

RFQ: 17- C-00002

Upper Peninsula Watershed Drainage Improvements - Dale Mabry/Henderson Trunkline
Design Criteria Package



**RFQ: 17-C-00002 DESIGN-BUILD SERVICES
FOR THE
Upper Peninsula Watershed Drainage Improvements
Dale Mabry/Henderson Trunkline**

DESIGN CRITERIA PACKAGE



PREPARED BY:

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DESIGN CRITERIA PROFESSIONALS

DESIGN CRITERIA:

The City of Tampa and Interflow Engineering, LLC has prepared the Design Criteria Package for RFQ: 17-C-00002 Design-Build Services related to the Upper Peninsula Watershed Drainage Improvements- Dale Mabry/Henderson Trunkline from the intersection of Dale Mabry Highway and Henderson Boulevard with an outfall to Hillsborough Bay at the Estrella Street terminus.

The scope shall include, but not be limited to the following:

- Design services will include:
 - Survey
 - Subsurface Utility Excavation Locates
 - Utility Coordination
 - Assessment of all trees in or immediately adjacent to the right-of-way
 - Assessment and identification of economical treatment alternatives for stormwater quality improvements
 - Geotechnical investigation to assess soils for stability and unsuitable materials
 - Completion of a hydrologic/hydraulic analysis for capacity in the proposed stormwater structures.
- Comprehensive design services of selected improvements
- Detour Route planning
- Coordinating, applying for and obtaining regulatory permits
- Preconstruction Services with Development of Guaranteed Maximum Price (GMP) for construction
- Construction of selected improvements, including any demolition and rehabilitation of existing stormwater structures and pipes
- Public Relation activities to maintain a positive response to the project from affected residents.
- Construction Engineering and Inspection Services
- Estimated Construction Budget: \$40,000,000

In addition, the following pages contain the project overview and description of requirements.

1. Purpose

1.1 This document provides the criteria for the design and construction of approximately 8,100 linear feet of box culvert and associated utility construction and or relocation. The intent is to list the minimum design-build criteria necessary for achieving installation of the new stormwater infrastructure.

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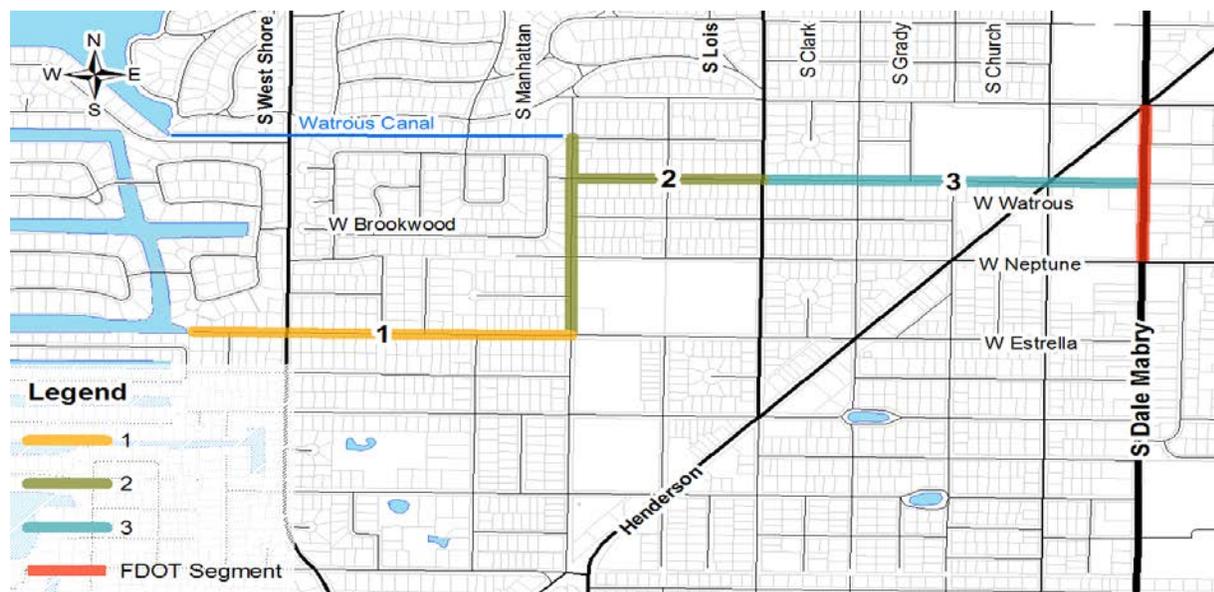
1.2 This package is not a specification or prescriptive checklist and is not intended to replace the professional judgment by a competent licensed professional engineer after coordination with the end-user and stakeholders of the City of Tampa.

