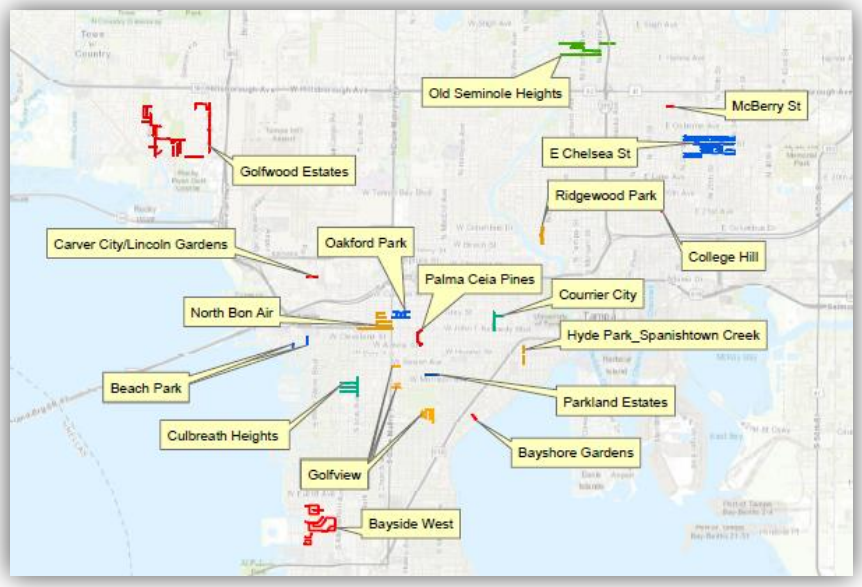
RFQ: 18-C-00037 DESIGN-BUILD SERVICES FOR THE FY19 CIP Water Main Replacement Project

DESIGN CRITERIA PACKAGE

PREPARED BY:



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RFQ: 18-C-00037
FY19 CIP Water Main Replacement Project
Design Criteria Package

CITY OF TAMPA
JULY 2018

DESIGN CRITERIA:

The City of Tampa has prepared the Design Criteria Package for RFQ: 18-C-00037 Design-Build Services related to the Fiscal Year 2019 (FY19) Capital Improvement Project (CIP) Water Main Replacements.

The project will consist of the design and construction of approximately 96,000 linear feet of potable water distribution pipe and appurtenances for various non-contiguous water main replacement projects throughout the central portion of the City's water service area; in addition to performing public relations.

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

- Design services will include:
    - Establishing the best location and/or rehabilitation method for pipe replacements
    - Performing subsurface utility excavation (SUE) and utility coordination
    - Performing topographical surveying in accordance with Water Department standards
    - Developing base drawings and proceeding with formal design resulting in construction documents
    - Comprehensive design services for selected improvements
    - Detour route planning
    - Coordinating, applying for and obtaining regulatory permits
- Preconstruction services with development of a Guaranteed Maximum Price (GMP) for construction
- Construction of selected improvements, including any demolition and removal of existing water pipes and appurtenances
- Public relation activities that will maintain a positive response to the project from affected residents
- Estimated design & construction budget: $23,000,000
- Below are required delivery dates to maintain the estimated time frame for the project:
    1. Design to start by early January 2019
    2. 60% design and estimate completed by mid-June 2019
    3. GMP proposal preparation end of June to end of July 2019
    4. GMP proposal submitted by early August 2019
    5. GMP award planned for mid-September 2019
    6. Notice to Proceed (NTP) for construction mid-October 2019\
    7. Construction complete by December 2020

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

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1. Purpose

1.1 This document provides the criteria for the design and construction of approximately 96,000 linear feet of multiple non-contiguous water main replacement projects (Figure 1 – FY 2019 CIP DB PROJECTS) required for select distribution water mains. Services shall include project coordination, preliminary engineering, 60%, 90%, and 100% plans submittals (with specifications provided at the 90% and 100% submittals), topographic surveying, SUE, permitting, maintenance of traffic plans, construction cost estimating for each submittal, project scheduling, public involvement and communication. To maintain the anticipated accelerated schedule, development and preparation of a Guaranteed Maximum Price (GMP) proposal based on 60% construction plans is desired.

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 is based on providing facilities that will meet the needs of the Water Department to effectively maintain and/or improve the level of service for the potable water distribution system. The Firm should include fire hydrant assemblies, meter sets and valves for a complete and functioning system.

2.2 The Firm shall conduct an alternatives analysis to identify and evaluate construction methods for replacing the existing pipelines. The analysis will include identification of permitting requirements, coordination with other City Departments and utility owners, constructability review, preliminary cost estimates, and recommending project phasing. The City will review the analysis of alternatives and make a selection of the required improvements that will be used for replacing the existing water mains.

2.3 Design-build services shall include, but not be limited to, demolition, replacement of aging infrastructure, pavement, and maintenance of traffic, coordination with regulatory agencies, utility coordination, topographic survey, tree assessment, public relations, design plans and cost estimating.

