. The Contractor has properly maintained the project, as specified hereinbefore.

3. The Contractor has furnished a sworn affidavit to the effect that the Contractor has paid all bills and no suits are pending (other than those exceptions listed, if any) in connection with work performed under the Contract and that the Contractor has not offered or made any gift or gratuity to, or made any financial transaction of any nature with, any employee

of the County in the performance of the Contract. Include with the listed tort liability exceptions, if any, evidence of adequate insurance coverage as required in 7-13.

4. The surety on the Contract bond consents, by completion of their portion of the affidavit and surety release subsequent to the Contractor's completion of his portion, to final payment to the Contractor and agrees that the making of such payment does not relieve the surety of any of its obligations under the bond.

5. The Contractor has complied with and settled all requirements pertaining to any wage-rate provisions.

6. The Contractor has submitted all required mill tests and analysis reports to the Director.

7. The Contractor has furnished the Construction Compliance with Specifications and Plans Certification. Provide the Director with a notarized final certification of compliance with the requirements of Section 105 to accompany the final estimate. Certification must be on a form provided by the Director.

8. The Contractor has submitted and the County has accepted all as-built drawings and certified surveys.

9. The Contractor has furnished all required manufacturers' warranties to the Director.

9-8.2 Reserved

9-9 Reserved

9-10 Offsetting Payments.

1. After settlement or final adjudication of any claim of the County for work done pursuant to a construction contract with any party, the County may offset such amount from payments due for work done on any construction contract, excluding amounts owed to subcontractors, suppliers, and laborers, which it has with the party owing such amount if, upon demand, payment of the amount is not made within 60 days to the County.

2. Offsetting any amount pursuant to (1) above shall not be considered a breach of Contract by the County.

EXHIBIT F
INSURANCE REQUIREMENTS

CERTIFICATES OF INSURANCE

(1) The Contractor shall obtain and maintain such insurance as will protect it from: (1) claims under workers' compensation laws, disability benefit laws, or other similar employee benefit laws; (2) claims for damages because of bodily injury, occupational sickness or disease or death of its employees including claims insured by usual personal injury liability coverage; (3) claims for damages because of bodily injury, sickness or disease, or death of any person other than its employees including claims insured by usual personal injury liability coverage; and (4) from claims for injury to or destruction of tangible property including loss of use resulting there from -- any or all of which claims may arise out of, or result from, the services, Work and operations carried out pursuant to and under the requirements of the Contract Documents, whether such services, Work and operations be by the Contractor, its employees, or by Subcontractor(s), or anyone employed by or under the supervision of any of them, or for whose acts any of them may be legally liable.

(2) This insurance shall be obtained and written for not less than the limits of liability specified hereinafter, or as required by law, whichever is greater.

(3) The Contractor shall require and shall be responsible for ensuring throughout the time the Agreement is in effect, that any and all of its Subcontractors obtain and maintain until the completion of that Subcontractor's work, such of the insurance coverages described herein as are required by law to be provided on behalf of their employees and others.

(4) The Contractor shall obtain, have and maintain during the entire period of the Agreement insurance policies, which contain the following information and provisions:

- (A) The name and type of policy and coverages provided;
- (B) The amount or limit applicable to each coverage provided;
- (C) The date of expiration of coverage;
- (D) The designation of the County as an additional insured and a certificate holder (This requirement may be excepted for workers' compensation and professional liability Insurance);
- (E) The following clause must appear on the Certificate of Insurance:

Should any material change occur in any of the above-described policies or should any of said policies be canceled before the expiration date thereof, the issuing company shall mail at least thirty (30) calendar days' written notice to the County.

(5) If the initial, or any subsequently issued Certificate of Insurance expires prior to the completion of the Work or termination of the Agreement, the Contractor shall furnish to the County, in triplicate, renewal or replacement Certificate(s) of Insurance not

later than thirty (30) calendar days prior to the date of their expiration. Failure of the Contractor to provide the County with such renewal certificate(s) shall be considered justification for the County to terminate the Agreement.

(6) Contractor shall include the County, the County's agents, officers and employees in the Contractor's General Liability and Automobile Liability policies as additional insureds.

(7) If the County has any objection to the coverage afforded by other provisions of the insurance required to be purchased and maintained by Contractor in accordance with the requirements of the Contract Documents on the basis of its not complying with the Contract Documents, the County shall notify Contractor in writing thereof within thirty (30) calendar days of the delivery of such certificates to the County. Contractor shall provide to the County such additional information with respect to its insurance as may be requested.

(8) The Contractor shall obtain and maintain the following insurance coverages as provided hereinbefore, and in the type, amounts and in conformance with the following minimum requirements:



Lee County Insurance Requirements

Minimum Insurance Requirements: *Risk Management in no way represents that the insurance required is sufficient or adequate to protect the vendors' interest or liabilities. The following are the required minimums the vendor must maintain throughout the duration of this contract. The County reserves the right to request additional documentation regarding insurance provided*

- a. **Commercial General Liability** - Coverage shall apply to premises and/or operations, products and completed operations, independent contractors, contractual liability exposures with minimum limits of:

\$1,000,000 per occurrence
\$2,000,000 general aggregate
\$1,000,000 products and completed operations
\$1,000,000 personal and advertising injury

- b. **Business Auto Liability** - The following Automobile Liability will be required and coverage shall apply to all owned, hired and non-owned vehicles use with minimum limits of:

\$1,000,000 combined single limit (CSL); or
\$500,000 bodily injury per person
\$1,000,000 bodily injury per accident
\$500,000 property damage per accident

- c. **Workers' Compensation** - Statutory benefits as defined by FS 440 encompassing all operations contemplated by this contract or agreement to apply to all owners, officers, and employees regardless of the number of employees. Workers Compensation exemptions may be accepted with written proof of the State of Florida's approval of such exemption. Employers' liability will have minimum limits of:

\$500,000 per accident
\$500,000 disease limit
\$500,000 disease – policy limit

****The required minimum limit of liability shown in a. and b. may be provided in the form of "Excess Insurance" or "Commercial Umbrella Policies." In which case, a "Following Form Endorsement" will be required on the "Excess Insurance Policy" or "Commercial Umbrella Policy."***



Lee County Insurance Requirements

Verification of Coverage:

1. Coverage shall be in place prior to the commencement of any work and throughout the duration of the contract. A certificate of insurance will be provided to the Risk Manager for review and approval. The certificate shall provide for the following:

- a. **Under the Description of Operations, the following must read as listed:**

“Lee County, a political subdivision and Charter County of the State of Florida, its agents, employees, and public officials are automatic additional insureds and includes an automatic waiver of subrogation with regard to general liability. The certificate holder is an additional insured on a primary and noncontributory basis with regards to general liability.”

- b. **The certificate holder must read as follows:**

Lee County, a political subdivision and Charter County of the State of Florida
P.O. Box 398
Fort Myers, Florida 33902

Special Requirements:

1. An appropriate "Indemnification" clause shall be made a provision of the contract.
2. It is the responsibility of the general contractor to ensure that all subcontractors comply with all insurance requirements.

EXHIBIT G
RELEASE AND AFFIDAVIT

COUNTY OF _____

STATE OF FLORIDA

Before me, the undersigned authority, personally appeared

_____,
who after being duly sworn, deposes and says:

(1) In accordance with the Contract Documents and in consideration of \$ _____ paid, _____ ("Contractor") releases and waives for itself and its subcontractors, materialmen, successors and assigns, all claims demands, damages, costs and expenses, whether in contract or in tort, against Lee County, Florida (the "County"), its Board of County Commissioners, employees and agents relating in any way to the performance of the Agreement between Contractor and the County, dated _____, _____, for the period from _____ to _____.

(2) Contractor certifies for itself and its subcontractors, materialmen, successors and assigns, that all charges for labor, materials, supplies, lands, licenses and other expenses for which the County might be sued or for which a lien or a demand against any Payment Bond might be filed, have been fully satisfied and paid.

(3) Contractor agrees to indemnify, defend and save harmless the County, its Board of County Commissioners, employees and agents from all demands or suits, actions, claims of liens or other charges filed or asserted against the County arising out of the performance by Contractor of the Work covered by this Release and Affidavit.

(4) This Release and Affidavit is given in connection with Contractor's [monthly/final] application for payment No. _____.

CONTRACTOR:

By: _____ (signature of the executive officer)

Its: _____ (title of the executive officer)

Date: _____

Witnesses

[Corporate Seal]

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of physical presence or online notarization, this _____ day of _____, _____, by _____, as _____ of _____, a _____ corporation, on behalf of the corporation. He/she is personally known to me or has produced _____ as identification and did (did not) take an oath.

My Commission Expires: _____
(Signature of Notary)

Name: _____
(Legibly Printed)

(AFFIX OFFICIAL SEAL)

Notary Public, State of _____

Commission No.: _____

EXHIBIT H CHANGE ORDER FORM



Lee County Construction Contract
Change Order

Print Form

Number: _____

A Change Order requires approval by the Department Director for expenditures under \$50,000, approval by the County Manger for expenditures between \$50,000.01 and \$100,000, or approval by the Board of County Commissioners for expenditures over \$100,000

Contract / Project Name: _____

Contractor: _____

Contract #: _____ Project #: _____ Bid #: _____

Lee County Project Manager: _____

Fiscal Staff: _____ Date of Request: _____

Upon the completion and execution of this Change Order by both parties to the Contract, the Contractor is authorized to and shall proceed to make the following changes in the Contract Documents:
(If you need space other than what has been provided, please attach additional sheets.)

Attachments: _____
(List documents supporting change)

Description: _____

Purpose of Change Oder: _____

Change in Contract Price	Dollar Amount	Change in Contract Time	Calendar Days
Original Contract Price		Original Contract Time	
Previous Change Order No. _____		Net Change from Previous Change Orders	
Contract Price Prior to this Change Order		Contract Time Prior to this Change Order	
Net Increase (Decrease) of this Change Order		Net Increase (Decrease) of this Change Order	
Contract Price with All Approved Change Orders		Contract Time with All Approved Change Orders	

It is understood and agreed that the acceptance of this modification by the CONTRACTOR constitutes an accord and satisfaction, and represents payment in full (both time and money) for all costs arising out of, or incidental to, the above mentioned change.

Name of Contractor

Date Accepted

Contact Email Address

Contact Phone #

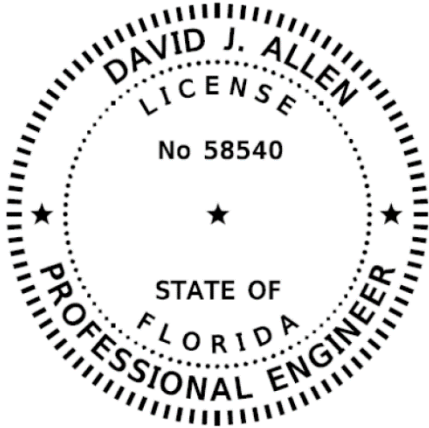
EXHIBIT I
SUPPLEMENTAL SPECIFICATIONS

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I hereby certify that these Supplemental Specifications have been properly prepared by me, or under my responsible charge:

Supplemental Specification Section(s): 8-3.2, 102, 200 and 430	
Signature:	
Date:	March 12, 2024
Engineer of Record:	David Allen, P.E.
Florida License No.:	58540
Firm Name:	Stantec
Firm Address:	3905 Crescent Park Dr
City, State, Zip Code:	Riverview, FL 33578
Cert. of Authorization No:	



DIVISION I-GENERAL REQUIREMENTS AND COVENANTS

PROSECUTION AND PROGRESS - PROSECUTION OF WORK - GENERAL (SUBMISSION OF WORKING SCHEDULE). (REV 5-20-21) (FA 7-7-21) (FY 2023-24)

SUBARTICLE 8-3.2 is deleted and the following substituted:

8-3.2 General: For this Contract, submit the following schedules and reports.

8-3.2.1 Contract Schedule: Submit to the Engineer for acceptance a Critical Path Method (CPM) Contract Schedule for the project within 30 calendar days after execution of the Contract or at the preconstruction conference, whichever is earlier.

The Contract Schedule shall include detailed schedule diagrams and schedule data as described below that shows how the Contractor intends to complete the work within the Contract Time. Any weather days that affect the Critical Path will be added as they occur. When the project includes a Maintenance of Traffic plan, the work breakdown structure (WBS) or project activity codes for the Contract Schedule shall be consistent with the Contract Maintenance of Traffic plan, showing activities for each discrete Contract activity to be accomplished within each Maintenance of Traffic phase. When the project does not include a Maintenance of Traffic plan, the WBS or project activity codes shall be consistent with the phasing shown in the Contract Documents. Include activities for deliverables and reviews in the schedule. Sufficient liaison shall be conducted and information provided to indicate coordination with utility owners having facilities within the project limits. The schedule must incorporate the utility work schedules included in the Contract Documents, unless changed by mutual agreement of the utility company, the Contractor and the Department. Show the interdependence (logic) of the utility work schedule activities with other schedule activities in the Contract Schedule for acceptance by the Department, unless otherwise approved by the Engineer.

Failure to include any element of work or any activity relating to utility work will not relieve the Contractor from completing all work within the Contract Time at no additional time or cost to the Department, notwithstanding the acceptance of the schedule by the Department.

The Contract Schedule may indicate a completion date in advance of the expiration of Contract Time. However, the Department will not be liable in any way for the Contractor's failure to complete the project prior to expiration of Contract Time. Any additional costs, including extended overhead incurred between the Contractor's scheduled completion date and the expiration of Contract Time, shall be the responsibility of the Contractor. The Contractor shall not be entitled to claim or recover any such costs from the Department.

Acceptance by the Engineer of the Contract Schedule or any updates shall not be construed as approval of any particular construction methods or sequence of construction or to relieve the Contractor of its responsibility to provide sufficient materials, equipment and labor to guarantee the completion of the contract in accordance with the Contract Documents.

8-3.2.2 Schedule Submissions: Develop the schedule in Precedence Diagram Method (PDM) format.

Each schedule submission and monthly update shall include a minimum of the following six items:

1. Submit the files electronically in the current Department version of Oracle Primavera P6 format by exporting the full schedule to an .xer file format.

2. A Gantt chart grouped by WBS, then phase, sorted by early start then total float. The chart shall include the following columns:

- a. Activity ID
- b. Activity Name
- c. Calendar
- d. Activity Type
- e. Original Duration
- f. Remaining Duration
- g. Duration % Complete
- h. Early Start
- i. Early Finish
- j. Late Start
- k. Late Finish
- l. Total Float

The chart shall also include activity bars using the Oracle Primavera P6 default color coding for the bars. The chart shall be submitted as a Portable Document Format (.pdf) file and formatted on 11 inch by 17 inch landscape oriented sheets, with the activity table and bars.

3. A Gantt chart with the same columns and bars listed in 8-3.2.2(2), but filtered for the longest path, not grouped but sorted by early start, then early finish. The chart shall be submitted as a.pdf file and formatted on 11 inch by 17 inch landscape oriented sheets, with the activity table and bars.

4. The Schedule log for the calculated schedule, submitted as a.pdf file and formatted on 8-1/2 inch by 11 inch portrait oriented sheets.

5. A schedule narrative report with the following information:

- a. Current project schedule status and identify potential delays
- b. A description of the progress made since the previous schedule submission
- c. Objectives for the upcoming 30 calendar days
- d. Indicate if the project is on schedule, ahead of schedule or behind schedule.

1. If ahead or behind schedule, indicate the specific number of calendar days.

2. If behind schedule, include a detailed recovery plan that will put the schedule back on track or identify the alleged delay event for which a preliminary request for an extension of Contract Time has been submitted, which if granted by the Department, will account for the amount of time the project is behind schedule, or provide a fully supported request for a Contract Time extension, which if granted by the Department, will account for the amount of time the project is behind schedule.

e. Description of the current critical path and indicate if the critical path has changed in the last 30 calendar days.

f. Discussion of current successes or problems that have affected either the critical path's length or have caused a shift in the critical path within the last 30 calendar days.

g. Identify specific activities, progress, or events that may reasonably be anticipated to impact the critical path within the next 30 calendar days, either to affect its length or to shift it to an alternate path.

h. List all changes to schedule logic, calendars, calendar assignments, activity types, activity names, changes to constraints, added activities or duration changes (original and remaining) that have been made to the schedule since the previous submission.

For each change, describe the basis for the change and specifically identify the affected activities by activity ID.

i. Identify any and all activities, either in progress or scheduled to occur within the following 30 days that require Department participation, review, approval, etc.

6. A detailed logic report that provides a list of activities in the schedule sorted by activity ID, no grouping and submitted as a .pdf file and formatted on 8-1/2 inch by 11 inch portrait oriented sheets. For each activity listed, the report shall include the activity's predecessors and successors, including the relationship type and lag.

For each submission of the Contract Schedule and monthly update, the Engineer will have 21 days to accept the Contract Schedule or monthly update or to schedule a meeting, if needed, within that time, with the Contractor to resolve any problems that prevent acceptance of the schedule. Attend the meeting scheduled by the Engineer, and submit a corrected schedule to the Engineer within seven days after the meeting. The process will be continued until a Contract Schedule or monthly update is accepted or accepted as noted by the Engineer.

Upon the Engineer's acceptance of the Contract Schedule, submit monthly updates of the Contract Schedule, including all months prior to the start of construction, reflecting progress through the monthly estimate cut-off date within 8 calendar days after the monthly estimate cut-off date.

The Engineer may withhold monthly payments due for failure of the Contractor to submit an acceptable schedule or monthly updates within the time frame described herein.

8-3.2.3 Schedule Content: All schedule submissions shall comply with the following content guidelines as appropriate to the specific submission:

The schedules shall include the sequence, order, and interdependence of major construction milestones and activities. Include procurement of project specific materials and equipment that require submittals and are not readily available, long-lead time items, and key milestones identified by the Contract.

Show the sequence, order, and interdependence of activities in which the work is to be accomplished. Include allowance for Department review, acceptance and return of submittals, samples and shop drawings where Department acceptance is specifically required (in accordance with 5-1.4.6 of the standard specifications). In addition to construction activities, schedule activities shall include the submittals, procurement, and Department or Utility activities:

1. Submittal activities shall include submittal preparation, Department review, and acceptance of submittals. If the Department's action on any submittal is "Not Accepted" or "Revise and Resubmit", a new series of submittal preparation activities shall be inserted into the schedule. Predecessor for the new submittal preparation activity will be the

original acceptance activity and the successor of the new acceptance activity will be the fabrication/delivery activity for the equipment or material.

2. Procurement activities shall include all project specific materials and equipment that require submittals and are not readily available, fabrication of special material and equipment, and their installation and testing.

3. Show activities of the Department or Utilities that affect progress and contract-required dates for completion of all or parts of the work.

Detailed schedule data: shall conform to the following:

1. All activities shall be assigned to a specific project calendar within the software. Specific project calendars will be defined within the software to include planned work days and planned non-work days. These project calendars will include both Contractor and Contract defined holidays and suspension days as non-workdays. The use of global calendars is not permitted. Project calendars shall not inherit holidays from global calendars. Work shifts identified for each project calendar shall be consistent with the Contractor's planned workdays. Actual start and finish date times shall be consistent with the work shift hours on the calendar assigned to the activities.

2. A cost account drawdown schedule depicting amount earned by month through project completion. The sum total of the cost accounts shall be equal to the current contract value.

3. At a minimum, each schedule activity shall contain codes by:
a. Responsibility: for items of work that are not in control of the Contractor including, but not be limited to, Department, Utility, etc.

b. Phasing: identify the appropriate Maintenance of Traffic phase or subphase.

The required coding can be accomplished by WBS codes or project activity codes.

4. Key milestones as identified by Contract. At a minimum, the start and finish of each Maintenance of Traffic phase or subphase shall be represented by a milestone activity. Milestone activities shall be start or finish milestone type activities, as appropriate.

5. All non-procurement activities must be less than or equal to 20 workdays unless approved by the Engineer. Sufficient explanation for activities over 20 days shall be provided for the Engineers review and approval.

6. All activities must include adequate detailed activity descriptions to describe the work that is included. In each activity, provide sufficient detail so that the amount of work the activity involves is clearly communicated.

7. Only two open-ended activities (the first and the last) are allowed.

8. Constraints shall only be used for "project start," and "project completion." Constraints shall not override logic. The project start constraint shall be the Contract execution date. The project completion date shall be the Contract completion date plus any Contract defined holidays and suspension days included on the longest path. The use of any other imposed constraints is not allowed without specific approval by the Engineer. Any other desired constraints must be submitted to the Engineer with the rationale for the use of each desired additional constraint. If allowed by the Engineer, the rationale should be recorded in the activity's notebook field. Mandatory constraints (start and finish) violate network logic and shall not be used.

9. Out of sequence progress shall be corrected on each monthly update by modifying the schedule logic so that the logic accurately depicts the actual sequence of the work. The Retained Logic setting shall be used when calculating the schedule.

10. All changes to activities shall be recorded with a note in the activity notebook field. The notebook entry shall include, as a minimum, the date and reason for the change, as well as reference to a document wherein the Engineer acknowledges and accepts the change.

11. The use of resource leveling, either manual or automatic, is prohibited.

12. Activities shall not be deleted from the schedule. If an activity is not required, then upon approval from the Engineer, the Contractor shall provide actual start and finish dates equal to the date of the Engineer's approval, shall add the word "Removed" to the activity name and shall make a notebook entry explaining the reason for removing the activity from the planned work.

13. Activities shall be added to the schedule upon notifying the Engineer when it is determined that a Contract work element was omitted from the previous accepted Contract schedule or update or if work is added to the Contract, or to reflect a time extension in accordance with 8-7.3.2.

14. Activity names shall only be changed to reflect changes to the scope of the work element represented by the activity, not as a way to remove and replace activities. Changes to activity names shall be approved by the Engineer.

15. Unless otherwise approved by the Engineer, activity types shall be defined as milestones, level-of-effort, WBS summary or task dependent. Resource dependent type shall not be used. All activities shall have percent complete type set to duration and duration type set to either fixed duration and unit/time or fixed duration and units.

8-3.2.4 Weekly Meetings: Attend weekly meetings scheduled by the Engineer to discuss Contract progress, near term scheduled activities, including utility relocations, problems and their proposed solutions. Submit a Three-Week Planning Schedule at each weekly meeting, showing the Contract schedule activities completed in the previous week and planned for the next two weeks. Develop the Three-Week Planning Schedule in Gantt chart format from the updated Contract schedule, identifying completed, current and planned activities. Designate all activities that are controlling work items as determined by the currently accepted Contract Schedule

8-3.2.5 Float: Float is defined as the amount of time the finish of an activity can be delayed. Two kinds of float are possible: Total float is how much an activity can be delayed without affecting the finish date of the project or an intermediate deadline (constraint); it is the difference between the late finish date and the early finish date. Free float is how much an activity can be delayed without affecting its earliest successor.

Float is not for the exclusive use or benefit of either the Department or the Contractor.

Use of float suppression techniques, such as preferential sequencing (arranging critical path through activities more susceptible to Department caused delay), special lead/lag logic restraints, zero total or free float constraints, extended activity times, positive relationship lags, or imposing constraint dates other than as required by the contract, shall be cause for rejection of the project schedule or its updates. The use of finish-to-start lags greater than zero days, start-to-start lags that exceed the duration of the predecessors, or finish-to-finish lags that exceed the duration of the successor, shall not be used without the expressed approval of the

Engineer. The use of Resource Leveling, or similar software features, for the purpose of artificially adjusting activity durations to consume float and influence the critical path is expressly prohibited.

Negative float shall not be a basis for requesting time extensions. Any extension of time shall be addressed in accordance with 8-3.2. 7. Scheduled completion dates that extend beyond the Contract completion date, evidenced by negative float, may be used in computations for assessment of payment withholdings. The use of this computation is not to be construed as a means of acceleration.

8-3.2.6 Critical Path: The critical path shall be defined as the longest path and is represented by the longest logical path through the remaining activities, resulting in the earliest calculated completion date. There may be more than one longest path in the schedule. However, the use of float suppression techniques as described in 8-3.2.5 shall not be used to force the schedule to have more than one longest path.

8-3.2.7 Time Extensions: The Contractor is responsible for submitting a request for Contract Time extension in accordance with 8-7.3.2. An extension of time shall be considered only to the extent that an event impacts the completion date of the schedule such that the impacted completion date is later than the Contract completion date as adjusted previously. The Pre-event Schedule is defined as the latest accepted update of the Contract schedule, statused (actual start dates added, actual finish dates added, remaining durations adjusted) to the end of the day before the start of the event. The Post-event Schedule is defined as the accepted update of the Contract Schedule just after the end of the event and destatused (actual start dates removed, actual finish dates removed, remaining durations adjusted) to the end of the last day of the event.

As a minimum, time extension requests shall contain:

1. A descriptive summary of the event
2. A written analysis supported by a:
 - a. Pre-event Schedule
 - b. Post-event Schedule
3. Schedule submittal items 1, 2, 3 and 4 required in 8-3.2.2 shall be provided for the Pre-event and Post-event schedules

Time extensions shall not be considered for proposals that do not include full documentation described above. Once a time extension has been approved by the Engineer, the Contract completion date shall be changed accordingly.

8-3.2.7 Performance of Work: By submitting a schedule, the Contractor is making a positive assertion that the project has been and will be constructed in the order indicated in the schedule. Prosecute the work in accordance with the latest accepted Contract Schedule or update. Any costs associated with meeting milestones and completing the project within the authorized Contract Time will be borne solely by the Contractor.

8-3.2.8 As-Built Schedule: Submit an as-built schedule along with the Qualified Acceptance Letter if the Contractor elects the use of the Qualified Acceptance Letter as described in 9-8.1. The as-built schedule shall describe the actual order and start and stop times for all activities by the Contractor.

DIVISION II-CONSTRUCTION DETAILS

SECTION 102 – MAINTENANCE OF TRAFFIC (LCDOT 09/15/2023)

Article 102-4: Delete Article 102-4 in its entirety and substitute the following:

The Contractor shall submit a complete Traffic Control Plan (TCP) to the Engineer for review and approval at the preconstruction meeting. Prepare the TCP in conformance with and in the form prescribed in the current version of the FDOT Design Manual, FDOT Standard Plans – Index 102 series and the MUTCD. Indicate in the plan a TCP for each phase of activities. Take responsibility for identifying and assessing any potential impacts to a utility that may be caused by the TCP, and notify the County in writing of any such potential impacts to utilities. The TCP shall be signed and sealed by a professional engineer duly registered in the State of Florida.

Engineer's approval of the TCP does not relieve the Contractor of sole responsibility for all utility impacts, costs, delays or damages, whether direct or indirect, resulting from Contractor initiated changes in the design or construction activities from those depicted in the original Contract Documents, and which effect a change in utility work different from that shown in the utility plans, joint project agreements, interlocal agreements or utility relocation schedules.

The County reserves the right to reject any Traffic Control Plan. Obtain the Engineer's written approval before beginning work using a TCP. The Engineer's written approval is required for all modifications to the TCP. The Engineer will only allow changes to the TCP without proper documentation on an emergency basis.

Pedestrian and/or bicycle traffic must be safely and continuously maintained through, or around, work zones on highway or streets where pedestrian and bicyclists were permitted at the start of the project. The Contractor shall submit a plan for approval signed and sealed by a professional engineer duly licensed in the State of Florida for the safe passage of pedestrian and bicycle traffic prior to closure of any existing pedestrian facility. Facilities constructed to specifically provide access for pedestrians in or around work zones must be consistent with the current United States Access Board-PROWAG. The plan shall detail the rerouting of users, duration of closure and proposed construction methods for any temporary facility.

All costs for maintenance of traffic including preparation of Traffic Control Plan shall be included in the price bids for Pay Item 102-1 – Maintenance of Traffic, except as expressly provided for in other pay items in the contract.

Subarticle 102-9.15: Delete Subarticle 102-9.15 in its entirety and substitute the following:

Temporary Traffic Detection Technology – Maintain all existing actuated or traffic responsive mode signal operations for main and side street movements for the duration of the contract and restore any loss of detection within 12 hours. Video detection shall be

installed at the beginning of the project before any loss of detection has occurred. The contractor shall furnish, install and operate video detection using technology approved by Lee DOT Traffic Division and as listed in Lee County DOT Traffic Plan Specifications posted on the county website at <https://www.leegov.com/dot/traffic/trafficstandard>

SECTION 200 - PRIMING AND MAINTAINING

Article 200-8.1: The following Article shall be added in its entirety:

The Contractor shall select the particular type of base material and prime coat material that are compatible and adhere together. If the prime coat is damaged by subsequent construction equipment, including the paving machine, construction shall be stopped, and the base/prime shall be removed and replaced.

SECTION 430 – PIPE CULVERTS AND STORM SEWERS (LCDOT 10/27/2017)

Article 430-3: Articles 430-3.1 is modified as follows:

Pipe material for storm sewer or cross drain installations under pavement shall consist of steel reinforced concrete pipe in accordance with Section 449 and shall be a minimum of Class III or HE-III.

DIVISION III-MATERIALS

Reserved

EXHIBIT J
SPECIAL PROVISIONS

1. CONTRACT TIME

Contractor shall perform the contracted work fully, entirely, and in accordance with the Contract Documents within the Contract Time specified herein. If the Contractor fails to complete the work within the time stipulated, liquidated damages will apply in accordance with Standard Specification Article 8-10 Liquidated Damages for Failure to Complete the Work.

Contract Time: 400 Calendar Days Commencement Date to Final Acceptance

2. PERMITS

In accordance with Article 7-2 of Division I, permits and licenses procured by the County are listed below and attached hereto.

- a. Lee County Development Order, LDO2023-00421, approved 10-30-2023.
- b. FDEP CCCL Permit Exemption Pursuant to 161.053/161.052

3. GEOTECHNICAL INFORMATION

Certain subsurface explorations and/or testing were conducted by the County in the design of this Project. Reports summarizing this work are listed below and attached hereto. The attached information is NOT a part of the Contract Documents and is provided as a supplement for informational purposes only. The County is not responsible for the accuracy, completeness or usefulness thereof. The County makes no warranty, express or implied, for the data, interpretations or opinions contained therein. Any person or party that utilizes the attached information does so purely at its own risk, and the County disclaims any responsibility or liability for any user's reliance upon the information.

- a. 15-2562 David Douglas Associates-Estero Blvd-Segment 2.pdf
- b. 16-1668 David Douglas Associates-Estero Blvd-Segment 3 Geotechnical Report.pdf
- c. 16-1668 David Douglas Associates-Estero Blvd-Segment 4 Geotechnical Report
- d. 16-1168 David Douglas Associates-Estero Blvd-Segment 5 Geotechnical Report
- e. 16-1668 David Douglas Associates-Estero Blvd-Segment 6 Geotechnical Report 2.pdf

4. WARRANTY

If within three (3) year after Final Acceptance, any Work is found to be Defective due to base failure, Contractor shall correct it promptly after receipt of written notice from the County. Prior to Final Payment, Contractor shall provide and maintain through three (3) years after final acceptance a Warranty Bond for base failures. Contractor will repair damage caused by the failure and/or repair.

5. MATERIAL TESTING

For all naturally occurring excavated materials the County reserves the right to sample and test the material at the source at the County's cost and sole discretion. The intent of this testing would be to confirm the material produced at the site meets specification requirements prior to delivery and acceptance at the project site. The County shall notify the contractor and supplier as soon as discrepancies are noticed, if any. Once notified of material issues the Contractor and supplier shall submit to the County for approval a plan to immediately rectify material properties and consistency prior to delivery and acceptance at the project site.

6. UTILITY COORDINATION

The contractor is advised that they will be required to coordinate with other contractors within the utility construction limits and adjacent to them. This coordination could affect staff time, amounts of production, construction sequencing, space availability, etc. These coordination efforts should be considered in the preparation of the bid as they will be considered incidental to the overall utility construction and no separate payment will be provide for them.



Writer's Direct Dial Number: 239-533-8890

BOARD OF COUNTY COMMISSIONERS

Richard Wesch

County Attorney

Donna Marie Collins

County Hearing Examiner

Dave Harner, II

County Manager

Mike Greenwell

District Five

Brian Hamman

District Four

Kevin Ruane

District One

Ray Sandelli

District Three

Cecil L. Pendergrass

District Two

October 27, 2023

Karla Dias

Stantec

1821 Victoria Ave

cape coral, 33901

RE: Estero Blvd
LDO2023-00421
Type D Limited Review

Dear Karla Dias:

Your plans for the above-referenced project have been reviewed and approved for a Development Order with stipulation(s). The Development Order is granted for the following:

Improve lighting at crosswalk locations along Estero Blvd from S Crescent St. to Big Carlos Pass and from Palermo Cir. to Estrellita Dr

This approval does not relieve the development from the responsibility to obtain all other necessary Federal, State and local permits.

THIS DEVELOPMENT ORDER WILL BE VALID FOR A PERIOD OF SIX (6) YEARS AND IS SCHEDULED TO EXPIRE ON 10/27/2029.

If you have any questions concerning this matter, please contact this office.

Sincerely,

DEPARTMENT OF COMMUNITY DEVELOPMENT

Development Services Section

Electronically signed on 10/30/2023 by
Ohdet Kleinmann, Development Services Manager
Lee County Development Services

Stantec
Estero Blvd
LDO2023-00421
October 27, 2023

Page 2

Approval is subject to the following stipulation(s) and/or comment(s):

Development Services Comments:

INFORMATIONAL: Please be advised that, the review of this development order, limited or otherwise, is solely for the improvements proposed in the Lee County right-of-way within an incorporated area per LCLDC Section 10-174(4)(c), and 10-297.

STIPULATION: All fixtures installed as part of this development order must comply with the submitted Estero Photometric Study dated August 25, 2023 included in the official project file.

Please contact Brian Roberts at BRoberts@leegov.com or by calling 239-533-8890 with any questions regarding the above review comments.

From: Cramer, Kelly <Kelly.Cramer@FloridaDEP.gov>
Sent: Friday, July 14, 2023 6:28 AM
To: Dias, Karla
Subject: FW: Exemption Determination Pursuant to section 161.053 or 161.052, F.S - Estero Blvd. at

FYI



Kelly Cramer

Florida Department of Environmental Protection
Office of Resilience and Coastal Protection
Coastal Construction Control Line (CCCL)
Field Permitting and Compliance
Lee, Collier, Charlotte, & Monroe Counties
PO Box 2549, Ft. Myers, FL. 33902-2549
DEP Cell #: 239-770-7502 (NO TEXTS)
Fax #:850-412-0590



CCCL PERMITTING:

For instructions on accessing forms and submitting them, and other documents to DEP please visit our website at: <https://floridadep.gov/rcp/coastal-construction-control-line/content/coastal-construction-control-line-cccl-forms> or for more information email: CCCL@dep.state.fl.us

Gopher tortoises/Demolition with excavation/Soil Borings:

This is to inform you that you need prior authorization to perform the relocation/demolition with excavation, soil boring activities in any project seaward of the Coastal Construction Control Line. Pursuant to Section 161.053(2)(a), Florida Statutes ("F.S."), a CCCL permit must be obtained in locations seaward of the CCCL prior to: construction of any structure; excavation; removal of any beach material; alteration of existing ground elevations; driving any vehicle on, over, or across any sand dune; or damaging or causing to be damaged such sand dune or the vegetation growing thereon.

Use the link below to search sites in relation to the CCCL on your own:

<https://ca.dep.state.fl.us/mapdirect/?focus=beaches>

This site gives you additional information as well as on the left you can download GIS data for the CCCL Lines. <https://floridadep.gov/rcp/coastal-construction-control-line/content/locate-coastal-construction-control-line-cccl>

Additional web resources:

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From: Spanier, Jason <Jason.Spanier@FloridaDEP.gov>
Sent: Thursday, July 13, 2023 2:11 PM
To: Cramer, Kelly <Kelly.Cramer@FloridaDEP.gov>; Aarons, Douglas <Douglas.Aarons@FloridaDEP.gov>; Jackson, Celora A. <Celora.A.Jackson@FloridaDEP.gov>
Subject: RE: Exemption Determination Pursuant to section 161.053 or 161.052, F.S - Estero Blvd. at

Hi Kelly,

This would be exempt as I'm assuming they are mono-post but also because we don't issue stand alone CCCL permits for just lighting. Obviously, they'll want to be consistent with their own lighting ordinance, if they have one. In addition, you can always forward the link below which might be helpful.

Thanks,
Jason

<https://myfwc.com/wildlifehabitats/wildlife/sea-turtle/lighting/>



Jason M. Spanier

Office of Resilience and Coastal Protection
Florida Department of Environmental Protection
jason.spanier@floridadep.gov
Phone: (850) 510-5619



From: Cramer, Kelly <Kelly.Cramer@FloridaDEP.gov>

Sent: Thursday, July 13, 2023 1:33 PM

To: Aarons, Douglas <Douglas.Aarons@FloridaDEP.gov>; Spanier, Jason <Jason.Spanier@FloridaDEP.gov>; Jackson, Celora A. <Celora.A.Jackson@FloridaDEP.gov>

Subject: FW: Exemption Determination Pursuant to section 161.053 or 161.052, F.S - Estero Blvd. at
Importance: High

Good afternoon,

How do I handle this one? Field permit with coordination with FWC?



Kelly Cramer

Florida Department of Environmental Protection
Office of Resilience and Coastal Protection
Coastal Construction Control Line (CCCL)
Field Permitting and Compliance
Lee, Collier, Charlotte, & Monroe Counties
PO Box 2549, Ft. Myers, FL. 33902-2549
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Additional web resources:

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From: Dias, Karla <karla.dias@stantec.com>

Sent: Monday, June 19, 2023 11:22 AM

To: Cramer, Kelly <Kelly.Cramer@FloridaDEP.gov>

Subject: Exemption Determination Pursuant to section 161.053 or 161.052, F.S - Estero Blvd. at

EXTERNAL MESSAGE

This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Good Morning Kelly,

I hope you are doing well.

I am following up on my phone call and message I left for you today. Back in 2020, you determined that our traffic light project at the Estero Blvd was exempt from the CCCL General Permit. Please see attached e-mail string on our correspondence.

Lee County would like to add some turtle criteria lighting poles at the crosswalk along Estero Blvd and I would like to confirm with you that the addition of lights at the crosswalks still falls under the exemption.

Please advise, and if you have any question, please do not hesitate to contact me. **(Please see attached lighting plans with the addition of light poles at crosswalks). Light poles are added throughout the project from page L-10 thru L-66.**

Thank you again and have a great day.

Karla Dias

Civil Engineer - EIT

Direct: 239 347-5528

karla.dias@stantec.com

Stantec

1821 Victoria Avenue Suite 1

Fort Myers FL 33901-3436



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GFA INTERNATIONAL

FLORIDA'S LEADING ENGINEERING SOURCE

Report of Geotechnical Exploration

**Estero Boulevard – Segment 2
Fort Myers Beach, Lee County, Florida**

**May 2, 2016
GFA Project No.: 15-2562**

For: David Douglas Associates, Inc.





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May 2, 2016

Mr. George R. Brinson, Jr., P.E.
David Douglas Associates, Inc.
1821 Victoria Ave.
Fort Myers, FL 33901
Phone: (239) 337-3330
GB@DDAI-Engineers.com

**Site: Geotechnical Engineering Services Report
Estero Boulevard – Segment 2
Fort Myers Beach, Lee County, Florida
GFA Project # 15-2562**

Dear Mr. Brinson:

GFA International, Inc. (GFA) has completed the subsurface exploration and geotechnical engineering evaluation for the above-referenced project in accordance with the geotechnical and engineering service agreement for this project. The scope of services was completed in accordance with our Geotechnical Engineering Proposal (15-2562.00), planned in conjunction with and authorized by you.

EXECUTIVE SUMMARY

The purpose of our subsurface exploration was to classify the nature of the subsurface soils and general geomorphic conditions and evaluate their impact upon the proposed construction. This report contains the results of our subsurface exploration at the site and our engineering interpretations of these, with respect to the project characteristics described to us including providing recommendations for site preparation and the design of the foundation system.

It is our understanding the project will consist of a construction of a new roadway, drainage installation including underground exfiltration trench, and installation of a new force main or mains along +/- 7,300 feet of Estero Blvd. Documents provided to GFA at the time of this report were Preliminary Plans (30%) completed by T.Y. Lin International, 63 pages updated April 9, 2014. The recommendations provided herein are based upon the above considerations. If the project description has been revised, please inform GFA International so that we may review our recommendations with respect to any modifications.

The following was completed for this study:

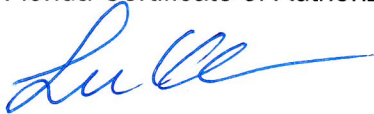
- Two (2) Standard Penetration Test (SPT) borings to depths of approximately 25 feet below ground surface (BGS).
- Fifteen (15) Hand Auger (HA) borings to depths of approximately 5 feet BGS.
- Three (3) Field Percolation Test borings to depths of approximately 5 feet BGS.
- Eight (8) Asphalt Cores with base and subbase thicknesses spaced at approximately 1,000-foot centers.

The subsurface soil conditions encountered at this site generally consists of very loose to medium dense sand (SP) and sand with silt (SP-SM) with shell fragments to the boring termination depths. Please refer to "Appendix D – Record of SPT and HA Boring Logs" for a detailed account of each boring.

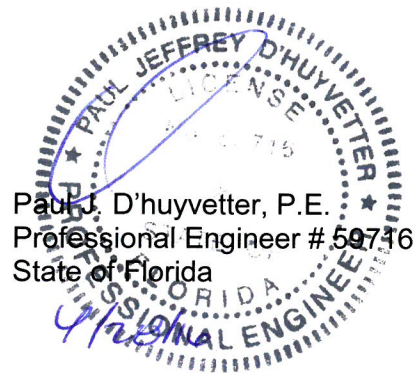
The following report presents the project information made available to us, our observation of the existing site conditions, the subsurface geotechnical information obtained during this exploration, and our recommendations on the suitability of the soils encountered for the force main replacement. Also included with this report are the results of our field and laboratory testing. The assessment of site environmental conditions for the presence of pollutants in the soil, rock, and groundwater at this site was not included as a part of our services.

We appreciate the opportunity to be of service to you on this project and look forward to a continued association. Please do not hesitate to contact us if you have any questions or comments, or if we may further assist you as your plans proceed.

Respectfully Submitted,
GFA International, Inc.
Florida Certificate of Authorization Number 4930



Lee S. Khan, E.I.
Staff Engineer



Copies: 2, Addressee
1, CD-R



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1.0 INTRODUCTION

1.1 Scope of Services

The objective of our geotechnical services was to collect subsurface data for the subject project, summarize the test results, and discuss any apparent site conditions that may have geotechnical significance for force main replacement. The following scope of service is provided within this report:

1. Prepare records of the soil boring logs depicting the subsurface soil conditions encountered during our field exploration.
2. Conduct a review of each soil sample obtained during our field exploration for classification and additional testing if necessary.
3. Analyze the existing soil conditions found during our exploration for the suitability of the soils encountered for the force main replacement.
4. Provide recommendations with respect to backfill material for the force main replacement.
5. Provide criteria and site preparation procedures to prepare the site for the proposed construction.

1.2 Project Description

It is our understanding the project will consist of a construction of a new roadway, drainage installation including underground exfiltration trench, as well as directional bore and installation of a new force main or mains along +/- 7,300 feet of Estero Blvd. Documents provided to GFA at the time of this report were Preliminary Plans (30%) completed by T.Y. Lin International, 63 pages updated April 9, 2014. The recommendations provided herein are based upon the above considerations. If the project description has been revised, please inform GFA International so that we may review our recommendations with respect to any modifications.

2.0 OBSERVATIONS

2.1 Site Inspection

A site reconnaissance was conducted by members of our engineering staff prior to mobilization of drilling equipment and crews. The purpose of the site visit was to observe the existing site conditions in order to detect any factors that may impact our studies and recommendations.

Generally, the proposed construction site is level. No standing water on the surface was observed during the time of our drilling. The tested site consists of an urban area and is landscaped.



2.2 Geology

The surficial geologic map of Lee County, Florida consists of a quartz sand blanket that overlies the Tertiary Tamiami Formation (T_t), Tertiary-Quaternary Shell Units (Q_{su}) and Quaternary (Holocene) Coastal and Estuarine Sediments (Q_h). The quartz sand blanket is generally less than 20 feet thick deposit, fine to medium grained, well sorted, with no fossils.

The oldest formation is the Tertiary Tamiami Formation (T_t). The Tamiami Formation consists of a mixture of variably sandy limestone, sands and clays containing varying percentage of phosphate grains. Fossils including mollusks, echinoids and corals are abundant. Fossil preservation varies from well preserved to molds and casts.

Overlaying the Tamiami Formation throughout much of the county are sediments indicated as Tertiary-Quaternary Shell Units (Q_{su}). These units consist of sands with subordinate limestone and clay. Fossils, including mollusks and corals, are common and well preserved.

Along the coast, Quaternary (Holocene) Coastal and Estuarine Sediments (Q_h) are founded below an altitude of approximately 5 feet. These sediments consist of quartz sand with a variable organics component. The Holocene sediments include the beach ridge and dune sands.

2.3 Field Exploration

The following was completed for soil study:

- Two (2) Standard Penetration Test (SPT) borings to depths of approximately 25 feet below ground surface (BGS).
- Fifteen (15) Hand Auger (HA) borings to depths of approximately 5 feet BGS.
- Three (3) Field Percolation Test borings to depths of approximately 5 feet BGS.

The locations of the borings performed are illustrated in "Appendix B: Test Location Plan". The Standard Penetration Test (SPT) boring method was used as the investigative tool within the borings. SPT tests were performed in substantial accordance with ASTM Procedure D-1586, "Penetration Test and Split-Barrel Sampling of Soils". This test procedure consists of driving a 1.4-inch I.D. split-tube sampler into the soil profile using a 140-pound hammer falling 30 inches. The number of blows per foot, for the second and third 6-inch increment, is an indication of soil strength.

The soil samples recovered from the soil borings were visually classified and their stratification is illustrated in "Appendix D: Record of SPT and HA Boring Logs". It should be noted that soil conditions might vary between the strata interfaces, which are shown. The soil boring data reflect information from a specific test location only. Site specific survey staking for the test locations was not provided for our field exploration. The indicated depth and location of each test was approximated based upon existing grade and estimated distances and relationships to obvious landmarks. The boring depths were selected based on our knowledge of vicinity soils and to include the zone of soil likely to be stressed by the proposed construction.



2.4 Laboratory Analysis

Soil samples recovered from our field exploration were returned to our laboratory where they were visually examined in general accordance with ASTM D-2488. Samples were evaluated to obtain an accurate understanding of the soil properties and site geomorphic conditions. After a thorough visual examination of the recovered site soils, laboratory testing was conducted to determine gradation analysis (D-422) on individual samples as well as corrosiveness of two composite samples (North Composite Sample: Sta. 1164+00 to Sta. 1194+00; South Composite Sample: Sta. 1194+00 to Sta. 1238+00) ranging from 3 to 5 feet BGS.

Bulk specific gravity tests were run on the eight asphalt cores obtained during field exploration using the saturated surface-dry procedure (AASHTO T-166). Limerock Bearing Ratio (LBR) tests were run on material obtained within approximately 5 feet of the edge of pavement using the Florida Method FM 5-515.

All laboratory tests were conducted in general accordance with ASTM, AASHTO, or Florida Methods, as applicable. The test method number for each test and the number of tests completed are presented in the following table.

TEST DESCRIPTION	NUMBER OF TESTS	ASTM TEST METHOD
Soil Classification	41	D-2488
Gradation Analysis	5	D-422
Soil Corrosiveness (pH, Resistivity, Chloride, Sulfate)	2 (North & South Composite Samples)	FM 5-550, FM 5-551, FM 5-552, and FM 5-553
Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens	8	AASHTO T-166
Limerock Bearing Ratio (LBR)	5	FM 5-515

Bag samples of the soil encountered during our field exploration will be held in our laboratory for your inspection for 90 days and then discarded unless we are notified otherwise in writing.

2.4.1 Gradation Tests

A total of five (5) gradation tests were performed on samples obtained during the field exploration program. Material passing the No. 200 sieve is considered “fines” and will be either silt or clay. The percent passing the No. 200 sieve, for the tested samples, ranged from 1.7 to 10.3 percent, this resulted in the sampled material to be considered poorly graded. A summary of the grain size distribution curve is presented in “Appendix H: Gradation Test Results”.



2.4.2 Soil Corrosiveness

This test method covers the laboratory determination for the minimum resistivity of a soil. The principal use of this test method is to determine a soil's corrosivity and thereby identify the conditions under which the corrosion of metals in soil may be sharply accentuated. Soil corrosiveness testing was completed on two (2) composite samples ranging from 3 – 5 feet BGS. Composite Sample – 1 was obtained from material between Station Number 1164+00 to Station Number 1194+00 (North Section of Segment 2). Composite Sample – 2 was obtained from material between Station Number 1194+00 to Station Number 1238+00 (South Section of Segment 2).

The soil samples obtained were considered non-marine structures and classified under the criteria for substructure environmental classifications. The pH (>7.0), chloride (<500 ppm), and sulfate (<1000 ppm) fell under the slightly aggressive classification but due to the resistivity results (<1000 Ohm-cm), **Composite 1 is deemed to be extremely aggressive.**

The pH (>7.0), chloride (<500 ppm), and sulfate (<1000 ppm) fell under the slightly aggressive classification but due to the resistivity results (<1000 Ohm-cm), **Composite 2 is deemed to be extremely aggressive.** The laboratory results for soil corrosiveness can be found in “Appendix I: Soil Corrosive Series Test Results”.

For design purposes we recommend using a classification of “Extremely Aggressive” for this project.

2.5 Geomorphic Conditions

Boring logs derived from our field exploration are presented in “Appendix B: Boring Locations and Soil Profiles”. The boring logs depict the observed soils in graphic detail. The Standard Penetration Test borings indicate the penetration resistance, or N-values, logged during the drilling and sampling activities. The classifications and descriptions shown on the logs are generally based upon visual characterizations of the recovered soil samples. All soil samples reviewed have been depicted and classified in general accordance with the Unified Soil Classification System, modified as necessary to describe typical southwest Florida conditions. See “Appendix E: Discussion of Soil Groups”, for a detailed description of various soil groups.

The subsurface soil conditions encountered at this site generally consists of very loose to medium dense sand (SP) and sand with silt (SP-SM) with shell fragments to the boring termination depths. Please refer to “Appendix D – Record of SPT and HA Boring Logs” for a detailed account of each boring.

2.6 Hydrogeological Conditions

On March 8, 2016, the groundwater table was encountered in our SPT borings at depths of approximately 4 to 5.5 feet below the existing ground surface. On March 28, 2016, the groundwater table was encountered in our HA borings at depths of approximately 2.75 to 4 feet below the existing ground surface. The groundwater table will fluctuate depending upon tidal events.



Located in “Appendix F: Hydrologic Soils Map” are the following descriptive characteristics of the two (2) types of soil surveys encountered during the drilling operations based on the soil survey of Lee County, Florida, published by the United States Department of Agriculture:

Canaveral-Urban Land Complex (4)

About 50 to 70 percent of each area of the complex consists of nearly level Canaveral soils or areas of Canaveral soils that have been reworked or reshaped, but which still are recognizable as Canaveral soils. Typically, Canaveral soils have a surface layer of lack and dark gray fine sand that is mixed with shell fragments. Beneath the surface layer, to a depth of 80 inches or more, are layers of light brownish gray and light gray fine sand mixed with shell fragments.

About 20 to 30 percent of each area is urban land. This land is used for houses, streets, driveways, buildings, parking lots, and other related uses.

In undrained areas, the water table is at a depth of 18 to 40 inches for a period of 2 to 6 months in most years. Drainage systems have been established in most areas, however, and the depth to the water table is dependent on the drainage system.

Captiva Fine Sand (5)

This is a nearly level, poorly drained soil in sloughs. Slopes are smooth to concave and range from 0 to 1 percent. Typically, the surface layer is black fine sand about 6 inches thick. The underlying layers are fine sand mixed with shell fragments to a depth of 80 inches or more. The upper 9 inches is pale brown with light gray streaks, the next 11 inches is light gray with many pale brown mottles, the next 4 inches is light gray with about 30 percent multicolored shell fragments, and the lower 50 inches is light gray.

In most years, under natural conditions, this soil has a water table within a depth of 10 inches for 1 to 2 months. The water table is at a depth of 10 to 40 inches for 10 months during most years. In some years, the soil is covered by standing water for several days. Permeability is very rapid.

2.6.1 Exfiltration Testing

GFA International performed three Field Percolation (PERC) tests spaced at approximately 2,500-foot centers. The exfiltration testing was performed in accordance with the SFWMD Constant-Head Open-Hole Test Method. The results are presented below.

PERC Test – 1	
Depth (ft)	Soil Description
0 – 5	Light Gray Sand (A-3; SP) with Traces of Shell Fragments
Water table: 3 feet below grade.*	
Saturated K = 33.7 Ft./Day – Ft. of Head	

*Water Table is Tidally Influenced.



PERC Test – 2	
Depth (ft)	Soil Description
0 – 5	Gray Sand (A-3; SP) with Some Shell Fragments
Water table: 4.6 feet below grade.*	
Saturated K = 36.0 Ft./ Day – Ft. of Head	

*Water Table is Tidally Influenced.

PERC Test – 3	
Depth (ft)	Soil Description
0 – 5	Gray Sand (A-3; SP) with Some Shell Fragments
Water table: 4.5 feet below grade.*	
Saturated K = 18.2 Ft./ Day – Ft. of Head	

*Water Table is Tidally Influenced.

The location of the exfiltration test completed is illustrated in Appendix B: "Test Location Plan".

3.0 ENGINEERING EVALUATION AND RECOMMENDATIONS

3.1 General

The geotechnical evaluations for the proposed construction site are based on the subsurface soil and groundwater conditions encountered during this study, the project information made available, our site observations, and our experience in the vicinity. The test data has been evaluated using established geotechnical parameters of the soils recorded at this site, laboratory test results, and the observed performance of similar soil types.

Based on the soil conditions encountered in the performed borings, the near surface soils do not meet the below mentioned Lee County Technical Specifications for select fill. The water main replacement may be designed according to the recommendations and site preparations as discussed below with a fill material meeting the specifications.

3.2 Pipe Bedding and Initial Backfill (Force Main)

According to the Lee County Technical Specifications, Section 2223, Backfilling, a select fill material shall be used for pipe bedding and initial backfill from top of bedding to 1 foot over the top of pipes. The select fill shall be compacted to not less than 95 percent of the maximum dry density as determined by ASTM D-1557.

Pipe bedding containing very fine sand, uniformly graded sands and gravel, silt, soft earth, or other material that have a tendency to flow under pressure when wet is unacceptable.

Based on the laboratory test results the majority of the near surface soils consist of poorly graded clean sands to slightly silty sands. Material from on-site excavation does not meet the gradation specification for select fill and cannot be used for pipe bedding and initial backfill.

In addition, four of the five samples tested meet the gradation specification for common fill.



3.3 Pipe Bedding and Initial Backfill (Drainage System)

Pipe bedding and initial backfill shall be in accordance with Florida Department of Transportation (FDOT) for Road and Bridge Construction.

3.4 Trench Excavation

Where trench excavations are required, trenches shall be sufficiently wide and deep to allow proper installation of pipes. We recommend about 12 inches clear of the pipe on either side at any point. Boulders, rocks or other hard unyielding material shall be excavated to a depth of 12 inches below the bottom of the pipe elevation.

All trench excavations with side walls greater than 5 feet in depth shall be sloped or shored to protect workers. Material suitable for backfilling, clean to silty or clayey sands, shall be stockpiled far enough from the trench edge to avoid overloading slides or cave-ins. We recommend that distance shall be greater or equal to a depth of the trench.

Sloping is accomplished by cutting the banks of the excavation back to the angle of repose. The angle of repose for “in-situ” fine sands and sands with silt or clay will be about 26 to 30 degrees respectively. Normally, this angle would be not less than 1.5 feet on the horizontal to each foot on the vertical. When the excavation will be performed in the area not large enough to slope to the angle of repose, shoring must be erected to prevent a cave-in. The shoring can be installed in the form of sheeting or sliding trench shield.

In a location, or where buildings are some distance away, structure protection is not involved; sheeting will not require extreme rigidity and can be used without bracing. Wales and rakers may be omitted. The strut or raker system also creates obstruction in the excavation area which is undesirable. Sheeting system can be constructed as Z piles with an embedment depth below the bottom not less than 1/3 of the excavation with a sheet pile hammer or with vibratory driving devices.

3.5 Trench Backfill

Trench backfill material shall be clean earth fill composed of sand, clay and sand, sand and stone, crushed stones or other soils approved by a professional engineer. The trench backfilling shall be accomplished from the top of the initial backfill to the ground surface. The backfill, unless otherwise specified, shall be compacted to 95% of maximum density, as determined by ASTM D-1557.

When trenches are cut in pavements or areas to be paved, compaction shall be in accordance with FDOT for Road and Bridge Construction.

Based on the soil profiles, presented in “Appendix B: Boring Locations and Soil Profiles”, the material from on-site excavation that will contain sands and silt or gravel size limestone fragments may be used for the trench backfill. The organic soils, if encountered during construction, are not suitable and shall not be used as a trench backfill material.



4.0 DEWATERING OF EXCAVATIONS

The high groundwater tables, if encountered during construction, in the vicinity of excavations shall be reduced to prevent water inflow into excavations. Each excavation shall be kept dry during subgrade preparation and continually thereafter until installation of the pipe. The dewatering will be required to maintain groundwater elevation at least 24 inches below the bottom at all times to prevent bottom disturbance or failure. Trench sheeting will provide some kind of water barrier around the excavations. However, it will be impossible to create a nearly impervious water barrier.

The surface water and groundwater inflow into excavation shall be removed and disposed. If construction will be performed during a dry season and the groundwater table will be low, the small water inflow into excavations can be pumped out from sump holes (small pits) installed below the bottom of the excavations. During a wet season, when the groundwater table will be around 1 foot below the ground surface, a system of wellpoints shall be installed to depress the water table. This system may consist of a single row of closely spaced wellpoints installed for shallow excavations. For deeper excavations, multiple rows of wellpoints may be required. For excavations that are shored with sheet piles, dewatering may be required outside the sheet piles with additional dewatering at the bottom of the excavation on the inside the sheetpiles.

5.0 SITE PREPARATION PROCEDURES

Site preparation procedures should begin with the removal of existing debris, vegetation, or other unsuitable materials within and beyond the excavation construction.

The organic soils, if encountered during construction, shall be removed and replaced to a required level (the future project specification) with a compacted suitable fill. The suitable fill material shall contain less than 10 percent of fines passing the No. 200 sieve, not contain clay balls and rock fragments greater than 3 inches in diameter.

An adequate dewatering system shall be installed to maintain the water table 2 feet or more below the maximum depth of excavation. The continuous dewatering shall be provided until the pipeline is completed and backfill is above the water table before beginning of the dewatering. When a professional engineer approves the discontinuing of the dewatering, the rate of pumping shall slowly decrease, allowing the water level to rise slowly.

The soils that extend below the water table should be allowed to dry prior to placement as a backfill material and compaction. This can be accomplished by stockpiling the material and allowing it to drain, or by spreading it in relatively thin lifts on the surface and allowing it to dry prior to compaction. The silty or sands with clay may require moisture conditioning so that the soil moisture content at the time of compaction is at or near the optimum moisture content.

The sandy soils may be excavated with normal heavy earthmoving equipment such as large hydraulic excavator. Trenching through the hard limestone can be performed with a rock trencher as it is indicated in the previous paragraphs.

Trench bottoms should be compacted with a small roller or vibratory plate compactor prior to pipe placement. Any loose or soft yielding areas detected during compaction of the trench bottoms should either be further compacted to at least 95% of maximum dry density or removed and replaced with a select fill and compacted to 95% of maximum dry density. Bedding stone may be used in lieu of select fill.



During the compaction operation, a geotechnical engineer or an engineering technician working under his direction should observe the soils to verify that the exposed soils are suitable and that unsuitable soils have been removed. Samples of the backfill materials should be obtained to determine the grain size distribution, its maximum dry density and optimum moisture content in the laboratory in accordance with ASTM D-1557 (Modified Proctor Test).

6.0 ASPHALT EVALUATION

6.1 Asphalt Thickness

Eight (8) asphalt cores with shallow hand auger borings were taken at alternating lanes (southbound or northbound) along Estero Boulevard in Fort Myers Beach starting from the Red Coconut RV Park (Sta. 1167+50) and finishing at Bayland Road (Sta. 1235+50). The location of each individual asphalt core can be found in “Appendix B: Test Location Plan”.

GFA International encountered an average core depth of 9-inches with a range of five (5) to eight (8) lifts per asphalt core. A stratum was initiated from top of existing asphalt (Lift 1) down to the bottom of asphalt (ex.: Lift 6). Asphalt Core AC-5 experienced complete debonding between Lift 1 and Lift 2 due to possibility of intrusion of sands in tack coat prior to placement of asphalt. A summary of the test results are shown in “Appendix J: Asphalt/ Shellrock Thickness by Core Determination”. “Appendix M: Asphalt Core Photographs” confirms the debonding occurred between Lifts 1 and 2 in AC-5, as well as the condition of all cores.

6.2 Base and Subbase Thicknesses

Beneath the asphalt, a layer of shellrock base was encountered. This material consists of sand, shell and shellrock fragments. This shell rock varied in thickness from 3-½ to 9-5/8 inches.

Beneath the shellrock base is a layer of sand with traces of shell and gravel that ranged from 4-½ to 15-1/8 inches. It is unclear if this material is naturally occurring or a mechanically mixed, stabilized subbase. This material is darker than the underlying sands and is most likely a mixed in place stabilized material or an import fill material.

Under the sand with shell and gravel layer, we encountered relatively clean sands (SP, SP-SM) to the boring termination depths. These sands are notably lighter in color (light gray to white) and in our opinion, these sands are naturally occurring. The depths of each layer encountered are illustrated in “Appendix D: Record of SPT and HA Boring Logs”.

6.3 Limerock Bearing Ratio (LBR) Testing

A total of five (5) samples were obtained within approximately 5 feet of the edge of pavement to conduct Limerock Bearing Ratio (LBR) tests using the Florida Method FM 5-515. Based on the laboratory test results, we recommend an LBR value of 70 for shell stabilized base with a structural coefficient of 0.10 to be utilized for pavement design.

For design purposes, we recommend using a structural coefficient for Type B Stabilized subbase, LBR 30 material (0.06). For complete test results, refer to “Appendix L – Limerock Bearing Ratio (LBR) Results”.



6.4 Asphalt Bulk Specific Gravity Testing

A total of eight (8) asphalt core samples were tested using American Association of State Highway and Transportation (AASHTO) T-166 “Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens”. The average density of asphalt resulted in 133.2 pounds per cubic foot (PCF). Due to the complete debonding between Lifts 1 and 2 in asphalt core AC-5, only Lift 1 was tested for bulk specific gravity. Asphalt core AC-6 had noticeable air voids within Lift 2.

For complete test results, refer to “Appendix K – Asphalt Bulk Specific Gravity”.

7.0 REPORT LIMITATIONS

This consulting report has been prepared for the exclusive use of the current project owners and other members of the design team for the Estero Boulevard – Segment 2 located on Estero Boulevard in Fort Myers Beach, Lee County, Florida. This report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied. The evaluation submitted in this report, is based in part upon the data collected during a field exploration, however, the nature and extent of variations throughout the subsurface profile may not become evident until the time of construction. If variations then appear evident, it may be necessary to reevaluate information and professional opinions as provided in this report. In the event changes are made in the nature, design, or locations of the proposed structure, the evaluation and opinions contained in this report shall not be considered valid, unless the changes are reviewed and conclusions modified or verified in writing by GFA International. GFA is not responsible for damage caused by soil improvement and/or construction activity vibrations related to this project. GFA is also not responsible for damage concerning drainage or moisture related issues for the proposed or nearby structures.

8.0 BASIS FOR RECOMMENDATIONS

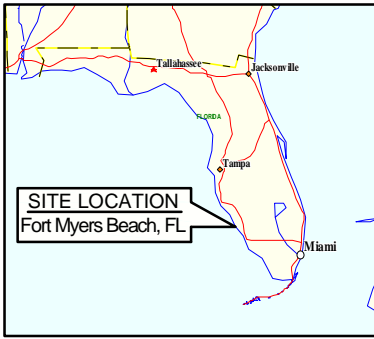
The analysis and recommendations submitted in this report are based on the data obtained from the tests performed at the locations indicated on the attached figure in “Appendix B: Test Location Plan”. This report does not reflect any variations, which may occur between borings. While the borings are representative of the subsurface conditions at their respective locations and for their vertical reaches, local variations characteristic of the subsurface soils of the region are anticipated and may be encountered. The delineation between soil types shown on the soil logs is approximate and the description represents our interpretation of the subsurface conditions at the designated boring locations on the particular date drilled.

Any third party reliance of our geotechnical report or parts thereof is strictly prohibited without the expressed written consent of GFA International. The methodology (ASTM D-1586) used in performing our borings and for determining penetration resistance is specific to the sampling tools utilized and does not reflect the ease or difficulty to advance other tools or materials.



