FINAL DESIGN OF WHITING STREET IMPROVEMENTS

THEA PROJECT No. O-2725

RESPONSIBLE DEPARTMENT

Judith Villegas, E.I.
ITS Manager

PROCUREMENT DEPARTMENT
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Notice: This document is constructed in four (4) sections. Section A contains the general information and general conditions the respondents need to prepare an Expanded Letters of Response (ELOR) Package. Section B contains service-specific information and specific response requirements. Section C contains forms required to be submitted as part of the ELOR Package. Section D contains attachments incorporated into the ELOR Package for general information and reference.

TAMPA-HILLSBOROUGH COUNTY EXPRESSWAY AUTHORITY
EXPANDED LETTER OF RESPONSE ~ No. O-2725
Final Design of Whiting Street Improvements

The Tampa-Hillsborough County Expressway Authority (THEA) in Tampa, Florida is soliciting *Expanded Letters of Response (ELOR) from Firms/Respondents that are Florida Department of Transportation (FDOT) pre-qualified to provide final design services (the "Services") for the project known as the Whiting Street Improvements Project (THEA Project No.* ***O-2725****). The project is to reduce congestion and provide operational and safety improvements on the Selmon Expressway by improvements to Whiting Street from Jefferson Street to Brush Street, extending Whiting Street from Brush Street to Meridian Avenue, adding a new eastbound exit ramp from the Selmon Expressway to Whiting Street and removing the existing eastbound exit ramp to Morgan Street/Channelside Drive. Only firms with FDOT pre-qualifications for final design services at the time of the submittal are eligible for selection. The selection will be made from the Expanded Letters of Response Package and Oral Presentations. Responses will be evaluated and ranked on the following criteria: Understanding the Scope, Qualifications and Experience of Key Personnel, Quality Assurance, Communication and Workload.*

Major Work (FDOT Prequalified):
3.3 Controlled Access Highway Design
4.2.1 Major Bridge Design - Concrete
4.2.1 Major Bridge Design - Steel

Selection will be made from the Expanded Letters of Response (ELOR) Package and Oral Presentations. THEA will evaluate the ELOR Packages and will shortlist a minimum of three (3) firms that will proceed to Oral Presentations. Respondents will be evaluated and ranked on the following criteria: Understanding the Scope, Qualifications and Experience of Key Personnel, Quality Control/Quality Assurance, Communication and Workload.

The following firms participated in the development of the conceptual plans or Request for Proposal for this Project and are prohibited from proposing or participating with a Proposer to propose on this Project without approval from the Authority.

- HNTB Corporation
- Tierra, Inc.
- Element Engineering Group, LLC
- H.W. Lochner, Inc.

Selection will be made from the Expanded Letters of Response (ELOR) Package and Oral Presentations. THEA will evaluate the ELOR Packages and will shortlist a minimum of three (3) respondents that will proceed to Oral Presentations. In its sole and absolute discretion, THEA intends to award a contract to the respondent who is determined to be the most responsive and responsible in accordance with the evaluation process described herein.

Respondents will be evaluated and ranked on the following criteria: Understanding the Scope, Qualifications and Experience of Key Personnel, Quality Assurance/Quality Control, Communication and Workload.

Interested respondents will obtain a copy of the ELOR Instructions and Submittal Documents and submit a completed ELOR Package to THEA as referenced in Paragraph 1.4, Schedule of Events.

ELOR Packages shall include completion of the documents and required forms attached within this solicitation in Section C, Required Forms. Respondents failing to submit the Required Forms may be deemed non-responsive. The Schedule of Events containing additional important deadlines is located in the Instructions and Submittal Documents at Section A, Paragraph 1.4.

The Instructions and Submittal Documents are available on THEA's website and through the DemandStar System (www.demandstar.com).

Questions concerning this solicitation **must** be directed by email to THEA's Procurement Office at procurement@tampa-xway.com.

SECTION A

GENERAL INFORMATION AND GENERAL CONDITIONS

1. GENERAL INFORMATION:

1.1 INSTRUCTIONS TO RESPONDENTS:

To be considered, responses must be made in accordance with the instructions and requirements as contained within this solicitation's corresponding sections.

1.2 ATTACHMENTS:

The attachments listed in Section D of this solicitation are hereby incorporated into and made a part of this solicitation as though fully set forth herein.

1.3 PROCUREMENT PROCESS:

The procurement process that will be utilized for this selection will be Expanded Letters of Response (ELOR) Packages and oral presentations. It is THEA's intention to solicit responses from potentially qualified respondents and to enter into a contract for services upon successful negotiation of a satisfactory contract with the respondent whose response is judged, through the evaluation and negotiation process, to be in the best interest of THEA in its sole and absolute discretion.

Respondents must demonstrate to THEA that they are fully capable, staffed, and qualified to provide the services required by this solicitation. Fully qualified respondents (and/or their team assigned to provide these Services) will have the qualifications (knowledge, education, training, expertise, and skills), and experience (documentation, successful, and relevant) necessary to meet the requirements of this solicitation. Determination of the respondent best qualified and experienced to perform the services required through this solicitation will be determined by THEA in its sole opinion and absolute discretion.

Respondents must submit an "Expanded Letters of Response (ELOR) Package" conforming to and containing all documents, forms, and information as required by the Expanded Letters of Response (ELOR) Instructions and Submittal Documents and as specifically identified in Section B, Service Information and Expanded Letters of Response (ELOR) Requirements at Section 2.1, Expanded Letters of Response (ELOR) Package.

THEA will evaluate and rank all responses received by the submittal date as set forth in this solicitation, or as amended by addendum, on the basis of the criteria stated herein. THEA reserves the right to request additional information and to seek clarification of any information submitted, including any omission from the original response. Additionally, THEA reserves the right to waive as informalities any irregularities in any response and to reject any and/or

all responses, in its sole and absolute discretion. The shortlisted respondents will proceed to Oral Presentations. THEA contemplates engaging one respondent and will commence contract negotiations with the top ranked respondent. If a satisfactory agreement cannot be negotiated with the top ranked respondent, then negotiations would begin with the next highest ranked respondent if so recommended by the evaluation committee and approved by the Board of Directors.

1.4 SCHEDULE OF EVENTS:

The selection process will adhere to the following schedule. All times given are Eastern Standard Time or Eastern Daylight Savings Time. THEA reserves the right to make changes or alterations to the schedule as THEA determines in its best interest. Unless otherwise notified in writing by THEA, the dates, times, and locations indicated below for submission of items or for other actions on the part of a respondent shall constitute absolute deadlines for those activities, and failure to fully comply by the time stated shall be cause for the respondent's Expanded Letters of Response (ELOR) Package to be rejected and disqualified from further consideration.

SCHEDULE OF EVENTS

DATE	DESCRIPTION	LOCATION
February 7, 2025, by 5:00 PM	Advertisement Published	THEA Website & Demandstar
February 18, 2025 @ 11:00 AM	Mandatory Pre-Proposal/Site Visit Meeting	THEA Office 1101 E. Twiggs Street, Tampa, FL 33602
March 4, 2025, by 9:00 AM	Deadline for Respondent's submission of questions to THEA	Email to Procurement@tampa-xway.com
March 14, 2025, by 5:00 PM	Deadline for THEA to respond to Respondent's questions	THEA Website & Demandstar
March 28, 2025, by 9:00 AM	Deadline for Submitting Expanded Letters of Response (ELOR)	Email to Procurement@tampa-xway.com
April 18, 2025, by 12:00 PM	Evaluation Committee submits scoring of ELORs to THEA Procurement Office	Email to Procurement@tampa-xway.com
April 30, 2025, @ 1:30 PM	Evaluation Committee confirms ranking and discussion of ELOR packages of shortlisted respondents	THEA Office 1101 E. Twiggs Street, Tampa, FL 33602
May 5, 2025, by 5:00 PM	Posting of Notice Intended Shortlist	THEA Website & Demandstar
May 19, 2025, @ 1:30 PM	Board Approval of Shortlist Ranking	THEA Offices 1101 E. Twiggs Street Tampa, FL 33602
June 10, 2025, @ 9:00-11:00 AM	Presentations with Shortlisted Respondents- In Person	THEA Office 1101 E. Twiggs Street Tampa, FL 33602
June 25, 2025 by 9:00 AM	Evaluation Committee submits final scores to THEA Procurement Office	Email to Procurement@tampa-xway.com

July 2, 2025 @ 10:00 AM	Evaluation committee meets to confirm final scores and final ranking of respondents	THEA Office 1101 E. Twiggs Street, Tampa, FL 33602
July 7, 2025 by 5:00 PM	Posting of Notice of Intended Final Ranking	THEA Website & Demandstar
August 25, 2025 @ 1:30 PM	Board Approval of Final Ranking and Award of Contract	THEA Board Room 1101 E. Twiggs Street Tampa, FL 33602
August 26, 2025 by 5:00 PM	Posting of Final Ranking	THEA Website & Demandstar
September 9, 2025 @ 10:00 AM	Scope Clarification Meeting & Negotiations	THEA Offices 1101 E. Twiggs Street Tampa, FL 33602

1.5 CHANGES TO SCHEDULE OR MEETING PLACE/TIME:

Any changes to paragraph 1.4 Schedule of Events or meeting place/time will be posted as an addendum and published through the DemandStar System (www.demandstar.com) and is also available through a link on THEA website (www.tampa-xway.com) under the Procurement Notice section.

1.6 SPECIAL ACCOMMODATIONS:

Any person requiring special accommodations to attend or participate in a THEA meeting regarding this solicitation, pursuant to the Americans with Disabilities Act, should contact THEA Procurement Manager in person at 1104 East Twiggs Street, Suite 300, Tampa, Florida 33605 or by telephone at 813-272-6740, or by email at Procurement@tampa-xway.com at least five (5) business days prior to the scheduled meeting.

1.7 ELECTRONIC DISTRIBUTION SYSTEM:

THEA solicitations for solicitations are issued electronically via THEA Website (https://www.tampa-xway.com/procurement/#) and Demand Star's eProcurement distribution system. (DemandStar Contact Information: Telephone: 800-711-1712 /www.demandstar.com)

Obtaining solicitations documents through DemandStar ensures respondents have the following capabilities:

a) Receipt of Expanded Letters of Response (ELOR) Instructions and Submittal Documents electronically;
b) Tracking status of the procurement process;
c) Receiving Letters of Clarification and addendum;
d) Receiving the results of rankings and contract awards;
e) Viewing drawings, plans and blueprints online.

RESPONDENTS WHO OBTAIN SOLICITATION DOCUMENTS REGARDING THIS SOLICITATION FROM SOURCES OTHER THAN DEMANDSTAR OR THEA WEBSITE

ARE CAUTIONED THE SOLICITATION PROCUREMENT DOCUMENTS MAY BE INCOMPLETE.

ATTACHMENTS, EXHIBITS, AND/OR REFERENCES NOT ATTACHED HERETO WILL BE SUPPLIED UPON REQUEST AND SHARED VIA A ONEDRIVE FILE SHARE OR IN-PERSON PICKUP OF A FLASH DRIVE AT THEA HEADQUARTERS OFFICE. PLEASE CONTACT THE PROCUREMENT OFFICE AT PROCUREMENT@TAMPA-XWAY.COM TO REQUEST YOUR LINK.

1.8 QUESTIONS ABOUT THIS SOLICITATION OR THE SERVICES:

All requests for interpretation, clarification or questions about the procurement process or the services **must be in writing**, addressed to THEA, Procurement Office at Procurement@tampa-xway.com.

To be considered, such requests must be received no later than the date and time stated for the **Deadline for Respondent's Submission of Questions to THEA** referenced in Paragraph 1.4, Schedule of Events.

THEA will **not** make any oral response to requests for interpretation, clarification or questions about the procurement process or the Services.

Any such responses or supplemental instructions by THEA to the respondents will be in the form of a Letter of Clarification or written addendum which if issued, will be posted on the DemandStar System (www.demandstar.com) and THEA website no later than the date and time stated for the **Deadline for THEA to respond to respondent's questions** referenced in Paragraph 1.4, Schedule of Events.

Failure of any respondent to receive any such Letter of Clarification or Addendum shall not relieve said respondent from any obligations contained within this solicitation.

Respondents are required to acknowledge receipt of any such addendum issued for this solicitation. A copy of the required **ACKNOWLEDGMENT OF RECEIPT OF ADDENDUM** is contained in Section C as **Form 8**.

All Letters of Clarification and Addendum so issued shall become part of the Contract documents.

1.9 COMMUNICATIONS/CONE OF SILENCE:

From the time the solicitation is published and until THEA Board of Directors has made a final decision regarding the award of the contract, Respondents to this solicitation or persons acting on their behalf **may not** contact members of the Evaluation Committee, other THEA staff, THEA officers or THEA Board Members, or the contractors representing THEA with this solicitation.

Any communications regarding this solicitation must be in writing to THEA, Attention Procurement Office at procurement@tampa-xway.com.

Violation of this provision shall be cause for the respondent's ELOR Package to be rejected and disqualified from further consideration.

1.10 MODIFICATION AND WITHDRAWAL:

ELOR Packages may be withdrawn by written request dispatched by the respondent and received by THEA at any time prior to the deadline stated for the **Deadline for submitting Expanded Letters of Response (ELOR) Package** referenced in Paragraph 1.4, Schedule

of Events.

Negligence on the part of the respondent in preparing its ELOR Package confers no right of withdrawal or modification after the ELOR Package has been opened at the appointed time and place by THEA.

ELOR Packages shall remain valid and in force for a period of one-hundred twenty (120) days after the opening date.

1.11 DISQUALIFICATION AND CANCELLATION OF THIS SOLICITATION:

THEA reserves the right to disqualify ELOR Packages before or after opening, upon evidence of collusion with the intent to defraud or other illegal practices upon the part of the respondent.

THEA may consider any ELOR Package nonresponsive that is not prepared and submitted in accordance with the instructions contained within this solicitation and may waive as informalities any irregularities, or reject any and all responses, at its sole and absolute discretion.

THEA reserves the right to reject, at its sole and absolute discretion, an ELOR Package if the evidence submitted by the respondent or an investigation of the qualifications and/or experience of the respondent fails to satisfy THEA's Evaluation Committee that such Respondent is sufficiently qualified or experienced to carry out the obligations as required in the solicitation. THEA also reserves the right to reject all ELOR Package to the solicitation, in its sole and absolute discretion.

THEA reserves the right to reject any or all ELOR Packages as not responsible or non-responsive; to re-advertise for the Services; to postpone or cancel this process; to waive irregularities in the procurement process or in the ELOR Package thereto; and to change or modify the procurement schedule at any time.

1.11.1 Examples of **not responsible** may include, without limitation, termination of a previous contract with THEA, financial weakness, or multiple legal actions taken against the respondent.

1.11.2 Examples of **non-responsive** may include, without limitation, failure to include all required information in response Package, documents not properly signed, goods or services not in compliance with specifications, substitution of terms and conditions, limitation of liability, failure to comply with delivery schedule or qualification of response Package contingent on another contract award.

1.12 WAIVER OF IRREGULARITIES:

THEA reserves the right to waive as informalities any irregularities contained in any ELOR Package received where such is merely a matter of form and not substance, and the correction or waiver of which is not prejudicial to other respondents. Minor irregularities are defined as those that will not have an adverse effect on THEA's interest and will not give a respondent an advantage or benefit not enjoyed by other respondents.

1.13 BINDING OFFER:

Respondent's submission of an ELOR Package will be considered a binding offer to perform the required services, assuming all terms are negotiated satisfactorily. The submission of an ELOR Package shall be taken as prima facie evidence that the respondent has familiarized itself with the contents and requirements of this Solicitation.

1.14 MANDATORY PRE-PROPOSAL MEETING:

Attendance at the Pre-Proposal Meeting is mandatory. Any respondent failing to attend may be deemed non-responsive and eliminated from further consideration, at the discretion of THEA. The purpose of the Pre-Proposal Meeting is to provide a forum for THEA to discuss with all respondents the proposed Services, and instructions for submitting proposals. In the event that any discussions at the Pre-Proposal Meeting require official additions, deletions, or clarifications of the Request for Proposal, THEA will issue a written addendum to the solicitation as THEA determines is appropriate. No oral representations or discussions which take place at the Pre-Proposal Meeting will be binding on THEA. Respondents shall direct all questions to THEA's Procurement Office:

Procurement@tampa-xway.com

1.15 COST OF PREPARATION:

The cost of preparing an ELOR Package for this solicitation shall be borne entirely by the respondent.

1.16 DELIVERY OF ELOR PACKAGE:

The deadline for delivery of respondent's ELOR is no later than the date and time stated for the **Deadline for Submitting Expanded Letters of Response (ELOR) Package** referenced in Paragraph 1.4, Schedule of Events.

The delivery of respondent's ELOR Package to THEA prior to the deadline is solely and strictly the responsibility of the respondent.

All ELOR Packages shall be delivered using the method stated in the **Deadline for Submitting Expanded Letters of Response (ELOR) Package** referenced in Paragraph 1.4, Schedule of Events.

All ELOR Packages must be submitted in accordance with the instructions set forth within the Solicitation Instructions and Submittal Documents and specifically in accordance with the requirements of Section B.

Any ELOR Package received after the date and time stated for the **Deadline for Submitting Expanded Letters of Response (ELOR) Package** referenced in Paragraph 1.4, Schedule of Events, will not be considered.

1.17 OPENING OF ELOR PACKAGES:

ELOR Packages will be received and opened on the date and time and at the location specified for the **Deadline for Submitting Expanded Letters of Response (ELOR) Package** referenced in Paragraph 1.4, Schedule of Events. The Procurement Office will conduct examinations of ELOR Packages for responsiveness to requirements of the RFP. Those determined to be non-responsive and not responsible will be automatically rejected. Responsive Packages will be delivered to the Evaluation Committee to be evaluated.

1.18 ELOR EVALUATIONS:

Respondents will be evaluated preliminarily on whether the respondent is responsible and responsive to this solicitation and then evaluated based on criteria that will be used by THEA for final ranking of the respondents.

An Evaluation Committee consisting of representatives of THEA will be established to review and evaluate all ELOR Packages submitted in response to this solicitation. THEA reserves the right to request additional information and clarification of any information submitted, including any omission from the original response.

The Evaluation Committee will meet to confirm their scores of the ELOR Packages and Shortlist a minimum of three (3) respondents on the date, time and at the location stated for the **Evaluation Committee meets to confirm ELOR Package scores** referenced in Section A, Paragraph 1.4, Schedule of Events. In the event the Authority receives fewer than three proposals, all respondents will be shortlisted. Respondents are not required to attend; however, the meeting is open to the public.

Criteria for evaluating the ELOR Packages to shortlist respondents are as follows:

	SHORTLIST EVALUATION CRITERIA	Maximum Points
1.	**Understanding the Scope** The respondent shall demonstrate their understanding of the scope of services including any unique issues involved in the project and their ability to meet the challenges. Assumptions (if any) should be clearly stated.	30
2.	**Qualifications and Experience of Key Personnel** The respondent shall discuss the availability of qualified staff. • Provide the name of the proposed Design Project Engineer, Lead Bridge Engineer, Lead Roadway Engineer, Lead Drainage Engineer and names and roles of other key personnel • Provide the credentials/expertise/experience of the Design Project Engineer, Lead Bridge Engineer, Lead Roadway Engineer, Lead Drainage Engineer Project Administrator/Project Engineer and other key individuals who are specifically licensed and/or certified to perform and/or oversee the work detailed in the scope of services • Explain the organization of its team and functional responsibilities of each subconsultant. Discuss the staffing quality and availability, individuals experience on similar projects	30
3.	**Quality Control/Quality Assurance (QC/QA)** The respondent shall demonstrate their implementation and commitment to a Quality Assurance Program that is specific to this project and meets the requirements of the scope of services. • Discuss key aspects of the respondent's QC/QA program that are most important to its success on this project. • Present their project review and QA/QC approach. Include discussion on types of documents to be reviewed, frequency of reviews, official and unofficial reviews • Discuss project QA/QC responsibilities	15
4.	**Communication** The respondent will discuss THEA's ability to communicate with the respondent's Project Manager and Key Staff and their commitment in responding to THEA. ▪ Discuss their approach to timely review and submittal of contractor invoices, THEA personnel action requests, and committing requested personnel in a timely manner. The respondent shall discuss their communication with their subconsultants. The respondent will discuss their approach to communicating with THEA and with the public. ▪ Discuss their approach to communications with the other agencies and how the communication will be handled between them and THEA.	15
5.	**Workload:** The respondent shall discuss its recent, current and projected workload, as well as, workforce availability to undertake THEA work. • Identify other current and projected work that the respondent has or is pursuing and their impact on the staffing for this project	10
	TOTAL:	**100**

The 100 total points are for scoring of the shortlist firms only and will not carry over to the Evaluation Criteria in Section 1.19.

After ranking of the respondents by the Evaluation Committee, the results will be posted no later than the date, time and at the locations stated for the **Posting of Notice of Intended Shortlist** referenced in Section A, Paragraph 1.4, Schedule of Events.

The ranking of respondents based on the Evaluation Committee's evaluation will be presented to THEA's Board of Directors for consideration and approval, with a recommendation, that the top ranked respondents (minimum of three (3)) be shortlisted to advance to the Oral Presentations in Paragraph 1.18.

1.18 ORAL PRESENTATIONS:

Interviews will be used to select the successful respondent from an initial shortlist. After the Oral Presentation, the Evaluation Committee will ask questions that will assist in evaluating the capability of the respondent and key staff to provide the desired Services. Attendance at the Oral Interview is limited to six (6) attendees. Only the respondent's project manager and other key staff providing the Services should be present.

The order of the presentations will be established by random drawing by the Procurement Office. A representative of the Procurement Office shall facilitate the interviews, be the timekeeper during the meeting, and ensure the respondents adhere to the time constraints set forth in this section.

Each shortlisted respondent will be allotted 30 minutes for their oral presentations, followed by a 45-minute Question-and-Answer session by the Evaluation Committee and Technical Advisors. Approximately 5 minutes each are allowed for set-up and breakdown. Set-up and breakdown are not included in the time limit for oral presentation for Q&A and are not timed. Questions can both be standard (asked of all firms) and clarifying (related to a point addressed by the Consultant in the oral presentation).

Shortlisted Consultants will be instructed that handouts at the oral presentation will be restricted to copies of slides from the PowerPoint presentation. Shortlisted firms should number the slides included in the presentation. Additionally, an altered 4' x 6' maximum aerial board may be utilized in the oral presentation by the Consultant. Split views are allowed, as long as the overall total size does not exceed 4' x 6'. If the consultant wishes to provide a copy of the board, the board shall be reduced in size to one 11 x 17 aerial plot and shall be provided to the Procurement Department on a flash drive along with the presentation slides at the Oral Presentation. Consultant shall not include any additional documentation other than the slides to be presented in the actual oral presentation in the handout. The handout of the slide presentation will be limited in size to 8.5" x 11". The Procurement Office will also distribute to the Evaluation Committee as an electronic document. Consultants will be assessed/scored based on the information verbally communicated in the Oral Presentation. Evaluation Committee are not obligated to review slides after an oral presentation has occurred. Consultants are permitted to refer to paper notepads or index cards with notes during their oral presentations. The notes will not be reviewed or evaluated by the Evaluation Committee... Consultants are not permitted the use of smartphones, laptops, and tablets during the Interview.

1.19 EVALUATION CRITERIA:

The Evaluation Committee will meet to confirm their scores of the Oral Presentations and final ranking of the respondents on the date, time and at the location stated for **Evaluation Committee Meets to Confirm Scores and Final Ranking of Respondents** referenced in

Section A, Paragraph 1.4, Schedule of Events. Respondents are not required to attend; however, the meeting is open to the public.

The Oral Presentations will be scored by the Evaluation Committee per the criteria provided below. The maximum points to be earned in the evaluation are one hundred (100) points per evaluator.
The evaluation committee reserves the right to request additional information and clarification of any information submitted, including any omission from the original response.

The following	ORAL PRESENTATIONS EVALUATION CRITERIA	Maximum Points
1.	**Understanding the Scope/Innovative Approach** The respondent shall demonstrate their understanding of the scope of services including any unique issues involved and their ability to meet the challenges of providing planning services for emerging technologies analysis. Innovative approaches to address design issues should be highlighted. Assumptions (if any) should be clearly stated.	25
2.	**Qualifications and Experience of Key Personnel** The respondent shall discuss the availability of qualified staff. • Provide the name of the proposed Project Manager, Senior Project Engineer/Planner, Project Administrator/Project Engineer and names and roles of key personnel by function. • Provide the credentials/expertise/experience of the key staff, to include Senior Project Engineer, Project Administrator/Project Engineer and other key individuals who are expected to perform and/or oversee the work detailed in the scope of services • Explain the organization of the team, how this team can meet the unpredictable needs emerging technology may create functional responsibilities of each subconsultant. Discuss the staffing quality and availability, individuals experience on similar projects	20
3.	**Overall Responses to Questions** The respondent ~~firm~~ shall demonstrate their capabilities and commitment to the project and to meet the requirements of the scope of services. • Provide clear and detailed responses to the questions. • Provide specific answers to the question asked. ~~Provide specific answers to the question~~ •	35
4.	**Communications QA/QC** The respondent will discuss their team's ability to communicate with THEA Project Manager and present to THEA Executive Director and/or THEA Board of Directors summaries and analysis of the impacts, benefits, and opportunities for specific technologies. ▪ Discuss their approach to communications with THEA and how communication and presentations will be handled. ▪ Ability to support THEA in provision of technical expertise if needed to discuss impacts to THEA projects with other agencies, companies, developments or individuals. ▪ Discuss key aspects of the firm's QC/QA program that are most important to the success on this type of project, as emerging technologies can introduce unexpected requirements. ▪ Discuss project QC/QA responsibilities. ▪	10
5.	**Workload:** The respondent shall discuss its recent, current and projected workload, as well as, workforce availability to undertake THEA work. • Identify other current and projected work that the respondent has or is pursuing and their impact on the staffing for this project	10
	TOTAL:	**100**

After ranking of the respondents Oral Presentations by the Evaluation Committee, the results will be posted no later than the date, time and at the locations stated for the Posting of Notice of Intended Final Ranking referenced in Section A, Paragraph 1.4, Schedule of Events.

1.20 FINAL SELECTION:

The ranking of respondents based on the Evaluation Committee's evaluation will be presented to THEA's Board of Directors for consideration and approval with a recommendation that the highest-ranked respondent be selected on the date, time and at the location stated for the **Board Approval of Final Ranking and Award of Contract** referenced in Section A, Paragraph 1.4, Schedule of Events. Respondents are not required to attend; however, the meeting is open to the public.

THEA's Board of Directors has the right to correct any errors in the evaluation and selection process that may have been made. THEA is not obligated to award the contract and THEA's Board of Directors may decide to reject all proposals.

After approval of the final ranking of the respondents and award of the contract by THEA's Board of Directors, the results will be posted no later than the date, time and at the locations stated for the **Posting of Notice of Board Approval of Final Ranking and Award of Contract** referenced in Section A, Paragraph 1.4, Schedule of Events.

1.21 AWARD OF CONTRACT:

The award of the contract by THEA's Board of Directors, if made, will be within one hundred and twenty (120) days after the opening of the ELOR Packages.

Upon approval of the final ranking by THEA Board of Directors, THEA will begin negotiations with the top ranked respondent. Should THEA be unable to negotiate a contract with the top ranked respondent that is satisfactory to THEA, in its sole and absolute discretion, negotiations shall be terminated, and THEA shall then undertake negotiations with the next top ranked respondent until a satisfactory contract is achieved if approved by THEA's Board of Directors. Negotiations will include scope clarification, discussion of miscellaneous fees and other charges, insurance requirements and any other negotiable terms and conditions of the contract. Once THEA and the selected respondent have negotiated a satisfactory agreement THEA may then enter into a contract with the selected respondent.

1.22 SOLICITATION RESULTS:

Preliminary results will be available on the date, time and at the location specified for the **Posting of Notice of Intended Final Ranking** referenced in Paragraph 1.4, Schedule of Events.

Final results will be available on the date, time and at the location specified for the **Posting of Notice of Board Approval of Final Ranking and Award of Contract** referenced in Paragraph 1.4, Schedule of Events.