2.4 The Firm is to provide a topographic survey of the proposed route for the respective distribution water main replacements, provide alignment for the sidewalks, paths and ramps and create new base drawings for their design of the local water mains. The Firm shall conduct preliminary design services that will include the following:

- Utility coordination with the City and other utility owners to determine the location of 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.
- Environmental and right-of-way permitting.

2.4 Detours should be planned by the design build team based on traffic count and type information. Additionally, minor detours, may reflect the haul routes, staging areas, and construction methods.

2.5 The Firm shall provide final design and specifications necessary to construct water main replacements that meet the Water Department standards. At a minimum the selected Firm shall:

- Provide final construction documents to include construction plans in 2018 AutoCAD Civil 3D format and scaled as 11" x 17" PDFs; specifications in Word format;
- Identify and obtain all necessary permits to deliver a completed project;
- Develop and update a construction sequence and schedule.

3. Construction & Oversight

The Firm shall perform all construction and related tasks necessary to deliver completed water main replacements. The Firm shall perform construction in a manner to minimize impact to the local residents and traffic. The Firm shall maintain utility services at all times. The Firm shall provide for construction management activities and general project oversight with consistent coordination with the City. Construction management activities will include, but not be limited to:

- Conduct and coordinate project meetings to review project scope, deliverable(s), schedule, data requirements, equipment and material preferences, and other pertinent information.
- Identification of the designated staging location(s) with respect to project need. For each replacement effort, the Firm shall prepare an aerial map with the project boundaries and staging site(s) clearly delineated. The map shall include, at a minimum, distances (from property lines) of the staging lot(s) to adjacent residential parcels, in addition to the duration of occupancy of the location. Accompanying the aerial maps shall be a plan of the respective staging site(s) showing fencing, screening, and if necessary the location of trailers, parking areas and the driveway apron(s) for access.
- 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 Firm's quality-assurance and quality-control responsibilities will be identified. Coordinate with the 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 the 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, pressure testing, chlorination, and bacteriological sampling.
    - 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 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.
- Apply for and obtain Florida Department of Environmental Protection (FDEP) clearances to place complete water mains into service.
- Anticipate the construction week to be Monday through Friday, with work not starting before 7:00 AM and ending no later than 5:00 PM.
- All right-of-way restoration shall meet or exceed City of Tampa standards.
- All private property restoration shall meet or exceed the existing conditions.
- Maintain safe construction site conditions at all times.
- Accurately document construction installation per Water Department Standards.
- Follow American Water Works Association (AWWA) and Florida Administrative Code (F.A.C.) standards for maintaining and installing water pipeline.
- Complete “Water Main Meter Sheets” to clearly document meter location, serial number, and service lateral characteristics.
- Generate and continuously maintain a project schedule, budget, invoicing, and understand payment status for any utilized sub-consultant or sub-contractor.

The Firm shall provide 2018 AutoCAD Civil 3D as-built drawings accurately depicting the as-built conditions of the proposed underground conveyance systems; in addition to any pertinent design data (survey, hydraulic analysis). Hard copies of the as-built drawings will also be required as determined during the design phase.

4. Public Relations

Mandatory public involvement meetings prior to and during construction are necessary to minimize impacts and reduce uncertainty for the residence. The 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 Firm, after coordination of the responses with the City.

The Firm will be responsible for maintaining a proactive, robust and transparent community outreach to keep residents continuously informed of construction scheduling and impacts. Also, the Firm shall immediately react, respond, and address any resident's concerns during construction. At a minimum the selected Firm shall:

- Provide a manned 24/7 phone number and e-mail, for residents, to address concerns regarding the project.
- Maintain a phone/e-mail response log.
- Develop and maintain a website that depicts accurate and up-to-date construction scheduling and project progression.
- Conduct public meetings and provide a mailer to inform residents of the available resources and construction schedule.

Old Seminole Heights
McBerry St
E Chelsea St
Golfwood Estates
Ridgewood Park
College Hill
Carver City/Lincoln Gardens
Oakford Park
Palma Ceia Pines
Courrier City
North Bon Air
Hyde Park_Spanishtown Creek
Parkland Estates
Culbreath Heights
Bayshore Gardens
Bayside West

Water Distribution Mains
Project_Name
Bayshore Gardens 500 Ft
Bayside West 13824 Ft
Beach Park 870 Ft
Carver City_Lincoln Gardens 777 Ft
College Hill 686 Ft
Courrier City 2026 Ft
Culbreath Heights 6253 Ft
E Chelsea St 20507 Ft
E McBerry St 580 Ft
Golfview 5263 Ft
Golfwood Estates 23066 Ft
Hyde Park_Spanishtown Creek 1477 Ft
North Bon Air 2730 Ft
Oakford Park 3890 Ft
Old Seminole Heights 7964 Ft
Palma Ceia Pines 1516 Ft
Parkland Estates 1010 Ft
Ridgewood Park 1345 Ft

City of Tampa Florida
Water Department

Figure 1 - FY 2019 CIP DB PROJECTS

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