Appendix A - Vicinity Map

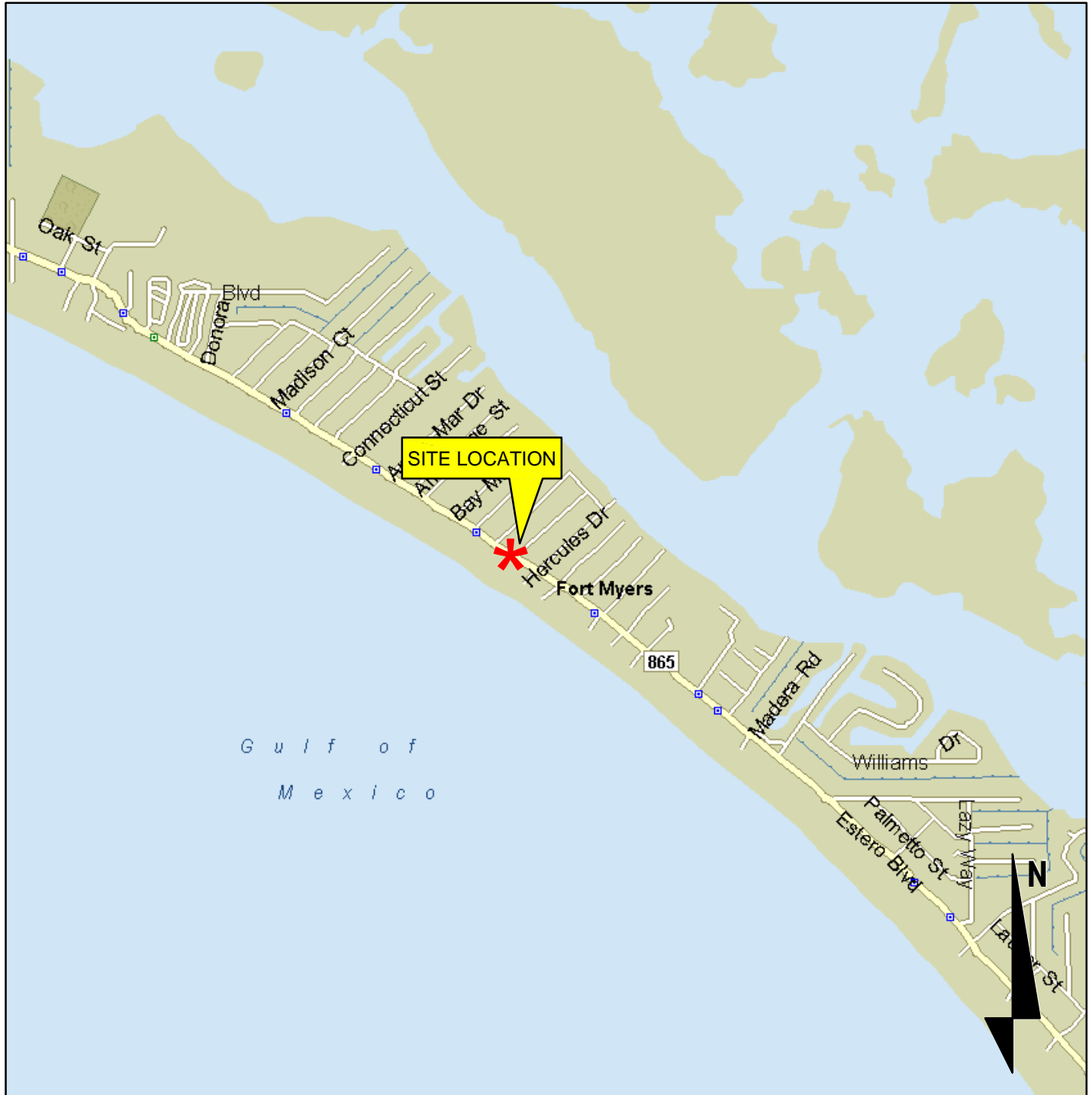




VICINITY MAP

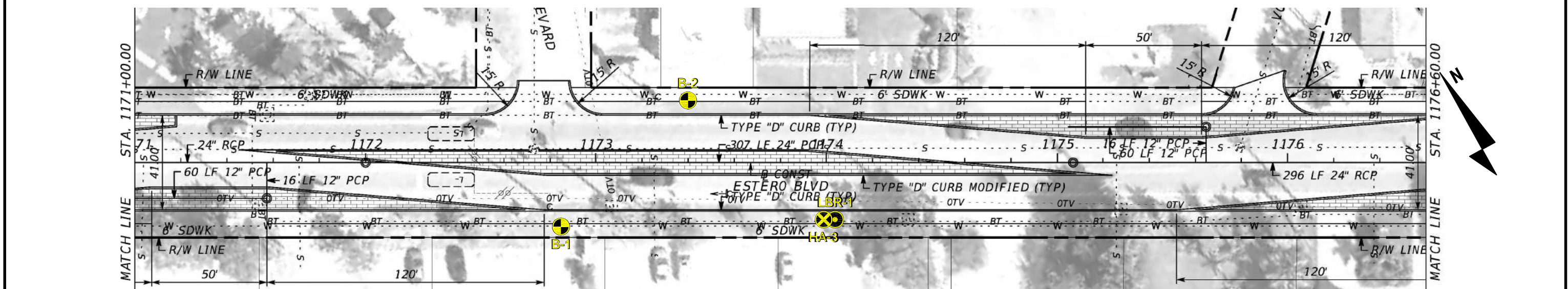
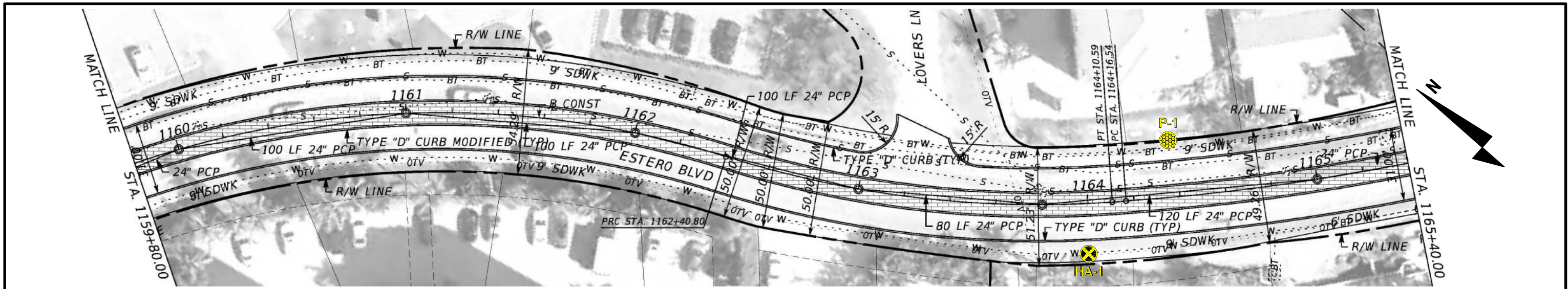
Estero Boulevard

Fort Myers Beach, Lee County, Florida
GFA International Project No.: 15-2562



Appendix B – Test Location Plan





- NOTES:
- SPT BORING LOCATION
 - ASPHALT CORE LOCATION
 - LBR TEST LOCATION
 - PERCOLATION TEST LOCATION
 - HAND AUGER LOCATION
 - BASE DRAWING PROVIDED BY CLIENT

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

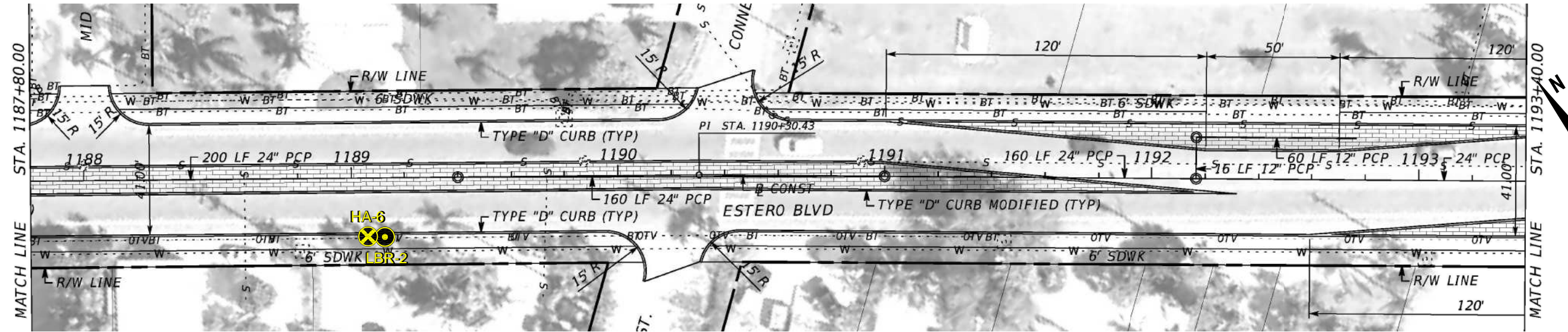
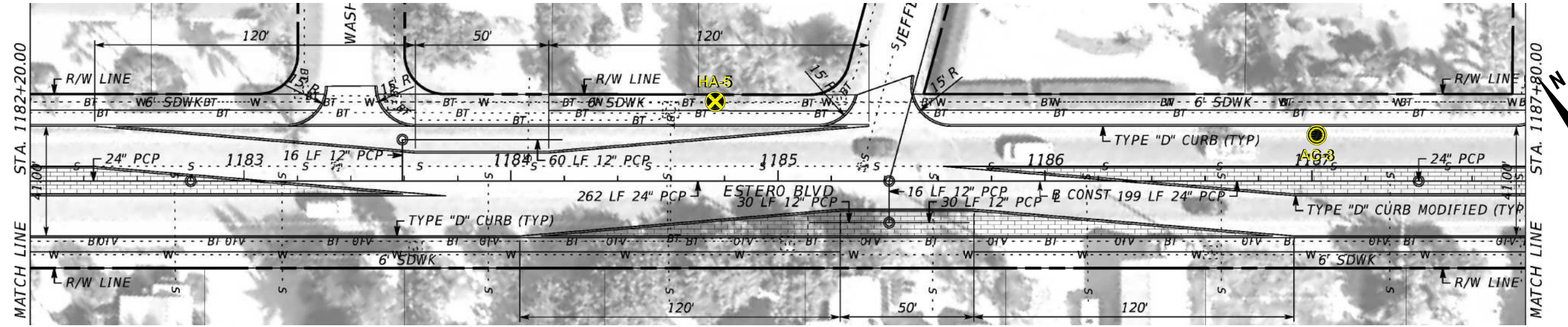
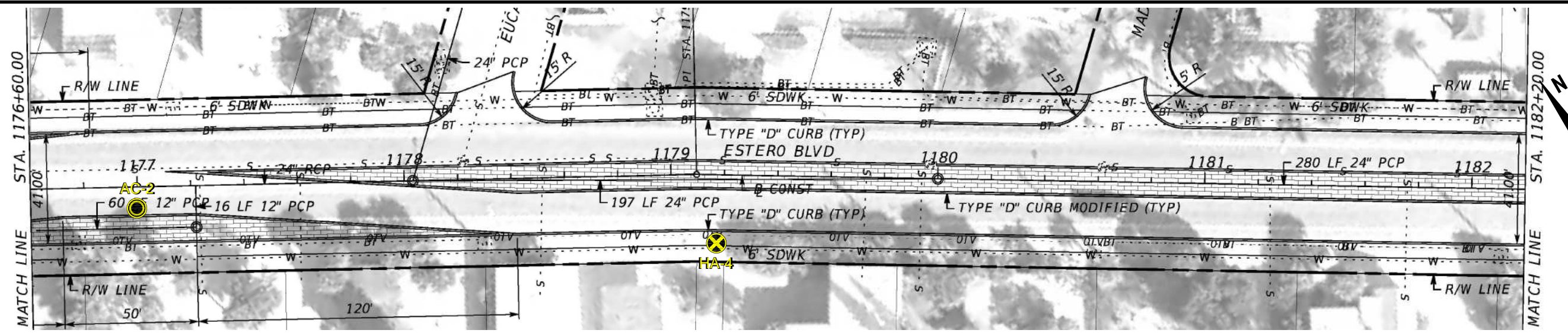
GFA INTERNATIONAL, INC.
 5851 COUNTRY LAKES DRIVE
 FORT MYERS, FLORIDA 33905

 PAUL J. D'HUYVETTER, P.E. #59716

LEE COUNTY DEPARTMENT OF PUBLIC WORKS		
ROAD NAME	COUNTY NAME	PROJECT ID
ESTERO BOULEVARD	LEE	15-2562

TEST LOCATION PLAN
ESTERO BOULEVARD
FORT MYERS BEACH, LEE COUNTY, FLORIDA

DRAWN BY:
 LSK



- NOTES:
- SPT BORING LOCATION
 - ASPHALT CORE LOCATION
 - LBR TEST LOCATION
 - PERCOLATION TEST LOCATION
 - HAND AUGER LOCATION
 - BASE DRAWING PROVIDED BY CLIENT

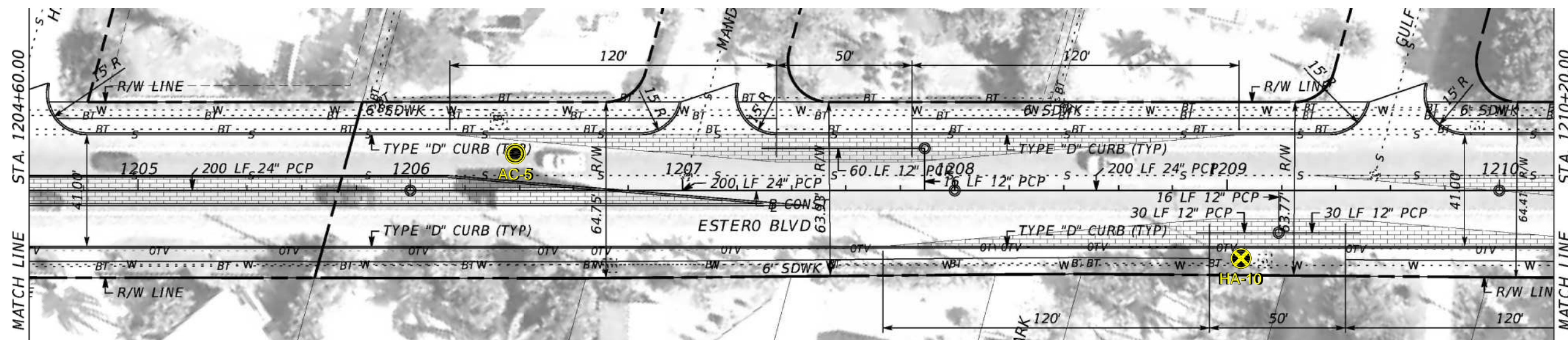
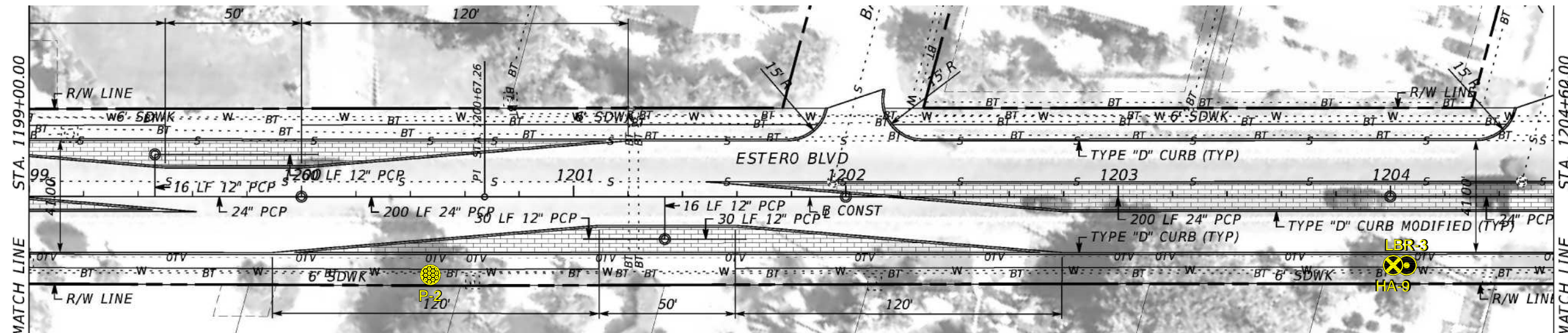
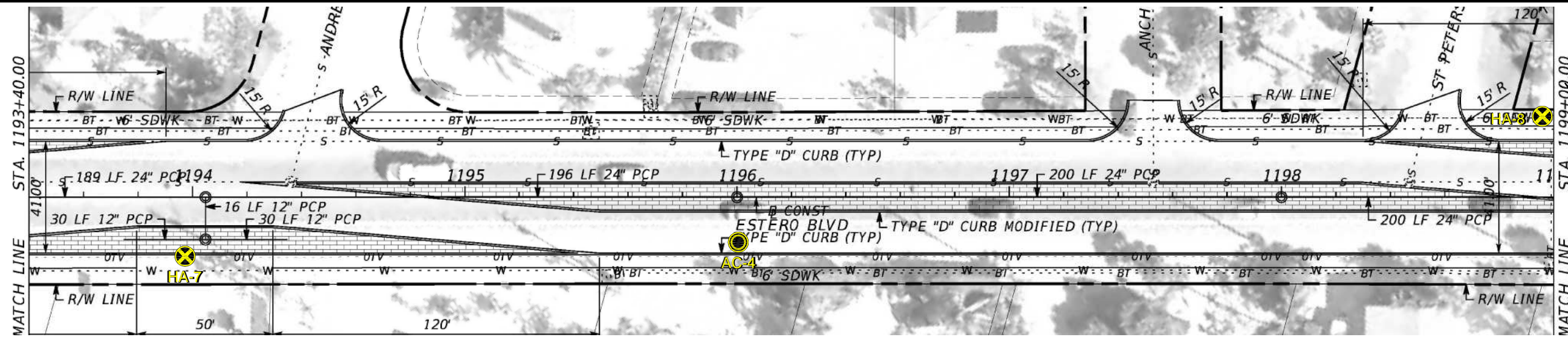
REVISIONS					
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 PAUL J. D'HUYVETTER, P.E. #59716

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ESTERO BOULEVARD	LEE	15-2562

TEST LOCATION PLAN
 ESTERO BOULEVARD
 FORT MYERS BEACH, LEE COUNTY, FLORIDA

DRAWN BY:
 LSK



- NOTES:
- SPT BORING LOCATION
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 - PERCOLATION TEST LOCATION
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 - BASE DRAWING PROVIDED BY CLIENT

REVISIONS					
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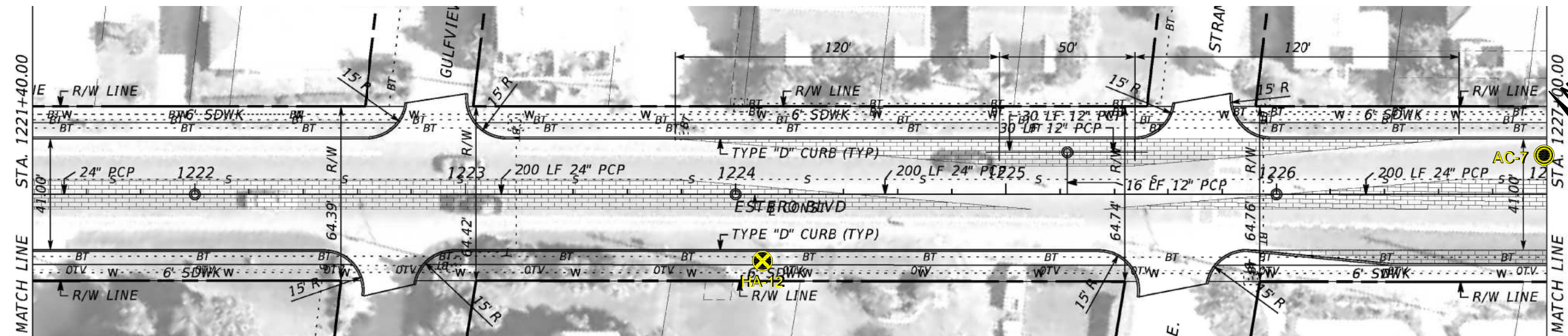
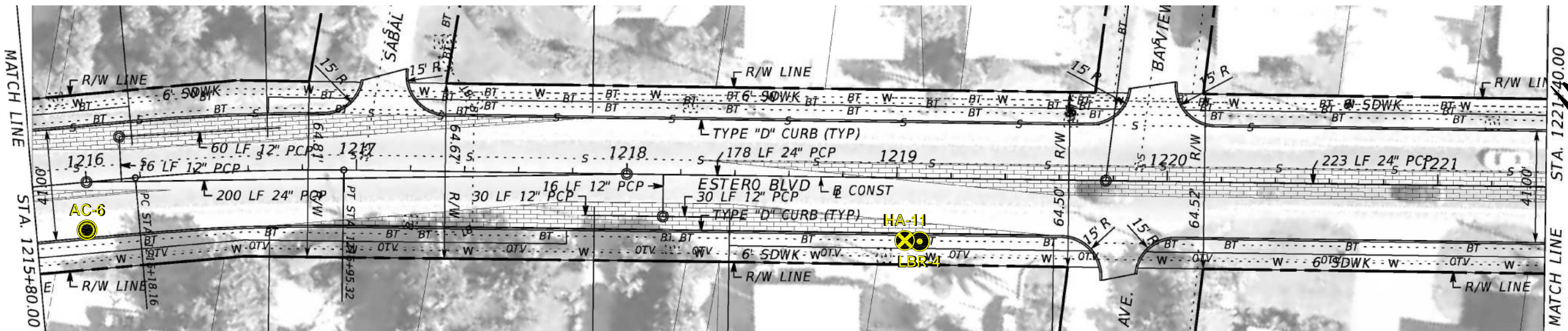
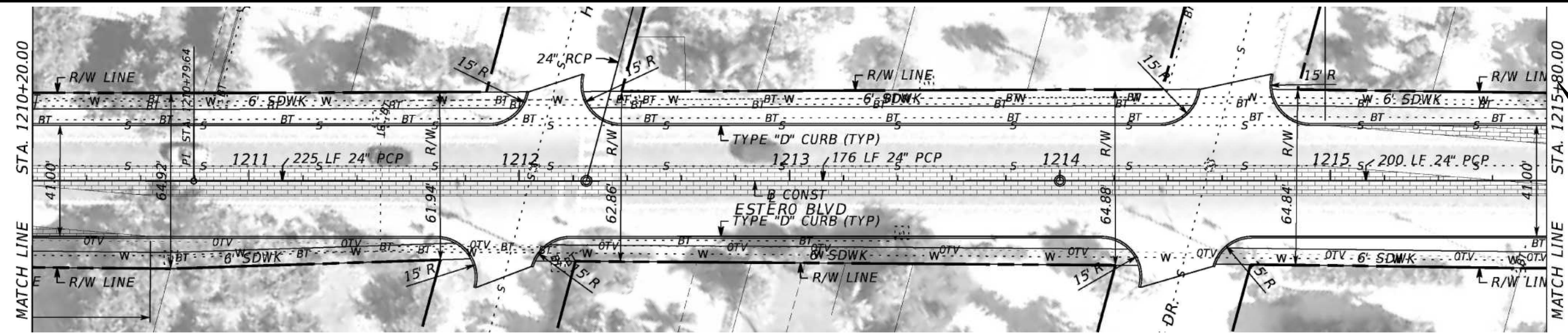
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TEST LOCATION PLAN
ESTERO BOULEVARD
FORT MYERS BEACH, LEE COUNTY, FLORIDA

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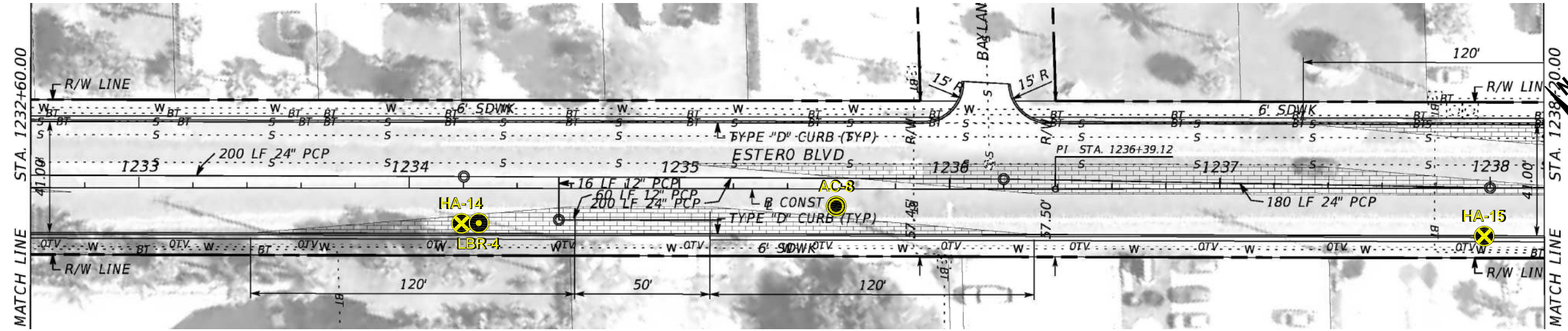
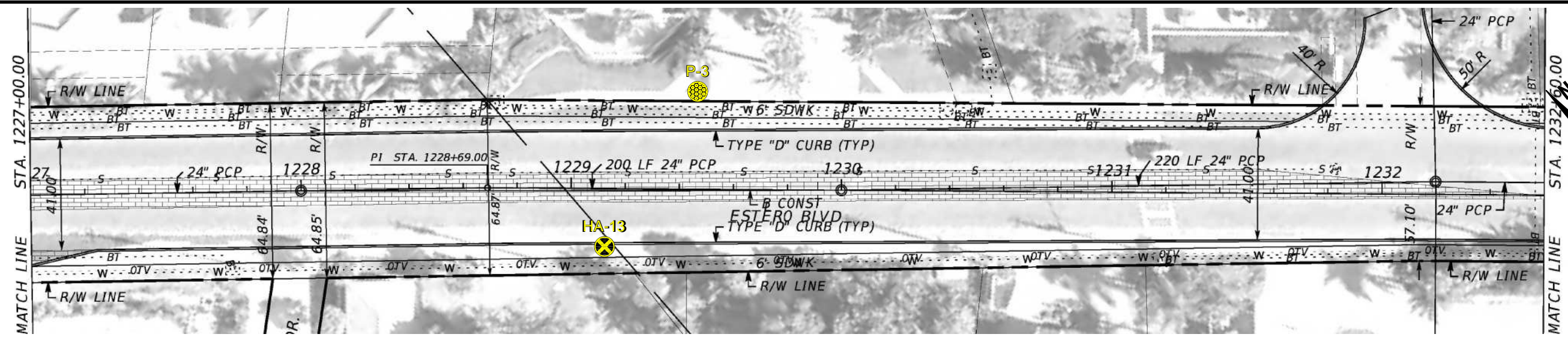
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TEST LOCATION PLAN
ESTERO BOULEVARD
FORT MYERS BEACH, LEE COUNTY, FLORIDA

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- NOTES:
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TEST LOCATION PLAN
ESTERO BOULEVARD
FORT MYERS BEACH, LEE COUNTY, FLORIDA

DRAWN BY:
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Appendix C - Notes Related to Borings



**NOTES RELATED TO
RECORDS OF TEST BORING AND
GENERALIZED SUBSURFACE PROFILE**

1. Groundwater level was encountered and recorded (if shown) following the completion of the soil test boring on the date indicated. Fluctuations in groundwater levels are common; consult report text for a discussion.
2. The boring location was identified in the field by offsetting from existing reference marks and using a cloth tape and survey wheel.
3. The borehole was backfilled to site grade following boring completion, and patched with asphalt cold patch mix when pavement was encountered.
4. The Record of Test Boring represents our interpretation of field conditions based on engineering examination of the soil samples.
5. The Record of Test Boring is subject to the limitations, conclusions and recommendations presented in the Report text.
6. "Field Test Data" shown on the Record of Test Boring indicated as 11/6 refers to the Standard Penetration Test (SPT) and means 11 hammer blows drove the sampler 6 inches. SPT uses a 140-pound hammer falling 30 inches.
7. The N-value from the SPT is the sum of the hammer blows required to drive the sampler the second and third 6-inch increments.
8. The soil/rock strata interfaces shown on the Records of Test Boring are approximate and may vary from those shown. The soil/rock conditions shown on the Records of Test Boring refer to conditions at the specific location tested; soil/rock conditions may vary between test locations.

9. Relative density for sands/gravels and consistency for silts/clays are described as follows:

SPT	CPT	SANDS/GRAVELS	SPT	CPT	SILTS/CLAYS
BLOWS/FOOT	KG/CM ²	RELATIVE DENSITY	BLOWS/FOOT	KG/CM ²	CONSISTENCY
0-4	0-16	Very loose	0-1	0-3	Very soft
5-10	17-40	Loose	2-4	4-9	Soft
11-30	41-120	Medium Dense	5-8	10-17	Firm
31-50	over 120	Dense	9-15	18-31	Stiff
over 50		Very Dense	16-30	32-60	Very stiff
			31-50	over 60	Hard

10. Grain size descriptions are as follows:

NAME	SIZE LIMITS	PROPORTION	ADJECTIVE
Boulder	12 Inches or more	Up to 10%	with a trace
Cobbles	3 to 12 Inches	10 to 30%	with some
Coarse Gravel	¾ to 3 Inches		
Fine Gravel	No. 4 sieve to ¾ inch		
Coarse Sand	No. 10 to No. 4 sieve		
Medium Sand	No. 40 to No. 10 sieve		
Fine Sand	No. 200 to No. 40 sieve		
Fines	Smaller than No. 200 sieve		

11. Definition of Descriptive Terms of Fines:

PROPORTION	ADJECTIVE	APPROXIMATE ROOT DIAMETER	ADJECTIVE
Up to 10%	with a trace	Less than 1/32"	Fine roots
10 to 30%	with some	1/32" to ¼"	Small roots
30 to 50%	with	¼" to 1"	Medium roots
		Greater than 1"	Large roots




Appendix D – Record of SPT and HA Boring Logs



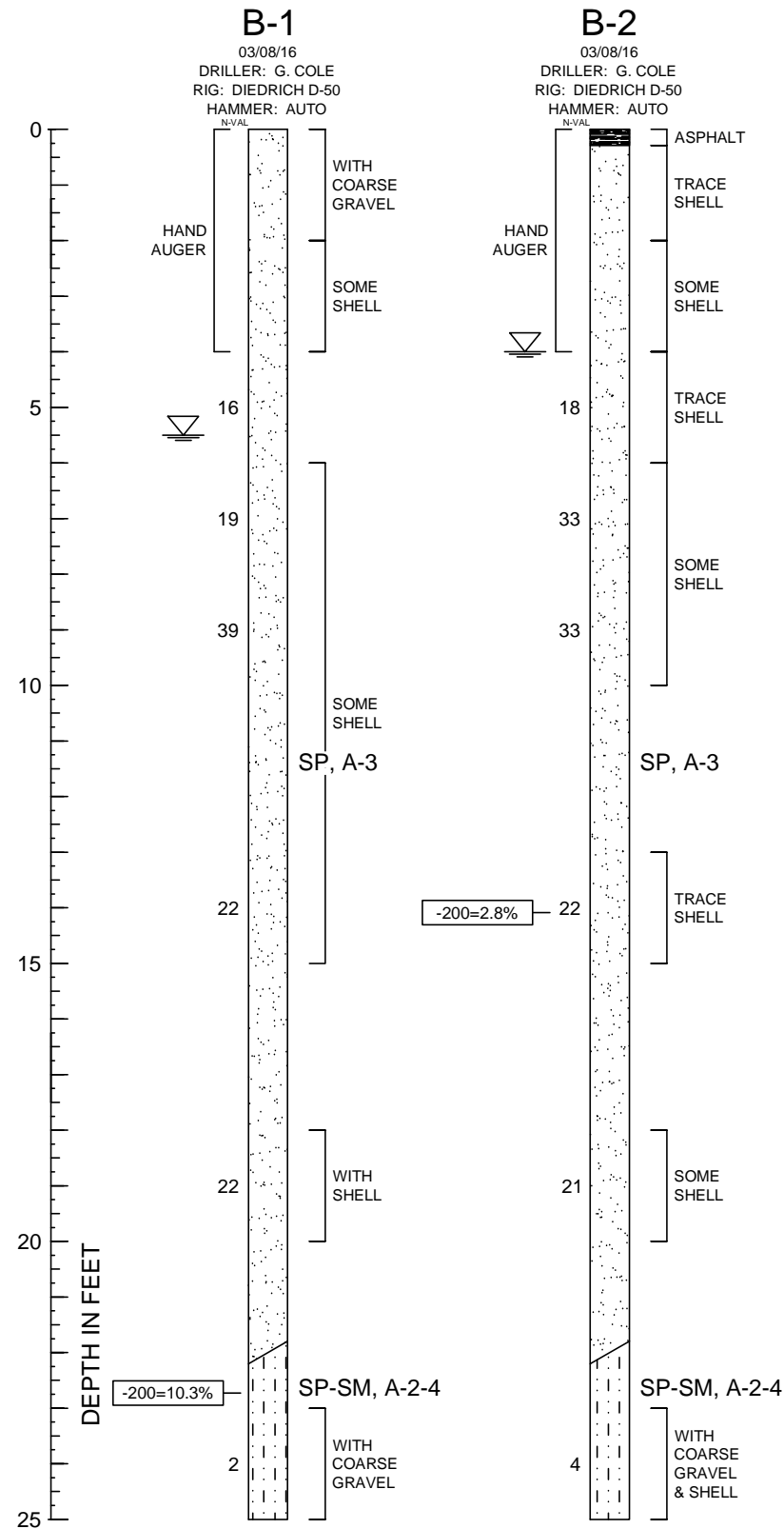
TEST LOCATION PLAN





NOTES:  SPT BORING LOCATION
 BASE MAP OBTAINED FROM GOOGLE EARTH
 SCALE IS AN APPROXIMATION AND MAY NOT BE ACCURATE




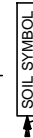
SOIL PROFILES



SOIL LEGEND

-  Light Gray to Gray, SAND, Medium Dense to Dense (SP/ A-3)
-  Light Gray to White, SAND WITH SILT, Very Loose to Loose (SP-SM/ A-2-4)

SOIL PROFILE LEGEND NOTES

B-X = BORING NUMBER
 N = SPT TEST VALUE
 SOIL TYPE X
 GROUND WATER LEVEL
 SOIL SYMBOL
 INDICATES PRACTICAL REFUSAL TO BORING EQUIPMENT
 H = INDICATES GRADUAL TRANSITION IN SOIL TYPES
 N - STANDARD PENETRATION RESISTANCE TEST (SPT) VALUE. NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12-INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
 ALL ELEVATIONS BASED ON EXISTING GROUND LEVEL.
 WOH = WEIGHT OF HAMMER
 LFC = LOSS OF DRILLING FLUID CIRCULATION

SOIL DESCRIPTION

CORRELATION OF N-VALUES WITH RELATIVE DENSITY AND CONSISTENCY - GRANULAR MATERIALS -
 SPT N-VALUES
 BLOW/FOOT RELATIVE DENSITY
 LESS THAN 3 VERY LOOSE
 3 - 8 LOOSE
 9 - 24 MEDIUM DENSE
 25 - 40 DENSE
 GREATER THAN 40 VERY DENSE

APPROXIMATE FINES CONTENT

PERCENTAGE	MODIFIERS
5% TO 15%	SLIGHTLY SILTY OR CLAYEY
16% TO 25%	SILTY OR CLAYEY
26% TO 49%	VERY SILTY OR CLAYEY

SILTS AND CLAYS -
 SPT N-VALUES
 BLOW/FOOT CONSISTENCY
 LESS THAN 1 VERY SOFT
 1 - 3 SOFT
 4 - 6 FIRM
 7 - 12 STIFF
 13 - 24 VERY STIFF
 GREATER THAN 24 HARD

APPROXIMATE SAND/GRAVEL CONTENT

PERCENTAGE	MODIFIERS
5% TO 15%	SLIGHTLY SANDY OR GRAVELLY
16% TO 25%	SANDY OR GRAVELLY
26% TO 49%	VERY SANDY OR GRAVELLY

CORRELATION OF N-VALUES WITH HARDNESS OF LIMEROCK -

LIMEROCK -
 SPT N-VALUES
 BLOW/FOOT HARDNESS
 LESS THAN 20 VERY SOFT
 20 - 49 SOFT
 50 - 100 MEDIUM HARD
 50 FOR 2 TO 5" MODERATELY HARD
 50 FOR 0 TO 2" HARD

APPROXIMATE ROOT CONTENT

PERCENTAGE	MODIFIERS
5% - 10%	TRACE
11% - 20%	TRACE TO SOME
21% - 40%	SOME
41% - 60%	AND

Boring No.	Stratum	Depth (ft)	Unit Weight (moist) (pcf)	Angle of Internal Friction (°)	Cohesion Cu (psf)	USCS/ AASHTO
B-1	1	0 - 23	108	32	-	SP/ A-3
	2	23 - 25	100	28	-	SP-SM/ A-2-4
B-2	1	0 - 23	108	32	-	SP/ A-3
	2	23 - 25	100	28	-	SP-SM/ A-2-4

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

 GFA INTERNATIONAL, INC.
 5851 COUNTRY LAKES DRIVE
 FORT MYERS, FLORIDA 33905
 PAUL J. D'HUYVETTER, P.E. #59716

LEE COUNTY DEPARTMENT OF PUBLIC WORKS
 ROAD NAME COUNTY NAME PROJECT ID
 ESTERO BOULEVARD LEE 15-2562

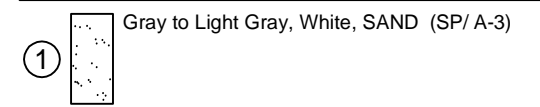
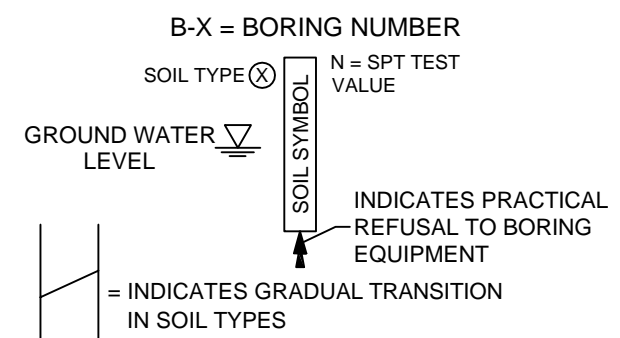
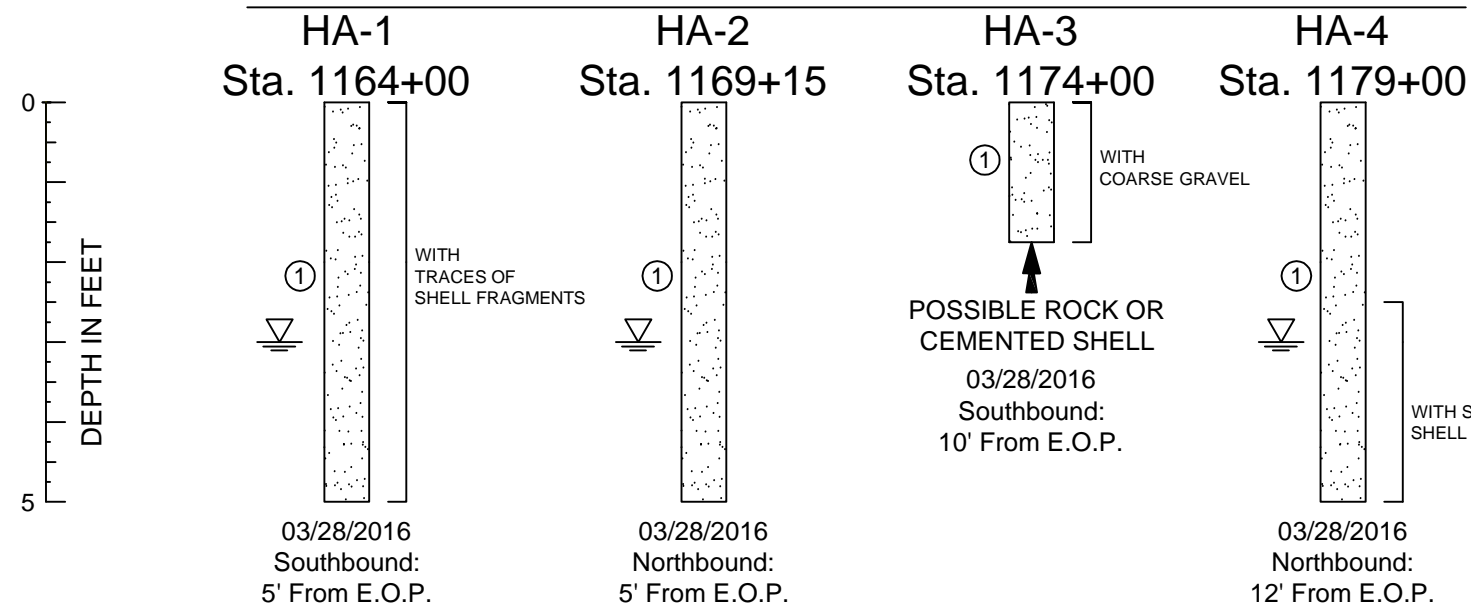
REPORT OF TEST BORINGS
 ESTERO BOULEVARD
 FORT MYERS BEACH, LEE COUNTY, FLORIDA

DRAWN BY:
 LSK

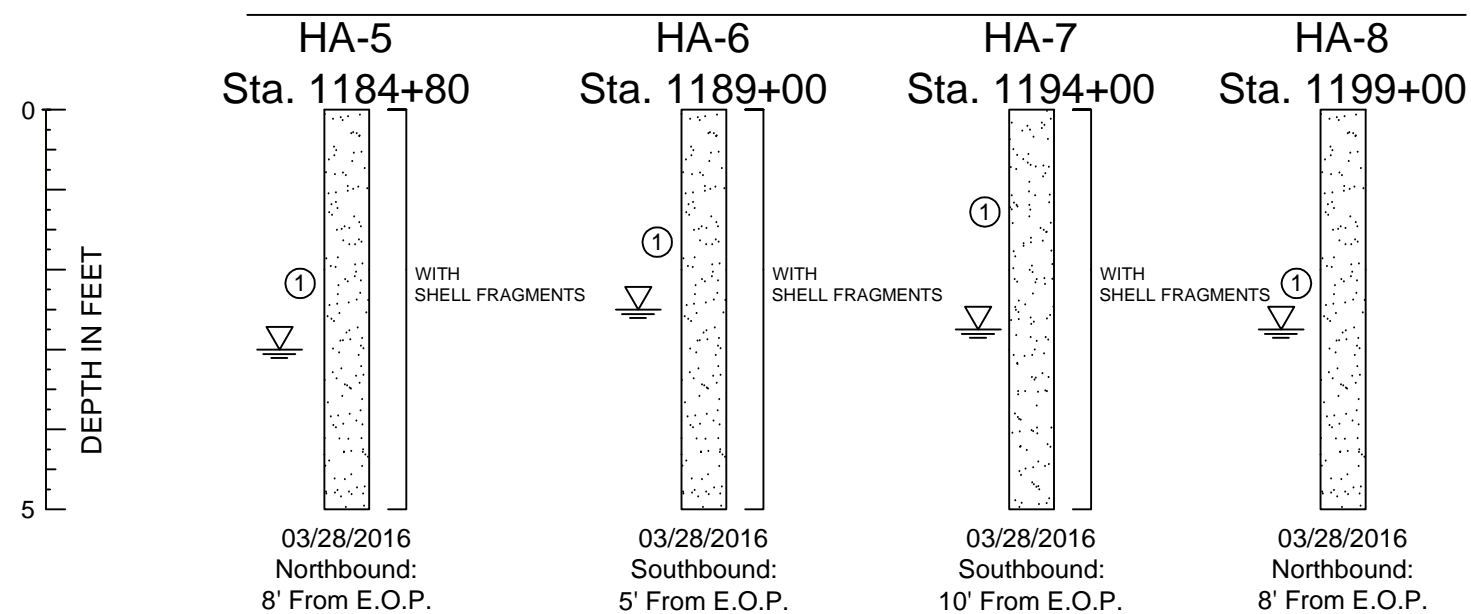
SOIL PROFILES

SOIL PROFILE LEGEND

SOIL LEGEND



NOTES:
N - STANDARD PENETRATION RESISTANCE TEST (SPT) VALUE. NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12-INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
WOH - BORING INTERVAL ADVANCED UNDER WEIGHT OF HAMMER.
LFC - LOSS OF DRILLING FLUID CIRCULATION.



SOIL CLASSIFICATION

CORRELATION OF N - VALUES WITH RELATIVE DENSITY AND CONSISTENCY				CORRELATION OF N - VALUES WITH HARDNESS DESCRIPTION	
COHESIONLESS SOIL		SILTS AND CLAYS		LIMEROCK	
N - VALUE	RELATIVE DENSITY	N - VALUE	CONSISTENCY	N - VALUE	RELATIVE DENSITY
0 - 2	VERY LOOSE	UNDER 1	VERY SOFT	0 - 19	VERY SOFT
3 - 8	LOOSE	1 - 3	SOFT	20 - 49	SOFT
9 - 24	MEDIUM DENSE	4 - 6	FIRM	50 - 100	MEDIUM HARD
25 - 40	DENSE	7 - 12	STIFF	50 FOR 3 TO 5"	MODERATELY HARD
OVER 40	VERY DENSE	13 - 24	VERY STIFF	50 FOR 0 TO 2"	HARD
		OVER 24	HARD		

APPROXIMATE FINES CONTENT		APPROXIMATE SAND/ GRAVEL CONTENT		APPROXIMATE ROOT CONTENT	
MODIFIERS		MODIFIERS		MODIFIERS	
5% TO 15%	SLIGHTLY SILTY OR SLIGHTLY CLAYEY	5% TO 15%	SLIGHTLY SANDY OR SLIGHTLY GRAVELLY	5% TO 10%	TRACE
16% TO 25%	SILTY OR CLAYEY	16% TO 25%	SANDY OR GRAVELLY	11% TO 20%	TRACE TO SOME
26% TO 49%	VERY SILTY OR VERY CLAYEY	26% TO 49%	VERY SANDY OR VERY GRAVELLY	21% TO 40%	SOME
				41% TO 60%	AND

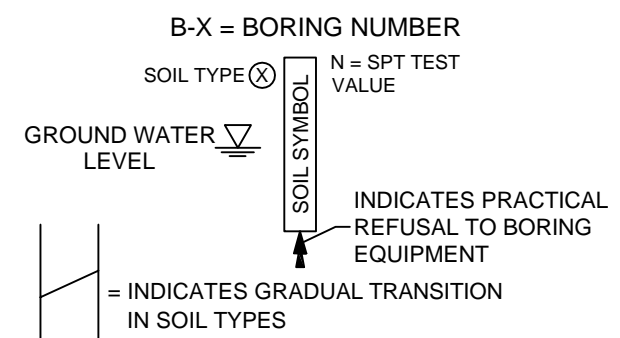
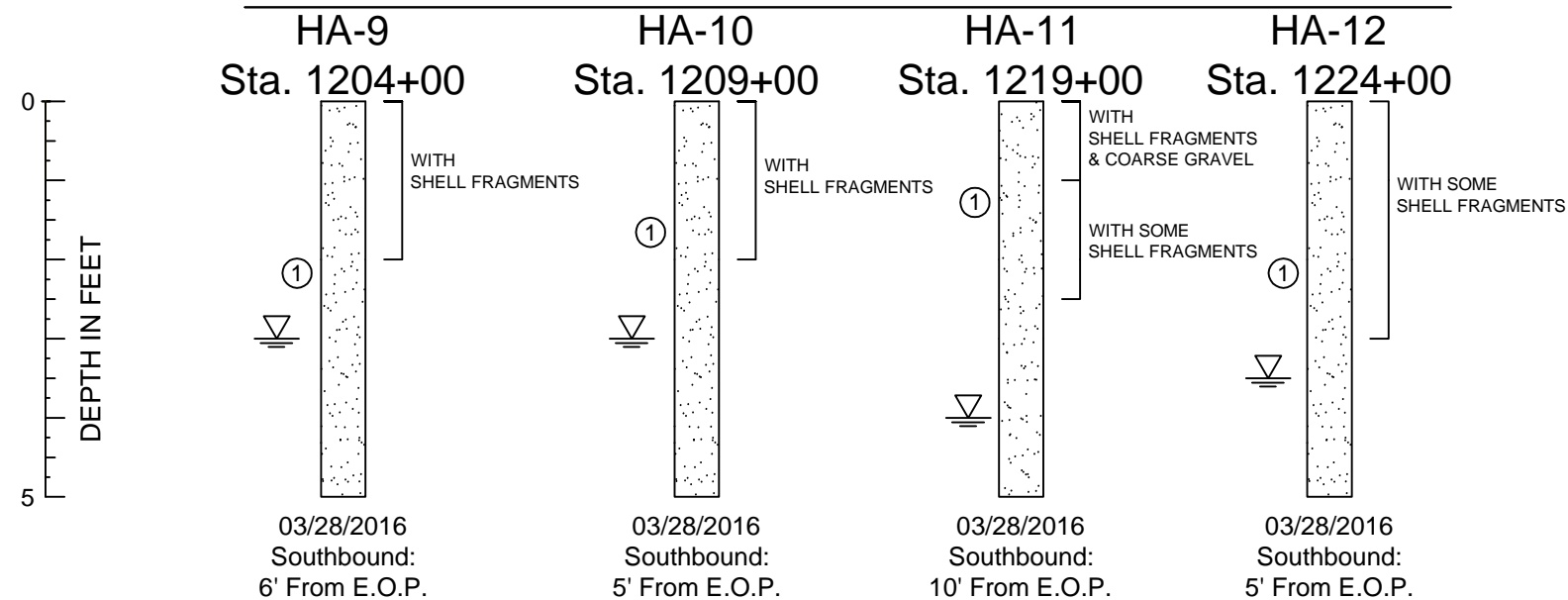
RECORD OF TEST BORINGS

	GFA International, Inc. 5851 Country Lakes Drive Fort Myers, Florida 33905 239-489-2443 * TeamGFA.com	Client: David Douglas Associates, Inc.	Date: 04/13/2016
		Project: Estero Boulevard - Segment 2 Fort Myers Beach, Lee County, Florida Approved by: PJD	Job No: 15-2562 Drawn By: LSK

SOIL PROFILES

SOIL PROFILE LEGEND

SOIL LEGEND



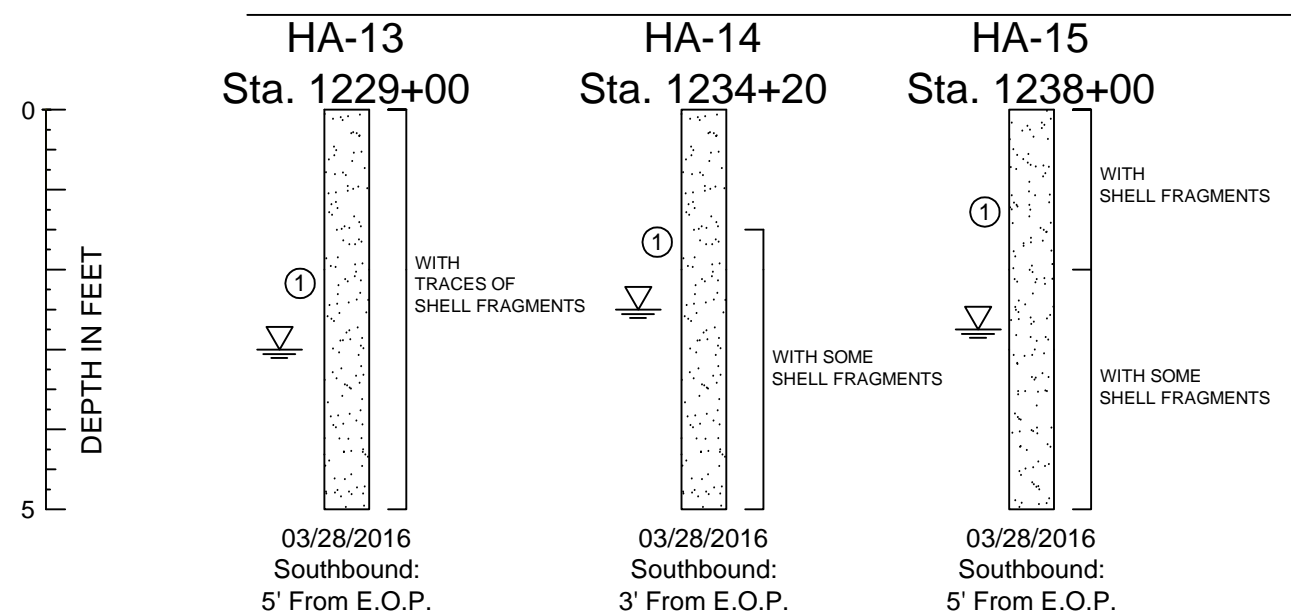
① Gray to Light Gray, White, SAND (SP/ A-3)

NOTES:

N - STANDARD PENETRATION RESISTANCE TEST (SPT) VALUE. NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12-INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).

WOH - BORING INTERVAL ADVANCED UNDER WEIGHT OF HAMMER.

LFC - LOSS OF DRILLING FLUID CIRCULATION.




SOIL CLASSIFICATION

CORRELATION OF N - VALUES WITH RELATIVE DENSITY AND CONSISTENCY				CORRELATION OF N - VALUES WITH HARDNESS DESCRIPTION	
COHESIONLESS SOIL		SILTS AND CLAYS		LIMEROCK	
N - VALUE	RELATIVE DENSITY	N - VALUE	CONSISTENCY	N - VALUE	RELATIVE DENSITY
0 - 2	VERY LOOSE	UNDER 1	VERY SOFT	0 - 19	VERY SOFT
3 - 8	LOOSE	1 - 3	SOFT	20 - 49	SOFT
9 - 24	MEDIUM DENSE	4 - 6	FIRM	50 - 100	MEDIUM HARD
25 - 40	DENSE	7 - 12	STIFF	50 FOR 3 TO 5"	MODERATELY HARD
OVER 40	VERY DENSE	13 - 24	VERY STIFF	50 FOR 0 TO 2"	HARD
		OVER 24	HARD		

APPROXIMATE FINES CONTENT		APPROXIMATE SAND/ GRAVEL CONTENT		APPROXIMATE ROOT CONTENT	
MODIFIERS		MODIFIERS		MODIFIERS	
5% TO 15%	SLIGHTLY SILTY OR SLIGHTLY CLAYEY	5% TO 15%	SLIGHTLY SANDY OR SLIGHTLY GRAVELLY	5% TO 10%	TRACE
16% TO 25%	SILTY OR CLAYEY	16% TO 25%	SANDY OR GRAVELLY	11% TO 20%	TRACE TO SOME
26% TO 49%	VERY SILTY OR VERY CLAYEY	26% TO 49%	VERY SANDY OR VERY GRAVELLY	21% TO 40%	SOME
				41% TO 60%	AND

RECORD OF TEST BORINGS

	GFA International, Inc. 5851 Country Lakes Drive Fort Myers, Florida 33905 239-489-2443 * TeamGFA.com	Client: David Douglas Associates, Inc. Project: Estero Boulevard - Segment 2 Fort Myers Beach, Lee County, Florida Approved by: PJD	Date: 04/13/2016 Job No: 15-2562 Drawn By: LSK

Appendix E – Discussion of Soil Groups



DISCUSSION OF SOIL GROUPS: AASHTO CLASSIFICATION

COARSE GRAINED SOILS

- **Group A-1:** The typical material of this group is a well-graded mixture of stone fragments or gravel, coarse sand, fine sand, and a nonplastic or feebly-plastic soil binder. However, this group also includes stone fragments, gravel, coarse sand, volcanic cinders, etc., without a soil binder.
 - **Subgroup A-1-a:** Includes those materials consisting predominantly of stone fragments or gravel, either with or without a well-graded binder of fine material.
 - **Subgroup A-1-b:** Includes those materials consisting predominantly of coarse sand, either with or without a well-graded soil binder.

- **Group A-3:** The typical material of this group is fine beach sand or fine desert-blow sand without silty or clay fines, or with a very small amount of nonplastic silt. This group also includes stream-deposited mixtures of poorly-graded fine sand and limited amounts of coarse sand and gravel.

- **Group A-2:** This group includes a wide variety of “granular” materials which are borderline between the materials falling in Groups A-1 and A-3, and the silt-clay materials of Groups A-4, A-5, A-6, and A-7. It includes all materials containing 35% or less passing a No. 200 (75- μ m) sieve which cannot be classified in Groups A-1 or A-3, due to the fines content or the plasticity indexes, or both, in excess of the limitations for those groups.
 - **Subgroups A-2-4 and A-2-5:** Include various granular materials containing 35% or less passing a No. 200 (75- μ m) sieve and with a minus No. 40 (425- μ m) portion having the characteristics of Groups A-4 and A-5, respectively. These groups include such materials as gravel and coarse sand with silt contents or plasticity indexes in excess of the limitations of Group A-1 and fine sand with nonplastic-silt content in excess of the limitations of Group A-3.
 - **Subgroups A-2-6 and A-2-7:** Include materials similar to those described under Subgroups A-2-4 and A-2-5, except that the fine portion contains plastic clay having the characteristics of the A-6 or A-7 group, respectively.



FINE GRAINED SOILS

- **Group A-4:** The typical material of this group is a nonplastic or moderately plastic silty soil usually having 75% or more passing a No. 200 (75- μ m) sieve. This group also includes mixtures of fine silty soil and up to 64% of sand and gravel retained on a No. 200 sieve.
- **Group A-5:** The typical material of this group is similar to that described under Group A-4, except that it is usually of diatomaceous or micaceous character and may be highly elastic as indicated by the high liquid limit.
- **Group A-6:** The typical material of this group is a plastic clay soil usually having 75% or more passing a No. 200 (75- μ m) sieve. This group also includes mixtures of fine clayey soil and up to 64% of sand and gravel retained on a No. 200 sieve. Materials of this group usually have a high volume change between wet and dry states.
- **Group A-7:** The typical material of this group is similar to that described under Group A-6, except that it has the high liquid limits characteristic of Group A-5 and may be elastic as well as subject to high-volume change.
 - **Subgroup A-7-5:** Includes those materials with moderate plasticity indexes in relation to the liquid limit and which may be highly elastic as well as subject to considerable volume change.
 - **Subgroup A-7-6:** Includes those materials with high plasticity indexes in relation to liquid limit and which are subject to extremely high volume change.

HIGHLY ORGANIC SOILS

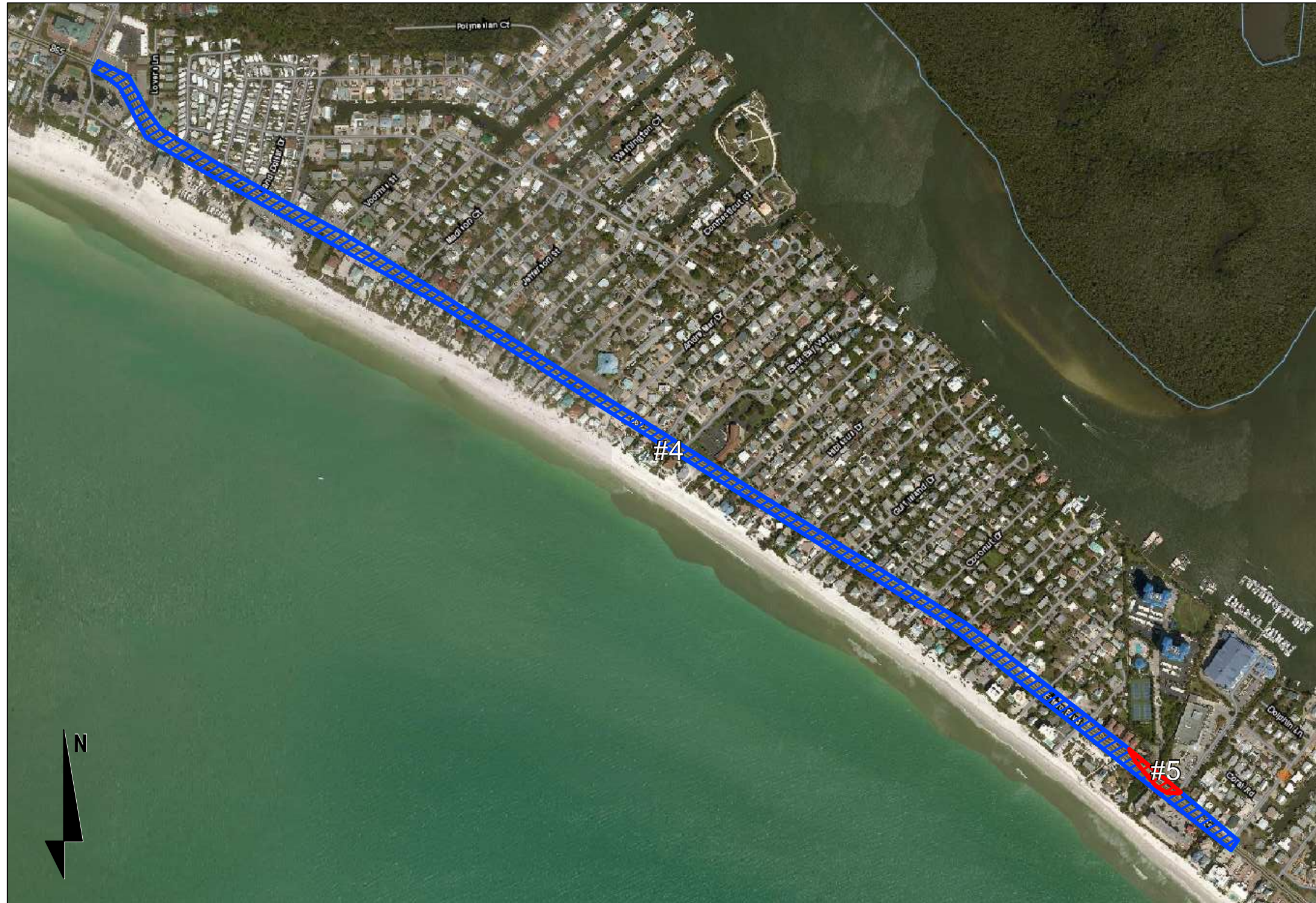
- **Group A-8:** Highly organic soils (peat or muck) may be classified in this group. Classification of these materials is based on visual inspection and is not dependent on the percentage passing the No. 200 (75- μ m) sieve liquid limit, or plasticity index. The material is composed primarily of partially decayed organic matter, generally has a fibrous texture, a dark brown or black color, and an odor of decay. These organic materials are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.



Appendix F – Hydrologic Soils Map



HYDROLOGIC SOILS MAP



NOTES:

 #4 CANAVERAL-URBAN LAND COMPLEX

 #5 CAPTIVA FINE SAND

MAP OBTAINED FROM USDA WEB SOIL SURVEY WEBSITE

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



GFA INTERNATIONAL, INC.
5851 COUNTRY LAKES DRIVE
FORT MYERS, FLORIDA 33905

PAUL J. D'HUYVETTER, P.E. #59716

LEE COUNTY DEPARTMENT OF TRANSPORTATION

ROAD NAME	COUNTY NAME	PROJECT ID
ESTERO BOULEVARD	LEE	15-2562

HYDROLOGIC SOILS MAP
ESTERO BOULEVARD
FORT MYERS BEACH, LEE COUNTY, FLORIDA

DRAWN BY:

LSK

Appendix G – Roadway Soil Survey



LEE COUNTY
DEPARTMENT OF PUBLIC WORKS
ESTERO BOULEVARD

DATE OF SURVEY : APRIL 11, 2016
SURVEY MADE BY : GFA INTERNATIONAL, INC.
SUBMITTED BY : PAUL J. D'HUYVETTER

ROAD NAME : ESTERO BOULEVARD
CITY : FORT MYERS BEACH
COUNTY : LEE

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS
SURVEY BEGINS: STA. 1164+00 SURVEY ENDS: STA. 1238+00

STRATUM NO.	ORGANIC CONTENT			SIEVE ANALYSIS RESULTS % PASS				ATTERBERG LIMITS (%)			AASHTO GROUP	DESCRIPTION	CORROSION SERIES TEST RESULTS					
	NO. OF TESTS	% ORGANIC	% MOISTURE CONTENT	NO. OF TESTS	4 MESH	10 MESH	60 MESH	200 MESH	NO. OF TESTS	LIQUID LIMIT			PLASTIC INDEX	NO. OF TESTS	RESISTIVITY ohms-cm	CHLORIDE ppm	SULFATES ppm	pH
1	-	-	-	4	87.6-99.0	81.7-96.3	67.4-91.5	1.7-8.8	-	-	-	A-3	Gray to Light Gray, White, clean SAND to SAND WITH SILT with Traces of Shell Fragments (SP; SP-SM)	-	-	-	-	-
2	-	-	-	1	60.8	57.4	46.0	10.3	-	-	-	A-2-4	Light gray, gray, silty SAND with trace to some shell fragments (SM)	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	Composite Soil 1 - Borings 1-2, 3-5ft BGS	1	9.29	20	40.1	7.79
4	-	-	-	-	-	-	-	-	-	-	-	-	Composite Soil 2 - Borings 1-2, 3-5ft BGS	1	8.97	30	70	7.76

NOTES:

EMBANKMENT AND SUBGRADE MATERIAL
STRATA BOUNDARIES ARE APPROXIMATE

Ground water was encountered at depths of about 4 to 5 feet at boring locations at the time of our drilling.

The material from Stratum Numbers 1 & 2 appears satisfactory for use in the embankment when utilized in accordance with Index 505.

It has been the experience of the Department, within projects constructed within this general geographical area, that although preliminary borings did not indicate a presence of rock, rock was encountered while performing underground installations. Therefore, the contractor should consider the increased cost of all underground work activities while preparing the bid.

All costs of rock 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 with fill material or special handling of rock.