2. GENERAL CONDITIONS:

2.1 QUALIFICATIONS OF RESPONDENT:

Each Respondent shall *be a FDOT Pre-Qualified Consultant for Design Major Work Types 3.3, 4.2.1 and 4.2.2, along with Minor Work Types 2.0, 3.2, 4.1.1, 4.1.2, 6.1, 6.2, 6.3.1, 6.3.2, 6.3.3, 7.1, 7.2, 7.3, 8.1, 8.3, 8.4, 9.1, 9.1 and 9.4.1.*

2.2 PERSONNEL:

ELOR Packages submitted for this solicitation will be evaluated, in part, based upon the qualifications of the respondent's team and upon the qualifications of key personnel

presented in the ELOR Package.

By submitting an ELOR Package, the respondent agrees and acknowledges that it will provide the full complement of staff required to perform the Services, including the specific individuals named in the respondent's proposal.

The specific key personnel named in the respondent's ELOR Package shall remain assigned for the duration of the Services, unless otherwise agreed to in writing by THEA.

After the award of the resulting contract from this solicitation, in the event that the selected respondent proposes to substitute any of the key personnel, the individual(s) proposed as substitute(s) must demonstrate equal or superior qualifications and experience as required to successfully perform such duties. THEA shall have the sole right to determine whether key personnel proposed as substitutes are accepted and qualified to work on the Services.

2.3 AVAILABILITY OF PERSONNEL:

Personnel described in the respondent's ELOR Package shall be available to perform the Services as described. All personnel shall be considered to be, at all times, the employees, or agents of the respondent and not employees or agents of THEA.

2.4 PROJECT MANAGER:

The respondent shall designate from its staff a qualified "Project Manager" having experience in performing and/or administering similar types of work as this engagement.

The "Project Manager" shall be the single point of contact as liaison with THEA during the procurement process and during performance of the awarded contract. THEA desires that the Project Manager be located in the Tampa Bay area to be able to respond to requests and/or meetings in a timely manner.

The "Project Manager" shall be the responsible person in charge of coordinating day to day work activities on task assignments, directing consultant's work forces, reports, day to day administrative matters, coordinating the SBE policy to achieve the established goals and other related items necessary to fulfill the requirements of the contract.

2.5 CONTRACT:

The selected respondent shall enter a contract with THEA for these Services with the terms and conditions as specified within this Solicitation's Instructions and Submittal Document.

2.6 CONTRACT DURATION:

The contract duration will be for 900 days.

2.7 CONTRACT ASSIGNMENT:

The selected respondent may not make any assignments of their obligations resulting from this solicitation without the prior written authorization of THEA.

2.8 NON-EXCLUSIVITY OF CONTRACT:

The selected respondent understands and agrees that any resulting contractual relationship is non-exclusive and THEA reserves the right to seek similar or identical services elsewhere if deemed in the best interest of THEA and to cancel any contract with

a 30-day written notice from THEA.

2.9 COMPLIANCE:

THEA has the right to reject the ELOR Package or annul the award in the event respondent's ELOR Package does not comply with any of the requirements outlined herein.

2.10 OWNERSHIP OF DOCUMENTS:

All documents resulting from this procurement process and subsequent contract will become the sole property of THEA.

2.11 PUBLIC RECORDS LAW:

In accordance with *Florida Statutes* Chapter 119, and, except as may be provided by other applicable State and Federal Laws, all respondents should be aware that this solicitation and all the responses thereto are in the public domain and are available for public inspection.

The respondents are requested, however, to identify specifically any information contained in their ELOR Package which they consider confidential and/or proprietary and which they believe to be exempt from disclosure, citing specifically the applicable exemption law.

All ELOR Packages received in response to this solicitation will become the property of THEA and will not be returned.

2.12 INDEMNIFICATION (GENERAL LIABILITY):

The contract will contain an indemnification clause wherein the selected respondent agrees to indemnify and hold harmless THEA Board of Directors, THEA, its members and its officers, representatives and employees from any claim, loss, suit, action, demand, liability, damage, cost, charge, and expense, including but not limited to attorney and paralegal fees (at trial and on appeal), to the extent caused by any negligent act, error, omission, recklessness, or intentional misconduct by the respondent, its agents, employees, or subcontractors arising out of the execution, performance nonperformance of the duties of the respondent under this solicitation, the enforcement of this solicitation, or resulting from the activities of the respondent in any way connected to this solicitation.

2.13 ITENTIONALLY LEFT BLANKN

2.14 PUBLIC ENTITY CRIMES STATEMENT:

A person, affiliate, or corporation who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, consultant, subcontractor, or contractor under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for a period of 36 months from the date of being placed on the convicted vendor list.

Any such person, affiliate, or corporation wishing to propose on this solicitation must include

a current sworn statement pursuant to Section 287.133 (1) Florida Statutes, on public entity crimes. A copy of the required **Form 2 - PUBLIC ENTITY CRIMES** is contained in Section C.

THEA may make inquiries regarding alleged convictions or public entity crimes. The failure of the respondent to promptly supply information in connection with an inquiry or the failure to comply with the requirement contained within this section will cause the rejection of any submitted bid, offer, response, or proposal, at the sole discretion of THEA.

2.15 INSURANCE REQUIREMENTS:

For the term of these Services and agreement, during contract award the respondent shall procure and maintain insurances of the types and limits specified in **ATTACHMENT 4**, **INSURANCE REQUIREMENTS, COVERAGES AND LIMITS**.

2.16 BID SECURITY:

A bond is not required for this solicitation.

2.17 PAYMENT AND PERFORMANCE BOND:

A Payment and Performance Bond is not required for this solicitation.

2.18 CONFLICTS OF INTEREST:

The respondent shall state if it represents clients that may present conflicts or potential conflicts with representation of THEA. Respondent shall provide a list of any potential conflicts by description. Respondent need not identify a particular client. If conflicts are listed, the respondent shall address how these conflicts will be resolved. A copy of the required **CONFLICTS OF INTEREST STATEMENT** is contained in Section C as **Form 5**.

2.19 SCRUTINIZED COMPANIES:

Section 287.135 of the *Florida Statutes* prohibits governmental entities from contracting for goods and services of $1 million or more with companies with Activities in Sudan List, (b) it is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, (c) it is not on the Scrutinized Companies with Activities in Iran Terrorism Sectors List, (d) that it does not have business operations or is engaged in business in Cuba or Syria, and (e) that it is not engaged or engaging in a Boycott of Israel, and that all such certifications were true at the time it submitted its ELOR Package.

A company that, at the time of bidding or submitting a proposal for a new contract is on the Scrutinized Companies with Activities in Sudan List, (b) it is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, (c) it is not on the Scrutinized Companies with Activities in Iran Terrorism Sectors List, (d) that it does not have business operations or is engaged in business in Cuba or Syria, and (e) that it is not engaged or engaging in a Boycott of Israel, is ineligible for, and may not bid on, submit a proposal for, or enter into or renew a contract with an agency or local government entity for goods or services of $1 million or more.

Respondents must certify that it is not listed on the Scrutinized Companies with Activities in Sudan List, (b) it is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, (c) it is not on the Scrutinized Companies with Activities in Iran Terrorism Sectors List, (d) that it does not have Business operations or is engaged in business in Cuba or Syria, and (e) that it is not engaged or engaging in a Boycott of Israel.

The resulting contract from this solicitation shall contain a provision that allows for immediate termination of the contract by THEA if the respondent is found to have submitted a false statement or if the respondent during the term of the resulting contract is placed on the Scrutinized Companies with Activities in Sudan List, (b) it is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, (c) it is not on the Scrutinized Companies with Activities in Iran Terrorism Sectors List, (d) that it does not have business operations or is engaged in business in Cuba or Syria, and (e) that it is not engaged or engaging in a Boycott of Israel.

Respondents are required to complete and submit the Certification Regarding Scrutinized Companies Lists with its ELOR Package. A copy of the required **Form 5 - CERTIFICATION REGARDING SECURITIZED COMPANIES LIST** is contained in Section C.

2.20 E-VERIFY SYSTEM:

The respondent shall comply with all applicable provisions of sections 448.09 and 448.095, Florida Statutes, as may be amended. The definitions in section 448.095(1), Florida Statutes, as may be amended, apply to this solicitation. The respondent shall register with and use the U.S. Department of Homeland Security's E-Verify system to verify the work authorization status of all employees of respondent. The respondent may not enter into a contract with a subcontractor to perform work under the awarded Respondents agreement unless and until the subcontractor registers with and uses the E-Verify system. If the respondent enters into a contract with a subcontractor to perform work, the respondent must obtain a properly executed affidavit from the subcontractor stating that the subcontractor does not employ, contract with, or subcontract with an unauthorized alien. The respondent must maintain copies of all such affidavits for the duration of these Services. THEA may terminate the executed agreement for cause if THEA determines that Respondent or respondent's subcontractor has not complied with any applicable provision of sections 448.09 or 448.095, Florida Statutes, as may be amended. THEA will terminate the agreement for cause if THEA has a good faith belief that Respondent has knowingly violated subsection 448.09(1), Florida Statutes, as may be amended. If THEA has a good faith belief that a subcontractor knowingly violated section 448.09(1), Florida Statutes, as may be amended, but THEA determines that respondent otherwise complied with section 448.09(1), Florida Statutes, as may be amended, THEA will notify the respondent as such, and the respondent must immediately terminate the respondent's contract with said subcontractor. If the executed agreement is terminated under section 448.095(c), F.S.: (a) such termination is not a breach and may not be considered as such; (b) respondent may not be awarded a public contract for at least 1 year after the date on which the agreement is terminated; and (c) respondent is liable for any additional costs incurred by THEA as a result of the termination of the agreement.

The selected respondent and all its subconsultants shall provide proof of registration and required certificate (as of January 1, 2021) in the E-Verify system to THEA upon execution of a contract.

2.21 NOTICE OF PROTEST:

2.21.1 Protests Prior to Notice of Award:

Any person wishing to protest THEA's procurement process or its solicitation documents for the procurement of services must file a Notice of Intent to Protest accompanied by a protest bond in the amount of $5,000 or for such amount as set forth in this solicitation documents within 72 hours of THEA's publication of the procurement documents, (excluding Saturdays, Sundays, and legal holidays). Within five (5) calendar days of the filing of the Notice of Intent to Protest and posting of bond,

the protesting party must file a written protest stating with particularity the facts and law upon which the protest is based. The protest should: (1) state the specific provision(s) of the bid or proposal Package or process applicable to the protest; (2) state the specific manner or method in which the protesting party alleges that THEA erred in its interpretation or implementation of its procurement process, procedures or statutory provisions; (3) state the basis upon which the protest is premised; and (4) state the protesting party's position and arguments of law, including any evidence supporting the position.

2.21.2 Protests After Notice of Award:

Any person wishing to protest THEA's actions leading up to a notice of recommendation to either reject any or all bids, or to make a selection or award ("Notice of Decision"), must file a Notice of Intent to Protest, accompanied by a protest bond in the amount of $5,000, or for such amount as shall be set forth in this procurement documents with THEA within 72 hours of THEA's publication of its Notice of Decision, (excluding Saturdays, Sundays, and legal holidays). The protest bond required herein shall be in addition to the Protest Bond referenced in Paragraph 2.27.1 above. Within five (5) calendar days of the filing of the Notice of Intent to Protest and posting of bond, the protesting party must file a written protest stating with particularity the facts and law upon which the protest is based. The protest should: (1) state the specific provision(s) of the bid Package or process applicable to the protest; (2) state the specific manner or method in which the protesting party alleges that THEA erred in its interpretation or implementation of its procurement process, procedures or statutory provisions; (3) state the basis upon which the protest is premised; and (4) state the protesting party's position and arguments of law, including any evidence supporting the position.

2.22 EXPANDED LETTERS OF RESPONSE (ELOR) PACKAGE REVIEW:

To assist respondents in preparing and submitting a complete ELOR Package, a checklist is included for respondent's use.

The **RESPONDENT'S Expanded Letters of Response (ELOR) PACKAGE REVIEW CHECKLIST** is contained in Section C as **Form 7**.

2.23 RESTRICTION ON RESPONDENTS ELIGIBILITY TO COMPETE FOR THIS PROJECT

A respondent, its affiliate, or sub-consultant that is under contract with THEA for the development of this solicitation cannot be part of a respondent's team proposing to this solicitation.

[END OF SECTION A – GENERAL INFORMATION AND GENERAL CONDITIONS]

SECTION B

PROJECT INFORMATION AND RESPONSE REQUIREMENTS

1. DESCRIPTION OF PROJECT AND SCOPE OF SERVICES:

1.1 DESCRIPTION OF PROJECT:

The Scope of Services describes and defines the Services which are required for contract administration, inspection, and materials sampling and testing for the construction project listed below.

1.2 SCOPE OF SERVICES:

A Scope of Services is attached hereto **Attachment 1 -** Scope of Services.

2. RESPONSE REQUIREMENTS:

Respondents are advised to carefully follow the instructions as contained within this section in order to be considered fully responsive to the solicitation. Respondents are further advised that lengthy or wordy submissions are not necessary. Responses should be prepared simply and economically, providing a straight-forward, concise description of the respondent's ability to fulfill the requirements of these Services.

2.1 EXPANDED LETTERS OF RESPONSE (ELOR) PACKAGE:

ELOR Packages must be submitted using the method stated in the **Deadline for Submitting Expanded Letters of Response (ELOR*)* Package** referenced in Section A, Paragraph 1.4, Schedule of Events.

Submittal Deadline - The deadline for delivery of respondent's ELOR Package is no later than the date and time stated for the **Deadline for Submitting Expanded Letters of Response (ELOR*)* Package** referenced in Section A, Paragraph 1.4, Schedule of Events.

Submittal Quantities - One (1) electronic copy of the ELOR Package in Adobe PDF, no larger than 8 MB, shall be delivered to THEA by the date, time, and at the location stated for the **Deadline for Submitting Expanded Letters of Response (ELOR*)* Package** referenced in Section A, Paragraph 1.4, Schedule of Events.

Format - The ELOR Package should be submitted on 8 ½-inch by 11-inch pages unless otherwise authorized. Each page should be typewritten and single-spaced with a font size of 10. Text should be presented single-sided on each separate page. Graphics and photographs shall be held to a minimum.

ELOR Packages must be submitted as a single document attached to an E-Mail, submitted electronically to the indicated address as referenced in Section A, Paragraph 1.4, Schedule of Events. The ELOR Packages must not exceed 8 MG in size in Adobe PDF format and unzipped. Failure to comply with the submittal requirements may cause the ELOR Packages to be considered non-responsive.

Signature - All ELOR Packages must be either manually or digitally signed by an authorized officer, principal or partner (as applicable).

Content - In order to ensure a uniform review process and to obtain the maximum degree of understanding of the respondent's abilities, experience and qualifications, it is **required** that Respondent's ELOR Packages Package be organized, tabbed and submitted as follows:

1. Table of Contents

2. Expanded Letters of Response (ELOR)

A maximum of **five (5) pages** will be allowed for the "Expanded Letter of Response" element. The five-page limit does not include Organizational Chart, Resumes, Forms, or Staff hour Estimate. The ELOR shall contain the following:

a) Minimum Requirements:
- State THEA Project Name and Number;
- Name of Respondent;
- Respondent Address;
- Respondent Telephone Number;
- Respondents Project Manager's Name (Project Manager will be considered the primary contact for the respondent during the Procurement process **and** during performance of the project);
- Project Manager's Address;
- Project Manager's Telephone Number;
- Project Manager's Email Address;
- Statement indicating Project Manager's number of years' experience in support of this solicitation or similar services;
- A brief statement of interest;
- A brief statement of qualifications of respondent's team;
- Statement confirming respondent's ability to meet the requirements of this solicitation.
- Statement confirming respondent and its Project Manager providing the services meets the minimum qualifications and minimum requirements of this solicitation.

b) Past Performance:

Respondent's past performance and references for specialized services related to planning, evaluating, and determining implementation steps for innovative and emerging technologies.
Respondent must provide the owner's name, title, phone number and email address for references listed for past performance.

c) Respondent's Understanding of the Scope:

Respondents detailed approach to provide services and willingness and ability to meet and adhere to schedules and budgets

Respondents detailed approach to provide services and willingness and ability to meet and adhere to technical requirements, schedules and

budgets. Respondent shall include all assumptions and any innovative design concepts.

d) Respondent's Quality Assurancel/Quality Control (QA/QC) Plan:

Respondents shall provide details of their QA/QC plan and their commitment to ensure proper implementation of the plan by all project staff.

e) Respondents detailed approach to provide services and willingness and ability to meet and adhere to schedules and budgets:

Respondents detailed approach to communicating with THEA staff, THEA GEC staff and other project participants to ensure successful coordination of efforts to remain on schedule and provide THEA with the required design documents.

f) Respondents Workload:

Respondents shall discuss its recent, current and projected workload, as well as workforce availability to undertake THEA work. Respondent shall identify current and projected work, including pursuits with proposed staff members for this project.

3. Organizational Chart

Attach an Organizational Chart that includes the following:

- Identify key members of Respondent's team including the proposed Project Manager and names and roles of other key personnel;
- State respondent name for key members of respondent's team (if from a Subcontractor);
- State office location (city and state) for key members of respondent's team.

Only those members of the team who will **actively** participate under the potential work assignments should be included. Individuals who would be available on an "as-needed" basis should be omitted.

A maximum of 1 page will be allowed for the "Organization Chart" element. The Organizational Chart may be submitted on paper sized larger than 8½" x 11" if folded neatly to 8½" x 11".

4. Resumes

Include one (1) page resumes for the Project Manager and the key active participants of Respondent's team.

5. Forms

The following forms are required to be completed, signed, notarized when indicated and included in respondents' ELOR Package.

- **Form 1 - Declaration of Respondent**
- **Form 2 - Public Entity Crimes Form**
- **Form 3 - Conflicts of Interest Statement**
- **Form 4 - Certification Regarding Scrutinized Companies List**

- **Form 5 – Acknowledgement of Receipt of Addendum**
- **Form 6 - Respondent's Response Package Review Checklist**

6. Staff hour Estimate

Provide a one-page summary sheet indicating estimated staff hours for the respondent and all subconsultants. Do not include additional narrative content. Examples of acceptable and unacceptable content are provided at the following link.

https://www.fdot.gov/procurement/SubmittalExamples.shtm

[END OF SECTION B – PROJECT INFORMATION AND RESPONSE REQUIREMENTS]

SECTION C

REQUIRED FORMS

Required forms to be completed, signed, notarized when indicated and included in Respondent's ELOR Package:

FORM 1: Declaration of Respondent
FORM 2: Public Entity Crimes Form
FORM 3: Conflicts of Interest Statement
FORM 4: Certification Regarding Scrutinized Companies Lists
FORM 5: Acknowledgement of Receipt of Addendum
FORM 6: Respondent's Response Package Review Checklist

Note: Failure to submit the required forms may result in respondent's ELOR Package being determined non-responsive and rejected.

FORM 1

DECLARATION OF RESPONDENT

1. Name of Respondent: _____
(RESPONDENT, CORPORATION, BUSINESS OR INDIVIDUAL)

2. Name of Contact Person: _____

3. Our local (to Tampa, Florida) business and mailing address is: _____

_____

4. Professional License Number is:_____

5. The Project Manager assigned to this contract has a current Professional License Number of _____ issued by the State of _____.

6. Federal I.D. Number: _____

7. Our primary business address is: _____

8. Our present business phone number is: _____

9. Our present fax number is: _____

10. Our present e-mail address is: _____

11. Our business has been operating under its present name since: _____

The below named Respondent affirms and declares:

(1) That the Respondent has contractual capacity and that no other person, Respondent, or corporation has any interest in this response.

(2) That this response is made without any understanding, agreement, or connection with any other person, Respondent or corporation making a response for the same purpose, and is in all respects fair and without collusion or fraud.

(3) That the Respondent is not in arrears to the Tampa-Hillsborough County Expressway Authority (THEA) upon debt or contract and is not a defaulter, as surety or otherwise, upon any obligation to THEA.

(4) That the Respondent is not in litigation or been disbarred from doing business with THEA.

(5) That no officer or employee or person whose salary is payable in whole or in part from THEA Treasury is, shall be, or become interested, directly or indirectly, as surety or otherwise in this response; in the performance of the contract; for the supplies, materials, equipment, and work or labor to which they relate; or in any portion of the profits thereof.

(6) That by submitting a proposal, the Respondent agrees and acknowledges that it will provide the full complement of staff required to perform the scope of work, including the specific individuals named in the its proposal and the specific key personnel named in its proposal shall remain assigned for the duration of the project, unless otherwise agreed to in writing by THEA.

(7) By submitting this response, Respondent accepts and acknowledges that Respondent can comply with all terms and conditions set forth in the solicitation including, without limitation, the insurance requirements and the indemnification provisions.

(8) The person signing hereby warrants that they are duly authorized to sign and bind on behalf of the Respondent.

IN WITNESS WHEREOF, this response is hereby signed and sealed as of the date indicated below.

ATTEST:	**RESPONDENT:**
_____	_____
(Witness Signature)	Respondent Name
_____	By: _____
(Printed Name of Witness)	(AUTHORIZED SIGNATURE)
_____	_____
(Witness Signature)	(Printed Name of Signer)
_____	_____
(Printed Name of Witness)	(Title of Signer)
	_____
	(Date Signed)

NOTE: The person signing for the Respondent shall in his/her own handwriting, sign the Company's name, his/her own name and his/her title. Where the person signing for a corporation is <u>other</u> than the President or Vice-President, he/she must by affidavit, show his/her authority to bind the Company. Said affidavit shall be attached to this Declaration of Respondent.

STATE OF _____

COUNTY OF _____

Sworn to (or affirmed) and subscribed before me this _____ day of _____20____, by

_____. (Name
of Individual Signing)

_____
Signature of Notary Public

My Commission Expires: _____

[Apply Notary Seal Here]

[END OF FORM 1 - DECLARATION OF RESPONDENT]

FORM 2

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

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 Tampa-Hillsborough County Expressway Authority

by _____
[print individual's name and title]
for _____
[print name of entity submitting sworn statement]
whose business address is _____
and (if applicable) its Federal Employer Identification Number (FEIN) is _____
(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____.)

2. I understand that a "public entity crime" as defined in a Paragraph 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 of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of 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 Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjunction 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 an "affiliate" as defined in Paragraph 287.133 (1)(a), Florida Statutes, means:

i. A predecessor or successor of a person convicted of a public entity crime; or

ii. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of 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 for fair market value under an arm's length agreement, shall be prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power

to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on the information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. **[indicate which statement applies.]**

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

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

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

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (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 OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

_____
[signature]

Sworn to and subscribed before me this _____day of _____, 20_____.
Personally known _____ OR Produced identification ____
Notary Public – State of _____
My commission expires _____
(Type of Identification)

(Printed, typed or stamped Commissioned Name of Notary Public)

(END OF FORM 2- PUBLIC ENTITIES CRIME STATEMENT)

FORM 3

CONFLICTS OF INTEREST STATEMENT

Check one of the boxes below:

☐ To the best of our knowledge, the undersigned respondent has no potential conflict of interest due to any other clients, contracts, or property interest for this solicitation and project.

OR

☐ The undersigned respondent, by attachment to this form, submits information which **may** be a potential conflict of interest due to other clients, contracts or property interest for this solicitation and project.

RESPONDENT:

By: _____
(AUTHORIZED SIGNATURE)

_____
(Printed Name of Signer)

_____
Title of Signer)

_____
(Date Signed)

[END OF FORM 3 – CONFLICTS OF INTEREST STATEMENT]

FORM 4

CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS

This certification is required pursuant to Florida Statute, Section 287.135.

By executing this form and each and every renewal hereof (if renewal is separately provided for herein), pursuant to section 287.135, Florida Statutes, Consultant certifies, represents, and warrants that: (a) it is not on the Scrutinized Companies with Activities in Sudan List, (b) it is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, (c) it is not on the Scrutinized Companies with Activities in Iran Terrorism Sectors List, (d) that it does not have Business operations or is engaged in business in Cuba or Syria, and (e) that it is not engaged or engaging in a Boycott of Israel, and that all such certifications were true at the time it submitted its bid or proposal for this Agreement, as of the Effective Date of this Agreement, and as of the effective date of any renewal of this Agreement. Notwithstanding anything contained in this Agreement to the contrary, the Authority may terminate this Agreement immediately for cause if: (1) Consultant is found to have submitted a false certification regarding (a) – (e) above in accordance with section 287.135(5), Florida Statutes, (2) Consultant is found to have been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or is or has been engaged in Business operations in Cuba or Syria or a Boycott of Israel, or (3) Consultant is found to have been placed on a list created pursuant to section 215.473, Florida Statutes, relating to scrutinized active business operations in Iran. Such termination shall be in addition to any and all remedies available to the Authority at law or in equity. The terms "Boycott of Israel" and "Business operations" used in this section are defined as in Section 287.135, Florida Statutes. The Lists referred to in this section are those Lists in and maintained pursuant to section 287.135, Florida Statutes.

Firm: _____ **Firm FID or EIN:** _____

Address: _____

City: _____ **State:** _____ **Zip:** _____

I hereby warrant that I am duly authorized to sign and bind on behalf of the company listed above as the "Firm".

I hereby certify and affirm that the company listed above as the "Firm" certifies, represents, and warrants that:
(a) it is not on the Scrutinized Companies with Activities in Sudan List, (b) it is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, (c) it is not on the Scrutinized Companies with Activities in Iran Terrorism Sectors List, (d) that it does not have Business operations or is engaged in business in Cuba or Syria, and (e) that it is not engaged or engaging in a Boycott of Israel, and that all such certifications were true at the time it submitted its bid or proposal for this Agreement, as of the Effective Date of this Agreement, and as of the effective date of any renewal of this Agreement. I understand pursuant to Florida Statue, Section 287.135, the submission of a false certification may subject the Respondent/Bidder to civil penalties, attorney's fees and/or costs.

Firm:

By: _____ **(Authorized Signature)**

_____

(Printed Name of Signer)

_____

(Title of Signer)

_____

(Date Signed)

[END OF FORM 4 – CERTIFICATION REGARDING SCRUTINIZED COMPANIES LIST]

FORM 5

ACKNOWLEDGEMENT OF RECEIPT OF ADDENDUM

Were Addendum issued on this Solicitation?

☐ Yes

☐ No

I (We) hereby acknowledge receipt of the following Addendum/Addenda issued in reference to this solicitation by listing the Addendum by number, date and signing the form:

Addendum	_____	Date:	_____
Addendum	_____	Date:	_____
Addendum	_____	Date:	_____
Addendum	_____	Date:	_____
Addendum	_____	Date:	_____
Addendum	_____	Date:	_____

RESPONDENT:

By: _____
(AUTHORIZED SIGNATURE)

_____
(Printed Name of Signer)

_____
(Title of Signer)

_____
(Date Signed)

[END OF FORM 5 – ACKNOWLEDGMENT OF RECEIPT OF ADDENDUM]

FORM 6

RESPONDENT'S EXPANDED LETTERS OF RESPONSE (ELOR) PACKAGE REVIEW CHECKLIST

Respondent's ELOR Package **must be** organized and labeled following the instructions as contained in **Section B**, Paragraph 2.1, ELOR Package.

Proposal Format	Section Title
	1. Table of Contents
	2. ELOR
	3. Organizational Chart
	4. Resumes
	5. Completed Forms Form 1 - Declaration of Respondent Form 2 - Public Entity Crimes Statement Form 3 - Conflicts of Interest Statement Form 4 - Certification Regarding Scrutinized Companies List Form 5 – Acknowledgement of Receipt of Addendum Form 6 - Respondent's Response Package Review Checklist Addendum (if applicable).
	6. Staff Hour Estimate

By submitting this response, we accept and acknowledge that we can comply with all terms and conditions set forth in the ELOR including, without limitation, the insurance and performance/payment bond requirements and the indemnification provision.

_____ _____

Name of Person Responsible Date

_____ _____

Title of Person Responsible Company Name

[END OF FORM 6 - RESPONDENT'S EXPANDED LETTERS OF RESPONSE (ELOR) PACKAGE REVIEW CHECKLIST]

SECTION D

Documents for this project include documents exempt from public disclosure as provided by Section 119.071(3)(b), Florida Statutes. Attachments, Exhibits and/or References not attached to the RFP and/or RFP Addendum will be supplied upon request and shared via a OneDrive File Share. An Exempt Documents/Security System Plan Distribution Form (Exhibit 3) must be completed. The requestor of the documents must submit a copy of their business card, identification card, and documentation exhibiting their Florida professional engineering license number (such as a business card with their license number); licensed architect or licensed contractor information is also acceptable. Contact the Procurement Office at procurement@tampaxway.com to request your link.

