SCOPE OF SERVICES

CITY OF HOLLYWOOD
PROJECT # 15-5130 - WATER MAIN REPLACEMENT PROGRAM

HOLLYWOOD BOULEVARD FROM N. 21ST AVENUE
TO THE EAST SIDE OF CITY HALL CIRCLE

SUBSURFACE UTILITY EVALUATION, UTILITIES VERIFICATIONS, GEOTECHNICAL, DESIGN, PERMITTING AND LIMITED CONSTRUCTION ADMINISTRATION SERVICES

I. PROJECT DESCRIPTION

The Florida Department of Transportation (FDOT) is performing a streetscape beautification project along Hollywood Boulevard from N. 21st Avenue to just east of City Hall Circle, which includes minor stormwater system improvements, landscaping and hardscaping within the right-of-way (ROW) limits. The City has requested Tetra Tech provide professional engineering services for design, permitting and construction administration to replace the existing 8-inch diameter water main. In general, the limits for the water main relocation and upsizing are from just east of the FEC railroad crossing at N. 21st Avenue along Hollywood Boulevard to the east side of City Hall Circle, as shown on the attached exhibit.

The City owns and operates various water and wastewater utility infrastructure within the FDOT project area with FDOT operating and maintaining the existing stormwater system infrastructure within Hollywood Boulevard. Other existing utilities that typically share the ROW include power, telephone, cable, gas utilities, and others. The City would like to implement the potable water pipeline replacement and improvements while avoiding relocation of existing utilities, if possible.

Tetra Tech is to provide a 12-inch nominal diameter water main crossing the FEC ROW limits at Hollywood Blvd. to replace the existing 8-inch diameter water main and tie into the City's existing system approximately 3,000 linear feet to the west of FEC western right of way including replacement of fire hydrants, water services and reconnections of existing mains along the side street(s) will also be included in the design. Other service to be provided include obtaining up to eleven (11) geotechnical borings for depths up to 50-feet due to horizontal directional drilling within FEC's ROW limits for the future pipeline installations, and obtain up to thirty (30) soft digs. Ground penetrating radar (GPR) will also be used for identifying the potential of other existing facilities within the FEC ROW limits.

II. SCOPE OF SERVICES

A. Subsurface Utility Evaluation

1. Subsurface utility evaluation: The utility locate firm will coordinate with Sunshine State One Call of Florida (SSOCOF) to obtain dig tickets for facility locations prior to performing up to thirty (30) vacuum excavation soft digs to positively identify designated subsurface facilities. A report will include record cover depth, facility type, size, material composition and sketches. The Surveyor will record horizontal and vertical location of existing pipes at proposed connection locations and other soft dig locations. In addition, ground penetrating radar will be used across FEC ROW limits to locate and identify the potential of existing facilities prior to implementation of the soft digs.

B. Utilities Verification

Utilities Verification: Tetra Tech will be perform the utility verification for the existing buried power, telecommunication, cable television, gas, water, sewer and drainage facilities, and identified facilities within limits of the project.

a. Tetra Tech will coordinate with SSOCOF to open Design Tickets, will contact all existing utilities provided by SSOCOF and will submit sketches of the proposed work to obtain available atlas, mark-ups, records, as-builts, etc.
b. The locations of the existing underground utilities will be depicted based on the records received, by using the above ground visible features (i.e. valves, manhole covers, inlets) to approximate the locations of the utilities.
c. The horizontal locations of services will be approximated, to the extent possible, based on the limited information provided and above ground visible features within the right way (i.e. water meters).
d. Vertical locations for sewers will be approximated, to the extent possible, based on invert elevations at manholes and inlets, if accessible, etc. Vertical locations for services and laterals will be assumed based on City standards.