REVISIONS						GFA GFA INTERNATIONAL, INC. 5851 COUNTRY LAKES DRIVE FORT MYERS, FLORIDA 33905 PAUL J. D'HUYVETTER P.E. #59716	LEE COUNTY DEPARTMENT OF TRANSPORTATION			ROADWAY SOIL SURVEY ESTERO BOULEVARD FORT MYERS BEACH, LEE COUNTY, FLORIDA	DRAWN BY: LSK
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NAME	COUNTY NAME	PROJECT ID		
						ESTERO BOULEVARD	LEE	15-2562			

Appendix H – Gradation Test Results





SIEVE ANALYSIS

Project: Estero Boulevard - Segment 2 **Project No.:** 15-2562
Client: David Douglass Associates, Inc. **Lab No.:** S001
Location: Station 1169+00: Hand Auger Boring HA-2 (0 - 3')
Sampled By: Lee Khan **Date Sampled:** 3/28/2016
Tested By: Jeremy Perminter **Date Tested:** 4/8/2016
Material Description: Gray SAND (SP)

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	315.9	312.9	3.0	0.9%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	0	0	0.0%	100.0%
#4	4.76	9.3	9.3	2.9%	97.1%
#10	2.00	18.9	28.2	8.9%	91.1%
#16	1.19	9.6	37.8	12.0%	88.0%
# 40	0.420	11.6	49.4	15.6%	84.4%
# 60	0.250	12.5	61.9	19.6%	80.4%
#100	0.149	210.3	272.2	86.2%	13.8%
#200	0.074	38.3	310.5	98.3%	1.7%
Pan	0.000	1.9	312.4	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 2 **Project No.:** 15-2562
Client: David Douglass Associates, Inc. **Lab No.:** S002
Location: Station 1172+80: Boring B-1 (23 - 25')
Sampled By: Greg Cole **Date Sampled:** 3/8/2016
Tested By: Jeremy Perminter **Date Tested:** 4/8/2016
Material Description: Gray to Light Green SAND WITH SILT (SP-SM)

Soil Classification AASHTO M 145-91 (2000) : A-2-4

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	241.1	220.8	20.3	8.4%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	SIEVE WEIGHT RETAINED (g)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	70.3	70.3	29.2%	70.8%
#4	4.76	24.1	94.4	39.2%	60.8%
#10	2.00	8.4	102.8	42.6%	57.4%
#16	1.19	5.7	108.5	45.0%	55.0%
# 40	0.420	8.7	117.2	48.6%	51.4%
# 60	0.250	12.9	130.1	54.0%	46.0%
#100	0.149	20.3	150.4	62.4%	37.6%
#200	0.074	65.9	216.3	89.7%	10.3%
Pan	0.000	3.8	220.1	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 2 **Project No.:** 15-2562
Client: David Douglass Associates, Inc. **Lab No.:** S003
Location: Station 1173+40: Boring B-2 (13 - 15')
Sampled By: Greg Cole **Date Sampled:** 3/8/2016
Tested By: Jeremy Permitter **Date Tested:** 4/8/2016
Material Description: Light Gray SAND (SP) with Traces of Shell Fragments

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	416.2	407.7	8.5	2.0%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	SIEVE WEIGHT RETAINED (g)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	0	0	0.0%	100.0%
#4	4.76	4.2	4.2	1.0%	99.0%
#10	2.00	11.0	15.2	3.7%	96.3%
#16	1.19	3.7	18.9	4.5%	95.5%
# 40	0.420	5.5	24.4	5.9%	94.1%
# 60	0.250	10.9	35.3	8.5%	91.5%
#100	0.149	132.5	167.8	40.3%	59.7%
#200	0.074	236.9	404.7	97.2%	2.8%
Pan	0.000	3.4	408.1	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 2 **Project No.:** 15-2562
Client: David Douglass Associates, Inc. **Lab No.:** S004
Location: Station 1194+00: Hand Auger Boring HA-7 (0 - 5')
Sampled By: Lee Khan **Date Sampled:** 3/28/2016
Tested By: Jeremy Perminter **Date Tested:** 4/8/2016
Material Description: Gray SAND (SP) with Traces of Shell Fragments

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	451.9	445.1	6.8	1.5%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	SIEVE WEIGHT RETAINED (g)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	23	23	5.1%	94.9%
#4	4.76	33.2	56.2	12.4%	87.6%
#10	2.00	26.6	82.8	18.3%	81.7%
#16	1.19	15.4	98.2	21.7%	78.3%
# 40	0.420	22.4	120.6	26.7%	73.3%
# 60	0.250	26.9	147.5	32.6%	67.4%
#100	0.149	190.7	338.2	74.8%	25.2%
#200	0.074	104.4	442.6	97.9%	2.1%
Pan	0.000	2.2	444.8	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 2 **Project No.:** 15-2562
Client: David Douglass Associates, Inc. **Lab No.:** S005
Location: Station 1234+25: Hand Auger Boring HA-15 (1.5 - 5')
Sampled By: Lee Khan **Date Sampled:** 3/28/2016
Tested By: Jeremy Perminter **Date Tested:** 4/8/2016
Material Description: Light Gray to White SAND WITH SILT (SP-SM) with Traces of Shell Fragments

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	456.2	417.3	38.9	8.5%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	5.2	5.2	1.1%	98.9%
#4	4.76	6.4	11.6	2.5%	97.5%
#10	2.00	7.2	18.8	4.1%	95.9%
#16	1.19	5.4	24.2	5.3%	94.7%
# 40	0.420	12.1	36.3	8.0%	92.0%
# 60	0.250	23.2	59.5	13.0%	87.0%
#100	0.149	250.1	309.6	67.9%	32.1%
#200	0.074	106.6	416.2	91.2%	8.8%
Pan	0.000	1.2	417.4	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930

Appendix I – Soil Corrosive Series Test Results





SOIL CORROSIVENESS

Project: Estero Boulevard - Segment 2 **Project No.:** 15-2562
Address: Estero Boulevard, Fort Myers Beach, FL **Lab No.:** COR-001
Client: David Douglass Associates
Location: Composite #1: Sta. 1164+00 to Sta. 1194+00 (Depth 3 - 5 Ft.)
Sampled By: Lee Khan **Date Sampled:** 3/28/2016
Tested By: David May **Date Tested:** 4/8/2016
Material Description: Light Gray Sand with Shell

LABORATORY RESULTS

TEST	LAB RESULTS
pH Content (FM 5-550):	7.79
Resistivity (FM 5-551), ohm-cm:	9.29
Chloride (FM 5-552), ppm:	20
Sulfate (FM 5-553), ppm:	40.1

Comments: Extremely Aggressive due to Resistivity <1000 ohm-cm

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930
 State of Florida

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SOIL CORROSIVENESS

Project: Estero Boulevard - Segment 2 **Project No.:** 15-2562
Address: Estero Boulevard, Fort Myers Beach, FL **Lab No.:** COR-002
Client: David Douglass Associates
Location: Composite #2: Sta. 1194+00 to Sta. 1238+00 (Depth 3 - 5 Ft.)
Sampled By: Lee Khan **Date Sampled:** 3/28/2016
Tested By: David May **Date Tested:** 4/8/2016
Material Description: Light Gray Sand with Shell

LABORATORY RESULTS

TEST	LAB RESULTS
pH Content (FM 5-550):	7.76
Resistivity (FM 5-551), ohm-cm:	8.97
Chloride (FM 5-552), ppm:	30
Sulfate (FM 5-553), ppm:	70

Comments: Extremely Aggressive due to Resistivity <1000 ohm-cm

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930
 State of Florida

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Appendix J – Asphalt/ Shellrock Thickness by Core Determination





ASPHALT/ SHELLROCK THICKNESS BY CORE DETERMINATION

Client: David Douglass Associates, Inc. Project #: 15-2562
 Project: Estero Boulevard - Segment 2
 Address: Estero Boulevard, Fort Myers Beach, FL

Results of Test

Core #	Location	Shell Rock Thickness (in.)	Total Asphalt Core Thickness (in.)	Measured Asphalt Thickness (in.)		Visual Asphalt Type Classification
				Lift	Thickness	
AC - 1	Sta. 1167+50 9'4" from C.L. Southbound Lane	7 1/4"	8 7/8"	Lift 1	1 1/2	S-III
				Lift 2	1	S-III
				Lift 3	1 5/8	S-III
				Lift 4	7/8	S-III
				Lift 5	3 1/4	ABC-1
				Lift 6	5/8	Sand Asphalt
AC - 2	Sta. 1177+00 9'1" from C.L. Southbound Lane	7 1/2"	9 1/2"	Lift 1	1 1/2	S-III
				Lift 2	1	S-III
				Lift 3	1 1/4	S-III
				Lift 4	2 1/4	S-I
				Lift 5	2 3/4	ABC-1
				Lift 6	3/4	Sand Asphalt
AC - 3	Sta. 1187+00 12' 6" from C.L. Northbound Lane	5 3/8"	9"	Lift 1	1 7/8	S-III
				Lift 2	1 1/4	S-III
				Lift 3	1 1/8	S-III
				Lift 4	3 1/2	S-I
				Lift 5	1 1/4	S-III
AC - 4	Sta. 1196+00 10' from C.L. Southbound Lane	9 5/8"	9"	Lift 1	1 1/2	S-III
				Lift 2	1/2	S-III
				Lift 3	3 1/2	S-I
				Lift 4	1 7/8	ABC-1
				Lift 5	1 3/8	ABC-1
				Lift 6	1/4	Sand Asphalt
AC - 5	Sta. 1206+40 10' from C.L. Northbound Lane	7 1/4"	8 3/4"	Lift 1*	2	S-III
				Lift 2*	1 3/4	S-I
				Lift 3	1 1/2	S-I
				Lift 4	2 3/8	S-I
				Lift 5	1 1/8	S-III

*Asphalt Debonded Between Lifts

The above test results were obtained in accordance with standard laboratory procedures.

Environmental • Geotechnical • Construction Materials Testing • Special & Threshold Inspections • Plan Review & Code Compliance

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ASPHALT / SHELLROCK THICKNESS BY CORE DETERMINATION

Client: David Douglass Associates, Inc. Project #: 15-2562

Project: Estero Boulevard - Segment 2

Address: Estero Boulevard, Fort Myers Beach, FL

Results of Test

Core #	Location	Shell Rock Thickness (in.)	Total Asphalt Core Thickness (in.)	Measured Asphalt Thickness (in.)		Visual Asphalt Type Classification
				Lift	Thickness	
AC - 6	Sta. 1216+00 9'9" from C.L. Southbound Lane	6 3/4"	8"	Lift 1	1 1/4	S-III
				Lift 2	1	S-III
				Lift 3	3	S-I
				Lift 4	2	ABC-1
				Lift 5	3/4	Sand Asphalt
AC - 7	Sta. 1227+00 4'3" from C.L. Northbound Lane	3 1/2" *	9 1/8"	Lift 1	1 1/8	S-III
				Lift 2	1	S-III
				Lift 3	1 1/2	S-I
				Lift 4	1 1/2	S-I
				Lift 5	2	S-I
				Lift 6	1	S-I
				Lift 7	1	S-I
AC - 8	Sta. 1235+50 13' 10" from C.L. Southbound Lane	7"	10"	Lift 1	2	S-III
				Lift 2	1 1/4	S-III
				Lift 3	1 1/4	S-I
				Lift 4	1 1/4	S-I
				Lift 5	1 1/4	S-I
				Lift 6	1 3/8	ABC-1
				Lift 7	1	ABC-1
				Lift 8	5/8	Sand Asphalt

*2-Inches of Blended Asphalt Between Base and Subbase

The above test results were obtained in accordance with standard laboratory procedures.

Appendix K – Asphalt Bulk Specific Gravity





ASPHALT CORE SPECIFIC GRAVITY

CLIENT: David Douglass Associates PROJECT # 15-2562

PROJECT: Estero Boulevard - Segment 2

ADDRESS: Estero Boulevard CITY Fort Myers Beach DATE: 4/8/2016

Core #	Location	(A) Weight In Air (grams)	(B) Weight SSD (grams)	(C) Weight In Water (grams)	(D) A/(B-C) Specific Gravity	(E) D x 62.4 Density (PCF)	Core Testing Thickness (in.)
Core - 1	Sta. 1167+50	3034.0	3037.1	1607.1	2.12	132.4	8 1/8
Core - 2	Sta. 1177+00	3186.6	3191.2	1695.1	2.13	132.9	8 1/2
Core - 3	Sta. 1187+00	3376.5	3378.2	1848.4	2.21	137.7	8 3/4
Core - 4	Sta. 1196+00	3037.6	3042.6	1606.1	2.11	132.0	8 1/8
Core - 5	Sta. 1206+40	687.4	689.5	355.4	2.06	128.4	2
Core - 6*	Sta. 1216+00	2722.2	2729.8	1436.5	2.10	131.3	7 5/8
Core - 7	Sta. 1227+00	3299.3	3305.0	1787.2	2.17	135.6	8 1/2
Core - 8	Sta. 1235+00	3565.7	3569.4	1923.7	2.17	135.2	9 1/4

*Noticeable Air Voids in 2nd Lift of Asphalt

Respectfully Submitted by:
GFA International, Inc.
 FBPE CA # 4930

Appendix L – Limerock Bearing Ratio (LBR) Results





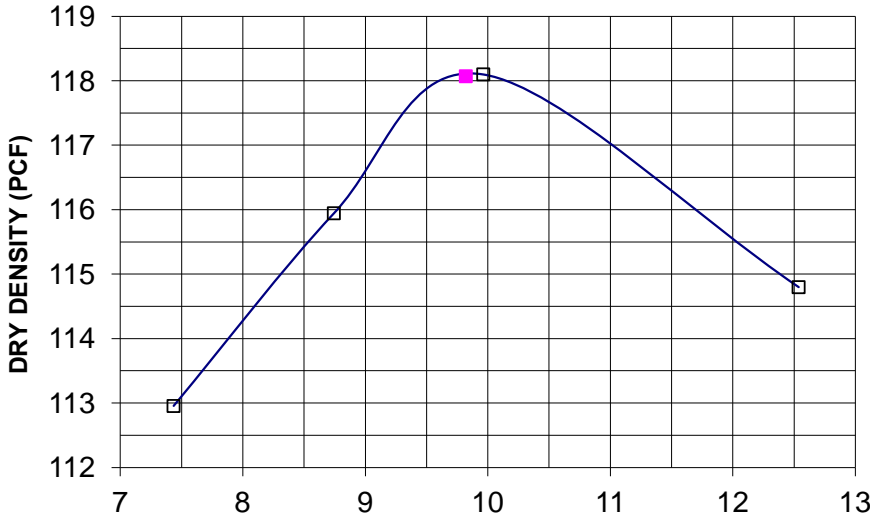
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 2
Address: Estero Boulevard, Fort Myers Beach
Client: David Douglas Associates, Inc.

Project ID: 15-2562
Report ID: LBR001

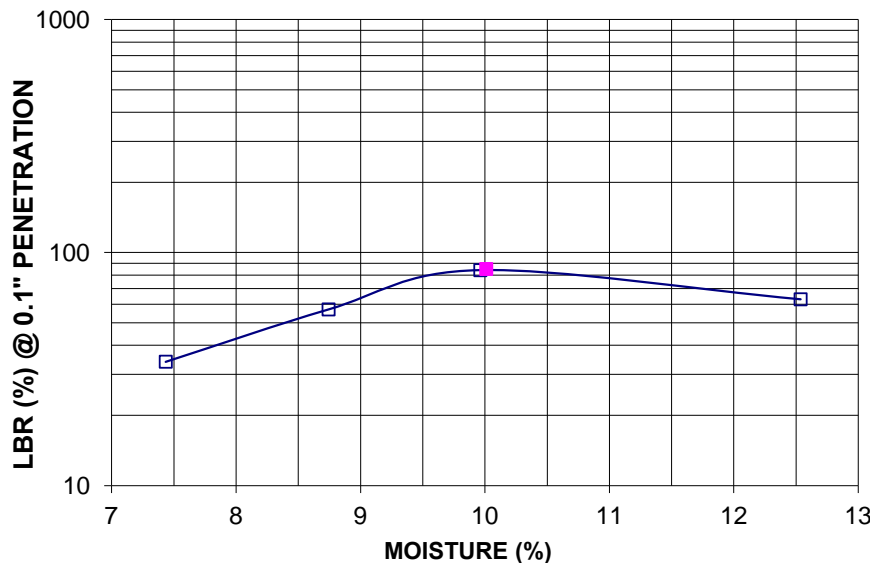
Soil Location: Sta. 1174+00, South Bound Shoulder, 10' off Edge of Pavement
Sampled By: L. Khan **Date Sampled:** 3/29/2016
Tested By: M. Stel **Date Tested:** 3/31/2016
Soil Description: Light Gray Sand with Rock
Soil Classification: _____ **Type of Rammer:** Mechanical
Rammer Face: Sector **Soak Time (hrs):** 48 **Surcharge (lbs):** 15

Comments: _____



Dry Density (pcf)	Moisture (%)
113.0	7.4
115.9	8.7
118.1	10.0
114.8	12.5

LBR (%)
34.3
57.0
84.4
62.8



Maximum Dry Density (pcf)
118

Optimum Moisture (%)
10

Limerock Bearing Ratio (%)
85

Respectfully Submitted.
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

5/2/16

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

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Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 2
Address: Estero Boulevard, Fort Myers Beach
Client: David Douglas & Associates, Inc.

Project ID: 15-2562
Report ID: LBR002

Soil Location: Sta. 1189+00, South Bound Shoulder, 5' off Edge of Pavement

Sampled By: L. Khan **Date Sampled:** 3/29/2016

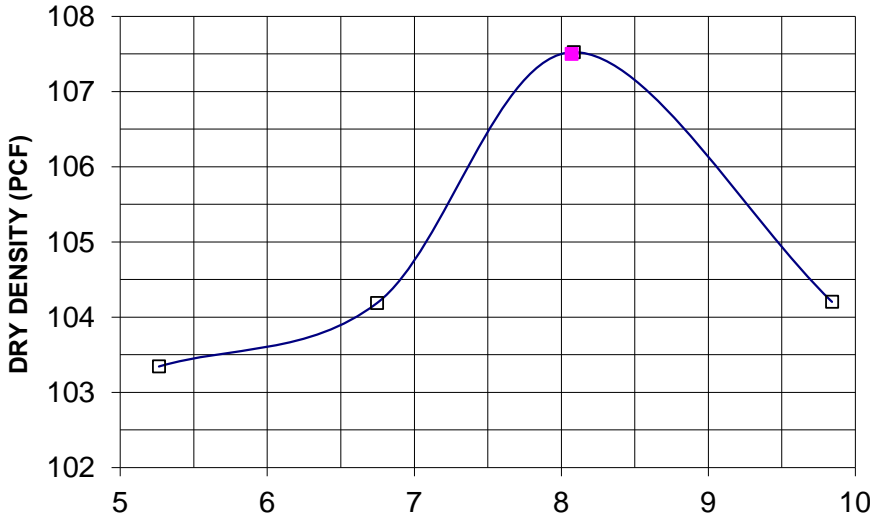
Tested By: M. Stel **Date Tested:** 3/31/2016

Soil Description: Fine Gray Sand, with Shell

Soil Classification: _____ **Type of Rammer:** Mechanical

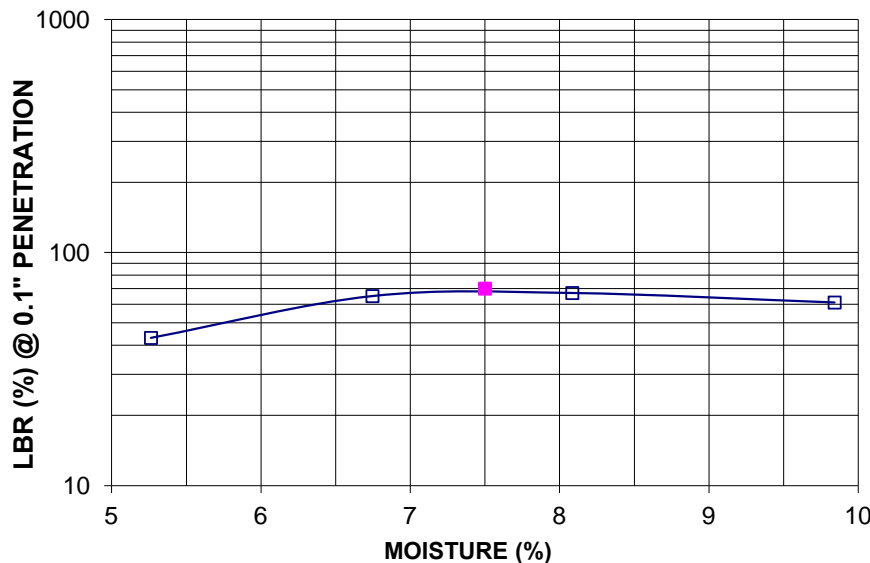
Rammer Face: Sector **Soak Time (hrs):** 48 **Surcharge (lbs):** 15

Comments: _____



Dry Density (pcf)	Moisture (%)
103.3	5.3
104.2	6.7
107.5	8.1
104.2	9.8

LBR (%)
42.8
64.5
66.9
61.2



Maximum Dry Density (pcf)
108

Optimum Moisture (%)
8

Limerock Bearing Ratio (%)
70

Respectfully Submitted.
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

5/2/16

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

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Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 2
Address: Estero Boulevard, Fort Myers Beach
Client: David Douglas & Associates, Inc.

Project ID: 15-2562
Report ID: LBR003

Soil Location: Sta. 1204+00 South Bound Shoulder, 6' off Edge of Pavement

Sampled By: L. Khan **Date Sampled:** 3/29/2016

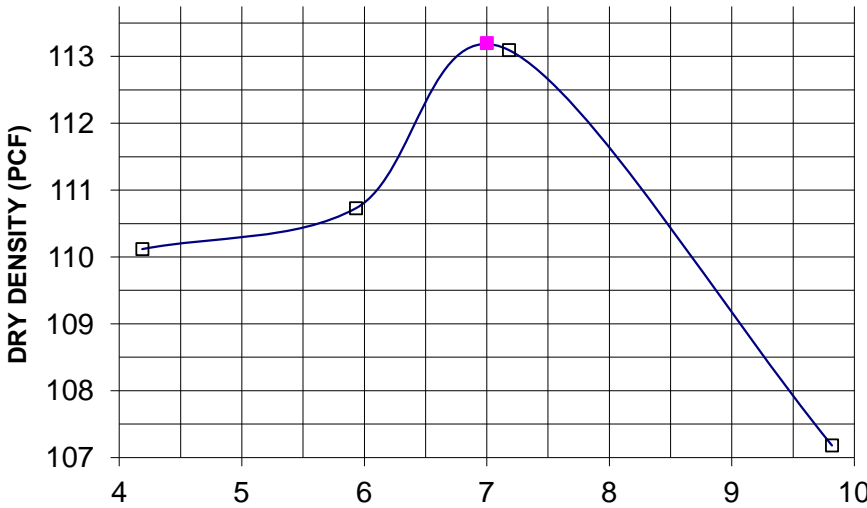
Tested By: M. Stel **Date Tested:** 3/31/2016

Soil Description: _____

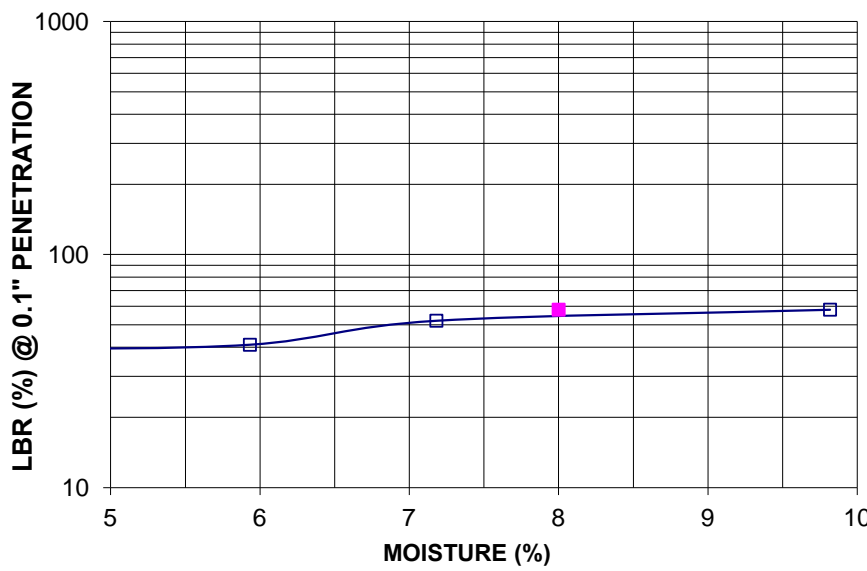
Soil Classification: _____ **Type of Rammer:** Mechanical

Rammer Face: Sector **Soak Time (hrs):** 48 **Surcharge (lbs):** 15

Comments: _____



Dry Density (pcf)	Moisture (%)
110.1	4.2
110.7	5.9
113.1	7.2
107.2	9.8



LBR (%)
39.3
41.3
52.3
58.1

Maximum Dry Density (pcf)
113

Optimum Moisture (%)
7

Limerock Bearing Ratio (%)
58

Respectfully Submitted.
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

5/2/16

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

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Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 2
Address: Estero Boulevard, Fort Myers Beach
Client: David Douglas & Associates, Inc.

Project ID: 15-2562
Report ID: LBR004

Soil Location: Sta. 1219+00 South Bound Shoulder, 5' off Edge of Pavement

Sampled By: L. Khan **Date Sampled:** 3/29/2016

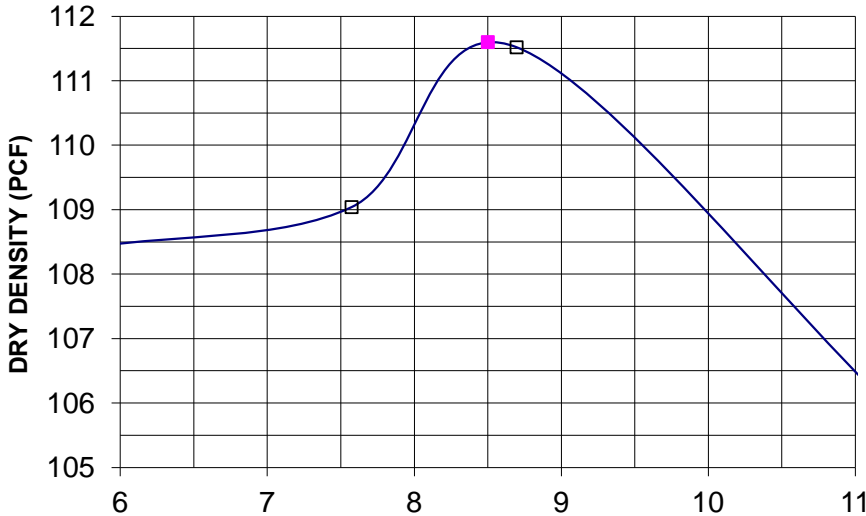
Tested By: M. Stel **Date Tested:** 3/31/2016

Soil Description: Fine Gray Sand with Shell

Soil Classification: _____ **Type of Rammer:** Mechanical

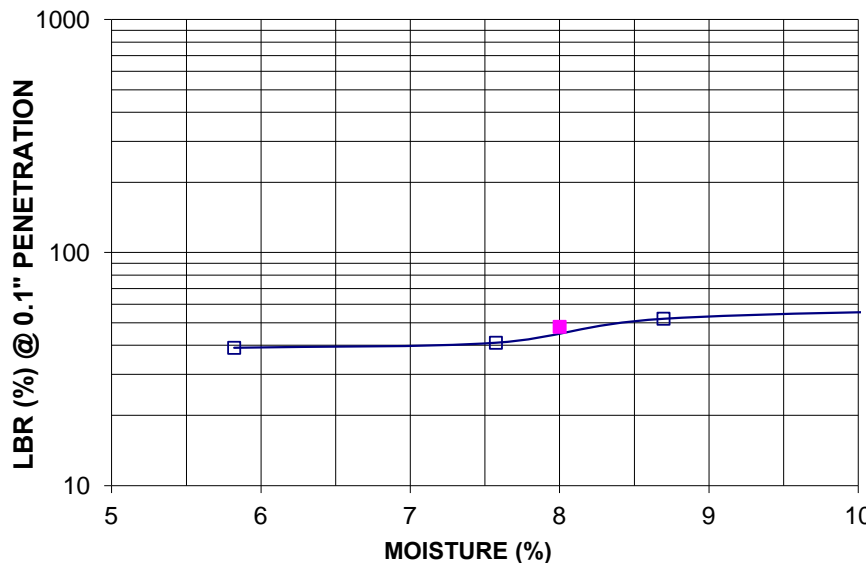
Rammer Face: Sector **Soak Time (hrs):** 48 **Surcharge (lbs):** 15

Comments: _____



Dry Density (pcf)	Moisture (%)
108.4	5.8
109.0	7.6
111.5	8.7
105.7	11.3

LBR (%)
39.3
41.3
52.3
58.1



Maximum Dry Density (pcf)
112

Optimum Moisture (%)
9

Limerock Bearing Ratio (%)
48

Respectfully Submitted,
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

5/2/16

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

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Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 2
Address: Estero Boulevard, Fort Myers Beach
Client: David Douglas & Associates, Inc.

Project ID: 15-2562
Report ID: LBR005

Soil Location: Sta. 1234+20, South Bound Shoulder, 3' off Edge of Pavement

Sampled By: L. Khan **Date Sampled:** 3/29/2016

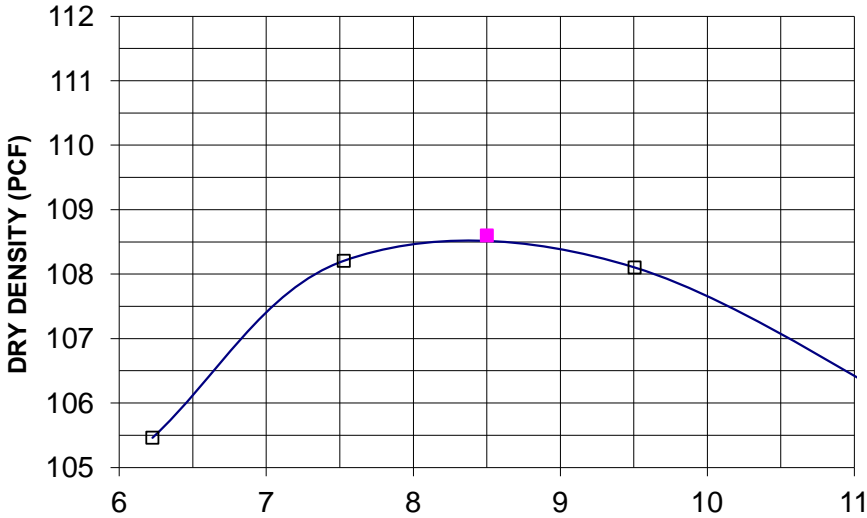
Tested By: M. Stel **Date Tested:** 3/31/2016

Soil Description: Dk. Gray / Brown Sand with Shell

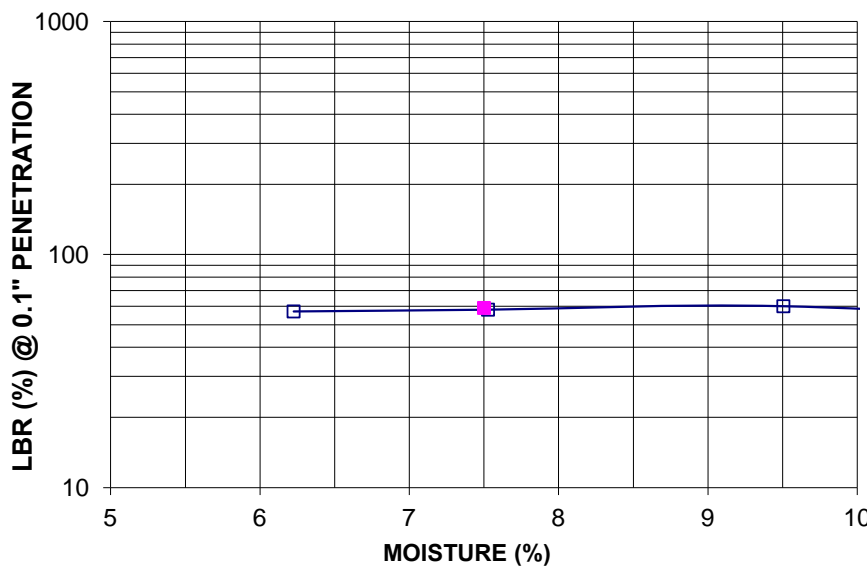
Soil Classification: _____ **Type of Rammer:** Mechanical

Rammer Face: Sector **Soak Time (hrs):** 48 **Surcharge (lbs):** 15

Comments: _____



Dry Density (pcf)	Moisture (%)
105.5	6.2
108.2	7.5
108.1	9.5
105.0	12.1



LBR (%)
56.7
57.6
59.7
50.4

Maximum Dry Density (pcf)
109

Optimum Moisture (%)
9

Limerock Bearing Ratio (%)
59

Respectfully Submitted.
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

5/2/16

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Appendix M – Asphalt Core Photographs



ASPHALT CORE AC-1



ASPHALT CORE AC-2



ASPHALT CORE AC-3



ASPHALT CORE AC-4



ASPHALT CORE AC-5



Complete debonding between Lifts 1 and 2.

ASPHALT CORE AC-6



Air voids observed in Lift 2.

ASPHALT CORE AC-7



ASPHALT CORE AC-8



GFA INTERNATIONAL

FLORIDA'S LEADING ENGINEERING SOURCE

Report of Geotechnical Exploration

**Estero Boulevard – Segment 3
Fort Myers Beach, Lee County, Florida**

**March 22, 2017
GFA Project No.: 16-1668**

For: David Douglas Associates, Inc.





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March 22, 2017

Mr. Dan Craig P.E.
David Douglas Associates, Inc.
1821 Victoria Ave.
Fort Myers, FL 33901
Phone: (239) 337-3330
Email: DC@DDAI-Engineers.com

**Site: Geotechnical Engineering Services Report
Estero Boulevard – Segment 3
Fort Myers Beach, Lee County, Florida
GFA Project # 16-1668**

Dear Mr. Craig:

GFA International, Inc. (GFA) has completed the subsurface exploration and geotechnical engineering evaluation for the above-referenced project in accordance with the geotechnical and engineering service agreement for this project. The scope of services was completed in accordance with our Geotechnical Engineering Proposal (16-1668.00), planned in conjunction with and authorized by you.

EXECUTIVE SUMMARY

The purpose of our subsurface exploration was to classify the nature of the subsurface soils and general geomorphic conditions and evaluate their impact upon the proposed construction. This report contains the results of our subsurface exploration at the site and our engineering interpretations of these, with respect to the project characteristics described to us including providing recommendations for site preparation and the design of the foundation system.

It is our understanding the project will consist of a construction of a new roadway, drainage installation including underground exfiltration trench, and installation of a new force main or mains along +/- 4,400 feet of Estero Blvd (Sta. 1238+00: Bayland Road to Sta. 1282+00: Lanark Avenue). Documents provided to GFA at the time of this report were Plan and Profile Plans completed by T.Y. Lin International, Sheet No. 32 through Sheet No. 46, dated April 9, 2014. The recommendations provided herein are based upon the above considerations. If the project description has been revised, please inform GFA International so that we may review our recommendations with respect to any modifications.

The following was completed for this study:

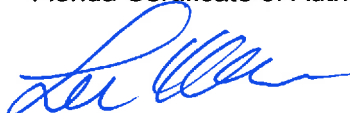
- Eight (8) Hand Auger (HA) borings to depths of approximately 5 feet below ground surface (BGS).
- Three (3) Field Percolation Test borings to depths of approximately 5 feet BGS.
- Four (4) Asphalt Cores with base and subbase thicknesses spaced at approximately 1,000-foot centers.

The subsurface soil conditions encountered at this site generally consists of sand (SP) with shell fragments to the boring termination depths. Please refer to "Appendix D – Record of Hand Auger Boring Logs" for a detailed account of each boring.

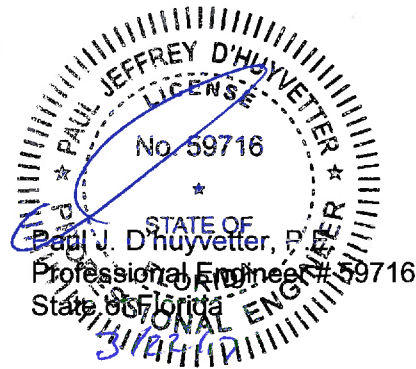
The following report presents the project information made available to us, our observation of the existing site conditions, the subsurface geotechnical information obtained during this exploration, and our recommendations on the suitability of the soils encountered for the force main replacement. Also included with this report are the results of our field and laboratory testing. The assessment of site environmental conditions for the presence of pollutants in the soil, rock, and groundwater at this site was not included as a part of our services.

We appreciate the opportunity to be of service to you on this project and look forward to a continued association. Please do not hesitate to contact us if you have any questions or comments, or if we may further assist you as your plans proceed.

Respectfully Submitted,
GFA International, Inc.
Florida Certificate of Authorization Number 4930



Lee S. Khan, E.I.
Staff Engineer



Copies: 2, Addressee
1, CD-R



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1.0 INTRODUCTION

1.1 Scope of Services

The objective of our geotechnical services was to collect subsurface data for the subject project, summarize the test results, and discuss any apparent site conditions that may have geotechnical significance for force main replacement. The following scope of service is provided within this report:

1. Prepare records of the soil boring logs depicting the subsurface soil conditions encountered during our field exploration.
2. Conduct a review of each soil sample obtained during our field exploration for classification and additional testing if necessary.
3. Analyze the existing soil conditions found during our exploration for the suitability of the soils encountered for the force main replacement.
4. Provide recommendations with respect to backfill material for the force main replacement.
5. Provide criteria and site preparation procedures to prepare the site for the proposed construction.

1.2 Project Description

It is our understanding the project will consist of a construction of a new roadway, drainage installation including underground exfiltration trench, and installation of a new force main or mains along +/- 4,400 feet of Estero Blvd (Sta. 1238+00: Bayland Road to Sta. 1282+00: Lanark Avenue). Documents provided to GFA at the time of this report were Plan and Profile Plans completed by T.Y. Lin International, Sheet No. 32 through Sheet No. 46, dated April 9, 2014. The recommendations provided herein are based upon the above considerations. If the project description has been revised, please inform GFA International so that we may review our recommendations with respect to any modifications.

2.0 OBSERVATIONS

2.1 Site Inspection

A site reconnaissance was conducted by members of our engineering staff prior to mobilization of drilling equipment and crews. The purpose of the site visit was to observe the existing site conditions in order to detect any factors that may impact our studies and recommendations.

Generally, the proposed construction site is level. No standing water on the surface was observed during the time of our drilling. The tested site consists of an urban area and is landscaped.



2.2 Geology

The surficial geologic map of Lee County, Florida consists of a quartz sand blanket that overlies the Tertiary Tamiami Formation (T_t), Tertiary-Quaternary Shell Units (Q_{su}) and Quaternary (Holocene) Coastal and Estuarine Sediments (Q_h). The quartz sand blanket is generally less than 20 feet thick deposit, fine to medium grained, well sorted, with no fossils.

The oldest formation is the Tertiary Tamiami Formation (T_t). The Tamiami Formation consists of a mixture of variably sandy limestone, sands and clays containing varying percentage of phosphate grains. Fossils including mollusks, echinoids and corals are abundant. Fossil preservation varies from well preserved to molds and casts.

Overlaying the Tamiami Formation throughout much of the county are sediments indicated as Tertiary-Quaternary Shell Units (Q_{su}). These units consist of sands with subordinate limestone and clay. Fossils, including mollusks and corals, are common and well preserved.

Along the coast, Quaternary (Holocene) Coastal and Estuarine Sediments (Q_h) are founded below an altitude of approximately 5 feet. These sediments consist of quartz sand with a variable organics component. The Holocene sediments include the beach ridge and dune sands.

2.3 Field Exploration

The following was completed for this study:

- Eight (8) Hand Auger (HA) borings to depths of approximately 5 feet below ground surface (BGS).
- Three (3) Field Percolation Test borings to depths of approximately 5 feet BGS.
- Four (4) Asphalt Cores with base and subbase thicknesses spaced at approximately 1,000-foot centers.

The locations of the borings performed are illustrated in "Appendix B: Test Location Plan". The Standard Penetration Test (SPT) boring method was used as the investigative tool within the borings. SPT tests were performed in substantial accordance with ASTM Procedure D-1586, "Penetration Test and Split-Barrel Sampling of Soils". This test procedure consists of driving a 1.4-inch I.D. split-tube sampler into the soil profile using a 140-pound hammer falling 30 inches. The number of blows per foot, for the second and third 6-inch increment, is an indication of soil strength.

The soil samples recovered from the soil borings were visually classified and their stratification is illustrated in "Appendix D: Record of Hand Auger Boring Logs". It should be noted that soil conditions might vary between the strata interfaces, which are shown. The soil boring data reflect information from a specific test location only. Site specific survey staking for the test locations was not provided for our field exploration. The indicated depth and location of each test was approximated based upon existing grade and estimated distances and relationships to obvious landmarks. The boring depths were selected based on our knowledge of vicinity soils and to include the zone of soil likely to be stressed by the proposed construction.



2.4 Laboratory Analysis

Soil samples recovered from our field exploration were returned to our laboratory where they were visually examined in general accordance with ASTM D-2488. Samples were evaluated to obtain an accurate understanding of the soil properties and site geomorphic conditions. After a thorough visual examination of the recovered site soils, laboratory testing was conducted to determine particle size distribution (D-422) on individual samples and soil corrosiveness on a composite sample obtained from depths ranging from 2 to 5 feet BGS.

Composite bulk specific gravity tests were run on the four asphalt cores obtained during field exploration using the saturated surface-dry procedure (AASHTO T-166). Limerock Bearing Ratio (LBR) tests were run on material obtained within approximately 5 feet of the edge of pavement using the Florida Method FM 5-515.

All laboratory tests were conducted in general accordance with ASTM, AASHTO, or Florida Methods, as applicable. The test method number for each test and the number of tests completed are presented in the following table.

TEST DESCRIPTION	NUMBER OF TESTS	ASTM TEST METHOD
Soil Classification	24	D-2488
Gradation Analysis	5	D-422
Soil Corrosiveness (pH, Resistivity, Chloride, Sulfate)	1	FM 5-550, FM 5-551, FM 5-552, and FM 5-553
Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens	4	AASHTO T-166
Limerock Bearing Ratio (LBR)	4	FM 5-515

Bag samples of the soil encountered during our field exploration will be held in our laboratory for your inspection for 90 days and then discarded unless we are notified otherwise in writing.

2.4.1 Gradation Tests

A total of five (5) gradation tests were performed on samples obtained during the field exploration program. Material passing the No. 200 sieve is considered “fines” and will be either silt or clay. The percent passing the No. 200 sieve, for the tested samples, ranged from 0.9 to 2.5 percent, this resulted in the sampled material to be considered poorly graded. A summary of the grain size distribution curve is presented in “Appendix H: Gradation Test Results”.

2.4.2 Soil Corrosiveness

This test method covers the laboratory determination for the minimum resistivity of a soil. The principal use of this test method is to determine a soil's corrosivity and thereby identify the conditions under which the corrosion of metals in soil may be sharply accentuated. Soil corrosiveness testing was completed on one (1) composite sample ranging from 2 – 5 feet BGS.



The soil samples obtained were considered non-marine structures and classified under the criteria for substructure environmental classifications. The pH (>7.0), chloride (<500 ppm), and sulfate (<1000 ppm) fell under the slightly aggressive classification but due to the resistivity results (<1000 Ohm-cm), **Composite 1 is deemed to be slightly aggressive for concrete structures and moderately aggressive for steel structures.** The laboratory results for soil corrosiveness can be found in “Appendix I: Soil Corrosive Series Test Results”.

For design purposes we recommend using a classification of “Moderately Aggressive” for this project.

2.5 Geomorphic Conditions

Boring logs derived from our field exploration are presented in “Appendix B: Boring Locations and Soil Profiles”. The boring logs depict the observed soils in graphic detail. The Standard Penetration Test borings indicate the penetration resistance, or N-values, logged during the drilling and sampling activities. The classifications and descriptions shown on the logs are generally based upon visual characterizations of the recovered soil samples. All soil samples reviewed have been depicted and classified in general accordance with the Unified Soil Classification System, modified as necessary to describe typical southwest Florida conditions. See “Appendix E: Discussion of Soil Groups”, for a detailed description of various soil groups.

The subsurface soil conditions encountered at this site generally consists of sand (SP) with shell fragments to the boring termination depths. Please refer to “Appendix D – Record of Hand Auger Boring Logs” for a detailed account of each boring.

2.6 Hydrogeological Conditions

During our field exploration program from February 13, 2017 to February 17, 2017, the groundwater table was encountered in our HA borings at depths of approximately 4 to 5 feet below the existing ground surface. The groundwater table will fluctuate depending upon tidal events.

Located in “Appendix F: Hydrologic Soils Map” are the following descriptive characteristics of the one (1) type of soil survey encountered during the drilling operations based on the soil survey of Lee County, Florida, published by the United States Department of Agriculture:

Canaveral-Urban Land Complex (4)

About 50 to 70 percent of each area of the complex consists of nearly level Canaveral soils or areas of Canaveral soils that have been reworked or reshaped, but which still are recognizable as Canaveral soils. Typically, Canaveral soils have a surface layer of lack and dark gray fine sand that is mixed with shell fragments. Beneath the surface layer, to a depth of 80 inches or more, are layers of light brownish gray and light gray fine sand mixed with shell fragments.

About 20 to 30 percent of each area is urban land. This land is used for houses, streets, driveways, buildings, parking lots, and other related uses.

In undrained areas, the water table is at a depth of 18 to 40 inches for a period of 2 to 6 months in most years. Drainage systems have been established in most areas, however, and the depth to the water table is dependent on the drainage system.



2.6.1 Exfiltration Testing

GFA International performed three field percolation (PERC) tests spaced at approximately 1,450-foot centers. The percolation testing was performed in accordance with the SFWMD Constant-Head Open-Hole Test Method. The results are presented below.

PERC Test – 1 (Sta. 1247+00)	
Depth (ft)	Soil Description
0 – 5.5	Gray Sand (A-3; SP) with Shell Fragments
Water table: 5.1 feet below grade.*	
Saturated K = 42.4 Ft.³/Day/ Ft.² – Ft. of Head	

*Water Table is Tidally Influenced.

PERC Test – 2 (Sta. 1267+50)	
Depth (ft)	Soil Description
0 – 5	Gray Sand (A-3; SP) with Shell Fragments
Water table: 4.0 feet below grade.*	
Saturated K = 51.9 Ft.³/Day/ Ft.² – Ft. of Head	

*Water Table is Tidally Influenced.

PERC Test – 3 (Sta. 1282+00)	
Depth (ft)	Soil Description
0 – 3	Gray Sand (A-3; SP)
3 – 5	Brown Sand (A-3; SP) with Shell Fragments
Water table: 4.0 feet below grade.*	
Saturated K = 27.0 Ft.³/Day/ Ft.² – Ft. of Head	

*Water Table is Tidally Influenced.

The location of the exfiltration test completed is illustrated in "Appendix B: Test Location Plan".

3.0 ENGINEERING EVALUATION AND RECOMMENDATIONS

3.1 General

The geotechnical evaluations for the proposed construction site are based on the subsurface soil and groundwater conditions encountered during this study, the project information made available, our site observations, and our experience in the vicinity. The test data has been evaluated using established geotechnical parameters of the soils recorded at this site, laboratory test results, and the observed performance of similar soil types.

Based on the soil conditions encountered in the performed borings, the near surface soils do not meet the below mentioned Lee County Technical Specifications for select fill. The water main replacement may be designed according to the recommendations and site preparations as discussed below with a fill material meeting the specifications.



3.2 Pipe Bedding and Initial Backfill (Force Main)

According to the Lee County Technical Specifications, Section 2223, Backfilling, a select fill material shall be used for pipe bedding and initial backfill from top of bedding to 1 foot over the top of pipes. The select fill shall be compacted to not less than 95 percent of the maximum dry density as determined by ASTM D-1557.

Pipe bedding containing very fine sand, uniformly graded sands and gravel, silt, soft earth, or other material that have a tendency to flow under pressure when wet is unacceptable.

Based on the laboratory test results the majority of the near surface soils consist of poorly graded clean sands to slightly silty sands. Material from on-site excavation does not meet the gradation specification for select fill and cannot be used for pipe bedding and initial backfill.

In addition, four of the five samples tested meet the gradation specification for common fill. Hand Auger HA-3 from 2 to 3.5 feet BGS did not meet the gradation specification for common fill.

3.3 Pipe Bedding and Initial Backfill (Drainage System)

Pipe bedding and initial backfill shall be in accordance with Florida Department of Transportation (FDOT) for Road and Bridge Construction – Sections 120 & 125 (January 2017).

3.4 Trench Excavation

Where trench excavations are required, trenches shall be sufficiently wide and deep to allow proper installation of pipes. We recommend about 12 inches clear of the pipe on either side at any point. Boulders, rocks or other hard unyielding material shall be excavated to a depth of 12 inches below the bottom of the pipe elevation.

Due to the depth of excavations and the depth of the water table, we anticipate excavation will require shoring or a trench box. Trenching should be in general accordance with any Lee County trenching requirements and the Occupational Safety and Health Administration (OSHA) requirements, as applicable.

3.5 Trench Backfill

Trench backfill material shall be clean earth fill composed of sand, clay and sand, sand and stone, crushed stones or other soils approved by a professional engineer. The trench backfilling shall be accomplished from the top of the initial backfill to the ground surface. The backfill, unless otherwise specified, shall be compacted to 95% of maximum density, as determined by ASTM D-1557.

When trenches are cut in pavements or areas to be paved, compaction shall be in accordance with FDOT for Road and Bridge Construction (January 2017).

Based on the soil profiles, presented in “Appendix B: Boring Locations and Soil Profiles”, the material from on-site excavation that will contain sands and silt or gravel size limestone fragments may be used for the trench backfill. The organic soils, if encountered during construction, are not suitable and shall not be used as a trench backfill material.



4.0 DEWATERING OF EXCAVATIONS

The high groundwater tables in the vicinity of excavations shall be reduced to prevent water inflow into excavations. Dewatering will be required for the excavation of trenches during construction. Each excavation shall be kept dry during subgrade preparation and continually thereafter until installation of the pipe or wet well structures. The dewatering will be required to maintain groundwater elevation at least 24 inches below the bottom at all times to prevent bottom disturbance or failure.

5.0 SITE PREPARATION PROCEDURES

Site preparation procedures should begin with the removal of existing debris, vegetation, or other unsuitable materials within and beyond the excavation construction.

The organic soils, if encountered during construction, shall be removed and replaced to a required level (the future project specification) with a compacted suitable fill. The suitable fill material shall contain less than 10 percent of fines passing the No. 200 sieve, not contain clay balls and rock fragments greater than 3 inches in diameter.

An adequate dewatering system shall be installed to maintain the water table 2 feet or more below the maximum depth of excavation. The continuous dewatering shall be provided until the pipeline is completed and backfill is above the water table before beginning of the dewatering. When a professional engineer approves the discontinuing of the dewatering, the rate of pumping shall slowly decrease, allowing the water level to rise slowly.

The soils that extend below the water table should be allowed to dry prior to placement as a backfill material and compaction. This can be accomplished by stockpiling the material and allowing it to drain, or by spreading it in relatively thin lifts on the surface and allowing it to dry prior to compaction. The silty or sands with clay may require moisture conditioning so that the soil moisture content at the time of compaction is at or near the optimum moisture content.

Trench bottoms should be compacted with a small roller or vibratory plate compactor prior to pipe placement. Any loose or soft yielding areas detected during compaction of the trench bottoms should either be further compacted to at least 95% of maximum dry density or removed and replaced with a select fill and compacted to 95% of maximum dry density. Bedding stone may be used in lieu of select fill.

During the compaction operation, a geotechnical engineer or an engineering technician working under his direction should observe the soils to verify that the exposed soils are suitable and that unsuitable soils have been removed. Samples of the backfill materials should be obtained to determine the grain size distribution, its maximum dry density and optimum moisture content in the laboratory in accordance with ASTM D-1557 (Modified Proctor Test).



6.0 ASPHALT EVALUATION

6.1 Asphalt Thickness

Four (4) asphalt cores were taken at alternating lanes (southbound or northbound) along Estero Boulevard in Fort Myers Beach starting from Glenview Manor Drive (Sta. 1245+00) and finishing at Aberdeen Avenue (Sta. 1276+00). The location of each individual asphalt core can be found in “Appendix B: Test Location Plan”.

GFA International encountered an average asphalt thickness of 9-1/8 inches with a range of five (5) to seven (7) lifts per asphalt core. A stratum was initiated from top of existing asphalt (Lift 1) down to the bottom of asphalt (ex.: Lift 6). Air voids were observed in Lift 2 of Asphalt Core C-2 as well as complete debonding between Lift 6 and Lift 7 due to possibility of intrusion of sands in tack coat prior to placement of asphalt. A summary of the test results are shown in “Appendix J: Asphalt Thickness by Core Determination”. “Appendix M: Asphalt Core Photographs” confirms the debonding occurred between Lifts 6 and 7 in C-2, as well as the condition of all cores.

Beneath the asphalt, a layer of cemented shell base was encountered. This material consists of sand shell fragments.

6.2 Limerock Bearing Ratio (LBR) Testing

A total of four (4) samples were obtained within approximately 5 feet of the edge of pavement to conduct Limerock Bearing Ratio (LBR) tests on the existing subgrade soils, using the Florida Method FM 5-515. Based on the laboratory test results, we recommend a structural coefficient for Type B Stabilized subbase, LBR 30 material (0.06). For complete test results, refer to “Appendix L – Limerock Bearing Ratio (LBR) Results”. It is our understanding that the existing base material will be removed during utility construction. As such, no LBR samples were collected from the base material.

6.3 Asphalt Bulk Specific Gravity Testing

A total of four (4) asphalt core samples were tested using American Association of State Highway and Transportation (AASHTO) T-166 “Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens”. The top 4-inches of asphalt were tested as a composite sample per each asphalt core. The asphalt density ranged from 131.7 to 134.0 pounds per cubic foot (PCF) which averaged in 133.1 PCF.

For complete test results, refer to “Appendix K – Asphalt Bulk Specific Gravity”.



7.0 REPORT LIMITATIONS

This consulting report has been prepared for the exclusive use of the current project owners and other members of the design team for the Estero Boulevard – Segment 3 located on Estero Boulevard in Fort Myers Beach, Lee County, Florida. This report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied. The evaluation submitted in this report, is based in part upon the data collected during a field exploration, however, the nature and extent of variations throughout the subsurface profile may not become evident until the time of construction. If variations then appear evident, it may be necessary to reevaluate information and professional opinions as provided in this report. In the event changes are made in the nature, design, or locations of the proposed structure, the evaluation and opinions contained in this report shall not be considered valid, unless the changes are reviewed and conclusions modified or verified in writing by GFA International. GFA is not responsible for damage caused by soil improvement and/or construction activity vibrations related to this project. GFA is also not responsible for damage concerning drainage or moisture related issues for the proposed or nearby structures.

8.0 BASIS FOR RECOMMENDATIONS

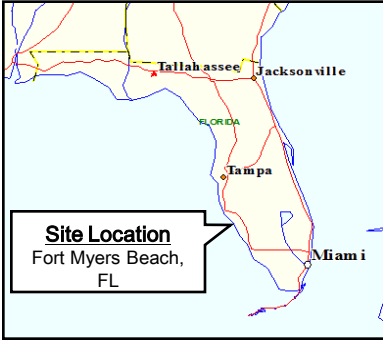
The analysis and recommendations submitted in this report are based on the data obtained from the tests performed at the locations indicated on the attached figure in “Appendix B: Test Location Plan”. This report does not reflect any variations, which may occur between borings. While the borings are representative of the subsurface conditions at their respective locations and for their vertical reaches, local variations characteristic of the subsurface soils of the region are anticipated and may be encountered. The delineation between soil types shown on the soil logs is approximate and the description represents our interpretation of the subsurface conditions at the designated boring locations on the particular date drilled.

Any third party reliance of our geotechnical report or parts thereof is strictly prohibited without the expressed written consent of GFA International. The methodology (ASTM D-1586) used in performing our borings and for determining penetration resistance is specific to the sampling tools utilized and does not reflect the ease or difficulty to advance other tools or materials.



Appendix A - Vicinity Map





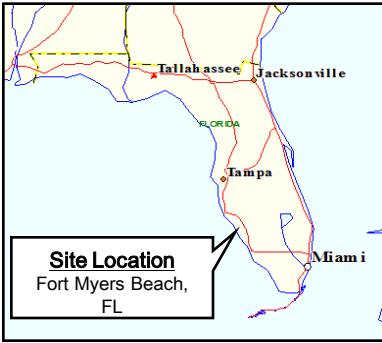
VICINITY MAP

Estero Boulevard – Segment 3
Fort Myers Beach, Lee County, Florida
GFA International Project No.: 16-1668



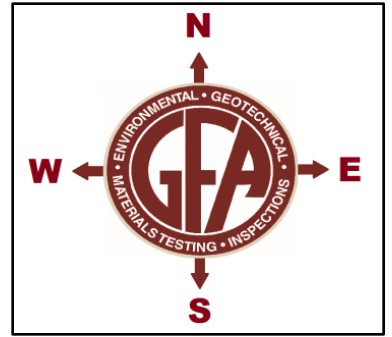
Appendix B – Test Location Plan





TEST LOCATION PLAN

Estero Boulevard – Segment 3
Fort Myers Beach, Lee County, Florida
GFA International Project No.: 16-1668



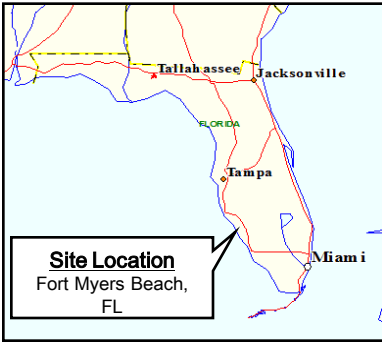
*Scale is an approximation and may not be accurate.

Hand Auger Boring

Asphalt Core

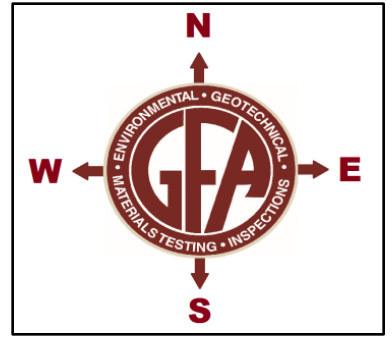
Exfiltration Test

Hand Auger Boring/ LBR Sample





TEST LOCATION PLAN

Estero Boulevard – Segment 3
Fort Myers Beach, Lee County, Florida
GFA International Project No.: 16-1668



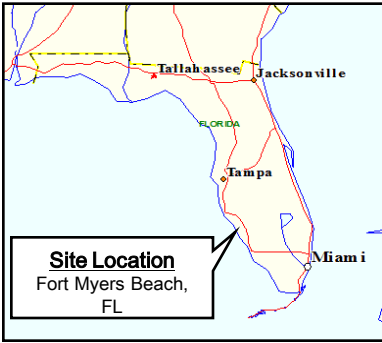
*Scale is an approximation and may not be accurate.

 Hand Auger Boring

 Asphalt Core

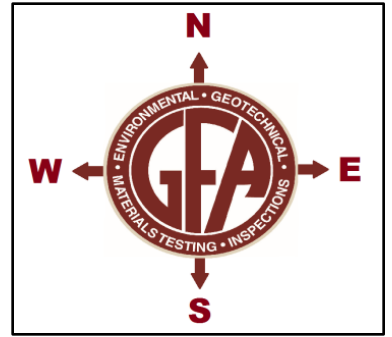
 Exfiltration Test

 Hand Auger Boring/ LBR Sample



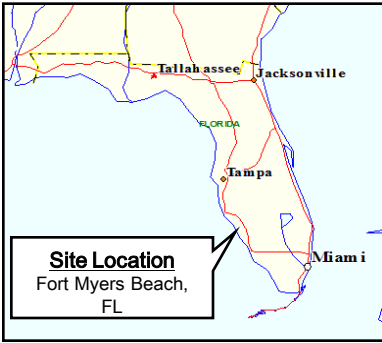
TEST LOCATION PLAN

Estero Boulevard – Segment 3
 Fort Myers Beach, Lee County, Florida
 GFA International Project No.: 16-1668



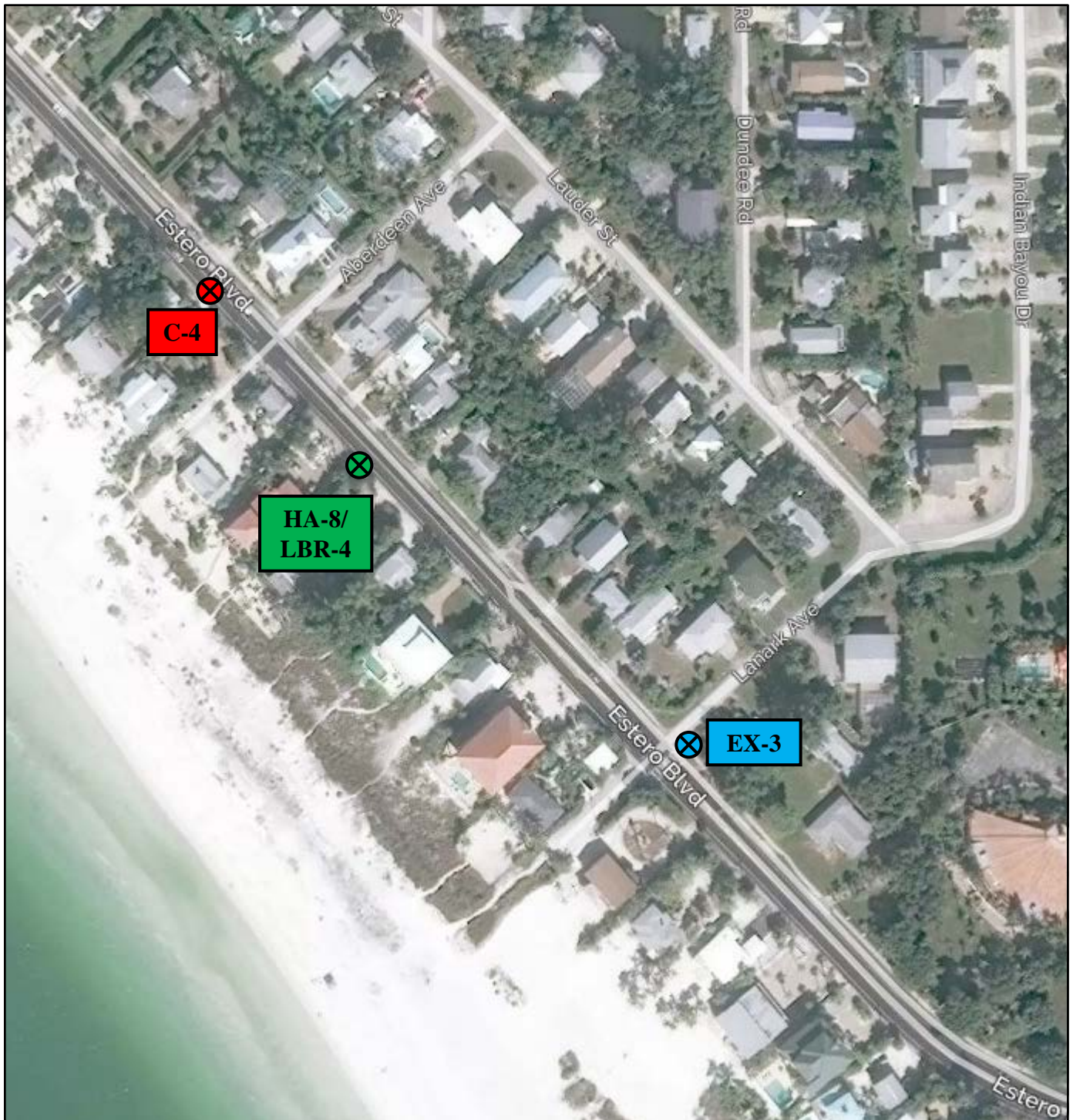
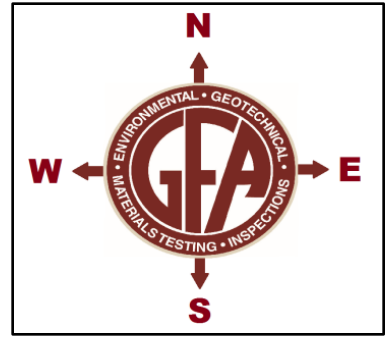
*Scale is an approximation and may not be accurate.

-  Hand Auger Boring
-  Asphalt Core
-  Exfiltration Test
-  Hand Auger Boring/ LBR Sample



TEST LOCATION PLAN

Estero Boulevard – Segment 3
 Fort Myers Beach, Lee County, Florida
 GFA International Project No.: 16-1668



*Scale is an approximation and may not be accurate.

Hand Auger Boring

Asphalt Core

Exfiltration Test

Hand Auger Boring/ LBR Sample

Appendix C - Notes Related to Borings



**NOTES RELATED TO
RECORDS OF TEST BORING AND
GENERALIZED SUBSURFACE PROFILE**

1. Groundwater level was encountered and recorded (if shown) following the completion of the soil test boring on the date indicated. Fluctuations in groundwater levels are common; consult report text for a discussion.
2. The boring location was identified and located in the field based on measured and estimated distances from existing site features.
3. The borehole was backfilled to site grade following boring completion, patched with asphalt cold patch mix when pavement was encountered.
4. The Record of Test Boring represents our interpretation of field conditions based on engineering examination of the soil samples.
5. The Record of Test Boring is subject to the limitations, conclusions, and recommendations presented in the report text.
6. The Standard Penetration Test (SPT) was performed in accordance ASTM Procedure D-1586. SPT testing procedure consists of driving a 1.4-inch I.D. split-tube sampler into the soil profile using a 140-pound hammer falling 30 inches.
7. On the Record of Test Boring listed as "Blow Counts", the N-value is the sum of the SPT hammer blows required to drive the split-tube sampler through the second and third 6-inch increment of the sampling layer, and is an indication of soil strength.
8. Shown on the Record of Test Boring an SPT N-value expressed as 50/2" is descriptive of the fact that 50 hammer blows were required to drive the split-spoon sampler a distance of approximately 2 inches.
9. The soil/rock strata interfaces shown on the Records of Test Boring are approximate and may vary from those in the field. The soil/rock conditions shown on the Records of Test Boring refer to conditions at the specific location tested; soil/rock conditions may vary between test locations.

10. Relative density and consistency for sands/gravels, silts/clays, and limestone are described as follows:

Cohesionless Soils	
SPT (N-Value)	Relative Density
0 – 3	Very Loose
4 – 8	Loose
9 – 24	Medium Dense
25 – 40	Dense
Over 40	Very Dense

Silts and Clays	
SPT (N-Value)	Consistency
0 – 1	Very Soft
2 – 4	Soft
4 – 6	Firm
7 – 12	Stiff
13 – 24	Very Stiff
Over 24	Hard

Limestone	
SPT (N-Value)	Relative Density
0 – 19	Very Soft
20 – 49	Soft
50 – 100	Medium Hard
50 for 3 to 5"	Moderately Hard
50 for 0 to 2"	Hard

11. Definition of descriptive terms of modifiers for silts/clays/shells/gravels are described as follows:

Percentage of Modifier Material	First Qualifier	Second Qualifier
0 – 5	With a Trace of + Modifier	With a Trace
5 – 12	Slightly + Modifier + y	With Some
12 – 30	Modifier + y	With
30 – 50	Very + Modifier + y	And

12. Descriptive characteristics for organic content percentages are described as follows:

Percentage of Organic Material	Descriptor
0 – 5	With a Trace
5 – 20	With Organics
20 – 75	Highly Organic
75 – 100	Peat



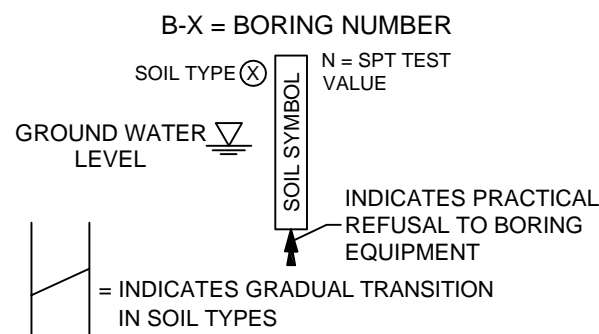
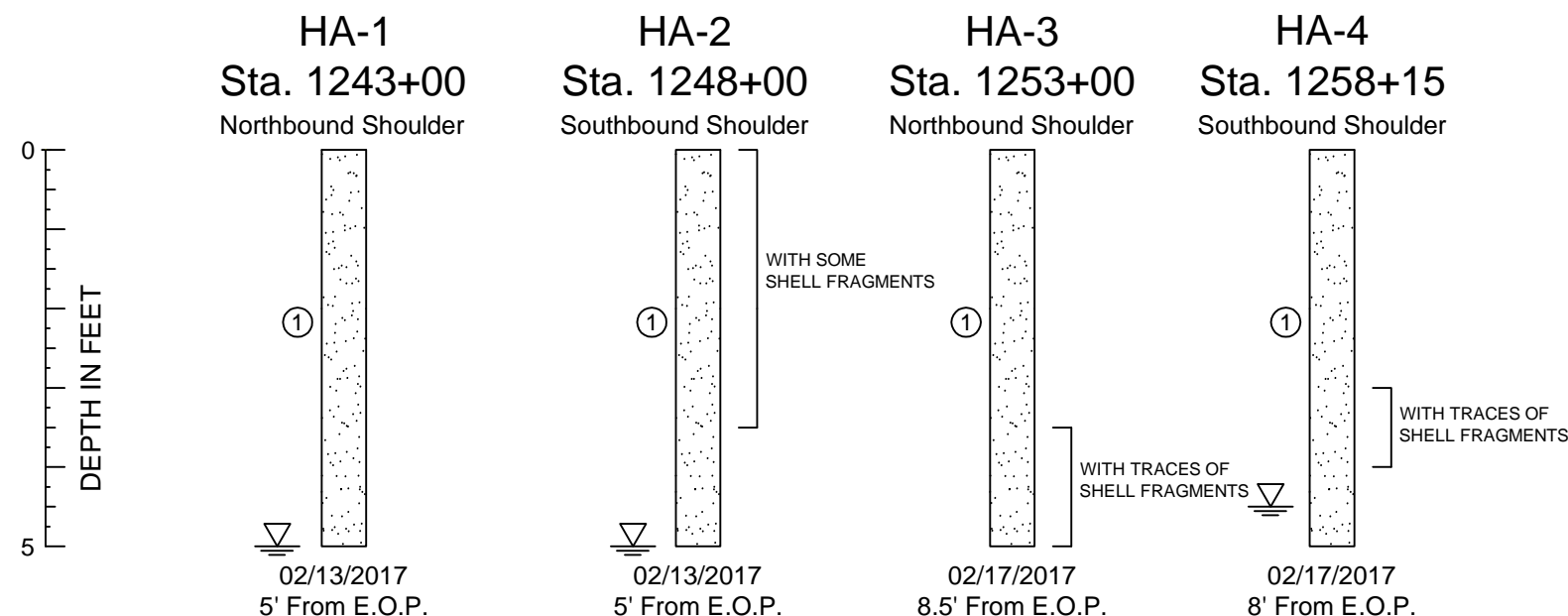
Appendix D – Record of Hand Auger Boring Logs



SOIL PROFILES

SOIL PROFILE LEGEND

SOIL LEGEND



① Light Gray to Gray, Orange to Tan, Light Brown to Brown, SAND (SP/ A-3)

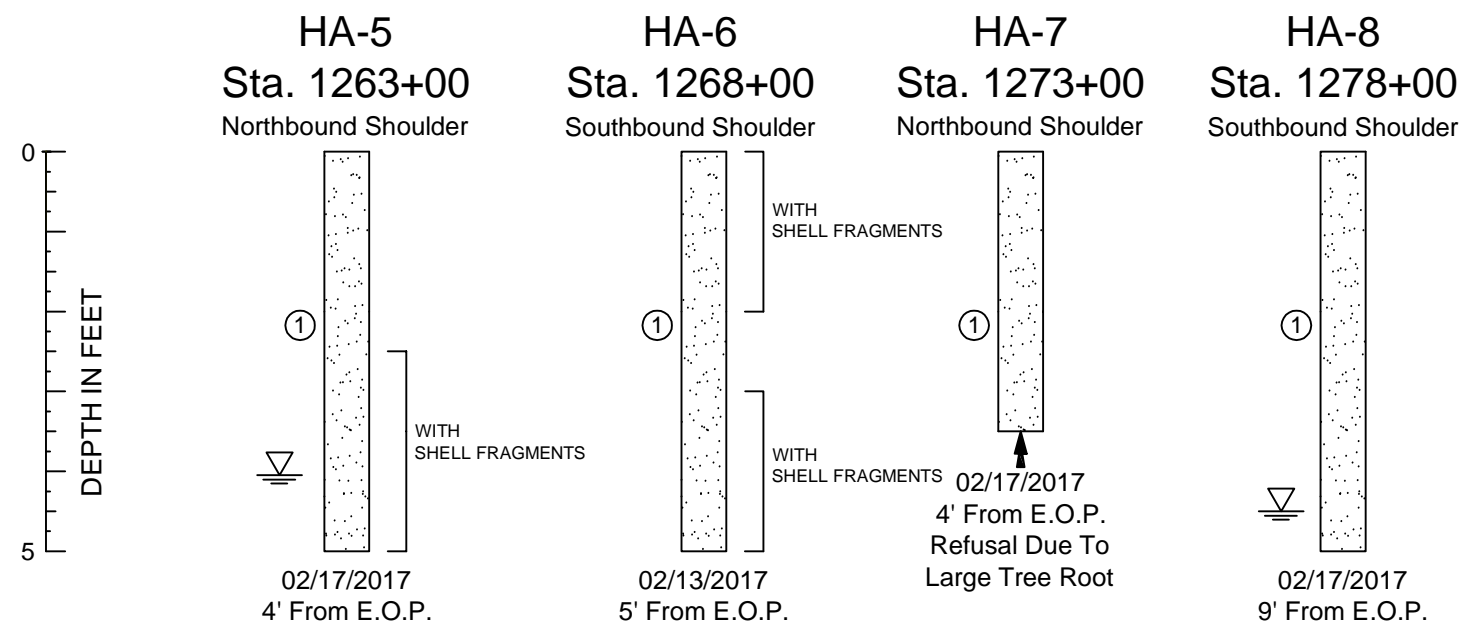
NOTES:

N - STANDARD PENETRATION RESISTANCE TEST (SPT) VALUE. NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12-INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).