EXHIBITS

1. Scope of Services
2. Insurance Requirements, Coverages and Limits
3. Exempt Documents / Security System Plan Distribution Form
4. Existing Plans:
    a. Contract 6 – Bayshore to Florida
    b. Eastern Extension to I-75 Contract 1
    c. Selmon Bridge Widening & Deck Replacement

EXHIBIT 1
February 07, 2025

SCOPE OF SERVICES

FOR

Final Design of Whiting Street Improvements

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SCOPE OF SERVICES FOR CONSULTING ENGINEERING SERVICES

HIGHWAY AND BRIDGE/STRUCTURAL DESIGN

This Exhibit forms an integral part of the agreement between the Tampa Hillsborough County Expressway Authority (hereinafter referred to as THEA) and the Respondent awarded the contract (hereinafter referred to as the design consultant) relative to the transportation facility described as follows:

THEA Project ID: TBD

Roadway: Whiting Street & Selmon Expressway

Project Description:
Improvements to Whiting Street from Jefferson Street to Brush Street and the extension of Whiting Street from Brush Street to Meridian Avenue. The eastbound on-ramp from Jefferson Street will be shifted to the north to accommodate a new eastbound exit ramp to Whiting Street. The existing eastbound exit ramp to Morgan Street/Channelside Drive will be removed and a single eastbound exit ramp to Florida Avenue will remain.

Bridge No(s):
- 100333

Railroad Crossing No.: N/A

Context Classification:
- Selmon Expressway - Limited Access
- Whiting Street – C6 Urban Core

Hereinafter, reference made to "DEPARTMENT" and "FDOT" shall mean the Florida Department of Transportation.

1 PURPOSE

The purpose of this Exhibit is to describe the scope of work and the responsibilities of the design consultant and THEA in connection with the design and preparation of a complete set of construction contract documents and incidental engineering services, as necessary, for improvements to the transportation facility described herein.

- Major work mixes include:
  - *0002- New Road Construction*
  - *0213- Add Lanes and Reconstruct*
  - *0229- Interchange Ramp New*
  - *0231- Interchange Improvement*

- Major work groups include:
  - *3.3- Controlled Access Highway Design*
  - *4.2.1- Major Bridge Design – Concrete*
  - *4.2.2- Major Bridge Design – Steel*
- Minor work groups include:

- *2.0- Project Development & Environmental (PD&E) Studies*
- *3.2- Major Highway Design*
- *4.1.1- Miscellaneous Structures*
- *4.1.2- Minor Bridge Design*
- *6.1- Traffic Studies*
- *6.2- Traffic Signal Timing*
- *6.3.1- Intelligent Transportation Systems Analysis & Design*
- *6.3.2- Intelligent Transportation Systems Implementation*
- *6.3.3- Intelligent Transportation Systems Engineering Communications*
- *7.1- Signing, Pavement Markings & Channelization*
- *7.2- Lighting*
- *7.3- Signalization*
- *8.1- Control Surveying*
- *8.2- Design, Right of Way, Construction Surveying*
- *8.3- Photogrammetric Mapping*
- *8.4- Right of Way Mapping*
- *9.1- Soil Exploration*
- *9.2- Geotechnical Classification Lab Testing*
- *9.4.1- Standard Foundation Studies*

The general objective is for the design consultant to prepare a set of Contract Documents including plans, specifications, supporting engineering analysis, calculations and other technical documents in accordance with THEA and FDOT policy, procedures and requirements. These Contract Documents will be used by the contractor to build the project and test the project components. These Contract Documents will be used by THEA or its Construction Engineering Inspection (CEI) representatives for inspection and final acceptance of the project. The design consultant shall follow a systems engineering process to ensure that all required project components are included in the development of the Contract Documents and the project can be built as designed and to specifications. The Scope of Services establishes which items of work in the FDOT Design Manual and other pertinent manuals are specifically prescribed to accomplish the work included in this Contract, and also indicate which items of work will be the responsibility of the design consultant and/or THEA.

The design consultant shall be aware that as a project is developed, certain modifications and/or improvements to the original concepts may be required. The design consultant shall incorporate these refinements into the design and consider such refinements to be an anticipated and integral part of the work. Refinementsshall not be a basis for any supplemental fee request(s).

The design consultant shall demonstrate good project management practices while working on this project. These include communication with THEA and others as necessary, management of time and resources, and documentation. The design consultant shall set up and maintain throughout the design of the project a contract file in accordance with THEA procedures. Design consultants are expected to know the laws and rules governing their professions and are expected to provide services in accordance with current regulations, codes and ordinances and recognized standards applicable to such professional services. The design consultant shall

provide qualified technical and professional personnel to perform to THEA standards and procedures, the duties and responsibilities assigned under the terms of this Agreement. The design consultant shall minimize to the maximum extent possible THEA's need to apply its own resources to assignments authorized by THEA.

THEA will provide contract administration, management services, and technical reviews of all work associated with the development and preparation of Contract Documents, including Construction Documents. THEA's technical reviews are for high-level conformance and are not meant to be comprehensive reviews. The design consultant shall be fully responsible for all work performed and work products developed under this Scope of Services. THEA may provide job-specific information and/or functions as outlined in this contract.

2 PROJECT DESCRIPTION

The design consultant shall investigate the status of the project and become familiar with concepts and commitments (typical sections, alignments, etc.) developed from prior studies and/or activities. If a Preliminary Engineering Report is available from a prior or current Project Development and Environment (PD&E) study, the design consultant shall use the approved concepts as a basis for the design unless otherwise directed by THEA. The scope of this Project consists of, but is not limited to:

The limits of this Project are within the boundaries of Project Development & Environmental (PD&E) study,. Improvements to Whiting Street from Jefferson Street to Brush Street and the extension of Whiting Street from Brush Street to Meridian Avenue. The eastbound on-ramp from Jefferson Street will be shifted to the north to accommodate a new eastbound exit ramp to Whiting Street. The existing eastbound exit ramp to Morgan Street/Channelside Drive will be removed and a single eastbound exit ramp to Florida Avenue will remain. The PD&E was completed in 2024.

2.1 Project General and Roadway (Activities 3, 4, and 5)

Quality Assurance/Quality Control (QA/QC) Staffing Plan: The design consultant shall develop a QA/QC plan that includes the Project Staffing and provide to THEA’s Project Manager.

Specifications Package Preparation: Standard

Plan Type:
The design consultant shall prepare contract plans in accordance with the FDOT Design Manual (FDM). All sheets shall be produced in portable document format (PDF) standard size (11” x 17”) for all submittals. The design consultant shall deliver final signed and sealed contract plans and documents in both PDF and digital BIM/CADD format.

Typical Section:
Number of Typical Sections:
1.) Two (2) Whiting Street; Jefferson Street to Brush Street and Brush Street to Meridian Avenue
2.) One (1) Nebraska Avenue/Finley Street

3.) Three (3) Ramps; Eastbound Whiting Street off-ramp, Eastbound Jefferson Street On-Ramp, Eastbound Florida Avenue off-ramp
4.) Two (2) Bridge; Eastbound Selmon Expressway (SR618), Eastbound Whiting Street off-ramp

The design consultant shall prepare and provide a Typical Section Design Package in accordance with the FDM. Typical sections for roadways not under the jurisdiction of THEA shall be coordinated with and signed off by the owning and/or maintaining agency.

Pavement Designs: The design consultant shall prepare and provide a Pavement Design in accordance with the current FDOT Flexible Pavement Design Manual.

Number of Pavement Designs: Six (6)

The following Six (6) pavement designs are anticipated:

1.) Four (4) Selmon Expressway (SR618) Ramps
    a. New Construction Travel Lanes
    b. New Construction Shoulder
    c. Mill & Resurface Travel Lanes
    d. Mill & Resurface Shoulder
2.) Two (2) Whiting Street & Nebraska Avenue/Finley Street
    a. New Construction Travel Lanes
    b. Reconstruction Travel Lanes

Cross-Slope Correction: Cross slope and superelevation deficiencies must be identified, and corrective measures proposed. The cross-slope analysis report and methods of correction must be submitted concurrently for review and approval with the pavement design Package.

Access Management Classification:
- Selmon Expressway (SR618) Class 1 (Area Type 1)
- Whiting Street Class 7 (Both Median Types)

Major Intersections and Interchanges:

1.) Florida Avenue/Jefferson Street/ Whiting Street Interchange
2.) Eastbound Selmon off-ramp at Whiting Street
3.) Brush Street at Whiting Street
4.) Whiting Street at Meridian Avenue

Level of Temporary Traffic Control Plan (TTCP): Level II

Design Exceptions/Design Variations: The design consultant shall prepare the design exceptions and design variations as identified in the PD&E documents and any others as required for submittal to THEA for approval.

2.2 Drainage (Activities 6a and 6b)

2.3 Selective Clearing and Grubbing (Activity 6c): N/A

2.4 Utilities Coordination (Activity 7)

The design consultant is responsible to certify that all necessary arrangements for utility work on this project have been made and will not conflict with the physical construction schedule. The design consultant should coordinate with THEA personnel to coordinate transmittals to utility companies and meet production schedules.

The design consultant shall ensure THEA/FDOT standards, policies, procedures, practices, and design criteria are followed concerning utility coordination.

The design consultant may employ more than one individual or Utility Engineering Design Consultant to provide utility coordination and engineering design expertise. The design consultant shall identify a dedicated person responsible for managing all utility coordination activities. This person shall be referred to as the Utility Coordination Manager and shall be identified in the design consultant proposal. The Utility Coordination Manager shall be required to satisfactorily demonstrate to THEA Project Manager that they have the following knowledge, skills, and expertise:

- A minimum of 4 years of experience performing utility coordination in accordance with FDOT, Federal Highway Administration (FHWA), and American Association of State Highway and Transportation Officials (AASHTO) standards, policies, and procedures.
- A thorough knowledge of the FDOT plans production process and utility coordination process.
- A thorough knowledge of THEA/FDOT Agreements, standards, policies, and procedures.

The Utility Coordination Manager shall be responsible for managing all utility coordination, including the following:

- Assuring that utility coordination and accommodation is in accordance with THEA, FDOT, and AASHTO standards, policies, procedures, and design criteria.
- Assisting the Engineer Of Record (EOR) in identifying all existing utilities and coordinating any new installations. Assisting the Engineer of Record with resolving utility conflicts.
- Scheduling and performing utility coordination meetings, keeping and distribution of minutes/action items of all utility meetings, and ensuring expedient follow-up on all unresolved issues.
- Distributing all plans, conflict matrixes and changes to affected utility owners and making sure this information is properly coordinated and documented.
- Review and certify to THEA Project Manager that all Utility Work Schedules are correct and in accordance with THEA/FDOT standards, policies, and procedures.
- Prepare, review, and process all utility related reimbursable paperwork inclusive of betterment and salvage determination.

The design consultant's utility coordination work shall be performed and directed by the Utility Coordination Manager that was identified and approved by THEA's Project Manager. Any proposed change of the approved Utility Coordination Manager shall be subject to review and approval by THEA's Project Manager prior to any change being made in this Contract.

Expected Utilities:

AT&T Corporation	Hillsborough County Sheriff's Office
City of Tampa Traffic	Lumen (FKA CenturyLink)
City of Tampa Water	Spectrum/Charter
City of Tampa Wastewater	T-Mobile/Sprint
Crown Castle	TECO Electric
Extent Network Operations	TECO People's Gas
Fiberlight	THEA
Frontier	Uniti Fiber
Hillsborough County	Verizon (FKA MCI)

2.5 Environmental Permits and Environmental Clearances (Activity 8)

The design consultant shall secure all required environmental permits.

Potential permits:

- Southwest Florida Water Management District (SWFWMD) Environmental Resource Permit (ERP)
- Florida Department of Environmental Protection (FDEP) Construction Generic Permit (CGP)

2.6 Structures (Activities 9 - 18)

Bridge:

No.	Bridge Number	Length	Description
1	100333	705 ft	EB Selmon (SR 618) Downtown Viaduct - Varying Widening (~17' to 37') to the outside with FIB
2	New Bridge	400 ft	EB Selmon Exit Ramp to Whiting Street ~ 30' Width and Steel Superstructure

Type of Bridge Structure Work

- BDR (Activity 10)
    - *These bridges and miscellaneous structures shall maintain/match the current level of aesthetics of the corridor.*

- *Design consultant will investigate the possible need and limits for Index 460-490 Traffic Railing - (Rectangular Tube Retrofit) and provide recommendations.*

- Temporary Bridge (Activity 11): ***N/A***
- Short Span Concrete (Activity 12): ***N/A***
- Medium Span Concrete (Activity 13)
- Structural Steel (Activity 14)
- Segmental Concrete (Activity 15): ***N/A***
- Movable Span (Activity 16): ***N/A***

Retaining Walls:

No.	Location	Temp Type	Temp Length	Perm Type	Perm Length
1	End of New Bridge between Jefferson St and Whiting St	N/A	N/A	MSE	1200 ft
2	Bridge 100333	Sheet Pile for Foundation Installation	150 ft	N/A	N/A
3	New Exit Ramp Bridge	Sheet Pile for Foundation Installation	60 ft	N/A	N/A

Miscellaneous Structures:

- *Mast Arms (3 locations for a total of 10 mast arms)*
- *Overhead Sign Structures (1 new span sign structures)*
- *Ancillary Structures (2 sign panel replacements)*
- *Other Structures (2 bridge mounted cantilever sign structures)*

2.7 Signing and Pavement Markings (Activities 19 & 20)

- Add new exit and advance guide signs for new EB Exit Ramp from the Selmon to Whiting Street
- Modify existing exit and advance guide sign for EB Selmon exit 6A & 6B as ramp 6B (EB Exit Ramp from the Selmon to Morgan Street/Channel side Drive will be removed converting the EB Selmon Exit Ramp to Florida Avenue to a single lane exit ramp.
- Rectangular Rapid Flashing Beacon (RRFB) pedestrian signals at the ramp's connection with Florida Avenue
- Bi-directional cycle track on the north side of Whiting Street

2.8 Signalization (Activities 21 & 22)

- Whiting Street at Jefferson Street – pedestrian signal and signal head modifications
- Whiting Street at EB Selmon off-ramp – full signal design
- Whiting Street at Brush Street – full signal design
- Whiting Street at Meridian Avenue – full signal design

2.9 Lighting (Activities 23 & 24)

- Replace conventional light poles on ramps at Florida Avenue, Jefferson Street, and Whiting Street with LED luminaires.
- Proposed wall mount LED underdeck lighting under new Whiting Street off-ramp

2.10 Landscape (Activities 25 & 26)

Include coordination with existing and/or proposed underground utilities including but not limited to lighting, drainage, and Intelligent Transportation Systems (ITS). Landscape coordination with ITS shall include both underground conflicts and above-ground impacts to existing and/or proposed ITS coverage. The design consultant shall closely coordinate with THEA's ITS units to ensure that all conflicts are identified, addressed, and mitigated in the Contract Documents.

- Planting Plans
- Tree Relocation Plans
- Irrigation Plans
- Existing Irrigation components

2.11 Survey (Activity 27)

Design Survey: The design consultant shall provide, topography, digital terrain model (DTM), drainage and outfalls, right of way, and other appropriate surveys including field investigations.

Subsurface Utility Engineering (SUE): The design consultant shall provide SUE services in all locations that include new underground infrastructure or earthwork excavation (i.e., drilled shafts, bridge piles, strain poles, mast arms, miscellaneous foundations, drainage structures, pipe culverts, new ditches, etc.) in areas that work will be performed.

Right of Way Survey: From MP 117 to MP 127

Vegetation Survey: – N/A 2.12 Photogrammetry (Activity 28) [from MP 117 to MP 123.7]

2.12 Photogrammetry (Activity 28) N/A

2.13 Mapping (Activity 29)

The design consultant shall submit Boundary Surveys, CTL maps, ROW Control Surveys, Sketches of Descriptions, Appraisal Sketches, right of way maps and Legal Descriptions to THEA for review at various stages of completion as specified by THEA.

Control Survey Map: For required ROW acquisition.

Right of Way Map: For required ROW acquisition.

Legal Descriptions: For required ROW acquisition.

2.14 Terrestrial Mobile LiDAR (Activity 30)

Supplement 3D LiDAR DTM as required within project limits.

2.15 Architecture (Activity 31) N/A

2.16 Noise Barriers (Activity 32) N/A

2.17 Intelligent Transportation Systems (Activities 33 & 34)

The design consultant shall provide required Intelligent Transportation Systems (ITS) design and complete all the associated tasks necessary to prepare a component set of ITS plans. ITS scope shall follow National ITS Architecture and standards as well as with a regional ITS architecture developed to reflect the local needs, issues, problems, and objectives for implementation.

For all projects with ITS activities, the design consultant shall follow the Rule 940 requirements and use a Systems Engineering approach for determining the requirements for the project. The design consultant shall develop all necessary documents to support the Rule 940 requirements like Concept of Operations (ConOPS), and others as deemed necessary by THEA. The ITS shall operate from the Traffic Management Center (TMC) located at THEA Headquarters at 1104 E. Twiggs Street, Tampa, FL 33602, using the appropriate software Package.

2.18 Geotechnical (Activity 35)

The design consultant will provide subsurface investigation and prepare geotechnical reports providing recommendations to support the design and construction of proposed improvements including roadway, structures, drainage and pavement. Provide recommendations addressing protection and monitoring of existing structures and document details and reasons of selecting structures not required by the standard specifications.

Pavement cores and pavement evaluation will be performed by design consultant. The design consultant shall coordinate with THEA's Project Manager regarding all work and requests, original and additional, associated with the pavement coring information used in the Pavement Design Report.

2.19 Project Schedule

Within ten (10) days after the Notice-To-Proceed, and prior to the design consultant beginning work, the design consultant shall provide a detailed Critical Path Method (CPM) project activity/event schedule for THEA and design consultant scheduled activities]. The schedule shall be accompanied by an anticipated payout and fiscal progress curve. For the purpose of scheduling, the design consultant shall allow for a two (2) week review time for each phase submittal and any other submittals as appropriate.

The schedule shall indicate all required submittals.

All fees and price proposals are to be based on the negotiated schedule of eighteen (18) months for final construction contract documents. However, the contract deadline is eighteen (18) months from the Notice to Proceed.

Periodically, throughout the life of the contract, the project schedule and payout and fiscal progress curves shall be reviewed and, with the approval of THEA, adjusted as necessary to incorporate changes in the Scope of Services and progress to date.

The approved schedule and schedule status report, along with progress and payout curves, shall be submitted with the monthly progress report.

The schedule shall be submitted in Microsoft Project system-compatible format in both .MPP and .PDF format.

2.20 Submittals

The design consultant shall furnish construction contract documents as required by THEA to adequately control, coordinate, and approve the work concepts. The design consultant shall distribute submittals as directed by THEA. THEA will determine the specific number of copies required prior to each submittal.

Document Submittals include, but are not limited to: Plans submittals, Engineering Document submittals, Reports, Calculations, Design and Right of Way Survey, Right of Way Maps, and necessary supporting documentation to complete the project design. The design consultant shall submit all deliverables to THEA electronically in PDF format, unless otherwise notified by THEA's Project Manager.

The design consultant shall provide all Computer Aided Design and Drafting (CADD) files as outlined in the 2024 FDOT CADD Manual for each phase submittal, including the CADD.ZIP or BIM.ZIP files. For each submittal, the design consultant shall include a Transmittal Memorandum that includes, at a minimum, the file name of each PDF file as well as the number of PDFs (if any) as directed by THEA's Project Manager.

A Google Earth Keyhole Markup Language Zipped (KMZ) file will be developed and submitted for all plan or roll plot submittals to THEA. The file will have both existing and proposed information for each discipline beginning at Phase II.

A preliminary traffic control plan design (45%) must be submitted for review and a traffic control plan workshop with THEA production and construction staff must be held following the submission. This workshop shall ideally be scheduled about halfway through

THEA's review period and is intended to facilitate a collaborative discussion of the traffic control plan to work though the proposed design and the complex issues that require THEA assistance. The submission will be reviewed, and comments will be provided for the EOR's information and consideration. No written responses will be required for this submittal as they are expected to be addressed in the subsequent Phase submittal.

After Phase IV and no later than three weeks before the Production Date, the design consultant shall submit signed and sealed Final Plans, Specifications Package, and design documents for review by THEA. The design consultant shall include a "Notes to Reviewers" plan sheet(s) in order to call attention to conditions, issues, and features unique to the project design in all phase submittals prior to the Final submittal.

2.21 Provisions for Work

The services performed by the design consultant must comply with all applicable DEPARTMENT and THEA manuals, procedures, policies, and guidelines. Specifically, the design consultant must comply with the FDOT Project Development and Environmental (PD&E) Manual, FDOT Design Manual (FDM), Structures Manual, and CADD Manual

The FDOT manuals and guidelines incorporate, by requirement or reference, all applicable federal and state laws, regulations, and Executive Orders. The design consultant will use the latest editions of the manuals, procedures, and guidelines to perform work for this project.

All work shall be prepared with English units (unless otherwise specified) in accordance with the latest editions of standards and requirements utilized by THEA.

2.22 Services to be Performed by THEA

When appropriate or available, THEA will provide project data including:

- ***Numbers for field books***
- ***Preliminary Horizontal Network Control***
- ***Access for the design consultant to utilize THEA's Information Technology Resources***
- ***All THEA agreements with Utility Agency Owners (UAOs)***
- ***All certifications necessary for project letting***
- ***All information that may come to THEA pertaining to future improvements***
- ***All future information that may come to THEA during the term of the design consultant's Agreement, which in the opinion of THEA is necessary for the prosecution of the work***
- ***Available traffic and planning data***
- ***All approved utility relocations***
- ***Project utility certification to THEA***
- ***Any necessary title searches***
- ***Engineering standards review services***

- ***All available information in the possession of THEA pertaining to utility companies whose facilities may be affected by the proposed construction***
- ***All future information that may come to THEA pertaining to subdivision plans so that the design consultant may take advantage of additional areas that can be utilized as part of the existing right of way***
- ***Systems traffic for Projected Design Year, with K, D, and T factors***
- ***Existing right of way maps***
- ***PD&E Documents***
- ***Design Reports***
- ***Letters of authorization designating the design consultant as an agent of THEA in accordance with Chapter 348.54, Florida Statutes***
- ***Phase reviews of plans and engineering documents***
- ***Regarding Environmental Permitting Services:***
    - ***Approved Permit Document when available***
    - ***Approval of all contacts with environmental agencies***
    - ***General philosophies and guidelines of THEA to be used in the fulfillment of this contract. Objectives, constraints, budgetary limitations, and time constraints will be completely defined by the Project Manager.***
    - ***Appropriate signatures on application forms***

3 PROJECT COMMON AND PROJECT GENERAL TASKS

Project Common Tasks

Project Common Tasks, as listed below, are work efforts that are applicable to many project activities, 4 (Roadway Analysis) through 35 (Geotechnical). These tasks are to be included in the project scope in each applicable activity when the described work is to be performed by the design consultant.

Cost Estimates: The design consultant is responsible for producing a construction cost estimate and reviewing and updating the cost estimate when scope changes occur and/or at milestones of the project. Prior to Phase II plans or completion of quantities, a draft preliminary engineer's estimate will be provided. Once the quantities have been developed (beginning at Phase II plans and no later than Phase III plans) the design consultant shall be responsible for providing final pay items and quantities with an updated preliminary engineer's estimate. As part of Phase IV plans, the design consultant shall provide a final preliminary engineer's estimate.

Specifications Package: The design consultant shall provide a draft Specifications Package as part of the Phase IV submittal.

Technical Special Provisions: The design consultant shall provide Technical Special Provisions for all items of work not covered by the Standard Specifications for Road and Bridge Construction and the workbook of implemented modifications.

A Technical Special Provision shall not modify the Standard Specifications and implemented modifications in any way.

The Technical Special Provisions shall provide a description of work, materials, equipment and specific requirements, method of measurement and basis of payment. Proposed Technical Special Provisions will be submitted to THEA for initial review at the time of the Phase III plans review submission to THEA's Project Manager. This timing will allow for adequate processing time prior to final submittal. The Technical Special Provisions will be reviewed for suitability in accordance with the Handbook for Preparation of Specification Packages. THEA will forward the Technical Special Provisions to their Legal Office for their review and comment. All comments will be returned to the design consultant for correction and resolution. Final Technical Special Provisions shall be digitally signed and sealed in accordance with applicable Florida Statutes.

Modified Special Provisions: The design consultant shall provide Modified Special Provisions as required by the project. Modified Special Provisions are defined in the Specifications Handbook.

A Modified Special Provision shall not modify the first nine sections of the Standard Specifications and implemented modifications in any way. All modifications to other sections must be justified to THEA to be included in the project's specifications Package.

Field Reviews: The design consultant shall make as many trips to the project site as required to obtain necessary data for all elements of the project.

Technical Meetings: The design consultant shall attend all technical meetings necessary to execute the Scope of Services of this contract. This includes meetings with THEA and/or Agency staff, between disciplines and subconsultants, such as access management meetings, pavement design meetings, local governments, railroads, airports, progress review meetings (phase review), and miscellaneous meetings. The design consultant shall prepare and submit to THEA's Project Manager for review, the meeting minutes for all meetings attended by them. The meeting minutes are due within five (5) working days of attending the meeting.

Quality Assurance/Quality Control: It is the intention of THEA that design consultants, including their subconsultant(s), are held responsible for their work, including plans reviews. The purpose of design consultant plan reviews is to ensure that design consultant plans follow the plan preparation procedures outlined in the FDOT Design Manual, that state and federal design criteria are followed with THEA concept, and that the design consultant submittals are complete. All subconsultant document submittals shall be submitted by the subconsultant directly to the design consultant for their independent Quality Assurance/Quality Control review and subsequent submittal to THEA.

It is the design consultant's responsibility to independently and continually QC their plans and other deliverables. The design consultant should regularly communicate with THEA's Project Manager to discuss and resolve issues or solicit opinions from those within designated areas of expertise.

The design consultant shall be responsible for the professional quality, technical accuracy and coordination of all surveys, designs, drawings, specifications and other services furnished by the design consultant and their subconsultant(s) under this contract.

The design consultant shall provide a Quality Control Plan that describes the procedures to be utilized to verify, independently check, and review all maps, design drawings, specifications, and

other documentation prepared as a part of the contract. The design consultant shall describe how the checking and review processes are to be documented to verify that the required procedures were followed. The Quality Control Plan shall be one specifically designed for this project. The design consultant shall submit a Quality Control Plan for approval within twenty (20) business days of the written Notice to Proceed and it shall be signed by the design consultant's Project Manager and the design consultant QC Manager. The Quality Control Plan shall include the names of the design consultant's staff that will perform the quality control reviews. The Quality Control reviewer shall be a Florida Licensed Professional Engineer fully prequalified under F.A.C. 14-75 in the work type being reviewed. A marked up set of prints from a Quality Control Review indicating the reviewers for each component (structures, roadway, drainage, signals, geotechnical, signing and marking, lighting, landscape, surveys, etc.) and a written resolution of comments on a point-by-point basis will be required, if requested by THEA, with each phase submittal. The responsible Professional Engineer, Landscape Architect, or Professional Surveyor & Mapper that performed the Quality Control review will sign a statement certifying that the review was conducted and found to meet required specifications.

The design consultant shall, without additional compensation, correct all errors or deficiencies in the designs, maps, drawings, specifications and/or other products and services.

Independent Peer Review: When directed by THEA, a subconsultant may perform Independent Peer Reviews.

Independent Peer Review and a Constructability/Biddability Review for design Phase Plans document submittals are required on this project. These separate reviews shall be completed by someone who has not worked on the plan component that is being reviewed. These could include but are not limited to a separate office under the Prime's umbrella, a subconsultant that is qualified in the work group being reviewed, or a CEI. It does not include persons who have knowledge of the day-to-day design efforts. The Constructability/Biddability Review shall be performed by a person with experience working on THEA construction projects (CEI, Contractor, etc.).

The Independent Peer Review for design Phase Plans submittals shall ensure the plans meet the FDM, Standard Plans and FDOT CADD Manual. The Constructability/Biddability Review shall ensure the project can be constructed and paid for as designed. Constructability/Biddability Reviews should be conducted prior to the Phase III and Phase IV submittals, using the Phase Review Checklist (Guidance Document 1-1-A) from the FDOT Construction Project Administration Manual (CPAM) as a minimum guideline. The design consultant shall submit this checklist, as well as the "marked-up" set of plans during this review, and review comments and comment responses from any previous Constructability/Biddability reviews. These items will be reviewed by THEA.

Supervision: The design consultant shall supervise all technical design activities.

Coordination: The design consultant shall coordinate with all disciplines of the project to produce a final set of construction documents.

