TAMPA-HILLSBOROUGH COUNTY EXPRESSWAY AUTHORITY

Addendum No. 15

FOR

Request for Proposals (RFP)

East Selmon Slip Ramps Design-Build

RFP O-02520

ADDENDUM NO. 15

PROJECT NAME: East Selmon Slip Ramps Design-Build RFP O-02520

DATE OF ADDENDUM: April 15, 2021

PLEASE NOTE THE FOLLOWING ADDENDUM NO. 15 TO THE RFP:

The RFP is hereby modified, as follows:

Section VI.F.3. is deleted and replaced with the following:

3. **Drainage Analysis:**

The Design-Build Firm shall be responsible for designing the drainage and stormwater management systems. All design work shall be in compliance with the Department's Drainage Manual; Florida Administrative Code, chapter 14-86; Federal Aid Policy Guide 23 CFR 650A; and the requirements of the regulatory agencies. This work will include the engineering analysis necessary to design any or all of the following: cross drains, French drains, roadway ditches, outfall ditches, storm sewers, retention/detention facilities, interchange drainage and water management, other drainage systems and elements of systems as required for a complete analysis. Full coordination with all permitting agencies, the Authority's Environmental Management section and Drainage Design section will be required from the outset. Full documentation of all meetings and decisions are to be submitted to Authority. These activities and submittals should be coordinated through the Authority's Project Manager.

The exact number of drainage basins, outfalls and water management facilities (retention/detention areas, weirs, etc.) floodplain compensation sites, and Impaired Water Body and Outstanding Florida Waters designations will be the Design-Build Firm's responsibility. The Design-Build Firm shall obtain approval of the stormwater treatment/attenuation design.

The objective is to obtain approved stormwater treatment/attenuation design.

The Design-Build Firm shall perform design and generate construction plans documenting the permitted systems function to criteria.

The Design-Build Firm shall perform the investigation necessary and provide the engineering analysis required to determine whether existing drainage features to remain are hydraulically and structurally adequate. Flood flow requirements will be determined in accordance with the Department's procedures. If any of these existing cross drains or storm sewers are found to be hydraulically inadequate or found to have insufficient design life, they must be replaced or supplemented in accordance with the drainage requirements of this RFP.

Existing drainage pipes and structures for the East Selmon Expressway have been constructed and or modified over multiple projects; the original Eastern Extension of the Crosstown (Selmon Expressway), the Reversible Lanes project, conversion to All-Electronic Tolling project, and the I-4/Selmon Connector project. The Authority has identified several cross drains and storm sewers constructed with the original Eastern Extension of the Expressway and the Reversible Lanes within the ramp project limits that are to be lined by the Design-Build Firm with cured in place pipe liners. These drainage pipes and structures to be lined are included in the Attachments. The Design-Build Firm shall desilt, video inspect, and investigate the existing 8'x8' concrete box culvert cross drain CD-05 at Station 714+00, as well as all other existing pipes and structures not previously identified as to be lined within the project limits and shall make recommendations to the Authority for repairs. The Design-Build Firm shall provide the recommendations to the Authority prior to beginning construction and in sufficient time for the Authority to decide if the repair work will be added to the project. Pipe inspections and investigations should extend as a minimum to the first existing drainage structure outside of the longitudinal or lateral project limits.

The Design-Build Firm shall maintain its work in such condition that adequate drainage will exist at all times. The construction of the Project shall not temporarily or permanently cause a material adverse effect to existing functioning storm sewers, gutters, ditches, and other run-off facilities.