WOH - BORING INTERVAL ADVANCED UNDER WEIGHT OF HAMMER.

LFC - LOSS OF DRILLING FLUID CIRCULATION.

E.O.P. - DISTANCE OF HAND AUGER BORING FROM EDGE OF PAVEMENT.



SOIL CLASSIFICATION

CORRELATION OF N - VALUES WITH RELATIVE DENSITY AND CONSISTENCY

COHESIONLESS SOIL		SILTS AND CLAYS	
N - VALUE	RELATIVE DENSITY	N - VALUE	CONSISTENCY
0 - 2	VERY LOOSE	UNDER 1	VERY SOFT
3 - 8	LOOSE	1 - 3	SOFT
9 - 24	MEDIUM DENSE	4 - 6	FIRM
25 - 40	DENSE	7 - 12	STIFF
OVER 40	VERY DENSE	13 - 24	VERY STIFF
		OVER 24	HARD

CORRELATION OF N - VALUES WITH HARDNESS DESCRIPTION

LIMEROCK	
N - VALUE	RELATIVE DENSITY
0 - 19	VERY SOFT
20 - 49	SOFT
50 - 100	MEDIUM HARD
50 FOR 3 TO 5"	MODERATELY HARD
50 FOR 0 TO 2"	HARD

APPROXIMATE FINES CONTENT	MODIFIERS
5% TO 15%	SLIGHTLY SILTY OR SLIGHTLY CLAYEY
16% TO 25%	SILTY OR CLAYEY
26% TO 49%	VERY SILTY OR VERY CLAYEY

APPROXIMATE SAND/ GRAVEL CONTENT	MODIFIERS
5% TO 15%	SLIGHTLY SANDY OR SLIGHTLY GRAVELLY
16% TO 25%	SANDY OR GRAVELLY
26% TO 49%	VERY SANDY OR VERY GRAVELLY

APPROXIMATE ROOT CONTENT	MODIFIERS
5% TO 10%	TRACE
11% TO 20%	TRACE TO SOME
21% TO 40%	SOME
41% TO 60%	AND

RECORD OF TEST BORINGS



GFA International, Inc.
5851 Country Lakes Drive
Fort Myers, Florida 33905
239-489-2443 * TeamGFA.com

Client: David Douglas Associates, Inc.
Project:
Estero Boulevard - Segment 3
Fort Myers Beach, Lee County, Florida
Approved by: PJD

Date: 03/09/2017
Job No: 16-1668
Drawn By: LSK

Appendix E – Discussion of Soil Groups



DISCUSSION OF SOIL GROUPS: AASHTO CLASSIFICATION

COARSE GRAINED SOILS

- **Group A-1:** The typical material of this group is a well-graded mixture of stone fragments or gravel, coarse sand, fine sand, and a nonplastic or feebly-plastic soil binder. However, this group also includes stone fragments, gravel, coarse sand, volcanic cinders, etc., without a soil binder.
 - **Subgroup A-1-a:** Includes those materials consisting predominantly of stone fragments or gravel, either with or without a well-graded binder of fine material.
 - **Subgroup A-1-b:** Includes those materials consisting predominantly of coarse sand, either with or without a well-graded soil binder.

- **Group A-3:** The typical material of this group is fine beach sand or fine desert-blow sand without silty or clay fines, or with a very small amount of nonplastic silt. This group also includes stream-deposited mixtures of poorly-graded fine sand and limited amounts of coarse sand and gravel.

- **Group A-2:** This group includes a wide variety of “granular” materials which are borderline between the materials falling in Groups A-1 and A-3, and the silt-clay materials of Groups A-4, A-5, A-6, and A-7. It includes all materials containing 35% or less passing a No. 200 (75- μ m) sieve which cannot be classified in Groups A-1 or A-3, due to the fines content or the plasticity indexes, or both, in excess of the limitations for those groups.
 - **Subgroups A-2-4 and A-2-5:** Include various granular materials containing 35% or less passing a No. 200 (75- μ m) sieve and with a minus No. 40 (425- μ m) portion having the characteristics of Groups A-4 and A-5, respectively. These groups include such materials as gravel and coarse sand with silt contents or plasticity indexes in excess of the limitations of Group A-1 and fine sand with nonplastic-silt content in excess of the limitations of Group A-3.
 - **Subgroups A-2-6 and A-2-7:** Include materials similar to those described under Subgroups A-2-4 and A-2-5, except that the fine portion contains plastic clay having the characteristics of the A-6 or A-7 group, respectively.



FINE GRAINED SOILS

- **Group A-4:** The typical material of this group is a nonplastic or moderately plastic silty soil usually having 75% or more passing a No. 200 (75- μ m) sieve. This group also includes mixtures of fine silty soil and up to 64% of sand and gravel retained on a No. 200 sieve.
- **Group A-5:** The typical material of this group is similar to that described under Group A-4, except that it is usually of diatomaceous or micaceous character and may be highly elastic as indicated by the high liquid limit.
- **Group A-6:** The typical material of this group is a plastic clay soil usually having 75% or more passing a No. 200 (75- μ m) sieve. This group also includes mixtures of fine clayey soil and up to 64% of sand and gravel retained on a No. 200 sieve. Materials of this group usually have a high volume change between wet and dry states.
- **Group A-7:** The typical material of this group is similar to that described under Group A-6, except that it has the high liquid limits characteristic of Group A-5 and may be elastic as well as subject to high-volume change.
 - **Subgroup A-7-5:** Includes those materials with moderate plasticity indexes in relation to the liquid limit and which may be highly elastic as well as subject to considerable volume change.
 - **Subgroup A-7-6:** Includes those materials with high plasticity indexes in relation to liquid limit and which are subject to extremely high volume change.

HIGHLY ORGANIC SOILS

- **Group A-8:** Highly organic soils (peat or muck) may be classified in this group. Classification of these materials is based on visual inspection and is not dependent on the percentage passing the No. 200 (75- μ m) sieve liquid limit, or plasticity index. The material is composed primarily of partially decayed organic matter, generally has a fibrous texture, a dark brown or black color, and an odor of decay. These organic materials are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.



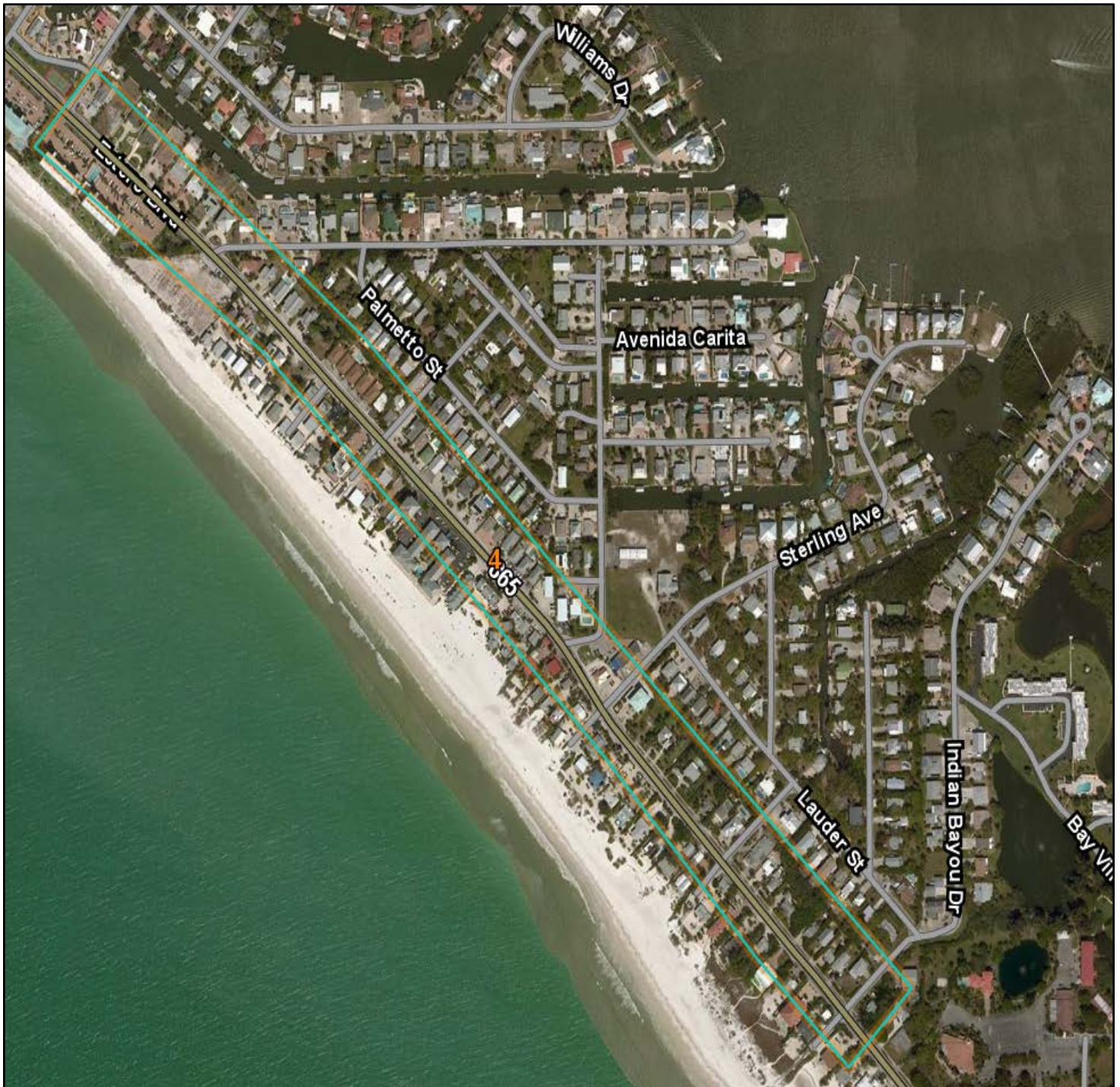
Appendix F – Hydrologic Soils Map





Hydrologic Soils map

Estero Boulevard – Segment 3
Fort Myers Beach, Lee County, Florida
GFA International Project No.: 16-1668



*Map Not To Scale
Map Unit: 4 – Canaveral- Urban Land Complex

Appendix G – Roadway Soil Survey



LEE COUNTY
DEPARTMENT OF PUBLIC WORKS
ESTERO BOULEVARD: SEGMENT 3

DATE OF SURVEY : FEBRUARY 13 - 17, 2017
 SURVEY MADE BY : GFA INTERNATIONAL, INC.
 SUBMITTED BY : PAUL J. D'HUYVETTER

ROAD NAME : ESTERO BOULEVARD
 CITY : FORT MYERS BEACH
 COUNTY : LEE

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS
 SURVEY BEGINS: STA. 1238+00 SURVEY ENDS: STA. 1282+00

STRATUM NO.	ORGANIC CONTENT			SIEVE ANALYSIS RESULTS % PASS				ATTERBERG LIMITS (%)			AASHTO GROUP	DESCRIPTION	CORROSION SERIES TEST RESULTS					
	NO. OF TESTS	% ORGANIC	% MOISTURE CONTENT	NO. OF TESTS	4 MESH	10 MESH	60 MESH	200 MESH	NO. OF TESTS	LIQUID LIMIT			PLASTIC INDEX	NO. OF TESTS	RESISTIVITY ohms-cm	CHLORIDE ppm	SULFATES ppm	pH
1	-	-	-	5	94.2 - 99.8	90.7 - 99.5	57.8 - 94.5	0.4 - 1.9	-	-	-	A-3	White, Tan, Light Gray to Gray Sand (SP) with Traces of Shell Fragments	1*	3,600	18	48.9	8.27

*Corrosion Series Test ran on one (1) composite sample obtained from hand auger borings during GFA's field exploration program.

NOTES:


EMBANKMENT AND SUBGRADE MATERIAL
STRATA BOUNDARIES ARE APPROXIMATE

Ground water was encountered at depths of about 4 to 5 feet at boring locations at the time of our drilling.

The material from Stratum Number 1 appears satisfactory for use in the embankment when utilized in accordance with Index 505, except where organics are encountered.

It has been the experience of the Department, within projects constructed within this general geographical area, that although preliminary borings did not indicate a presence of rock, rock was encountered while performing underground installations. Therefore, the contractor should consider the increased cost of all underground work activities while preparing the bid.

All costs of rock 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 with fill material or special handling of rock.

REVISIONS						 GFA INTERNATIONAL, INC. 5851 COUNTRY LAKES DRIVE FORT MYERS, FLORIDA 33905 PAUL J. D'HUYVETTER P.E. #59716	LEE COUNTY DEPARTMENT OF TRANSPORTATION			ROADWAY SOIL SURVEY ESTERO BOULEVARD: SEGMENT 3 FORT MYERS BEACH, LEE COUNTY, FLORIDA	DRAWN BY:
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NAME	COUNTY NAME	PROJECT ID		LSK
						ESTERO BOULEVARD	LEE	16-1668			

Appendix H – Gradation Test Results





GFA International, Inc
 5851 Country Lakes Drive
 Fort Myers, Florida 33905
 239-489-2443 P
 239-489-3438 F

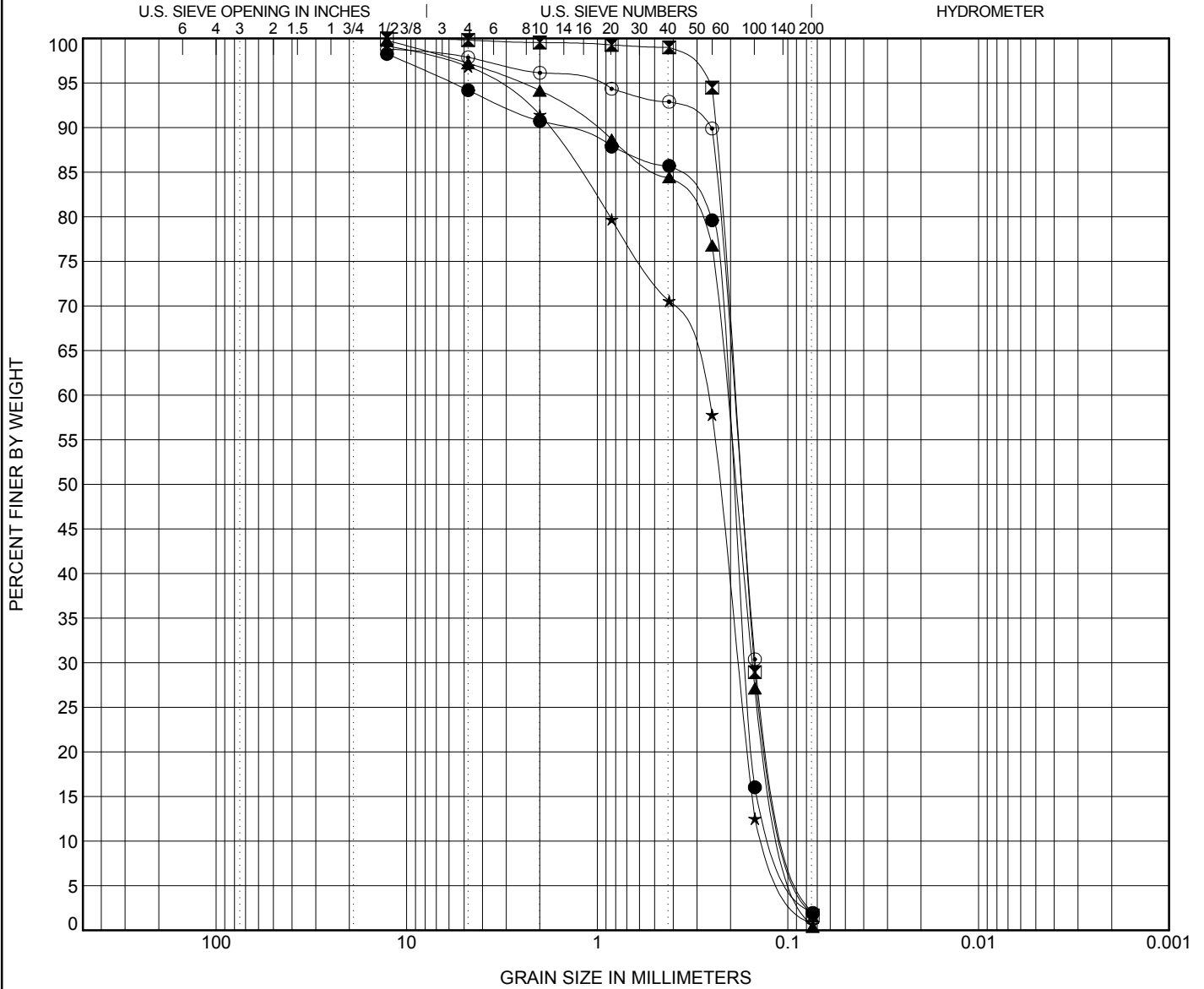
GRAIN SIZE DISTRIBUTION

CLIENT David Douglas Associates, Inc.

PROJECT NAME Estero Boulevard - Segment 3

PROJECT NUMBER 16-1668

PROJECT LOCATION Sta. 1238+00 to Sta. 1282+00



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu		
● HA-1 (0-3.5') 0.0	POORLY GRADED SAND(SP)				1.18	1.93		
☒ HA-3 (2-3.5') 0.0	POORLY GRADED SAND(SP)				1.29	2.08		
▲ HA-4 (3-4') 0.0	POORLY GRADED SAND(SP)				1.18	2.21		
★ HA-6 (4-5') 0.0	POORLY GRADED SAND(SP)				0.94	2.13		
⊙ HA-8 (0-4') 0.0	POORLY GRADED SAND(SP)				1.25	2.14		
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● HA-1 (0-3.5') 0.0	12.7	0.213	0.167	0.11	4.1	92.0	2.2	
☒ HA-3 (2-3.5') 0.0	12.7	0.19	0.15	0.092	0.2	97.6	2.2	
▲ HA-4 (3-4') 0.0	12.7	0.21	0.154	0.095	2.6	96.3	0.9	
★ HA-6 (4-5') 0.0	12.7	0.273	0.182	0.128	2.3	95.9	0.9	
⊙ HA-8 (0-4') 0.0	12.7	0.193	0.148	0.09	0.9	95.4	2.5	

GRAIN SIZE GINT CURVES.GPJ MASTER BORING LOG.GDT 3/16/17



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 3
Client: David Douglas Associates, Inc. **Project No.:** 16-1668
Location: HA-1: 0 to 3.5 ft.
Sampled By: Christian Casey **Date Sampled:** 2/13/2017
Tested By: Lee Khan **Date Tested:** 3/10/2017
Material Description: Gray Sand (SP) with Traces of Shell Fragments

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	716.0	707.4	8.6	1.2%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	12.5	12.5	1.7%	98.3%
#4	4.76	29.1	41.6	5.8%	94.2%
#10	2.00	24.7	66.3	9.3%	90.7%
#20	0.841	20.5	86.8	12.1%	87.9%
#40	0.420	15.5	102.3	14.3%	85.7%
#60	0.250	43.7	146.0	20.4%	79.6%
#100	0.149	455.2	601.2	84.0%	16.0%
#200	0.074	101.1	702.3	98.1%	1.9%
Pan	0.000	1.2	703.5	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 3
Client: David Douglas Associates, Inc. **Project No.:** 16-1668
Location: HA-3: 2 to 3.5 ft.
Sampled By: Christian Casey **Date Sampled:** 2/13/2017
Tested By: Lee Khan **Date Tested:** 3/10/2017
Material Description: Gray Sand (SP)

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	368.2	364.0	4.2	1.1%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	0	0	0.0%	100.0%
#4	4.76	0.7	0.7	0.2%	99.8%
#10	2.00	1.0	1.7	0.5%	99.5%
#20	0.841	1.0	2.7	0.7%	99.3%
#40	0.420	1.0	3.7	1.0%	99.0%
#60	0.250	16.6	20.3	5.5%	94.5%
#100	0.149	241.4	261.7	71.1%	28.9%
#200	0.074	100.4	362.1	98.3%	1.7%
Pan	0.000	2.1	364.2	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 3
Client: David Douglas Associates, Inc. **Project No.:** 16-1668
Location: HA-4: 3 to 4 ft.
Sampled By: Christian Casey **Date Sampled:** 2/17/2017
Tested By: Lee Khan **Date Tested:** 3/10/2017
Material Description: Gray Sand (SP)

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	470.4	467.0	3.4	0.7%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	1.1	1.1	0.2%	99.8%
#4	4.76	12	13.1	2.8%	97.2%
#10	2.00	14.4	27.5	5.8%	94.2%
#20	0.841	25.8	53.3	11.3%	88.7%
#40	0.420	19.9	73.2	15.6%	84.4%
#60	0.250	36.0	109.2	23.2%	76.8%
#100	0.149	233.6	342.8	72.9%	27.1%
#200	0.074	125.8	468.6	99.6%	0.4%
Pan	0.000	1.1	469.7	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 3
Client: David Douglas Associates, Inc. **Project No.:** 16-1668
Location: HA-6: 4 to 5 ft.
Sampled By: Christian Casey **Date Sampled:** 2/13/2017
Tested By: Lee Khan **Date Tested:** 3/10/2017
Material Description: Tan Sand (SP) with Shell Fragments

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	710.1	706.2	3.9	0.5%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	6	6	0.8%	99.2%
#4	4.76	16.4	22.4	3.2%	96.8%
#10	2.00	38.4	60.8	8.6%	91.4%
#20	0.841	83.3	144.1	20.3%	79.7%
#40	0.420	64.9	209.0	29.4%	70.6%
#60	0.250	90.6	299.6	42.2%	57.8%
#100	0.149	321.6	621.2	87.5%	12.5%
#200	0.074	84.1	705.3	99.3%	0.7%
Pan	0.000	0.7	706.0	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 3
Client: David Douglas Associates, Inc. **Project No.:** 16-1668
Location: HA-8: 0 to 4 ft.
Sampled By: Christian Casey **Date Sampled:** 2/17/2017
Tested By: Lee Khan **Date Tested:** 3/10/2017
Material Description: Gray Sand (SP)

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	480.1	473.4	6.7	1.4%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	5.8	5.8	1.2%	98.8%
#4	4.76	4.4	10.2	2.1%	97.9%
#10	2.00	8.3	18.5	3.9%	96.1%
#20	0.841	8.6	27.1	5.6%	94.4%
#40	0.420	7.0	34.1	7.1%	92.9%
#60	0.250	14.4	48.5	10.1%	89.9%
#100	0.149	285.7	334.2	69.6%	30.4%
#200	0.074	136.6	470.8	98.1%	1.9%
Pan	0.000	2.0	472.8	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930

Appendix I – Soil Corrosive Series Test Results





SOIL CORROSIVENESS

Project: Estero Boulevard Remaining Segments **Project No.:** 16-1668
Address: Estero Boulevard, Fort Myers Beach, Lee County, Florida
Client: David Douglas Associates, Inc.
Location: Segment # 3 / Composite Sample # 1
Sampled By: Christian Casey **Date Sampled:** 2/13/17-2/17/17
Tested By: David May **Date Tested:** 3/3/2017
Material Description: Gray - Brown Sand

LABORATORY RESULTS

TEST	LAB RESULTS
pH Content (FM 5-550):	8.27
Resistivity (FM 5-551), ohm-cm:	3,600
Chloride (FM 5-552), ppm:	18
Sulfate (FM 5-553), ppm:	48.9

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930

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Appendix J – Asphalt Thickness by Core Determination





ASPHALT THICKNESS BY CORE DETERMINATION

Client: David Douglas Associates, Inc. Project #: 16-1668
 Project: Estero Boulevard - Segment 3
 Address: Estero Boulevard, Fort Myers Beach, Lee County, Florida

Results of Test

Core #	Location	Total Asphalt Core Thickness (in.)	Measured Asphalt Thickness (in.)		Visual Asphalt Type Classification
			Lift	Thickness	
C-1	Sta. 1245+50: Northbound	7-5/8	Lift 1	1-5/8	S-III
			Lift 2	5/8	Binding Layer
			Lift 3	2-1/8	S-I
			Lift 4	1-5/8	S-I
			Lift 5	1-5/8	S-I
C-2	Sta. 1255+50: Southbound	9-1/8	Lift 1	1-3/8	S-III
			Lift 2*	1/2	Binding Layer
			Lift 3	1	S-I
			Lift 4	1-7/8	S-I
			Lift 5	1-3/4	S-I
			Lift 6**	1-1/2	Type II
C-3	Sta. 1265+50: Northbound	9-5/8	Lift 1	1-7/8	S-III
			Lift 2	2	S-I
			Lift 3	2	S-I
			Lift 4	2-1/4	S-I
			Lift 5	1-1/2	S-I
C-4	Sta. 1275+50: Southbound	10-1/8	Lift 1	2-1/8	S-III
			Lift 2	1-1/8	S-I
			Lift 3	2-5/8	S-I
			Lift 4	3-3/8	Type II
			Lift 5	7/8	ABC-3

*Air Voids Observed in Lifts

**Asphalt Debonded Between Lifts

The above test results were obtained in accordance with standard laboratory procedures.

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Appendix K – Asphalt Bulk Specific Gravity





ASPHALT CORE DENSITIES

CLIENT: <u>David Douglas Associates, Inc.</u>	PROJECT # <u>16-1668</u>
PROJECT: <u>Estero Boulevard - Segment 3</u>	REPORT # <u>1</u>
ADDRESS: <u>Estero Boulevard</u>	CITY: <u>Fort Myers Beach</u> DATE: <u>3/8/2017</u>

Core #	Location/ Offset from Center Line	(A) Weight In Air (grams)	(B) Weight SSD (grams)	(C) Weight In Water (grams)	(D) A/(B-C) Specific Gravity	(E) D x 62.4 Density (PCF)	Tested Thickness (inches)
C-1	Sta. 1245+50 (NB)/ 9 Feet	3765.0	3769.1	1994.0	2.12	132.4	4"
C-2	Sta. 1255+50 (SB)/ 6.5 Feet	3568.3	3578.3	1887.6	2.11	131.7	4"
C-3	Sta. 1265+50 (NB)/ 9.5 Feet	3684.2	3690.2	1974.6	2.15	134.0	4"
C-4	Sta. 1275+50 (SB)/ 6.75 Feet	3661.2	3663.2	1962.0	2.15	134.3	4"

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930

Appendix L – Limerock Bearing Ratio (LBR) Results





Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 3
Address: Estero Boulevard, Fort Myers Beach, Lee County, FL
Client: David Douglas Associates, Inc.

Project ID: 16-1668
Report ID: LBR001

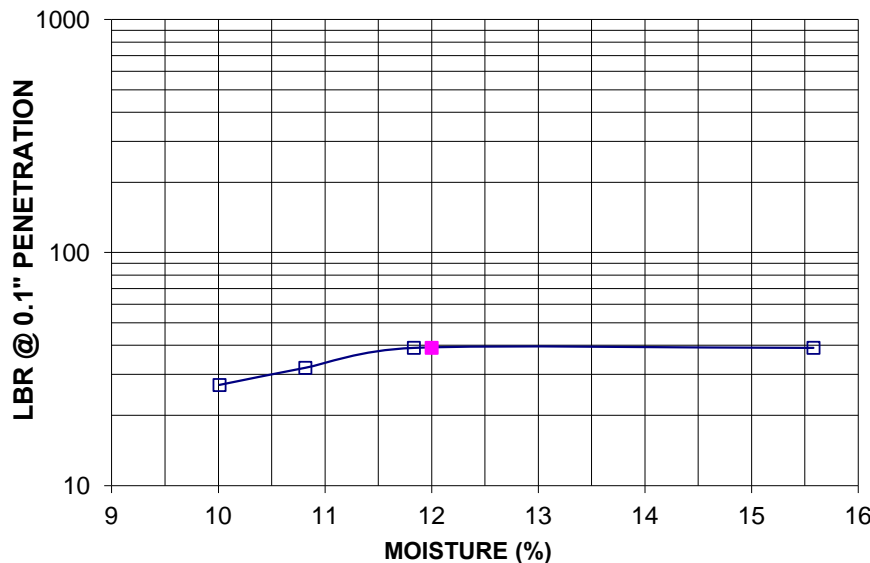
Soil Location: Sta. 1248+00: Existing Shoulder Material
Sampled By: C. Casey **Date Sampled:** 3/1/2017
Tested By: M. Stel **Date Tested:** 3/2/2017
Soil Description: Dark Brown Sand
% Passing #4 Sieve: 73.7 **Type of Rammer:** Mechanical
Rammer Face: Sector **Soak Time (hrs):** 48 **Surcharge (lbs):** 15

Comments: _____



Dry Density (pcf)	Moisture (%)
103.7	10.0
104.9	10.8
105.0	11.8
102.9	15.6

LBR
27
32
39
39



Maximum Dry Density (pcf)
105.1

Optimum Moisture (%)
11.5

Limerock Bearing Ratio
39

Respectfully Submitted.
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

3/16/17

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

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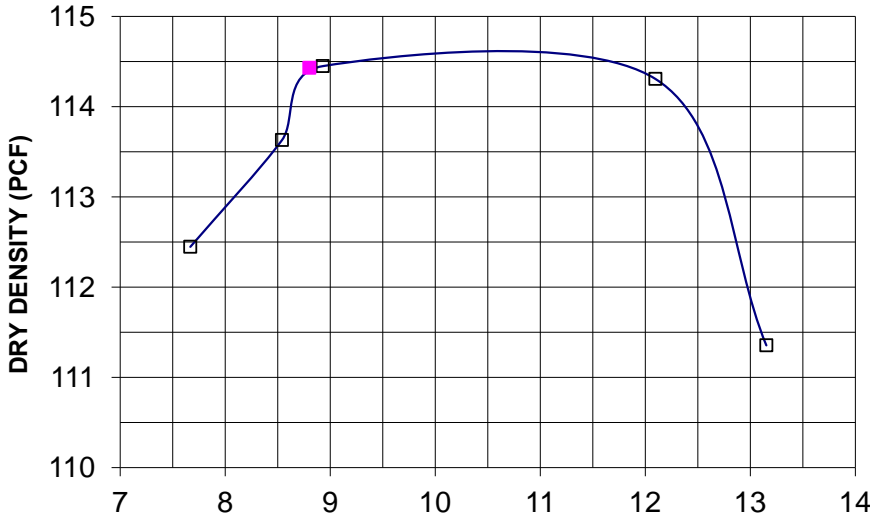
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 3
Address: Estero Boulevard, Fort Myers Beach, Lee County, FL
Client: David Douglas Assocaites, Inc.

Project ID: 16-1668
Report ID: LBR002

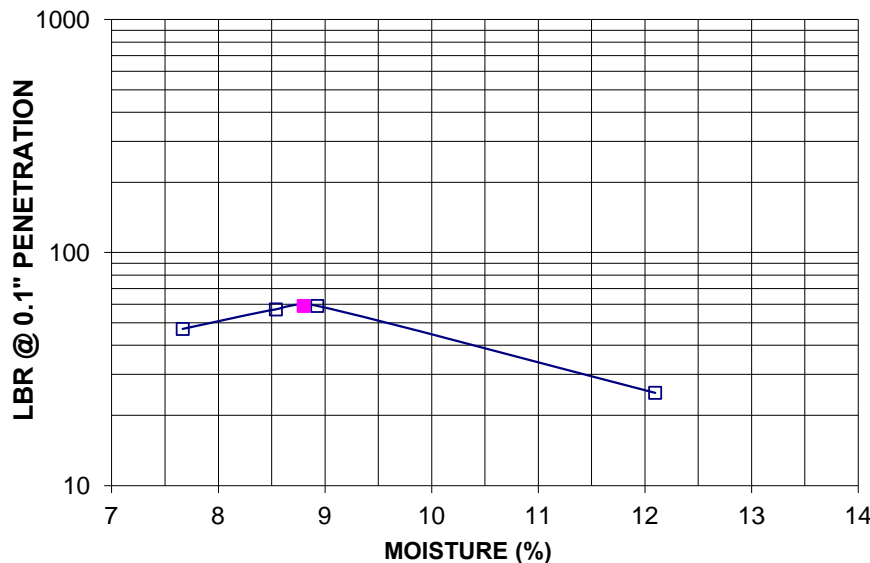
Soil Location: Sta. 1258+00: Existing Shoulder Material
Sampled By: C. Casey **Date Sampled:** 2/15/2017
Tested By: M. Stel **Date Tested:** 2/24/2017
Soil Description: Tan to Light Brown Sand
Soil Classification: 73.7 **Type of Rammer:** Mechanical
Rammer Face: Sector **Soak Time (hrs):** _____ **Surcharge (lbs):** _____

Comments: _____



Dry Density (pcf)	Moisture (%)
112.4	7.7
113.6	8.5
114.4	8.9
114.3	12.1
111.4	13.2

LBR
47.2
56.9
59.3
25.0
15.2



Maximum Dry Density (pcf)
114.4

Optimum Moisture (%)
8.8

Limerock Bearing Ratio (%)
59

Respectfully Submitted.
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

3/16/17

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

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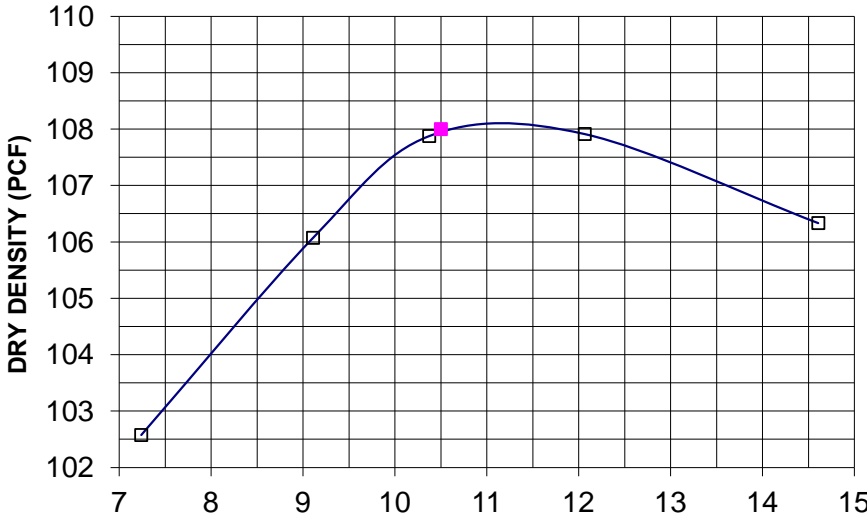
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 3
Address: Estero Boulevard, Fort Myers Beach, Lee County, FL
Client: David Douglas & Associates
Soil Location: Sta. 1268+00: Existing Shoulder Material
Sampled By: C. Casey
Tested By: M. Stel
Soil Description: Tan Brown Sand, Some Organics
Soil Classification: 73.7
Rammer Face: Sector **Soak Time (hrs):** _____
Comments: _____

Project ID: 16-1668
Report ID: LBR003

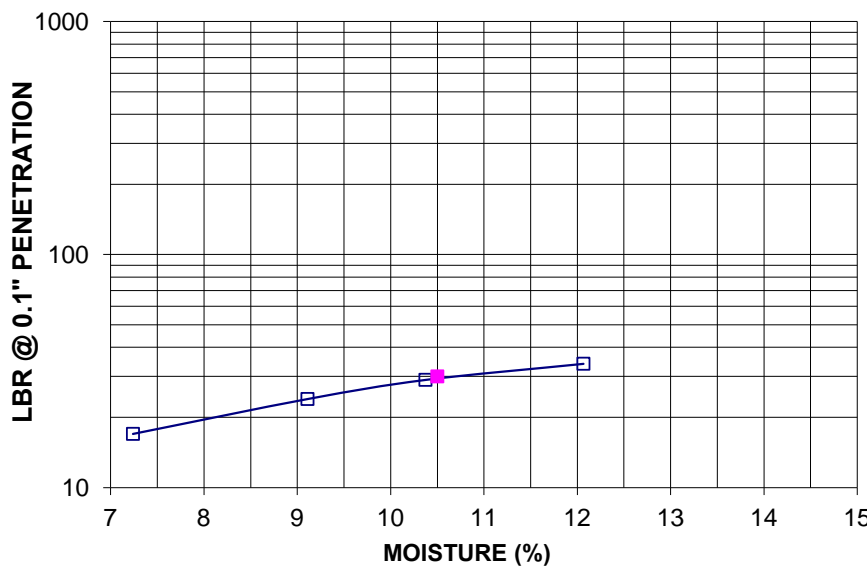
Date Sampled: 2/15/2017
Date Tested: 2/24/2017

Type of Rammer: Mechanical
Surcharge (lbs): _____



Dry Density (pcf)	Moisture (%)
102.6	7.2
106.1	9.1
107.9	10.4
107.9	12.1
106.3	14.6

LBR
17.1
23.8
29.3
33.8
29.6



Maximum Dry Density (pcf)
108.0

Optimum Moisture (%)
10.5

Limerock Bearing Ratio (%)
30

Respectfully Submitted.
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

3/16/17

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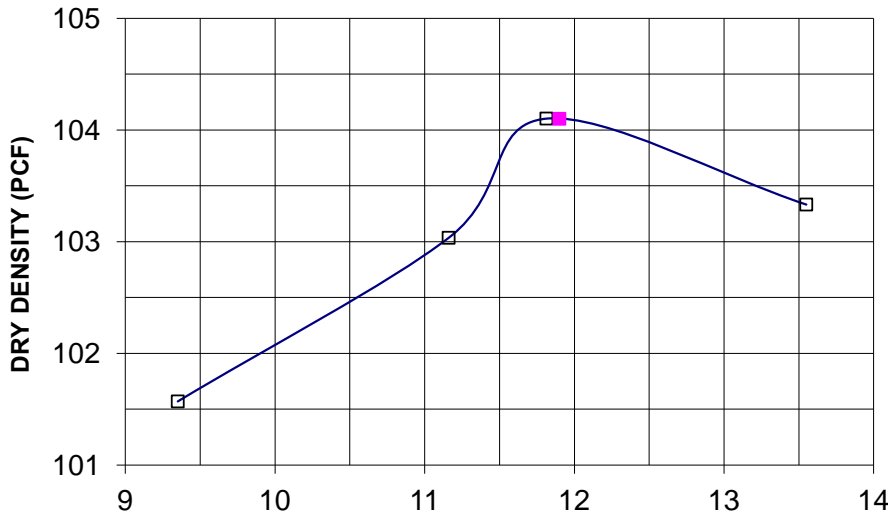
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 3
Address: Estero Boulevard, Fort Myers Beach, Lee County, FL
Client: David Douglas & Associates

Project ID: 16-1668
Report ID: LBR004

Soil Location: Sta. 1278+00: Existing Shoulder Material
Sampled By: C. Casey **Date Sampled:** 3/1/2017
Tested By: M. Stel **Date Tested:** 3/2/2017
Soil Description: Gray Sand
% Passing No. 4 Sieve: 73.7 **Type of Rammer:** Mechanical
Rammer Face: Sector **Soak Time (hrs):** 48 **Surcharge (lbs):** 15

Comments: _____



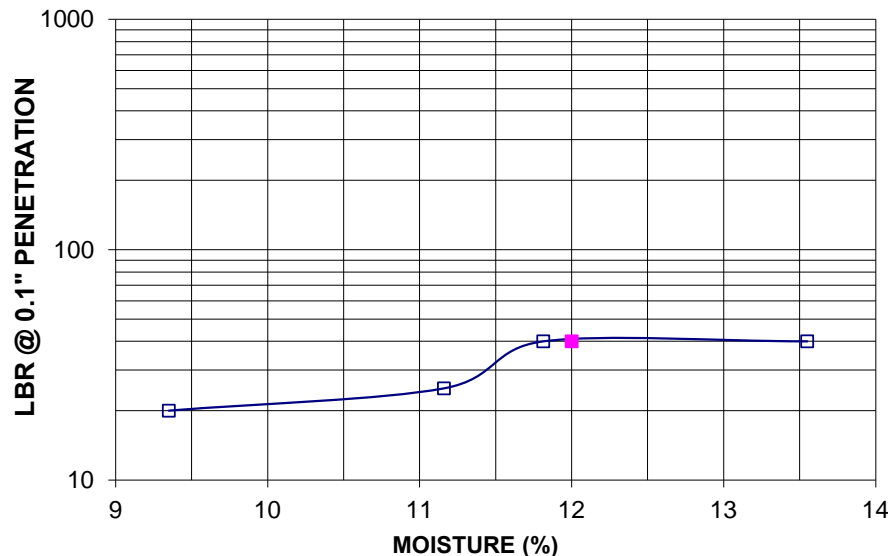
Dry Density (pcf)	Moisture (%)
101.6	9.4
103.0	11.2
104.1	11.8
103.3	13.5

LBR
20
25
40
40

Maximum Dry Density (pcf)
104.1

Optimum Moisture (%)
11.9

Limerock Bearing Ratio
40



Respectfully Submitted,
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

3/16/17

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

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Appendix M – Asphalt Core Photographs



ASPHALT CORE AC-1



ASPHALT CORE AC-2



ASPHALT CORE AC-3



ASPHALT CORE AC-4



GFA INTERNATIONAL

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Report of Geotechnical Exploration

**Estero Boulevard – Segment 4
Fort Myers Beach, Lee County, Florida**

**March 22, 2017
GFA Project No.: 16-1668**

For: David Douglas Associates, Inc.





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March 22, 2017

Mr. Dan Craig P.E.
David Douglas Associates, Inc.
1821 Victoria Ave.
Fort Myers, FL 33901
Phone: (239) 337-3330
Email: DC@DDAI-Engineers.com

**Site: Geotechnical Engineering Services Report
Estero Boulevard – Segment 4
Fort Myers Beach, Lee County, Florida
GFA Project # 16-1668**

Dear Mr. Craig:

GFA International, Inc. (GFA) has completed the subsurface exploration and geotechnical engineering evaluation for the above-referenced project in accordance with the geotechnical and engineering service agreement for this project. The scope of services was completed in accordance with our Geotechnical Engineering Proposal (16-1668.00), planned in conjunction with and authorized by you.

EXECUTIVE SUMMARY

The purpose of our subsurface exploration was to classify the nature of the subsurface soils and general geomorphic conditions and evaluate their impact upon the proposed construction. This report contains the results of our subsurface exploration at the site and our engineering interpretations of these, with respect to the project characteristics described to us including providing recommendations for site preparation and the design of the foundation system.

It is our understanding the project will consist of a construction of a new roadway, drainage installation including underground exfiltration trench, and installation of a new force main or mains along +/- 4,000 feet of Estero Blvd (Sta. 1282+00: Lanark Avenue to Sta. 1322+00: South of Albatross Street). Documents provided to GFA at the time of this report were Plan and Profile Plans completed by T.Y. Lin International, Sheet No. 32 through Sheet No. 46, dated April 9, 2014. The recommendations provided herein are based upon the above considerations. If the project description has been revised, please inform GFA International so that we may review our recommendations with respect to any modifications.

The following was completed for this study:

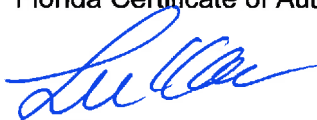
- Eight (8) Hand Auger (HA) borings to depths of approximately 5 feet below ground surface (BGS).
- Three (3) Field Percolation Test borings to depths of approximately 5 feet BGS.
- Four (4) Asphalt Cores with base and subbase thicknesses spaced at approximately 1,000-foot centers.

The subsurface soil conditions encountered at this site generally consists of sand (SP) with shell fragments and traces of organics to the boring termination depths. Please refer to “Appendix D – Record of Hand Auger Boring Logs” for a detailed account of each boring.

The following report presents the project information made available to us, our observation of the existing site conditions, the subsurface geotechnical information obtained during this exploration, and our recommendations on the suitability of the soils encountered for the force main replacement. Also included with this report are the results of our field and laboratory testing. The assessment of site environmental conditions for the presence of pollutants in the soil, rock, and groundwater at this site was not included as a part of our services.

We appreciate the opportunity to be of service to you on this project and look forward to a continued association. Please do not hesitate to contact us if you have any questions or comments, or if we may further assist you as your plans proceed.

Respectfully Submitted,
GFA International, Inc.
Florida Certificate of Authorization Number 4930



Lee S. Khan, E.I.
Staff Engineer



Copies: 2, Addressee
1, CD-R



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1.0 INTRODUCTION

1.1 Scope of Services

The objective of our geotechnical services was to collect subsurface data for the subject project, summarize the test results, and discuss any apparent site conditions that may have geotechnical significance for force main replacement. The following scope of service is provided within this report:

1. Prepare records of the soil boring logs depicting the subsurface soil conditions encountered during our field exploration.
2. Conduct a review of each soil sample obtained during our field exploration for classification and additional testing if necessary.
3. Analyze the existing soil conditions found during our exploration for the suitability of the soils encountered for the force main replacement.
4. Provide recommendations with respect to backfill material for the force main replacement.
5. Provide criteria and site preparation procedures to prepare the site for the proposed construction.

1.2 Project Description

It is our understanding the project will consist of a construction of a new roadway, drainage installation including underground exfiltration trench, and installation of a new force main or mains along +/- 4,000 feet of Estero Blvd (Sta. 1282+00: Lanark Avenue to Sta. 1322+00: South of Albatross Street). Documents provided to GFA at the time of this report were Plan and Profile Plans completed by T.Y. Lin International, Sheet No. 32 through Sheet No. 46, dated April 9, 2014. The recommendations provided herein are based upon the above considerations. If the project description has been revised, please inform GFA International so that we may review our recommendations with respect to any modifications.

2.0 OBSERVATIONS

2.1 Site Inspection

A site reconnaissance was conducted by members of our engineering staff prior to mobilization of drilling equipment and crews. The purpose of the site visit was to observe the existing site conditions in order to detect any factors that may impact our studies and recommendations.

Generally, the proposed construction site is level. No standing water on the surface was observed during the time of our drilling. The tested site consists of an urban area and is landscaped.



2.2 Geology

The surficial geologic map of Lee County, Florida consists of a quartz sand blanket that overlies the Tertiary Tamiami Formation (T_t), Tertiary-Quaternary Shell Units (Q_{su}) and Quaternary (Holocene) Coastal and Estuarine Sediments (Q_h). The quartz sand blanket is generally less than 20 feet thick deposit, fine to medium grained, well sorted, with no fossils.

The oldest formation is the Tertiary Tamiami Formation (T_t). The Tamiami Formation consists of a mixture of variably sandy limestone, sands and clays containing varying percentage of phosphate grains. Fossils including mollusks, echinoids and corals are abundant. Fossil preservation varies from well preserved to molds and casts.

Overlaying the Tamiami Formation throughout much of the county are sediments indicated as Tertiary-Quaternary Shell Units (Q_{su}). These units consist of sands with subordinate limestone and clay. Fossils, including mollusks and corals, are common and well preserved.

Along the coast, Quaternary (Holocene) Coastal and Estuarine Sediments (Q_h) are founded below an altitude of approximately 5 feet. These sediments consist of quartz sand with a variable organics component. The Holocene sediments include the beach ridge and dune sands.

2.3 Field Exploration

The following was completed for this study:

- Eight (8) Hand Auger (HA) borings to depths of approximately 5 feet below ground surface (BGS).
- Three (3) Field Percolation Test borings to depths of approximately 5 feet BGS.
- Four (4) Asphalt Cores with base and subbase thicknesses spaced at approximately 1,000-foot centers.

The locations of the borings performed are illustrated in "Appendix B: Test Location Plan". The Standard Penetration Test (SPT) boring method was used as the investigative tool within the borings. SPT tests were performed in substantial accordance with ASTM Procedure D-1586, "Penetration Test and Split-Barrel Sampling of Soils". This test procedure consists of driving a 1.4-inch I.D. split-tube sampler into the soil profile using a 140-pound hammer falling 30 inches. The number of blows per foot, for the second and third 6-inch increment, is an indication of soil strength.

The soil samples recovered from the soil borings were visually classified and their stratification is illustrated in "Appendix D: Record of Hand Auger Boring Logs". It should be noted that soil conditions might vary between the strata interfaces, which are shown. The soil boring data reflect information from a specific test location only. Site specific survey staking for the test locations was not provided for our field exploration. The indicated depth and location of each test was approximated based upon existing grade and estimated distances and relationships to obvious landmarks. The boring depths were selected based on our knowledge of vicinity soils and to include the zone of soil likely to be stressed by the proposed construction.



2.4 Laboratory Analysis

Soil samples recovered from our field exploration were returned to our laboratory where they were visually examined in general accordance with ASTM D-2488. Samples were evaluated to obtain an accurate understanding of the soil properties and site geomorphic conditions. After a thorough visual examination of the recovered site soils, laboratory testing was conducted to determine particle size distribution (D-422) on individual samples and soil corrosiveness on a composite sample obtained from depths ranging from 2 to 5 feet BGS.

Composite bulk specific gravity tests were run on the four asphalt cores obtained during field exploration using the saturated surface-dry procedure (AASHTO T-166). Limerock Bearing Ratio (LBR) tests were run on material obtained within approximately 5 feet of the edge of pavement using the Florida Method FM 5-515.

All laboratory tests were conducted in general accordance with ASTM, AASHTO, or Florida Methods, as applicable. The test method number for each test and the number of tests completed are presented in the following table.

TEST DESCRIPTION	NUMBER OF TESTS	ASTM TEST METHOD
Soil Classification	24	D-2488
Gradation Analysis	4	D-422
Soil Corrosiveness (pH, Resistivity, Chloride, Sulfate)	1	FM 5-550, FM 5-551, FM 5-552, and FM 5-553
Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens	4	AASHTO T-166
Limerock Bearing Ratio (LBR)	4	FM 5-515

Bag samples of the soil encountered during our field exploration will be held in our laboratory for your inspection for 90 days and then discarded unless we are notified otherwise in writing.

2.4.1 Gradation Tests

A total of four (4) gradation tests were performed on samples obtained during the field exploration program. Material passing the No. 200 sieve is considered “fines” and will be either silt or clay. The percent passing the No. 200 sieve, for the tested samples, ranged from 0.9 to 2.0 percent, this resulted in the sampled material to be considered poorly graded. A summary of the grain size distribution curve is presented in “Appendix H: Gradation Test Results”.

2.4.2 Soil Corrosiveness

This test method covers the laboratory determination for the minimum resistivity of a soil. The principal use of this test method is to determine a soil's corrosivity and thereby identify the conditions under which the corrosion of metals in soil may be sharply accentuated. Soil corrosiveness testing was completed on one (1) composite sample ranging from 2 – 5 feet BGS.



The soil samples obtained were considered non-marine structures and classified under the criteria for substructure environmental classifications. The pH (>7.0), chloride (<500 ppm), and sulfate (<1000 ppm) fell under the slightly aggressive classification but due to the resistivity results (<1000 Ohm-cm), **Composite 1 is deemed to be moderately aggressive for concrete structures and moderately aggressive for steel structures.** The laboratory results for soil corrosiveness can be found in “Appendix I: Soil Corrosive Series Test Results”.

For design purposes we recommend using a classification of “Moderately Aggressive” for this project.

2.5 Geomorphic Conditions

Boring logs derived from our field exploration are presented in “Appendix B: Boring Locations and Soil Profiles”. The boring logs depict the observed soils in graphic detail. The Standard Penetration Test borings indicate the penetration resistance, or N-values, logged during the drilling and sampling activities. The classifications and descriptions shown on the logs are generally based upon visual characterizations of the recovered soil samples. All soil samples reviewed have been depicted and classified in general accordance with the Unified Soil Classification System, modified as necessary to describe typical southwest Florida conditions. See “Appendix E: Discussion of Soil Groups”, for a detailed description of various soil groups.

The subsurface soil conditions encountered at this site generally consists of sand (SP) with shell fragments and traces of organics to the boring termination depths. Please refer to “Appendix D – Record of Hand Auger Boring Logs” for a detailed account of each boring.

2.6 Hydrogeological Conditions

During our field exploration program from February 13, 2017 to February 17, 2017, the groundwater table was encountered in our HA borings at depths of approximately 4 to 5 feet below the existing ground surface. The groundwater table will fluctuate depending upon tidal events.

Located in “Appendix F: Hydrologic Soils Map” are the following descriptive characteristics of the two (2) types of soil surveys encountered during the drilling operations based on the soil survey of Lee County, Florida, published by the United States Department of Agriculture:

Canaveral-Urban Land Complex (4)

About 50 to 70 percent of each area of the complex consists of nearly level Canaveral soils or areas of Canaveral soils that have been reworked or reshaped, but which still are recognizable as Canaveral soils. Typically, Canaveral soils have a surface layer of lack and dark gray fine sand that is mixed with shell fragments. Beneath the surface layer, to a depth of 80 inches or more, are layers of light brownish gray and light gray fine sand mixed with shell fragments.

About 20 to 30 percent of each area is urban land. This land is used for houses, streets, driveways, buildings, parking lots, and other related uses.

In undrained areas, the water table is at a depth of 18 to 40 inches for a period of 2 to 6 months in most years. Drainage systems have been established in most areas, however, and the depth to the water table is dependent on the drainage system.



Kesson Fine Sand (24)

This is a nearly level, very poorly drained soil in broad tidal swamps. Areas are subject to tidal flooding. Typically, the surface layer is about 6 inches of sand that contains shell fragments. The underlying layers are fine sand that contains shell fragments, and they extend to a depth of 80 inches or more.

The water table fluctuates with the tide. The available water capacity is low. Permeability is moderately rapid or rapid.

2.6.1 Exfiltration Testing

GFA International performed three field percolation (PERC) tests spaced at approximately 1,150-foot centers. The percolation testing was performed in accordance with the SFWMD Constant-Head Open-Hole Test Method. The results are presented below.

PERC Test – 4 (Sta. 1293+00)	
Depth (ft)	Soil Description
0 – 3	Gray Sand (A-3; SP) with Shell Fragments
3 – 4	Light Gray Sand (A-3; SP)
4 – 5	Brown Sand (A-3; SP)
Water table: 4.5 feet below grade.*	
Saturated K = 39.2 Ft.³/Day/ Ft.² – Ft. of Head	

*Water Table is Tidally Influenced.

PERC Test – 5 (Sta. 1305+00)	
Depth (ft)	Soil Description
0 – 1.5	Gray Sand (A-3; SP) with Shell Fragments
1.5 – 3	Gray Sand (A-3; SP)
3 – 5	Brown Sand (A-3; SP) with Traces of Roots
Water table: 3.75 feet below grade.*	
Saturated K = 17.8 Ft.³/Day/ Ft.² – Ft. of Head	

*Water Table is Tidally Influenced.

PERC Test – 6 (Sta. 1316+00)	
Depth (ft)	Soil Description
0 – 2	Dark Gray Sand (A-3; SP)
2 – 3	Gray Sand (A-3; SP)
3 – 5	Brown Sand (A-3; SP)
Water table: 2.75 feet below grade.*	
Saturated K = 19.0 Ft.³/Day/ Ft.² – Ft. of Head	

*Water Table is Tidally Influenced.

The location of the exfiltration test completed is illustrated in "Appendix B: Test Location Plan".



3.0 ENGINEERING EVALUATION AND RECOMMENDATIONS

3.1 General

The geotechnical evaluations for the proposed construction site are based on the subsurface soil and groundwater conditions encountered during this study, the project information made available, our site observations, and our experience in the vicinity. The test data has been evaluated using established geotechnical parameters of the soils recorded at this site, laboratory test results, and the observed performance of similar soil types.

Based on the soil conditions encountered in the performed borings, the near surface soils do not meet the below mentioned Lee County Technical Specifications for drainage fill, select fill, or common fill. The water main replacement may be designed according to the recommendations and site preparations as discussed below with a fill material meeting the specifications.

3.2 Pipe Bedding and Initial Backfill (Force Main)

According to the Lee County Technical Specifications, Section 2223, Backfilling, a select fill material shall be used for pipe bedding and initial backfill from top of bedding to 1 foot over the top of pipes. The select fill shall be compacted to not less than 95 percent of the maximum dry density as determined by ASTM D-1557.

Pipe bedding containing very fine sand, uniformly graded sands and gravel, silt, soft earth, or other material that have a tendency to flow under pressure when wet is unacceptable.

Based on the laboratory test results the majority of the near surface soils consist of poorly graded clean sands to slightly silty sands. Material from on-site excavation does not meet the gradation specification for select fill or common fill and cannot be used for pipe bedding and initial backfill.

3.3 Pipe Bedding and Initial Backfill (Drainage System)

Pipe bedding and initial backfill shall be in accordance with Florida Department of Transportation (FDOT) for Road and Bridge Construction – Sections 120 & 125 (January 2017).

3.4 Trench Excavation

Where trench excavations are required, trenches shall be sufficiently wide and deep to allow proper installation of pipes. We recommend about 12 inches clear of the pipe on either side at any point. Boulders, rocks or other hard unyielding material shall be excavated to a depth of 12 inches below the bottom of the pipe elevation.

Due to the depth of excavations and the depth of the water table, we anticipate excavation will require shoring or a trench box. Trenching should be in general accordance with any Lee County trenching requirements and the Occupational Safety and Health Administration (OSHA) requirements, as applicable.



3.5 Trench Backfill

Trench backfill material shall be clean earth fill composed of sand, clay and sand, sand and stone, crushed stones or other soils approved by a professional engineer. The trench backfilling shall be accomplished from the top of the initial backfill to the ground surface. The backfill, unless otherwise specified, shall be compacted to 95% of maximum density, as determined by ASTM D-1557.

When trenches are cut in pavements or areas to be paved, compaction shall be in accordance with FDOT for Road and Bridge Construction (January 2017).

Based on the soil profiles, presented in “Appendix B: Boring Locations and Soil Profiles”, the material from on-site excavation that will contain sands and silt or gravel size limestone fragments may be used for the trench backfill. The organic soils, if encountered during construction, are not suitable and shall not be used as a trench backfill material.

4.0 DEWATERING OF EXCAVATIONS

The high groundwater tables in the vicinity of excavations shall be reduced to prevent water inflow into excavations. Dewatering will be required for the excavation of trenches during construction. Each excavation shall be kept dry during subgrade preparation and continually thereafter until installation of the pipe or wet well structures. The dewatering will be required to maintain groundwater elevation at least 24 inches below the bottom at all times to prevent bottom disturbance or failure.

5.0 SITE PREPARATION PROCEDURES

Site preparation procedures should begin with the removal of existing debris, vegetation, or other unsuitable materials within and beyond the excavation construction.

The organic soils, if encountered during construction, shall be removed and replaced to a required level (the future project specification) with a compacted suitable fill. The suitable fill material shall contain less than 10 percent of fines passing the No. 200 sieve, not contain clay balls and rock fragments greater than 3 inches in diameter.

An adequate dewatering system shall be installed to maintain the water table 2 feet or more below the maximum depth of excavation. The continuous dewatering shall be provided until the pipeline is completed and backfill is above the water table before beginning of the dewatering. When a professional engineer approves the discontinuing of the dewatering, the rate of pumping shall slowly decrease, allowing the water level to rise slowly.

The soils that extend below the water table should be allowed to dry prior to placement as a backfill material and compaction. This can be accomplished by stockpiling the material and allowing it to drain, or by spreading it in relatively thin lifts on the surface and allowing it to dry prior to compaction. The silty or sands with clay may require moisture conditioning so that the soil moisture content at the time of compaction is at or near the optimum moisture content.



Trench bottoms should be compacted with a small roller or vibratory plate compactor prior to pipe placement. Any loose or soft yielding areas detected during compaction of the trench bottoms should either be further compacted to at least 95% of maximum dry density or removed and replaced with a select fill and compacted to 95% of maximum dry density. Bedding stone may be used in lieu of select fill.

During the compaction operation, a geotechnical engineer or an engineering technician working under his direction should observe the soils to verify that the exposed soils are suitable and that unsuitable soils have been removed. Samples of the backfill materials should be obtained to determine the grain size distribution, its maximum dry density and optimum moisture content in the laboratory in accordance with ASTM D-1557 (Modified Proctor Test).

6.0 ASPHALT EVALUATION

6.1 Asphalt Thickness

Four (4) asphalt cores were taken at alternating lanes (southbound or northbound) along Estero Boulevard in Fort Myers Beach starting just south of Lanark Avenue (Sta. 1285+50) and finishing just north of Albatross Street (Sta. 1315+00). The location of each individual asphalt core can be found in “Appendix B: Test Location Plan”.

GFA International encountered an average asphalt thickness of 10-3/8 inches with a range of six (6) to nine (9) lifts per asphalt core. A stratum was initiated from top of existing asphalt (Lift 1) down to the bottom of asphalt (ex.: Lift 6). Air voids were observed in Lift 3 of Asphalt Core C-7 and C-8. A summary of the test results are shown in “Appendix J: Asphalt Thickness by Core Determination”. Refer to “Appendix M: Asphalt Core Photographs” for a visual record of each asphalt core.

Beneath the asphalt, a layer of cemented shell base was encountered. This material consists of sand shell fragments.

6.2 Limerock Bearing Ratio (LBR) Testing

A total of four (4) samples were obtained within approximately 5 feet of the edge of pavement to conduct Limerock Bearing Ratio (LBR) tests on the existing subgrade soils, using the Florida Method FM 5-515. Based on the laboratory test results, we recommend a structural coefficient for Type B Stabilized subbase, LBR 30 material (0.06). For complete test results, refer to “Appendix L – Limerock Bearing Ratio (LBR) Results”. It is our understanding that the existing base material will be removed during utility construction. As such, no LBR samples were collected from the base material.

6.3 Asphalt Bulk Specific Gravity Testing

A total of four (4) asphalt core samples were tested using American Association of State Highway and Transportation (AASHTO) T-166 “Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens”. The top 4-inches of asphalt were tested as a composite sample per each asphalt core. The asphalt density ranged from 129.7 to 134.6 pounds per cubic foot (PCF) which averaged in 131.3 PCF.

For complete test results, refer to “Appendix K – Asphalt Bulk Specific Gravity”.



7.0 REPORT LIMITATIONS

This consulting report has been prepared for the exclusive use of the current project owners and other members of the design team for the Estero Boulevard – Segment 4 located on Estero Boulevard in Fort Myers Beach, Lee County, Florida. This report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied. The evaluation submitted in this report, is based in part upon the data collected during a field exploration, however, the nature and extent of variations throughout the subsurface profile may not become evident until the time of construction. If variations then appear evident, it may be necessary to reevaluate information and professional opinions as provided in this report. In the event changes are made in the nature, design, or locations of the proposed structure, the evaluation and opinions contained in this report shall not be considered valid, unless the changes are reviewed and conclusions modified or verified in writing by GFA International. GFA is not responsible for damage caused by soil improvement and/or construction activity vibrations related to this project. GFA is also not responsible for damage concerning drainage or moisture related issues for the proposed or nearby structures.

8.0 BASIS FOR RECOMMENDATIONS

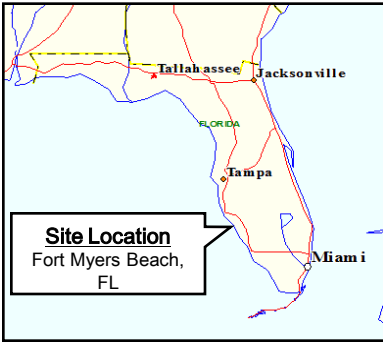
The analysis and recommendations submitted in this report are based on the data obtained from the tests performed at the locations indicated on the attached figure in “Appendix B: Test Location Plan”. This report does not reflect any variations, which may occur between borings. While the borings are representative of the subsurface conditions at their respective locations and for their vertical reaches, local variations characteristic of the subsurface soils of the region are anticipated and may be encountered. The delineation between soil types shown on the soil logs is approximate and the description represents our interpretation of the subsurface conditions at the designated boring locations on the particular date drilled.

Any third party reliance of our geotechnical report or parts thereof is strictly prohibited without the expressed written consent of GFA International. The methodology (ASTM D-1586) used in performing our borings and for determining penetration resistance is specific to the sampling tools utilized and does not reflect the ease or difficulty to advance other tools or materials.