C. Geotechnical

A geotechnical investigation to facilitate design and construction of the proposed horizontal directional drill water main within the FEC ROW as well as the open cut of the water main along Hollywood Boulevard will be performed by Ardaman & Associates, Inc. The scope for the geotechnical investigation includes the following:

1. Up to eleven (11) borings ranging from 10 feet to 50 feet deep for determination of soil strata and depth to water table.

2. Associated laboratory and office analysis.

3. The boring information will be included in the overall report submitted for the project corridor and shall include soil borings logs and classifications, existing groundwater levels, estimated seasonal high levels, pipe trench and backfill requirements, and roadway reconstruction requirements.

D. Final Design

The final design will result in preparation of the bid documents, plan and profile view drawings for the additional limits and within the FEC ROW heading west on Hollywood Boulevard approximately 3,000 linear feet west of the FEC ROW and to the eastern loop of City Hall Circle, which will be submitted to the City for review. All connections to existing water mains will require contractor coordination with City staff to close required valves during connections. As requested by City staff, this project will require two (2) reviews which will be at the 60% and 100% completion levels. The 60% water main improvements submittal will include plan view with connections and typical conflicts detailed and a draft project manual. The 100% completion level will include profile views and incorporate City comments. Three (3) sets of drawings and specifications will be provided to the City for each review. Also, an engineer's opinion of probable cost will accompany the 60% and 100% design documents.

1. Site Visit: Tetra Tech staff will visit the project limits to observe existing conditions and evaluate the pipeline corridors. Two (2) days have been included in the proposal for this activity.

2. Review the survey and available City record drawings to identify pipeline locations for the City's replacement water mains. The City will provide GIS information of City owned water, sewer and stormwater facilities in digital format.

3. Coordinate with the City and FDOT to discuss the proposed pipeline locations and potential conflicts. Time will be required for meetings, calls, and other associated coordination efforts during design development. Request and obtain information related to FDOT's surveying, utilities/utility coordination, design and coordinate for minimization of potential conflicts.

4. Prepare drawings in AutoCAD and technical specifications based on surveying and utility coordination information. Drawings will be included in the overall project plan set at 1" = 20 feet scale. It is anticipated that eight (8) plan and profile view sheets will be required for the additional limits. Tetra Tech will reasonably rely upon accuracy the survey information performed by others as provided by the City for the project limits.

5. Prepare an engineer's opinion of construction cost based on previous bid tabulations, vendor quotes, and estimates provided by Contractors. Cost estimate will be provided at the 60% and 100% completion level.

E. Permitting

Tetra Tech will prepare and submit the project limits for inclusion in permit submittals to Broward County Health Department (BCHD), Broward County Highway Construction and Engineering Division (BCHCED), Florida East Coast (FEC) railway, and City of Hollywood Building Department for the water main relocation project and respond to requests for additional information.

Prepare and submit up to two (2) additional water main clearance applications through the BCHD for project certification. Clearance applications are budgeted based on receipt of a single Contractor submittal containing two (2) additional hardcopy sets and one (1) AutoCAD CD set of as-built drawings that depict the information required in the contract documents along with original passing bacteriological sample reports and signed passing pressure test forms. Failure of the Contractor to provide the required information or submission of poor quality as-built drawings will count as an application review. Poor quality as-built drawings will be returned with comments one (1) time and subsequent reviews of poor quality as-built drawings submitted by the Contractor will be counted as one (1) application review per instance.

Prepare FEC Permit application and corresponding exhibits for water main crossing the FEC ROW for review and response to one (1) anticipated "Request for Additional Information" (RAI) issued by the regulatory agency or one (1) teleconference with agency staff. The City will be responsible for all permitting fees.