Project General Tasks

Project General Tasks, described in Sections 3.1 through 3.7 below, represent work efforts that are applicable to the project as a whole and not to any one or more specific project activity. The work described in these tasks shall be performed by the design consultant when included in the project scope.

3.1 Public Involvement

Public involvement includes communicating to all interested persons, groups, and government organizations information regarding the development of the project. The design consultant shall provide to THEA drafts of all Public Involvement documents (e.g., newsletters, property owner letters, solicitations, etc.) associated with the following tasks for review and approval at least ten (10) business days prior to printing and/or distribution.

3.1.1 Community Awareness Plan

Prepare a Community Awareness Plan (CAP) for review and approval by The objective of the plan is to notify local governments, affected property owners, tenants, and the public of THEA'S proposed construction and the anticipated impact of that construction. The CAP shall address timeframes for each review and shall include tentative dates for each public involvement requirement for the project. The CAP will also document all public involvement activities conducted throughout the project's duration. In addition to the benefits of advance notification, the process should allow THEA to resolve controversial issues during the design phase. This item shall be reviewed and updated periodically as directed by THEA throughout the life of the project.

3.1.2 Notifications

In addition to public involvement data collection, the design consultant shall assist THEA or prepare public notices, solicitations, flyers, and/or letters to elected officials and other public officials, private property owners, and tenants at intervals during plans production as identified by THEA.

All letters and notices shall be reviewed by THEA to ensure that they are addressed to the correct and current public officials. All letters and notices shall be approved by THEA. The design consultant shall prepare display solicitations and will pay the cost of publishing. The design consultant will pay the cost of postage for all letters and notifications.

3.1.3 Preparing Mailing Lists

At the beginning of the project, The design consultant shall identify all impacted property owners and tenants including elected and appointed officials, and any other stakeholders. The design consultant shall prepare a mailing list of all such entities and shall update the mailing list as needed during the life of the project.

3.1.4 Median Modification Letters – N/A

3.1.5 Driveway Modification Letters

The design consultant shall prepare Driveway Modification Letters for distribution as applicable. The letters will be sent by the design consultant.

3.1.6 Newsletters

The design consultant shall prepare newsletters for distribution to elected officials, public officials, property owners along the corridor and other interested parties. The letters will be sent by the design consultant.

3.1.7 Renderings and Fly-Throughs

The design consultant shall prepare renderings and fly-throughs for use in public meetings.

3.1.8 PowerPoint Presentations

The design consultant shall prepare PowerPoint presentations for use in public involvement meetings. The PowerPoint presentations will include the following as THEA requires:

Presentation scripts

Graphics for presentation

Voiceover audio presentation

3.1.9 Public Meeting/Hearing Preparations

The design consultant shall prepare the necessary materials for use in public meeting(s)/hearing(s). The design consultant will investigate potential meeting sites to advise THEA on their suitability. The design consultant will pay all costs for meeting site rents and insurance. No THEA meetings will be held on public school system properties. The design consultant will provide up to two (2) interactive display boards for one (1) in-person Public meeting(s).

3.1.10 Public Meeting/Hearing Attendance and Follow-up

The design consultant shall attend public meeting(s)/hearing(s), assist with meeting setup and take down. The design consultant shall also prepare a summary report of the public meeting/hearing that includes all copies of all materials shown or provided at the public meeting/hearing. The summary shall also include a listing of all written comments made during or after the meeting/hearing. The design consultant shall draft responses for Department’s approval to those written comments. The design consultant will attend the meetings with an appropriate number of personnel to assist THEA 'S Project Manager. It is estimated for this project there will be one (1) Public meetings during the design.

3.1.11 Other Agency Meetings

In addition to scheduled public meetings the design consultant may be required to participate in meetings with local governing authorities and/or Metropolitan Planning Organization (MPO). The design consultant's participation may include, but not be limited to, presentations during the meeting, note taking, and summarizing the meeting in a memo to the file. It is estimated for this project there will be up to ten (10) meetings (as indicated in Section 2.1 above) with local governing authorities and/or MPOs during the design.

3.1.12 Web Site

The design consultant will coordinate with the appropriate local government agencies and obtain all land use development activities (current and future) within the project area within 60 days of NTP. The design consultant will inform THEA of any impact of the land use changes to the project and recommend strategies to address the impacts. The design consultant shall provide material and content for a project website in conjunction with THEA 's web designer. The design consultant shall provide social media support for the project, which includes, but is not limited to, monitoring social media sites related to the project, providing monthly social media monitoring updates to THEA from Notice to Proceed through Letting, and providing video footage and text for up to two (2) social media solicitations.

3.2 Joint Project Agreements N/A

3.3 Specifications & Estimates

3.3.1 Specifications Package Preparation

The design consultant shall prepare and provide a Specifications Package in accordance with the DEPARTMENT'S Procedure Topic No. 630-010-005 Specifications Package Preparation and the Specifications Handbook. The design consultant shall provide THEA names of at least two (2) team members who have successfully completed the Specifications Package Preparation Training and will be responsible for preparing the Specifications Package for the project. The Specifications Package shall be prepared using the DEPARTMENT's Specs on the Web application. The design consultant shall be able to document that the procedure defined in the Handbook for the Preparation of Specifications Packages is followed, which includes the quality assurance/quality control procedures. The Specifications Package shall address all items and areas of work and include any Mandatory Specifications, Modified Special Provisions, and Technical Special Provisions.

If applicable, identification and development of draft TSPs/MSPs shall begin no later than Phase II submittal and shall be submitted for review no later than the Phase III submittal. THEA approval of TSPs/MSPs is required prior to any Phase IV submittal. The draft Specifications Package shall be submitted for review as part of the Phase IV Submittal.

These submittals do not require signing and sealing and shall be coordinated through THEA Project Manager. The draft Specifications Package submittal shall consist of:

- the complete Specifications Package
- PDF copy of workbook used to prepare the Package
- A copy of the final project plans.

Final submittal of the Specifications Package must occur on or prior to the Production date (date is referenced in Section 2.19). This submittal shall be digitally signed, dated, and sealed in accordance with applicable Florida Statutes.

3.4 Contract Maintenance and Project Documentation

Contract maintenance includes project management effort for complete setup and maintenance of files, electronic folders and documents, developing technical monthly progress reports and schedule updates. Project documentation includes the compilation and delivery of final documents, reports or calculations that support the development of the contract plans.

3.5 Value Engineering (Multi-Discipline Team) Review N/A

3.6 Prime Consultant Project Manager Meetings

Includes only the Prime Consultant Project Manager's time for travel and attendance at Activity Technical Meetings and other meetings listed in the meeting summary for Task 3.6 on tab 3 Project General Task of the staff hour forms. Staff hours for other personnel attending Activity Technical Meetings are included in the meeting task for that specific Activity.

Progress Meetings: The design consultant shall attend all progress meetings. Thirty (30) progress meetings are anticipated for this project. The design consultant shall prepare, and submit to THEA's Project Manager for review, the meeting agenda and notes for all meetings attended by them. The meeting notes are due within five (5) working days of attending the meeting.

3.7 Plans Update

The effort needed for Plans Update services will vary from project to project, depending on size and complexity of the project, as well as the duration of time spent "on the shelf".

Specific services will be negotiated as necessary as a contract amendment.

3.8 Post-Design Services

Post-Design Services may include, but are not limited to, meetings, construction assistance, plans revisions, shop drawing review, survey services, as-built drawings, and load ratings. Specific services will be negotiated as necessary as a contract amendment.

Post-Design Services are not intended for instances of design consultant errors or omissions.

3.9 Digital Delivery

The design consultant shall deliver final signed and sealed contract plans and documents in digital BIM/CADD format.

3.10 Risk Assessment Workshop N/A

3.11 Railroad, Transit and/or Airport Coordination N/A

3.12 Landscape and Existing Vegetation Coordination

Coordinate to ensure preservation and protection of existing vegetation. Relocation of existing vegetation may be necessary in some cases. Space for proposed landscape should

be preserved and conflicts with drainage, utilities, ITS, and signage should be minimized. Coordination with THEA Landscape Architect may be necessary as defined in 4.12.

3.13 Other Project General Tasks

3.13.1 THEA Owned Underground Facilities

THEA-owned underground facilities shall be designated and located, as needed, by the design consultant. THEA will locate its underground facilities as the result of a call to Sunshine 811 (Sunshine State One-Call). design consultant may further determine the locations of existing THEA-owned underground facilities using SUE, reviewing as-built plans, field investigations, or other means. This requirement also applies to Utility Agency/Owner underground facilities located in service THEA-owned properties that have utilities serving the Selmon Greenway, Meridian Trail, lighting and irrigation, etc.

3.13.2 New Power Services Coordination

ITS to determine the location for new service points; the cost to provide power service to the service point locations; and schedules for providing the new service. design consultant shall review and confirm that the power company's estimate is accurate and includes the required components needed for the individual systems (voltage, transformer size, location, clearing and grubbing, etc.) and provide the cost estimate and a written request to utilize the Do-Not-Bid pay item (639-8-ABC) to THEA Project Manager.

4 ROADWAY ANALYSIS

The design consultant shall analyze and document Roadway Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

4.1 Typical Section Package

The design consultant shall prepare a Typical Section Package and submit to THEA.

4.2 Pavement Type Selection Report N/A

4.3 Pavement Design Package

The design consultant shall prepare a Pavement Design Package and submit to THEA.

4.4 Cross-Slope Analysis

4.5 Safety Analysis

The design consultant shall perform all safety analysis required for roadway design. This includes safety analysis (justification/mitigation) required for design variations and exceptions, Highway Safety Manual (HSM) assessments, and crash analysis of crash reports.

4.6 Design Analysis

Monitoring Existing Structures: The design consultant shall perform field observations to visually identify existing structures within the project limits which may require settlement, vibration or groundwater monitoring by the contractor during construction in accordance with FDM Chapter 117. The design consultant shall identify the necessary pay items to be included in the bid documents to monitor existing structures.

Optional Services (may be negotiated at a later date if needed): The design consultant shall coordinate with and assist the geotechnical engineer and/or structural engineer to develop mitigation strategies (when applicable).

Access Management: The design consultant shall incorporate access management standards for each project in coordination with THEA staff. The design consultant shall review adopted access management standards and the existing access conditions (interchange spacing, signalized intersection spacing, median opening spacing, and connection spacing). Median openings that will be closed, relocated, or substantially altered shall be shown on plan sheets and submitted with supporting documentation for review with the first plans submittal.

THEA shall provide access management classification information and information derived from PD&E studies and public hearings to be used by the design consultant.

4.7 Operational Analysis N/A

4.8 Design Reports

The design consultant shall prepare all applicable report(s). Reports are to be delivered as a signed and sealed pdf file.

4.9 Design Variations and Exceptions

The design consultant shall prepare the documentation necessary to gain THEA approval of all appropriate Project Design Variation Memorandums, Formal Design Variations and/or Design Exceptions.

4.10 Master Design File Setup & Maintenance, Model Management Plan

The design consultant shall set up the horizontal/vertical master design file and maintain the design file throughout the life of the design. The design consultant shall create a model management plan.

4.11 Horizontal/Vertical Master Design Files

The design consultant shall design the geometrics using the Standard Plans that are most appropriate with proper consideration given to the design traffic volumes, design speed, capacity and levels of service, functional classification, adjacent land use, design consistency and driver expectancy, aesthetics, existing vegetation to be preserved, pedestrian and bicycle concerns, ADA requirements, Safe Mobility For Life Program, access management, PD&E documents and scope of work. The design consultant shall also

develop utility conflict information to be provided to project Utility Coordinator in the format requested by THEA.

3D Model Development: The design consultant shall design elements in a 3D Model in accordance with the FDOT CADD Manual and FDM.

4.12 Temporary Traffic Control Plan (TTCP) Analysis and Master Design Files

The design consultant shall design a safe and effective TTCP to move vehicular and pedestrian traffic during all phases of construction. The design shall include construction phasing of roadways ingress and egress to existing property owners and businesses, routing, signing and pavement markings, and detour quantity tabulations, roadway pavement, drainage structures, ditches, front slopes, back slopes, drop offs within clear zone, transit stops, and traffic monitoring sites. Special consideration shall be given to the construction of the drainage system when developing the construction phases. Positive drainage must be maintained at all times. The design shall include construction phasing of roadways to accommodate the construction or relocation of utilities when the Contract includes Joint Project Agreements (JPAs).

The design consultant shall investigate the need for temporary traffic signals, temporary highway lighting, detours, diversions, lane shifts, and the use of materials such as sheet piling in the analysis. The Traffic Control Plan shall be prepared by a certified designer who has completed training as required by the DEPARTMENT. Before proceeding with the TTCP, the design consultant shall meet with the appropriate THEA personnel. The purpose of this meeting is to provide information to the design consultant that will better coordinate the Preliminary and Final TTCP efforts.

The design consultant shall consider the local impact of any lane closures or alternate routes. When the need to close a road is identified during this analysis, the design consultant shall notify THEA's Project Manager as soon as possible. Proposed road closings must be reviewed and approved by THEA. Diligence shall be used to minimize negative impacts by appropriate specifications, recommendations or plans development. Local impacts to consider will be local events, holidays, peak seasons, detour route deterioration and other eventualities. The design consultant shall be responsible to obtain local authorities' permission for use of detour routes not on THEA facilities.

The design consultant shall analyze the impact to the customer for any proposed detours. If the detour routes customers to a toll site with a higher toll, multiple toll sites, or closes tolled cash options and forces customers through electronic toll collection lanes, then provide options to mitigate the impact to customers. This analysis shall be included in the Detour Tolls Analysis Memorandum and submitted for review and approval.

Master TTCP Design Files

The design consultant shall develop master TTCP files showing each phase of the TTCP. This includes all work necessary for designing lane configurations, diversions, lane shifts, signing and pavement markings, temporary traffic control devices, and temporary pedestrian ways.

TTCP 3D Modeling (Isolated Locations): When the TTCP includes a 3D Model deliverable, the design consultant shall design TTCP elements for isolated locations intended for design clarification of Level II TTCP designs in a 3D Model in accordance with the FDOT CADD Manual and FDM.

4.13 Utility Data Collection and Analysis

The design consultant shall collect, analyze, and coordinate utility data. This includes reviewing the Utility Work Schedule (UWS) and developing and coordinating utility conflict information.

4.14 Roadway Quantities

The design consultant shall determine roadway pay items and quantities and the supporting documentation.

TTCP Quantities: The design consultant shall determine temporary traffic control pay items and quantities and the supporting documentation.

4.15 Cost Estimate The design consultant shall submit cost estimates at each phase submittal.

4.16 Technical or Modified Special Provisions

4.17 Other Roadway Tasks

4.18 Quality Assurance/Quality Control

4.19 Supervision

4.20 Roadway Meetings

4.21 Field Reviews

4.22 Coordination

5 ROADWAY PLANS

The design consultant shall prepare Roadway, TTCP, Utility Adjustment Sheets, plan sheets, notes, and details. The plans shall include the following sheets necessary to convey the intent and scope of the project for the purposes of construction.

5.1 Key Sheet & Signature Sheet

5.2 Typical Section Sheets

5.3 Cross Slope Correction Details

5.4 General Notes/Pay Item Notes

5.5 Project Layout/Model Management

5.6 Plan View (Plan Sheets)

5.7 Profile View (Plan/Profile Sheets)

5.8 Special Profiles

5.9 Sidewalk Profiles

5.10 Interchange Layout Sheet

5.11 Details

5.12 Soil Survey Sheets

5.13 Cross Sections

5.14 Temporary Traffic Control Plan

5.15 Utility Adjustment Sheets

5.16 Project Control Sheets

5.17 Utility Verification Data (SUE Data)

5.18 Quality Assurance/Quality Control

5.19 Supervision

6a DRAINAGE ANALYSIS

The design consultant shall analyze and document Drainage Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

The design consultant shall be responsible for designing a drainage and stormwater management system. All design work shall comply with the requirements of the appropriate regulatory agencies and the DEPARTMENT's Drainage Manual.

The design consultant shall coordinate fully with the appropriate permitting agencies and THEA's staff. All activities and submittals should be coordinated through THEA's Project Manager. The work will include the engineering analyses for any or all of the following:

6a.1 Base Clearance Analysis

Analyze, determine, and document high water elevations which will be used to set roadway profile grade and roadway materials for the Whiting Street extension to Meridian Avenue and ramp connections to existing roadways. Determine surface water elevations at cross drains, floodplains, outfalls and adjacent stormwater ponds. Determine groundwater elevations at intervals between the above-mentioned surface waters. Document findings in a Base Clearance Technical Memorandum.

6a.2 Hydroplaning Analysis

Perform a hydroplaning analysis to assist in the determination of the appropriate roadway geometry for all necessary locations (both typical sections and critical cross sections) as needed. See the FDOT Hydroplaning Guidance and FDOT Design Manual (FDM) Chapters 210 and 211 for more information.

6a.3 Existing Permit Analysis

Data gathering including desktop analysis of local, state, and federal Drainage permits.

6a.4 Utility Conflict Matrix (for drainage structures)

Populating and coordination of the utility conflict matrix for all drainage structures.

6a.5 Noise Barrier Drainage Analysis N/A

6a.6 Temporary Drainage Analysis

6a.7 Stormwater Management Facility Analysis and Report

The PD&E Preferred Alternative involves replacing existing Stormwater Pond 2 with a stormwater detention vault. This vault shall be sized to replace the stormwater management functions provided by existing Pond 2 for Meridian Avenue, and to accommodate the stormwater management requirements of the Whiting Street/Selmon Expressway Ramp Improvements project. THEA desires that the stormwater vault be located underneath the new segment of the Whiting Street extension to Meridian Avenue.

The design consultant shall perform a preliminary hydrologic and hydraulic analysis. to confirm that all of the project stormwater management requirement can be met by the proposed stormwater vault system. The design consultant shall advise THEA immediately if the single stormwater vault system cannot meet all of the stormwater treatment/attenuation requirements for the project.

The design consultant shall document the results and coordination for all the project's stormwater management facility analyses. The FDOT Drainage Manual provides specific documentation requirements.

6a.8 Pipe Video Inspection Report

The design consultant shall desilt, video inspect and investigate all existing pipes and structures that are proposed to be utilized as part of the drainage system for the roadway improvements and shall make recommendations to THEA for repairs or replacement. Cured-in-place pipe liners shall be the only repair method considered by THEA for pipes that are too small to be physically accessed. Pipes that are large enough to be physically accessed may use other repair methods in addition to cured-in-place liner, as approved by THEA. Repair recommendations for pipe liners shall include a hydraulic evaluation of the pipe/culvert's smaller inside area with the proposed liner. Pipe inspections and investigations shall extend as a minimum to the first existing drainage structure outside of the longitudinal or lateral project limits. The design consultant shall document the observations

and results of the pipe inspections and shall prepare a report with repair or replacement recommendations. This report shall be submitted for review and approval by THEA in sufficient time so that final repair/replacement recommendations can be incorporated into the project plans.

The report shall list all deficiencies of the storm drainpipes, manholes and inlets, along with a detailed map of the storm drain pipe system videoed.

The map must include, but is not limited to, THEA highway, intersecting side streets, the location of all inlets and manholes, and the diameter and length of all pipes videoed.

The report must include, but is not limited to, deficiencies such as cracked pipes, joint leaks, failed patches, subsidence, intrusions, stained pipe, and significant defects. Specify the coordinate location of each deficiency in the report in the same chronological order as the video. Note the conditions of intersecting pipes and drainage structures on the report and video.

Include GPS coordinates of storm drainage lines' locations including type/size/shape of all inspected drainage lines. GPS location point readings should be taken at the beginning and end points of all straight and tangent pipe sections, or where changes in direction, size or structures occur. For drainage structures, the GPS location point readings shall be taken at the center of each structure or grate.

Document defects identified during this review and submit inspection logs. Include the following in the report:

1. Date, project name, and project number.
2. Street names with starting and ending points.
3. Identify the type of structure, locations, and number (if available).
4. Distances using a tape measure or roll-a-tape.
5. Coordinate locations of the beginning and end points of pipe runs.
6. Coordinate locations of pipe/culvert/drainage structure deficiencies (i.e., bad joints, offset joints, breaks, or leaks).
7. Centerline distances between structures (if available).
8. Inspection video indicating the structure type/number, coordinates, rim elevation, pipe invert, counter display, and any other relevant data.
9. Coordinate point location (X, Y, Z fields) to represent latitude and longitude in North American 1983 Datum. Precision shall be to the seventh decimal for X and Y, and to the tenth for Z (ex. 25.217111, - 80.3683639, 10.5'). Z coordinate shall represent the Vertical Datum NAVD 88 unless the Contract Documents specify otherwise.
10. A separate column identifying whether it is the beginning or end point, change of direction or change of size etc.
11. A written report indicating drainage structure numbers and video counter display numbers.
12. Pipe diameter in inches (18", 24", 36", etc.)

13. Pipe material (reinforced concrete, corrugated, galvanized, high density polyethylene, etc.)
14. For flexible pipe types, submit a Pipe Ovality Report for each pipe run that includes:
    1. Representative diameter of the pipe.
    2. Pipe deformation/deflections measurements with the 5% deflection limit clearly defined.
15. Pipe shape (round, elliptical, square, rectangular)
16. A detailed map of the storm water drainage system as videoed

Catalog inspection information gathered on inspection forms to produce a report of deficiencies.

The expected deliverables must be in a data format that is compatible with ESRI's ArcGIS 10.1 and above; a PDF file of the inspection report cataloging the inspection results; video version of the report showing the inspected pipe; spreadsheet file (.xls format) indicating the structure locations with pipe start and end points, and their associated material, location, identification number, referenced plan set (if available), etc. Results will be made available on computer programs compatible with THEA systems.

The firm utilized by the Design Consultant to perform the video inspection shall be approved by THEA prior to starting any work.

6a.9 Bridge Hydraulic Report N/A

6a.10 Design of Cross Drains

Analyze the hydraulic design and performance of cross drains. Check existing cross drains to determine if they are structurally sound and can be extended. Document the design as required. Determine and provide flood data as required.

6a.11 Design of Ditches and Side Drains

Design roadway conveyance and outfall ditches. This task includes capacity calculations, longitudinal grade adjustments, flow changes, additional adjustments for ditch convergences, selection of suitable channel lining, design of side drainpipes, and documentation. (Design of linear stormwater management facilities in separate task.)

6a.12 Design of Stormwater Management Facility

Design stormwater management facilities to meet requirements for stormwater quality treatment, attenuation and maintenance. Develop proposed stormwater management facility layout (contributing drainage basin, inflow structure(s), shape, depth, contours, slopes, volumes, tie-ins, aesthetics, etc.), perform routing, pollutant/nutrient loading calculations, recovery calculations, design the outlet control structure and buoyancy calculations for pond liners when necessary.

6a.13 Design of Floodplain Compensation N/A

6a.14 Design of Storm Drains

Delineate contributing drainage areas, determine runoff, inlet locations, and spread. Calculate hydraulic losses (friction, utility conflict and, if necessary, minor losses). Includes deck drainage for widened bridge segments. Determine design tailwater and, if necessary, outlet scour protection.

6a.15 Optional Culvert Material

Determine acceptable options for pipe materials using the Culvert Service Life Estimator. For Whiting Street, pipe material shall be in accordance with City of Tampa requirements.

6a.16 Design of Trench Drains N/A

6a.17 French Drain Systems N/A

6a.18 Design of Drainage Wells N/A

6a.19 Stormwater Runoff Control Concept

Includes analysis and design of the Stormwater Runoff Control Concept. Includes creating the design file.

6a.20 Other Drainage Tasks

Includes all efforts for a drainage task not covered by an existing defined task.

6a.21 Drainage Design Documentation Report

Compile drainage design documentation into report format. Include documentation for all the drainage design tasks and associated meetings and decisions, except for stand-alone reports, such as the Stormwater Management Facility Analysis Report. All pages (including appendices, calculations, and exhibits) in report shall be numbered and report shall be indexed with a table of contents.

6a.22 Drainage Quantities

The design consultant shall determine drainage pay items and quantities and the supporting documentation.

6a.23 Cost Estimate

Prepare cost estimates for the drainage components for each submittal. The design consultant will also need to provide THEA a regular periodic maintenance schedule for the proposed stormwater management facilities along with an estimate of the maintenance costs in order to meet stormwater permitting requirements.

6a.24 Technical or Modified Special Provisions

6a.25 Quality Assurance/Quality Control

6a.26 Supervision

6a.27 Drainage Meetings

Meetings with THEA staff, regulatory agencies, local governments such as meetings with THEA Director of Operations and Engineering, THEA Project Manager, the City of Tampa, the Water Management District, FDEP, etc.

6a.28 Field Reviews

6a.29 Coordination

6b DRAINAGE PLANS

The design consultant shall prepare Drainage plan sheets, notes, and details. The plans shall include the following sheets necessary to convey the intent and scope of the project for the purposes of construction.

6b.1 Drainage Map (Including Interchanges)

6b.2 Bridge Hydraulics Recommendation Sheets N/A

6b.3 Drainage Structures

6b.4 Lateral Ditches

6b.5 Retention/Detention Facility

6b.6 Quality Assurance/Quality Control

6b.7 Supervision

6c SELECTIVE CLEARING AND GRUBBING N/A

7 UTILITIES

The design consultant shall identify utility facilities and secure agreements, utility work schedules, and plans from the Utility Agency Owners (UAO) ensuring all conflicts that exist between utility facilities and THEA's construction project are addressed. The design consultant shall certify all utility negotiations have been completed and that arrangements have been made for utility work to be undertaken.

7.1 Utility Kickoff Meeting

Before any contact with the UAO(s), the design consultant shall meet with THEA to receive guidance, as may be required, to assure that all necessary coordination will be accomplished in accordance with THEA procedures. The design consultant shall bring a copy of the design project work schedule reflecting utility activities. The design consultant shall be prepared to discuss the projects applied utility schedule logic and current UAO contact information.

7.2 Identify Existing Utility Agency Owner(s)

The design consultant shall identify all Utility Agency Owners (UAOs) in the corridor and within and adjacent to the project limits that may be impacted by the project. Identification shall include the updated UAO contact information. The design consultant shall contact Sunshine 811, perform a field visit, and review prior utility permits, reports, existing plans, and surveys provided.

7.3 Make Utility Contacts

First Contact: The design consultant shall send letters and plans to each Utility Agency Owner (UAO), and one set to THEA Offices. Include contact by phone for meeting coordination. Request type, size, location, easements, and cost for relocation if reimbursement is claimed. Request the voltage level for power lines in the project area. Send UAO requests for reimbursement to THEA for a legal opinion. Include the meeting schedule (if applicable) and the design schedule. Include typical meeting agenda. If scheduling a meeting, give a 4-week notice.

Second Contact: At a minimum of 4 weeks prior to the meeting, the design consultant shall transmit Phase II plans and the utility conflict information (when applicable and in the format requested by THEA) to each UAO having facilities located within the project limits, and one set to THEA.

Third Contact: Identify agreements and assemble Packages. The design consultant shall send agreements, letters, the utility conflict information (when applicable and in the format requested by THEA) and plans to the UAO(s) including all component sets, one set for the utility office, one set to construction and maintenance if required. Include the design schedule.

Not all projects will have all contacts as described above.

7.4 Exception Processing

The design consultant shall be responsible for transmitting/coordinating the appropriate design reports including, but not limited to, the Resurfacing, Restoration and Rehabilitation (RRR) report, Preliminary Engineering Report, Project Scope and/or the Concept Report (if applicable) to each UAO to identify any condition that may require a Design Alternative. The design consultant shall identify and communicate to the UAO any facilities in conflict with their location or project schedule. The design consultant shall assist with the processing of design alternative involving Utilities with the UAO and THEA. Assist with processing per the UAM.

7.5 Preliminary Utility Meeting

The design consultant shall schedule (time and place), notify participants, and conduct a preliminary utility meeting with all UAO(s) having facilities located within the project limits for the purpose of presenting the project, review the current design schedule, evaluate the utility information collected, provide follow-up information on compensable property rights from THEA, discuss the utility work by highway contractor option with each utility, and discuss any future design issues that may impact utilities. This is also an opportunity

for the UAO(s) to present proposed facilities. The design consultant shall keep accurate minutes and distribute a copy to all attendees.

7.6 Individual/Field Meetings

The design consultant shall meet with each UAO as necessary, separately or together, throughout the project design duration to provide guidance in the interpretation of plans, review changes to the plans and schedules, standard or selective clearing and grubbing work, and assist in the development of the UAO(s) marked/RGB plans and work schedules. The design consultant is responsible for motivating the UAO to complete and return the necessary documents after each Utility Contact or Meeting.