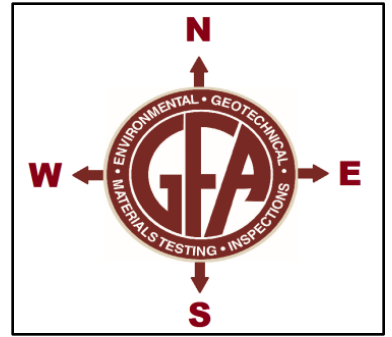
Appendix A - Vicinity Map





VICINITY MAP

Estero Boulevard – Segment 4
Fort Myers Beach, Lee County, Florida
GFA International Project No.: 16-1668



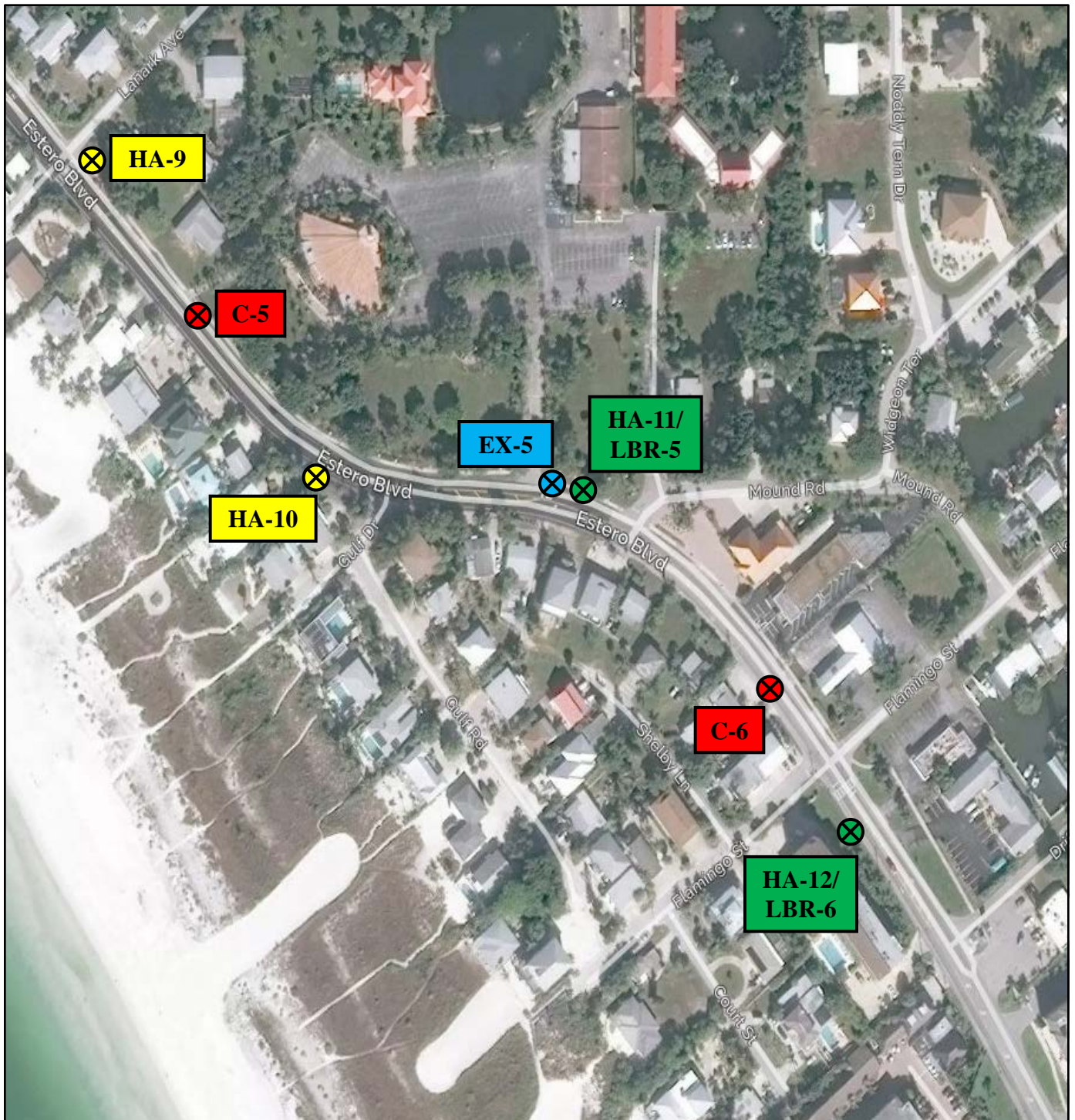
Appendix B – Test Location Plan





TEST LOCATION PLAN

Estero Boulevard – Segment 4
Fort Myers Beach, Lee County, Florida
GFA International Project No.: 16-1668



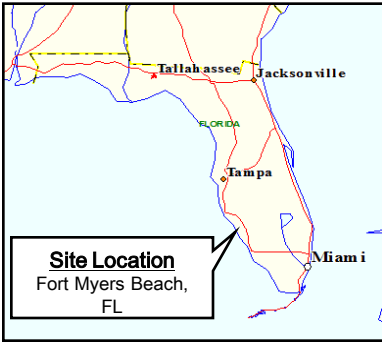
*Scale is an approximation and may not be accurate.

⊗ Hand Auger Boring

⊗ Asphalt Core

⊗ Exfiltration Test

⊗ Hand Auger Boring/ LBR Sample



TEST LOCATION PLAN

Estero Boulevard – Segment 4
Fort Myers Beach, Lee County, Florida
GFA International Project No.: 16-1668



*Scale is an approximation and may not be accurate.

⊗ Hand Auger Boring
⊗ Exfiltration Test

⊗ Asphalt Core
⊗ Hand Auger Boring/ LBR Sample

Appendix C - Notes Related to Borings



**NOTES RELATED TO
RECORDS OF TEST BORING AND
GENERALIZED SUBSURFACE PROFILE**

1. Groundwater level was encountered and recorded (if shown) following the completion of the soil test boring on the date indicated. Fluctuations in groundwater levels are common; consult report text for a discussion.
2. The boring location was identified and located in the field based on measured and estimated distances from existing site features.
3. The borehole was backfilled to site grade following boring completion, patched with asphalt cold patch mix when pavement was encountered.
4. The Record of Test Boring represents our interpretation of field conditions based on engineering examination of the soil samples.
5. The Record of Test Boring is subject to the limitations, conclusions, and recommendations presented in the report text.
6. The Standard Penetration Test (SPT) was performed in accordance ASTM Procedure D-1586. SPT testing procedure consists of driving a 1.4-inch I.D. split-tube sampler into the soil profile using a 140-pound hammer falling 30 inches.
7. On the Record of Test Boring listed as "Blow Counts", the N-value is the sum of the SPT hammer blows required to drive the split-tube sampler through the second and third 6-inch increment of the sampling layer, and is an indication of soil strength.
8. Shown on the Record of Test Boring an SPT N-value expressed as 50/2" is descriptive of the fact that 50 hammer blows were required to drive the split-spoon sampler a distance of approximately 2 inches.
9. The soil/rock strata interfaces shown on the Records of Test Boring are approximate and may vary from those in the field. The soil/rock conditions shown on the Records of Test Boring refer to conditions at the specific location tested; soil/rock conditions may vary between test locations.

10. Relative density and consistency for sands/gravels, silts/clays, and limestone are described as follows:

Cohesionless Soils	
SPT (N-Value)	Relative Density
0 – 3	Very Loose
4 – 8	Loose
9 – 24	Medium Dense
25 – 40	Dense
Over 40	Very Dense

Silts and Clays	
SPT (N-Value)	Consistency
0 – 1	Very Soft
2 – 4	Soft
4 – 6	Firm
7 – 12	Stiff
13 – 24	Very Stiff
Over 24	Hard

Limestone	
SPT (N-Value)	Relative Density
0 – 19	Very Soft
20 – 49	Soft
50 – 100	Medium Hard
50 for 3 to 5"	Moderately Hard
50 for 0 to 2"	Hard

11. Definition of descriptive terms of modifiers for silts/clays/shells/gravels are described as follows:

Percentage of Modifier Material	First Qualifier	Second Qualifier
0 – 5	With a Trace of + Modifier	With a Trace
5 – 12	Slightly + Modifier + y	With Some
12 – 30	Modifier + y	With
30 – 50	Very + Modifier + y	And

12. Descriptive characteristics for organic content percentages are described as follows:

Percentage of Organic Material	Descriptor
0 – 5	With a Trace
5 – 20	With Organics
20 – 75	Highly Organic
75 – 100	Peat



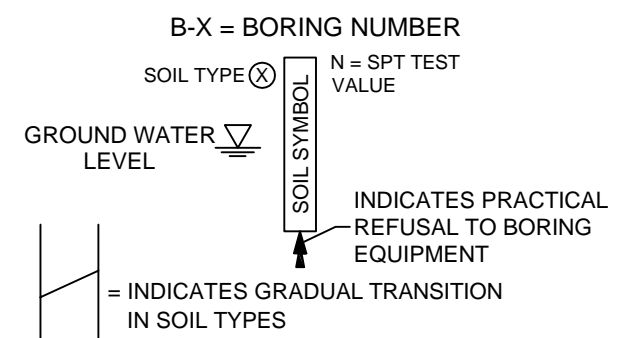
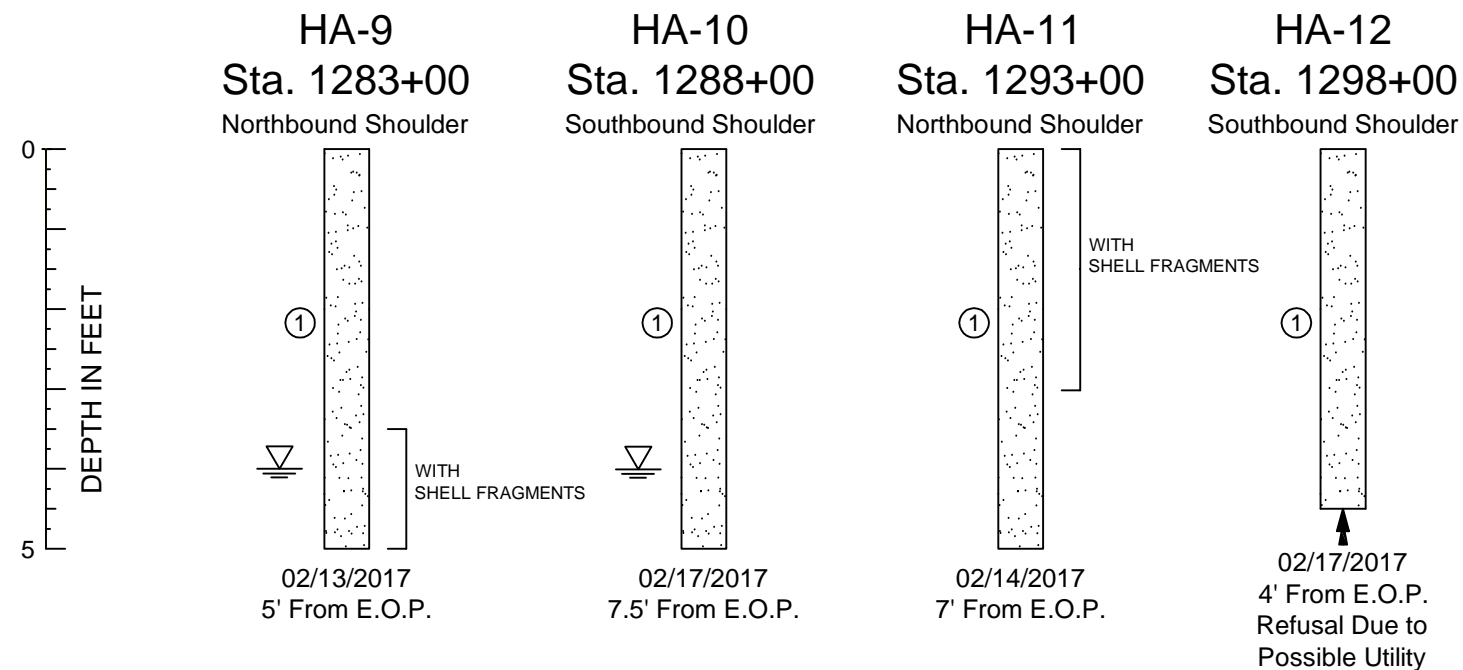
Appendix D – Record of Hand Auger Boring Logs



SOIL PROFILES

SOIL PROFILE LEGEND

SOIL LEGEND



① White, Light Gray to Gray, Orange to Tan, Light Brown to Brown, SAND (SP/ A-3)

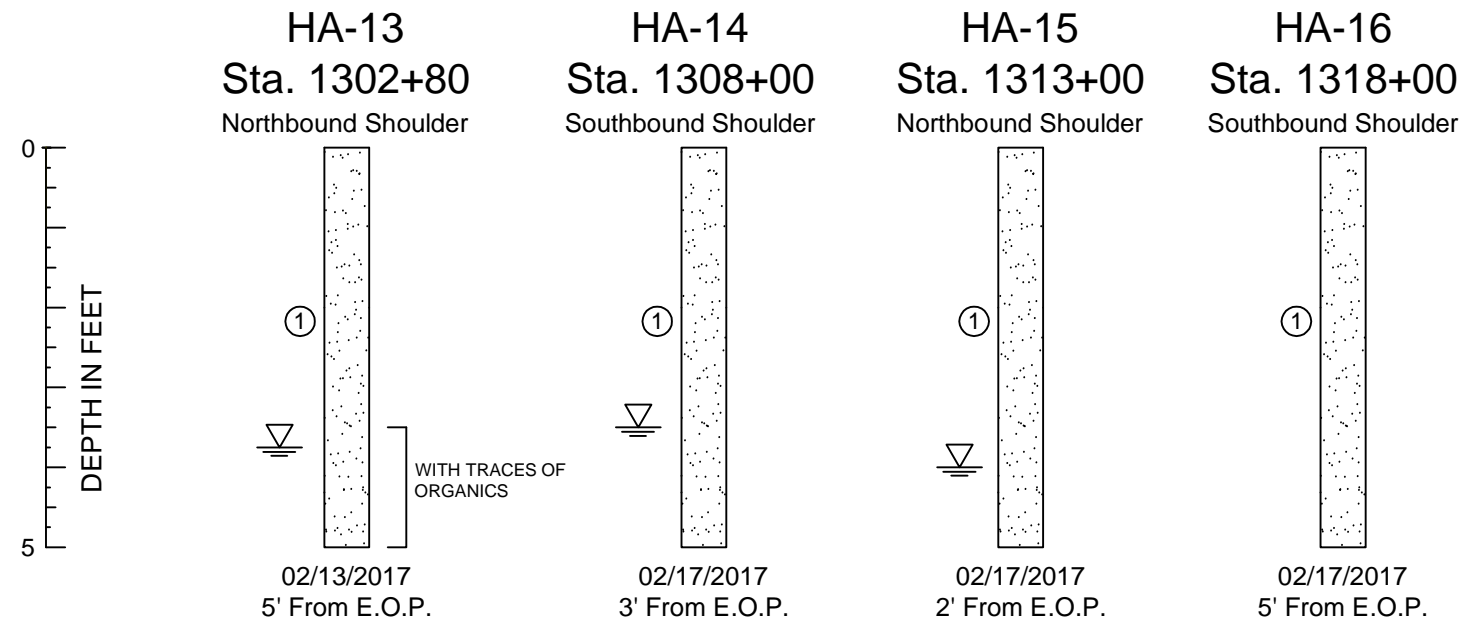
NOTES:

N - STANDARD PENETRATION RESISTANCE TEST (SPT) VALUE. NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12-INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).

WOH - BORING INTERVAL ADVANCED UNDER WEIGHT OF HAMMER.

LFC - LOSS OF DRILLING FLUID CIRCULATION.

E.O.P. - DISTANCE OF HAND AUGER BORING FROM EDGE OF PAVEMENT




SOIL CLASSIFICATION

CORRELATION OF N - VALUES WITH RELATIVE DENSITY AND CONSISTENCY				CORRELATION OF N - VALUES WITH HARDNESS DESCRIPTION	
COHESIONLESS SOIL		SILTS AND CLAYS		LIMEROCK	
N - VALUE	RELATIVE DENSITY	N - VALUE	CONSISTENCY	N - VALUE	RELATIVE DENSITY
0 - 2	VERY LOOSE	UNDER 1	VERY SOFT	0 - 19	VERY SOFT
3 - 8	LOOSE	1 - 3	SOFT	20 - 49	SOFT
9 - 24	MEDIUM DENSE	4 - 6	FIRM	50 - 100	MEDIUM HARD
25 - 40	DENSE	7 - 12	STIFF	50 FOR 3 TO 5"	MODERATELY HARD
OVER 40	VERY DENSE	13 - 24	VERY STIFF	50 FOR 0 TO 2"	HARD
		OVER 24	HARD		

APPROXIMATE FINES CONTENT		APPROXIMATE SAND/ GRAVEL CONTENT		APPROXIMATE ROOT CONTENT	
MODIFIERS		MODIFIERS		MODIFIERS	
5% TO 15%	SLIGHTLY SILTY OR SLIGHTLY CLAYEY	5% TO 15%	SLIGHTLY SANDY OR SLIGHTLY GRAVELLY	5% TO 10%	TRACE
16% TO 25%	SILTY OR CLAYEY	16% TO 25%	SANDY OR GRAVELLY	11% TO 20%	TRACE TO SOME
26% TO 49%	VERY SILTY OR VERY CLAYEY	26% TO 49%	VERY SANDY OR VERY GRAVELLY	21% TO 40%	SOME
				41% TO 60%	AND

RECORD OF TEST BORINGS

	GFA International, Inc. 5851 Country Lakes Drive Fort Myers, Florida 33905 239-489-2443 * TeamGFA.com	Client: David Douglas Associates, Inc. Project: Estero Boulevard - Segment 4 Fort Myers Beach, Lee County, Florida Approved by: PJD	Date: 03/09/2017 Job No: 16-1668 Drawn By: LSK
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Appendix E – Discussion of Soil Groups



DISCUSSION OF SOIL GROUPS: AASHTO CLASSIFICATION

COARSE GRAINED SOILS

- **Group A-1:** The typical material of this group is a well-graded mixture of stone fragments or gravel, coarse sand, fine sand, and a nonplastic or feebly-plastic soil binder. However, this group also includes stone fragments, gravel, coarse sand, volcanic cinders, etc., without a soil binder.
 - **Subgroup A-1-a:** Includes those materials consisting predominantly of stone fragments or gravel, either with or without a well-graded binder of fine material.
 - **Subgroup A-1-b:** Includes those materials consisting predominantly of coarse sand, either with or without a well-graded soil binder.
- **Group A-3:** The typical material of this group is fine beach sand or fine desert-blow sand without silty or clay fines, or with a very small amount of nonplastic silt. This group also includes stream-deposited mixtures of poorly-graded fine sand and limited amounts of coarse sand and gravel.
- **Group A-2:** This group includes a wide variety of “granular” materials which are borderline between the materials falling in Groups A-1 and A-3, and the silt-clay materials of Groups A-4, A-5, A-6, and A-7. It includes all materials containing 35% or less passing a No. 200 (75- μ m) sieve which cannot be classified in Groups A-1 or A-3, due to the fines content or the plasticity indexes, or both, in excess of the limitations for those groups.
 - **Subgroups A-2-4 and A-2-5:** Include various granular materials containing 35% or less passing a No. 200 (75- μ m) sieve and with a minus No. 40 (425- μ m) portion having the characteristics of Groups A-4 and A-5, respectively. These groups include such materials as gravel and coarse sand with silt contents or plasticity indexes in excess of the limitations of Group A-1 and fine sand with nonplastic-silt content in excess of the limitations of Group A-3.
 - **Subgroups A-2-6 and A-2-7:** Include materials similar to those described under Subgroups A-2-4 and A-2-5, except that the fine portion contains plastic clay having the characteristics of the A-6 or A-7 group, respectively.



FINE GRAINED SOILS

- **Group A-4:** The typical material of this group is a nonplastic or moderately plastic silty soil usually having 75% or more passing a No. 200 (75- μ m) sieve. This group also includes mixtures of fine silty soil and up to 64% of sand and gravel retained on a No. 200 sieve.
- **Group A-5:** The typical material of this group is similar to that described under Group A-4, except that it is usually of diatomaceous or micaceous character and may be highly elastic as indicated by the high liquid limit.
- **Group A-6:** The typical material of this group is a plastic clay soil usually having 75% or more passing a No. 200 (75- μ m) sieve. This group also includes mixtures of fine clayey soil and up to 64% of sand and gravel retained on a No. 200 sieve. Materials of this group usually have a high volume change between wet and dry states.
- **Group A-7:** The typical material of this group is similar to that described under Group A-6, except that it has the high liquid limits characteristic of Group A-5 and may be elastic as well as subject to high-volume change.
 - **Subgroup A-7-5:** Includes those materials with moderate plasticity indexes in relation to the liquid limit and which may be highly elastic as well as subject to considerable volume change.
 - **Subgroup A-7-6:** Includes those materials with high plasticity indexes in relation to liquid limit and which are subject to extremely high volume change.

HIGHLY ORGANIC SOILS

- **Group A-8:** Highly organic soils (peat or muck) may be classified in this group. Classification of these materials is based on visual inspection and is not dependent on the percentage passing the No. 200 (75- μ m) sieve liquid limit, or plasticity index. The material is composed primarily of partially decayed organic matter, generally has a fibrous texture, a dark brown or black color, and an odor of decay. These organic materials are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.



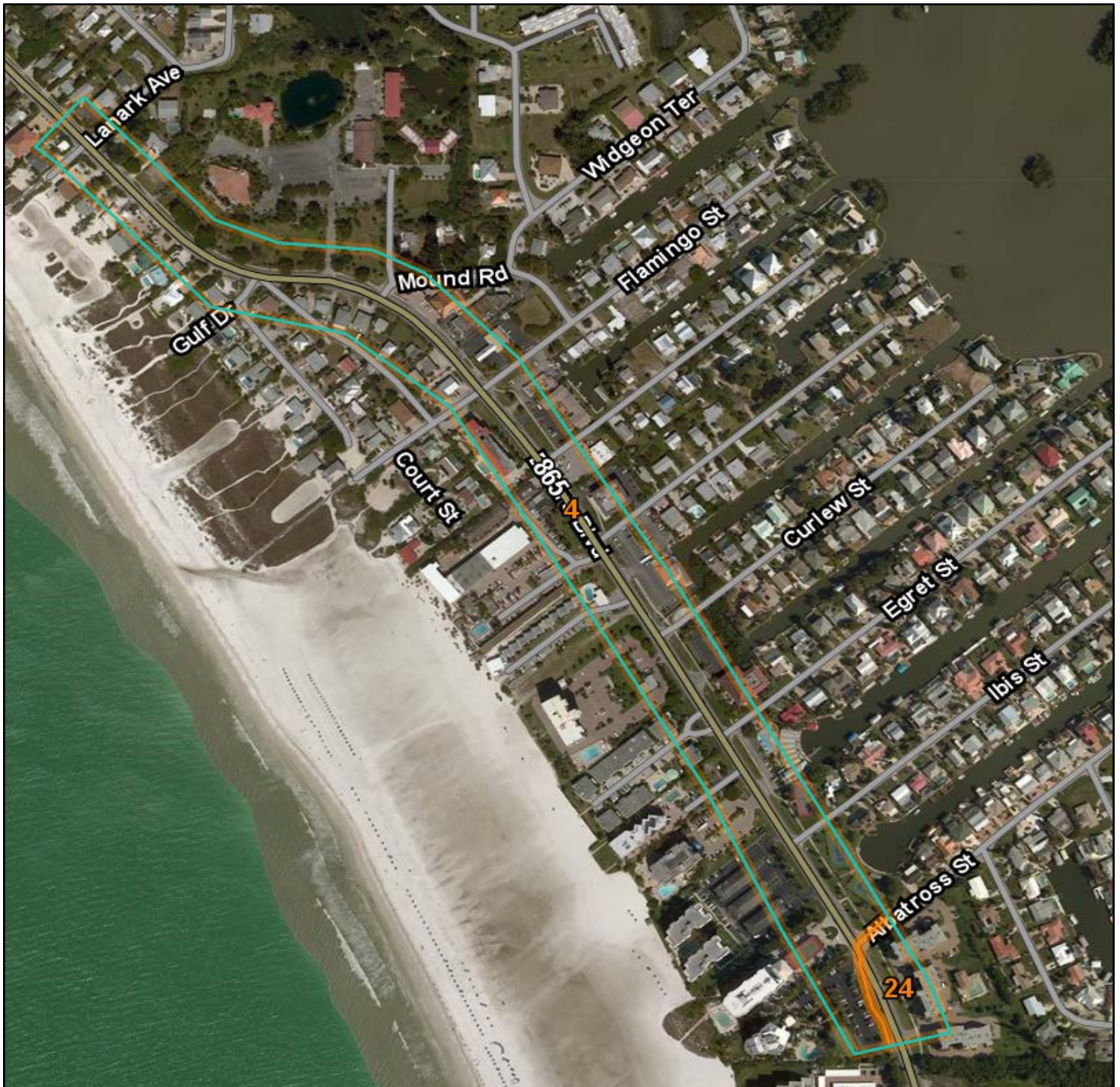
Appendix F – Hydrologic Soils Map





Hydrologic Soils map

Estero Boulevard – Segment 4
Fort Myers Beach, Lee County, Florida
GFA International Project No.: 16-1668



*Map Not To Scale
Map Unit: 4 – Canaveral- Urban Land Complex
24 – Kesson Fine Sand

Appendix G – Roadway Soil Survey



LEE COUNTY
DEPARTMENT OF PUBLIC WORKS
ESTERO BOULEVARD: SEGMENT 4

DATE OF SURVEY : FEBRUARY 13 - 17, 2017
 SURVEY MADE BY : GFA INTERNATIONAL, INC.
 SUBMITTED BY : PAUL J. D'HUYVETTER

ROAD NAME : ESTERO BOULEVARD
 CITY : FORT MYERS BEACH
 COUNTY : LEE

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS
 SURVEY BEGINS: STA. 1282+00 SURVEY ENDS: STA. 1322+00

STRATUM NO.	ORGANIC CONTENT			SIEVE ANALYSIS RESULTS % PASS				ATTERBERG LIMITS (%)			AASHTO GROUP	DESCRIPTION	CORROSION SERIES TEST RESULTS					
	NO. OF TESTS	% ORGANIC	% MOISTURE CONTENT	NO. OF TESTS	4 MESH	10 MESH	60 MESH	200 MESH	NO. OF TESTS	LIQUID LIMIT			PLASTIC INDEX	NO. OF TESTS	RESISTIVITY ohms-cm	CHLORIDE ppm	SULFATES ppm	pH
1	-	-	-	4	99.2 - 99.9	98.8 - 99.8	95.1 - 98.8	0.6 - 1.3	-	-	-	A-3	White, Tan, Light Gray to Gray Sand (SP) with Traces of Shell Fragments	1*	2,300	33	32.1	8.13

*Corrosion Series Test ran on one (1) composite sample obtained from hand auger borings during GFA's field exploration program.

NOTES:


EMBANKMENT AND SUBGRADE MATERIAL
 STRATA BOUNDARIES ARE APPROXIMATE

Ground water was encountered at depths of about 4 to 5 feet at boring locations at the time of our drilling.

The material from Stratum Number 1 appears satisfactory for use in the embankment when utilized in accordance with Index 505, except where organics are encountered.

It has been the experience of the Department, within projects constructed within this general geographical area, that although preliminary borings did not indicate a presence of rock, rock was encountered while performing underground installations. Therefore, the contractor should consider the increased cost of all underground work activities while preparing the bid.

All costs of rock 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 with fill material or special handling of rock.

REVISIONS						 GFA INTERNATIONAL, INC. 5851 COUNTRY LAKES DRIVE FORT MYERS, FLORIDA 33905 PAUL J. D'HUYVETTER P.E. #59716	LEE COUNTY DEPARTMENT OF TRANSPORTATION			ROADWAY SOIL SURVEY ESTERO BOULEVARD: SEGMENT 4 FORT MYERS BEACH, LEE COUNTY, FLORIDA	DRAWN BY:
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NAME	COUNTY NAME	PROJECT ID		LSK
						ESTERO BOULEVARD	LEE	16-1668			

Appendix H – Gradation Test Results





GFA International, Inc
 5851 Country Lakes Drive
 Fort Myers, Florida 33905
 239-489-2443 P
 239-489-3438 F

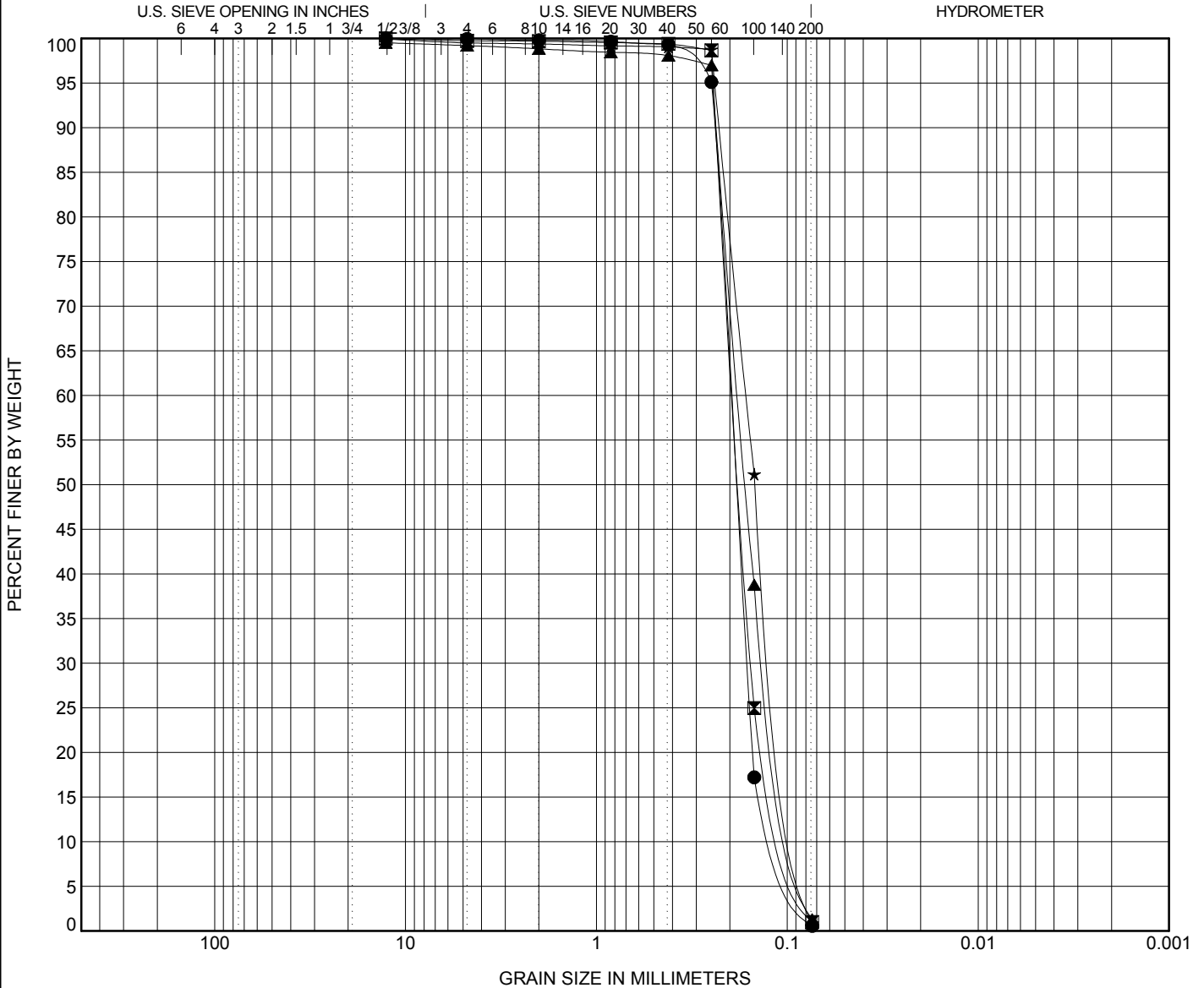
GRAIN SIZE DISTRIBUTION

CLIENT David Douglas Associates, Inc.

PROJECT NAME Estero Boulevard - Segment 4

PROJECT NUMBER 16-1668

PROJECT LOCATION Sta. 1282+00 to Sta. 1322+00



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● HA-9 (0-3') 0.0	POORLY GRADED SAND(SP)				1.21	1.80
☒ HA-11 (3-5') 0.0	POORLY GRADED SAND(SP)				1.30	1.98
▲ HA-14 (2-3') 0.0	POORLY GRADED SAND(SP)				1.02	2.07
★ HA-15 (3-5') 0.0	POORLY GRADED SAND(SP)				0.89	1.95

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● HA-9 (0-3') 0.0	12.7	0.198	0.162	0.11	0.1	99.1	0.9	
☒ HA-11 (3-5') 0.0	12.7	0.191	0.154	0.096	0.3	98.3	1.5	
▲ HA-14 (2-3') 0.0	12.7	0.18	0.126	0.087	0.3	97.2	2.0	
★ HA-15 (3-5') 0.0	12.7	0.164	0.111	0.084	0.4	97.7	1.8	

GRAIN SIZE GINT CURVES.GPJ MASTER BORING LOG.GDT 3/16/17



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 4
Client: David Douglas Associates, Inc. **Project No.:** 16-1668
Location: HA-9: 0 to 3 ft.
Sampled By: Christian Casey **Date Sampled:** 2/13/2017
Tested By: Lee Khan **Date Tested:** 3/10/2017
Material Description: Light Gray Sand (SP)

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	569.9	568.3	1.6	0.3%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	0	0	0.0%	100.0%
#4	4.76	0.3	0.3	0.1%	99.9%
#10	2.00	0.8	1.1	0.2%	99.8%
#20	0.841	0.9	2.0	0.4%	99.6%
#40	0.420	1.7	3.7	0.6%	99.4%
#60	0.250	24.1	27.8	4.9%	95.1%
#100	0.149	444.0	471.8	82.8%	17.2%
#200	0.074	94.9	566.7	99.4%	0.6%
Pan	0.000	1.3	568.0	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 4
Client: David Douglas Associates, Inc. **Project No.:** 16-1668
Location: HA-11: 3 to 5 ft.
Sampled By: Christian Casey **Date Sampled:** 2/14/2017
Tested By: Lee Khan **Date Tested:** 3/10/2017
Material Description: Light Gray Sand (SP)

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	810.4	806.9	3.5	0.4%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	0	0	0.0%	100.0%
#4	4.76	2.1	2.1	0.3%	99.7%
#10	2.00	0.4	2.5	0.3%	99.7%
#20	0.841	1.2	3.7	0.5%	99.5%
#40	0.420	1.3	5.0	0.6%	99.4%
#60	0.250	5.8	10.8	1.3%	98.7%
#100	0.149	597.2	608.0	75.0%	25.0%
#200	0.074	194.3	802.3	99.0%	1.0%
Pan	0.000	4.4	806.7	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 4
Client: David Douglas Associates, Inc. **Project No.:** 16-1668
Location: HA-14: 2 to 3 ft.
Sampled By: Christian Casey **Date Sampled:** 2/17/2017
Tested By: Lee Khan **Date Tested:** 3/10/2017
Material Description: Gray Sand (SP)

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	386.2	383.3	2.9	0.8%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	1.9	1.9	0.5%	99.5%
#4	4.76	1.2	3.1	0.8%	99.2%
#10	2.00	1.4	4.5	1.2%	98.8%
#20	0.841	1.5	6.0	1.6%	98.4%
#40	0.420	1.4	7.4	1.9%	98.1%
#60	0.250	4.2	11.6	3.0%	97.0%
#100	0.149	224.8	236.4	61.2%	38.8%
#200	0.074	144.8	381.2	98.7%	1.3%
Pan	0.000	1.0	382.2	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930



SIEVE ANALYSIS

Project: Estero Boulevard - Segment 4
Client: David Douglas Associates, Inc. **Project No.:** 16-1668
Location: HA-15: 3 to 5 ft.
Sampled By: Christian Casey **Date Sampled:** 2/17/2017
Tested By: Lee Khan **Date Tested:** 3/10/2017
Material Description: Brown Sand (SP) with Traces of Medium Roots

Soil Classification AASHTO M 145-91 (2000) : A-3

#200 SIEVE WET WASH					
	ORIGINAL SAMPLE WEIGHT (g)	WASHED SAMPLE WEIGHT (g)	WEIGHT PASSING (g)	PERCENT PASSING	
	518.0	515.6	2.4	0.5%	

DRY SIEVE ANALYSIS					
STANDARD SIEVE SIZE	PARTIAL SIZE (mm)	TOTAL WEIGHT RETAINED (g)	CUMULATIVE WEIGHT RETAINED (g)	CUMULATIVE PERCENT RETAINED	PERCENT PASSING
1/2"	12.7	0.3	0.3	0.1%	99.9%
#4	4.76	2.3	2.6	0.5%	99.5%
#10	2.00	0.6	3.2	0.6%	99.4%
#20	0.841	1.1	4.3	0.8%	99.2%
#40	0.420	0.6	4.9	0.9%	99.1%
#60	0.250	1.5	6.4	1.2%	98.8%
#100	0.149	246.5	252.9	48.8%	51.2%
#200	0.074	260.8	513.7	99.2%	0.8%
Pan	0.000	1.8	515.5	--	--

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930

Appendix I – Soil Corrosive Series Test Results





SOIL CORROSIVENESS

Project: Estero Boulevard Remaining Segments **Project No.:** 16-1668
Address: Estero Boulevard, Fort Myers Beach, Lee County, Florida
Client: David Douglas Associates, Inc.
Location: Segment # 4 / Composite Sample # 2
Sampled By: Christian Casey **Date Sampled:** 2/13/17-2/17/17
Tested By: David May **Date Tested:** 3/3/2017
Material Description: Gray - Brown Sand

LABORATORY RESULTS

TEST	LAB RESULTS
pH Content (FM 5-550):	8.13
Resistivity (FM 5-551), ohm-cm:	2,300
Chloride (FM 5-552), ppm:	33
Sulfate (FM 5-553), ppm:	32.1

Comments: _____

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930

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Appendix J – Asphalt Thickness by Core Determination





LIMEROCK/ASPHALT THICKNESS BY CORE DETERMINATION

Client: David Douglas Associates, Inc. Project #: 16-1668
 Project: Estero Boulevard - Segment 4
 Address: Estero Boulevard, Fort Myers Beach, Lee County, Florida

Results of Test

Core #	Location	Total Asphalt Core Thickness (in.)	Measured Asphalt Thickness (in.)		Visual Asphalt Type Classification
			Lift	Thickness	
C-5	Sta. 1285+50: Northbound	7-3/4	Lift 1	1-1/2	S-III
			Lift 2*	3/4	Binding Layer
			Lift 3	1-1/4	S-I
			Lift 4	1-3/4	S-I
			Lift 5	1	S-I
			Lift 6	1-1/2	S-I
C-6	Sta. 1296+50: Southbound	9-3/8	Lift 1	2-1/4	S-III
			Lift 2	1	S-I
			Lift 3	1-1/2	S-I
			Lift 4	1-5/8	S-I
			Lift 5	1-1/2	Type II
			Lift 6	1	Type II
			Lift 7	1/2	ABC-3
C-7	Sta. 1305+50: Northbound	12-3/4	Lift 1	1-1/2	S-III
			Lift 2	1-7/8	S-III
			Lift 3*	1	Binding Layer
			Lift 4	2	S-I
			Lift 5	2-1/8	S-I
			Lift 6	2-1/8	S-I
			Lift 7	2-1/8	S-I
C-8	Sta. 1315+50: Southbound	11-3/8	Lift 1	1-1/2	S-III
			Lift 2	1/2	S-III
			Lift 3*	3/4	Binding Layer
			Lift 4	1-1/2	S-I
			Lift 5	1-3/8	S-I
			Lift 6	1-3/4	S-I
			Lift 7	1-1/8	S-I
			Lift 8	1-3/8	S-I
			Lift 9	1-3/4	Type II

*Air Voids Observed in Lifts

**Asphalt Debonded Between Lifts

The above test results were obtained in accordance with standard laboratory procedures.

Appendix K – Asphalt Bulk Specific Gravity





ASPHALT CORE DENSITIES

CLIENT: <u>David Douglas Associates, Inc.</u>	PROJECT # <u>16-1668</u>
PROJECT: <u>Estero Boulevard - Segment 4</u>	REPORT # <u>1</u>
ADDRESS: <u>Estero Boulevard</u>	CITY: <u>Fort Myers Beach</u> DATE: <u>3/8/2017</u>

Core #	Location/ Offset from Center Line	(A) Weight In Air (grams)	(B) Weight SSD (grams)	(C) Weight In Water (grams)	(D) A/(B-C) Specific Gravity	(E) D x 62.4 Density (PCF)	Tested Thickness (inches)
C-5	Sta. 1285+50 (NB)/ 6.75 Feet	3583.9	3616.5	1892.2	2.08	129.7	4"
C-6	Sta. 1296+50 (SB)/ 8 Feet	3594.6	3601.2	1890.2	2.10	131.1	4"
C-7	Sta. 1305+50 (NB)/ 12 Feet	3534.4	3542.9	1844.3	2.08	129.8	4"
C-8	Sta. 1315+50 (SB)/ 15 Feet	3744.6	3748.7	2012.6	2.16	134.6	4"

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930

Appendix L – Limerock Bearing Ratio (LBR) Results





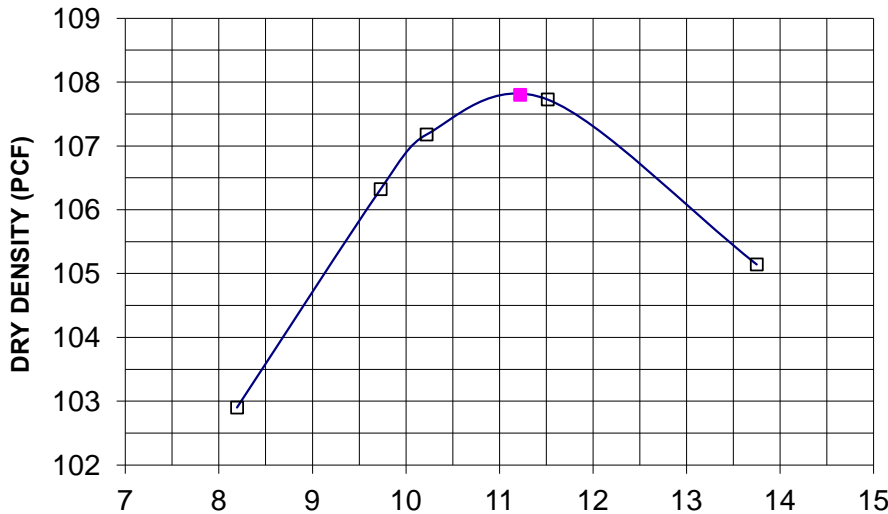
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 4
Address: Estero Boulevard, Fort Myers Beach, Lee County, FL
Client: David Douglas & Associates

Project ID: 16-1668
Report ID: LBR005

Soil Location: Sta. 1293+00: Existing Shoulder Material
Sampled By: C. Casey **Date Sampled:** 3/1/2017
Tested By: M. Stel **Date Tested:** 3/16/2017
Soil Description: Brown Sand with Shell & Organics
% Passing No. 4 Sieve: 26.3 **Type of Rammer:** Mechanical
Rammer Face: Sector **Soak Time (hrs):** 0 **Surcharge (lbs):** 0

Comments: _____



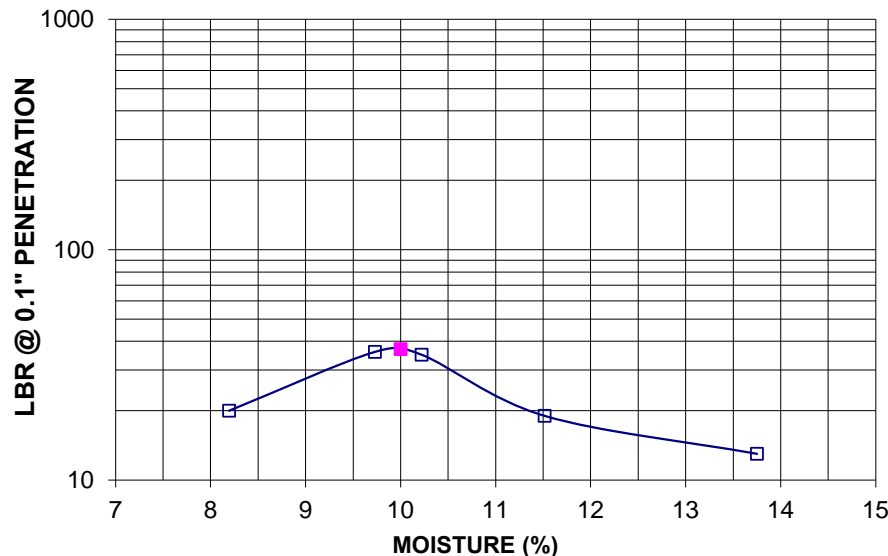
Dry Density (pcf)	Moisture (%)
102.9	8.2
106.3	9.7
107.2	10.2
107.7	11.5
105.1	13.8

LBR
20
36
35
19
13

Maximum Dry Density (pcf)
107.8

Optimum Moisture (%)
11.2

Limerock Bearing Ratio
37



Respectfully Submitted,
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

3/22/17

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

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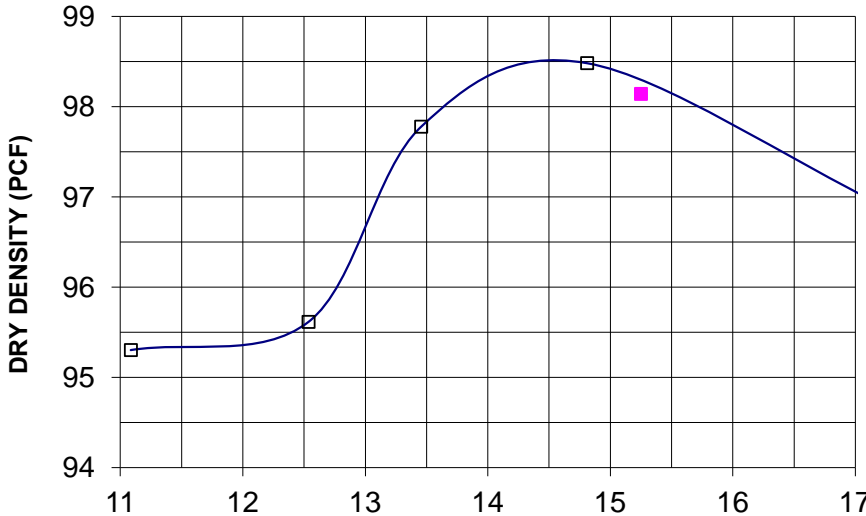
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 4
Address: Estero Boulevard, Fort Myers Beach, Lee County, FL
Client: David Douglas & Associates

Project ID: 16-1668
Report ID: LBR006

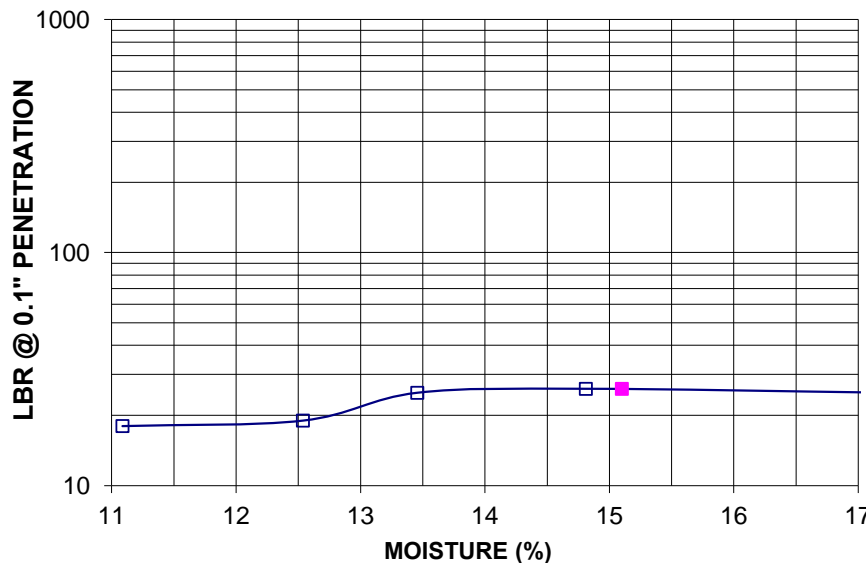
Soil Location: Sta. 1298+00: Existing Shoulder Material
Sampled By: M. Peppler **Date Sampled:** 3/1/2017
Tested By: M. Stel **Date Tested:** 3/14/2017
Soil Description: Brown Sand with Organics
% Passing #4 Sieve: 73.7 **Type of Rammer:** Mechanical
Rammer Face: Sector **Soak Time (hrs):** 48 **Surcharge (lbs):** 15

Comments: _____



Dry Density (pcf)	Moisture (%)
95.3	11.1
95.6	12.5
97.8	13.5
98.5	14.8
96.9	17.3

LBR
18
19
25
26
25



Maximum Dry Density (pcf)
98.1

Optimum Moisture (%)
15.3

Limerock Bearing Ratio
26

Respectfully Submitted.
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

3/17/17

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

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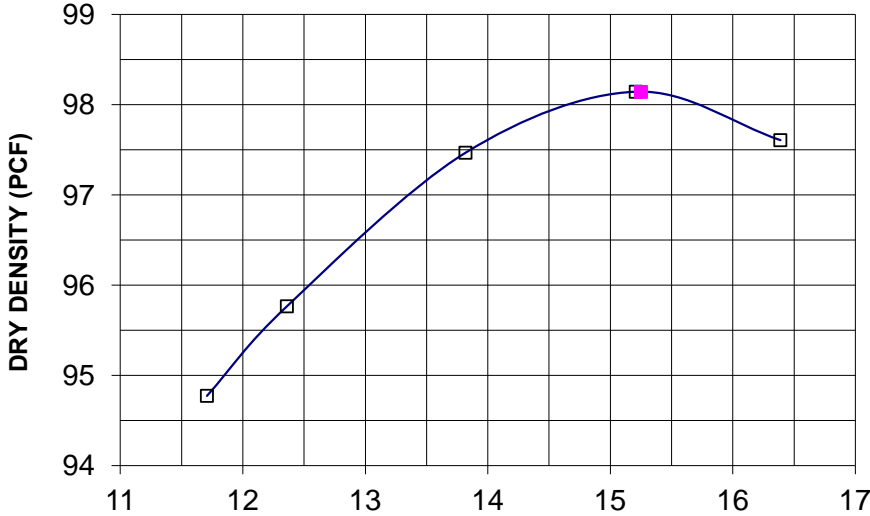


Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 3
Address: Estero Boulevard, Fort Myers Beach, Lee County, FL
Client: David Douglas & Associates
Soil Location: Sta. 1313+00: Existing Shoulder Material
Sampled By: C. Casey
Tested By: M. Stel
Soil Description: Brown to Dark Brown Sand
% Passing #4 Sieve: 73.7
Rammer Face: Sector **Soak Time (hrs):** 48

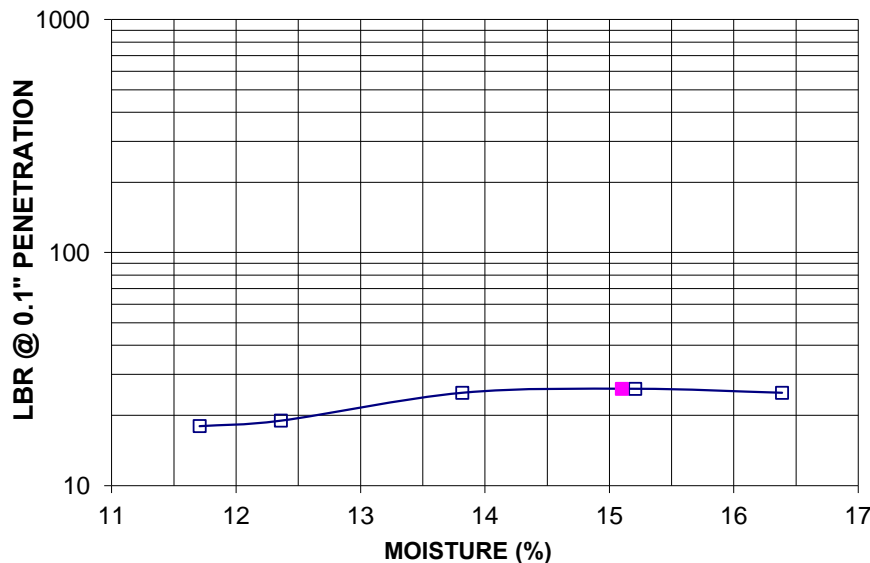
Project ID: 16-1668
Report ID: LBR007
Date Sampled: 3/1/2017
Date Tested: 3/7/2017
Type of Rammer: Mechanical
Surcharge (lbs): 15

Comments: _____



Dry Density (pcf)	Moisture (%)
94.8	11.7
95.8	12.4
97.5	13.8
98.1	15.2
97.6	16.4

LBR
18
19
25
26
25



Maximum Dry Density (pcf)
98.1

Optimum Moisture (%)
15.3

Limerock Bearing Ratio
26

Respectfully Submitted.
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

3/17/17

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

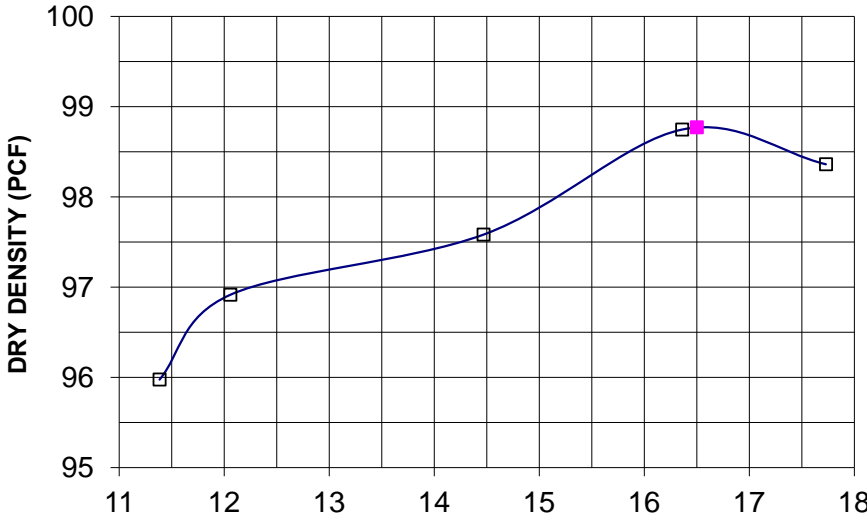
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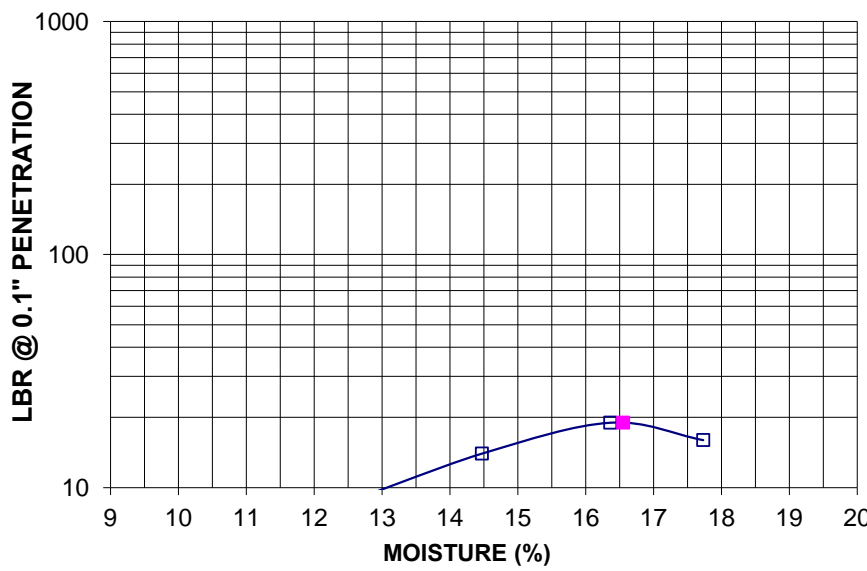
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard - Segment 3
Address: Estero Boulevard, Fort Myers Beach, Lee County, FL
Client: David Douglas & Associates
Soil Location: Sta. 1318+00: Existing Shoulder Material
Sampled By: C. Casey
Tested By: M. Stel
Soil Description: Brown Sand with Organics
% Passing #4 Sieve: 73.7
Rammer Face: Sector **Soak Time (hrs):** 48
Comments: _____

Project ID: 16-1668
Report ID: LBR008
Date Sampled: 3/7/2017
Date Tested: 3/14/2017
Type of Rammer: Mechanical
Surcharge (lbs): 15



Dry Density (pcf)	Moisture (%)
96.0	11.4
96.9	12.1
97.6	14.5
98.7	16.4
98.4	17.7



LBR
9
8
14
19
16

Maximum Dry Density (pcf)
98.8

Optimum Moisture (%)
16.5

Limerock Bearing Ratio
19

Respectfully Submitted,
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

3/17/17

Paul J. D'huyvetter, P.E.
 Registered Engineer #59716
 State of Florida

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Appendix M – Asphalt Core Photographs



ASPHALT CORE AC-5



ASPHALT CORE AC-6



ASPHALT CORE AC-7



ASPHALT CORE AC-8



GFA INTERNATIONAL

FLORIDA'S LEADING ENGINEERING SOURCE

Report of Geotechnical Exploration

**Estero Boulevard – Segment 5
Fort Myers Beach, Lee County, Florida**

**January 31, 2018
GFA Project No.: 16-1668**

For: David Douglas Associates, Inc.





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January 31, 2018

Mr. Dan Craig P.E.
David Douglas Associates, Inc.
1821 Victoria Ave.
Fort Myers, FL 33901
Phone: (239) 337-3330
Email: DC@DDAI-Engineers.com

**Site: Geotechnical Engineering Services Report
Estero Boulevard – Segment 5
Fort Myers Beach, Lee County, Florida
GFA Project # 16-1668**

Dear Mr. Craig:

GFA International, Inc. (GFA) has completed the subsurface exploration and geotechnical engineering evaluation for the above-referenced project in accordance with the geotechnical and engineering service agreement for this project. The scope of services was completed in accordance with our Geotechnical Engineering Proposal (16-1668.00), planned in conjunction with and authorized by you.

EXECUTIVE SUMMARY

The purpose of our subsurface exploration was to classify the nature of the subsurface soils and general geomorphic conditions and evaluate their impact upon the proposed construction. This report contains the results of our subsurface exploration at the site and our engineering interpretations of these, with respect to the project characteristics described to us including providing recommendations for site preparation and the design of the foundation system.

It is our understanding the project will consist of a construction of a new roadway, drainage installation including underground exfiltration trench, and installation of a new force main or mains along +/- 3,900 feet of Estero Blvd (Sta. 1317+00: Albatross St. to Sta. 1356+00: Bay Beach Lane). Documents provided to GFA at the time of this report were Plan and Profile Plans completed by T.Y. Lin International, Sheet No. 46 through Sheet No. 53, dated April 9, 2014. The recommendations provided herein are based upon the above considerations. If the project description has been revised, please inform GFA International so that we may review our recommendations with respect to any modifications.

The following was completed for this study:

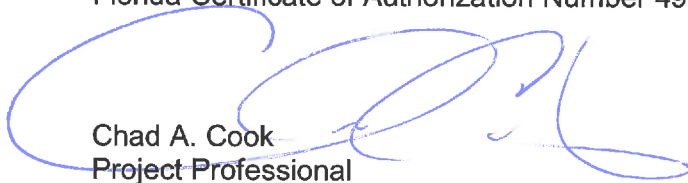
- Seven (7) Hand Auger (HA) borings to depths of approximately 5 feet below ground surface (BGS).
- Three (3) field percolation tests to depths of approximately 5 feet BGS.
- Four (4) asphalt cores with base and subbase thicknesses spaced at approximately 1,000-foot centers.

The subsurface soil conditions encountered at this site generally consists of sand (SP; A-3) with shell fragments to the boring termination depths. Please refer to “Appendix D – Record of Hand Auger Boring Logs” for a detailed account of each boring.

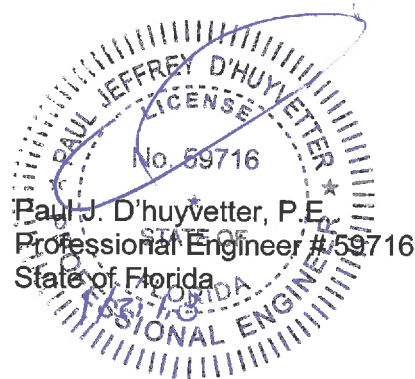
The following report presents the project information made available to us, our observation of the existing site conditions, the subsurface geotechnical information obtained during this exploration, and our recommendations on the suitability of the soils encountered for the force main replacement. Also included with this report are the results of our field and laboratory testing. The assessment of site environmental conditions for the presence of pollutants in the soil, rock, and groundwater at this site was not included as a part of our services.

We appreciate the opportunity to be of service to you on this project and look forward to a continued association. Please do not hesitate to contact us if you have any questions or comments, or if we may further assist you as your plans proceed.

Respectfully Submitted,
GFA International, Inc.
Florida Certificate of Authorization Number 4930



Chad A. Cook
Project Professional



Copies: 2, Addressee
1, CD-R

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1.0 INTRODUCTION

1.1 Scope of Services

The objective of our geotechnical services was to collect subsurface data for the subject project, summarize the test results, and discuss any apparent site conditions that may have geotechnical significance for force main replacement. The following scope of service is provided within this report:

1. Prepare records of the soil boring logs depicting the subsurface soil conditions encountered during our field exploration.
2. Conduct a review of each soil sample obtained during our field exploration for classification and additional testing if necessary.
3. Analyze the existing soil conditions found during our exploration for the suitability of the soils encountered for the force main replacement.
4. Provide recommendations with respect to backfill material for the force main replacement.
5. Provide criteria and site preparation procedures to prepare the site for the proposed construction.

1.2 Project Description

It is our understanding the project will consist of a construction of a new roadway, drainage installation including underground exfiltration trench, and installation of a new force main or mains along +/- 3,900 feet of Estero Blvd (Sta. 1317+00: Albatross St. to Sta. 1356+00: Bay Beach Lane). Documents provided to GFA at the time of this report were Plan and Profile Plans completed by T.Y. Lin International, Sheet No. 46 through Sheet No. 53, dated April 9, 2014. The recommendations provided herein are based upon the above considerations. If the project description has been revised, please inform GFA International so that we may review our recommendations with respect to any modifications.

2.0 OBSERVATIONS

2.1 Site Inspection

A site reconnaissance was conducted by members of our engineering staff prior to mobilization of drilling equipment and crews. The purpose of the site visit was to observe the existing site conditions in order to detect any factors that may impact our studies and recommendations.

Generally, the proposed construction site is level. No standing water on the surface was observed during the time of our drilling. The tested site consists of an urban area and is landscaped.



2.2 Geology

The surficial geologic map of Lee County, Florida consists of a quartz sand blanket that overlies the Tertiary Tamiami Formation (T_t), Tertiary-Quaternary Shell Units (Q_{su}) and Quaternary (Holocene) Coastal and Estuarine Sediments (Q_h). The quartz sand blanket is generally less than 20 feet thick deposit, fine to medium grained, well sorted, with no fossils.

The oldest formation is the Tertiary Tamiami Formation (T_t). The Tamiami Formation consists of a mixture of variably sandy limestone, sands and clays containing varying percentage of phosphate grains. Fossils including mollusks, echinoids and corals are abundant. Fossil preservation varies from well preserved to molds and casts.

Overlaying the Tamiami Formation throughout much of the county are sediments indicated as Tertiary-Quaternary Shell Units (Q_{su}). These units consist of sands with subordinate limestone and clay. Fossils, including mollusks and corals, are common and well preserved.

Along the coast, Quaternary (Holocene) Coastal and Estuarine Sediments (Q_h) are founded below an altitude of approximately 5 feet. These sediments consist of quartz sand with a variable organics component. The Holocene sediments include the beach ridge and dune sands.

2.3 Field Exploration

The following was completed for this study:

- Seven (7) Hand Auger (HA) borings to depths of approximately 5 feet below ground surface (BGS).
- Three (3) field percolation tests to depths of approximately 5 feet BGS.
- Four (4) asphalt cores with base and subbase thicknesses spaced at approximately 1,000-foot centers.

The locations of the borings performed are illustrated in "Appendix B: Test Location Plan". The Standard Penetration Test (SPT) boring method was used as the investigative tool within the borings. SPT tests were performed in substantial accordance with ASTM Procedure D-1586, "Penetration Test and Split-Barrel Sampling of Soils". This test procedure consists of driving a 1.4-inch I.D. split-tube sampler into the soil profile using a 140-pound hammer falling 30 inches. The number of blows per foot, for the second and third 6-inch increment, is an indication of soil strength.

The soil samples recovered from the soil borings were visually classified and their stratification is illustrated in "Appendix D: Record of Hand Auger Boring Logs". It should be noted that soil conditions might vary between the strata interfaces, which are shown. The soil boring data reflect information from a specific test location only. Site specific survey staking for the test locations was not provided for our field exploration. The indicated depth and location of each test was approximated based upon existing grade and estimated distances and relationships to obvious landmarks. The boring depths were selected based on our knowledge of vicinity soils and to include the zone of soil likely to be stressed by the proposed construction.



2.4 Laboratory Analysis

Soil samples recovered from our field exploration were returned to our laboratory where they were visually examined in general accordance with ASTM D-2488. Samples were evaluated to obtain an accurate understanding of the soil properties and site geomorphic conditions. After a thorough visual examination of the recovered site soils, laboratory testing was conducted to determine grain size distribution on individual samples and soil corrosiveness on a composite sample obtained from depths ranging from 0 to 5 feet BGS.

Composite bulk specific gravity tests were run on the four (4) asphalt cores obtained during field exploration using the saturated surface-dry procedure (AASHTO T-166). Limerock Bearing Ratio (LBR) tests were run on material obtained within approximately 5 feet of the edge of pavement using the Florida Method FM 5-515.

All laboratory tests were conducted in general accordance with ASTM, AASHTO, or Florida Methods, as applicable. The test method number for each test and the number of tests completed are presented in the following table.

TEST DESCRIPTION	NUMBER OF TESTS	ASTM TEST METHOD
Soil Classification	23	D-2488
Gradation Analysis	4	D-422
Soil Corrosiveness (pH, Resistivity, Chloride, Sulfate)	2	FM 5-550, FM 5-551, FM 5-552, and FM 5-553
Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens	4	AASHTO T-166
Limerock Bearing Ratio (LBR)	3	FM 5-515

Bag samples of the soil encountered during our field exploration will be held in our laboratory for your inspection for 90 days and then discarded unless we are notified otherwise in writing.

2.4.1 Gradation Tests

A total of four (4) gradation tests were performed on samples obtained during the field exploration program. Material passing the No. 200 sieve is considered “fines” and will be either silt or clay. The percent passing the No. 200 sieve, for the tested samples, ranged from 0.3 to 2.9 percent, this resulted in the sampled material to be considered poorly graded fine sand (SP; A-3). A summary of the grain size distribution curve is presented in “Appendix H: Gradation Test Results”.

2.4.2 Soil Corrosiveness

This test method covers the laboratory determination for the minimum resistivity of a soil. The principal use of this test method is to determine a soil's corrosivity and thereby identify the conditions under which the corrosion of metals in soil may be sharply accentuated. Soil corrosiveness testing was completed on two (2) composite sample ranging from 0 – 5 feet BGS.