2. Design Criteria

2.1 The design will be based on the Feasibility Study prepared by Interflow Engineering, LLC and provide facilities that will meet the needs of the Transportation and Stormwater Services Department (TSS) to effectively and efficiently mitigate flooding in the area. Construction of drainage improvement features will reduce flooding depth and duration within the basin with an outfall to Hillsborough Bay at the Estrella Street terminus. The design should consider existing conditions and the current and future demands on the stormwater conveyance system. It is imperative that the final designer and preparer of construction documents fully understand the system requirements (modeling results), permitting, site logistics (residential impacts) and all related requirements to design the stormwater facilities accordingly.

2.2 The surrounding area is highly urbanized; therefore the impacts during construction would consist of: transportation, access to residences, trees in or near the right-of-way, and utility service relocations and/or adjustments. There is little or no vacant land in the region; however, the Design Build effort should consider the incorporation – to a practical extent – green solutions as part of the proposed stormwater infrastructure

2.3 Design and construction can be broken down into three (3) logical phases to allow the design/ build team to complete the design and permitting for Phase I and commence construction prior to completing the design for Phase II and Phase III. Note, the phasing plan can be adjusted to suit the final design.



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- 2.4 Design build services shall include, but not be limited to, demolition, replacement of all aging infrastructure, pavement, traffic analysis, maintenance of traffic, coordination with regulatory agencies, utility coordination, topographic survey, tree assessment, geotechnical investigation, hydrologic/hydraulic analysis, public relations, design plans and cost estimating.
- 2.5 Existing drainage problems on S. Dale Mabry Highway from Henderson Blvd to Neptune Ave are frequent and severe. Even frequent storm events (for example, Mean Annual or 2.33-Year Storm) cause significant flooding.
- 2.6 The Culbreath Isles neighborhood has significant transportation challenges as it will impact the only entrance into this area. Additionally west of Manhattan the route appears to only have 50-feet of right-of-way (previously 60-feet).

3. Project Development Criteria

The Design Build Team is to provide a topographic survey of the proposed route for the respective stormwater improvements. Conduct preliminary design services that will include the following:

- Utility coordination with the City and other utility owners to determine the existing facilities, which may include subsurface utility excavation (SUE).
- A tree assessment by a certified arborist for impacts to large diameter and protected trees within the public right-of-way.
- Traffic assessment for maintenance of traffic and detour route planning.

- Geotechnical assessment of soils within the impacted areas.
- Environmental and right-of-way permitting.

The upstream connections and any conceivable route for the stormwater runoff to the downstream receiving waters will impact existing developed areas. The City will review the proposed design for constructability and to ensure a complete working system. The final design for the stormwater improvements will be during construction.

Create final plans to be provided in Auto CAD (.dwg) and PDF format , and provide pricing proposals developed to a GMP document with all associated exhibits (scope, pricing, and qualifications).

Present final design; site plan, site preparation, construction schedule, equipment purchases and placement, utility agreements, right of way permits and all required approvals from regulatory agencies and local authorities.

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The Design Build effort shall incorporate, to a practical extent, green solutions as part of the proposed stormwater infrastructure. Solutions include, but are not limited to, treatment systems appropriate for an urban area such as rain gardens, vortex separators, filters, baffle boxes and wetlands to reduce pollutant loading on Tampa Bay.

Using typical approaches (for example, stormwater ponds) for treatment are not economical as enough vacant land is not available. Many of the existing treatment systems are to be used to retrofit existing systems or can be constructed with new features.

The Design Build team will be responsible for all required environmental testing and permitting needed to complete the project. The scope of these requirements will be determined by the Design Build team based on the selected improvements and construction requirements.

5. Construction Management & Oversight (Inspection)

The Design Build team will be responsible for primary construction management activities and general project oversight with consistent coordination with the City during the design and construction portions of the project. Construction management activities will include, but not be limited to:

- Preparation of a general Quality-Control Plan to be submitted in format(s) acceptable to the City, in which personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out the Design Build Firm's quality-assurance and quality-control responsibilities will be identified. Coordinate with Contractor's construction schedule.
- Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for project.
- Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- Include a comprehensive schedule of work requiring testing or inspection, including the following:
 - Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections.
 - Owner-required tests include soil density, concrete for all structural or structurally related work and asphalt.
 - Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to

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- bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- Maintain testing and inspection reports including log of approved and rejected results, including work the City has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

The Design Build team shall provide AutoCAD as-builts drawings accurately depicting the as-built conditions of the stormwater conveyance system, in addition to any pertinent design data (geotechnical reports, survey, hydraulic analysis) . Hard copies of the as-built drawings will also be required as will be determined during the design phase.

6. Public Relations

Public Involvement meetings will be required prior to and during construction to minimize impacts and reduce uncertainty for the residents. The Design Build firm, at a minimum: (1) should notice impacted residences; (2) provide as much access as safely possible; and (3) plan for short duration, high intensity construction for impact to more than four (4) residences.

Construction requirements may be imposed, with public involvement, to reduce the severity of the impacts. Inquiries and questions about design and construction will be handled by the Design Build Firm, after coordination of the responses with the City of Tampa.