
PROPOSAL FOR PROFESSIONAL SERVICES

Task Order 12-02
Engineering Design and Technical Services
East Front Street Storm Water Improvements
FEMA Hazard Mitigation Grant No. 1539-47-R

Prepared for
City of Key West Utilities Department

January 2, 2012



1010 Kennedy Drive, Suite 400
Key West, Florida 33040
305-293-9440

BACKGROUND AND OBJECTIVES

The City developed a Long Range Storm Water Utility Plan to address areas of local flooding, standing water (puddling), and flood control measures. The City has also prepared a Storm Water Master Plan to identify and prioritize new storm water projects. The Storm Water Master Plan has identified the need for improvements to the East Front Street area and its contributing drainage basin areas.

The City has been awarded a Hazard Mitigation Grant (FEMA Project 1539-47-R) for Phase I of this project. The Phase I deliverables include, but are not limited to the following:

- Engineer's plans that clearly show the pre and post effects of the proposed project.
- The plans shall depict the physical locations and elevations of the infrastructure and the FEMA Special Flood Hazard Areas.
- Publish public notices in a manner that anyone that may be affected or interested in this project has access to the posting and meet all required environmental laws and policies.
- Preparation of a detailed Benefit Cost Analysis.
- Provide FEMA a set of community approved, State reviewed construction plans (sealed) for review and comment including milestones and timelines for completion of the final phase of the project and bid documents/award.

The City must demonstrate they are committed to implement and ready to construct additional drainage improvements in order to obtain the greatest amount of state and federal grant funds. This task order includes the following components pertaining to the storm water improvements including construction of storm sewer, storm inlets, and gravity injection wells at eight (8) to ten (10) locations:

- Project management - Design,
- Land surveying,
- Final construction plans and specifications,
- Detailed construction cost estimate, and
- Benefit Cost Analysis.

SCOPE OF WORK

TASK 1 – SITE EVALUATION, DATA COLLECTION AND SURVEY

- 1.1 Collect and review available as-built documents and drainage basin data describing the existing land use, drainage facilities, topography, utility atlas maps and utility record drawings.
- 1.2 Review the Storm Water Master Plan with City staff to identify the specific locations and limits of the proposed improvements.

- 1.3 Perform project area inspection to determine City drainage sub-basins and confirm existing physical conditions pertaining to current stormwater drainage elements, patterns and characteristics.
- 1.4 Prepare a detailed topographic survey of each intersection/location. The surveys shall extend a minimum of 100 feet beyond each intersection/location.
- 1.5 Attend and assist the City with public meeting(s).

TASK 2 – PRELIMINARY DESIGN

- 2.1 Prepare Preliminary Design documents consisting of final design criteria, preliminary drawings, outline specifications and written descriptions of the Project.
- 2.2 These drawings shall consist of a cover sheet, overall site plan/key map, intersection site plans, and details. The drawings shall also depict any required ADA sidewalk improvements. These drawings will be of presentation quality intended to reflect the final product.
- 2.3 Prepare a preliminary estimate of construction costs based on current area, volume or other unit costs, which shall be updated throughout the design development phase.
- 2.4 Prepare a development schedule, which shall include, but shall not be limited to, the review and approval times by all governmental agencies as may be required.
- 2.5 Make available all design calculations and associated data.
- 2.6 Furnish five (5) copies of the Preliminary Design documents and present and review them with the City.
- 2.7 Upon receipt of complete written comments from all applicable CITY departments, we shall address the comments, provide the necessary revisions and prepare final drawings.

TASK 3 – FINAL DESIGN

- 3.1 Prepare construction documents which shall include but not be limited to drawings and technical specifications, general and supplementary conditions, bid forms, invitations to bid, instructions to bidders, with technical criteria, descriptions and design data necessary for permitting by governmental authorities, and shall include any further adjustments in the scope or quality of the project or in the construction budget authorized by the City.
- 3.2 Prepare a detailed opinion of probable cost which shall be reviewed by the City prior to going out for bids.

- 3.3 Use front end bid documents provided by the City including bidding forms, conditions of the contract, and form of AGREEMENT between the City and CONTRACTOR.
- 3.4 Make available all design calculations and associated Data.
- 3.5 Furnish five (5) copies of the 95% Complete Design documents and present and review them with the City for final comments and revisions.
- 3.6 Provide 100% complete contract documents for bidding purposes (hardcopies and electronic format).
- 3.7 Prepare a Benefit Cost Analysis using the hydrologic and hydraulic modeling results from the City's Storm Water Master Plan. The Benefit Cost Analysis shall be prepared with FEMA's Benefit Cost Analysis Software.
- 3.8 Prepare the appropriate documents for FEMA to facilitate a tribal consultation process. These documents shall contain the following:
 - Lat/Long coordinates for all boundaries of the project.
 - Indicate the level of project ground disturbance as follows: The area (horizontal limits) in square feet and the depth (vertical) in feet of ground disturbance.
 - A high-quality topographic map with the project location.

DELIVERABLES

1. Minutes of PE&D team and City meetings to all participants and designees
2. Task 2 Preliminary Design / Const. Drawings & Specifications
3. Task 3 Final Design / Const. Drawings & Specifications
4. Detailed Engineer's Opinion of Construction Costs
5. Benefit Cost Analysis
6. Tribal Consultation Documents

ASSUMPTIONS

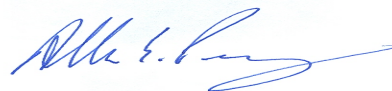
- 1. City will furnish all pertinent documents and site specific data in its possession regarding the project area in a timely matter, including basin lines, topographic maps, storm sewer system maps, and related information to infiltration studies that were conducted within the drainage basin for existing and proposed wells.
- 2. City will bring to attention in a timely matter other consultants under contract having information pertinent to PE&D scope of work and complete its review of draft/progress deliverables in a timely manner.

COMPENSATION

The proposed total lump sum fee compensation for this scope of work is **\$191,000**. A summary of compensation per task is shown on the attached worksheet.

Task 1 – Site Evaluation, Data Collection, and Survey	\$ 45,270
Task 2 – Preliminary Design	\$ 47,460
Task 3 – Final Design	<u>\$ 98,270</u>
Total	\$191,000

Jim Scholl **Date**
City Manager



Allen E. Perez, P.E. **Date**
President



EXHIBIT No. 1

East Front Street Storm Water Improvements

Summary of Billable Costs											
Sub-Task Description	Principal		Senior Engineer	Design Engineer	Senior CADD Designer	Clerical	Const. Manager	Survey		TOTAL HOURS	TOTAL BILLABLE COSTS
Hourly Rate	150.00	120.00	110.00	80.00	70.00	35.00	75.00	1.00	1.00		
A. Site Evaluation and Data Collection	18	0	24	36	15	0	0	36000		93	\$45,270.00
B. Preliminary Design	80	0	94	146	172	40	0			532	\$47,460.00
C. Final Design	140	0	139	346	450	80	0			1155	\$98,270.00
SUBTOTAL LABOR	238	0	257	528	637	120	0			1780	
TOTAL BILLABLE COSTS	\$35,700.00	\$0.00	\$28,270.00	\$42,240.00	\$44,590.00	\$4,200.00	\$0.00	\$36,000.00	\$0.00	\$191,000.00	\$191,000.00