The soil samples obtained were considered non-marine structures and classified under the criteria for substructure environmental classifications. Composite Sample 1 resulted in moderately aggressive for steel and concrete, while Composite Sample 2 resulted in moderately aggressive for steel and slightly aggressive for concrete. The laboratory results for soil corrosiveness can be found in “Appendix I: Soil Corrosive Series Test Results”.

For design purposes we recommend using a classification of “Moderately Aggressive” for this project.

2.5 Geomorphic Conditions

Boring logs derived from our field exploration are presented in “Appendix B: Boring Locations and Soil Profiles”. The boring logs depict the observed soils in graphic detail. The Standard Penetration Test borings indicate the penetration resistance, or N-values, logged during the drilling and sampling activities. The classifications and descriptions shown on the logs are generally based upon visual characterizations of the recovered soil samples. All soil samples reviewed have been depicted and classified in general accordance with the Unified Soil Classification System, modified as necessary to describe typical southwest Florida conditions. See “Appendix E: Discussion of Soil Groups”, for a detailed description of various soil groups.

The subsurface soil conditions encountered at this site generally consists of sand (SP) with shell fragments and traces of organics to the boring termination depths. Please refer to “Appendix D – Record of Hand Auger Boring Logs” for a detailed account of each boring.

2.6 Hydrogeological Conditions

During our field exploration program from December 26, 2017 to December 27, 2017, the groundwater table was encountered in our HA borings at depths of approximately 3.5 to 5 feet below the existing ground surface. The groundwater table will fluctuate depending upon tidal events.

Located in “Appendix F: Hydrologic Soils Map” are the following descriptive characteristics of the five (5) types of soil surveys encountered during the drilling operations based on the soil survey of Lee County, Florida, published by the United States Department of Agriculture:

Canaveral-Urban Land Complex (4)

In undrained areas, the water table is at a depth of 18 to 40 inches for a period of 2 to 6 months in most years. Drainage systems have been established in most areas however, and the depth to the water table is dependent on the drainage system.

Captiva Fine Sand (5)

In most years, under natural conditions, this soil has a water table within a depth of 10 inches for 1 to 2 months. The water table is at a depth of 10 to 40 inches for 10 months during most years. In some years, the soil is covered by standing water for several days. Permeability is very rapid.



Kesson Fine Sand (24)

This is a nearly level, very poorly drained soil in broad tidal swamps. Areas are subject to tidal flooding. Typically, the surface layer is about 6 inches of sand that contains shell fragments. The underlying layers are fine sand that contains shell fragments, and they extend to a depth of 80 inches or more. The water table fluctuates with the tide. The available water capacity is low. Permeability is moderately rapid or rapid.

Urban Land (59)

Urban land consists of areas that are more than 85 percent covered with parking lots, large buildings, streets, and sidewalks where the natural soil and ground water table cannot be observed.

Matlacha Gravelly Fine Sand (69)

The depth to the water table varies with the amount of fill material and the extent of artificial drainage. However, in most years, the water table is 24 to 36 inches below the surface of the fill material for 2 to 4 months. It is more than 60 inches below the surface during extended dry periods. Permeability is variable within short distances, but it is estimated to be moderately rapid to rapid in the fill material and rapid in the underlying material.

2.6.1 Exfiltration Testing

GFA International performed three field percolation (PERC) tests spaced at approximately 1,150-foot centers. The percolation testing was performed in accordance with the SFWMD Constant-Head Open-Hole Test Method. The results are presented below.

PERC Test – 1 (Sta. 1320+50)	
Depth (ft)	Soil Description
0 – 2.5	Gray Sand (A-3; SP)
2.5 – 5	Light Gray Sand (A-3; SP)
Water table: 2.5 feet below grade.*	
Saturated K = 6.7 Ft.³/Day/ Ft.² – Ft. of Head	

*Water Table is Tidally Influenced.

PERC Test – 2 (Sta. 1337+50)	
Depth (ft)	Soil Description
0 – 5	Gray Sand (A-3; SP)
Water table: 2.83 feet below grade.*	
Saturated K = 15.4 Ft.³/Day/ Ft.² – Ft. of Head	

*Water Table is Tidally Influenced.



PERC Test – 3 (Sta. 1351+00)	
Depth (ft)	Soil Description
0 – 2	Gray Sand (A-3; SP)
2 – 5	Light Gray Sand (A-3; SP), Shell Fragments
Water table: 3.0 feet below grade.*	
Saturated K = 35.4 Ft.³/Day/ Ft.² – Ft. of Head	

*Water Table is Tidally Influenced.

The location of the exfiltration test completed is illustrated in "Appendix B: Test Location Plan".

3.0 ENGINEERING EVALUATION AND RECOMMENDATIONS

3.1 General

The geotechnical evaluations for the proposed construction site are based on the subsurface soil and groundwater conditions encountered during this study, the project information made available, our site observations, and our experience in the vicinity. The test data has been evaluated using established geotechnical parameters of the soils recorded at this site, laboratory test results, and the observed performance of similar soil types.

Based on the soil conditions encountered in the performed borings, the near surface soils do not meet the below mentioned Lee County Technical Specifications for drainage fill or select fill. The near surface soils do meet the below mentioned Lee County Technical Specifications for common fill. The water main replacement may be designed according to the recommendations and site preparations as discussed below with a fill material meeting the specifications.

3.2 Pipe Bedding and Initial Backfill (Force Main)

According to the Lee County Technical Specifications, Section 2223, Backfilling, a select fill material shall be used for pipe bedding and initial backfill from top of bedding to 1 foot over the top of pipes. The select fill shall be compacted to not less than 98 percent of the maximum dry density as determined by ASTM D-1557.

Pipe bedding containing very fine sand, uniformly graded sands and gravel, silt, soft earth, or other material that have a tendency to flow under pressure when wet is unacceptable.

Based on the laboratory test results the majority of the near surface soils consist of poorly graded clean sands to slightly silty sands. Material from on-site excavation does not meet the gradation specification for select fill cannot be used for pipe bedding and initial backfill.

3.3 Pipe Bedding and Initial Backfill (Drainage System)

Pipe bedding and initial backfill shall be in accordance with Florida Department of Transportation (FDOT) for Road and Bridge Construction – Sections 120 & 125 (January 2017).



3.4 Trench Excavation

Where trench excavations are required, trenches shall be sufficiently wide and deep to allow proper installation of pipes. We recommend about 12 inches clear of the pipe on either side at any point. Boulders, rocks or other hard unyielding material shall be excavated to a depth of 12 inches below the bottom of the pipe elevation.

Due to the depth of excavations and the depth of the water table, we anticipate excavation will require shoring or a trench box. Trenching should be in general accordance with any Lee County trenching requirements and the Occupational Safety and Health Administration (OSHA) requirements, as applicable.

3.5 Trench Backfill

Trench backfill material shall be clean earth fill composed of sand, clay and sand, sand and stone, crushed stones or other soils approved by a professional engineer. The trench backfilling shall be accomplished from the top of the initial backfill to the ground surface. The backfill, unless otherwise specified, shall be compacted to 98% of maximum density, as determined by ASTM D-1557.

When trenches are cut in pavements or areas to be paved, compaction shall be in accordance with FDOT for Road and Bridge Construction (January 2017).

Based on the soil profiles, presented in “Appendix D: Record of Hand Auger Boring Logs”, the material from on-site excavation that will contain sands and silt or gravel size limestone fragments may be used for the trench backfill. Organic soils are not suitable and shall not be used as trench backfill material, if encountered during construction.

4.0 DEWATERING OF EXCAVATIONS

The high groundwater tables in the vicinity of excavations shall be reduced to prevent water inflow into excavations. Dewatering will be required for the excavation of trenches during construction. Each excavation shall be kept dry during subgrade preparation and continually thereafter until installation of the pipe or wet well structures. The dewatering will be required to maintain groundwater elevation at least 24 inches below the bottom at all times to prevent bottom disturbance or failure.

5.0 SITE PREPARATION PROCEDURES

Site preparation procedures should begin with the removal of existing debris, vegetation, or other unsuitable materials within and beyond the excavation construction.

The organic soils, if encountered during construction, shall be removed and replaced to a required level (the future project specification) with a compacted suitable fill. The suitable fill material shall contain less than 10 percent of fines passing the No. 200 sieve, not contain clay balls and rock fragments greater than 3 inches in diameter.

An adequate dewatering system shall be installed to maintain the water table 2 feet or more below the maximum depth of excavation. The continuous dewatering shall be provided until the pipeline is completed and backfill is above the water table before beginning of the dewatering.



When a professional engineer approves the discontinuing of the dewatering, the rate of pumping shall slowly decrease, allowing the water level to rise slowly.

The soils that extend below the water table should be allowed to dry prior to placement as a backfill material and compaction. This can be accomplished by stockpiling the material and allowing it to drain, or by spreading it in relatively thin lifts on the surface and allowing it to dry prior to compaction. The silty or sands with clay may require moisture conditioning so that the soil moisture content at the time of compaction is at or near the optimum moisture content.

Trench bottoms should be compacted with a small roller or vibratory plate compactor prior to pipe placement. Any loose or soft yielding areas detected during compaction of the trench bottoms should either be further compacted to at least 95% of maximum dry density or removed and replaced with a select fill and compacted to 95% of maximum dry density. Bedding stone may be used in lieu of select fill.

During the compaction operation, a geotechnical engineer or an engineering technician working under his direction should observe the soils to verify that the exposed soils are suitable and that unsuitable soils have been removed. Samples of the backfill materials should be obtained to determine the grain size distribution, its maximum dry density and optimum moisture content in the laboratory in accordance with ASTM D-1557 (Modified Proctor Test).

6.0 ASPHALT EVALUATION

6.1 Asphalt Thickness

Four (4) asphalt cores were taken at alternating lanes (southbound or northbound) along Estero Boulevard in Fort Myers Beach starting just north of Albatross Street (Sta. 1317+00) and finishing just north of Bay Beach Lane (Sta. 1356+00). The location of each individual asphalt core can be found in "Appendix B: Test Location Plan".

GFA International encountered an average asphalt thickness of 9-1/16 inches with a range of four (4) to six (6) lifts per asphalt core. A stratum was initiated from top of existing asphalt (Lift 1) down to the bottom of asphalt (ex.: Lift 4). A summary of the test results are shown in "Appendix J: Asphalt Thickness by Core Determination". Refer to "Appendix M: Asphalt Core Photographs" for a visual record of each asphalt core.

Beneath the asphalt, a layer of cemented shell base was encountered. This material consists of sand and shell fragments with an average thickness of 8-3/4 inches.

6.2 Limerock Bearing Ratio (LBR) Testing

A total of three (3) samples were obtained within approximately 5 feet of the edge of pavement to conduct Limerock Bearing Ratio (LBR) tests on the existing subgrade soils, using the Florida Method FM 5-515. Based on the laboratory test results, we recommend a structural coefficient for Type B Stabilized subbase, LBR 40 material (0.08). For complete test results, refer to "Appendix L – Limerock Bearing Ratio (LBR) Results". It is our understanding that the existing base material will be removed during utility construction. As such, no LBR samples were collected from the base material.



6.3 Asphalt Bulk Specific Gravity Testing

A total of four (4) asphalt core samples were tested using American Association of State Highway and Transportation (AASHTO) T-166 “Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens”. The top 4-inches of asphalt were tested as a composite sample per each asphalt core. The asphalt density ranged from 130.0 to 136.1 pounds per cubic foot (PCF) which averaged in 132.85 PCF.

For complete test results, refer to “Appendix K – Asphalt Bulk Specific Gravity”.

7.0 REPORT LIMITATIONS

This consulting report has been prepared for the exclusive use of the current project owners and other members of the design team for the Estero Boulevard – Segment 5 located on Estero Boulevard in Fort Myers Beach, Lee County, Florida. This report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied. The evaluation submitted in this report, is based in part upon the data collected during a field exploration, however, the nature and extent of variations throughout the subsurface profile may not become evident until the time of construction. If variations then appear evident, it may be necessary to reevaluate information and professional opinions as provided in this report. In the event changes are made in the nature, design, or locations of the proposed structure, the evaluation and opinions contained in this report shall not be considered valid, unless the changes are reviewed and conclusions modified or verified in writing by GFA International. GFA is not responsible for damage caused by soil improvement and/or construction activity vibrations related to this project. GFA is also not responsible for damage concerning drainage or moisture related issues for the proposed or nearby structures.

8.0 BASIS FOR RECOMMENDATIONS

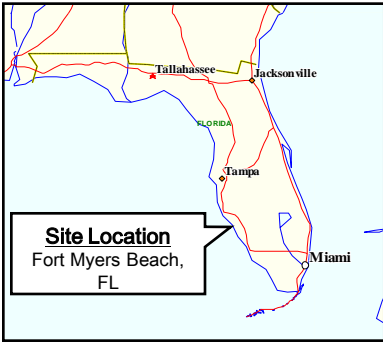
The analysis and recommendations submitted in this report are based on the data obtained from the tests performed at the locations indicated on the attached figure in “Appendix B: Test Location Plan”. This report does not reflect any variations, which may occur between borings. While the borings are representative of the subsurface conditions at their respective locations and for their vertical reaches, local variations characteristic of the subsurface soils of the region are anticipated and may be encountered. The delineation between soil types shown on the soil logs is approximate and the description represents our interpretation of the subsurface conditions at the designated boring locations on the particular date drilled.

Any third party reliance of our geotechnical report or parts thereof is strictly prohibited without the expressed written consent of GFA International. The methodology (ASTM D-1586) used in performing our borings and for determining penetration resistance is specific to the sampling tools utilized and does not reflect the ease or difficulty to advance other tools or materials.



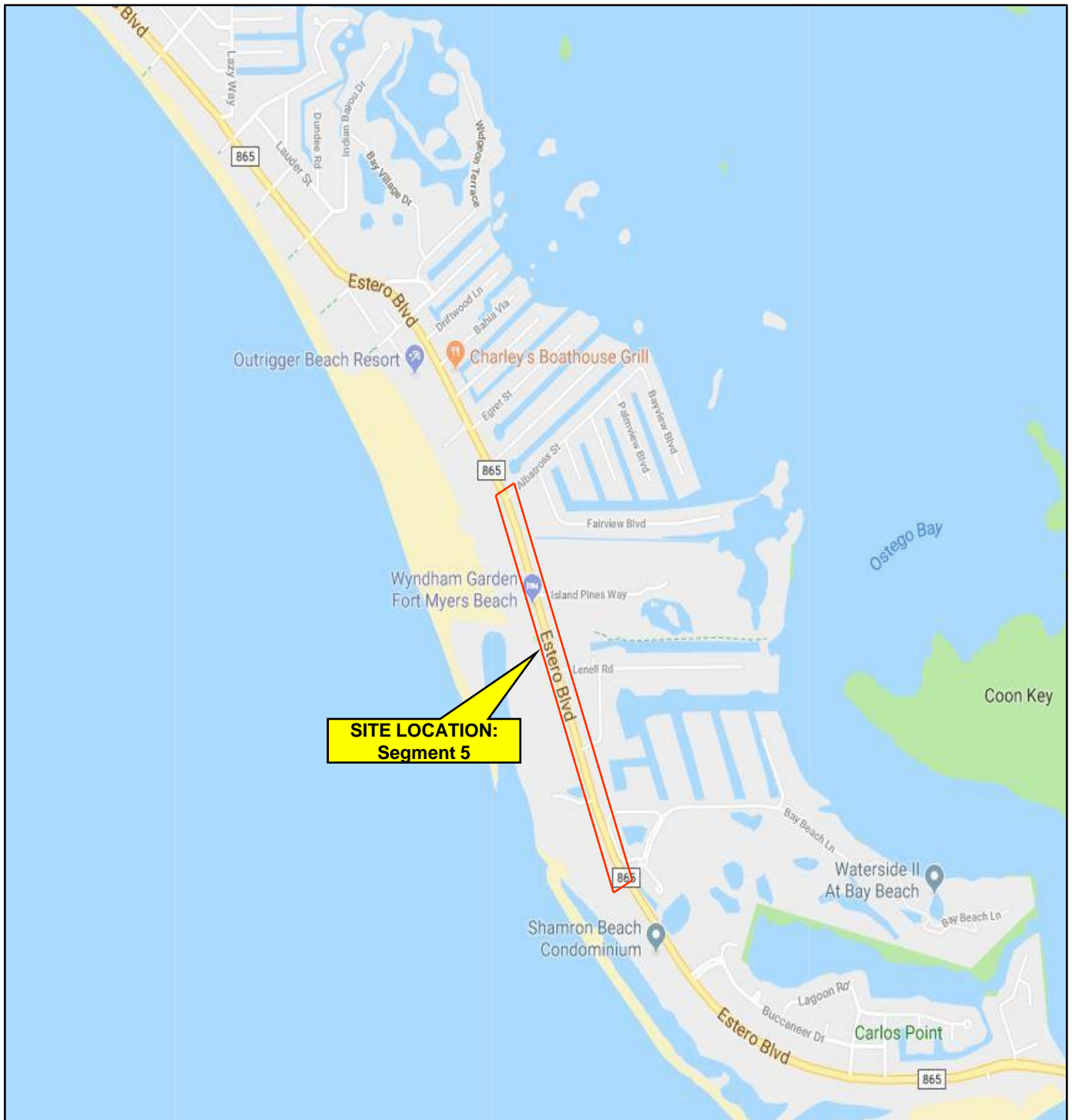
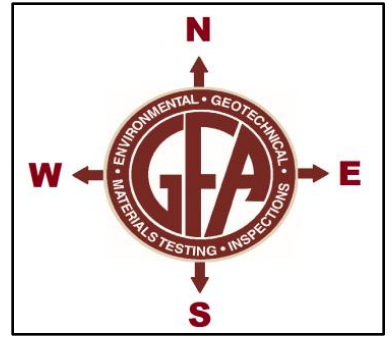
Appendix A - Vicinity Map





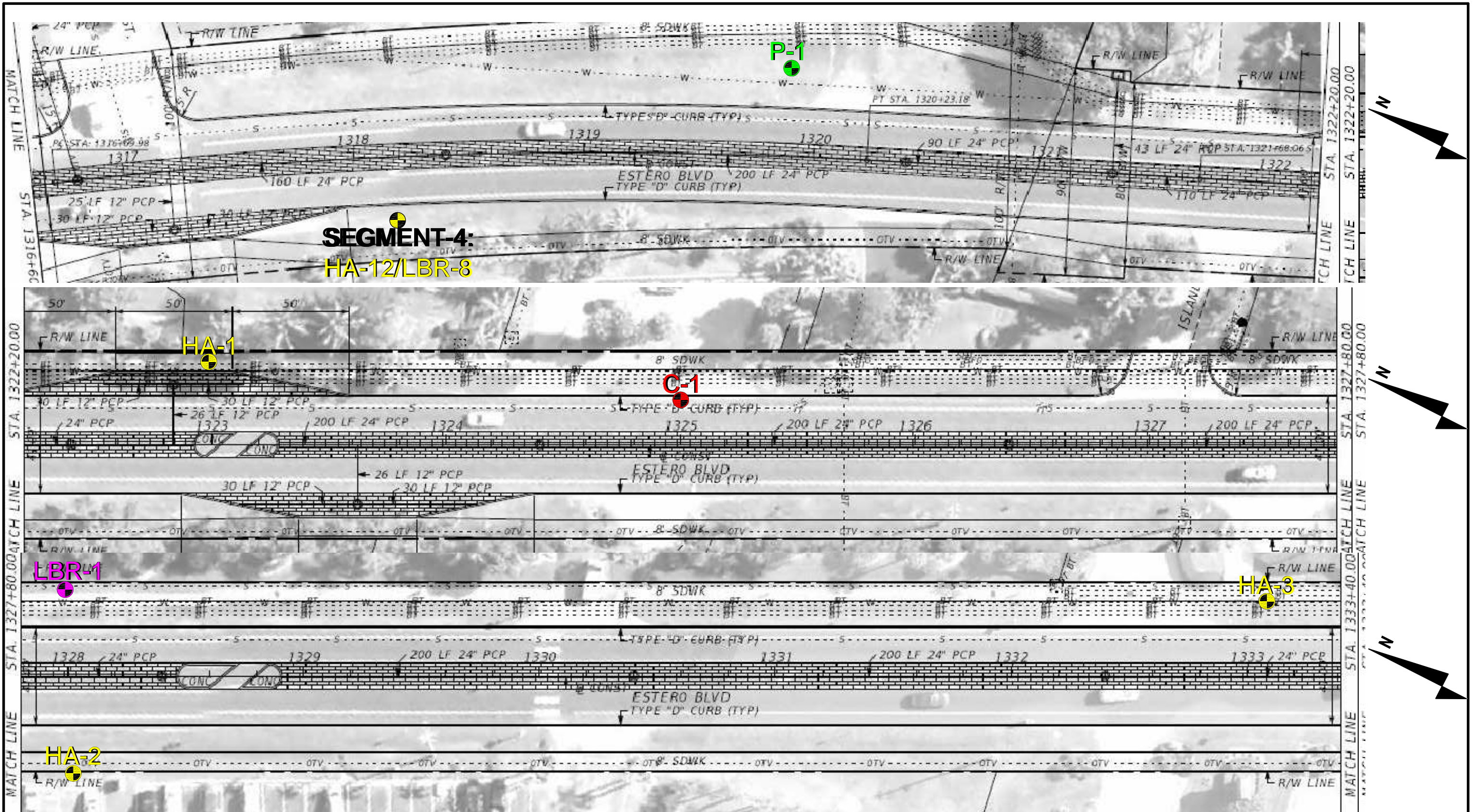
VICINITY MAP

Estero Boulevard – Segment 5
Fort Myers Beach, Lee County, Florida
GFA International Project No.: 16-1668



Appendix B – Test Location Plan





- NOTES:
- HAND AUGER LOCATION
 - ASPHALT CORE LOCATION
 - PERCOLATION TEST LOCATION
 - LBR TEST LOCATION

BASE DRAWING PROVIDED BY CLIENT



GFA INTERNATIONAL, INC.
5851 COUNTRY LAKES DRIVE
FORT MYERS, FLORIDA 33905

PAUL J. D'HUYVETTER, P.E. #59716

LEE COUNTY DEPARTMENT OF PUBLIC WORKS

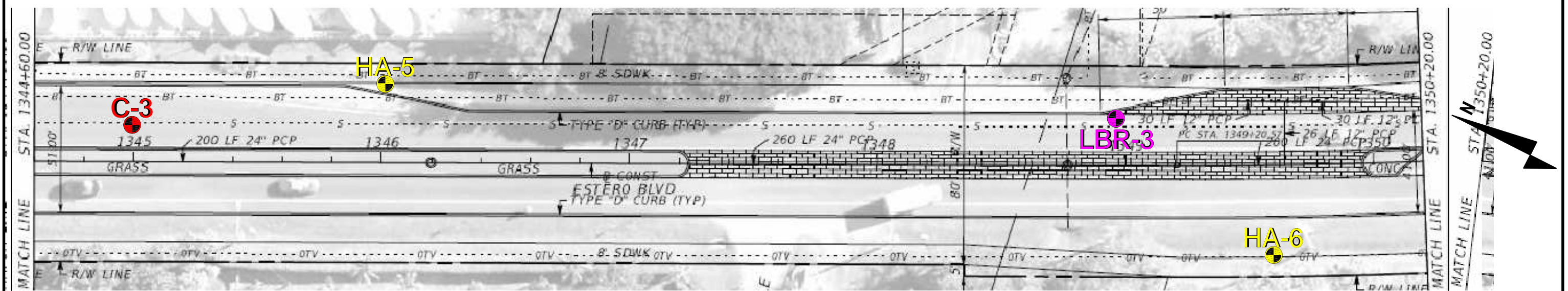
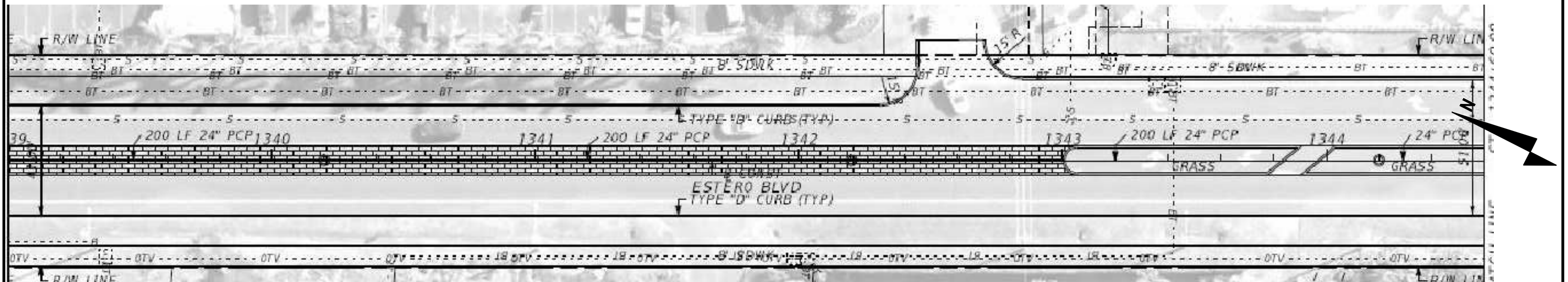
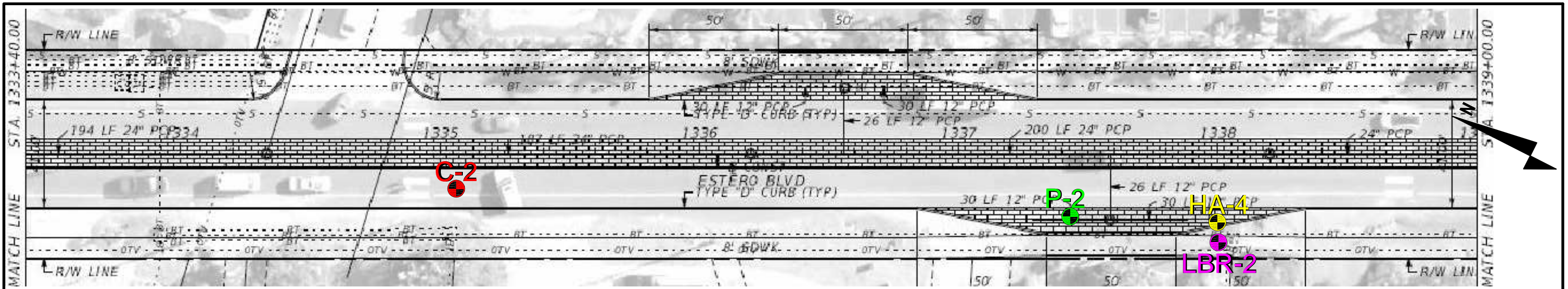
ROAD NAME	COUNTY NAME	PROJECT ID
ESTERO BOULEVARD	LEE	16-1668

TEST LOCATION PLAN
ESTERO BLVD. UTILITY IMPROVEMENTS
SEGMENT 5 - Albatross St. to Bay Beach Lane
FORT MYERS BEACH, LEE COUNTY, FLORIDA

DRAWN BY:

CAC

		REVISIONS			
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



- NOTES:
- HAND AUGER LOCATION
 - ASPHALT CORE LOCATION
 - PERCOLATION TEST LOCATION
 - LBR TEST LOCATION

BASE DRAWING PROVIDED BY CLIENT



GFA INTERNATIONAL, INC.
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FORT MYERS, FLORIDA 33905

PAUL J. D'HUYVETTER, P.E. #59716

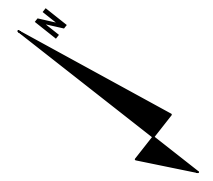
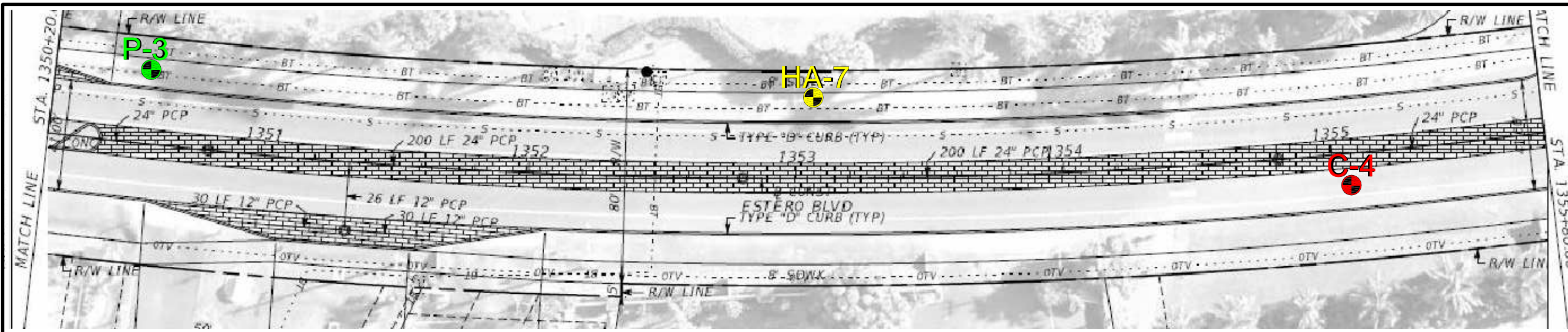
LEE COUNTY DEPARTMENT OF PUBLIC WORKS

ROAD NAME	COUNTY NAME	PROJECT ID
ESTERO BOULEVARD	LEE	16-1668

TEST LOCATION PLAN
ESTERO BLVD. UTILITY IMPROVEMENTS
SEGMENT 5 - Albatross St. to Bay Beach Lane
FORT MYERS BEACH, LEE COUNTY, FLORIDA

DRAWN BY:

CAC



- NOTES:
- HAND AUGER LOCATION
 - ASPHALT CORE LOCATION
 - PERCOLATION TEST LOCATION
 - LBR TEST LOCATION

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LEE COUNTY DEPARTMENT OF PUBLIC WORKS

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TEST LOCATION PLAN
ESTERO BLVD. UTILITY IMPROVEMENTS
SEGMENT 5 - Albatross St. to Bay Beach Lane
FORT MYERS BEACH, LEE COUNTY, FLORIDA

DRAWN BY:

CAC

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Appendix C - Notes Related to Borings



**NOTES RELATED TO
RECORDS OF TEST BORING AND
GENERALIZED SUBSURFACE PROFILE**

1. Groundwater level was encountered and recorded (if shown) following the completion of the soil test boring on the date indicated. Fluctuations in groundwater levels are common; consult report text for a discussion.
2. The boring location was identified and located in the field based on measured and estimated distances from existing site features.
3. The borehole was backfilled to site grade following boring completion, patched with asphalt cold patch mix when pavement was encountered.
4. The Record of Test Boring represents our interpretation of field conditions based on engineering examination of the soil samples.
5. The Record of Test Boring is subject to the limitations, conclusions, and recommendations presented in the report text.
6. The Standard Penetration Test (SPT) was performed in accordance ASTM Procedure D-1586. SPT testing procedure consists of driving a 1.4-inch I.D. split-tube sampler into the soil profile using a 140-pound hammer falling 30 inches.
7. On the Record of Test Boring listed as "Blow Counts", the N-value is the sum of the SPT hammer blows required to drive the split-tube sampler through the second and third 6-inch increment of the sampling layer, and is an indication of soil strength.
8. Shown on the Record of Test Boring an SPT N-value expressed as 50/2" is descriptive of the fact that 50 hammer blows were required to drive the split-spoon sampler a distance of approximately 2 inches.
9. The soil/rock strata interfaces shown on the Records of Test Boring are approximate and may vary from those in the field. The soil/rock conditions shown on the Records of Test Boring refer to conditions at the specific location tested; soil/rock conditions may vary between test locations.

10. Relative density and consistency for sands/gravels, silts/clays, and limestone are described as follows:

Cohesionless Soils	
SPT (N-Value)	Relative Density
0 – 3	Very Loose
4 – 8	Loose
9 – 24	Medium Dense
25 – 40	Dense
Over 40	Very Dense

Silts and Clays	
SPT (N-Value)	Consistency
0 – 1	Very Soft
2 – 4	Soft
4 – 6	Firm
7 – 12	Stiff
13 – 24	Very Stiff
Over 24	Hard

Limestone	
SPT (N-Value)	Relative Density
0 – 19	Very Soft
20 – 49	Soft
50 – 100	Medium Hard
50 for 3 to 5"	Moderately Hard
50 for 0 to 2"	Hard

11. Definition of descriptive terms of modifiers for silts/clays/shells/gravels are described as follows:

Percentage of Modifier Material	First Qualifier	Second Qualifier
0 – 5	With a Trace of + Modifier	With a Trace
5 – 12	Slightly + Modifier + y	With Some
12 – 30	Modifier + y	With
30 – 50	Very + Modifier + y	And

12. Descriptive characteristics for organic content percentages are described as follows:

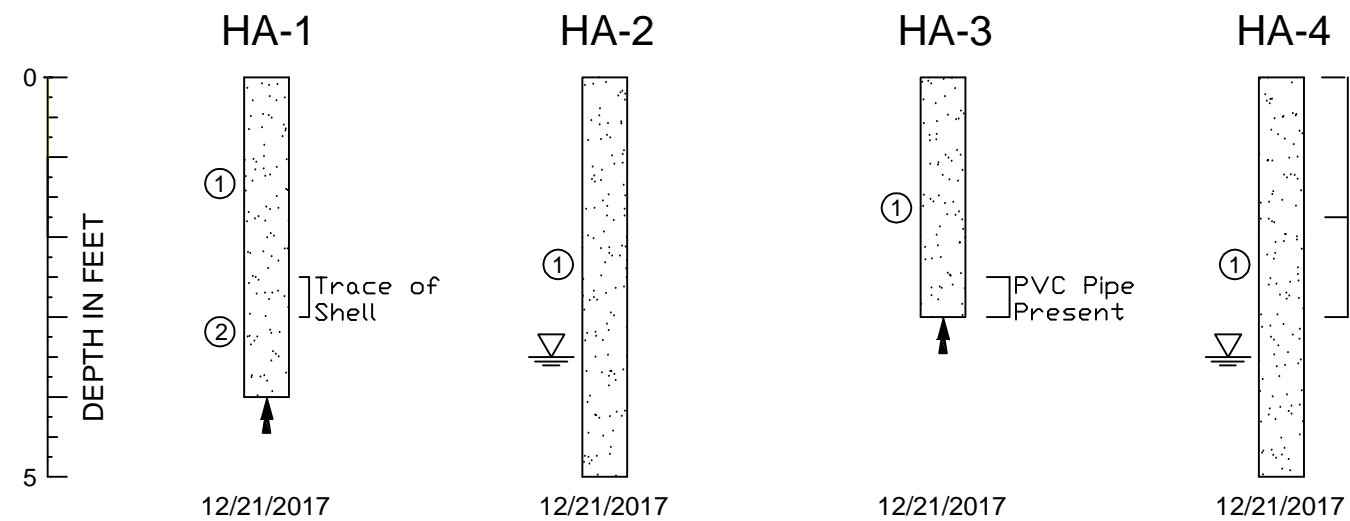
Percentage of Organic Material	Descriptor
0 – 5	With a Trace
5 – 20	With Organics
20 – 75	Highly Organic
75 – 100	Peat



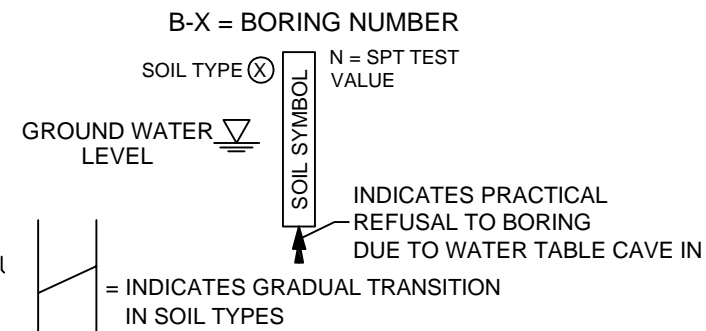
Appendix D – Record of Hand Auger Boring Logs



SOIL PROFILES



SOIL PROFILE LEGEND



NOTES:

N - STANDARD PENETRATION RESISTANCE TEST (SPT) VALUE. NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12-INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).

HA - HAND AUGER

SOIL LEGEND

① Gray, Dark Gray, Light Gray, Brown, Light Brown, Loose to Dense SAND (A-3; SP)

SOIL CLASSIFICATION

CORRELATION OF N - VALUES WITH RELATIVE DENSITY AND CONSISTENCY

COHESIONLESS SOIL		SILTS AND CLAYS	
N - VALUE	RELATIVE DENSITY	N - VALUE	CONSISTENCY
0 - 3	VERY LOOSE	0 - 1	VERY SOFT
4 - 8	LOOSE	2 - 4	SOFT
9 - 24	MEDIUM DENSE	5 - 6	FIRM
25 - 40	DENSE	7 - 12	STIFF
OVER 40	VERY DENSE	13 - 24	VERY STIFF
		OVER 24	HARD

CORRELATION OF N - VALUES WITH HARDNESS DESCRIPTION

LIMEROCK	
N - VALUE	RELATIVE DENSITY
0 - 19	VERY SOFT
20 - 49	SOFT
50 - 100	MEDIUM HARD
50 FOR 3 TO 5"	MODERATELY HARD
50 FOR 0 TO 2"	HARD

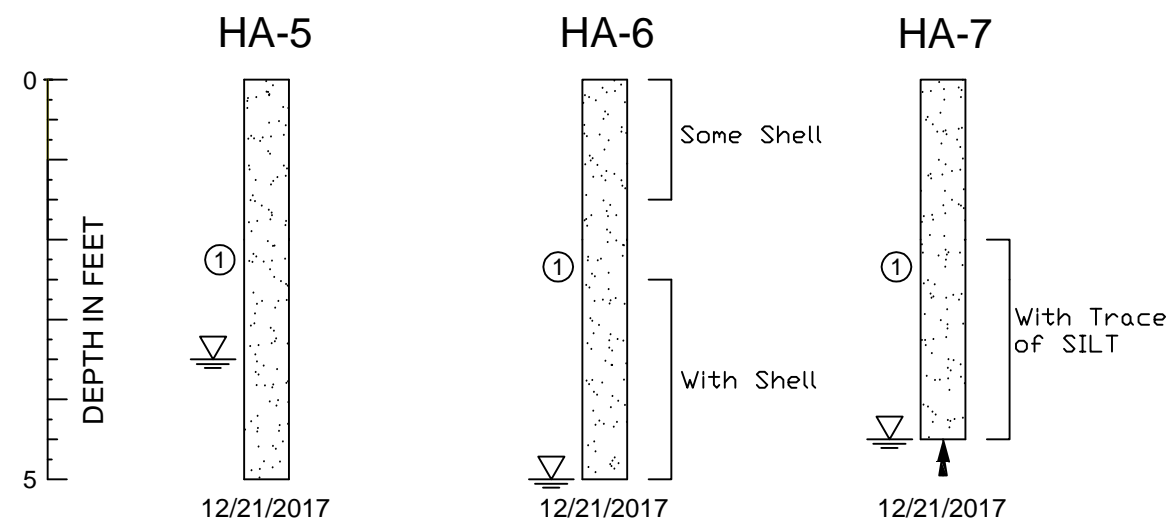
APPROXIMATE FINES CONTENT	MODIFIERS
5% TO 15%	SLIGHTLY SILTY OR SLIGHTLY CLAYEY
16% TO 25%	SILTY OR CLAYEY
26% TO 49%	VERY SILTY OR VERY CLAYEY

APPROXIMATE SHELL CONTENT	MODIFIERS
0% TO 5%	WITH A TRACE OF SHELL
6% TO 12%	SLIGHTLY SHELLY
13% TO 30%	SHELLY
31% TO 50%	VERY SHELLY

APPROXIMATE ORGANIC CONTENT	MODIFIERS
0% TO 5%	WITH A TRACE
5% TO 20%	WITH ORGANICS
20% TO 75%	HIGHLY ORGANIC
75% TO 100%	PEAT

DEFINITION OF DESCRIPTIVE TERMS OF MODIFIERS FOR SILTS/CLAYS/SHELLS/GRAVELS ARE DESCRIBED AS FOLLOWS:

PERCENTAGE OF MODIFIER MATERIAL	FIRST QUALIFIER	SECOND QUALIFIER
0 - 5	WITH A TRACE OF + MODIFIER	WITH A TRACE
5 - 12	SLIGHTLY + MODIFIER + Y	WITH SOME
12 - 30	MODIFIER + Y	WITH
30 - 50	VERY + MODIFIER + Y	AND



RECORD OF HAND AUGER BORINGS



GFA International, Inc.
5851 Country Lakes Drive
Fort Myers, Florida 33905
239-489-2443 * TeamGFA.com

Client: David Douglas Associates, Inc.
Project:
Estero Boulevard Utility Improvements
Segment 5
Fort Myers Beach, Lee County, Florida

Date: 1/09/2018
Job No: 16-1668
Drawn By: CAC
Approved by: PJD

Appendix E – Discussion of Soil Groups



DISCUSSION OF SOIL GROUPS: AASHTO CLASSIFICATION

COARSE GRAINED SOILS

- **Group A-1:** The typical material of this group is a well-graded mixture of stone fragments or gravel, coarse sand, fine sand, and a nonplastic or feebly-plastic soil binder. However, this group also includes stone fragments, gravel, coarse sand, volcanic cinders, etc., without a soil binder.
 - **Subgroup A-1-a:** Includes those materials consisting predominantly of stone fragments or gravel, either with or without a well-graded binder of fine material.
 - **Subgroup A-1-b:** Includes those materials consisting predominantly of coarse sand, either with or without a well-graded soil binder.

- **Group A-3:** The typical material of this group is fine beach sand or fine desert-blow sand without silty or clay fines, or with a very small amount of nonplastic silt. This group also includes stream-deposited mixtures of poorly-graded fine sand and limited amounts of coarse sand and gravel.

- **Group A-2:** This group includes a wide variety of “granular” materials which are borderline between the materials falling in Groups A-1 and A-3, and the silt-clay materials of Groups A-4, A-5, A-6, and A-7. It includes all materials containing 35% or less passing a No. 200 (75- μ m) sieve which cannot be classified in Groups A-1 or A-3, due to the fines content or the plasticity indexes, or both, in excess of the limitations for those groups.
 - **Subgroups A-2-4 and A-2-5:** Include various granular materials containing 35% or less passing a No. 200 (75- μ m) sieve and with a minus No. 40 (425- μ m) portion having the characteristics of Groups A-4 and A-5, respectively. These groups include such materials as gravel and coarse sand with silt contents or plasticity indexes in excess of the limitations of Group A-1 and fine sand with nonplastic-silt content in excess of the limitations of Group A-3.
 - **Subgroups A-2-6 and A-2-7:** Include materials similar to those described under Subgroups A-2-4 and A-2-5, except that the fine portion contains plastic clay having the characteristics of the A-6 or A-7 group, respectively.



FINE GRAINED SOILS

- **Group A-4:** The typical material of this group is a nonplastic or moderately plastic silty soil usually having 75% or more passing a No. 200 (75- μ m) sieve. This group also includes mixtures of fine silty soil and up to 64% of sand and gravel retained on a No. 200 sieve.
- **Group A-5:** The typical material of this group is similar to that described under Group A-4, except that it is usually of diatomaceous or micaceous character and may be highly elastic as indicated by the high liquid limit.
- **Group A-6:** The typical material of this group is a plastic clay soil usually having 75% or more passing a No. 200 (75- μ m) sieve. This group also includes mixtures of fine clayey soil and up to 64% of sand and gravel retained on a No. 200 sieve. Materials of this group usually have a high volume change between wet and dry states.
- **Group A-7:** The typical material of this group is similar to that described under Group A-6, except that it has the high liquid limits characteristic of Group A-5 and may be elastic as well as subject to high-volume change.
 - **Subgroup A-7-5:** Includes those materials with moderate plasticity indexes in relation to the liquid limit and which may be highly elastic as well as subject to considerable volume change.
 - **Subgroup A-7-6:** Includes those materials with high plasticity indexes in relation to liquid limit and which are subject to extremely high volume change.

HIGHLY ORGANIC SOILS

- **Group A-8:** Highly organic soils (peat or muck) may be classified in this group. Classification of these materials is based on visual inspection and is not dependent on the percentage passing the No. 200 (75- μ m) sieve liquid limit, or plasticity index. The material is composed primarily of partially decayed organic matter, generally has a fibrous texture, a dark brown or black color, and an odor of decay. These organic materials are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.



DISCUSSION OF SOIL GROUPS

COARSE GRAINED SOILS

GW and SW GROUPS. These groups comprise well-graded gravelly and sandy soils having little or no plastic fines (less than 5 percent passing the No. 200 sieve). The presence of the fines must not noticeably change the strength characteristics of the coarse-grained fraction and must not interface with its free-draining characteristics.

GP and SP GROUPS. Poorly graded gravels and sands containing little or no plastic fines (less than 5 percent passing the No. 200 sieve) are classed in GP and SP groups. The materials may be called uniform gravels, uniform sands or non-uniform mixtures of very coarse material and very fine sands, with intermediate sizes lacking (sometimes called skip-graded, gap-graded or step-graded). This last group often results from borrow pit excavation in which gravel and sand layers are mixed.

GM and SM GROUPS. In general, the GM and SM groups comprise gravels or sands with fines (more than 12 percent passing the No. 200 sieve) having low or no plasticity. The plasticity index and liquid limit of soils in the group should plot below the "A" line on the plasticity chart. The gradation of the material is not considered significant and both well and poorly graded materials are included.

GC and SC GROUPS. In general, the GC and SC groups comprise gravelly or sandy soils with fines (more than 12 percent passing the No. 200 sieve), which have a fairly high plasticity. The liquid limit and plasticity index should plot above the "A" line on the plasticity chart.

FINE GRAINED SOILS

ML and MH GROUPS. In these groups, the symbol M has been used to designate predominantly silty material. The symbols L and H represent low and high liquid limits, respectively, and an arbitrary dividing line between the two is set at a liquid limit of 50. The soils in the ML and MH groups are sandy silts, clayey silts or inorganic silts with relatively low plasticity. Also included are loess type soils and rock flours.

CL and CH GROUPS. In these groups the symbol C stands for clay, with L and H denoting low or high liquid limits, with the dividing line again set at a liquid limit of 50. The soils are primarily inorganic clays. Low plasticity clays are classified as CL and are usually lean clays, sandy clays or silty clays. The medium and high plasticity clays are classified as CH. These include the fat clays, gumbo clays and some volcanic clays.



OL and OH GROUPS. The soil in the OL and OH groups are characterized by the presence of organic odor or color, hence the symbol O. Organic silts and clays are classified in these groups. The materials have a plasticity range that corresponds with the ML and MH groups.

HIGHLY ORGANIC SOILS

The highly organic soils are usually very soft and compressible and have undesirable construction characteristics. Particles of leaves, grasses, branches, or other fibrous vegetable matter are common components of these soils. They are not subdivided and are classified into one group with the symbol PT. Peat humus and swamp soils with a highly organic texture are typical soils of the group.



Appendix F – Hydrologic Soils Map





Hydrologic Soils map

Estero Boulevard – Segment 5
Fort Myers Beach, Lee County, Florida
GFA International Project No.: 16-1668



*Map Not To Scale

Map Unit: 4 - Canaveral- Urban Land Complex
5 - Captiva Fine Sand
24 - Kesson Fine Sand

59 - Urban Land
69 - Matlacha Gravelly Fine Sand
99 - Water

Appendix G – Roadway Soil Survey



LEE COUNTY
DEPARTMENT OF PUBLIC WORKS
ESTERO BOULEVARD: SEGMENT 5

DATE OF SURVEY : December 21-22, 2017
SURVEY MADE BY : GFA INTERNATIONAL, INC.
SUBMITTED BY : PAUL J. D'HUYVETTER, P.E.

ROAD NAME : ESTERO BOULEVARD
CITY: FORT MYERS BEACH
COUNTY : LEE

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS
SURVEY BEGINS: STA. 1317+00 SURVEY ENDS: STA. 1356+00

STRATUM NO.	ORGANIC CONTENT			SIEVE ANALYSIS RESULTS % PASS						ATTERBERG LIMITS (%)			DESCRIPTION	CORROSION SERIES TEST RESULTS					
	NO. OF TESTS	% ORGANIC	% MOISTURE CONTENT	NO. OF TESTS	4 MESH	10 MESH	40 MESH	100 MESH	200 MESH	NO. OF TESTS	LIQUID LIMIT	PLASTIC INDEX		AASHTO GROUP	NO. OF TESTS	RESISTIVITY ohms-cm	CHLORIDE ppm	SULFATES ppm	pH
1	-	-	-	4	93-99.0	88-99	58-96	14-28	0.3-2.9	-	-	-	A-3	Gray to Dark Gray, Brown, SAND (SP) with Traces of Shell Fragments	2*	2,483-3,943	60	0-13	8.22-8.56


*Corrosion Series Test ran on two (2) composite sample obtained from hand auger borings during GFA's field exploration program.

NOTES:

EMBANKMENT AND SUBGRADE MATERIAL
STRATA BOUNDARIES ARE APPROXIMATE

Ground water was encountered at depths of about 3.5 to 5 feet at boring locations at the time of our drilling.

The material from Stratum Number 1 appears satisfactory for use in the embankment when utilized in accordance with Index 505, except where organics were encountered.

REVISIONS						 GFA INTERNATIONAL, INC. 5851 COUNTRY LAKES DRIVE FORT MYERS, FLORIDA 33905 PAUL J. D'HUYVETTER P.E. #59716	LEE COUNTY DEPARTMENT OF TRANSPORTATION			ROADWAY SOIL SURVEY ESTERO BOULEVARD: SEGMENT 5 FORT MYERS BEACH, LEE COUNTY, FLORIDA	DRAWN BY:
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NAME	COUNTY NAME	PROJECT ID		CAC
						ESTERO BOULEVARD	LEE	16-1668			

Appendix H – Gradation Test Results





GFA International, Inc
 5851 Country Lakes Drive
 Fort Myers, Florida 33905
 239-489-2443 P
 239-489-3438 F

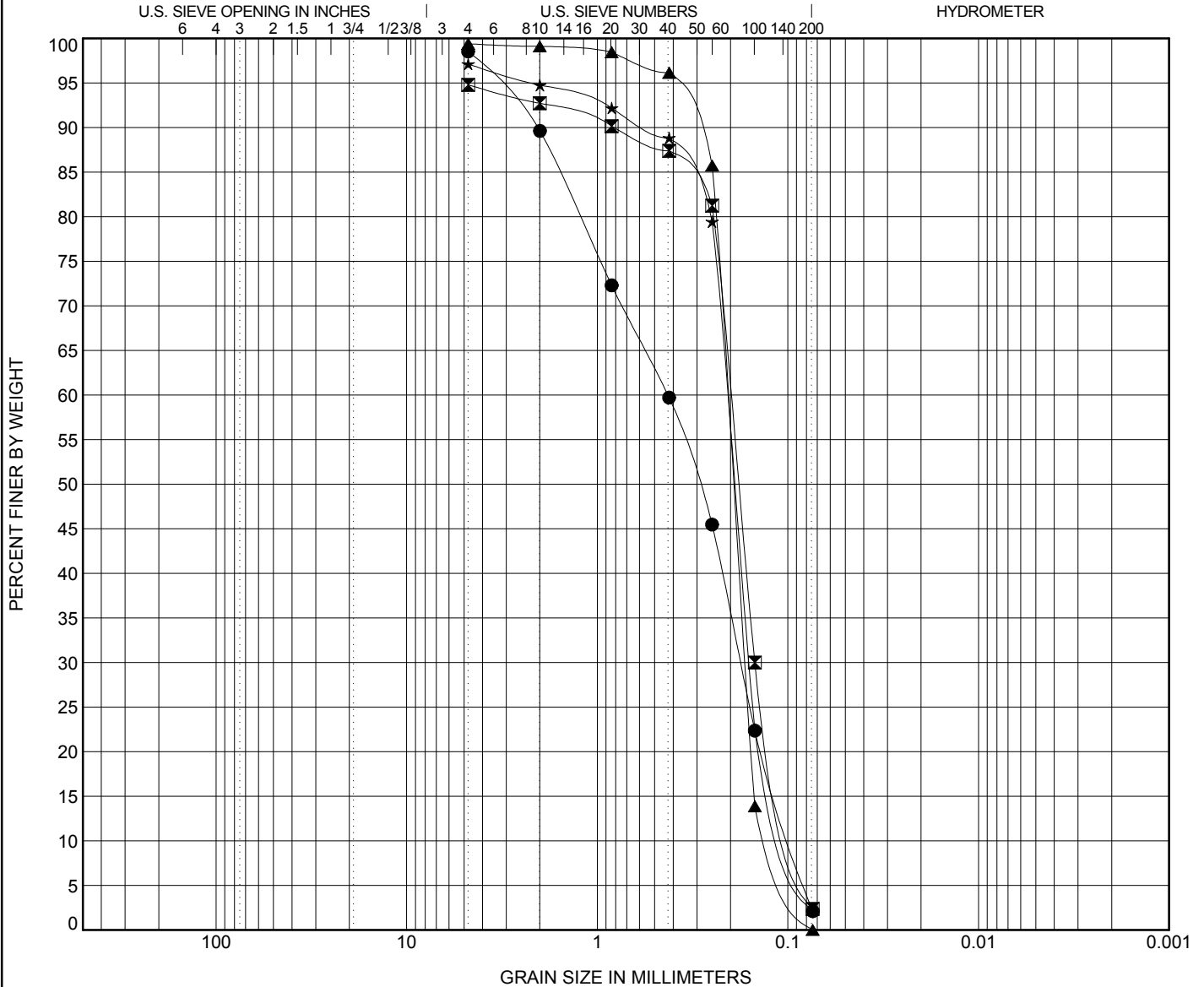
GRAIN SIZE DISTRIBUTION

CLIENT David Douglas Associates, Inc.

PROJECT NAME Estero Boulevard: Segment 5

PROJECT NUMBER 16-1668

PROJECT LOCATION Sta. 1317+00 to Sta. 1355+80



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● HA-1 (0-2.5') 0.0	Gray to Brown Poorly Graded Sand (SP) With Shell Fragments	NP	NP	NP	0.75	4.39
☒ HA-4 (3-5') 3.0	Gray Poorly Graded Sand (SP) With Trace Shell Fragments	NP	NP	NP	1.23	2.25
▲ HA-6 (2.5-4') 2.5	Gray Poorly Graded Sand (SP)	NP	NP	NP	1.10	1.70
★ HA-7 (2-3.5') 2.0	Gray Poorly Graded Sand (SP) With Shell Fragments	NP	NP	NP	1.25	2.16

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● HA-1 (0-2.5') 0.0	4.76	0.427	0.177	0.097	0.0	96.0	2.5	
☒ HA-4 (3-5') 3.0	4.76	0.202	0.149	0.09	0.0	91.9	2.9	
▲ HA-6 (2.5-4') 2.5	4.76	0.208	0.167	0.123	0.0	99.1	0.3	
★ HA-7 (2-3.5') 2.0	4.76	0.21	0.16	0.097	0.0	94.5	2.6	

GRAIN SIZE SEGMENT 5 SIEVE ANALYSIS.GPJ MASTER BORING LOG.GDT 1/23/18



SIEVE ANALYSIS ASTM C136

Project: Estero Boulevard: Remaining Segments **Project ID:** 16-1668
Client Address: 1821 Victorica Avenue, Fort Myers, Florida **Report ID:** S001
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 5: Sta. 1323+00 - Northbound Shoulder - HA-1 (0 to 2.5 Ft.)
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: R. Gibson **Date Tested:** 1/11/2018
Material Description: Gray to Brown Sand with Trace Shell Fragments and Organics
Material Classification: SP
Total Sample Weight: 266.1 **Sample Weight After Wash:** 262.2

SIEVE#	CUMMULATIVE WEIGHT RETAINED (G)	% PASSING
No. 4	3.9	97%
No. 10	27.6	88%
No. 20	73.7	71%
No. 40	107.2	58%
No. 60	145.1	44%
No. 100	206.6	21%
No. 200	259.0	2.5%
PAN (WT RETAINED)	2.7	
TOTAL	261.7	

The above test results were obtained in accordance with standard laboratory procedures.

Respectfully Submitted
GFA INTERNATIONAL

1/17/2018

Paul J. D'huyvetter, P.E.
Registered Engineer # 59716
State of Florida



SIEVE ANALYSIS ASTM C136

Project: Estero Boulevard: Remaining Segments **Project ID:** 16-1668
Client Address: 1821 Victorica Avenue, Fort Myers, Florida **Report ID:** S002
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 5: Sta. 1338+00 - Southbound Shoulder - HA-4 (3 to 5 Ft.)
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: R. Gibson **Date Tested:** 1/11/2018
Material Description: Gray Sand with Trace Shell Fragments
Material Classification: SP
Total Sample Weight: 437.9 **Sample Weight After Wash:** 428

SIEVE#	CUMMULATIVE WEIGHT RETAINED (G)	% PASSING
No. 4	22.8	93%
No. 10	31.9	90%
No. 20	43.1	88%
No. 40	55.2	85%
No. 60	82.1	79%
No. 100	306.5	28%
No. 200	424.9	2.9%
PAN (WT RETAINED)	2.7	
TOTAL	427.6	

The above test results were obtained in accordance with standard laboratory procedures.

Respectfully Submitted
GFA INTERNATIONAL

1/17/2018

Paul J. D'huyvetter, P.E.
Registered Engineer # 59716
State of Florida



SIEVE ANALYSIS ASTM C136

Project: Estero Boulevard: Remaining Segments **Project ID:** 16-1668
Client Address: 1821 Victorica Avenue, Fort Myers, Florida **Report ID:** S003
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 5: Sta. 1349+50 - Southbound Shoulder - HA-6 (2.5 to 4 Ft.)
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: R. Gibson **Date Tested:** 1/11/2018
Material Description: Gray Sand
Material Classification: SP
Total Sample Weight: 518.1 **Sample Weight After Wash:** 517

SIEVE#	CUMMULATIVE WEIGHT RETAINED (G)	% PASSING
No. 4	3.1	99%
No. 10	4.6	99%
No. 20	8.0	98%
No. 40	19.9	96%
No. 60	73.9	86%
No. 100	446.2	14%
No. 200	516.3	0.3%
PAN (WT RETAINED)	0.7	
TOTAL	517.0	

The above test results were obtained in accordance with standard laboratory procedures.

Respectfully Submitted
GFA INTERNATIONAL

1/17/2018

Paul J. D'huyvetter, P.E.
Registered Engineer # 59716
State of Florida



SIEVE ANALYSIS ASTM C136

Project: Estero Boulevard: Remaining Segments **Project ID:** 16-1668
Client Address: 1821 Victorica Avenue, Fort Myers, Florida **Report ID:** S004
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 5: Sta. 1353+00 - Southbound Shoulder - HA-7 (2 to 3.5 Ft.)
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: R. Gibson **Date Tested:** 1/11/2018
Material Description: Gray Sand with Shell Fragments
Material Classification: SP
Total Sample Weight: 498 **Sample Weight After Wash:** 487.2

SIEVE#	CUMMULATIVE WEIGHT RETAINED (G)	% PASSING
No. 4	14.3	95%
No. 10	26.1	93%
No. 20	38.9	90%
No. 40	55.6	87%
No. 60	102.4	77%
No. 100	386.2	20%
No. 200	485.3	2.6%
PAN (WT RETAINED)	1.9	
TOTAL	487.2	

The above test results were obtained in accordance with standard laboratory procedures.

Respectfully Submitted
GFA INTERNATIONAL

1/17/2018

Paul J. D'huyvetter, P.E.
Registered Engineer # 59716
State of Florida

Appendix I – Soil Corrosive Series Test Results





REPORT OF SOIL CORROSION SERIES

Project: Estero Boulevard Remaining Segments **Project ID:** 16-1668
Client Address: 1821 Victoria Avenue, Fort Myers, Florida **Report ID:** CS001
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 5: Composite Sample 1 - Hand Auger Borings HA-1 through HA-4 (0' - 5')
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: R. Gibson **Date Tested:** 1/12/2018
Material Description: Composite Sample: Gray to Brown Sand with Trace Shell Fragments
Material Classification: SP

	Lab Results
pH (FM 5-550):	8.22
Resistivity (FM 5-551):	2,483 ohm-cm
Chloride (FM 5-552):	30 ppm
Sulfate (FM 5-553):	213 ppm

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930

1/26/2018

Paul J. D'huyvetter, P.E.
 Registered Engineer # 59716
 State of Florida

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REPORT OF SOIL CORROSION SERIES

Project: Estero Boulevard Remaining Segments **Project ID:** 16-1668
Client Address: 1821 Victoria Avenue, Fort Myers, Florida **Report ID:** CS002
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 5: Composite Sample 2 - Hand Auger Borings HA-5 through HA-7
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: R. Gibson **Date Tested:** 1/12/2018
Material Description: Composite Sample: Gray to Brown Sand with Trace Shell Fragments
Material Classification: SP

	Lab Results
pH (FM 5-550):	8.56
Resistivity (FM 5-551):	3,943 ohm-cm
Chloride (FM 5-552):	60 ppm
Sulfate (FM 5-553):	Non-Detectable (ppm)

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930

1/26/2018

Paul J. D'huyvetter, P.E.
 Registered Engineer # 59716
 State of Florida

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Appendix J – Asphalt Thickness by Core Determination





LIMEROCK/ASPHALT THICKNESS BY CORE DETERMINATION

Client: David Douglas Associates, Inc. Project #: 16-1668

Project: Estero Boulevard - Segment 5

Address: Estero Boulevard, Fort Myers Beach, Lee County, Florida

Results of Test

Core #	Location/ Offset From Center Line	Total Asphalt Core Thickness (in.)	Measured Asphalt Thickness (in.)		Visual Asphalt Type Classification
C-1	Sta. 1325+00 Northbound/ 5.0 Feet	11-5/8	Lift 1	1-1/2	S-I
			Lift 2	7/8	S-I
			Lift 3	1-5/8	S-I
			Lift 4	1-7/8	S-II
			Lift 5	2-3/8	S-II
			Lift 6	1-7/8	S-II
			Lift 7	1-1/2	S-I
C-2	Sta. 1335+10 Southbound/ 7.0 Feet	11	Lift 1	1	S-I
			Lift 2	1-1/2	S-I
			Lift 3	1-1/2	S-II
			Lift 4	1-1/2	S-II
			Lift 5	1-1/4	S-II
			Lift 6	3-1/8	S-II
			Lift 7	1-1/8	S-I
C-3	Sta. 1345+00 Northbound/ 5.0 Feet	9-7/8	Lift 1	1	S-I
			Lift 2	1	S-I
			Lift 3	1-1/4	S-II
			Lift 4	1	S-II
			Lift 5	3-1/2	S-II
			Lift 6	2-1/8	S-II
C-4	Sta. 1355+00 Southbound/ 6.5 feet	8	Lift 1	1	S-I
			Lift 2	1	S-I
			Lift 3	1-7/8	S-I
			Lift 4	1-1/8	S-II
			Lift 5	1	S-II
			Lift 6	2	S-II

The above test results were obtained in accordance with standard laboratory procedures.