7.7 Collect and Review Plans and Data from UAO(s)

The design consultant shall review UAOs marked plans and data individually as they are received for content, accuracy, utility type, material, and size. Provide EOR for inclusion in the plans. Forward all requests for UAO reimbursement and supporting documentation to THEA.

7.8 Subordination of Easements Coordination

The design consultant, if requested by THEA, shall transmit to and secure from the UAO the executed subordination agreements prepared by THEA. The design consultant shall coordinate with THEA the programming of the necessary work program funds to compensate the UAO.

7.9 Utility Design Meeting

The design consultant shall schedule (time and place), notify participants, and conduct a Utility meeting with all affected UAO(s). The design consultant shall be prepared to discuss impacts to existing trees/vegetation and proposed landscape, drainage, traffic signalization, temporary traffic control plans (TTCP) (construction phasing), review the current design schedule and letting date, evaluate the utility information collected, provide follow-up information on compensable property rights from THEA, discuss with each UAO the utility work by highway contractor option, discuss any future design issues that may impact utilities, etc., to the extent that they may have an effect on existing or proposed utility facilities with particular emphasis on drainage and TTCP with each UAO. The intent of this meeting shall be to assist the UAOs in identifying and resolving conflicts between utilities and proposed construction before completion of the plans, including utility adjustment details. Also, to work with the UAOs to recommend potential resolution between known utility conflicts with proposed construction plans as may be deemed practical by the UAO. The design consultant shall keep accurate minutes of all meetings and distribute a copy to all attendees within 3 days.

7.10 Review Utility Markups & Work Schedules and Processing of Schedules & Agreements

The design consultant shall review utility marked up plans and work schedules as they are received for content and coordinate review with the designer. Send color markups and

schedules to THEA such as survey, geotechnical, drainage, structures, lighting, roadway, signals, utilities, landscape architecture, municipalities, and maintaining agency for review and comment if required by THEA. Coordinate with THEA for execution. Distribute Executed Final Documents. Prepare Work Order for UAO(s). The design consultant shall coordinate with THEA the programming of necessary Work Program funds.

7.11 Utility Coordination/Follow-up

The design consultant shall provide utility coordination and follow-up. This includes follow-up, interpreting plans, and assisting the UAOs with completion of their work schedules and agreements. Includes phone calls, face-to-face meetings, etc., to motivate and ensure the UAO(s) complete and return the required documents in accordance with the project schedule. Ensure the resolution of all identified conflicts. The design consultant shall keep accurate minutes of all meetings and distribute a copy to all attendees. This task can be applied to all phases of the project.

7.12 Utility Constructability Review

The design consultant shall review utility schedules against construction contract time, and phasing for compatibility. Coordinate with and obtain written concurrence from the construction office.

7.13 Additional Utility Services

The design consultant shall provide additional utility services. Additional services will be determined when the services are required and requested. This item is not usually included in the scope at the time of negotiation. It is normally added as a supplemental agreement when the need is identified.

7.14 Processing Utility Work by Highway Contractor (UWHC)

This includes coordination of utility design effort between THEA and the UAO(s). The design consultant shall conduct additional coordination meetings, prepare and process the agreements, review tabulation of quantities, perform UWHC constructability and biddability review, review pay items, cost estimates and Technical Special Provisions (TSP) or Modified Special Provision (MSP) prepared by the UAO. This does not include the utility design effort. This item is not usually included in the scope at the time of negotiation. It is normally added as a supplemental agreement when the need is identified. Effort for the EOR is not included in this task, see Roadway Analysis Task Group 4.

7.15 Contract Plans to UAO(s)

If requested by THEA, the design consultant shall transmit the contract plans as processed for letting to the UAO(s). Transmittals to UAO(s) via electronic delivery or another agreeable format.

7.16 Certification/Close-Out

This includes hours for transmitting utility files to THEA and preparation of the Utility Certification Letter. The design consultant shall certify to the appropriate THEA representative the following:

All utility negotiations (Full execution of each agreement, approved Utility Work Schedules, Technical Special Provisions or Modified Special Provisions written, etc.) have been completed with arrangements made for utility work to be undertaken and completed as required for proper coordination with the physical construction schedule.

OR

An on-site inspection was made, and no utility work will be involved.

OR

Plans were sent to the UAO(s) and no utility work is required.

7.17 Other Utilities

The design consultant shall provide other utility services. This includes all efforts for a utility task not covered by an existing defined task. Required work will be defined in the scope and negotiated on a case-by-case basis.

8 ENVIRONMENTAL PERMITS and ENVIRONMENTAL CLEARANCES

The design consultant shall notify THEA Project Manager in advance of all scheduled meetings with the regulatory agencies to allow a THEA representative to attend. The design consultant shall copy in the Project Manager and all appropriate THEA personnel on all permit related correspondence and meetings. The design consultant shall use current regulatory guidelines and policies for all permits required as identified in Section 2.4.

8.1 Preliminary Project Research

The design consultant shall perform preliminary project research and shall be responsible for regulatory agency coordination to ensure that design efforts are properly directed toward permit requirements. The research shall include but should not be limited to a review of the project's PD&E documents including the Environmental Document, Natural Resources Evaluation Report, and Cultural Resources Assessment Survey Report.

The design consultant shall research any existing easements or other restrictions that may exist both within or adjacent to the proposed project boundary. Project research may include but should not be limited to review of available: Right of Way files and databases; federal, state, and local permit files and databases; and local government information including county and property appraiser data. The design consultant shall determine if any Sovereign Submerged Lands easements need to be modified or acquired. Any applicable information will be shown on the plans as appropriate.

8.2 Field Work

8.2.1 Pond Site Alternatives:

The design consultant shall review alternative pond sites as directed by THEA and information shall be included in the Pond Siting Report.

8.2.2 Establish Wetland Jurisdictional Lines and Assessments:

The design consultant shall be responsible for, but not limited to, the following activities:

- Determine landward extent of wetlands and other surface waters as detailed in Rule Chapter 62-340, F.A.C., as ratified in Section 373.4211, F.S..; United States Army Corps of Engineers (USACE) Wetland Delineation Manual (Technical Report Y-87-1); Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (ERD/EL TR-10-20).
- Collect all data and information necessary to determine the jurisdictional boundaries of wetlands and other surface waters as defined by the rules or regulations of each permitting agency processing a permit application for the project.
- Set seasonal high-water levels in adjacent wetlands with biological indicators
- Obtain a jurisdictional determination as defined by the rules or regulations of each permitting agency processing a permit application for the project.
- Prepare aerial maps showing the jurisdictional boundaries of wetlands and other surface waters. Aerial maps shall be reproducible, of a scale of 1"=400'or more detailed and be recent photography. The maps shall show the jurisdictional boundaries of each agency. Photocopies of aerials are not acceptable. When necessary, a wetland specific survey will be prepared by a registered professional surveyor and mapper. All surveyed jurisdictional boundaries are to be tied to the project's baseline of survey.
- Prepare a written assessment of the current condition and functional value of the wetlands and other surface waters. Prepare data in tabular form which includes the ID number for each wetland (and other surface water, if necessary) impacted, size of wetland to be impacted, type of impact, and identify any wetland (by ID number and size) within the project limits that will not be impacted by the project.
- Prepare appropriate agency forms to obtain required permits. Forms may include but are not limited to the USACE "Wetland Determination Data Form - Atlantic and Gulf Coastal Plain Region"; the USACE "Request for Corps Jurisdictional Determination"; Uniform Mitigation Assessment Method forms and/or project specific data forms.

8.2.3 Species Surveys:

The design consultant shall conduct wildlife surveys as defined by rules or regulations of any permitting agency or commenting agency that is processing a permit.

8.3 Agency Verification of Wetland Data

The design consultant shall be responsible for verification of wetland and other surface water data identified in Section 8.2 and coordinating regulatory agency field reviews,

including finalization of assessments and jurisdictional determinations with applicable agencies.

8.4 Complete and Submit All Required Permit Applications

The design consultant shall collect the data and information necessary to prepare the permit applications and obtain the environmental permits and authorizations required to construct the project as identified in the Project Description and as described in 8.4.1, 8.4.2, and 8.15 (Other Environmental Permits). The design consultant shall prepare each application in accordance with the rules and/or regulations of the regulatory agency responsible for issuing a specific permit and/or authorization to perform work. The application Packages must be approved by THEA prior to submittal to regulatory agencies.

The design consultant will submit all permit applications, as directed by THEA and be responsible for payment of all permit and public noticing fees, unless directed otherwise by THEA.

8.4.1 Complete and Submit all Required Wetland Permit Applications:

The design consultant shall prepare, complete, and submit required wetland permit (e.g., ERP, Section 404) application Packages to the appropriate regulatory agencies. This includes, but is not limited to, applications submitted to WMDs and/or DEP, and USACE. The application Package may include but is not limited to attachments (e.g., project location map, aerials, affidavit of ownership, pictures, additional technical analysis, etc.), a cover letter with project description as well as completion of applicable agency forms. The design consultant shall prepare and respond to agency Requests for Additional Information (RAIs), including necessary revisions to the application Package. All responses and completed application Packages must be approved by THEA prior to submittal to the regulatory agencies. Geotechnical permitting should also be prepared, submitted, and obtained.

8.4.2 Complete and Submit all Required Species Permit Applications:

The design consultant shall prepare, complete and submit required species permit applications to the appropriate agencies. This includes federal and state protected species permit application Packages as required. The work includes completion of application Package (e.g., project location map, aerials, affidavit of ownership, pictures, additional technical analysis, etc.), and cover letter with project description as well as completion of applicable forms. The design consultant shall respond to agency RAIs, including necessary revisions to the application Package. All responses and completed applications must be approved by the prior to submittal to the regulatory agency.

8.5 Coordinate and Review Dredge and Fill Sketches

The design consultant shall review Dredge and Fill Detail sheets to ensure information on the sketch(es) meet the requirements of the regulatory agencies and are appropriate for environmental permit application submittal and acquisition. The design consultant will also

provide environmental data/information as needed to support the preparation of the Dredge and Fill sketches.

8.6 Complete and Submit Documentation for Coordination and/or USCG Bridge Permit Application N/A

8.6.1 Prepare and submit required documents for USCG Coordination

8.6.2 Complete and submit USCG Bridge Permit Application

8.7 Prepare Water Management District or Local Water Control District Right of Way Occupancy Permit Application N/A

8.8 Prepare Coastal Construction Control Line (CCCL) Permit Application N/A

8.9 Prepare USACE Section 408 Application to Alter a Civil Works Project N/A

8.10 Compensatory Mitigation Plan N/A

8.11 Mitigation Coordination and Meetings N/A

8.12 Regulatory Agency Support

The design consultant shall provide regulatory agency support which may include but is not limited to preparing: a Statement of Findings or Memorandum for the Record; Public Notice; Findings of Fact; and Biological Opinion.

8.13 Other Environmental Permits

The design consultant shall coordinate with and obtain approval from the City of Tampa on the proposed Whiting Street storm drain design.

8.14 Technical Support to THEA for Environmental Clearances and Re-evaluations

The design consultant shall provide engineering and environmental support for THEA to obtain environmental clearances for all changes to the project after the PD&E study was approved. These changes include but are not limited to pond or mitigation sites identified, land use or environmental changes, and major design changes.

8.14.1 PEIR Re-evaluation

During the development of the final design plans, the design consultant shall be responsible for coordinating with THEA Project Manager to provide necessary engineering information required in the preparation of the re-evaluation by THEA. The preparation of environmental re-evaluations includes those listed in Part 1, Chapter 13 of the DEPARTMENT's PD&E Manual: Right of Way, Design Change, and Construction Solicitation.

Re-evaluations will be completed in accordance with Part 1, Chapter 13 of the PD&E Manual. The design consultant shall provide information to update the Project Commitment Record for incorporation into the re-evaluation.

It is the responsibility of the design consultant to provide THEA Project Manager with engineering information on major design changes including changes in typical section, roadway alignment, pond site selection, right of way requirements, bridge to box culvert, drainage, and traffic volumes that may affect noise models.

8.14.2 Archaeological and Historical Resources

The design consultant shall provide necessary technical information to THEA's Project Manager to analyze the impacts to all cultural and historical resources due to changes in the project in accordance with Part 2, Chapter 8 of the PD&E Manual. The design consultant will be required to complete the environmental commitments as listed in Section 6.2 of the Final Project Environmental Impact Report (PEIR) from the prior PD&E Study (THEA Project No. HI-0141).

8.14.3 Section 4(f), 6(f), and Acquisition and Restoration Council Resources (ARC) N/A

8.14.4 Wetland Impact Analysis

The design consultant shall provide necessary technical information to the District's Project Manager to analyze the impacts to wetlands and other surface waters in accordance with Part 2, Chapter 9 of the PD&E Manual due to changes in the project.

8.14.5 Essential Fish Habitat Impact Analysis N/A

8.14.6 Protected Species and Habitat Impact Analysis

The design consultant shall provide necessary technical information to THEA Project Manager to analyze the impacts to all protected species and habitat in accordance with Part 2, Chapter 16 of the PD&E Manual due to changes in the project. The design consultant shall perform the necessary analysis to complete agency consultation in accordance with Section 7 or Section 10 of the Endangered Species Act.

8.15 Preparation of Environmental Clearances and Re-evaluations N/A

8.15.1 PEIR Re-evaluation

8.15.2 Archaeological and Historical Resources

8.15.3 Section 4(f), 6(f), and ARC Resources

8.15.4 Wetland Impact Analysis

8.15.5 Essential Fish Habitat Impact Analysis

8.15.6 Protected Species and Habitat Impact Analysis

8.16 Contamination Impact Analysis

The design consultant shall conduct a Contamination Screening Evaluation for the project limits including stormwater ponds and floodplain compensation sites as described in Part 2, Chapter 20, of the PD&E Manual. The appropriate level of analysis and delivery type will be approved by THEA Project Manager. The draft Level 1 Contamination Screening Evaluation document shall be submitted to THEA's Project Manager for review and final approval. The design consultant shall include an evaluation of any new contamination impacts due to changes to the project from the PD&E design concept, if applicable, and any new discharges or new potential contamination impacts not evaluated in any previously completed Contamination Screening Evaluation. The project impacts, conclusions and recommendations, figures, tables and appendices will be provided in a Level I Contamination Screening Evaluation Report. The design consultant will be required to complete the environmental commitments as listed in Section 6.2 of the Final PEIR from the prior PD&E Study (THEA Project No. HI-0141).

THEA will provide Level II assessment services. If contamination is identified within the limits of construction, the design consultant shall coordinate with THEA Project Manager to properly mark identified contamination areas in the plans and develop specifications as appropriate.

8.17 Asbestos Survey

The DEPARTMENT will provide asbestos and metal-based coatings survey services.

If asbestos or metal-based coatings above threshold levels are found on the bridge(s), the design consultant shall coordinate with THEA Project Manager to obtain plan notes, general notes, specifications, pay item notes, and Operation and Maintenance (O&M) plans for any asbestos to remain in place.

8.18 Technical Meetings

8.19 Quality Assurance/Quality Control

8.20 Supervision

8.21 Coordination

9 STRUCTURES - SUMMARY AND MISCELLANEOUS TASKS AND DRAWINGS

The design consultant shall analyze, design, and develop contract documents for all structures in accordance with applicable provisions as defined in Section 2.21, Provisions for Work. Individual tasks identified in Sections 9 through 18 are defined in the Staff Hour Estimation Handbook and within the provision defined in Section 2. 21, Provisions for Work. Contract documents shall display economic solutions for the given conditions.

The design consultant shall provide Design Documentation to THEA with each submittal consisting of structural design calculations and other supporting documentation developed

during the development of the plans. The design calculations submitted shall adequately address the complete design of all structural elements. These calculations shall be neatly and logically presented in PDF format, sized 8 ½"x11", and all sheets shall be numbered. The final design calculations shall be signed and sealed by a Florida-licensed professional engineer. A cover sheet indexing the contents of the calculations shall be included and the engineer shall sign and seal that sheet. All computer programs and parameters used in the design calculations shall include sufficient backup information to facilitate the review task.

9.1 Key Sheet and Index of Drawings

9.2 Project Layout

9.3 General Notes and Bid Item Notes

9.4 Miscellaneous Common Details

9.5 Incorporate Report of Core Borings

9.6 Standard Plans- Bridges

9.7 Existing Bridge Plans

9.8 Structures Quantities

9.9 Cost Estimate

9.10 Technical Special Provisions and Modified Special Provisions

9.11 Field Reviews

9.12 Technical Meetings

9.13 Quality Assurance/Quality Control

9.14 Independent Peer Review

9.15 Supervision

9.16 Coordination

10 STRUCTURES - BRIDGE DEVELOPMENT REPORT

The design consultant shall prepare a Bridge Development Report (BDR). The BDR shall be submitted as part of the Phase I Roadway Submittal, General Requirements.

General Requirements

10.1 Bridge Geometry

10.2 Ship Impact Data Collection N/A

10.3 Ship Impact Criteria N/A

Superstructure Alternatives

10.4 Short-Span Concrete N/A

10.5 Medium-Span Concrete

10.6 Long Span Concrete

10.7 Structural Steel

Foundation and Substructure Alternatives

10.8 Pier/Bent

10.9 Shallow Foundations / GRS Abutments N/A

10.10 Deep Foundations

Movable Span N/A

10.11 Data Collection and Design Criteria

10.12 Movable Span Geometrics and Clearances N/A

10.13 Deck System Evaluation

10.14 Framing Plan Development

10.15 Main Girder Preliminary Design

10.16 Conceptual Span Balance/Counterweight

10.17 Support System Development

10.18 Drive Power Calculations N/A

10.19 Drive System Development N/A

10.20 Power and Control Development N/A

10.21 Conceptual Pier Design

10.22 Foundation Analysis (FL PIER)

10.23 Tender Visibility Study N/A

Other BDR Issues

10.24 Aesthetics

10.25 TTCP/Staged Construction Requirements

10.26 Constructability Requirements

10.27 Load Rating for Damaged/Widened Structures

10.28 Quantity and Cost Estimates

10.29 Quantity and Cost Estimates - Movable Span N/A

10.30 Wall Type Justification

Report Preparation

10.31 Exhibits

10.32 Exhibits - Movable Span N/A

10.33 Report Preparation

10.34 Report Preparation - Movable Span N/A

10.35 BDR Submittal Package

Preliminary Plans

When ONLY Phase I plans are final deliverable, use Task Nos. as shown for applicable bridge types for project Activities 12 through 16. Staff hours to be negotiated and scaled appropriately.

11 STRUCTURES - TEMPORARY BRIDGE N/A

The design consultant shall prepare plans for Temporary Bridge(s) at the location(s) specified in Section 2.6. The design consultant shall contact FDOT Office of Maintenance to determine the type and availability of temporary before deciding on the temporary bridge type to be used.

General Layout Design and Plans

11.1 Overall Bridge Final Geometry

11.2 General Plan and Elevation

11.3 Miscellaneous Details

End Bent Design and Plans

11.4 End Bent Structural Design

11.5 End Bent Details

Intermediate Bent Design and Plans

11.6 Intermediate Bent Structural Design

11.7 Intermediate Bent Details

Miscellaneous Substructure Design and Plans

11.8 Foundation Layout

12 STRUCTURES - SHORT SPAN CONCRETE BRIDGE N/A

The design consultant shall prepare plans for Short Span Concrete Bridge(s) at the location(s) specified in Section 2.6.

General Layout Design and Plans

12.1 Overall Bridge Final Geometry

12.2 Expansion/Contraction Analysis

12.3 General Plan and Elevation

12.4 Construction Staging

12.5 Approach Slab Plan and Details

12.6 Miscellaneous Details

End Bent Design and Plans

12.7 End Bent Geometry

12.8 End Bent Structural Design

12.9 End Bent Plan and Elevation

12.10 End Bent Details

Intermediate Bent Design and Plans

12.11 Bent Geometry

12.12 Bent Stability Analysis

12.13 Bent Structural Design

12.14 Bent Plan and Elevation

12.15 Bent Details

Miscellaneous Substructure Design and Plans

12.16 Foundation Layout

Superstructure Design and Plans

12.17 Finish Grade Elevation Calculation

12.18 Finish Grade Elevations

Cast-In-Place Slab Bridges

12.19 Bridge Deck Design

12.20 Superstructure Plan

12.21 Superstructure Sections and Details

Prestressed Slab Unit Bridges

12.22 Prestressed Slab Unit Design

12.23 Prestressed Slab Unit Layout

12.24 Prestressed Slab Unit Details and Schedule

12.25 Deck Topping Reinforcing Layout

12.26 Superstructure Sections and Details

Reinforcing Bar Lists

12.27 Preparation of Reinforcing Bar List

Load Rating

12.28 Load Rating

13 STRUCTURES - MEDIUM SPAN CONCRETE BRIDGE

The design consultant shall prepare plans for Medium Span Concrete Bridge(s) at the location(s) specified in Section 2.6.

General Layout Design and Plans

13.1 Overall Bridge Final Geometry

13.2 Expansion/Contraction Analysis

13.3 General Plan and Elevation

13.4 Construction Staging

13.5 Approach Slab Plan and Details

13.6 Miscellaneous Details

End Bent Design and Plans

13.7 End Bent Geometry

13.8 Wingwall Design and Geometry

13.9 End Bent Structural Design

13.10 End Bent Plan and Elevation

13.11 End Bent Details

Intermediate Bent Design and Plans

13.12 Bent Geometry

13.13 Bent Stability Analysis

13.14 Bent Structural Design

13.15 Bent Plan and Elevation

13.16 Bent Details

Pier Design and Plans

13.17 Pier Geometry

13.18 Pier Stability Analysis

13.19 Pier Structural Design

13.20 Pier Plan and Elevation

13.21 Pier Details

Miscellaneous Substructure Design and Plans

13.22 Foundation Layout

Superstructure Deck Design and Plans

13.23 Finish Grade Elevation (FGE) Calculation

13.24 Finish Grade Elevations

13.25 Bridge Deck Design

13.26 Bridge Deck Reinforcing and Concrete Quantities

13.27 Diaphragm Design

13.28 Superstructure Plan

13.29 Superstructure Section

13.30 Miscellaneous Superstructure Details

Reinforcing Bar Lists

13.31 Preparation of Reinforcing Bar List

Continuous Concrete Girder Design N/A

13.32 Section Properties

13.33 Material Properties

13.34 Construction Sequence

13.35 Tendon Layouts

13.36 Live Load Analysis

13.37 Temperature Gradient

13.38 Time Dependent Analysis

13.39 Stress Summary

13.40 Ultimate Moments

13.41 Ultimate Shear

13.42 Construction Loading

13.43 Framing Plan

13.44 Girder Elevation, including Grouting Plan and Vent Locations

13.45 Girder Details

13.46 Erection Sequence

13.47 Splice Details

13.48 Girder Deflections and Camber

Simple Span Concrete Design

13.49 Prestressed Beam

13.50 Prestressed Beam Schedules

13.51 Framing Plan

Beam Stability

13.52 Beam/Girder Stability

Bearing

13.53 Bearing Pad and Bearing Plate Design

13.54 Bearing Pad and Bearing Plate Details

Load Rating

13.55 Load Ratings

14 STRUCTURES - STRUCTURAL STEEL BRIDGE

The design consultant shall prepare plans for Structural Steel Bridge(s) at the location(s) specified in Section 2.6.

General Layout Design and Plans

14.1 Overall Bridge Final Geometry

14.2 Expansion/Contraction Analysis

14.3 General Plan and Elevation

14.4 Construction Staging

14.5 Approach Slab Plan and Details

14.6 Miscellaneous Details

End Bent Design and Plans

14.7 End Bent Geometry

14.8 Wingwall Design and Geometry

14.9 End Bent Structural Design

14.10 End Bent Plan and Elevation

14.11 End Bent Details

Intermediate Bent Design and Plans N/A

14.12 Bent Geometry

14.13 Bent Stability Analysis

14.14 Bent Structural Design

14.15 Bent Plan and Elevation

14.16 Bent Details

Pier Design and Plans

14.17 Pier Geometry

14.18 Pier Stability Analysis

14.19 Pier Structural Design

14.20 Pier Plan and Elevation

14.21 Pier Details

Miscellaneous Substructure Design and Plans

14.22 Foundation Layout

Superstructure Deck Design and Plans

14.23 Finish Grade Elevation (FGE) Calculation

14.24 Finish Grade Elevations

14.25 Bridge Deck Design

14.26 Bridge Deck Reinforcing and Concrete Quantities

14.27 Superstructure Plan

14.28 Superstructure Section

14.29 Miscellaneous Bridge Deck Details

Reinforcing Bar Lists

14.30 Preparation of Reinforcing Bar List

Structural Steel Plate Girder Design

14.31 Unit Modeling

14.32 Section Design

14.33 Stiffener Design and Locations

14.34 Cross-frame Design

14.35 Connections

14.36 Bearing Assembly Design and Detailing (With Jacking Analysis)

14.37 Splice Design

14.38 Shear Stud Connectors

14.39 Deflection Analysis

14.40 Framing Plan

14.41 Girder Elevation

14.42 Structural Steel Details

14.43 Splice Details

14.44 Girder Deflections and Camber

Structural Steel Box Girder Design N/A

14.45 Unit Modeling

14.46 Section Design

14.47 Stiffener Design and Locations

14.48 Interior Cross-Frame Design

14.49 Exterior Cross-Frame Design

14.50 Connections

14.51 Bearing Assembly Design and Detailing (with Jacking Analysis)

14.52 Splice Design

14.53 Shear Stud Connectors

14.54 Deflection Analysis

14.55 Framing Plan

14.56 Girder Elevation

14.57 Structural Steel Details

14.58 Splice Details

14.59 Girder Deflections and Camber

Erection Scheme

14.60 Erection Scheme Analysis

14.61 Erection Scheme

Load Rating

14.62 Load Rating

15 STRUCTURES - SEGMENTAL CONCRETE BRIDGE N/A

16 STRUCTURES - MOVABLE SPAN N/A

17 STRUCTURES - RETAINING WALLS

The design consultant shall prepare plans for Retaining Wall(s) as specified in Section 2.6.

General Requirements

17.1 Key Sheet

17.2 Horizontal Wall Geometry

Permanent Proprietary Walls

17.3 Vertical Wall Geometry

17.4 Semi-Standard Drawings

17.5 Wall Plan and Elevations (Control Drawings)

17.6 Details

Temporary Proprietary Walls

17.7 Vertical Wall Geometry

17.8 Semi-Standard Drawings

17.9 Wall Plan and Elevations (Control Drawings)

17.10 Details

Cast-In-Place Retaining Walls

17.11 Design

17.12 Vertical Wall Geometry

17.13 General Notes

17.14 Wall Plan and Elevations (Control Drawings)

17.15 Sections and Details

17.16 Reinforcing Bar List

Other Retaining Walls and Bulkheads

17.17 Design

17.18 Vertical Wall Geometry

17.19 General Notes, Tables and Miscellaneous Details

17.20 Wall Plan and Elevations

17.21 Details

18 STRUCTURES - MISCELLANEOUS

The design consultant shall prepare plans for Miscellaneous Structure(s) as specified in Section 2.6.

Concrete Box Culverts N/A

18.1 Concrete Box Culverts

18.2 Concrete Box Culverts Extensions

18.3 Concrete Box Culvert Data Table Plan Sheets

18.4 Concrete Box Culvert Special Details Plan Sheets

Strain Poles N/A

18.5 Steel Strain Poles

18.6 Concrete Strain Poles

18.7 Strain Pole Data Table Plan Sheets

18.8 Strain Pole Special Details Plan Sheets

Mast Arms

18.9 Mast Arms

18.10 Mast Arms Data Table Plan Sheets

18.11 Mast Arms Special Details Plan Sheets

Overhead/Cantilever Sign Structure

18.12 Cantilever Sign Structures

18.13 Overhead Span Sign Structures

18.14 Special (Long Span) Overhead Sign Structures

18.15 Monotube Overhead Sign Structure

18.16 Bridge Mounted Signs (Attached to Superstructure)

18.17 Overhead/Cantilever Sign Structures Data Table Plan Sheets

18.18 Overhead/Cantilever Sign Structures Special Details Plan Sheets

High Mast Lighting N/A

18.19 Non-Standard High Mast Lighting Structures

18.20 High Mast Lighting Special Details Plan Sheets

Noise Barrier Walls (Ground Mount) N/A

18.21 Horizontal Wall Geometry

18.22 Vertical Wall Geometry

18.23 Summary of Quantities - Aesthetic Requirements

18.24 Control Drawings

18.25 Design of Noise Barrier Walls Covered by Standards

18.26 Design of Noise Barrier Walls not Covered by Standards

18.27 Aesthetic Details

Special Structures

18.28 Fender System N/A

18.29 Fender System Access N/A

18.30 Special Structures

18.31 Other Structures

18.32 Condition Evaluation of Signal and Sign Structures, and High Mast Light Poles

18.33 Condition Evaluation of Signal and Sign Structures, and High Mast Light Poles (No As built or Design Plans Available)

18.34 Analytical Evaluation of Signal and Sign Structures, and High Mast Light Poles

18.35 Ancillary Structures Report

19 SIGNING AND PAVEMENT MARKING ANALYSIS

The design consultant shall analyze and document Signing and Pavement Markings Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

19.1 Traffic Data Analysis N/A

19.2 No Passing Zone Study N/A

19.3 Signing and Pavement Marking Master Design File

The design consultant shall prepare the Signing & Marking Design file to include all necessary design elements and all associated reference files.