F. Construction Services

During the construction phase, Tetra Tech and the City will provide technical services support for the water main replacement improvements projects, including these additional work limits. Tetra Tech is anticipating reviewing up to twenty (20) shop drawing submittals for the water main which includes up to two reviews per submittal. It is anticipated that Tetra Tech will attend one (1) pre-construction meeting, up to six (6) progress construction meetings and provide up to six (6) field reviews – all of which are anticipated at 2 hours in total for attendance and preparation, including meeting minutes being generated by Tetra Tech for City review. Field reviews are anticipated at 2 hours each visit. The City will provide full time resident project representative services. Tetra Tech will also respond to requests for information (RFIs) from the Contractor and coordinate responses with the City as necessary including any requests for clarifications (RFCs).

III. Compensation

For the services set forth above, the City shall pay Tetra Tech the following not-to-exceed compensation to be invoiced on a monthly basis. Use of the design contingency must be approved by the City via written authorization.

FEE BY TASK

Task	Description	Cost
A	Subsurface Utilities Evaluation	$18,975
B	Utilities Verification	$1,510
C	Geotechnical	$5,500
D	Final Design	$17,920
E	Permitting	$3,510
F	Construction Services	$11,265
G	Reimbursable Expenses	$174
H	Design Contingency	$3,000
	Not-to-Exceed Total	**$61,854**

IV. Services Not Included

1. Coordination with homeowners or business owners is not included in this scope and no time has been budgeted for attendance at any meetings not previously included in the original scope of work.

2. No hydraulic modeling or sizing of water mains has been included in this scope of services. Phasing or phased water main system plans will be the responsibility of the City to evaluate for system shut downs, providing adequate fire flow(s) and directing Tetra Tech as necessary for phasing of the water main installations.

3. Services related to any stormwater and/or wastewater improvements design, permitting, bidding and construction administration are not included in this scope of services.

4. Surveying was performed by others and will be provided to Tetra Tech for their use and is not included in this effort. Surveying is understood to be complete for the required project efforts to be performed by Tetra Tech.

5. As this project will be part of a JPA/UWHC project bid along with FDOT's project, there are no anticipated bidding services nor is it anticipated that technical specifications will be required for this project. Notes will be added to the plans for the water main specifications. In addition, there is no Utility Work or "backout" scheduled required to be submitted for this project.

Price Proposal

Water Main Replacement Program:

Hollywood Blvd from N. 21st to City Hall Circle JPA

Submitted to: City of Hollywood (Attn: Clece Aurelus, P.E.)

		Labor Plan									
		6 Resource						Task Pricing Totals			61,854
	Bill Rate >	185.00	150.00	130.00	90.00	75.00	65.00	Specify Add'l Fees on Setup			0
								Technology Use Fee			
	Proj Area >							**Total Price**			**61,854**
								Pricing by Resource			
	Total Labor Hrs	Professional (9)	Professional (8)	Professional (7)	Professional (5)	Engineering Technician (5)	Word Processing Operator (4)	Labor	Subs	ODCs	**Task Pricing Totals**
Project Phases / Tasks	**282**	18	116	39	12	91	6	34,095	27,475	284	**61,854**
A Subsurface Utility Evaluations	-	-	-	-	-	-	-	-	**18,975**	-	**18,975**
B Utilities Verification	**13**	-	**2**	**7**	-	**4**	-	**1,510**	-	-	**1,510**
C Geotechnical	-	-	-	-	-	-	-	-	**5,500**	-	**5,500**
D Final Design	**159**	**10**	**57**	**8**	**12**	**72**	-	**17,920**	-	-	**17,920**
E Permitting	**27**	-	**11**	**12**	-	**4**	-	**3,510**	-	-	**3,510**
F Construction Services	**83**	**8**	**46**	**12**	-	**11**	**6**	**11,155**	-	**110**	**11,265**
G ODCs	-	-	-	-	-	-	-	-	-	**174**	**174**
H Design Contingency	-	-	-	-	-	-	-	-	**3,000**	-	**3,000**
Totals	**282**	**18**	**116**	**39**	**12**	**91**	**6**	**34,095**	**27,475**	**284**	**61,854**

APPROXIMATE PROJECT LIMITS EXHIBIT