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ASPHALT/ BASE THICKNESS BY CORE DETERMINATION

Client: David Douglas Associates, Inc.
 Project: Estero Boulevard Utility Improvements: Remaining Segments
 Location: Segments 5
 Tested By: JR Gibbs/ Kevin Mixon
 Date Tested: 12/20/2017

Project #: 16-1668
 Lab I.D. _____

Segment 5 - Results of Test

Core #	Location	Limerock Thickness Inches	Subbase Inches	Asphalt Thickness Inches
C-1	Sta. 1325+00: NB	12	N/A	11-5/8
C-2	Sta. 1335+00: SB	12	N/A	11
C-3	Sta. 1345+00: NB	6	N/A	9-7/8
C-4	Sta. 1355+00: SB	5	N/A	8

Appendix K – Asphalt Bulk Specific Gravity





ASPHALT CORE DENSITIES

CLIENT: <u>David Douglas Associates, Inc.</u>	PROJECT # <u>16-1668</u>
PROJECT: <u>Estero Boulevard - Segment 5</u>	REPORT # <u>1</u>
ADDRESS: <u>Estero Boulevard</u>	CITY: <u>Fort Myers Beach</u> DATE: <u>1/26/2018</u>

Core #	Location/ Offset from Center Line	(A) Weight In Air (grams)	(B) Weight SSD (grams)	(C) Weight In Water (grams)	(D) A/(B-C) Specific Gravity	(E) D x 62.4 Density (PCF)	Tested Thickness (inches)
C-1	Sta. 1325+00 (NB)/ 5.0 Feet	3760.0	3769.5	1991.0	2.11	131.9	4
C-2	Sta. 1335+10 (SB)/ 7.0 Feet	4423.2	4427.5	2399.5	2.18	136.1	4-1/2
C-3	Sta. 1345+00 (NB)/ 5.0 Feet	3661.6	3679.9	1922.5	2.08	130.0	3-7/8
C-4	Sta. 1355+00 (SB)/ 6.5 Feet	3593.3	3599.3	1918.9	2.14	133.4	3-13/16

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930

Appendix L – Limerock Bearing Ratio (LBR) Results

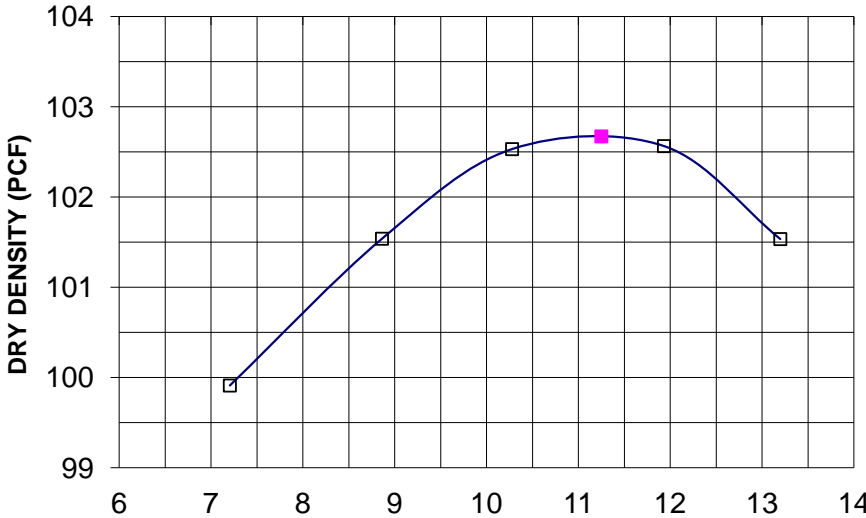




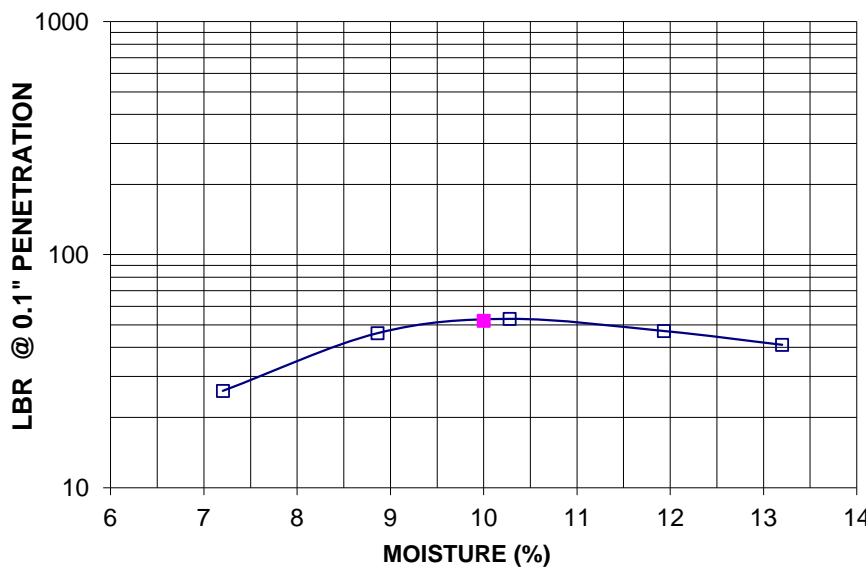
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard Utility Improvements
Address: 1821 Victoria Avenue
Client: David Douglas Associates, Inc.
Material Location: Segment 5 : LBR001, Station 1328+00, East Shoulder
Sampled By: G. Watson
Tested By: J. McStravic/ R. Gibson
Material Description: Existing, Gray Sand with Trace Organics
% Passing #4: 95%
Rammer Face: Sector **Soak Time (hrs):** 48
Comments: _____

Project ID: 16-1668
Report ID: LBR001
Lab/MAC ID: 17-1687
Date Sampled: 12/21/2017
Date Tested: 1/3/2018
Type of Rammer: Mechanical
Surcharge (lbs): 15



Dry Density (pcf)	Moisture (%)
99.9	7.2
101.5	8.9
102.5	10.3
102.6	11.9
101.5	13.2



LBR
26
46
53
47
41

Maximum Dry Density (pcf)
102.7

Optimum Moisture (%)
11.3

Limerock Bearing Ratio
52

Respectfully Submitted.
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

 Paul J. D'huyvetter, P.E.
 Registered Engineer # 59716
 State of Florida

1/31/18

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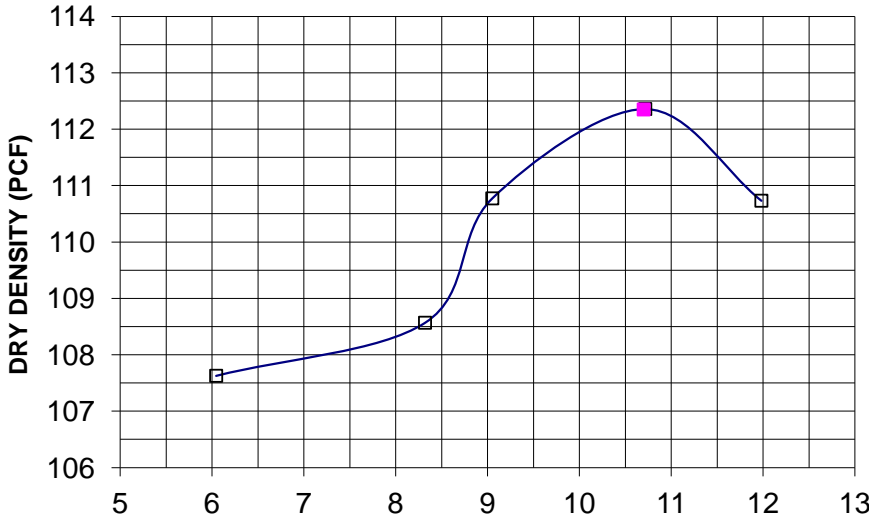


Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard Utility Improvements
Address: 1821 Victoria Avenue
Client: David Douglas Associates, Inc.
Material Location: Segment 5 : LBR002, Station 1338+00, West Shoulder
Sampled By: G. Watson
Tested By: J. McStravic/ R. Gibson
Material Description: Existing Shoulder, Gray Sand with Trace of Shell
% Passing #4: 97%
Rammer Face: Sector **Soak Time (hrs):** 48

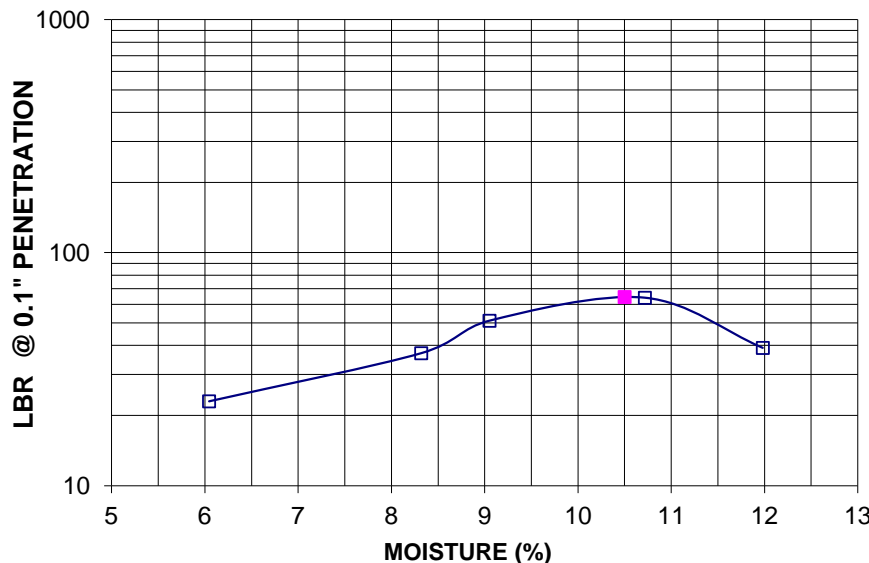
Project ID: 16-1668
Report ID: LBR002
Lab/MAC ID: 17-1688
Date Sampled: 12/21/2017
Date Tested: 1/3/2018
Type of Rammer: Mechanical
Surcharge (lbs): 15

Comments: _____



Dry Density (pcf)	Moisture (%)
107.6	6.0
108.6	8.3
110.8	9.1
112.4	10.7
110.7	12.0

LBR
23
37
51
64
39



Maximum Dry Density (pcf)
112.4

Optimum Moisture (%)
10.7

Limerock Bearing Ratio
65

Respectfully Submitted.
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

1/31/18

Paul J. D'huyvetter, P.E.
 Registered Engineer # 59716
 State of Florida

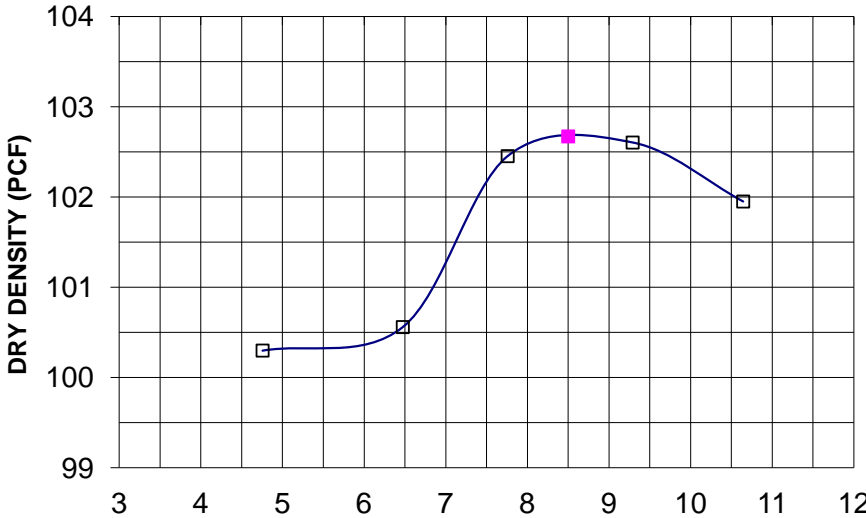
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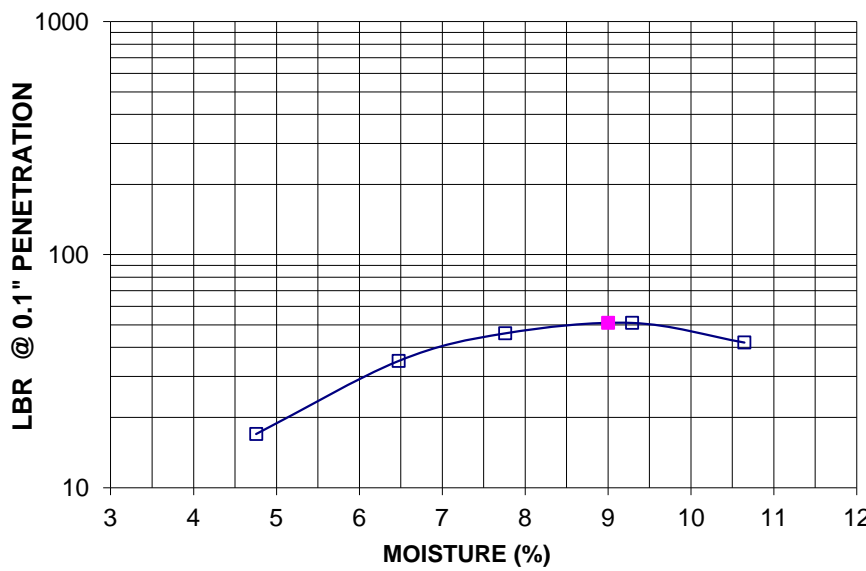
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard Utility Improvements
Address: 1821 Victoria Avenue
Client: David Douglas Associates, Inc.
Material Location: Segment 5 : LBR003, Station 1348+00, East Shoulder
Sampled By: G. Watson
Tested By: J. McStravic/ R. Gibson
Material Description: Existing Shoulder, Gray Sand with Trace of Organics
% Passing #4: 97%
Rammer Face: Sector **Soak Time (hrs):** 48
Comments: _____

Project ID: 16-1668
Report ID: LBR003
Lab/MAC ID: 17-1689
Date Sampled: 12/21/2017
Date Tested: 1/5/2018
Type of Rammer: Mechanical
Surcharge (lbs): 15



Dry Density (pcf)	Moisture (%)
100.3	4.8
100.6	6.5
102.5	7.8
102.6	9.3
101.9	10.6



LBR
17
35
46
51
42

Maximum Dry Density (pcf)
102.7

Optimum Moisture (%)
8.5

Limerock Bearing Ratio
51

Respectfully Submitted.
GFA INTERNATIONAL, INC.
 FBPE CA # 4930

 Paul J. D'huyvetter, P.E.
 Registered Engineer # 59716
 State of Florida

1/31/18

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Appendix M – Asphalt Core Photographs



ASPHALT CORE C-1



ASPHALT CORE C-2



ASPHALT CORE C-3



ASPHALT CORE C-4



GFA INTERNATIONAL

FLORIDA'S LEADING ENGINEERING SOURCE

Report of Geotechnical Exploration

**Estero Boulevard – Segment 6
Fort Myers Beach, Lee County, Florida**

**January 29, 2018
GFA Project No.: 16-1668**

For: David Douglas Associates, Inc.





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January 29, 2018

Mr. Dan Craig P.E.
David Douglas Associates, Inc.
1821 Victoria Ave.
Fort Myers, FL 33901
Phone: (239) 337-3330
Email: DC@DDAI-Engineers.com

**Site: Geotechnical Engineering Services Report
Estero Boulevard – Segment 6
Fort Myers Beach, Lee County, Florida
GFA Project # 16-1668**

Dear Mr. Craig:

GFA International, Inc. (GFA) has completed the subsurface exploration and geotechnical engineering evaluation for the above-referenced project in accordance with the geotechnical and engineering service agreement for this project. The scope of services was completed in accordance with our Geotechnical Engineering Proposal (16-1668.00), planned in conjunction with and authorized by you.

EXECUTIVE SUMMARY

The purpose of our subsurface exploration was to classify the nature of the subsurface soils and general geomorphic conditions and evaluate their impact upon the proposed construction. This report contains the results of our subsurface exploration at the site and our engineering interpretations of these, with respect to the project characteristics described to us including providing recommendations for site preparation and the design of the foundation system.

It is our understanding the project will consist of a construction of a new roadway, drainage installation including underground exfiltration trench, and installation of a new force main or mains along +/- 5,500 feet of Estero Blvd (Sta. 1356+00: Bay Beach Lane to Sta. 1413+76.38: Big Carlos Pass). Documents provided to GFA at the time of this report were Plan and Profile Plans completed by T.Y. Lin International, Sheet No. 53 through Sheet No. 63, dated April 9, 2014. The recommendations provided herein are based upon the above considerations. If the project description has been revised, please inform GFA International so that we may review our recommendations with respect to any modifications.

The following was completed for this study:

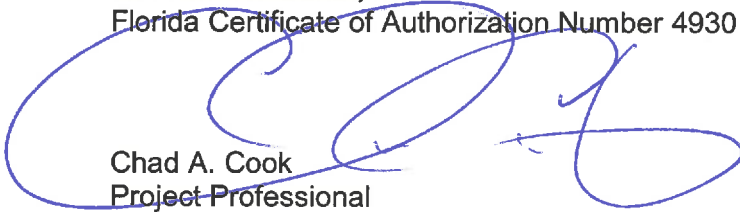
- Eleven (11) Hand Auger (HA) borings to depths of approximately 5 feet below ground surface (BGS).
- Three (3) Field Percolation Test borings to depths of approximately 5 feet BGS.
- Six (6) Asphalt Cores with base and subbase thicknesses spaced at approximately 1,000-foot centers.

The subsurface soil conditions encountered at this site generally consists of sand (SP;A-3) with shell fragments to the boring termination depths. Please refer to "Appendix D – Record of Hand Auger Boring Logs" for a detailed account of each boring.

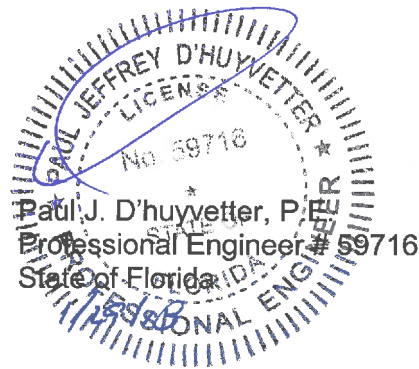
The following report presents the project information made available to us, our observation of the existing site conditions, the subsurface geotechnical information obtained during this exploration, and our recommendations on the suitability of the soils encountered for the force main replacement. Also included with this report are the results of our field and laboratory testing. The assessment of site environmental conditions for the presence of pollutants in the soil, rock, and groundwater at this site was not included as a part of our services.

We appreciate the opportunity to be of service to you on this project and look forward to a continued association. Please do not hesitate to contact us if you have any questions or comments, or if we may further assist you as your plans proceed.

Respectfully Submitted,
GFA International, Inc.
Florida Certificate of Authorization Number 4930



Chad A. Cook
Project Professional



Copies: 2, Addressee
1, CD-R



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1.0 INTRODUCTION

1.1 Scope of Services

The objective of our geotechnical services was to collect subsurface data for the subject project, summarize the test results, and discuss any apparent site conditions that may have geotechnical significance for force main replacement. The following scope of service is provided within this report:

1. Prepare records of the soil boring logs depicting the subsurface soil conditions encountered during our field exploration.
2. Conduct a review of each soil sample obtained during our field exploration for classification and additional testing if necessary.
3. Analyze the existing soil conditions found during our exploration for the suitability of the soils encountered for the force main replacement.
4. Provide recommendations with respect to backfill material for the force main replacement.
5. Provide criteria and site preparation procedures to prepare the site for the proposed construction.

1.2 Project Description

It is our understanding the project will consist of a construction of a new roadway, drainage installation including underground exfiltration trench, and installation of a new force main or mains along +/- 5,500 feet of Estero Blvd (Sta. 1356+00: Bay Beach Lane to Sta. 1413+76.38: Big Carlos Pass). Documents provided to GFA at the time of this report were Plan and Profile Plans completed by T.Y. Lin International, Sheet No. 53 through Sheet No. 63, dated April 9, 2014. The recommendations provided herein are based upon the above considerations. If the project description has been revised, please inform GFA International so that we may review our recommendations with respect to any modifications.

2.0 OBSERVATIONS

2.1 Site Inspection

A site reconnaissance was conducted by members of our engineering staff prior to mobilization of drilling equipment and crews. The purpose of the site visit was to observe the existing site conditions in order to detect any factors that may impact our studies and recommendations.

Generally, the proposed construction site is level. No standing water on the surface was observed during the time of our drilling. The tested site consists of an urban area and is landscaped.



2.2 Geology

The surficial geologic map of Lee County, Florida consists of a quartz sand blanket that overlies the Tertiary Tamiami Formation (T_t), Tertiary-Quaternary Shell Units (Q_{su}) and Quaternary (Holocene) Coastal and Estuarine Sediments (Q_h). The quartz sand blanket is generally less than 20 feet thick deposit, fine to medium grained, well sorted, with no fossils.

The oldest formation is the Tertiary Tamiami Formation (T_t). The Tamiami Formation consists of a mixture of variably sandy limestone, sands and clays containing varying percentage of phosphate grains. Fossils including mollusks, echinoids and corals are abundant. Fossil preservation varies from well preserved to molds and casts.

Overlaying the Tamiami Formation throughout much of the county are sediments indicated as Tertiary-Quaternary Shell Units (Q_{su}). These units consist of sands with subordinate limestone and clay. Fossils, including mollusks and corals, are common and well preserved.

Along the coast, Quaternary (Holocene) Coastal and Estuarine Sediments (Q_h) are founded below an altitude of approximately 5 feet. These sediments consist of quartz sand with a variable organics component. The Holocene sediments include the beach ridge and dune sands.

2.3 Field Exploration

The following was completed for this study:

- Eleven (11) Hand Auger (HA) borings to depths of approximately 5 feet below ground surface (BGS).
- Three (3) Field Percolation Test borings to depths of approximately 5 feet BGS.
- Six (6) Asphalt Cores with base and subbase thicknesses spaced at approximately 1,000-foot centers.

The locations of the borings performed are illustrated in "Appendix B: Test Location Plan". The Standard Penetration Test (SPT) boring method was used as the investigative tool within the borings. SPT tests were performed in substantial accordance with ASTM Procedure D-1586, "Penetration Test and Split-Barrel Sampling of Soils". This test procedure consists of driving a 1.4-inch I.D. split-tube sampler into the soil profile using a 140-pound hammer falling 30 inches. The number of blows per foot, for the second and third 6-inch increment, is an indication of soil strength.

The soil samples recovered from the soil borings were visually classified and their stratification is illustrated in "Appendix D: Record of Hand Auger Boring Logs". It should be noted that soil conditions might vary between the strata interfaces, which are shown. The soil boring data reflect information from a specific test location only. Site specific survey staking for the test locations was not provided for our field exploration. The indicated depth and location of each test was approximated based upon existing grade and estimated distances and relationships to obvious landmarks. The boring depths were selected based on our knowledge of vicinity soils and to include the zone of soil likely to be stressed by the proposed construction.



2.4 Laboratory Analysis

Soil samples recovered from our field exploration were returned to our laboratory where they were visually examined in general accordance with ASTM D-2488. Samples were evaluated to obtain an accurate understanding of the soil properties and site geomorphic conditions. After a thorough visual examination of the recovered site soils, laboratory testing was conducted to determine particle size distribution (D-422) on individual samples and soil corrosiveness on a composite sample obtained from depths ranging from 0 to 5 feet BGS.

Composite bulk specific gravity tests were run on the four asphalt cores obtained during field exploration using the saturated surface-dry procedure (AASHTO T-166). Limerock Bearing Ratio (LBR) tests were run on material obtained within approximately 5 feet of the edge of pavement using the Florida Method FM 5-515.

All laboratory tests were conducted in general accordance with ASTM, AASHTO, or Florida Methods, as applicable. The test method number for each test and the number of tests completed are presented in the following table.

TEST DESCRIPTION	NUMBER OF TESTS	ASTM TEST METHOD
Soil Classification	42	D-2488
Gradation Analysis	6	C-136
Soil Corrosiveness (pH, Resistivity, Chloride, Sulfate)	2	FM 5-550, FM 5-551, FM 5-552, and FM 5-553
Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens	6	AASHTO T-166
Limerock Bearing Ratio (LBR)	6	FM 5-515

Bag samples of the soil encountered during our field exploration will be held in our laboratory for your inspection for 90 days and then discarded unless we are notified otherwise in writing.

2.4.1 Gradation Tests

A total of six (6) gradation tests were performed on samples obtained during the field exploration program. Material passing the No. 200 sieve is considered “fines” and will be either silt or clay. The percent passing the No. 200 sieve, for the tested samples, ranged from 0.3 to 4.7 percent, this resulted in the sampled material to be considered poorly graded. A summary of the grain size distribution curve is presented in “Appendix H: Gradation Test Results”.

2.4.2 Soil Corrosiveness

This test method covers the laboratory determination for the minimum resistivity of a soil. The principal use of this test method is to determine a soil's corrosivity and thereby identify the conditions under which the corrosion of metals in soil may be sharply accentuated. Soil corrosiveness testing was completed on two (2) composite sample ranging from 0 – 5 feet BGS.



The soil samples obtained were considered non-marine structures and classified under the criteria for substructure environmental classifications. Composite Sample 1 is considered slightly aggressive for steel and moderately aggressive for concrete. Conversely, Composite Sample 2 is deemed to be slightly aggressive for both steel and concrete. The laboratory results for soil corrosiveness can be found in “Appendix I: Soil Corrosive Series Test Results”.

For design purposes we recommend using a classification of “Moderately Aggressive” for this project.

2.5 Geomorphic Conditions

Boring logs derived from our field exploration are presented in “Appendix D: Record of Hand Auger Boring Logs”. The boring logs depict the observed soils in graphic detail. The Standard Penetration Test borings indicate the penetration resistance, or N-values, logged during the drilling and sampling activities. The classifications and descriptions shown on the logs are generally based upon visual characterizations of the recovered soil samples. All soil samples reviewed have been depicted and classified in general accordance with the Unified Soil Classification System, modified as necessary to describe typical southwest Florida conditions. See “Appendix E: Discussion of Soil Groups”, for a detailed description of various soil groups.

The subsurface soil conditions encountered at this site generally consists of sand (SP) with shell fragments and traces of organics to the boring termination depths. Please refer to “Appendix D – Record of Hand Auger Boring Logs” for a detailed account of each boring.

2.6 Hydrogeological Conditions

During our field exploration program from December 26, 2017 to December 27, 2017, the groundwater table was encountered in our HA borings at depths of approximately 3.5 to 5 feet below the existing ground surface. The groundwater table will fluctuate depending upon tidal events.

Located in “Appendix F: Hydrologic Soils Map” is the following descriptive characteristic of the one (1) type of soil survey encountered during the drilling operations based on the soil survey of Lee County, Florida, published by the United States Department of Agriculture:

Canaveral-Urban Land Complex (4)

About 50 to 70 percent of each area of the complex consists of nearly level Canaveral soils or areas of Canaveral soils that have been reworked or reshaped, but which still are recognizable as Canaveral soils. Typically, Canaveral soils have a surface layer of light and dark gray fine sand that is mixed with shell fragments. Beneath the surface layer, to a depth of 80 inches or more, are layers of light brownish gray and light gray fine sand mixed with shell fragments.

About 20 to 30 percent of each area is urban land. This land is used for houses, streets, driveways, buildings, parking lots, and other related uses.

In undrained areas, the water table is at a depth of 18 to 40 inches for a period of 2 to 6 months in most years. Drainage systems have been established in most areas, however, and the depth to the water table is dependent on the drainage system.



2.6.1 Ex-filtration Testing

GFA International performed three field percolation (PERC) tests spaced at approximately 1,150-foot centers. The percolation testing was performed in accordance with the SFWMD Constant-Head Open-Hole Test Method. The results are presented below.

PERC Test – 1 (Sta. 1371+50)	
Depth (ft)	Soil Description
0 – 3	Gray Sand (A-3; SP)
3 – 5	Gray Sand (A-3; SP), Shell
Water table: 4.33 feet below grade.*	
Saturated K = 24.9 Ft.³/Day/ Ft.² – Ft. of Head	

*Water Table is Tidally Influenced.

PERC Test – 2 (Sta. 1391+00)	
Depth (ft)	Soil Description
0 – 1.5	Gray Sand (A-3; SP)
1.5 – 5	Light Gray Sand (A-3; SP), Shell
Water table: 4.0 feet below grade.*	
Saturated K = 29.1 Ft.³/Day/ Ft.² – Ft. of Head	

*Water Table is Tidally Influenced.

PERC Test – 3 (Sta. 1406+00)	
Depth (ft)	Soil Description
0 – 1.5	Gray Sand (A-3; SP)
1.5 – 5	Gray Sand (A-3; SP), with Silty Sand
Water table: 3.0 feet below grade.*	
Saturated K = 7.5 Ft.³/Day/ Ft.² – Ft. of Head	

*Water Table is Tidally Influenced.

The location of the exfiltration test completed is illustrated in "Appendix B: Test Location Plan".

3.0 ENGINEERING EVALUATION AND RECOMMENDATIONS

3.1 General

The geotechnical evaluations for the proposed construction site are based on the subsurface soil and groundwater conditions encountered during this study, the project information made available, our site observations, and our experience in the vicinity. The test data has been evaluated using established geotechnical parameters of the soils recorded at this site, laboratory test results, and the observed performance of similar soil types.

Based on the soil conditions encountered in the performed borings, the near surface soils do not meet the below mentioned Lee County Technical Specifications for drainage fill or select fill. The near surface soils do meet the below mentioned Lee County Technical Specifications for common fill. The water main replacement may be designed according to the recommendations and site preparations as discussed below with a fill material meeting the specifications.



3.2 Pipe Bedding and Initial Backfill (Force Main)

According to the Lee County Technical Specifications, Section 2223, Backfilling, a select fill material shall be used for pipe bedding and initial backfill from top of bedding to 1 foot over the top of pipes. The select fill shall be compacted to not less than 98 percent of the maximum dry density as determined by ASTM D-1557.

Pipe bedding containing very fine sand, uniformly graded sands and gravel, silt, soft earth, or other material that have a tendency to flow under pressure when wet is unacceptable.

Based on the laboratory test results the majority of the near surface soils consist of poorly graded clean sands to slightly silty sands. Material from on-site excavation does not meet the gradation specification for select fill and cannot be used for pipe bedding and initial backfill.

3.3 Pipe Bedding and Initial Backfill (Drainage System)

Pipe bedding and initial backfill shall be in accordance with Florida Department of Transportation (FDOT) for Road and Bridge Construction – Sections 120 & 125 (January 2017).

3.4 Trench Excavation

Where trench excavations are required, trenches shall be sufficiently wide and deep to allow proper installation of pipes. We recommend about 12 inches clear of the pipe on either side at any point. Boulders, rocks or other hard unyielding material shall be excavated to a depth of 12 inches below the bottom of the pipe elevation.

Due to the depth of excavations and the depth of the water table, we anticipate excavation will require shoring or a trench box. Trenching should be in general accordance with any Lee County trenching requirements and the Occupational Safety and Health Administration (OSHA) requirements, as applicable.

3.5 Trench Backfill

Trench backfill material shall be clean earth fill composed of sand, clay and sand, sand and stone, crushed stones or other soils approved by a professional engineer. The trench backfilling shall be accomplished from the top of the initial backfill to the ground surface. The backfill, unless otherwise specified, shall be compacted to 98% of maximum density, as determined by ASTM D-1557.

When trenches are cut in pavements or areas to be paved, compaction shall be in accordance with FDOT for Road and Bridge Construction (January 2017).

Based on the soil profiles, presented in “Appendix B: Boring Locations and Soil Profiles”, the material from on-site excavation that will contain sands and silt or gravel size limestone fragments may be used for the trench backfill. Organic soils, if encountered during construction, are not suitable and should not be used as a trench backfill material.



4.0 DEWATERING OF EXCAVATIONS

The high groundwater tables in the vicinity of excavations shall be reduced to prevent water inflow into excavations. Dewatering will be required for the excavation of trenches during construction. Each excavation shall be kept dry during subgrade preparation and continually thereafter until installation of the pipe or wet well structures. The dewatering will be required to maintain groundwater elevation at least 24 inches below the bottom at all times to prevent bottom disturbance or failure.

5.0 SITE PREPARATION PROCEDURES

Site preparation procedures should begin with the removal of existing debris, vegetation, or other unsuitable materials within and beyond the excavation construction.

The organic soils, if encountered during construction, shall be removed and replaced to a required level (the future project specification) with a compacted suitable fill. The suitable fill material shall contain less than 10 percent of fines passing the No. 200 sieve, not contain clay balls and rock fragments greater than 3 inches in diameter.

An adequate dewatering system shall be installed to maintain the water table 2 feet or more below the maximum depth of excavation. The continuous dewatering should be provided until the pipeline is completed and backfill is above the water table before beginning of the dewatering. When a professional engineer approves the discontinuing of the dewatering, the rate of pumping shall slowly decrease, allowing the water level to rise slowly.

The soils that extend below the water table should be allowed to dry prior to placement as a backfill material and compaction. This can be accomplished by stockpiling the material and allowing it to drain, or by spreading it in relatively thin lifts on the surface and allowing it to dry prior to compaction. The silty or sands with clay may require moisture conditioning so that the soil moisture content at the time of compaction is at or near the optimum moisture content.

Trench bottoms should be compacted with a small roller or vibratory plate compactor prior to pipe placement. Any loose or soft yielding areas detected during compaction of the trench bottoms should either be further compacted to at least 95% of maximum dry density or removed and replaced with a select fill and compacted to 95% of maximum dry density. Bedding stone may be used in lieu of select fill.

During the compaction operation, a geotechnical engineer or an engineering technician working under his direction should observe the soils to verify that the exposed soils are suitable and that unsuitable soils have been removed. Samples of the backfill materials should be obtained to determine the grain size distribution, its maximum dry density and optimum moisture content in the laboratory in accordance with ASTM D-1557 (Modified Proctor Test).



6.0 ASPHALT EVALUATION

6.1 Asphalt Thickness

Six (6) asphalt cores were taken at alternating lanes (southbound or northbound) along Estero Boulevard in Fort Myers Beach starting just north of Bay Beach Lane (Sta. 1356+00) and finishing just north of Big Carlos Pass (1413+76.38). The location of each individual asphalt core can be found in “Appendix B: Test Location Plan”.

GFA International encountered an average asphalt thickness of 9-1/16 inches with a range of four (4) to seven (7) lifts per asphalt core. A stratum was initiated from top of existing asphalt (Lift 1) down to the bottom of asphalt (ex.: Lift 7). A summary of the test results are shown in “Appendix J: Asphalt Thickness by Core Determination”. Refer to “Appendix M: Asphalt Core Photographs” for a visual record of each asphalt core.

Beneath the asphalt, a layer of cemented shell base was encountered. This material consists of sand and shell fragments with an average thickness of 26-2/3 inches.

6.2 Limerock Bearing Ratio (LBR) Testing

A total of six (6) samples were obtained within approximately 5 feet of the edge of pavement to conduct Limerock Bearing Ratio (LBR) tests on the existing subgrade soils, using the Florida Method FM 5-515. Based on the laboratory test results, we recommend a structural coefficient for Type B Stabilized subbase, LBR 40 material (0.08). For complete test results, refer to “Appendix L – Limerock Bearing Ratio (LBR) Results”. It is our understanding that the existing base material will be removed during utility construction. As such, no LBR samples were collected from the base material.

6.3 Asphalt Bulk Specific Gravity Testing

A total of six (6) asphalt core samples were tested using American Association of State Highway and Transportation (AASHTO) T-166 “Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens”. The top 4-inches of asphalt were tested as a composite sample per each asphalt core. The asphalt density ranged from 132.3 to 133.8 pounds per cubic foot (PCF) which averaged in 133.1 PCF.

For complete test results, refer to “Appendix K – Asphalt Bulk Specific Gravity”.



7.0 REPORT LIMITATIONS

This consulting report has been prepared for the exclusive use of the current project owners and other members of the design team for the Estero Boulevard – Segment 6 located on Estero Boulevard in Fort Myers Beach, Lee County, Florida. This report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied. The evaluation submitted in this report, is based in part upon the data collected during a field exploration, however, the nature and extent of variations throughout the subsurface profile may not become evident until the time of construction. If variations then appear evident, it may be necessary to reevaluate information and professional opinions as provided in this report. In the event changes are made in the nature, design, or locations of the proposed structure, the evaluation and opinions contained in this report shall not be considered valid, unless the changes are reviewed and conclusions modified or verified in writing by GFA International. GFA is not responsible for damage caused by soil improvement and/or construction activity vibrations related to this project. GFA is also not responsible for damage concerning drainage or moisture related issues for the proposed or nearby structures.

8.0 BASIS FOR RECOMMENDATIONS

The analysis and recommendations submitted in this report are based on the data obtained from the tests performed at the locations indicated on the attached figure in “Appendix B: Test Location Plan”. This report does not reflect any variations, which may occur between borings. While the borings are representative of the subsurface conditions at their respective locations and for their vertical reaches, local variations characteristic of the subsurface soils of the region are anticipated and may be encountered. The delineation between soil types shown on the soil logs is approximate and the description represents our interpretation of the subsurface conditions at the designated boring locations on the particular date drilled.

Any third party reliance of our geotechnical report or parts thereof is strictly prohibited without the expressed written consent of GFA International. The methodology (ASTM D-1586) used in performing our borings and for determining penetration resistance is specific to the sampling tools utilized and does not reflect the ease or difficulty to advance other tools or materials.



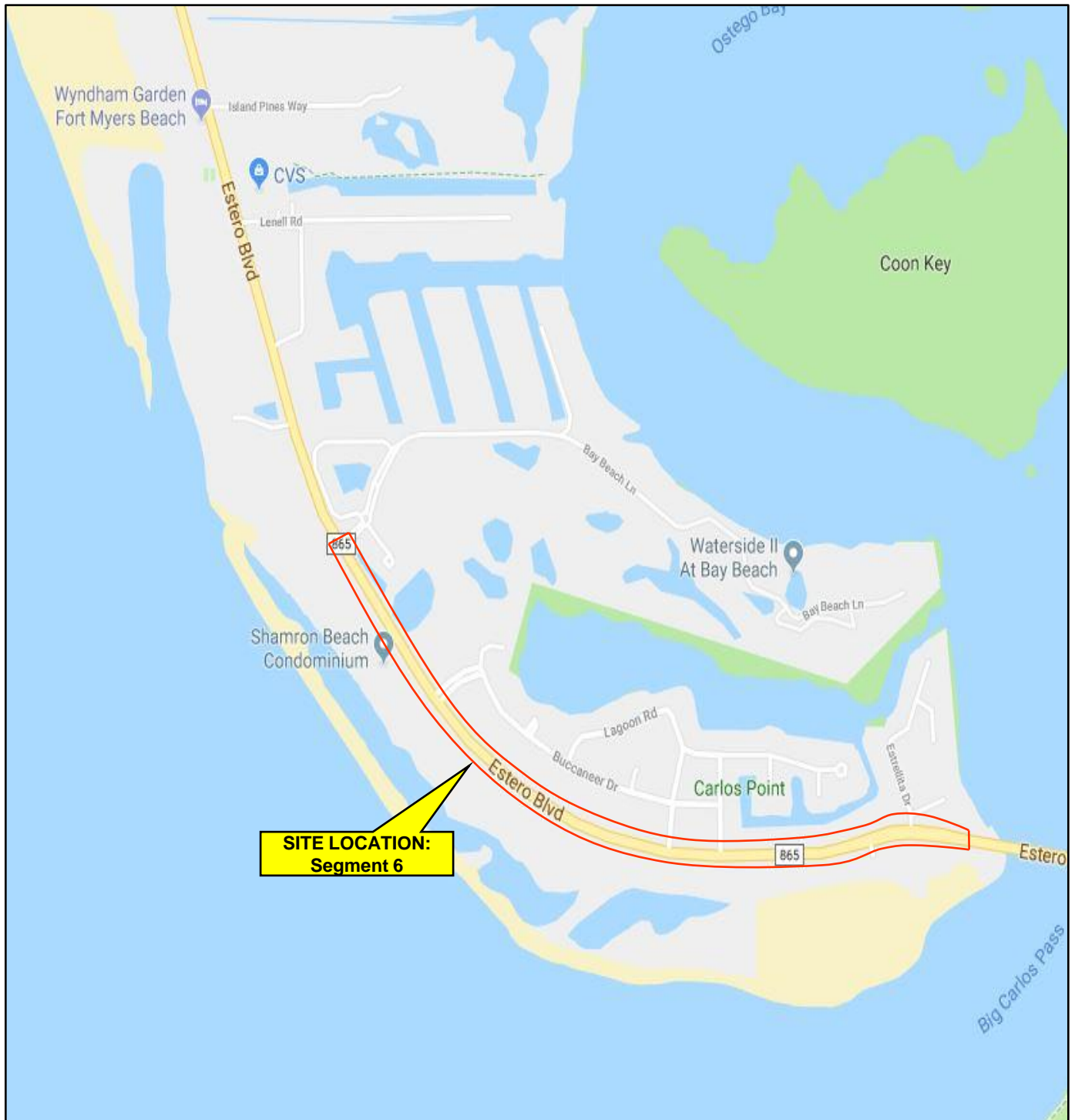
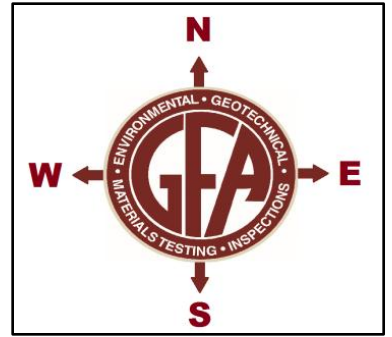
Appendix A - Vicinity Map





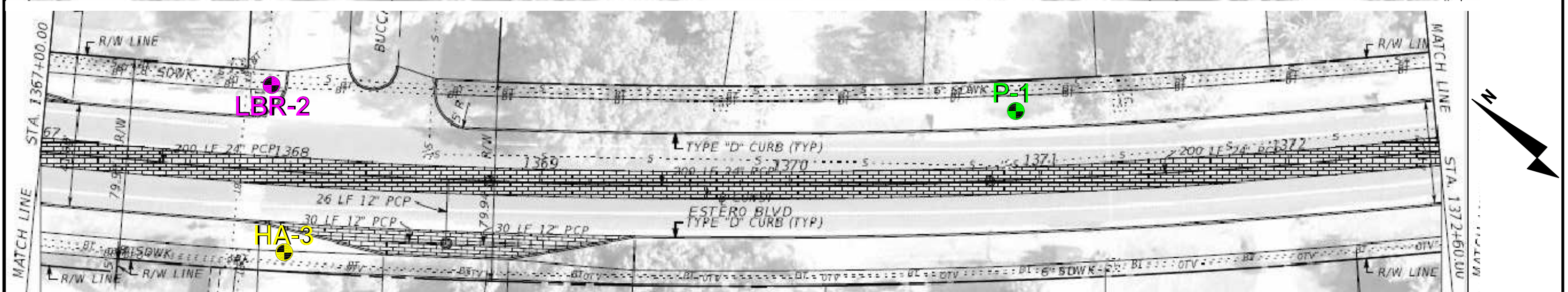
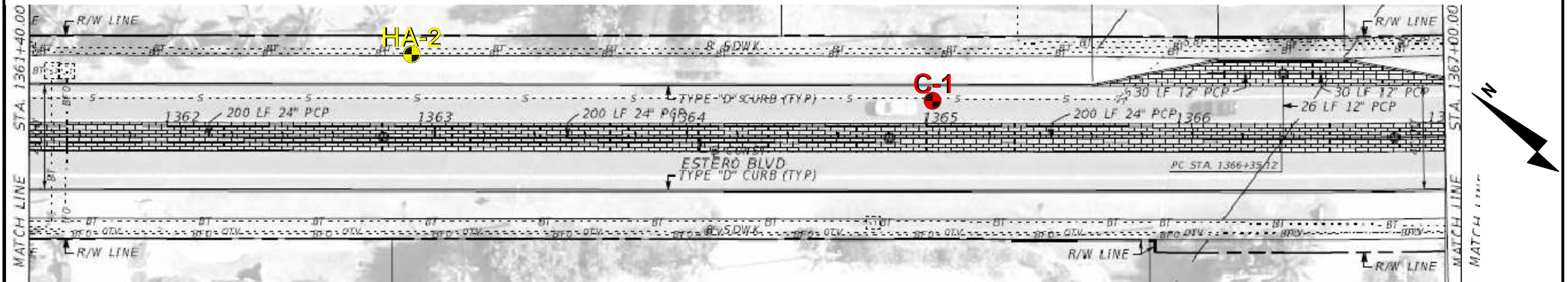
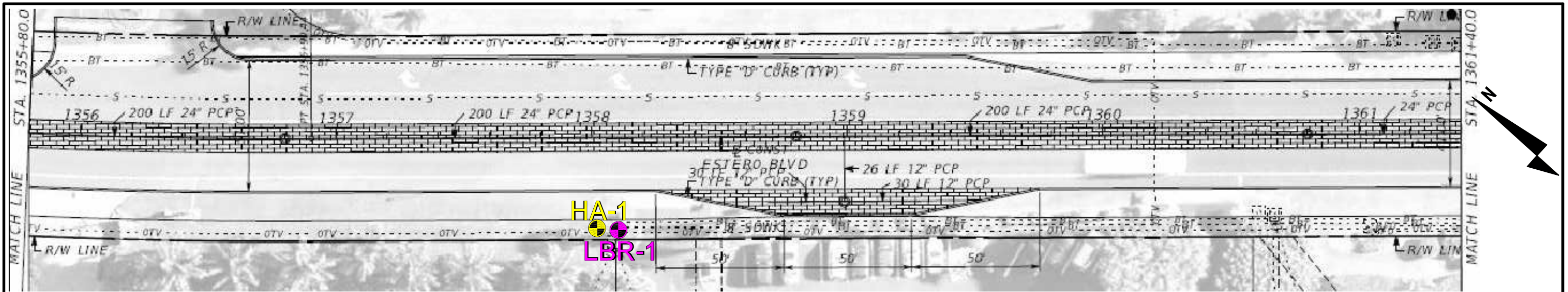
VICINITY MAP

Estero Boulevard – Segment 6
Fort Myers Beach, Lee County, Florida
GFA International Project No.: 16-1668



Appendix B – Test Location Plan





- NOTES:
- HAND AUGER LOCATION
 - ASPHALT CORE LOCATION
 - PERCOLATION TEST LOCATION
 - LBR TEST LOCATION

BASE DRAWING PROVIDED BY CLIENT

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

GFA INTERNATIONAL, INC.
5851 COUNTRY LAKES DRIVE
FORT MYERS, FLORIDA 33905

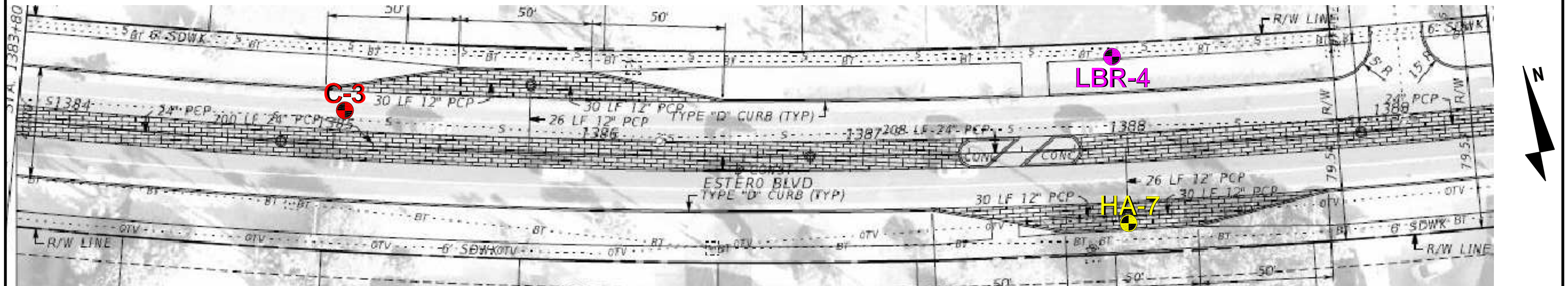
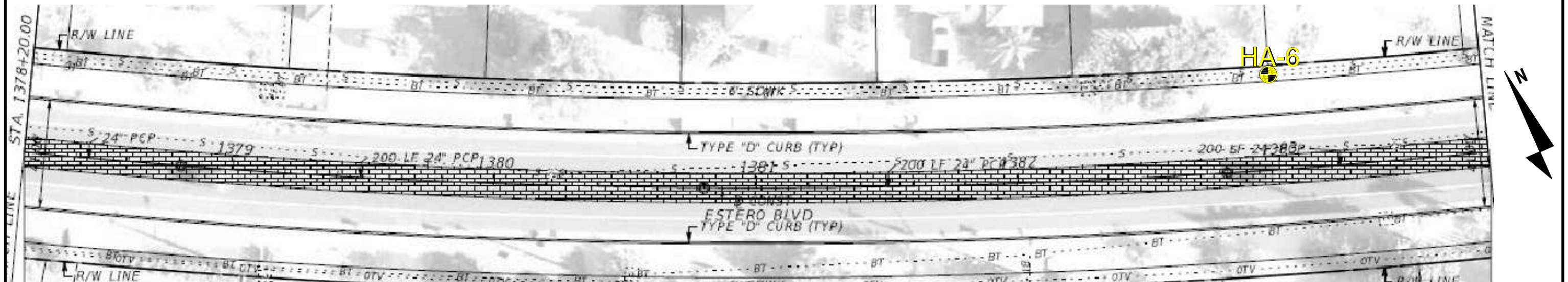
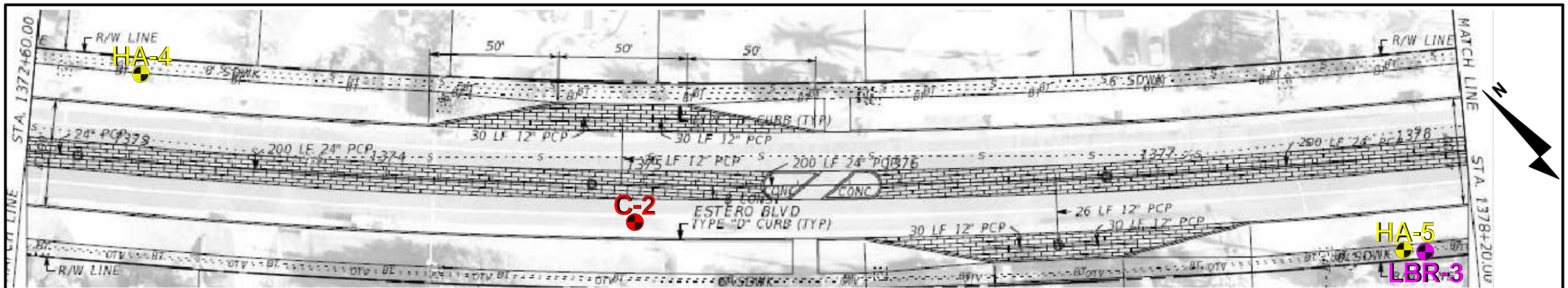
PAUL J. D'HUYVETTER, P.E. #59716

LEE COUNTY DEPARTMENT OF PUBLIC WORKS

ROAD NAME	COUNTY NAME	PROJECT ID
ESTERO BOULEVARD	LEE	16-1668

TEST LOCATION PLAN
ESTERO BLVD. UTILITY IMPROVEMENTS
SEGMENT 6 - Bay Beach Ln. to Big Carlos Pass
FORT MYERS BEACH, LEE COUNTY, FLORIDA

DRAWN BY:
CAC



- NOTES:
- HAND AUGER LOCATION
 - ASPHALT CORE LOCATION
 - PERCOLATION TEST LOCATION
 - LBR TEST LOCATION

BASE DRAWING PROVIDED BY CLIENT



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FORT MYERS, FLORIDA 33905

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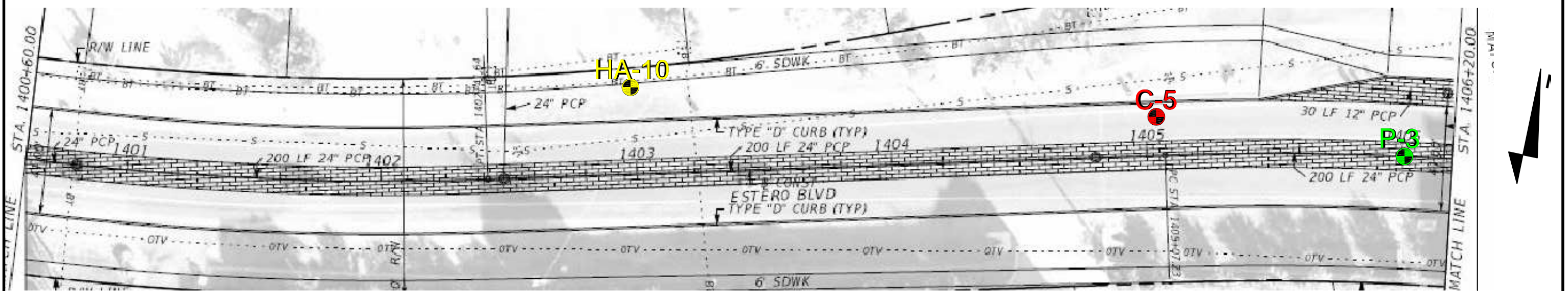
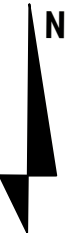
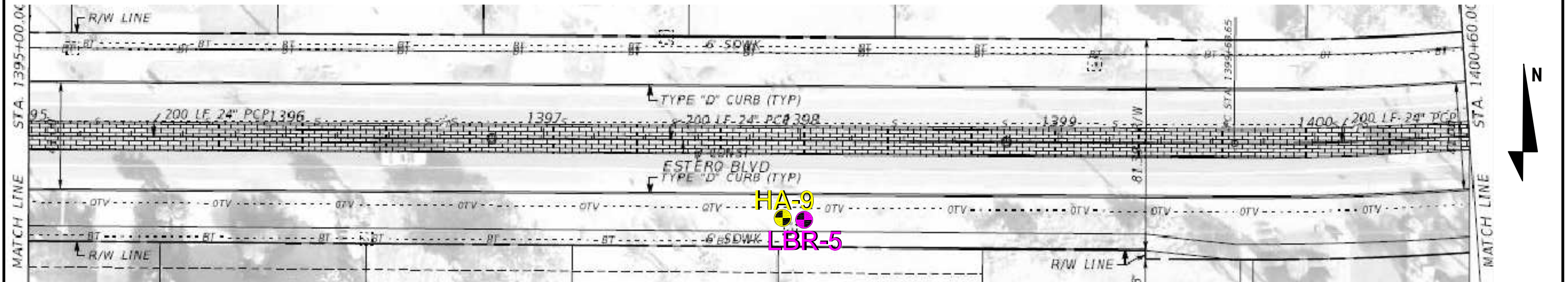
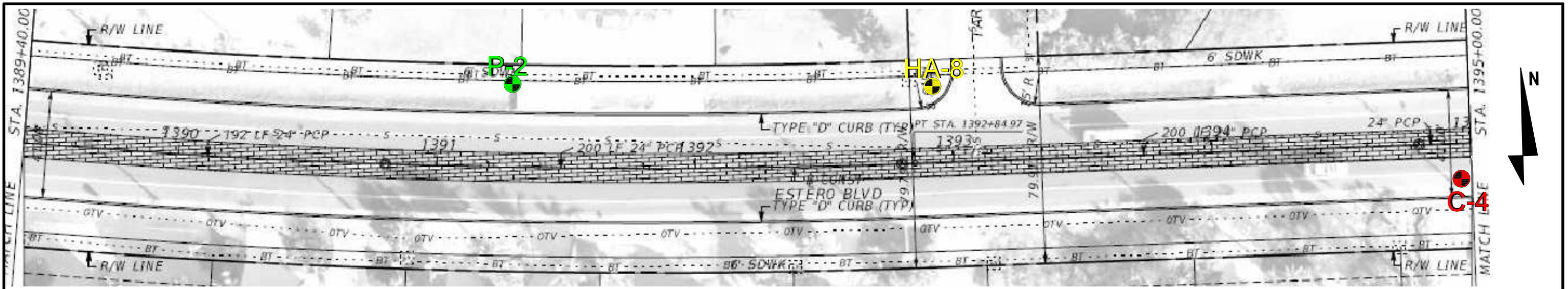
LEE COUNTY DEPARTMENT OF PUBLIC WORKS

ROAD NAME	COUNTY NAME	PROJECT ID
ESTERO BOULEVARD	LEE	16-1668

TEST LOCATION PLAN
ESTERO BLVD. UTILITY IMPROVEMENTS
SEGMENT 6 - Bay Beach Ln. to Big Carlos Pass
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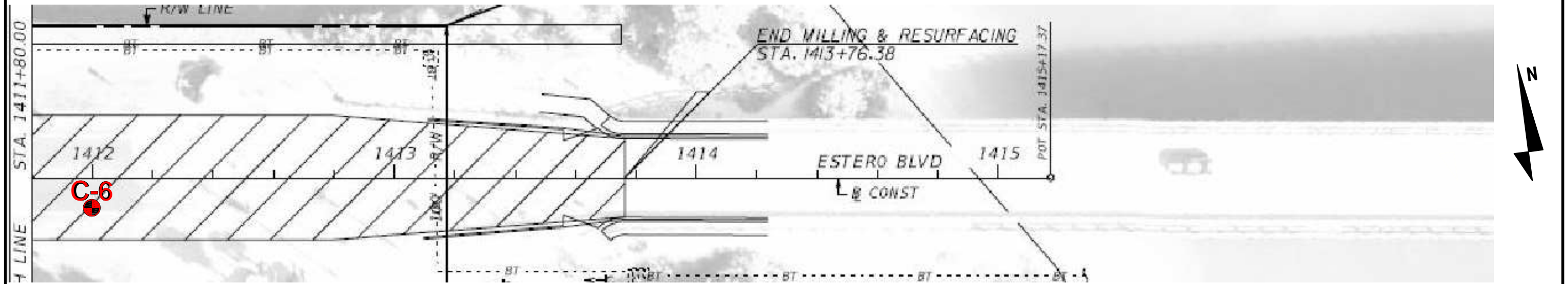
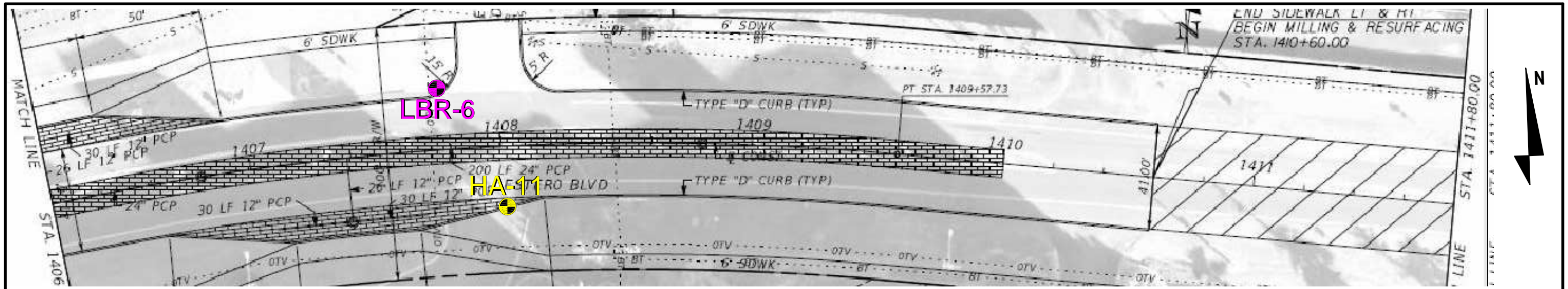
ROAD NAME	COUNTY NAME	PROJECT ID
ESTERO BOULEVARD	LEE	16-1668

TEST LOCATION PLAN
ESTERO BLVD. UTILITY IMPROVEMENTS
SEGMENT 6 - Bay Beach Ln. to Big Carlos Pass
FORT MYERS BEACH, LEE COUNTY, FLORIDA

DRAWN BY:

CAC

		REVISIONS			
DATE	BY	DATE	BY	DESCRIPTION	DESCRIPTION



- NOTES:
- HAND AUGER LOCATION
 - ASPHALT CORE LOCATION
 - PERCOLATION TEST LOCATION
 - LBR TEST LOCATION

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LEE COUNTY DEPARTMENT OF PUBLIC WORKS		
ROAD NAME	COUNTY NAME	PROJECT ID
ESTERO BOULEVARD	LEE	16-1668

TEST LOCATION PLAN
ESTERO BLVD. UTILITY IMPROVEMENTS
SEGMENT 6 - Bay Beach Ln. to Big Carlos Pass
FORT MYERS BEACH, LEE COUNTY, FLORIDA

DRAWN BY:
CAC

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Appendix C - Notes Related to Borings



**NOTES RELATED TO
RECORDS OF TEST BORING AND
GENERALIZED SUBSURFACE PROFILE**

1. Groundwater level was encountered and recorded (if shown) following the completion of the soil test boring on the date indicated. Fluctuations in groundwater levels are common; consult report text for a discussion.
2. The boring location was identified and located in the field based on measured and estimated distances from existing site features.
3. The borehole was backfilled to site grade following boring completion, patched with asphalt cold patch mix when pavement was encountered.
4. The Record of Test Boring represents our interpretation of field conditions based on engineering examination of the soil samples.
5. The Record of Test Boring is subject to the limitations, conclusions, and recommendations presented in the report text.
6. The Standard Penetration Test (SPT) was performed in accordance ASTM Procedure D-1586. SPT testing procedure consists of driving a 1.4-inch I.D. split-tube sampler into the soil profile using a 140-pound hammer falling 30 inches.
7. On the Record of Test Boring listed as "Blow Counts", the N-value is the sum of the SPT hammer blows required to drive the split-tube sampler through the second and third 6-inch increment of the sampling layer, and is an indication of soil strength.
8. Shown on the Record of Test Boring an SPT N-value expressed as 50/2" is descriptive of the fact that 50 hammer blows were required to drive the split-spoon sampler a distance of approximately 2 inches.
9. The soil/rock strata interfaces shown on the Records of Test Boring are approximate and may vary from those in the field. The soil/rock conditions shown on the Records of Test Boring refer to conditions at the specific location tested; soil/rock conditions may vary between test locations.

10. Relative density and consistency for sands/gravels, silts/clays, and limestone are described as follows:

Cohesionless Soils	
SPT (N-Value)	Relative Density
0 – 3	Very Loose
4 – 8	Loose
9 – 24	Medium Dense
25 – 40	Dense
Over 40	Very Dense

Silts and Clays	
SPT (N-Value)	Consistency
0 – 1	Very Soft
2 – 4	Soft
4 – 6	Firm
7 – 12	Stiff
13 – 24	Very Stiff
Over 24	Hard

Limestone	
SPT (N-Value)	Relative Density
0 – 19	Very Soft
20 – 49	Soft
50 – 100	Medium Hard
50 for 3 to 5"	Moderately Hard
50 for 0 to 2"	Hard

11. Definition of descriptive terms of modifiers for silts/clays/shells/gravels are described as follows:

Percentage of Modifier Material	First Qualifier	Second Qualifier
0 – 5	With a Trace of + Modifier	With a Trace
5 – 12	Slightly + Modifier + y	With Some
12 – 30	Modifier + y	With
30 – 50	Very + Modifier + y	And

12. Descriptive characteristics for organic content percentages are described as follows:

Percentage of Organic Material	Descriptor
0 – 5	With a Trace
5 – 20	With Organics
20 – 75	Highly Organic
75 – 100	Peat



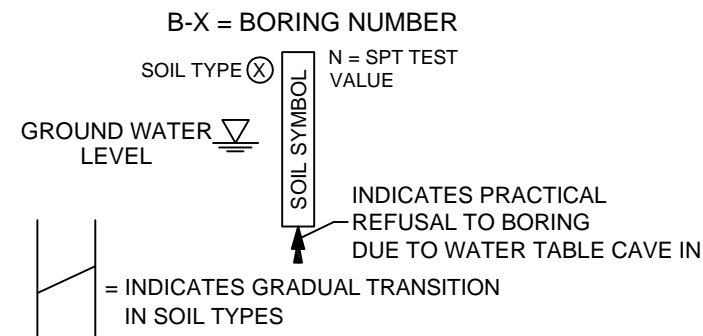
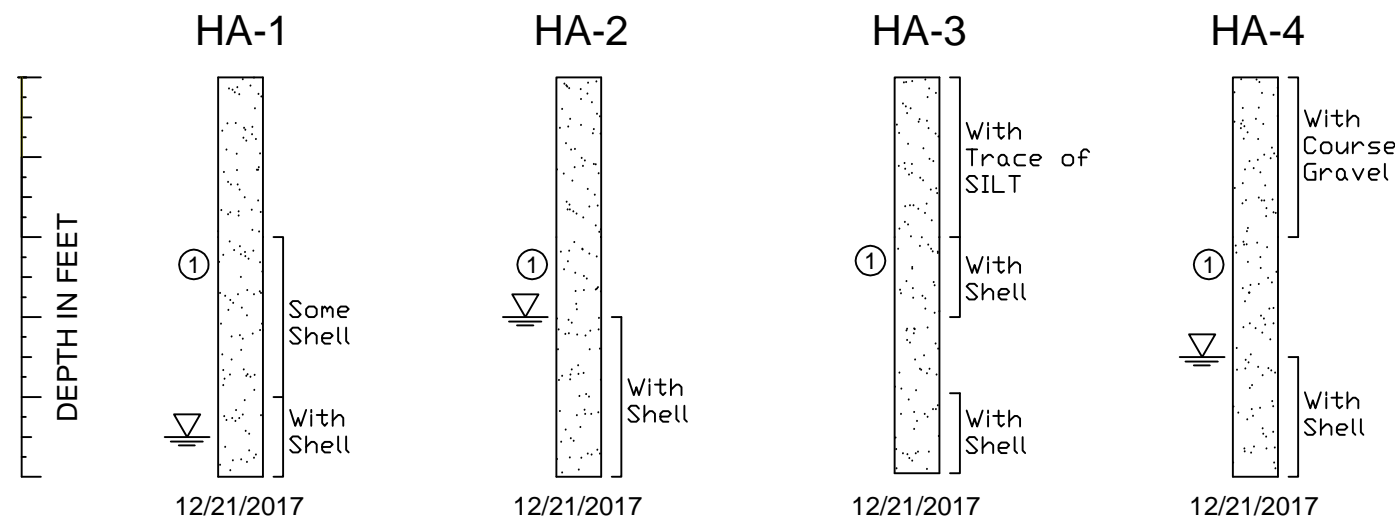
Appendix D – Record of Hand Auger Boring Logs



SOIL PROFILES

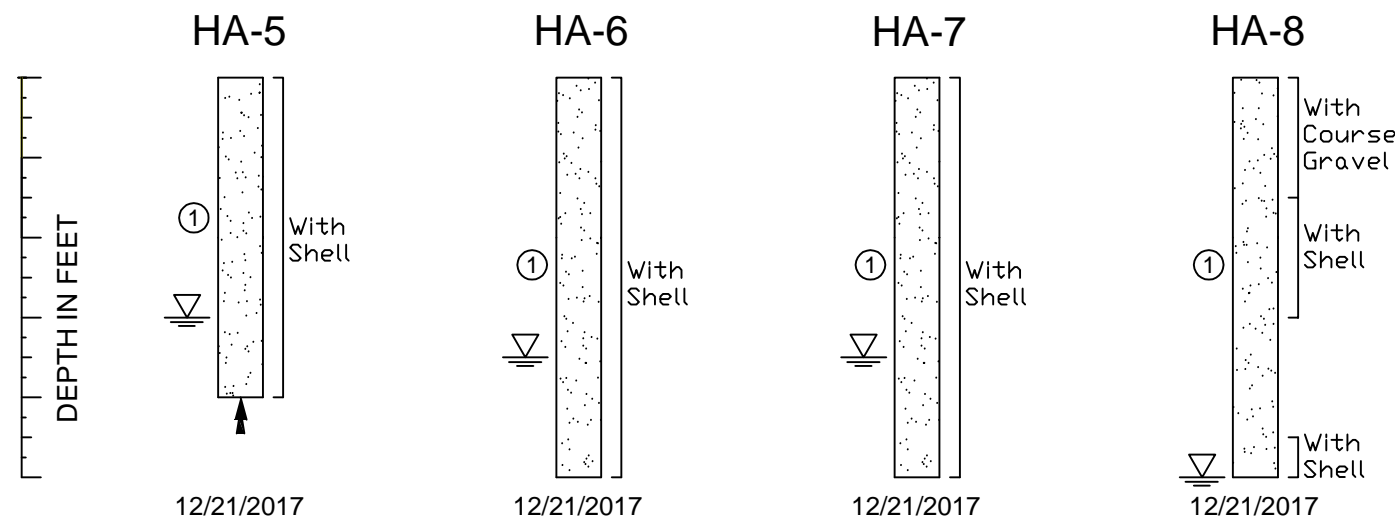
SOIL PROFILE LEGEND

SOIL LEGEND



① Gray, Dark Gray, Light Gray, Brown, Light Brown, Loose to Dense SAND (A-3; SP)

NOTES:
 N - STANDARD PENETRATION RESISTANCE TEST (SPT) VALUE. NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12-INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
 HA - HAND AUGER



SOIL CLASSIFICATION

CORRELATION OF N - VALUES WITH RELATIVE DENSITY AND CONSISTENCY

COHESIONLESS SOIL		SILTS AND CLAYS	
N - VALUE	RELATIVE DENSITY	N - VALUE	CONSISTENCY
0 - 3	VERY LOOSE	0 - 1	VERY SOFT
4 - 8	LOOSE	2 - 4	SOFT
9 - 24	MEDIUM DENSE	5 - 6	FIRM
25 - 40	DENSE	7 - 12	STIFF
OVER 40	VERY DENSE	13 - 24	VERY STIFF
		OVER 24	HARD

CORRELATION OF N - VALUES WITH HARDNESS DESCRIPTION

LIMEROCK	
N - VALUE	RELATIVE DENSITY
0 - 19	VERY SOFT
20 - 49	SOFT
50 - 100	MEDIUM HARD
50 FOR 3 TO 5"	MODERATELY HARD
50 FOR 0 TO 2"	HARD

APPROXIMATE FINES CONTENT		APPROXIMATE SHELL CONTENT		APPROXIMATE ORGANIC CONTENT	
MODIFIERS		MODIFIERS		MODIFIERS	
5% TO 15%	SLIGHTLY SILTY OR SLIGHTLY CLAYEY	0% TO 5%	WITH A TRACE OF SHELL	0% TO 5%	WITH A TRACE
16% TO 25%	SILTY OR CLAYEY	6% TO 12%	SLIGHTLY SHELLY	5% TO 20%	WITH ORGANICS
26% TO 49%	VERY SILTY OR VERY CLAYEY	13% TO 30%	SHELLY	20% TO 75%	HIGHLY ORGANIC
		31% TO 50%	VERY SHELLY	75% TO 100%	PEAT

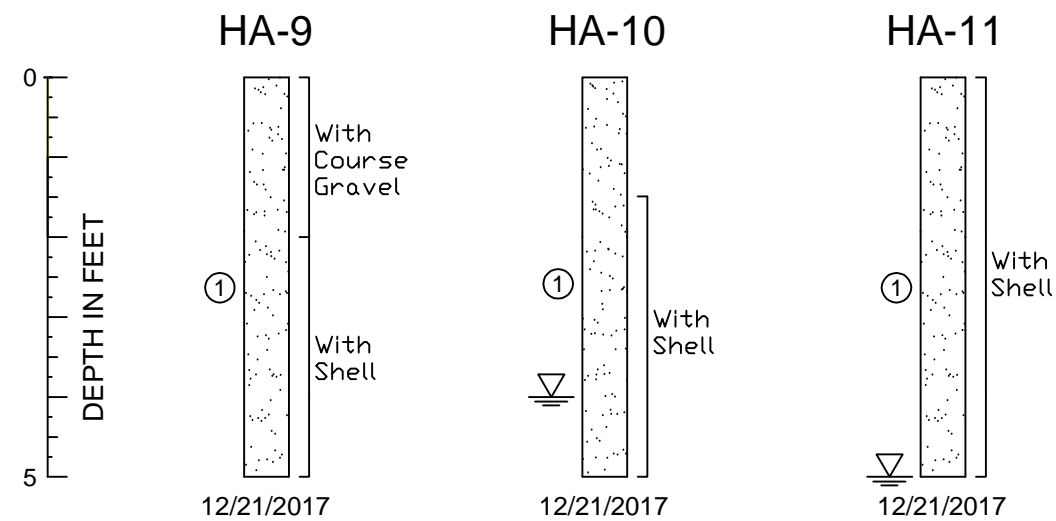
DEFINITION OF DESCRIPTIVE TERMS OF MODIFIERS FOR SILTS/CLAYS/SHELLS/GRAVELS ARE DESCRIBED AS FOLLOWS:

PERCENTAGE OF MODIFIER MATERIAL	FIRST QUALIFIER	SECOND QUALIFIER
0 - 5	WITH A TRACE OF + MODIFIER	WITH A TRACE
5 - 12	SLIGHTLY + MODIFIER + Y	WITH SOME
12 - 30	MODIFIER + Y	WITH
30 - 50	VERY + MODIFIER + Y	AND

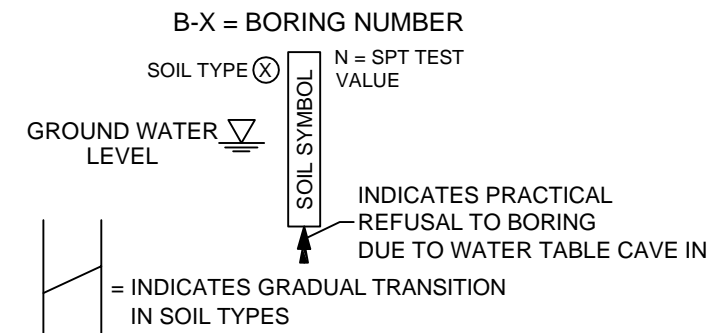
RECORD OF HAND AUGER BORINGS

	GFA International, Inc. 5851 Country Lakes Drive Fort Myers, Florida 33905 239-489-2443 * TeamGFA.com	Client: David Douglas Associates, Inc. Project: Estero Boulevard Utility Improvements Segment 6 Fort Myers Beach, Lee County, Florida	Date: 1/09/2018 Job No: 16-1668 Drawn By: CAC Approved by: PJD
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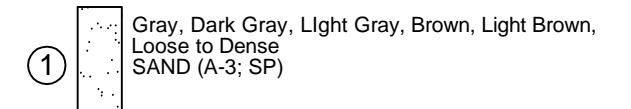
SOIL PROFILES



SOIL PROFILE LEGEND



SOIL LEGEND



NOTES:

N - STANDARD PENETRATION RESISTANCE TEST (SPT) VALUE. NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12-INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).