19.4 Multi-Post Sign Support Calculations

The design consultant shall determine the appropriate column size from the DEPARTMENT's Multi-Post Sign Program(s).

19.5 Sign Panel Design Analysis

Establish sign layout, letter size and series for non-standard signs.

19.6 Sign Lighting/Electrical Calculations N/A

19.7 S&PM Quantities

The design consultant shall determine signing and pavement marking pay items and quantities and the supporting documentation.

19.8 Cost Estimate

19.9 Technical Special Provisions and Modified Special Provisions N/A

19.10 Other Signing and Pavement Marking Analysis N/A

19.11 Field Reviews

19.12 Technical Meetings

19.13 Quality Assurance/Quality Control

19.14 Independent Peer Review N/A

19.15 Supervision

19.16 Coordination

20 SIGNING AND PAVEMENT MARKING PLANS

The design consultant shall prepare a set of Signing and Pavement Marking Plans in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums that includes the following.

20.1 Key Sheet & Signature Sheet

20.2 General Notes/Pay Item Notes

20.3 Project Layout N/A

20.4 Plan Sheet

20.5 Special Details N/A

20.6 Service Point Details N/A

20.7 Guide Sign Data

20.8 Cross Sections (Sign Installations)

20.9 Quality Assurance/Quality Control

The design consultant shall be responsible for the professional quality, technical accuracy and coordination of traffic design drawings, specifications and other services furnished by the design consultant under this contract.

The design consultant shall provide a Quality Control Plan that describes the procedures to be utilized to verify, independently check, and review all design drawings, specifications and other services prepared as a part of the contract. The design consultant shall describe how the checking and review processes are to be documented to verify that the required procedures were followed. The Quality Control Plan may be one utilized by the design consultant as part of their normal operation, or it may be one specifically designed for this project.

20.10 Supervision

21 SIGNALIZATION ANALYSIS

The design consultant shall analyze and document Signalization Analysis Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

21.1 Traffic Data Collection N/A

21.2 Traffic Data Analysis

The design consultant shall determine signal operation plan, intersection geometry, local signal timings, pre-emption phasing & timings, forecasting traffic, and intersection analysis run.

21.3 Signal Warrant Study N/A

21.4 Systems Timings

The design consultant shall determine proper coordination timing plans including splits, force offs, offsets, and preparation of Time Space Diagram.

21.5 Reference and Master Signalization Design File

The design consultant shall prepare the Signalization Design file to include all necessary design elements and all associated reference files.

21.6 Reference and Master Interconnect Communication Design File N/A

Interconnect Communication Design included in ITS Plans.

21.7 Overhead Street Name Sign Design

The design consultant shall design Signal Mounted Overhead Street Name signs.

21.8 Pole Elevation Analysis

21.9 Traffic Signal Operation Report

21.10 Signalization Quantities

The design consultant shall determine signalization pay items and quantities and the supporting documentation.

21.11 Cost Estimate

21.12 Technical Special Provisions and Modified Special Provisions

21.13 Other Signalization Analysis

21.14 Field Reviews

The design consultant shall collect information from the maintaining agencies and conduct a field review. The review should include, but is not limited to, the following:

- Existing Signal and Pedestrian Phasing
- Controller Make, Model, Capabilities and Condition/Age
- Condition of Signal Structure(s)
- Type of Detection as Compared with Current District Standards
- Interconnect Media
- Controller Timing Data

21.15 Technical Meetings

21.16 Quality Assurance/Quality Control

The design consultant shall be responsible for the professional quality, technical accuracy and coordination of traffic design drawings, specifications and other services furnished by the design consultant under this contract.

The design consultant shall provide a Quality Control Plan that describes the procedures to be utilized to verify, independently check, and review all design drawings, specifications and other services prepared as a part of the contract. The design consultant shall describe how the checking and review processes are to be documented to verify that the required procedures were followed. The Quality Control Plan may be one utilized by the design consultant as part of their normal operation, or it may be one specifically designed for this project.

21.17 Independent Peer Review N/A

21.18 Supervision

21.19 Coordination

22 SIGNALIZATION PLANS

The design consultant shall prepare a set of Signalization Plans in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums, which includes the following:

22.1 Key Sheet & Signature Sheet

22.2 General Notes/Pay Item Notes

22.3 Signalization Plan Sheets

22.4 Interconnect Plans N/A

22.5 Traffic Monitoring Site N/A

22.6 Guide Sign Data

22.7 Special Details N/A

22.8 Service Point Details

22.9 Mast Arm/Monotube Tabulation Sheet

22.10 Strain Pole Schedule N/A

22.11 TTCP Signal N/A

22.12 Temporary Detection Sheet N/A

22.13 Quality Assurance/Quality Control

The design consultant shall be responsible for the professional quality, technical accuracy and coordination of traffic design drawings, specifications and other services furnished by the design consultant under this contract.

The design consultant shall provide a Quality Control Plan that describes the procedures to be utilized to verify, independently check, and review all design drawings, specifications and other services prepared as a part of the contract. The design consultant shall describe how the checking and review processes are to be documented to verify that the required procedures were followed. The Quality Control Plan may be one utilized by the design consultant as part of their normal operation, or it may be one specifically designed for this project.

22.14 Supervision

23 LIGHTING ANALYSIS

The design consultant shall analyze and document Lighting Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

23.1 Lighting Justification Report N/A

23.2 Lighting Design Analysis Report (LDAR)

The design consultant shall prepare a Preliminary Lighting Design Analysis Report in accordance with the requirements of the FDOT Design Manual. The report shall be submitted under a separate cover with the Phase II plans submittal. After approval of the preliminary report, the design consultant shall submit a revised report for each submittal.

23.3 Voltage Drop Calculations

The design consultant shall submit voltage drop calculations showing the equation or equations used along with the number of luminaries per circuit, the length of each circuit, the size conductor or conductors used and their ohm resistance values. The voltage drop incurred on each circuit (total volts and percentage of drop) shall be calculated, and all work necessary to calculate the voltage drop values for each circuit should be presented in such a manner as to be duplicated by the District.

The Voltage Drop Calculations shall be submitted as part of the Lighting Design Analysis Report.

23.4 FDEP Coordination and Report N/A

23.5 Reference and Master Design Files

The design consultant shall prepare the Lighting Design file to include all necessary design elements and all associated reference files.

23.6 Temporary Highway Lighting N/A

23.7 Design Documentation

The design consultant shall submit a design documentation with each plan's submittal under a separate cover and not part of the roadway documentation book. At a minimum, the design documentation shall include:

- Phase submittal checklist.
- Structural calculations for special conventional pole concrete foundations.
- Correspondence with the power company concerning new electrical service.

23.8 Lighting Quantities

The design consultant shall determine lighting pay items and quantities and the supporting documentation.

23.9 Cost Estimate

23.10 Technical Special Provisions and Modified Special Provisions N/A

23.11 Other Lighting Analysis N/A

23.12 Field Reviews

The design consultant shall collect information from the maintaining agencies and conduct a field review. The review should include but is not limited to the following:

- Existing Lighting Equipment
- Load Center, Capabilities and Condition/Age
- Condition of Lighting Structure(s)
- Verification of horizontal clearances
- Verification of breakaway requirements

23.13 Technical Meetings

23.14 Quality Assurance/Quality Control

23.15 Independent Peer Review N/A

23.16 Supervision

23.17 Coordination

24 LIGHTING PLANS

The design consultant shall prepare a set of Lighting Plans in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

24.1 Key Sheet & Signature Sheet

24.2 General Notes/Pay Item Notes

24.3 Pole Data, Legend & Criteria

24.4 Project Layout N/A

24.5 Plan Sheets

24.6 Special Details N/A

24.7 Service Point Details

24.8 Temporary Highway Lighting Plan Sheets N/A

24.9 Quality Assurance/Quality Control

The design consultant shall be responsible for the professional quality, technical accuracy and coordination of traffic design drawings, specifications and other services furnished by the design consultant under this contract.

The design consultant shall provide a Quality Control Plan that describes the procedures to be utilized to verify, independently check, and review all design drawings, specifications

and other services prepared as a part of the contract. The design consultant shall describe how the checking and review processes are to be documented to verify that the required procedures were followed. The Quality Control Plan may be one utilized by the design consultant as part of their normal operation, or it may be one specifically designed for this project.

24.10 Supervision

25 LANDSCAPE ANALYSIS

The design consultant shall analyze and document Landscape Architecture Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

25.1 Data Collection

All research required to collect data necessary to complete the initial design analysis. Includes identifying local ordinances and collection of other project data.

25.2 Outdoor Advertising Assessment

Includes all work required to determine locations of all outdoor advertising permitted within the roadway project limits. Includes all work required to determine the proposed view zones and the supporting documentation.

25.3 Master Design File Setup (Base Files)

Includes all work required to setup the master design file.

25.4 Site Inventory and Analysis

Includes identification of opportunities and constraints for the proposed landscape project based on existing site conditions. Identify available planting areas for nursery landscape material. Summary of analysis, if required, is included in conceptual design.

25.5 Landscape Opportunity Plan

Task includes developing a Landscape Opportunity Plan.

25.6 Conceptual Planting Design

25.7 Final Planting Design

25.8 Conceptual Irrigation Design

25.9 Final Irrigation Design

Includes all work in master design files. Irrigation Design includes, but is not limited to, the locations and sizes of pumps, pump stations, mainlines, lateral lines, irrigation heads, valves, backflow and control devices.

25.10 Conceptual Hardscape Design

25.11 Final Hardscape Design

25.12 Landscape Quantities

The design consultant shall determine landscape pay items and quantities and the supporting documentation.

25.13 Cost Estimates

25.14 Technical or Modified Special Provisions

25.15 Other Landscape Services

25.16 Quality Assurance/Quality Control

25.17 Supervision

25.18 Landscape Meetings

25.19 Field Reviews

25.20 Coordination

26 LANDSCAPE PLANS

The design consultant shall prepare a set of Landscape Plans which includes the following.

26.1 Key Sheet & Signature Sheet

26.2 Plant Schedule - N/A

26.3 General Notes/Pay Item Notes

26.4 Planting Plans for Linear Areas

26.5 Planting Plans for Non-Linear Areas (Stormwater Facilities, Rest Areas, Interchanges and Toll Plazas)

26.6 Planting Details

26.7 Irrigation Plans for Linear Areas

26.8 Irrigation Plans for Non-Linear Areas (Stormwater Facilities, Rest Areas, Interchange and Toll Plazas)

26.9 Irrigation Details

26.10 Hardscape Plans and Details

26.11 Maintenance Plan

The design consultant shall include a written plan for care and maintenance of the plants and beds, hardscape, and irrigation system after the establishment period. The landscape maintenance plan will be developed in performance-based language and will be in coordination with the local government entity who assumes the maintenance obligation.

26.12 Quality Assurance/Quality Control

26.13 Supervision

27 SURVEY

The design consultant shall perform survey tasks in accordance with all applicable statutes, manuals, guidelines, standards, handbooks, procedures, and current design memoranda.

The design consultant shall submit all survey notes and computations to document the surveys. All field survey work shall be recorded in approved media and submitted to THEA. Field books submitted to THEA must be of an approved type. The field books shall be certified by the surveyor in responsible charge of work being performed before the final product is submitted.

The survey notes shall include documentation of decisions reached from meetings, telephone conversations or site visits. All like work (such as bench lines, reference points, etc.) shall be recorded contiguously. THEA may not accept field survey radial locations of section corners, platted subdivision lot and block corners, alignment control points, alignment control reference points and certified section corner references. THEA may instead require that these points be surveyed by true line, traverse or parallel offset.

27.1 Horizontal Project Control (HPC)

Establish or recover HPC, for the purpose of establishing horizontal control on the Florida State Plane Coordinate System or datum approved by THEA; may include primary or secondary control points. Includes analysis and processing of all field collected data, and preparation of forms.

27.2 Vertical Project Control (VPC)

Establish or recover VPC, for the purpose of establishing vertical control on datum approved by THEA; may include primary or secondary vertical control points. Includes analysis and processing of all field collected data, and preparation of forms.

27.3 Alignment and/or Existing Right of Way (R/W) Lines

Establish, recover or re-establish project alignment. Also includes analysis and processing of all field collected data, existing maps, and/or reports for identifying mainline, ramp, offset, or secondary alignments. Depict alignment and/or existing R/W lines (in required format) per THEA R/W Maps, platted or dedicated rights of way.

27.4 Aerial Targets/LiDAR Targets

Place, locate, and maintain required aerial targets and/or photo identifiable points. Includes analysis and processing of all field collected data, existing maps, and/or reports. Placement of the targets will be at the discretion of the aerial firm.

27.5 Reference Points

Reference Horizontal Project Control (HPC) points, project alignment, vertical control points, section, ¼ section, center of section corners and General Land Office (G.L.O.) corners as required.

27.6 Topography/Digital Terrain Model (DTM) (3D)

Locate all above ground features and improvements for the limits of the project by collecting the required data for the purpose of creating a DTM with sufficient density. Shoot all break lines, high and low points. Effort includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

27.7 Planimetric (2D) n/a

27.8 Roadway Cross Sections/Profiles

Perform cross sections or profiles. May include analysis and processing of all field-collected data for comparison with DTM.

27.9 Side Street Surveys

Refer to tasks of this document as applicable.

27.10 Underground Utilities

Designation includes 2-dimensional collection of existing utilities and selected 3-dimensional verification as needed for designation. Location includes non-destructive excavation to determine size, type and location of existing utility, as necessary for final 3-dimensional verification. Survey includes collection of data on points as needed for designates and locates. Includes analysis and processing of all field collected data, and delivery of all appropriate electronic files.

Soil removed for obtaining locates on utility lines shall be placed back in the excavation in a way that does not disturb or damage the utility. Locates through asphalt pavement shall be finished with cold pack asphalt to at least the same thickness as the base and asphalt that was removed. Locates through concrete pavement, sidewalks, etc. shall be finished using a high strength concrete mix to the same depth as what was removed. The cuts made in asphalt and concrete for locates shall be made in a manner that provides a patch with regular sides that will be level with no protruding or jagged edges.

27.11 Outfall Survey

Locate all above ground features and improvements for the limits of the project by collecting the required data for the purpose of a DTM. Survey with sufficient density of

shots. Shoot all break lines, high and low points. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

27.12 Drainage Survey

Locate underground data (XYZ, pipe size, type, condition and flow line) that relates to above ground data. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

27.13 Bridge Survey (Minor/Major)

Locate required above ground features and improvements for the limits of the bridge. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

27.14 Channel Survey N/A

27.15 Pond Site Survey

Refer to tasks of this document as applicable.

27.16 Mitigation Survey N/A

27.17 Jurisdiction Line Survey N/A

27.18 Geotechnical Support

Perform 3-dimensional (X,Y,Z) field location, or stakeout, of boring sites established by geotechnical engineer. Includes field edits, analysis and processing of all field collected data and/or reports.

27.19 Sectional/Grant Survey

Perform field location/placement of section corners, 1/4 section corners, and fractional corners where pertinent. Includes analysis and processing of all field-collected data and/or reports.

27.20 Subdivision Location

Survey all existing recorded subdivision/condominium boundaries, tracts, units, phases, blocks, street R/W lines, common areas. Includes analysis and processing of all field collected data and/or reports. If unrecorded subdivision is on file in the public records of the subject county, tie existing monumentation of the beginning and end of unrecorded subdivision.

27.21 Maintained R/W N/A

27.22 Boundary Survey

Perform boundary survey as defined by THEA and DEPARTMENT standards. Includes analysis and processing of all field-collected data, preparation of reports.

27.23 Water Boundary Survey

Perform Mean High Water, Ordinary High Water and Safe Upland Line surveys as required by THEA and DEPARTMENT standards.

27.24 Right of Way Staking, Parcel / Right of Way Line

Perform field staking and calculations of existing/proposed R/W lines for on-site review purposes.

27.25 Right of Way Monumentation

Set R/W monumentation as depicted on final R/W maps for corridor and water retention areas.

27.26 Line Cutting

Perform all efforts required to clear vegetation from the line of sight.

27.27 Work Zone Safety

Provide work zone safety as required by THEA and DEPARTMENT standards.

27.28 Vegetation Survey N/A

27.29 Tree Survey

Locate individual trees or palms within the project limits.

27.30 Miscellaneous Surveys

Refer to tasks of this document, as applicable, to perform surveys not described herein. The percent for Supplemental will be determined at negotiations. This item can only be used if authorized in writing by THEA or its representative.

27.31 Supplemental Surveys

Supplemental survey days and hours are to be approved in advance by THEA Project Manager. Refer to tasks of this document, as applicable, to perform surveys not described herein.

27.32 Document Research

Perform research of documentation to support field and office efforts involving surveying and mapping.

27.33 Field Review

Perform verification of the field conditions as related to the collected survey data.

27.34 Technical Meetings

Attend meetings as required and negotiated by THEA.

27.35 Quality Assurance/Quality Control (QA/QC)

Establish and implement a QA/QC plan. Also includes subconsultant review, response to comments and any resolution meetings if required, preparation of submittals for review, etc.

27.36 Supervision

Perform all activities required to supervise and coordinate project. These activities must be performed by the project supervisor, a Florida P.S.M. or their delegate as approved by THEA.

27.37 Coordination

Coordinate survey activities with other disciplines. These activities must be performed by the project supervisor, a Florida P.S.M. or their delegate as approved by THEA.

28 PHOTOGRAMMETRY

The design consultant shall perform photogrammetric tasks in accordance with all applicable statues, manuals, guidelines, standards, handbooks, procedures, and current design memoranda.

In addition to the maps and photographic products, the design consultant shall submit all computations to document the mapping. This will include documentation of all decisions reached from meetings, telephone conversations, and site visits.

28.1 Flight Preparation

Review record data, create target diagrams, and plan the mission.

28.2 Control Point Coordination

Determine photo identifiable control points, and mark contact prints.

28.3 Mobilization

Perform pre- and post-flight aircraft inspection; prepare the aircraft and camera for the mission.

28.4 Flight Operations

Operate the aircraft, aerial camera, and other instruments to obtain aerial photography.

28.5 Photo Products

Prepare contact prints, contact diapositives, and photo enlargements.

28.6 LiDAR

Includes data acquisition, post processing of LiDAR data to XYZ coordinates for "bare earth" classification.

28.7 Aerial Triangulation

Measure and adjust control within aerial images.

28.8 Surfaces

Includes collection of break lines and spot elevations.

28.9 Ortho Generation

Includes creation of final images.

28.10 Rectified Digital Imagery (Georeferenced)

Create the rectified digital image.

28.11 Mosaicking

Create the mosaic.

28.12 Sheet Clipping

Create plot files for sheets from the database.

28.13 Topographics (3D)

Prepare topographic maps including surface and planimetric. (Photogrammetrist will not propose hours for Surfaces and Topographies.)

28.14 Planimetric (2D)

Prepare 2D planimetric map.

28.15 Drainage Basin

Includes preparing drainage basin maps in clipped "sheet" format.

28.16 CADD Edit

Perform final edit of graphics for delivery of required MicroStation design files (.dgn), CADD, and Geopak files.

28.17 Data Merging

Merge photogrammetric files, field survey files, and data from other sources.

28.18 Miscellaneous

Other tasks not specifically addressed in this document.

28.19 Field Review

Perform on site review of maps.

28.20 Technical Meetings

Attend meetings as required.

28.21 Quality Assurance/Quality Control

Establish and implement a QA/QC plan.

28.22 Supervision

Supervise all photogrammetric activities. This task must be performed by the project supervisor, a Florida P.S.M.

28.23 Coordination

Coordinate with all elements of the project to produce a final photogrammetric product.

29 MAPPING

The design consultant will be responsible for the preparation of control survey maps, right of way maps, maintenance maps, sketches, other miscellaneous survey maps, and legal descriptions as required for this project in accordance with all applicable DEPARTMENT Manuals, Procedures, Handbooks, THEA-specific requirements, and Florida Statutes. All maps, surveys and legal descriptions will be prepared under the direction of a Florida Professional Surveyor and Mapper (PSM) to THEA size and format requirements utilizing THEA approved software and will be designed to provide a high degree of uniformity and maximum readability. The design consultant will submit maps, legal descriptions, quality assurance check prints, checklists, electronic media files and any other documents as required for this project to THEA for review at stages of completion as negotiated.

Master CADD File

29.1 Alignment

29.2 Section and 1/4 Section Lines

29.3 Subdivisions

29.4 Property Lines

29.5 Existing Right of Way

29.6 Topography

29.7 Parent Tract Properties and Existing Easements

29.8 Proposed Right of Way Requirements

The ENGINEER OF RECORD (EOR) will provide the proposed requirements. The PSM is responsible for calculating the final geometry. Notification of Final Right of Way Requirements along with the purpose and duration of all easements will be specified in writing.

29.9 Limits of Construction

The limits of construction DGN file as provided by the EOR will be imported or referenced to the master CADD file. Additional labeling will be added as required. The PSM is required to advise the EOR of any noted discrepancies between the limits of construction line and the existing/proposed right of way lines, and for making adjustments as needed when a resolution is determined.

29.10 Jurisdictional/Agency Lines

These lines may include, but are not limited to, jurisdictional, wetland, water boundaries, and city/county limit lines.

Sheet Files

29.11 Control Survey Cover Sheet

29.12 Control Survey Key Sheet

29.13 Control Survey Detail Sheet

29.14 Right of Way Map Cover Sheet

29.15 Right of Way Map Key Sheet

29.16 Right of Way Map Detail Sheet

29.17 Maintenance Map Cover Sheet

29.18 Maintenance Map Key Sheet

29.19 Maintenance Map Detail Sheet

29.20 Reference Point Sheet

This sheet(s) will be included with the Control Survey Map, Right of Way Map and Maintenance Map.

29.21 Project Control Sheet

This sheet depicts the baseline, the benchmarks, the primary and secondary control points and their reference points including the type of material used for each point, their XYZ coordinates, scale factors and convergence angles. This sheet(s) may be included with the Control Survey Map, Right of Way Map and Maintenance Map.

29.22 Table of Ownerships Sheet

Miscellaneous Surveys and Sketches

29.23 Parcel Sketches

29.24 TIITF Sketches

29.25 Other Specific Purpose Survey(s)

29.26 Boundary Survey(s) Map

29.27 Right of Way Monumentation Map

29.28 Title Search Map

29.29 Title Search Report

29.30 Legal Descriptions

29.31 Quality Assurance/Quality Control

29.32 Supervision

29.33 Mapping Meetings

29.34 Field Reviews

29.35 Coordination

29.36 Supplemental Mapping

This task is to cover efforts resulting from major design and/or development changes after 60% map development that affect the right of way requirements/parent tract property lines and may include any number of tasks. Request and approval to utilize the Supplemental Mapping hours will be in writing and approved by THEA prior to any work being done under this task.

30 TERRESTRIAL MOBILE LiDAR

The design consultant shall perform Terrestrial Mobile LiDAR tasks in accordance with all applicable statutes, manuals, guidelines, standards, handbooks, procedures, and current design memoranda.

In addition to the maps and LiDAR products, the design consultant shall submit all computations and reports to support the mapping. This will include documentation of all decisions reached from meetings, telephone conversations, and site visits.

30.1 Terrestrial Mobile LiDAR Mission Planning

Research and prepare materials necessary for the successful execution of the Mobile LiDAR Mission. This includes but is not limited to route and safety planning, GPS /data acquisition scheduling, weather reports, and site terrain research.

30.2 Project Control Point Coordination

All efforts necessary to coordinate the proper placement of project ground control; e.g., base stations, transformation control points, and validation points, supporting the Mobile LiDAR survey.

30.3 Terrestrial Mobile LiDAR Mobilization

Prepare the LiDAR sensor and vehicle for project data collection and get specialized personnel and equipment on site.

30.4 Terrestrial Mobile LiDAR Mission

Perform site calibrations of LiDAR sensor and collect laser survey data, including any simultaneous base station GPS occupations and operation of any necessary safety equipment.

30.5 Terrestrial Mobile LiDAR Processing

Download and post process collected measurement data from Mobile LiDAR vehicle sensors, and any base stations occupied during mission. Analyze Mobile LiDAR measurement points and scan route overlaps. Separate any large point cloud data sets into manageable file sizes with corresponding indexes.

30.6 Terrestrial Mobile Photography Processing

Process, reference, and name digital photographic imagery files collected during Mobile LiDAR mission.

30.7 Transformation / Adjustment

Adjust LiDAR point cloud data to Project Control points. Create point cloud data file(s) in approved digital format. Prepare required reports of precision and accuracy achieved. If this task is performed by separate firm, or is the final product to be delivered, include effort for Survey Report.

30.8 Classification / Editing

Identify and attribute (classify) point cloud data into requested groups. Classify or remove erroneous points.

30.9 Specific Surface Reporting

Prepare reports, data and/or graphics of specific surface details such as, but not limited to pavement rutting, bridge structure clearance to roadway surface.

30.10 Topographic (3D) Mapping

Produce three dimensional (3D) topographic survey map(s) from collected Mobile LiDAR data. This includes final preparation of Construction Information Management (CIM) deliverable, if applicable.

30.11 Topographic (2D) Planimetric Mapping

Produce two dimensional (2D) planimetric map(s) from collected Mobile LiDAR data.

30.12 CADD Edits

Perform final edit of graphics for delivery of required CADD files. This includes final presentation of CIM deliverable, if applicable.

30.13 Data Merging

Merge Mobile LiDAR survey and mapping files, with other field survey files, and data from other sources.

30.14 Miscellaneous

Other tasks not specifically addressed in this document.

30.15 Field Reviews

Perform on site review of maps.

30.16 Technical Meetings

Attend meetings as required.

30.17 Quality Assurance/ Quality Control

Establish and implement a QA/QC plan.

30.18 Supervision

Supervise all Terrestrial Mobile LiDAR activities. This task must be performed by the project supervisor, a Florida P.S.M.

30.19 Coordination

Coordinate with all elements of the project to produce a final product.

31 ARCHITECTURE DEVELOPMENT N/A

32 NOISE BARRIERS IMPACT DESIGN ASSESSMENT IN THE DESIGN PHASE N/A

33 INTELLIGENT TRANSPORTATION SYSTEMS ANALYSIS

The design consultant shall analyze and document Intelligent Transportations System (ITS) Analysis Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, existing ITS standard operating procedures, ITS master and strategic plans, Florida's SEMP guidelines, National, statewide and/or regional ITS architectures, and current design bulletins.

33.1 ITS Analysis

The design consultant shall review the previously prepared and approved preliminary engineering report(s), typical section Package, traffic technical memorandum, adjacent

projects programmed by THEA and other local highway agencies and proposed geometric design alignment to identify impacts to existing ITS components (if applicable) and proposed ITS field device placements. The design consultant shall review the project intelligence files provided by THEA's asset maintenance agent(s) related to all previously constructed ITS projects and maintenance documentation for the project corridor to ensure all cited ITS elements are included in this project for replacement and/or restoration.

Systems Engineering Analysis

The design consultant shall perform a systems engineering analysis including a Concept of Operations (ConOps), Project Systems Engineering Management Plan (PSEMP), Requirements Traceability Verification Matrix (RTVM), and other documents as necessary based on project complexity and risk as required by Florida Department of Transportation Systems Engineering and Intelligent Transportation Systems (ITS) Architecture Procedure (Procedure Number 750-040-003).