The Design-Build Firm shall be responsible for obtaining SWFWMD permits for this project. SWFWMD has indicated that depending on the length of each slip ramp, the project may qualify for an Exemption. The Design-Build Firm shall be responsible for permits that accurately depict the final design. Joint-use ponds or alternative SMFs can be considered; however, the Design-Build Firm is responsible for all associated coordination, costs, permitting fees and fines, as well as any permit time extensions. The Design-Build Firm shall design appropriate treatment and attenuation in accordance with SWFWMD and Department criteria for each existing outfall. The Design-Build Firm is advised that a stormwater permit exemption from SWFWMD does not alleviate the Design-Build Firm from its responsibility to limit post-developed discharges at outfalls leaving the project to pre-developed rates, or from evaluating and upgrading as necessary, the existing conveyance systems (cross drains, storm drains, ditches, etc.) to accommodate the proposed roadway improvements.

It shall not be acceptable to place guardrails or barrier walls for the sole purpose of circumventing clear zone criteria for drainage structures.

If pond liners are utilized, the Design-Build Firm shall determine an appropriate factor of safety for pond liners to prevent failures. The minimum factor of safety shall be 1.20.

The Design-Build Firm shall perform double ring infiltrometer tests (same number of tests as performed for design and permitting) for any dry pond 180 days prior to obtaining Final Acceptance. The double ring infiltrometer tests shall demonstrate infiltration rates equal to or better than the permitted rates. The bottom of any dry pond shall not be sodded. The Design-Build Firm's operations (i.e. material staging, equipment operation, etc.) shall not be conducted so as to compromise the infiltration characteristics of each dry pond. Any required remedial action to restore filtration characteristics will be provided at no cost to the Authority.

Vertical pipes adjacent to MSE walls shall have a concrete thrust block at the base of the pipe and a resilient connector at the base of the inlet.

Placing storm drain pipes below retaining walls shall not be allowed when other options may be available. Where a storm drain pipe needs to cross under a retaining wall, the pipe shall cross perpendicular to the wall at depths meeting the applicable design criteria to minimize impacts of any anticipated wall settlement. The alignment of pipes under retaining walls shall be configured to minimize the length of pipe under the wall.

The use of inverted siphons shall not be allowed on this project.

Concrete pipe shall be used for cross drains and storm drains for this project. The Department's Culvert Service Life Estimator program shall be utilized to determine the required RCP class. The minimum RCP class shall be Class II. Optional pipe materials may be used for gutter drain pipes in embankment slopes. The Design-Build Firm shall only use the optional pipe materials tabulated for a given structure. The documentation supporting the required RCP class and chosen optional pipe material for gutter drain pipes, including the Culvert Service Life Estimator Program Analysis, shall be submitted to the Authority with the 90% plan submittal. Pipe material type installed on the Project shall be indicated on the Summary of Drainage Structures Sheets.

A2000 PVC (ASTM F 949) shall not be used in areas exposed to direct sunlight such as above ground, unshaded installations, endwalls, and mitered end sections. Additional requirements are as follows:

- PVC pipe shall be manufactured from PVC compound having no less than 1.0 part of Titanium Dioxide per 100 parts of PVC resin, by weight.
- PVC pipe shall be installed within 2 years from the date of manufacture.

Water tight joints shall be required for all pipes. In the event of a leak at a pipe joint, hydrostatic calculations shall be submitted by the Design-Build Firm to demonstrate that the joint(s) are water tight per FDOT Specifications. Field measurement of the ground water elevation shall be required at the location of the leak to perform the required calculations.

All precast storm sewer manholes and inlets shall have resilient connectors. The Design-Build Firm shall include the type of resilient connectors, any required pipe adaptors, and the pipe material for each structure in the drainage structure shop drawing submittals. Drainage structure shop drawings shall be reviewed and approved by the Drainage EOR. The Authority will not be responsible for approving the Drainage Structure Shop Drawings.

The Design-Build Firm shall provide a drainage design that incorporates galvanized grates and manhole covers. Manholes shall not be located within the vehicle wheel path in any travel lane.

The Design-Build Firm shall protect existing drainage structures during construction activities.