E.O.P. - EAST OF PAVEMENT EDGE

W.O.P. - WEST OF PAVEMENT EDGE

HA - HAND AUGER

SOIL CLASSIFICATION

CORRELATION OF N - VALUES WITH RELATIVE DENSITY AND CONSISTENCY

COHESIONLESS SOIL		SILTS AND CLAYS	
N - VALUE	RELATIVE DENSITY	N - VALUE	CONSISTENCY
0 - 3	VERY LOOSE	0 - 1	VERY SOFT
4 - 8	LOOSE	2 - 4	SOFT
9 - 24	MEDIUM DENSE	5 - 6	FIRM
25 - 40	DENSE	7 - 12	STIFF
OVER 40	VERY DENSE	13 - 24	VERY STIFF
		OVER 24	HARD

CORRELATION OF N - VALUES WITH HARDNESS DESCRIPTION

LIMEROCK	
N - VALUE	RELATIVE DENSITY
0 - 19	VERY SOFT
20 - 49	SOFT
50 - 100	MEDIUM HARD
50 FOR 3 TO 5"	MODERATELY HARD
50 FOR 0 TO 2"	HARD

APPROXIMATE

FINES CONTENT	MODIFIERS
5% TO 15%	SLIGHTLY SILTY OR SLIGHTLY CLAYEY
16% TO 25%	SILTY OR CLAYEY
26% TO 49%	VERY SILTY OR VERY CLAYEY

APPROXIMATE

SHELL CONTENT	MODIFIERS
0% TO 5%	WITH A TRACE OF SHELL
6% TO 12%	SLIGHTLY SHELLY
13% TO 30%	SHELLY
31% TO 50%	VERY SHELLY

APPROXIMATE

ORGANIC CONTENT	MODIFIERS
0% TO 5%	WITH A TRACE
5% TO 20%	WITH ORGANICS
20% TO 75%	HIGHLY ORGANIC
75% TO 100%	PEAT

DEFINITION OF DESCRIPTIVE TERMS OF MODIFIERS FOR SILTS/CLAYS/SHELLS/GRAVELS ARE DESCRIBED AS FOLLOWS:

PERCENTAGE OF MODIFIER MATERIAL

0 - 5
5 - 12
12 - 30
30 - 50

FIRST QUALIFIER

WITH A TRACE OF + MODIFIER
SLIGHTLY + MODIFIER + Y
MODIFIER + Y
VERY + MODIFIER + Y

SECOND QUALIFIER

WITH A TRACE
WITH SOME
WITH
AND

RECORD OF HAND AUGER BORINGS



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 5851 Country Lakes Drive
 Fort Myers, Florida 33905
 239-489-2443 * TeamGFA.com

Client: David Douglas Associates, Inc.
 Project:
 Estero Boulevard Utility Improvements
 Segment 6
 Fort Myers Beach, Lee County, Florida

Date: 1/09/2018
 Job No: 16-1668
 Drawn By: CAC
 Approved by: PJD

Appendix E – Discussion of Soil Groups



DISCUSSION OF SOIL GROUPS: AASHTO CLASSIFICATION

COARSE GRAINED SOILS

- **Group A-1:** The typical material of this group is a well-graded mixture of stone fragments or gravel, coarse sand, fine sand, and a nonplastic or feebly-plastic soil binder. However, this group also includes stone fragments, gravel, coarse sand, volcanic cinders, etc., without a soil binder.
 - **Subgroup A-1-a:** Includes those materials consisting predominantly of stone fragments or gravel, either with or without a well-graded binder of fine material.
 - **Subgroup A-1-b:** Includes those materials consisting predominantly of coarse sand, either with or without a well-graded soil binder.

- **Group A-3:** The typical material of this group is fine beach sand or fine desert-blow sand without silty or clay fines, or with a very small amount of nonplastic silt. This group also includes stream-deposited mixtures of poorly-graded fine sand and limited amounts of coarse sand and gravel.

- **Group A-2:** This group includes a wide variety of “granular” materials which are borderline between the materials falling in Groups A-1 and A-3, and the silt-clay materials of Groups A-4, A-5, A-6, and A-7. It includes all materials containing 35% or less passing a No. 200 (75- μ m) sieve which cannot be classified in Groups A-1 or A-3, due to the fines content or the plasticity indexes, or both, in excess of the limitations for those groups.
 - **Subgroups A-2-4 and A-2-5:** Include various granular materials containing 35% or less passing a No. 200 (75- μ m) sieve and with a minus No. 40 (425- μ m) portion having the characteristics of Groups A-4 and A-5, respectively. These groups include such materials as gravel and coarse sand with silt contents or plasticity indexes in excess of the limitations of Group A-1 and fine sand with nonplastic-silt content in excess of the limitations of Group A-3.
 - **Subgroups A-2-6 and A-2-7:** Include materials similar to those described under Subgroups A-2-4 and A-2-5, except that the fine portion contains plastic clay having the characteristics of the A-6 or A-7 group, respectively.



FINE GRAINED SOILS

- **Group A-4:** The typical material of this group is a nonplastic or moderately plastic silty soil usually having 75% or more passing a No. 200 (75- μ m) sieve. This group also includes mixtures of fine silty soil and up to 64% of sand and gravel retained on a No. 200 sieve.
- **Group A-5:** The typical material of this group is similar to that described under Group A-4, except that it is usually of diatomaceous or micaceous character and may be highly elastic as indicated by the high liquid limit.
- **Group A-6:** The typical material of this group is a plastic clay soil usually having 75% or more passing a No. 200 (75- μ m) sieve. This group also includes mixtures of fine clayey soil and up to 64% of sand and gravel retained on a No. 200 sieve. Materials of this group usually have a high volume change between wet and dry states.
- **Group A-7:** The typical material of this group is similar to that described under Group A-6, except that it has the high liquid limits characteristic of Group A-5 and may be elastic as well as subject to high-volume change.
 - **Subgroup A-7-5:** Includes those materials with moderate plasticity indexes in relation to the liquid limit and which may be highly elastic as well as subject to considerable volume change.
 - **Subgroup A-7-6:** Includes those materials with high plasticity indexes in relation to liquid limit and which are subject to extremely high volume change.

HIGHLY ORGANIC SOILS

- **Group A-8:** Highly organic soils (peat or muck) may be classified in this group. Classification of these materials is based on visual inspection and is not dependent on the percentage passing the No. 200 (75- μ m) sieve liquid limit, or plasticity index. The material is composed primarily of partially decayed organic matter, generally has a fibrous texture, a dark brown or black color, and an odor of decay. These organic materials are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.



DISCUSSION OF SOIL GROUPS

COARSE GRAINED SOILS

GW and SW GROUPS. These groups comprise well-graded gravelly and sandy soils having little or no plastic fines (less than 5 percent passing the No. 200 sieve). The presence of the fines must not noticeably change the strength characteristics of the coarse-grained fraction and must not interface with its free-draining characteristics.

GP and SP GROUPS. Poorly graded gravels and sands containing little or no plastic fines (less than 5 percent passing the No. 200 sieve) are classed in GP and SP groups. The materials may be called uniform gravels, uniform sands or non-uniform mixtures of very coarse material and very fine sands, with intermediate sizes lacking (sometimes called skip-graded, gap-graded or step-graded). This last group often results from borrow pit excavation in which gravel and sand layers are mixed.

GM and SM GROUPS. In general, the GM and SM groups comprise gravels or sands with fines (more than 12 percent passing the No. 200 sieve) having low or no plasticity. The plasticity index and liquid limit of soils in the group should plot below the "A" line on the plasticity chart. The gradation of the material is not considered significant and both well and poorly graded materials are included.

GC and SC GROUPS. In general, the GC and SC groups comprise gravelly or sandy soils with fines (more than 12 percent passing the No. 200 sieve), which have a fairly high plasticity. The liquid limit and plasticity index should plot above the "A" line on the plasticity chart.

FINE GRAINED SOILS

ML and MH GROUPS. In these groups, the symbol M has been used to designate predominantly silty material. The symbols L and H represent low and high liquid limits, respectively, and an arbitrary dividing line between the two is set at a liquid limit of 50. The soils in the ML and MH groups are sandy silts, clayey silts or inorganic silts with relatively low plasticity. Also included are loess type soils and rock flours.

CL and CH GROUPS. In these groups the symbol C stands for clay, with L and H denoting low or high liquid limits, with the dividing line again set at a liquid limit of 50. The soils are primarily inorganic clays. Low plasticity clays are classified as CL and are usually lean clays, sandy clays or silty clays. The medium and high plasticity clays are classified as CH. These include the fat clays, gumbo clays and some volcanic clays.



OL and OH GROUPS. The soil in the OL and OH groups are characterized by the presence of organic odor or color, hence the symbol O. Organic silts and clays are classified in these groups. The materials have a plasticity range that corresponds with the ML and MH groups.

HIGHLY ORGANIC SOILS

The highly organic soils are usually very soft and compressible and have undesirable construction characteristics. Particles of leaves, grasses, branches, or other fibrous vegetable matter are common components of these soils. They are not subdivided and are classified into one group with the symbol PT. Peat humus and swamp soils with a highly organic texture are typical soils of the group.



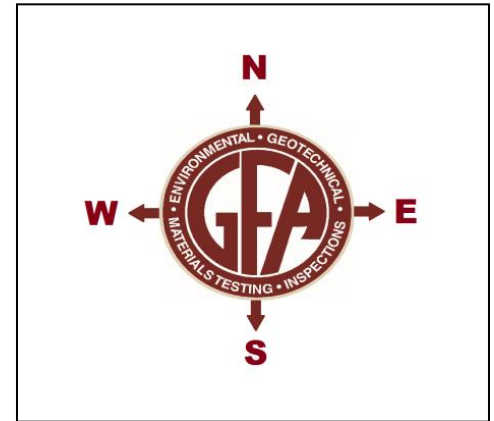
Appendix F – Hydrologic Soils Map





Hydrologic Soils map

Estero Boulevard – Segment 6
Fort Myers Beach, Lee County, Florida
GFA International Project No.: 16-1668



*Map Not To Scale
Map Unit: 4 - Canaveral-Urban Land Complex

Appendix G – Roadway Soil Survey



LEE COUNTY
DEPARTMENT OF PUBLIC WORKS
ESTERO BOULEVARD: SEGMENT 6

DATE OF SURVEY : December 21-22, 2017
SURVEY MADE BY : GFA INTERNATIONAL, INC.
SUBMITTED BY : PAUL J. D'HUYVETTER, P.E.

ROAD NAME : ESTERO BOULEVARD
CITY: FORT MYERS BEACH
COUNTY : LEE

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS
SURVEY BEGINS: STA. 1356+00 SURVEY ENDS: STA. 1413+76.38

STRATUM NO.	ORGANIC CONTENT			SIEVE ANALYSIS RESULTS % PASS						ATTERBERG LIMITS (%)			DESCRIPTION	CORROSION SERIES TEST RESULTS					
	NO. OF TESTS	% ORGANIC	% MOISTURE CONTENT	NO. OF TESTS	4 MESH	10 MESH	40 MESH	100 MESH	200 MESH	NO. OF TESTS	LIQUID LIMIT	PLASTIC INDEX		AASHTO GROUP	NO. OF TESTS	RESISTIVITY ohms-cm	CHLORIDE ppm	SULFATES ppm	pH
1	-	-	-	6	91-98.0	87-93	61-86	10-31	0.3-4.7	-	-	-	A-3	White, Gray, Brown to Tan, SAND (SP) with Shell Fragments, Traces of Silt and Traces of Organics	2*	3,234-6,890	30-75	0-18	8.28-8.58


*Corrosion Series Test ran on two (2) composite sample obtained from hand auger borings during GFA's field exploration program.

NOTES:

EMBANKMENT AND SUBGRADE MATERIAL
STRATA BOUNDARIES ARE APPROXIMATE

Ground water was encountered at depths of about 3 to 5 feet at boring locations at the time of our drilling.

The material from Stratum Number 1 appears satisfactory for use in the embankment when utilized in accordance with Index 505, except where organics were encountered.

REVISIONS						 GFA INTERNATIONAL, INC. 5851 COUNTRY LAKES DRIVE FORT MYERS, FLORIDA 33905 PAUL J. D'HUYVETTER P.E. #59716	LEE COUNTY DEPARTMENT OF TRANSPORTATION			ROADWAY SOIL SURVEY ESTERO BOULEVARD: SEGMENT 6 FORT MYERS BEACH, LEE COUNTY, FLORIDA	DRAWN BY:
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NAME	COUNTY NAME	PROJECT ID		CAC
						ESTERO BOULEVARD	LEE	16-1668			

Appendix H – Gradation Test Results





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 5851 Country Lakes Drive
 Fort Myers, Florida 33905
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 239-489-3438 F

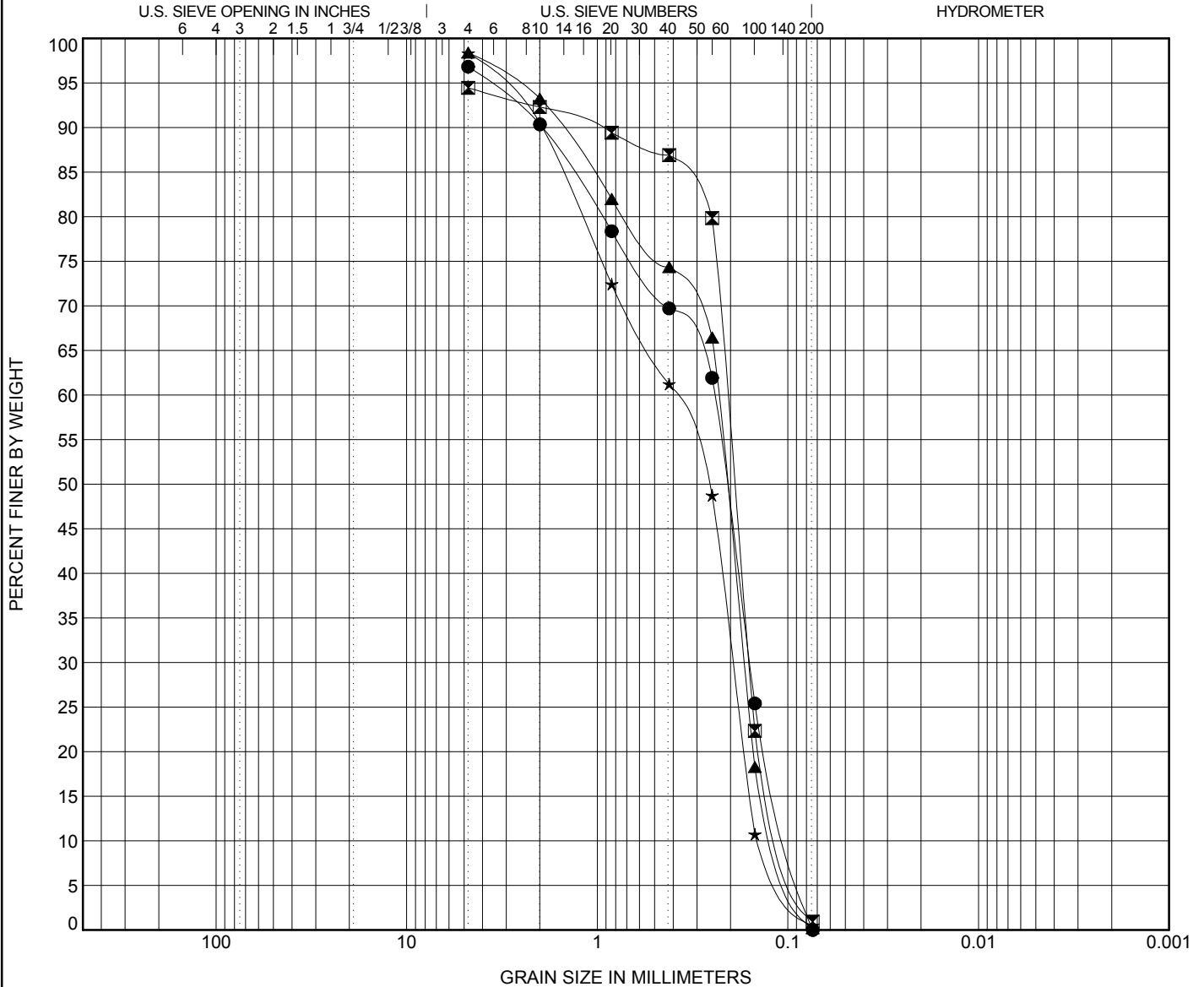
GRAIN SIZE DISTRIBUTION

CLIENT David Douglas Associates, Inc.

PROJECT NAME Estero Boulevard: Segment 6

PROJECT NUMBER 16-1668

PROJECT LOCATION Sta. 1355+80 to Sta. 1415+00



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● HA-1 4.0	White Poorly Graded Sand (SP) with Shell Fragments	NP	NP	NP	1.07	2.50
☒ HA-3 2.0	Gray Poorly Graded Sand (SP) with Shell Fragments	NP	NP	NP	1.22	2.10
▲ HA-5 0.0	Tan Poorly Graded Sand (SP) with Trace Shell Frag. & Org.	NP	NP	NP	1.13	2.16
★ HA-7 1.0	Light Brown Poorly Graded Sand (SP) with Shell Fragments	NP	NP	NP	0.66	2.82

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● HA-1 4.0	4.76	0.243	0.159	0.097	0.0	96.3	0.5	
☒ HA-3 2.0	4.76	0.209	0.16	0.1	0.0	93.1	1.3	
▲ HA-5 0.0	4.76	0.233	0.169	0.108	0.0	97.9	0.5	
★ HA-7 1.0	4.76	0.399	0.194	0.142	0.0	97.6	0.7	

GRAIN SIZE SEGMENT 6 SIEVE ANALYSIS.GPJ MASTER BORING LOG.GDT 1/23/18



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 Fort Myers, Florida 33905
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 239-489-3438 F

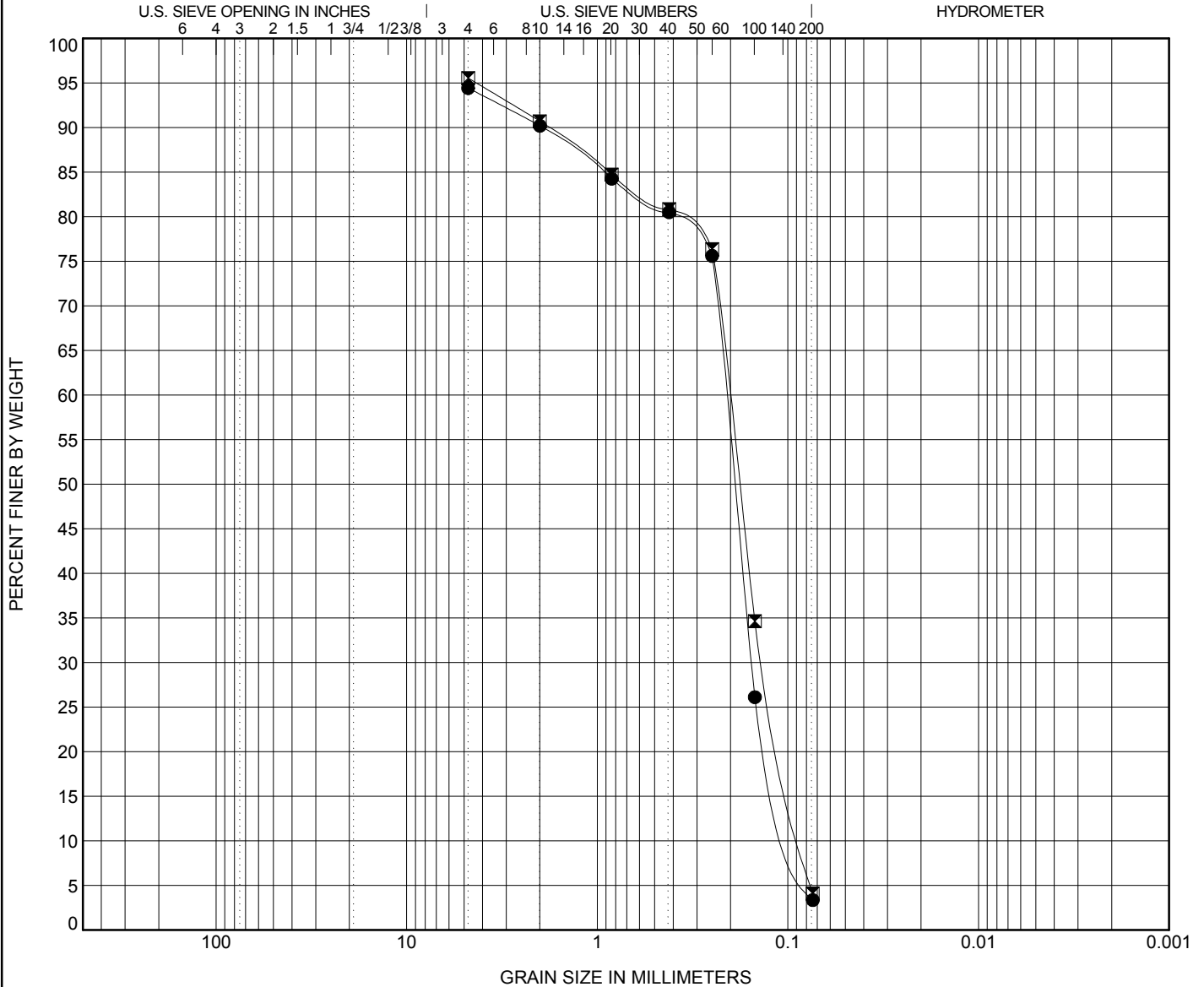
GRAIN SIZE DISTRIBUTION

CLIENT David Douglas Associates, Inc.

PROJECT NAME Estero Boulevard: Segment 6

PROJECT NUMBER 16-1668

PROJECT LOCATION Sta. 1355+80 to Sta. 1415+00



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● HA-9 3.0	Gray Poorly Graded Sand (SP) with Trace Shell Frag. & Silt	NP	NP	NP	1.25	2.34
⊠ HA-11 4.0	Gray Poorly Graded Sand (SP) with Trace Shell Fragments	NP	NP	NP	1.04	2.41

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● HA-9 3.0	4.76	0.212	0.155	0.091	0.0	90.6	3.8	
⊠ HA-11 4.0	4.76	0.204	0.134	0.085	0.0	90.9	4.7	

GRAIN SIZE SEGMENT 6 SIEVE ANALYSIS.GPJ MASTER BORING LOG.GDT 1/23/18



SIEVE ANALYSIS ASTM C136

Project: Estero Boulevard: Remaining Segments **Project ID:** 16-1668
Client Address: 1821 Victorica Avenue, Fort Myers, Florida **Report ID:** S001
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 6: Sta. 1358+00 - Southbound Shoulder - HA-1 (4 to 5 Ft.)
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: R. Gibson **Date Tested:** 1/11/2018
Material Description: White Sand with Shell Fragments
Material Classification: SP
Total Sample Weight: 469.9 **Sample Weight After Wash:** 468.8

SIEVE#	CUMMULATIVE WEIGHT RETAINED (G)	% PASSING
No. 4	14.9	97%
No. 10	45.3	90%
No. 20	101.6	78%
No. 40	142.3	69%
No. 60	178.9	62%
No. 100	350.5	25%
No. 200	468.2	0.3%
PAN (WT RETAINED)	0.5	
TOTAL	468.7	

The above test results were obtained in accordance with standard laboratory procedures.

Respectfully Submitted
GFA INTERNATIONAL

1/23/2018

Paul J. D'huyvetter, P.E.
Registered Engineer # 59716
State of Florida



SIEVE ANALYSIS ASTM C136

Project: Estero Boulevard: Remaining Segments **Project ID:** 16-1668
Client Address: 1821 Victorica Avenue, Fort Myers, Florida **Report ID:** S002
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 6: Sta. 1368+00 - Southbound Shoulder - HA-3 (2 to 3 Ft.)
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: R. Gibson **Date Tested:** 1/11/2018
Material Description: Gray Sand with Shell Fragments
Material Classification: SP
Total Sample Weight: 485.5 **Sample Weight After Wash:** 480.5

SIEVE#	CUMMULATIVE WEIGHT RETAINED (G)	% PASSING
No. 4	26.9	93%
No. 10	37.4	91%
No. 20	51.3	88%
No. 40	63.6	86%
No. 60	97.8	79%
No. 100	377.1	21%
No. 200	478.7	1.3%
PAN (WT RETAINED)	1.5	
TOTAL	480.2	

The above test results were obtained in accordance with standard laboratory procedures.

Respectfully Submitted
GFA INTERNATIONAL

1/23/2018

Paul J. D'huyvetter, P.E.
Registered Engineer # 59716
State of Florida



SIEVE ANALYSIS ASTM C136

Project: Estero Boulevard: Remaining Segments **Project ID:** 16-1668
Cleient Address: 1821 Victorica Avenue, Fort Myers, Florida **Report ID:** S003
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 6: Sta. 1378+00 - Southbound Shoulder - HA-5 (0 to 1.5 Ft.)
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: R. Gibson **Date Tested:** 1/11/2018
Material Description: Tan Sand with Trace Shell Fragments and Organics
Material Classification: SP
Total Sample Weight: 516.3 **Sample Weight After Wash:** 514.3

SIEVE#	CUMMULATIVE WEIGHT RETAINED (G)	% PASSING
No. 4	8.2	98%
No. 10	34.8	93%
No. 20	92.9	82%
No. 40	132.4	74%
No. 60	173.2	66%
No. 100	421.9	18%
No. 200	513.4	0.5%
PAN (WT RETAINED)	0.7	
TOTAL	514.1	

The above test results were obtained in accordance with standard laboratory procedures.

Respectfully Submitted
GFA INTERNATIONAL

1/23/2018

Paul J. D'huyvetter, P.E.
 Registered Engineer # 59716
 State of Florida



SIEVE ANALYSIS ASTM C136

Project: Estero Boulevard: Remaining Segments **Project ID:** 16-1668
Cleient Address: 1821 Victorica Avenue, Fort Myers, Florida **Report ID:** S004
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 6: Sta. 1388+00 - Southbound Shoulder - HA-7 (1 to 2.5 Ft.)
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: R. Gibson **Date Tested:** 1/11/2018
Material Description: Light Brown Sand with Shell Fragments
Material Classification: SP
Total Sample Weight: 494.5 **Sample Weight After Wash:** 491.8

SIEVE#	CUMMULATIVE WEIGHT RETAINED (G)	% PASSING
No. 4	8.2	98%
No. 10	47.0	90%
No. 20	136.3	72%
No. 40	191.7	61%
No. 60	253.4	48%
No. 100	441.4	10%
No. 200	490.6	0.7%
PAN (WT RETAINED)	0.7	
TOTAL	491.3	

The above test results were obtained in accordance with standard laboratory procedures.

Respectfully Submitted
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1/23/2018

Paul J. D'huyvetter, P.E.
Registered Engineer # 59716
State of Florida



SIEVE ANALYSIS ASTM C136

Project: Estero Boulevard: Remaining Segments **Project ID:** 16-1668
Client Address: 1821 Victorica Avenue, Fort Myers, Florida **Report ID:** S005
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 6: Sta. 1398+00 - Southbound Shoulder - HA-9 (3 to 4.5 Ft.)
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: R. Gibson **Date Tested:** 1/11/2018
Material Description: Gray Sand with Trace Shell Fragments and Silt
Material Classification: SP
Total Sample Weight: 610 **Sample Weight After Wash:** 590.2

SIEVE#	CUMMULATIVE WEIGHT RETAINED (G)	% PASSING
No. 4	34.0	91%
No. 10	59.8	87%
No. 20	96.0	81%
No. 40	118.9	77%
No. 60	148.8	72%
No. 100	450.7	23%
No. 200	586.6	3.8%
PAN (WT RETAINED)	3.4	
TOTAL	590.0	

The above test results were obtained in accordance with standard laboratory procedures.

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1/23/2018

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Registered Engineer # 59716
State of Florida



SIEVE ANALYSIS ASTM C136

Project: Estero Boulevard: Remaining Segments **Project ID:** 16-1668
Cleient Address: 1821 Victorica Avenue, Fort Myers, Florida **Report ID:** S006
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 6: Sta. 1408+00 - Southbound Shoulder - HA-11 (4 to 5 Ft.)
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: R. Gibson **Date Tested:** 1/11/2018
Material Description: Gray Sand with Trace Shell Fragments
Material Classification: SP
Total Sample Weight: 485.4 **Sample Weight After Wash:** 466.9

SIEVE#	CUMMULATIVE WEIGHT RETAINED (G)	% PASSING
No. 4	21.6	92%
No. 10	45.1	87%
No. 20	74.2	81%
No. 40	92.9	77%
No. 60	114.8	73%
No. 100	317.3	31%
No. 200	462.4	4.7%
PAN (WT RETAINED)	4.2	
TOTAL	466.6	

The above test results were obtained in accordance with standard laboratory procedures.

Respectfully Submitted
GFA INTERNATIONAL

1/23/2018

Paul J. D'huyvetter, P.E.
Registered Engineer # 59716
State of Florida

Appendix I – Soil Corrosive Series Test Results





REPORT OF SOIL CORROSION SERIES

Project: Estero Boulevard Remaining Segments **Project ID:** 16-1668
Client Address: 1821 Victoria Avenue, Fort Myers, Florida **Report ID:** CS001
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 6: Composite Sample 1 - Hand Auger Borings HA-1 through HA-6 (0' - 5')
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: K. Hazard **Date Tested:** 1/12/2018
Material Description: Composite Sample: Gray to Brown Sand with Trace Shell Fragments
Material Classification: SP

	Lab Results
pH (FM 5-550):	8.28
Resistivity (FM 5-551):	3,234 ohm-cm
Chloride (FM 5-552):	75 ppm
Sulfate (FM 5-553):	18 ppm

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930

1/29/2018

Paul J. D'huyvetter, P.E.
 Registered Engineer # 59716
 State of Florida

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REPORT OF SOIL CORROSION SERIES

Project: Estero Boulevard Remaining Segments **Project ID:** 16-1668
Client Address: 1821 Victoria Avenue, Fort Myers, Florida **Report ID:** CS002
Client: David Douglas Associates, Inc. **Lab/MAC ID:** N/A
Material Location: Segment 6: Composite Sample 2 - Hand Auger Borings HA-7 through HA-11 (0' - 5')
Sampled By: G. Watson **Date Sampled:** 12/21/2017
Tested By: K. Hazard **Date Tested:** 1/12/2018
Material Description: Composite Sample: Gray to Brown Sand with Trace Shell Fragments
Material Classification: SP

	Lab Results
pH (FM 5-550):	8.58
Resistivity (FM 5-551):	6,890 ohm-cm
Chloride (FM 5-552):	30 ppm
Sulfate (FM 5-553):	Non-Detectable (ppm)

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 Registered Engineer # 59716
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Appendix J – Asphalt Thickness by Core Determination





LIMEROCK/ASPHALT THICKNESS BY CORE DETERMINATION

Client: David Douglas Associates, Inc. Project #: 16-1668
 Project: Estero Boulevard - Segment 6
 Address: Estero Boulevard, Fort Myers Beach, Lee County, Florida

Results of Test

Core #	Location/ Offet From Center Line	Total Asphalt Core Thickness (in.)	Measured Asphalt Thickness (in.)		Visual Asphalt Type Classification
			Lift	Thickness	
C-1	Sta. 1365+00: Northbound/ 7.0 Feet	7-7/8	Lift 1	1-5/8	S-I
			Lift 2	1-3/4	S-I
			Lift 3	1-1/2	S-II
			Lift 4	1-5/8	S-II
			Lift 5	1-3/8	S-I
C-2	Sta. 1375+00: Southbound/ 6.0 Feet	8-7/8	Lift 1	2-1/4	S-I
			Lift 2	2	S-II
			Lift 3	2	S-II
			Lift 4	1-1/2	S-I
			Lift 4	1-1/8	S-II
C-3	Sta. 1385+00: Northbound/ 6.0 Feet	11-5/8	Lift 1	2	S-I
			Lift 2	2-1/4	S-I
			Lift 3	2	S-II
			Lift 4	1	S-II
			Lift 5	2	S-II
			Lift 6	1-1/2	S-I
			Lift 7	7/8	S-I
C-4	Sta. 1395+00: Southbound/ 6.0 Feet	7	Lift 1	1-1/2	S-I
			Lift 2	3/4	S-I
			Lift 3	3/4	S-I
			Lift 4	1	S-II
			Lift 5	1-1/4	S-II
			Lift 6	1-1/4	S-II
			Lift 7	1/2	S-II
C-5	Sta. 1405+00 Northbound/ 6.5 Feet	12-1/2	Lift 1	1-1/2	S-I
			Lift 2	1-1/2	S-I
			Lift 3	2-3/4	S-II
			Lift 4	3	S-II
			Lift 5	2	S-II
			Lift 6	1-3/4	S-I
C-6	Sta. 1408+00 Southbound/ 7.5 Feet	8-3/8	Lift 1	1-3/4	S-I
			Lift 2	1-1/4	S-I
			Lift 3	1-1/2	S-II
			Lift 4	1	S-II
			Lift 5	1-3/4	S-I
			Lift 6	7/8	S-II

The above test results were obtained in accordance with standard laboratory procedures.



ASPHALT/ BASE THICKNESS BY CORE DETERMINATION

Client: David Douglas Associates, Inc. Project #: 16-1668
 Project: Estero Boulevard Utility Improvements: Remaining Segments Lab I.D. _____
 Location: Segments 6
 Tested By: JR Gibbs/ Kevin Mixon
 Date Tested: 12/20/2017

Segment 6 - Results of Test

Core #	Location	Limerock Thickness Inches	Subbase Inches	Asphalt Thickness Inches
C-1	Sta. 1365+00: NB	16	N/A	7-7/8
C-2	Sta. 1375+00: SB	16	N/A	8-7/8
C-3	Sta. 1385+00: NB	20	N/A	11-5/8
C-4	Sta. 1395+00: SB	12	N/A	7
C-5	Sta. 1405+00: NB	48	N/A	12-1/2
C-6	Sta. 1408+00: SB	48	N/A	8-3/8

Appendix K – Asphalt Bulk Specific Gravity





ASPHALT CORE DENSITIES

CLIENT: <u>David Douglas Associates, Inc.</u>	PROJECT # <u>16-1668</u>
PROJECT: <u>Estero Boulevard - Segment 6</u>	REPORT # <u>1</u>
ADDRESS: <u>Estero Boulevard</u>	CITY: <u>Fort Myers Beach</u> DATE: <u>1/26/2018</u>

Core #	Location/ Offset from Center Line	(A) Weight In Air (grams)	(B) Weight SSD (grams)	(C) Weight In Water (grams)	(D) A/(B-C) Specific Gravity	(E) D x 62.4 Density (PCF)	Tested Thickness (inches)
C-1	Sta. 1365+00 (NB)/ 7.0 Feet	3688.5	3690.1	1963.3	2.14	133.3	3 1/2
C-2	Sta. 1375+10 (SB)/ 6.0 Feet	3205.9	3208.1	1696.4	2.12	132.3	5 13/16
C-3	Sta. 1385+00 (NB)/ 6.0 Feet	4178.7	4180.4	2219.9	2.13	133.0	4 3/8
C-4	Sta. 1395+00 (SB)/ 6.0 Feet	3623.4	3626.1	1929.4	2.14	133.3	3 7/8
C-5	Sta. 1405+00 (NB)/ 6.5 Feet	3705.4	3711.5	1982.8	2.14	133.8	3 15/16
C-6	Sta. 1408+00 (SB)/ 7.5 Feet	3669.0	3678.2	1956.6	2.13	133.0	4 1/4

Respectfully Submitted,
GFA International, Inc.
 FBPE CA # 4930

Appendix L – Limerock Bearing Ratio (LBR) Results

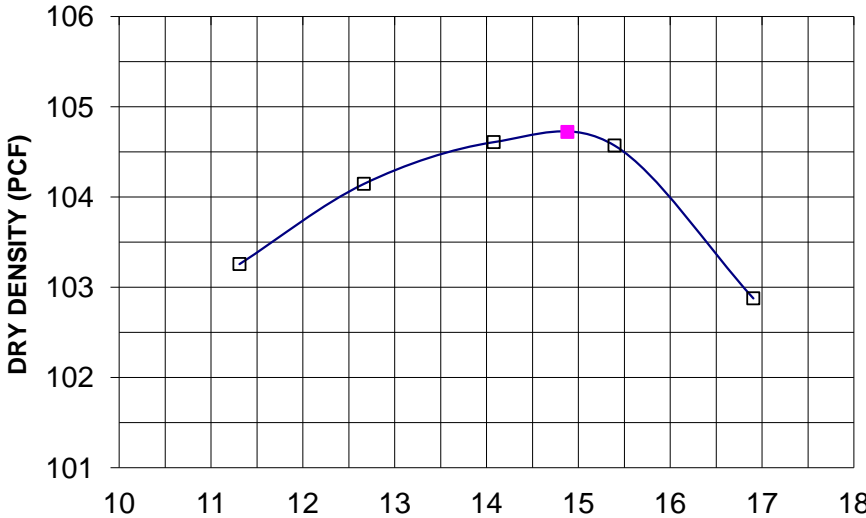




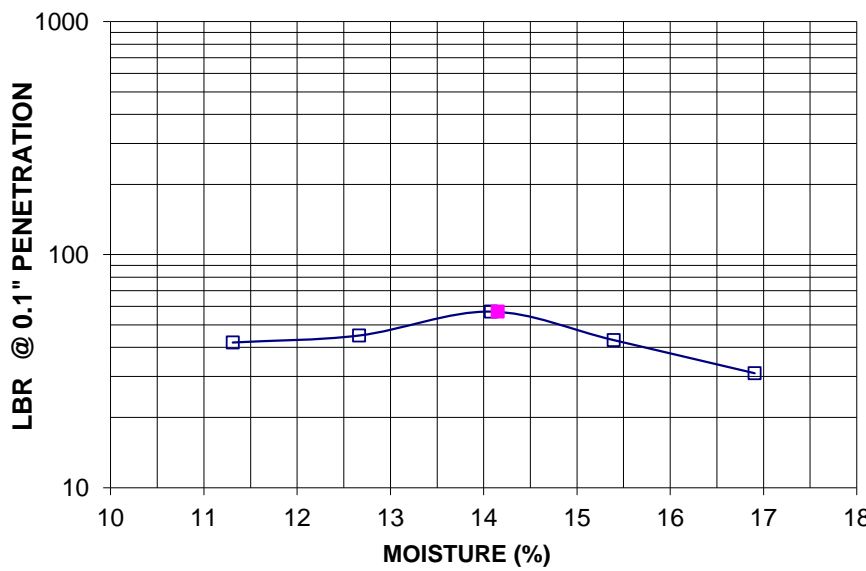
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard Utility Improvements
Address: 1821 Victoria Avenue
Client: David Douglas Associates, Inc.
Material Location: Segment 6 : LBR001, SB, Station 1358+00
Sampled By: G. Watson
Tested By: J. McStravic / R. Gibson
Material Description: Existing Shoulder, Dark Gray Sand with Trace Organics & Shell
% Passing #4: 98%
Rammer Face: Sector **Soak Time (hrs):** 48
Comments: _____

Project ID: 16-1668
Report ID: LBR001
Lab/MAC ID: 18-0003
Date Sampled: 12/22/2017
Date Tested: 1/10/2018
Type of Rammer: Mechanical
Surcharge (lbs): 15



Dry Density (pcf)	Moisture (%)
103.3	11.3
104.1	12.7
104.6	14.1
104.6	15.4
102.9	16.9



LBR
42
45
57
43
31

Maximum Dry Density (pcf)
104.7

Optimum Moisture (%)
14.9

Limerock Bearing Ratio
57

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GFA INTERNATIONAL, INC.
 FBPE CA # 4930

1/29/18

Paul J. D'huyvetter, P.E.
 Registered Engineer # 59716
 State of Florida

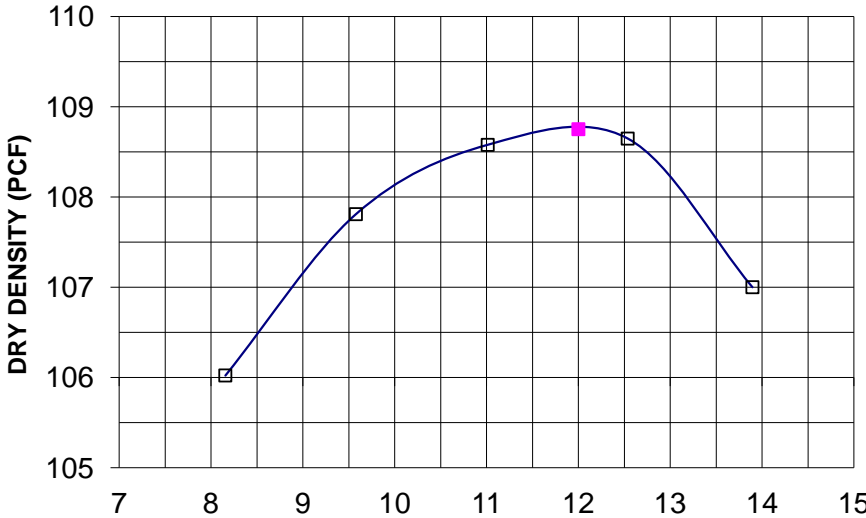
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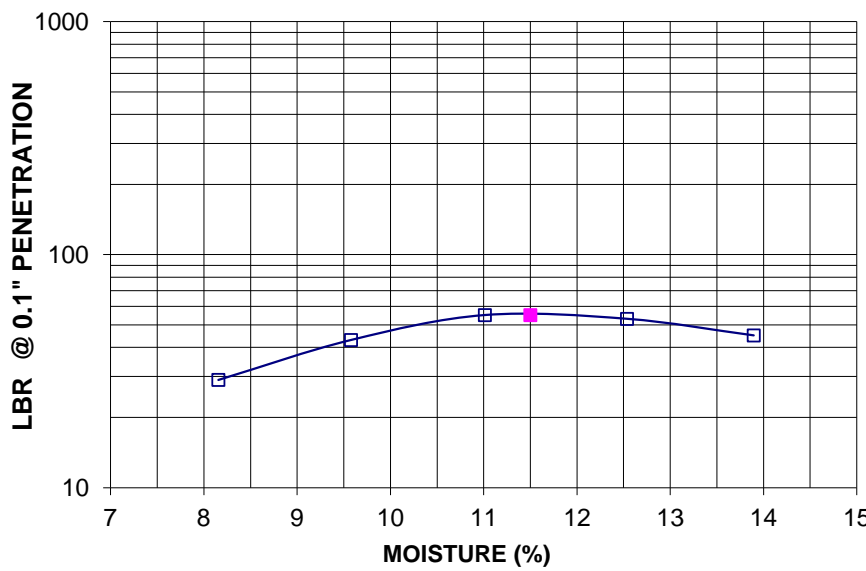
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard Utility Improvements
Address: 1821 Victoria Avenue
Client: David Douglas Associates, Inc.
Material Location: Segment 6 : LBR002, NB, Station 13671+75
Sampled By: G. Watson
Tested By: J. McStravic/ R. Gibson
Material Description: Existing Shoulder, Gray Sand with Some Shell
% Passing #4: 93%
Rammer Face: Sector **Soak Time (hrs):** 48
Comments: _____

Project ID: 16-1668
Report ID: LBR002
Lab/MAC ID: 18-0004
Date Sampled: 12/22/2017
Date Tested: 1/5/2018
Type of Rammer: Mechanical
Surcharge (lbs): 15



Dry Density (pcf)	Moisture (%)
106.0	8.2
107.8	9.6
108.6	11.0
108.6	12.5
107.0	13.9



LBR
29
43
55
53
45

Maximum Dry Density (pcf)
108.8

Optimum Moisture (%)
12.0

Limerock Bearing Ratio
55

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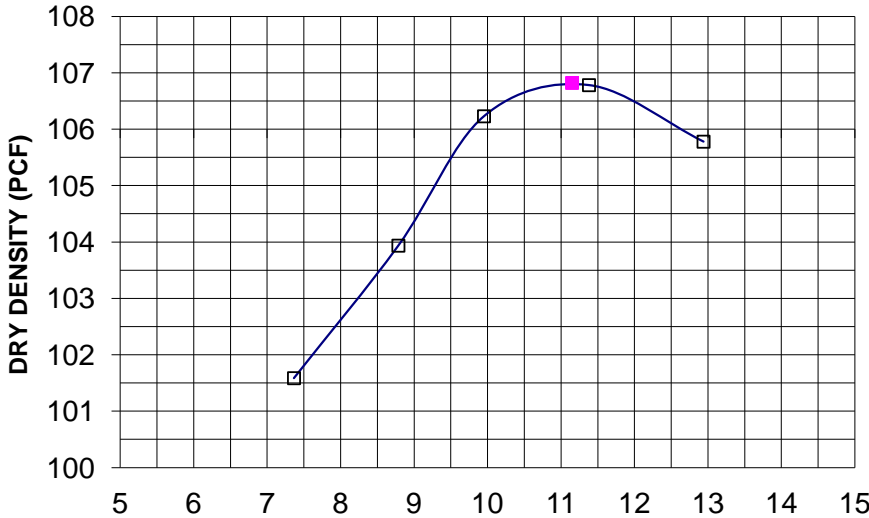


Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard Utility Improvements
Address: 1821 Victoria Avenue
Client: David Douglas Associates, Inc.
Material Location: Segment 6 : LBR003, SB, Station 1378+00
Sampled By: G. Watson
Tested By: J. McStravic / R. Gibson
Material Description: Existing Shoulder, Gray Sand with Trace Shell
% Passing #4: 97%
Rammer Face: Sector **Soak Time (hrs):** 48

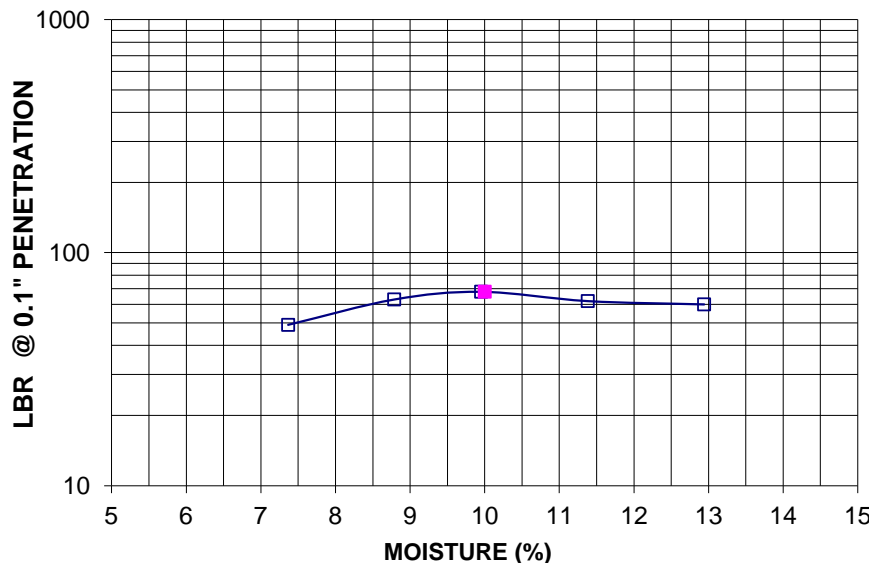
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Report ID: LBR003
Lab/MAC ID: 18-0005
Date Sampled: 12/22/2017
Date Tested: 1/10/2018
Type of Rammer: Mechanical
Surcharge (lbs): 15

Comments: _____



Dry Density (pcf)	Moisture (%)
101.6	7.4
103.9	8.8
106.2	10.0
106.8	11.4
105.8	12.9

LBR
49
63
68
62
60



Maximum Dry Density (pcf)
106.8

Optimum Moisture (%)
11.2

Limerock Bearing Ratio
68

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 FBPE CA # 4930

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 Registered Engineer # 59716
 State of Florida

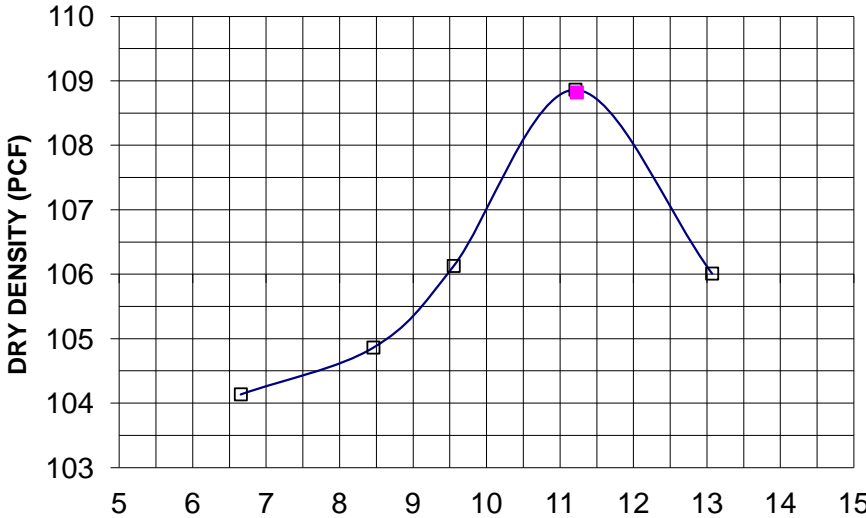
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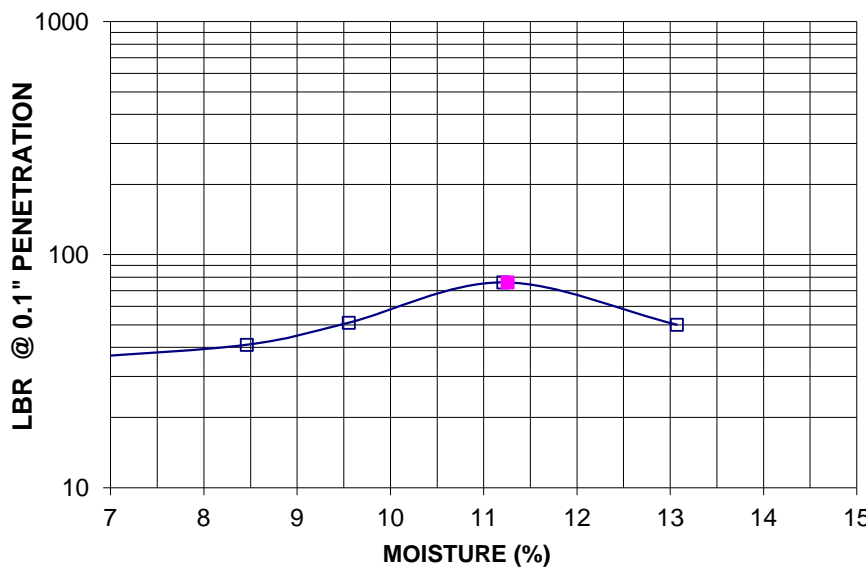
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard Utility Improvements
Address: 1821 Victoria Avenue
Client: David Douglas Associates, Inc.
Material Location: Segment 6 : LBR004, NB, Station 1388+00
Sampled By: G. Watson
Tested By: J. McStravic/ R. Gibson
Material Description: Existing Shoulder, Gray Sand with Trace Shell & Gravel
% Passing #4: 94%
Rammer Face: Sector **Soak Time (hrs):** 48
Comments: _____

Project ID: 16-1668
Report ID: LBR004
Lab/MAC ID: 18-0006
Date Sampled: 12/22/2017
Date Tested: 1/5/2018
Type of Rammer: Mechanical
Surcharge (lbs): 15



Dry Density (pcf)	Moisture (%)
104.1	6.7
104.9	8.5
106.1	9.6
108.9	11.2
106.0	13.1



LBR
36
41
51
76
50

Maximum Dry Density (pcf)
108.8

Optimum Moisture (%)
11.2

Limerock Bearing Ratio
76

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 Registered Engineer # 59716
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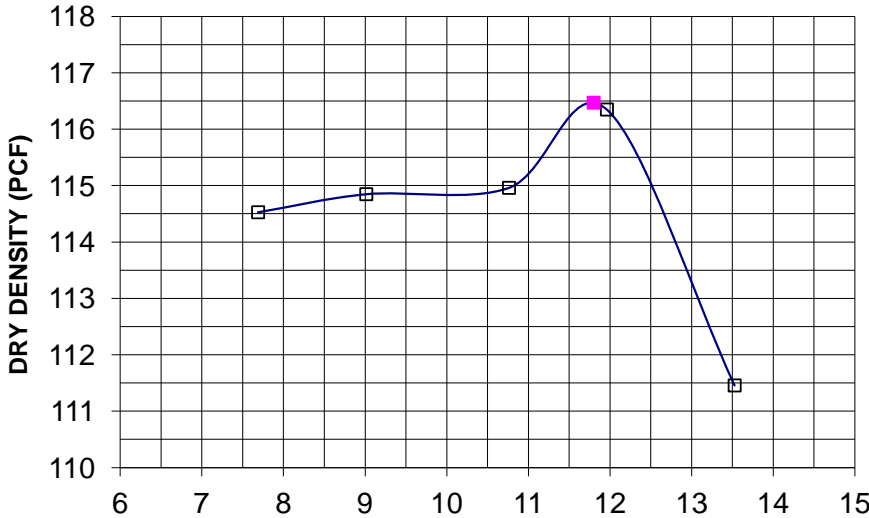


Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard Utility Improvements
Address: 1821 Victoria Avenue
Client: David Douglas Associates, Inc.
Material Location: Segment 6 : LBR005, SB, Station 1398+00
Sampled By: G. Watson
Tested By: J. Permenter / R. Gibson
Material Description: Existing Shoulder, Gray Sand with Some Shell
% Passing #4: 85%
Rammer Face: Sector **Soak Time (hrs):** 48

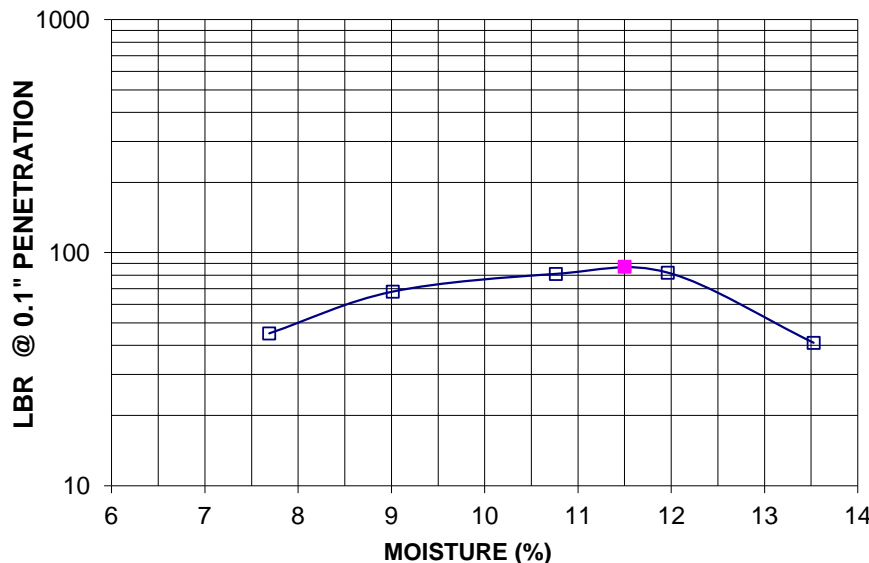
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Report ID: LBR005
Lab/MAC ID: 18-0007
Date Sampled: 12/22/2017
Date Tested: 1/10/2018
Type of Rammer: Mechanical
Surcharge (lbs): 15

Comments: _____



Dry Density (pcf)	Moisture (%)
114.5	7.7
114.8	9.0
115.0	10.8
116.3	12.0
111.5	13.5

LBR
45
68
81
82
41



Maximum Dry Density (pcf)
116.5

Optimum Moisture (%)
11.8

Limerock Bearing Ratio
87

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 FBPE CA # 4930

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 Registered Engineer # 59716
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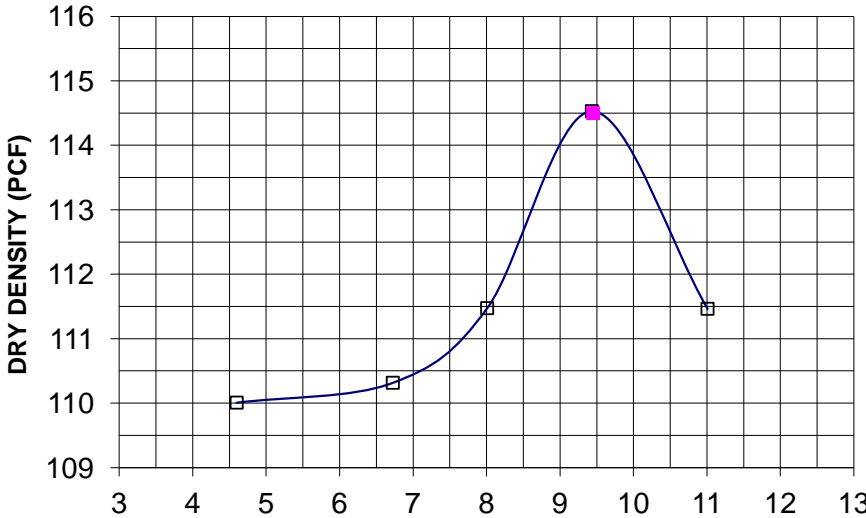
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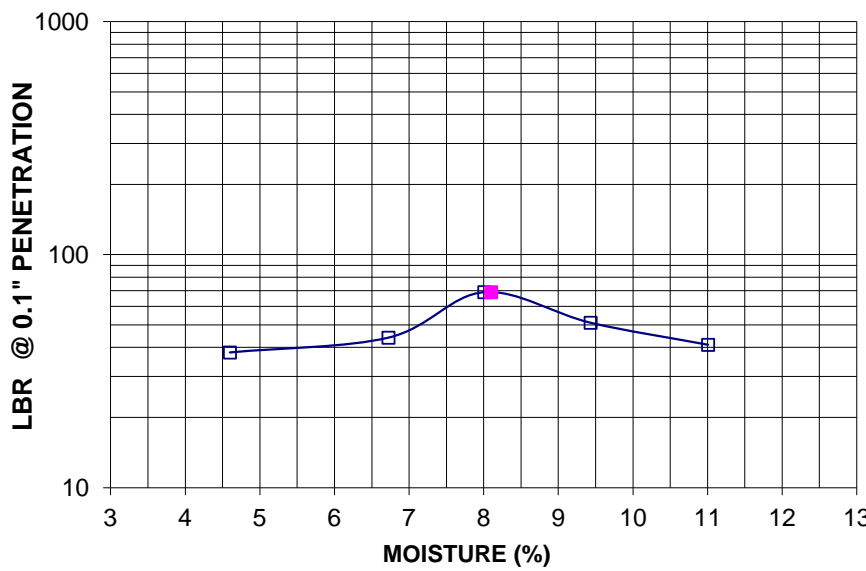
Limerock Bearing Ratio Florida Method FM 5-515

Project: Estero Boulevard Utility Improvements
Address: 1821 Victoria Avenue
Client: David Douglas Associates, Inc.
Material Location: Segment 6 : LBR006, NB, Station 14071+75
Sampled By: G. Watson
Tested By: J. Permenter / R. Gibson
Material Description: Existing Shoulder, Light Gray Sand with Some Shell & Gravel
% Passing #4: 90%
Rammer Face: Sector **Soak Time (hrs):** 48
Comments: _____

Project ID: 16-1668
Report ID: LBR006
Lab/MAC ID: 18-0008
Date Sampled: 12/22/2017
Date Tested: 1/5/2018
Type of Rammer: Mechanical
Surcharge (lbs): 15



Dry Density (pcf)	Moisture (%)
110.0	4.6
110.3	6.7
111.5	8.0
114.5	9.4
111.5	11.0



LBR
38
44
69
51
41

Maximum Dry Density (pcf)
114.5

Optimum Moisture (%)
9.5

Limerock Bearing Ratio
69

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 FBPE CA # 4930

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 Registered Engineer # 59716
 State of Florida

1/29/18

Test report shall not be reproduced, except in full, without the written approval of GFA International

Appendix M – Asphalt Core Photographs



ASPHALT CORE C-1



ASPHALT CORE C-2



ASPHALT CORE C-3



ASPHALT CORE C-4



ASPHALT CORE C-5



ASPHALT CORE C-6



EXHIBIT K
TECHNICAL SPECIAL PROVISIONS

RESERVED

I hereby certify that these Technical Special Provisions have been properly prepared by me, or under my responsible charge:

Technical Special Provision Section(s):		
Signature:		
Date:		
Engineer of Record:		
Florida License No.:		
Firm Name:		
Firm Address:		
City, State, Zip Code:		
Cert. of Authorization No:		

EXHIBIT L
FDOT AND LEE COUNTY DESIGN STANDARDS

The following design standards are expressly agreed to be incorporated by reference and made a part of this Agreement:

1. Florida Department of Transportation **FY 2024-25** Standard Plans as published at the following link:

<https://www.fdot.gov/design/standardplans/SPRBC.shtm>

2. Lee County Department of Transportation Plan Specifications for Sign Installation, the latest edition as published at the following link:

<http://www.leegov.com/dot/traffic/trafficsigninstallation>

3. Lee County Department of Transportation Plan Specifications for Signal & Street Lighting, the latest edition as published at the following link:

<http://www.leegov.com/dot/traffic/trafficstandard>

4. Lee County Utilities Design Manual, the latest edition as published at the following link:

<http://www.leegov.com/utilities/design-manual>

In the event of discrepancies between the Lee County and FDOT Design Standards, Lee County Standards shall govern.

EXHIBIT M
DEVELOPMENTAL SPECIFICATIONS

RESERVED

I hereby certify that these Developmental Specifications have been properly prepared by me, or under my responsible charge:

Developmental Specifications Section(s):	
Signature:	
Date:	3/12/24
Engineer of Record:	David J. Allen, PE
Florida License No.:	58540
Firm Name:	Stantec
Firm Address:	3905 Crescent Park Drive
City, State, Zip Code:	Riverview, FL 33578
Cert. of Authorization No:	

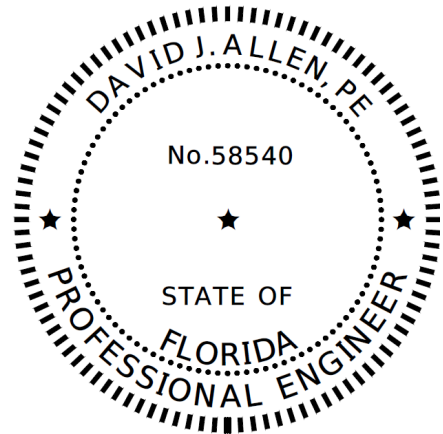


EXHIBIT N
CONTRACTOR'S BACKGROUND SCREENING AFFIDAVIT



**CONTRACTOR BACKGROUND
SCREENING AFFIDAVIT**

Florida Statutes Chapter 435 governs required background screenings for any employees, contractors, subcontractors, or agents of the Contractor who will have contact with any vulnerable person, as defined by statute, or who otherwise are required to undergo a Level 1 or Level 2 background screening in accordance with Florida law.

The Contractor is responsible for ensuring that such required background screenings are conducted in accordance with Florida Statutes Chapter 435. Documentation of such completed background screenings must be maintained for a period of no less than five (5) years and are subject to audit by Lee County at any time during such five (5) year period.

Under penalty of perjury, I declare that I have read and understand the requirements stated above, and that all required background screenings shall be conducted in accordance with this affidavit. I further understand that there may be additional local, state, and federal regulations that may require background screening, and that the Contractor will be solely responsible for complying with such legal requirements. Furthermore, the Contractor shall indemnify and hold Lee County harmless from any and all claims or actions resulting from failure to comply with this affidavit.

Date: 8/19/2024

Doug McIntyre
Signature

STATE OF FL
COUNTY OF Lee

Doug McIntyre
Name/Title

The foregoing instrument was sworn to (or affirmed) and subscribed before me by means of physical presence or online notarization, this 19 day of August, 2024, by the above-named person and in their stated capacity, and is either personally known to me or who has produced the following type of identification: _____

Type of Identification

[Stamp/seal required]

Paula Berkoben
Signature, Notary Public



PAULA BERKOBEN
Notary Public
State of Florida
Comm# HH240342
Expires 4/24/2026

EXHIBIT O
OTHER RELEVANT FORMS