Design Guidelines

The design consultant shall use applicable THEA requirements and guidelines, including, but not limited to, the FDM, Standard Plans, and Standard Specifications for Road and Bridge Construction in the design of ITS. The design consultant design is expected to include the following attributes, facilities, infrastructure, ITS devices, systems, and associated work:

- Structural Elements
- Power and Communications Infrastructure

CCTV, Vehicle Detection, Wrong Way Detection, Dynamic Message Signs, Traffic Signal System, Connected and Autonomous Vehicle System. The design consultant shall review the existing TMC Operations and develop additional incident management service requirements as necessary to support during the Construction Phase of the Project. The design consultant shall coordinate with THEA for additional information regarding existing Incident Management and TMC Operational Procedures.

All ITS devices shall be compatible with THEA’s central software platform. The operational status of all equipment shall be tracked with THEA’s ITS Monitoring software platform.

The design consultant shall design the project such that all ITS field devices and ancillary components comply with FDOT's Approved Product List (APL) or, when applicable and approved by THEA, FDOT's Innovative Product List (IPL) and are supported within the software approved by THEA. To facilitate the maintenance of equipment, the ITS field devices and ancillary components shall be the same make and model series of the equipment currently installed.

Closed Circuit Television (CCTV) Subsystem

CCTV devices shall be spaced and located as required to meet the Project requirements, Standard Specifications, FDM Section 233.10, guidance from the ConOps, and as approved by THEA. The design consultant shall be responsible for the design and exact field

locations for the camera assemblies. The camera subsystem shall provide overlapping coverage to overcome visual blockage and to monitor DMS messages, and toll-amount DMS, as directed by THEA.

The design consultant shall select CCTV technologies to meet the Project needs, ConOps requirements, and as approved by THEA. CCTV assemblies may include a camera lowering device (CLD), as directed by THEA.

Per FDM 233.6 and FDM 233.10, the position, height, and design of each camera pole shall be finalized during the design phase of the project. The maximum distance of this type of camera from the DMS sign is specified in FDM. The minimum distance from the DMS sign shall be determined by the design consultant to provide full viewing of the DMS legends based on the analysis performed and approved by THEA. Such analysis includes viewing angle, horizontal and vertical control determination.

If required by THEA, the design consultant shall determine the camera location by performing a videography study at each proposed camera site. The study shall include video at the proposed camera location and elevation with respect to the roadway elevation. The design consultant shall identify the final number and locations of the camera assemblies based on the videography study.

The camera system design shall ensure that the video quality is not degraded due to wind or vibration. The design consultant shall be responsible for the design of the poles and foundations to minimize the potential for vibration. The design consultant shall prepare cross section plan sheets showing details of horizontal and vertical clearances of the proposed equipment with identified utilities.

Vehicle Detection Subsystem

Vehicle detection devices shall be spaced as required to meet the Project requirements (speed, volume, and occupancy detection), Standard Specifications, FDM Section 233.9, guidance from the ConOps, and as approved by THEA.

The design consultant shall select vehicle detection technology to meet the Project needs, ConOps requirements, and as approved by THEA. Detection technologies include induction loops, video imaging, microwave, thermal imaging, wireless magnetometer, and vehicle probe detection systems. In the case of the arterial management systems with systemwide signal controlled intersections, the design consultant shall select vehicle detection technology type that is currently being used by THEA and local maintaining agencies.

The design consultant shall be responsible for the design of a non-intrusive vehicle detection subsystem for the limited access roadway facilities, arterials and sub-arterials with signalized intersections as required by THEA and by local maintaining agencies and specified in the scope of services. The detectors shall be positioned near other ITS field device infrastructure including the fiber-optic splice vaults when feasible to reduce cost. Final detection station locations shall be based on the number of location variables identified during the design phase.

Automatic Vehicle Identification (AVI) Subsystem

AVI detection devices shall be spaced as required to meet the Project requirements, Standard Specifications, FDM 233.9.5, guidance from the ConOps, and as approved by THEA.

The design consultant shall select AVI technology to meet the Project needs, Standard Specifications, FDM, ConOps requirements, and as approved by THEA.

The design consultant shall coordinate all design efforts for use of SunPass AVI transponders with THEA'S technical personnel.

Dynamic Message Sign (DMS) Subsystem

The design consultant shall be responsible for the design of the DMS subsystem for the roadway facilities. Both expressway and arterial dynamic message signs (DMS) shall be located to meet the Project requirements, Standard Specifications, FDM 233.11, guidance from the ConOps, and as approved by THEA. All FDOT FDM requirements shall be met for DMS locations. DMS locations shall be designed in conjunction with the Project's master signing design. The position of each DMS shall be finalized during the design phase of the project.

The design consultant shall select DMS technology, type, and display to meet the Project requirements and ConOps requirements.

The design consultant shall locate the DMS to satisfy the required sign functionality and to provide the required visibility of the signs. The project communications system shall enable full control of the DMS from the TMC facilities. All DMS hardware, software and related infrastructure components shall be fully compatible with THEA's central software. All DMS shall include a dedicated confirmation CCTV camera that allows for visual verification of the messages posted on the DMS by a TMC Operator.

The design consultant shall design support structures to accommodate the specified DMS to meet the design functional, operational, and maintenance requirements.

Arterial Dynamic Message Sign (ADMS) Subsystems (Front Access)

ADMS shall be spaced as required to meet the Project requirements, Standard Specifications, FDM Section 233.11, guidance from the ConOps, and as approved by THEA.

The design consultant shall select ADMS technologies to meet the Project needs, ConOps requirements, and as approved by THEA.

The ADMS shall be placed for the purpose of Traffic Incident Management (TIM), Integrated Corridor Management (ICM), Active Arterial Management (AAM), and other applications as directed by THEA. ADMS on arterial roadways are to be placed at a distance from the on-ramps of the limited access facilities determined by traffic analysis of the arterial back of queue and to allow time for the motorists to read the sign messages. Communication with ADMS shall be designed so that they can be managed and maintained

by the TMC. All FDOT FDM requirements shall be met for ADMS locations. ADMS locations shall be designed in conjunction with the Project's master signing design on major widening projects. All ADMS shall include a dedicated confirmation CCTV camera that allows for visual verification of the messages posted on the DMS by a TMC Operator.

Embedded Dynamic Message Signs

Embedded DMS shall be spaced as required to meet the Project requirements, Standard Specifications, FDM Section 233.11, express lanes requirements, guidance from the ConOps, and as approved by THEA.

The design consultant shall select Embedded DMS technologies to meet the Project needs, ConOps requirements, and as approved by THEA.

The design consultant design shall include Embedded DMS signs when the project is part of a toll facility, or other usage described in the ConOps, as required by THEA. The Embedded DMS signs are comprised of DMS panels embedded in a static sign panel. The Embedded DMS may have one or more line of text depending upon the application. Embedded DMS are to be located on the main line, express lanes, ramps, and on the crossroads as required to meet the project needs.

All Embedded DMS shall include a dedicated confirmation CCTV camera that allows for visual verification of the messages posted on the Embedded DMS by a TMC Operator.

Dynamic Trailblazing Sign Subsystems (DTBS)

DTBS shall be spaced as required to meet the Project requirements, Standard Specifications, FDM, guidance from the ConOps, and as approved by THEA to support evacuation, incident management, detour management, special event traffic management, active arterial management and/or integrated corridor. If directed by THEA, the design consultant shall develop the well-defined active traffic management detour plan.

The design consultant shall select DTBS technologies to meet the Project needs, ConOps requirements, and as approved by THEA.

The design consultant shall design the DTBS to recommend directions of travel to motorists. The active DTBS Embedded DMS and/or blank-out signs shall be sized based on the proposed legends or cardinal directions used for the active traffic management detour plans. The DTBS shall be connected to the fiber optic network to be operated and managed at the TMC. The DTBS will be mounted on new support structure or if mounted on an existing structure, the required structural analysis shall be performed for the existing structure. The size and types of dynamic and active portion of the signs shall be coordinated with THEA prior to design.

Traffic Signal Data Subsystem

The Traffic Signal Data Subsystem shall be provided at locations as required to meet the Project requirements, Standard Specifications, FDM, the guidance from the ConOps, and the approval of the City of Tampa and THEA.

The design consultant shall select Traffic Signal Data Subsystem technologies to meet the Project needs, ConOps requirements, and as approved by the City of Tampa and THEA.

The design consultant shall design the Traffic Signal Data Subsystem to include, as a minimum, FDOT APL Advance Transportation/Traffic Controllers (ATC) provided at the signalized intersections. The ATC shall include an open architecture hardware and software platform to interface with the latest network-wide supervisory Advanced Traffic Management System (ATMS) software currently being used by the local highway agencies supporting a wide variety of Intelligent Transportation Systems (ITS) applications. This includes traffic management, safety, and security.

The design consultant shall design other data-related applications for the Traffic Signal Data Subsystem, as directed by THEA, such as for basic Connected and Automated Vehicles (CAV) elements, ramp signaling, reliable data collection and analytics using Automated Traffic Signal Performance Measures (ATSPM), and edge computing capabilities.

Connected and Automated Vehicles (CAV) Subsystems

The CAV Subsystem shall be provided at locations as required to meet the Project requirements, Standard Specifications, guidance from the ConOps, and as approved by THEA.

The design consultant shall select CAV Subsystem technologies to meet the Project needs, ConOps requirements, and as approved by THEA.

The design consultant shall develop or update CAV Subsystem Technical Special Provisions or Modified Special Provisions (MSP/TSP) for Roadside Units (RSU), pedestrian detection analytics cameras, and other CAV Subsystem features based upon the unique needs of the project. The design consultant shall ensure that each RSU site consists of a remote processing unit (RPU), communication hardware, mounting hardware, cabling, power supply, pedestrian detection analytics cameras, and other site-specific components as required. The design consultant shall develop RSU requirements for communication between connected vehicles and roadside equipment such as ATC, detection systems, and warning beacons that are compatible with both Cellular Vehicle to Everything (C-V2X) communication national standards and protocols. The design consultant shall also coordinate FCC licensing requirements for two-way real-time C-V2X communication and DSRC, depending on national standards and policies, with THEA. The MSP/TSP shall address integration with THEA's Security Management Credential System (SCMS) requirements.

The MSP/TSP shall require RSU field equipment to be on the FDOT APL, the FDOT IPL or, as a minimum, tested at the Traffic Engineering Research Laboratory (TERL) prior to approval for use on the project. The MPS/TSP shall require RSU field equipment to be supported by the central system in the TMC and to be capable of transmitting required messages and data to and from the roadway and users via vehicle on-board units (OBU) and other mobile devices over the applicable communication schema in compliance with industry standards.

When used inside a traffic signal cabinet, the design consultant shall ensure the cabinet is equipped with ATC and the RSU is connected to the signal controller, Ethernet switch, and the above ground radio, and GPS antennas.

When used on the interstate, the design consultant shall develop the TSP/MSP to ensure the RSU is housed inside a corrosion-resistant enclosure that is NEMA 4X with IP66 rating, and meets the system requirements broken into the following categories:

- Power
- Environmental
- Physical
- Functional
- Performance
- Interface

Wrong-way Vehicle Detection Systems (WWVDS)

The WWVDS shall be provided at locations as required to meet the Project requirements, Standard Specifications, FDM, guidance from the ConOps, and as approved by THEA.

The design consultant shall select WWVDS technologies to meet the Project needs, ConOps requirements, and as approved by THEA.

The design consultant shall select the WWVDS technology for compatibility with THEA's central software version and to meet the project needs. The WWVDS shall collect and process data locally prior to sending a notification to the TMC. The design consultant shall design the WWVDS for remote configuration, calibration, monitoring, and diagnostic of real-time traffic activities from the TMC using THEA's central software and software provided by the detection system vendor. The WWVDS shall perform to meet the project requirements under all environmental and traffic conditions expected for the corridor. The WWVDS shall detect wrong way drivers within the specified accuracy. Vibration and shocks shall not affect the performance of the system. The WWVDS and highlighted signs shall be hardwired for power and communications to the main controller.

Structural Health Monitoring System (SHMS) Connectivity Subsystem

The SHMS connectivity shall be provided at locations as required to meet the Project requirements, Standard Specifications, FDM, guidance from the ConOps, and as approved by THEA.

The design consultant shall select SHMS connectivity technologies to meet the Project needs, ConOps requirements, and as approved by THEA.

The design consultant shall design the SHMS connectivity subsystem which includes a fully operational ITS cabinet containing the data acquisition logger, MFES, UPS, RPMU, and all necessary surge protection devices to receive the data from various optical sensors or non- optical sensors connected to the local data acquisition enclosures installed inside the bridge arches, attached inside the girders, and the stayed cables supporting the main spans. The design consultant shall coordinate with the structural and SHMS disciplines to provide for a collapsed ring topology of the communication scheme and provide for

connectivity to the fiber optic network. The SHMS data shall be transmitted via the existing and proposed 10 Gigabits per second fiber optic cable plant to the designated remote operation center for monitoring.

The design consultant is not responsible for the design and location of the SHMS sensors, sensor types, electrical, and data acquisition enclosures and hardware.

33.2 Communications Subsystem Analysis

See FDM 233.4, 233.5, and 233.8 for communication systems design requirements. The design consultant shall review the existing communication files in GIS or PDF format provided by THEA and or the local highway agencies and create an overall communication map to summarize mapping data associated with the fiber optic conduits and cables connectivity. This provides a communication location-based intelligence for the project and will be used in communication design. In addition, the design consultant shall include high level overview of how the project corridor(s) are connected to the TMC communication network including the existing and proposed master communication hubs.

The design consultant shall develop a communications plan to determine the optimal communications medium for the project corridor. The plan shall be developed prior to submittal of Phase I plans. The plan shall identify communications media alternatives and provide a cost estimate that includes initial, operations and maintenance cost for the life cycle of the communications network. The plan shall ensure that video, voice, and data will be communicated in real-time between center to-field and center-to-center (C2C) nodes as applicable. The communications system design must utilize non-proprietary, open-architecture, standards-based, robust, scalable, and proven technology. The communication plan analysis shall address communication and connections between field devices, communications and connections between field devices and the TMC, center-to-center communications between TMCs, and any other communication links or connections required to meet project goals and ConOps guidance. The plan must include bandwidth analysis and recommendations, needs assessment, and provide recommendations regarding minimum requirements, media, network devices, protocols, network topology, communication redundancy, future needs, spare capacity, and any communications or data sharing with other agencies.

The plan must include loss budget analysis and calculations for the optical cable lengths and bandwidth. The design consultant shall provide the calculations confirming the loss budgets are in conformance with allowable values established in the standard specifications. The design consultant shall calculate the loss budgets based on distance, anticipated fusion splices, and connectors to ensure the cabling will work with the links intended to be used. After installation, the loss budget for the cabling is compared to the actual test results during final acceptance to ensure the cable plant is installed properly.

For major widening projects where the existing underground fiber optic communication cables and ITS sites are impacted, the design consultant shall review the roadway, drainage, and TTCP plans to analyze and identify the magnitude of impact to the existing ITS

infrastructure. The design consultant shall prepare the Maintenance of Communication (MOC) concept that supports the final design in efforts to maintain and sustain center-to-field device connectivity and operability to the existing ITS field devices previously deployed along the project corridor. The MOC analysis shall consider and mitigate the impacts of the project's various construction phases so as to sustain center-to-field devices connectivity and operability in order to maintain operational quality as a minimum at the level provided prior to construction start and minimizing down time of the critical devices.

After approval of the plan, the design consultant shall submit a revised plan including a detailed design analysis for each submittal. The design consultant's communications design shall include multiple redundant paths for each location, which allows for automatic switching of communications path onto a secondary path, if the primary path is impacted.

33.3 Grounding, Surge Suppression, and Lightning Protection Analysis

The design consultant shall be responsible for a complete and reliable grounding, surge suppression, and lightning protection design to provide personnel and equipment protection against faults, surge currents and lightning transients. When Standards Plans depicting air terminal device heights above poles or equipment are not available, the height of the air terminal above poles or equipment shall be determined using applicable standards. See FDM 233.3.8 for additional design requirements.

33.4 Power Subsystem

See FDM Section 233.3 for ITS Power Design Requirements. The design consultant shall be responsible for an electrical design in accordance with all NEC requirements. No solar power should be utilized as a power solution for the Project unless otherwise approved by THEA. To enhance power reliability, the design consultant shall design a power distribution and backup system consisting of, at a minimum, underground power conduits and conductors, transformers, diesel fuel generators, automatic transfer switches (ATS), uninterruptable power supply (UPS), electrical distribution panel, equipment framing, reinforced concrete pad for the generator, site drainage, site security fencing and security camera (as directed by THEA), power command and control, Ethernet-based Modbus, and ITS Cabinet with Remote Power Management Unit (RPMU), and all associated equipment. The power backup system shall supply electrical power in event of commercial power supply failure for all system components. Power equipment shall be installed in areas to avoid wet locations. All connections and equipment shall be protected from moisture and water intrusion. The design consultant shall ensure that vandal resistant mechanisms for all electrical infrastructure shall be included as part of the Design.

The design consultant shall submit the power system design and voltage drop calculations for the power distribution system as part of phase II, III, and IV design submittals. The design consultant shall conduct a short circuit and protection coordination study for the designed power system and document the study as part of the power system design report.

33.5 Voltage Drop Calculations

See FDM Section 233.3.6 for voltage drop design requirements. The electrical design shall address allowable voltage drops per the NEC. The design consultant shall submit voltage

drop calculations for any electrical circuit providing power to the ITS field devices beyond the electric utility service point. The calculations shall document the length of each circuit, its load, the size of the conductor or conductors and their ohm resistance values and the required voltages from the service point to the respective ITS devices to maintain voltage drops within allowable limits. The voltage drop incurred on each circuit (total volts and percentage of drop) shall be calculated, and all work necessary to calculate the voltage drop values for each circuit should be presented in such a manner as to be duplicated by THEA. Load analysis calculations shall be submitted covering electrical path from all power sources to each ITS site connected to each power source. All voltage drop calculations shall allow for future expansion of ITS infrastructure, if identified in the Project ConOps.

33.6 Design Documentation

The design consultant shall submit a Design Documentation Book with each plan submittal under separate cover and not part of the roadway documentation book. At a minimum, the design documentation book shall include:

- Quantities and engineers estimate for all applicable items on plans.
- Phase submittal checklist.
- Three-way quantity check list
- Structural calculations for all structures
- Power Design Analysis, voltage drop calculations, and load analysis calculations
- Correspondences including utility design meeting and conflict resolutions
- Electrical Power Service Letter of Confirmation
- Subsurface Utility Exploration tables for each ITS support structure

33.7 Existing ITS

The design consultant shall research any required legacy system or system components that may be impacted by new work, such as: existing communications; existing types, numbers, locations, models, manufacturers, and age of ITS devices; as-built plans; existing operating software; existing center-to-field devices; and C2C communications and capabilities.

The project intelligence files provided by THEA and researched by the design consultant may include the following documents:

- Existing ITS field devices compared to the latest FDOT Standards and District requirements: device type, model, manufacturer, capabilities, condition, date installed, and historical maintenance logs. THEA will provide the ArcGIS data, when available, to the design consultant upon request.
- Condition of support structure(s), and associated mechanical brackets, and vertical hangers.
- Electrical power related to the sizes of the main and branch circuit breakers for the service disconnect, underground or overhead service feeder sizes from the power company transformer to the meter base.
- Existing fiber optic allocation as a graphical display of the existing buffer tube for the ITS devices at the Managed Field Ethernet Switch points, the buffer allocated for the existing local communication hubs, given number of connections within a corridor while maintaining the maximum number of physical connections on a specific Local Area Network (LAN), and local hubs to existing master communication hubs.

- An ArcGIS file of the existing fiber optic pull and splice boxes, ITS devices, local hubs, power service poles with latitudes and longitudes data.
- Underground infrastructure.
- Proximity to utilities.
- Other field reconnaissance as necessary to develop a complete ITS design Package.

33.8 Queue Analysis

The design consultant shall perform a queue analysis at high volume interchanges and high frequency conflict / crash locations to determine optimal placement of DMS using project forecasted traffic volumes. This analysis shall be performed prior to submittal of the Phase I plans. The design consultant shall perform other traffic engineering analysis as necessary to ensure that the DMS locations are selected based on optimum message delivery to the motorists.

The design consultant shall perform field observation of the existing traffic patterns during the normal peak hours to determine the optimal placement of DMS, ADMS, CCTV cameras, and detection sites.

The design consultant shall perform lane closure analysis and determine the time periods where construction activities can be performed. The lane closure analysis shall be performed using the available traffic data.

In cases when traffic technical memorandums have been performed by others and are available through THEA, or available from TMC CCTV camera surveillance sites, the design consultant shall use these reports and information in lieu of performing traffic engineering and safety analysis.

The design consultant shall coordinate with THEA for additional information regarding existing Incident Management and TMC Operational Procedures to address maintenance of ITS and post construction requirements.

33.9 Reference and Master ITS Design File

The design consultant shall prepare the ITS design file to include all necessary design elements and the reference files for topo, R/W roadway, utilities files, etc. This effort includes the design and layout of all proposed ITS devices and electrical service points, conduits, pull boxes, conductor sizing, generators, and transformers. All existing ITS infrastructure shall be referenced to the new ITS plan sheets (if applicable).

33.10 Reference and Master Communications Design File

The design consultant shall prepare the communication design file to include all necessary design elements and all associated reference files as well as reference files of topo, R/W, roadway, utilities files, existing ITS communications infrastructure, etc. This effort includes design and layout of proposed communications conduit, cabinet, pull boxes, splice boxes, standard route markers, communications plan overview, fiber optic sizing, fiber optic splicing, connections, communications hubs, etc.

33.11 ITS Poles and Overhead Structures Elevation Analysis

See FDM Section 233.6 for ITS Poles and Structures design requirements. The design consultant shall evaluate pole elevation requirements and design pole heights to meet the Project requirements including field of view; elimination of occlusion; site access for maintenance vehicles and personnel; access to pole mounted equipment, such as CCTV cameras, traffic detectors, and cabinets; and probability of lightning strike.

The design consultant shall coordinate with roadway, structures, and drainage disciplines to confirm that the elevations are updated during various design phases, and the ITS poles and overhead structure details are revised and designed with the correct heights, lengths, foundation depths and sizes.

33.12 DMS Sign Panel Design Analysis

The design consultant shall design all ITS signing in conjunction with the Roadway Master Signing. This includes any static sign panel that includes changeable message elements. Expressway and arterial full size DMS shall not be co-located with other static signs.

The DMS sign panel analysis applies to walk-in DMS, front access ADMS, and embedded Toll Amount and Status DMS and Dynamic Trail Blazing Signs. The design consultant shall provide the following design information for the DMS sign design basis and fabrication:

- Pixel Pitch
- Number of display messages
- Character height
- Number of characters per line
- Character spacing
- Mechanical properties of the sign such as weight, height, width, depth, and not including the vertical hanger size and weight.

33.13 ITS Quantities

The design consultant shall determine ITS pay items and quantities and the supporting documentation.

33.14 Cost Estimate

The design consultant shall prepare an engineer's cost estimate for the project using historical data from the FDOT or from other Industry sources.

33.15 Technical Special Provisions and Modified Special Provisions

The design consultant shall develop Technical Special Provisions (TSP) and Modified Special Provisions (MSP) for the specific items or conditions of the project that are not addressed in the FDOT's Standard Specifications, Supplemental Specifications and Special Provisions.

33.16 Other ITS Analyses

Investigate the viability of the existing conduit in the project area. Install pull rope in the existing conduit as needed.

33.17 Field Reviews

The design consultant shall conduct a field review for the required phase submittals. The review shall identify necessary data for all elements of the project including, but not limited to, the following:

- Existing ITS Field Devices as compared with the latest FDOT standards and THEA requirements
- Device Make, Model, Capabilities, Condition / Age, Existence of THEA's Central Software Driver
- Condition of Structure(s), cabinets, and other above-ground infrastructure and devices
- Type of Detection as Compared with Current District Standards and preferences.
- Underground Infrastructure
- Proximity of other utilities
- Any other field reconnaissance as necessary to develop a complete ITS design Package

33.18 Technical Meetings

The design consultant shall attend meetings as necessary to support the project.

33.19 Quality Assurance / Quality Control

The design consultant shall be responsible for the professional quality, technical accuracy and coordination of designs, drawings, specifications, and other services and work furnished by the design consultant under this contract.

The design consultant shall provide a Quality Control Plan that describes the procedures to be utilized to verify, independently check, and review all design drawings, specifications, and other documentation prepared as a part of the contract. The design consultant shall describe how the checking and review processes are to be documented to verify that the required procedures were followed. The Quality Control Plan may be one utilized by the design consultant as part of their normal operation or may be one specifically designed for this project. The design consultant shall utilize THEA's quality control checklist. The responsible Professional Engineer that performed the Quality Control review shall sign a statement certifying that the review was conducted.

The design consultant shall, without additional compensation, correct all errors or deficiencies in their work.

33.20 Supervision

The design consultant shall provide all efforts required to supervise all technical design activities.

33.21 Coordination

The design consultant shall coordinate with Survey, Geotech, Drainage, Structures, Lighting, Roadway Design, Utilities, municipalities, maintaining agencies and Traffic Operations to produce a final set of construction contract documents and to ensure that a high degree of accuracy for the design plans is achieved. The design consultant shall coordinate with the roadway utility adjustment sheets to incorporate all ITS support

structural foundations symbols drawn to scale in the utility adjustment sheets and attend the utility design meetings conveying the information to all utility owners to preserve the location of the proposed foundations and avoid any conflicts.

34 INTELLIGENT TRANSPORTATION SYSTEMS PLANS

The design consultant shall prepare a set of ITS Plans in accordance with the FDM that includes the following:

34.1 Key Sheet and Signature Sheet

The design consultant shall prepare the key sheet and signature sheet, if required, in accordance with the latest format depicted in the FDM.

34.2 General Notes / Pay Item Notes

The design consultant shall include all pertinent general notes and pay item notes as deemed fit and as established by THEA.

34.3 Project Layout

The design consultant shall prepare plan sheet(s) with an overview of the entire project that include stations and offsets, project limits, intersection locations, ramps, railroads crossings, devices, device identification using SunGuide nomenclature, and plan sheet numbering and coverage.

34.4 Communication Overview Sheet

34.5 Typical and Special Details

The design consultant shall prepare typical and / or special details for conditions in the project not addressed by the DEPARTMENT's Standard Plans for Design, Construction, Maintenance, and Utility Operations on the State Highway System. The design consultant shall prepare special details not addressed by FDOT Standard Plans, including block diagrams, cabinet diagrams, wiring diagrams, solar power service, and special mounting details, horizontal directional drilling at critical crossings, wireless ethernet equipment for local and broadband communication, RSU block diagrams, electrical and communication conduit, equipment inside box girders.

34.6 ITS and Communication Plan Sheet

The design consultant shall prepare the ITS and communication plan sheets utilizing the Design file to include all necessary information related to the project design elements and all associated reference files. The plan sheets shall include general and pay item notes and pay items. The plans shall depict the location of ITS devices and cabinets, pull boxes, splice boxes, conduit runs, electrical service points, conduit, pull boxes, and conductors, and underground and overhead utilities, if applicable. Devices shall be located by station and offset as well as setback from the travel way. The design consultant shall ensure the ITS sites and ground mounted cabinets locations are not in wetlands or wet drainage channels,

do not interfere with protected species, meet the OSHA circle of safety from the overhead energized lines, and do not conflict with underground utilities.

The design consultant shall prepare plans for the communications network. These plans shall consist of block diagrams, splicing diagrams, port assignments, wiring diagrams, and all other information necessary to convey the design concept to the contractor. These plans shall be included in the ITS plan set and be prepared in a manner consistent with immediately adjacent ITS project installations (planned or installed). Communication plans shall include conduit, fiber, pull and splice boxes, ITS devices, communication lateral drops, fiber connection hardware, pay items etc.

The communication system shall be an open-architecture, non-proprietary, real-time, multimedia communications network. The communication system design must be compatible and completely interoperable with the existing systems.

34.7 Maintenance of Communications Plans

The design consultant's design shall include protecting and maintaining the existing ITS infrastructure. For locations where existing ITS infrastructure is impacted, the design consultant's design shall include mitigation to minimize the downtime of existing system as per the District's requirements and prepare the Maintenance of Communication (MOC) plans. The design consultant shall develop the MOC sheets for the project, providing temporary communications as necessary, notes, details, and direction applicable to the ITS elements and associated communications for inclusion in the MOC plans. The MOC plans shall include the notes, plan sheets, cross sections showing existing and proposed grades with the tables defining the stations limits for the conduit depths below existing and proposed grades for various construction phases.