Prior to proceeding with the Drainage Design, the Design-Build Firm shall meet with the Authority. The purpose of this meeting is to provide information to the Design-Build Firm that will better coordinate the Preliminary and Final Drainage Design efforts. This meeting is Mandatory and is to occur fifteen (15) calendar days (excluding weekends and Authority observed holidays) prior to any submittals containing drainage components.

Permanent and temporary pavement spread shall be confined to the shoulders and shall not encroach into the travel or ramp lanes.

The Design-Build Firm shall provide the Authority a signed and sealed Drainage Design Report. It shall include all drainage computations, both hydrologic and hydraulic. The Engineer shall include all necessary supporting data. The Drainage Design Report shall include, at a minimum, the following items:

- Comprehensive narrative
- Existing conditions drainage pattern discussion and existing drainage map
- Proposed conditions drainage pattern discussion and proposed drainage map
- Outfall and boundary conditions
- Tailwater conditions and supporting documentation
- Design criteria
- Cross drain analysis
- Stormwater quality analysis, including volume recovery calculations
- Stormwater quantity analysis, including ICPR (or equivalent software) input and output
- A link-node diagram for the existing and proposed drainage conditions shall be provided for all hydraulic modeling. The diagram shall include, at a minimum, node names, link names, and overall drainage divides and areas.
- The drainage areas, Tc, CN, and other supporting data
- Control structure analysis, including skimmer and bleeder calculations
- Storm drain analysis (in approved format), including grate capacity for entire length of project.
- Ditch conveyance analysis
- Pavement drainage analysis (sheet flow, gutter flow, pavement spread, hydroplane, special gutter grades)
- Culvert service life analysis
- Structure and liner flotation analysis
- Temporary drainage during construction
- Supporting data for the above items
- Relevant correspondence

The Design-Build Firm is cautioned that existing plans may be in Vertical Datums NGVD 1929 or NAVD 1988. The Design-Build Firm is responsible for ensuring that current plans use the currently required datum and for converting

elevations as needed to the current datum. The conversion factor from NGVD to NAVD shall be called out in the Drainage Design Documentation and on the project Drainage Maps.

All calculations shall require the Authority's approval. The drainage documentation shall not solely reference any previously prepared design documentation or existing permit information as support for the Design-Build Firm's Project design. All pertinent information prepared by others shall be verified by the Design-Build Firm before being incorporated into the corresponding sections of the Project design documentation. An attachment of entire previously prepared documents will not be accepted.

The drainage documentation shall include a discussion which clearly states how the Project design is consistent with the existing or previously permitted condition. Where the Project design is not consistent with the existing or previously permitted condition, the documentation shall clearly describe the location of the change, the nature of the change and the permitting activities required to address the change. Existing and proposed basin maps shall be provided at the beginning of the supporting documentation for each SMF design, showing the boundaries with areas of the permitted conditions for all basins. The maps shall include an aerial background, basin divides, basin areas, permitted SMFs identified with control elevation, DHW, permit number, and outfall location. Drainage Plans shall include, at a minimum, the following items:

- Drainage Map and Regional Drainage Map
- Box Culvert Data Sheet
- Summary of Drainage Structures
- Optional Pipe Materials Sheet
- Roadway Plan/Profile Sheets (include all drainage structures)
- Drainage Structure Sections
- SMF and FPC Sheets (Plan, Typical Section, Control Detail)
- Lateral Ditch Plan/Profile
- Lateral Ditch Cross Sections
- Drainage Detail Sheets

The use of trench drain and/or slotted barrier for pavement drainage is limited to temporary uses to assist with temporary traffic control only. Trench Drain and slotted barrier shall not be allowed for pavement drainage in the permanent condition.

Respondents MUST acknowledge receipt of this Addendum/Letter of Clarification.

All other items, conditions, and specifications in the procurement document not specifically changed by the Addendum remain unchanged.

Please send all questions to THEA's Procurement Manager, Man Le, via email at Man.Le@tampa-xway.com.