If applicable, the design consultant shall review the roadway TTCP, drainage, structures, and landscaping plans and prepare the MOC plans for each construction phase. The MOC plans shall include construction phasing notes, half cross sections depicting existing and proposed grades, roadway templates, drainage ponds, flood mitigation zones, provide tables depicting the station range, location and depth of the proposed fiber optic trunk line below existing and proposed grades. The MOC plans shall optimize the reliable field-to-center (F2C) connectivity and operability of the ITS field devices previously deployed along the project corridor. The MOC design effort shall mitigate the impacts of the project's various construction phases so as to sustain center-to-field devices connectivity and operability, maintaining operational quality as a minimum at the level provided prior to construction start and minimizing down time as much as possible.

In cases, where major alteration to the existing roadway begins in the areas where the existing ITS devices and underground communication will be impacted at the initial construction phase, the design consultant shall include the permanent ITS and communication and electrical power work to be constructed in the early phase and stage of the construction to activate the devices. The notes referencing the MOC plan details shall be included in the TTCP plans alerting the CONTRACTOR and emphasizing the importance of keeping the ITS devices operational. Subsequently, the design consultant shall attend the utility design and pre-construction meeting conveying the importance of

the MOC and operability of the overall system. The design consultant shall include the MOC plan sheets in the beginning of the ITS plans.

The design consultant is responsible for the design of the communication infrastructure and its integration with THEA's communication system. Additionally, the design consultant shall determine the most cost effective, best performing, communication connectivity option. The communication system must allow command and control as well as data and video transmission between the field devices and the TMC.

Conduit paths shall be selected to provide a continuous duct system on one side of the road unless otherwise requested by THEA. The various components of ITS sites will be located on both sides of the freeway and therefore under pavement bore and lateral conduits will be necessary to access equipment locations. The design consultant is responsible to locate the ITS sites so they are accessible by maintenance vehicles.

34.8 Fiber Optic Splice Diagrams

The design consultant shall produce fiber optic cable splicing diagrams to show the connectivity of the fiber optic cable from its termini at field devices to the TMC. The diagrams shall denote new and existing fiber routes, splices, and terminations involved in the work. The diagrams shall identify cables by size, tube color / number and stand colors / numbers. All cables shall be identified either by a numbering system identified either by numbering system identified on the plans or by bounding devices. The diagrams shall denote the types of connectors in the patch panels.

The design consultant shall determine physical connection points and methods between the existing project limits to make the desired physical connection. The design consultant shall determine and identify the Buffer Tube/Fiber and Ring allocation to maintain acceptable maximum number of the local intersection per ring before redundant ringing to a master communication hub and manage the transmission bandwidth. The design consultant shall analyze existing and proposed fiber optic communication infrastructure for physical and logical connectivity into existing infrastructure.

34.9 Grounding and Lightning Protection Plans

The design consultant shall include efforts to design a complete and reliable lightning protection design for each pole and associated devices, ITS device installation, as well as device cabinets and communications hubs, etc. if not already addressed in the FDOT's Standard Plans for Design, Construction, Maintenance and Utility Operations on the State Highway System. Where the ITS site is located on viaducts and bridges, the design consultant shall provide the grounding and lightning protection details in the plans and show the work that is integral to the elevated superstructure and substructure.

34.10 Cross Sections

The design consultant shall prepare cross sections for all ITS devices and support structures including the ground mounted cabinets or local hubs. The cross section shall include the underground and overhead utilities with utility relocation provisions.

34.11 Hybrid and DMS Guide Sign Data

The design consultant shall prepare the guide sign data sheets to include all necessary information related to the design of the static and DMS, Embedded DMS, and DTBS in the project corridor.

34.12 Service Point Details

The design consultant shall design any service point and electrical distribution system beyond the electric utility company's service point. The plan shall depict with pay items, general and plan notes the locations of transformers, switches, disconnects, conduits, pull boxes and power conductors. The plans shall identify the location of underground and overhead service points with identifying pole and transformer numbers. The design consultant shall prepare the plan sheets depicting the electrical riser diagram and the line diagram for each location.

34.13 Strain Pole Schedule

The design consultant shall incorporate the schedule detail chart for concrete or steel strain poles in the plan set. The strain pole schedule details shall include stations, offsets, the ground elevations, proposed elevations, top of foundation elevation, all attachment tie-in heights, pole length, and embedment length.

34.14 Temporary Traffic Control Plans

The design consultant shall prepare Temporary Traffic Control Plans (TTCP) to minimize impact to traffic during the construction of ITS field devices and associated communications infrastructure that will be deployed along the project corridor.

The TTCP shall strive to maintain and sustain center-to-field device connectivity and operability to the ITS field devices previously deployed along the project corridor. The TTCP effort shall consider and mitigate the impacts of the project's various construction phases so as to sustain center-to-field devices connectivity and operability, maintaining operational quality as a minimum at the level provided prior to construction start and minimizing down time as much as possible. The design consultant shall develop the TTCP sheets for the project, providing temporary communications as necessary, notes, details, and direction applicable to the ITS elements and associated communications for inclusion in the TTCP.

The design consultant shall review the existing TMC Operations and develop additional incident management service requirements as necessary to support during the Construction Phase of the Project. The design consultant shall coordinate with THEA for additional information regarding existing Incident Management and TMC Operational Procedures.

34.15 Quality Assurance / Quality Control

The design consultant shall utilize THEA's quality control checklist for traffic design drawings in addition to the QC effort described in section three.

34.16 Supervision

The design consultant shall supervise all technical design activities.

35 GEOTECHNICAL

The design consultant shall, for each project, be responsible for a complete geotechnical investigation. All work performed by the design consultant shall be in accordance with DEPARTMENT standards, or as otherwise directed by THEA and its Geotechnical Engineer. THEA's Geotechnical Engineer will make interpretations and changes regarding geotechnical standards, policies and procedures and provide guidance to the design consultant.

Before beginning each phase of investigation and after the Notice to Proceed is given, the design consultant shall submit an investigation plan for approval and meet with THEA's Geotechnical Engineer or representative to review the project scope and THEA requirements. The investigation plan shall include, but not be limited to, the proposed boring locations and depths, and all existing geotechnical information from available sources to generally describe the surface and subsurface conditions of the project site. Additional meetings may be required to plan any additional field efforts, review plans, resolve plans/report comments, resolve responses to comments, and/or any other meetings necessary to facilitate the project.

The design consultant shall notify THEA in adequate time to schedule a representative to attend all related meetings and field activities.

35.1 Document Collection and Review

The design consultant will review printed literature including topographic maps, county agricultural maps, aerial photography (including historic photos), ground water resources, geology bulletins, potentiometric maps, pile driving records, historic construction records and other geotechnical related resources. Prior to field reconnaissance, the design consultant shall review U.S.G.S., S.C.S. and potentiometric maps, and identify areas with problematic soil and groundwater conditions.

Roadway

The design consultant shall be responsible for coordination of all geotechnical related field work activities. The design consultant shall retain all samples until acceptance of Phase IV plans. Rock cores shall be retained as directed in writing by THEA.

Obtain pavement cores for the project to meet DEPARTMENT standards and to support the pavement design.

If required by THEA, a preliminary roadway exploration shall be performed before the Phase I plans submittal. The preliminary roadway exploration will be performed, and results provided to the Engineer of Record to assist in setting roadway grades and locating potential problem areas. The preliminary roadway exploration shall be performed as directed in writing by THEA'S Project Manager.

The design consultant shall perform specialized field-testing as required by project needs and as directed in writing by THEA.

All laboratory testing and classification will be performed in accordance with applicable THEA standards, ASTM Standards or AASHTO Standards, unless otherwise specified in the Contract Documents.

35.2 Develop Detailed Boring Location Plan

Develop a detailed boring location plan. Meet with THEA's Project Manager for boring plan approval. If the drilling program expects to encounter artesian conditions, the design consultant shall submit a methodology(s) for plugging the borehole to THEA for approval prior to commencing with the boring program.

35.3 Stake Borings/Utility Clearance

Stake borings and obtain utility clearance.

35.4 Muck Probing

Probe standing water and surficial muck in a detailed pattern sufficient for determining removal limits to be shown in the Plans.

35.5 Coordinate and Develop TTCP for Field Investigation

Coordinate and develop Temporary Traffic Control Plan (TTCP). All work zone traffic control will be performed in accordance with the DEPARTMENT's Standard Plans Index 102 series.

35.6 Drilling Access Permits

Obtain all State, County, City, and Water Management District permits for performing geotechnical borings, as needed.

35.7 Property Clearances

Notify property tenants in person of drilling and field activities, if applicable. Written notification to property owners/tenants is the responsibility of THEA's Project Manager.

35.8 Groundwater Monitoring

Monitor groundwater, using piezometers.

35.9 LBR / Resilient Modulus Sampling

Collect appropriate samples for Limerock Bearing Ratio (LBR) testing. .

35.10 Coordination of Field Work

Coordinate all field work required to provide geotechnical data for the project.

35.11 Soil and Rock Classification - Roadway

Refine soil profiles recorded in the field, based on results of laboratory testing.

35.12 Design LBR

Complete Limerock Bearing Ratio testing. Determine design LBR values from the 90% and mean methods when LBR testing is required by THEA. Convert the Design LBR to a Design Resilient Modulus value.

35.13 Laboratory Data

Tabulate laboratory test results for inclusion in the geotechnical report, the report of tests sheet (Roadway Soil Survey Sheet), and for any necessary calculations and analyses.

35.14 Seasonal High Water Table

Review the encountered ground water levels and estimate seasonal high ground water levels. Estimate seasonal low ground water levels, if requested.

35.15 Parameters for Water Retention Areas

Calculate parameters for water retention areas, exfiltration trenches, and/or swales.

35.16 Delineate Limits of Unsuitable Material

Delineate limits of unsuitable material(s) in both horizontal and vertical directions. Assist the Engineer of Record with detailing these limits on the cross-sections. If requested, prepare a plan view of the limits of unsuitable material.

35.17 Electronic Files for Cross-Sections

Create electronic files of boring data for cross-sections.

35.18 Embankment Settlement and Stability

Estimate the total magnitude and time rate of embankment settlements. Calculate the factor of safety against slope stability failure.

35.19 Monitor Existing Structures

Provide Roadway EOR guidance on the radius to review existing structures for monitoring.

Optional services (may be negotiated at a later date if needed): Identify existing structures in need of settlement, vibration and/or groundwater monitoring by the contractor during construction and coordinate with the EOR and structural engineer (when applicable) to develop mitigation strategies. When there is risk of damage to the structure or facility, provide recommendations in the geotechnical report addressing project specific needs and coordinate those locations with the EOR. See FDM Chapter 117 and Chapter 9 of the Soils and Foundations Handbook.

35.20 Stormwater Volume Recovery and/or Background Seepage Analysis

Perform stormwater volume recovery analysis as directed by THEA.

35.21 Geotechnical Recommendations

Provide geotechnical recommendations regarding the proposed roadway construction project including the following: description of the site/alignment, design recommendations and discussion of any special considerations (e.g., removal of unsuitable material, consolidation of weak soils, estimated settlement time/amount, groundwater control, high groundwater conditions relative to pavement base, etc.) Evaluate and recommend types of geosynthetics and properties for various applications, as required.

35.22 Pavement Condition Survey and Pavement Evaluation Report

If a pavement evaluation is performed, submit the report in accordance with Section 3.2 of the Materials Manual: Flexible Pavement Coring and Evaluation. Enter all core information into the Pavement Coring and Reporting (PCR) system.

35.23 Preliminary Roadway Report

If a preliminary roadway investigation is performed, submit a preliminary roadway report before the Phase I plans submittal. The purpose of the preliminary roadway report will be to assist in setting road grades and locating potential problems.

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- A report of tests sheet that summarizes the laboratory test results, the soil stratification (i.e., soils grouped into layers of similar materials) and construction recommendations relative to Standard Plans Indices 120-001 and 120-002.
- The results of all tasks discussed in all previous sections regarding data interpretation and analysis.
- An appendix that contains stratified soil boring profiles, laboratory test data sheets, sample embankment settlement and stability calculations, design LBR calculation/graphs, and other pertinent calculations.
- The design consultant will respond in writing to any changes and/or comments from THEA and submit any responses and revised reports.

35.24 Final Report

The Final Roadway Report shall include the following:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- A report of tests sheet that summarizes the laboratory test results, the soil stratification (i.e., soils grouped into layers of similar materials) and construction recommendations relative to Standard Plans Indices 120-001 and 120-002.
- The results of all tasks discussed in all previous sections regarding data interpretation and analysis.
- An appendix that contains stratified soil boring profiles, laboratory test data sheets, sample embankment settlement and stability calculations, design LBR calculation/graphs, and other pertinent calculations.
- The design consultant will respond in writing to any changes and/or comments from THEA and submit any responses and revised reports.

35.25 Auger Boring Drafting

Draft auger borings as directed by THEA.

35.26 SPT Boring Drafting

Draft SPT borings as directed by THEA.

Structures

The design consultant shall be responsible for coordination of all geotechnical related fieldwork activities. The design consultant shall retain all samples until acceptance of Phase IV plans. Rock cores shall be retained as directed in writing by THEA Project Manager.

design consultant shall perform specialized field-testing as required by project needs and as directed in writing by THEA Project Manager.

All laboratory testing and classification will be performed in accordance with applicable THEA standards, ASTM Standards or AASHTO Standards, unless otherwise specified in the Contract Documents.

The staff hour tasks for high embankment fills and structural foundations for bridges, box culverts, walls, high-mast lighting, overhead signs, mast arm signals, strain poles, buildings, and other structures include the following (35.27 through 35.48):

35.27 Develop Detailed Boring Location Plan

Develop a detailed boring location plan. Meet with THEA for boring plan approval. If the drilling program expects to encounter artesian conditions, the design consultant shall submit a methodology(s) for plugging the borehole to THEA for approval prior to commencing with the boring program.

35.28 Stake Borings/Utility Clearance

Stake borings and obtain utility clearance.

35.29 Coordinate and Develop TTCP for Field Investigation

Coordinate and develop TTCP plan. All work zone traffic control will be performed in accordance with the DEPARTMENT's Standard Plans Index 102 series.

35.30 Drilling Access Permits

Obtain all State, County, City, and Water Management District permits for performing geotechnical borings, as needed.

35.31 Property Clearances

Notify property tenants in person of drilling and field activities, if applicable. Written notification to property owners/tenants is the responsibility of THEA's Project Manager.

35.32 Collection of Corrosion Samples

Collect corrosion samples for determination of environmental classifications.

35.33 Coordination of Field Work

Coordinate all field work required to provide geotechnical data for the project.

35.34 Soil and Rock Classification - Structures

Soil profiles recorded in the field should be refined based on the results of laboratory testing.

35.35 Tabulation of Laboratory Data

Laboratory test results should be tabulated for inclusion in the geotechnical report and for the necessary calculations and analyses.

35.36 Estimate Design Groundwater Level for Structures

Review encountered groundwater levels, estimate seasonal high groundwater levels, and evaluate groundwater levels for structure design.

35.37 Selection of Foundation Alternatives (BDR)

Evaluation and selection of foundation alternative, including the following:

- GRS-IBS
- Spread footings
- Prestressed concrete piling - various sizes
- Steel H- piles
- Steel pipe piles
- Drilled shafts
- Foundation analyses shall be performed using approved THEA methods. Assist in selection of the most economical, feasible foundation alternative.

35.38 Detailed Analysis of Selected Foundation Alternate(s)

Detailed analysis and basis for the selected foundation alternative. Foundation analyses shall be performed using approved THEA methods and shall include:

- GRS-IBS (including the parameters identified in the Instructions for Developmental Design Standard D6025 to be provided by the Geotechnical Engineer)
- Spread footings (including soil bearing capacity, minimum footing width, and minimum embedment depth).
- For pile and drilled shaft foundations, provide graphs of ultimate axial soil resistance versus tip elevations. Calculate scour resistance and/or downdrag (negative skin friction), if applicable.
- design consultant shall assist the Engineer of Record in preparing the Pile Data Table (including test pile lengths, scour resistance, downdrag, minimum tip elevation, etc.)
- Provide the design soil profile(s), which includes the soil model/type of each layer and all soil-engineering properties required for the Engineer of Record to run the FBPier computer program. Review lateral analysis of selected foundation for geotechnical compatibility.
- Estimated maximum driving resistance anticipated for pile foundations.
- Provide settlement analysis.

35.39 Bridge Construction and Testing Recommendations

Provide construction and testing recommendations including potential constructability problems.

35.40 Lateral Load Analysis (Optional)

Perform lateral load analyses as directed by THEA.

35.41 Walls

Provide the design soil profile(s), which include the soil model/type of each layer and all soil engineering properties required by the Engineer of Record for conventional wall analyses and recommendations. Review wall design for geotechnical compatibility and constructability.

Evaluate the external stability of conventional retaining walls and retained earth wall systems. For retained earth wall systems, calculate and provide minimum soil reinforcement lengths versus wall heights, and soil parameters assumed in analysis. Estimate differential and total (long term and short term) settlements.

Provide wall construction recommendations.

35.42 Sheet Pile Wall Analysis (Optional)

Analyze sheet pile walls as directed by THEA.

35.43 Design Soil Parameters for Signs, Signals, High Mast Lights, and Strain Poles and Geotechnical Recommendations

- Provide the design soil profile(s) that include the soil model/type of each layer and all soil properties required by the Engineer of Record for foundation design. Review design for geotechnical compatibility and constructability.

35.44 Box Culvert Analysis

- Provide the design soil profile(s) that include the soil model/type of each layer and all soil properties required by the Engineer of Record for foundation design. Review design for geotechnical compatibility and constructability.
- Provide lateral earth pressure coefficients.
- Provide box culvert construction and design recommendations.
- Estimate differential and total (long term and short term) settlements.
- Evaluate wingwall stability.

35.45 Preliminary Report - BDR

The preliminary structures report shall contain the following discussions as appropriate for the assigned project:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- Summary of structure background data, S.C.S., U.S.G.S., geologic and potentiometric data.
- The results of all tasks discussed in all previous sections regarding data interpretation and analysis).

- Recommendations for foundation installation, or other site preparation soils-related construction considerations with plan sheets as necessary.
- Any special provisions required for construction that are not addressed in the DEPARTMENT's Standard specification.
- An Appendix which includes SPT and CPT boring/sounding profiles, data from any specialized field tests, engineering analysis, notes/sample calculations, sheets showing ultimate bearing capacity curves versus elevation for piles and drilled shafts, a complete FHWA check list, pile driving records (if available), and any other pertinent information.

35.46 Final Report - Bridge and Associated Walls

The final structures report shall include the following:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- Summary of structure background data, S.C.S., U.S.G.S., geologic and potentiometric data.
- The results of all tasks discussed in all previous sections regarding data interpretation and analysis.
- Recommendations for foundation installation, or other site preparation soils-related construction considerations with plan sheets as necessary.
- Any special provisions required for construction that are not addressed in the DEPARTMENT's Standard specification.
- An Appendix which includes SPT and CPT boring/sounding profiles, data from any specialized field tests, engineering analysis, notes/sample calculations, sheets showing ultimate bearing capacity curves versus elevation for piles and drilled shafts, a complete FHWA check list, pile driving records (if available), and any other pertinent information.

35.47 Final Reports - Signs, Signals, Box Culvert, Walls, and High Mast Lights

The final reports shall include the following:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- Summary of structure background data, S.C.S., U.S.G.S., geologic and potentiometric data.
- The results of all tasks discussed in all previous sections regarding data interpretation and analysis).
- Recommendations for foundation installation, or other site preparation soils-related construction considerations with plan sheets as necessary.
- Any special provisions required for construction that are not addressed in the DEPARTMENT's Standard specification.
- An Appendix which includes SPT and CPT boring/sounding profiles, data from any specialized field tests, engineering analysis, notes/sample calculations, sheets showing ultimate bearing capacity curves versus elevation for piles and drilled shafts, a complete FHWA check list, pile driving records (if available), and any other pertinent information.

Final reports will incorporate comments from THEA and contain any additional field or laboratory test results, recommended foundation alternatives along with design parameters

and special provisions for the contract plans. These reports will be submitted to THEA and will include the following, submitted in PDF format:

- All original plan sheets (11" x 17")
- One set of all plan and specification documents
- One set of record prints
- One set of any special provisions
- All reference and support documentation used in preparation of contract plans Package

Additional final reports (up to four), aside from stated above, may be needed and requested for THEA's Project Manager and other disciplines.

The final reports, special provisions, as well as record prints, will be signed and sealed by a Professional Engineer licensed in the State of Florida.

Draft the detailed boring/sounding standard sheet, including environmental classification, results of laboratory testing, and specialized construction requirements, for inclusion in final plans.

35.48 SPT Boring Drafting

Prepare a complete set of drawings to include all SPT borings, auger borings and other pertinent soils information in the plans. Include these drawings in the Final Geotechnical Report. Draft borings, location map, S.C.S. map and U.S.D.A. map as directed by THEA. Soil symbols must be consistent with those presented in the latest Florida Department of Transportation Soils and Foundations Handbook.

35.49 Other Geotechnical

Other geotechnical efforts are specifically required for the project as determined by THEA and included in the geotechnical upset limit.

35.50 Technical Special Provisions and Modified Special Provisions

35.51 Field Reviews

Identify and note surface soil and rock conditions, surface water conditions and locations, and preliminary utility conflicts. Observe and note nearby structures and foundation types.

35.52 Technical Meetings

35.53 Quality Assurance/Quality Control

35.54 Supervision

35.55 Coordination

36 PROJECT REQUIREMENTS

36.1 Liaison Office

THEA and the design consultant will designate a Liaison Office and a Project Manager who shall be the representative of their respective organizations for the Project. While it is expected the design consultant shall seek and receive advice from various state, regional, and local agencies, the final direction on all matters of this project remain with THEA Project Manager.

36.2 Key Personnel

The design consultant's work shall be performed and directed by the key personnel identified in the proposal presentations by the design consultant. Any changes in the indicated personnel shall be subject to review and approval by THEA.

36.3 Progress Reporting

The design consultant shall meet with THEA as required and shall provide a written monthly progress report with approved schedule, schedule status, and payout curve or by using the earned value method that describe the work performed on each task. The report will include assessing project risk through monthly documentation of identifying and updating the risk category and approach for monitoring those tasks. Invoices shall be submitted after THEA approves the monthly progress report and the payout curve or with earned value analysis. THEA’s Project Manager will make judgment on whether work of sufficient quality and quantity has been accomplished by comparing the reported percent complete against actual work accomplished.

36.4 Correspondence

Copies of all written correspondence between the design consultant and any party pertaining specifically to this contract shall be provided to THEA for their records within one (1) week of the receipt or mailing of said correspondence.

36.5 Professional Endorsement

The design consultant shall have a Licensed Professional Engineer in the State of Florida sign and seal all reports, documents, Technical Special Provisions and Modified Special Provisions, and plans as required by THEA standards.

36.6 Computer Automation

The project will be developed utilizing Computer Aided Drafting and Design (CADD) systems. THEA makes available software to help assure quality and conformance with policy and procedures regarding CADD. It is the responsibility of the design consultant to meet the requirements in the FDOT CADD Manual. The design consultant shall submit final documents and files as described therein.

36.7 Coordination with Other Design Consultants

The design consultant is to coordinate work with any and all adjacent and integral design consultants so as to effect complete and homogenous plans and specifications for the project(s) described herein.

36.8 Optional Services

At THEA's option, the design consultant may be requested to provide optional services. The fee for these services shall be negotiated in accordance with the terms detailed in Exhibit B, Method of Compensation, for a fair, competitive and reasonable cost, considering the scope and complexity of the project(s). Additional services may be authorized by Letter of Authorization or supplemental amendment in accordance with paragraph 2.00 of the Standard Design Consultant Agreement. The additional services may include Construction Assistance, Review of Shop Drawings, Final Bridge Load Rating, update (Category II) bridge plans electronically (CADD) for the Final "As-Built" conditions, based on documents provided by THEA (CADD Services Only) or other Services as required.

37 INVOICING LIMITS

Payment for the work accomplished shall be in accordance with Method of Compensation of this contract. Invoices shall be submitted to THEA, in a format prescribed by THEA. THEA Project Manager and the design consultant shall monitor the cumulative invoiced billings to ensure the reasonableness of the billings compared to the project schedule and the work accomplished and accepted by THEA.

The design consultant shall provide a list of key events and the associated total percentage of work considered to be complete at each event. This list shall be used to control invoicing. Payments will not be made that exceed the percentage of work for any event until those events have actually occurred and the results are acceptable to THEA.

EXEMPT DOCUMENTS / SECURITY SYSTEM PLAN DISTRIBUTION FORM

Exempt Documents being requested or received are included in those exempt from public disclosure as provided by Section 119.071(3)(b), Florida Statutes (Attached). **Security System Plans** being requested are confidential and exempt as provided by Section 119.071(3)(a), Florida Statutes (Attached). The Exempt Documents relate to work being performed for or required by the Tampa-Hillsborough County Expressway Authority (THEA) or work related to the Authority's structures. The following information is being provided as a record of this request or receipt, the Proposer's certifications herein, and distribution of the Exempt Documents or Security System Plans.

Completion of this form and a signature is required before information will be released (* Indicates Required to Obtain Security System Plans):

A. Entity Requesting/Receiving Documents: (Provide Full Name of Entity)

Architect: _____

Engineer: _____

Contractor: _____

Other: _____

B. Name of person receiving Exempt Documents / Security Plans: (Printed): _____

Title:_____

Signature: _____ Date: _____

Email: _____**FL PE License No. (if applicable):**_____

Drivers License or photo identification number of recipient: _____

C. Name of Entity intending to Propose on RFP O-0725: _____

D. Relationship of Person receiving Exempt Documents if not employee of Entity intending to Propose on RFP:_

_____
_

E. Reason for Request/Intended Use: _____
_____
_____

F. RECIPIENT CERTIFICATION: I, personally, and as authorized representative of the above Proposer entity, fully understand (check the applicable certification block)

☐ the exempt nature of the Exempt Documents I am receiving and agree to maintain the exempt status of this information in accordance with Florida law.

☐ the confidential and exempt nature of the Security System Plans I am receiving and agree to maintain the confidential and exempt status of these Security System Plans in accordance with Florida law.

G. THEA Employee Providing Exempt Documents or Security Plans:

THEA Office: _____ Employee Name: _____

H. Signature of THEA Employee Authorizing Distribution: _____ Date: _____

Provider's Signature (if different than person authorizing distribution): _____

I. Method of delivery: Pick-up by Requestor

Date Provided: _____

EXEMPT DOCUMENTS / SECURITY SYSTEM PLAN DISTRIBUTION FORM

EXEMPT DOCUMENTS - Section 119.071(3)(b), Florida Statutes, provides:
Building plans, blueprints, schematic drawings, and diagrams, including draft, preliminary, and final formats, which depict the internal layout and structural elements of a building, arena, stadium, water treatment facility, or other structure owned or operated by an agency are exempt from s. 119.07(1) and s.24(a), Art. I of the State Constitution. This exemption applies to building plans, blueprints, schematic drawings, and diagrams, including draft, preliminary, and final formats, which depict the internal layout and structural elements of a building, arena, stadium, water treatment facility, or other structure owned or operated by an agency before, on, or after the effective date of this act. Information made exempt by this paragraph may be disclosed to another governmental entity if disclosure is necessary for the receiving entity to perform its duties and responsibilities; to a licensed architect, engineer, or contractor who is performing work on or related to the building, arena, stadium, water treatment facility, or other structure owned or operated by an agency; or upon a showing of good cause before a court of competent jurisdiction. The entities or persons receiving such information shall maintain the exempt status of the information.

SECURITY SYSTEM PLAN - ***Section 119.071(3)(a), Florida Statutes, provides:***
As used in this paragraph, the term “security system plan” includes all Records, information, photographs, audio and visual presentations, schematic diagrams, surveys, recommendations, or consultations or portions thereof relating directly to the physical security of the facility or revealing security systems; Threat assessments conducted by any agency or any private entity; Threat response plans; Emergency evacuation plans; Sheltering arrangements; or Manuals for security personnel, emergency equipment, or security training. A security system plan or portion thereof for: Any property owned by or leased to the state or any of its political subdivisions; or Any privately owned or leased property held by an agency is confidential and exempt from s. 119.07(1) and s. 24(a), Art. I of the State Constitution. This exemption is remedial in nature and it is the intent of the Legislature that this exemption apply to security system plans held by an agency before, on, or after the effective date of this paragraph. Information made confidential and exempt by this paragraph may be disclosed by the custodian of public records to The property owner or leaseholder; or Another state or federal agency to prevent, detect, guard against, respond to, investigate, or manage the consequences of any attempted or actual act of terrorism, or to prosecute those persons who are responsible for such attempts or acts.