TETRA TECH

August 22, 2014

Clèce Aurélus, P.E.
Senior Project Manager
City of Hollywood, Florida
Department of Public Utilities - ECSD
1621 N. 14th Avenue
Hollywood, FL 33019

Re: City of Hollywood
Water Main Replacement Program: Hollywood Boulevard to Sheridan Street from Federal Highway to N. 21St Avenue - City Project No. 14-5124

Dear Mr. Aurélus:

Tetra Tech is pleased to furnish this updated proposal for professional services to complete preparation of survey, geotechnical, utility coordination, design, permitting, bidding, and construction administration services for the Water Main Replacement Program: Hollywood Boulevard to Sheridan Street from Federal Highway to N. 21St Avenue project. The proposal has been prepared as we discussed via email and in person on August 3, 2014.

Tetra Tech looks forward to serving the City of Hollywood on this project. Should you have any questions, please do not hesitate to contact me at 305-849-3404.

Very truly yours,

Tetra Tech

Kenneth Caban, P.E., BCEE
Southeast Florida Regional Manager

C: Jitendra Patel, P.E., City of Hollywood
File – 200-16428-14001

1401 E. Broward Boulevard, Suite 302, Fort Lauderdale, FL 33301
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SCOPE OF SERVICES

CITY OF HOLLYWOOD
PROJECT # 14-5124

WATER MAIN REPLACEMENT PROGRAM: HOLLYWOOD BOULEVARD TO SHERIDAN STREET BETWEEN FEDERAL HIGHWAY AND N. 21ST AVENUE

SURVEY, GEOTECHNICAL, UTILITY COORDINATION, DESIGN, PERMITTING, BIDDING, AND CONSTRUCTION ADMINISTRATION SERVICES

I. PROJECT DESCRIPTION

The City of Hollywood (City) has an ongoing water main replacement program and has identified the area from Hollywood Boulevard to Sheridan Street between and including Federal Highway and the N. 21st Avenue, east of the railroad right-of-way, as a project for Tetra Tech to design under the General Engineering Consulting Services contract (City Project No. 02-1214). The water main improvements consist of approximately 92,000 feet of proposed 2-inch, 4-inch, 6-inch, 8-inch, 12-inch, and 16-inch diameter water mains along local City streets, rear easements and paved alleys. These improvements involve upgrading 2-inch, and 6-inch diameter water mains one nominal size and replacing 4-inch, 8-inch, 12-inch, and 16-inch diameter water mains with the same nominal size. The existing utilities will be replaced with new PVC water mains, isolation valves, fire hydrants, water services, and water meters (in some cases). Water meter and boxes will remain within alleys. Where water meter and boxes are located in rear easements, these will be relocated to the front within the City right-of-way. Where water meter and boxes are located within alleys, the pavement will be regraded toward the streets and reconstructed. On Federal Highway, the two existing 8-inch diameter water mains will be replaced. The three water mains that cross the railroad tracks at Tyler, Johnson, and Taft streets will also be replaced from N. 21st Avenue to west of Dixie Highway. On Hollywood Boulevard, the existing 6-inch diameter water mains will be replaced between N. 19th Avenue and N. 21st Avenue.

The City owns and operates various water, wastewater and stormwater utility infrastructure within the project right-of-way. Other existing utilities that typically share the right-of-way 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.

Design, permitting, and construction administration work associated with the replacement of the two 8-inch diameter water mains on Federal Highway is separated into a specific task.

The project has been broken down into eight distinct tasks, further described herein.

II. SCOPE OF SERVICES

A. Surveying/Subsurface Utility Evaluation

Survey services will be performed by Gibbs Land Surveyors (Surveyor) and shall provide a topographic/route survey of water distribution/transmission mains within the following limits of work, totaling approximately 88,000 linear feet of survey.

1. Those right-of-ways lying between the south right of way line of Hollywood Boulevard (from N. 19th Avenue to N. 21st Avenue) and the center line of Sheridan Street and between the east right-of-way line of Federal Highway and the west right-of-way line of N. 21st Avenue, and the right-of-ways for Tyler, Taft, and Johnson Streets from N. 21st Avenue, across the railroad tracks, 100 feet west of Dixie Highway right-of-way, per the sketch in Exhibit A.

Survey will consist of the following:

1. Establish all horizontal and vertical control for a topographical survey locating and identifying all applicable visible existing above-ground and underground utilities as marked, by others, within the project limits and will comply with "Minimum Technical Standards" established by the State of Florida and be at 1-inch = 20-ft scale.

2. Locate and/or provide permanent construction controls on site in State Plane Coordinates (1983 adjustment) and vertical control based on North American Vertical Datum of 1988 Benchmark system (NAVD88). Horizontal control data shall be relative to the Florida State Plane Coordinate system, East Zone, North American Datum of 1983/1990 adjustment.

3. Platted right-of-ways or easement and property boundaries shall be plotted on survey drawings for the project route.

4. Establish project baseline and monuments.

5. Provide cross-sections at approximately 100 foot intervals to extend 5 feet beyond the right-of-way lines.

6. Provide centerline elevations at 100 foot intervals within the alley rights-of-way.

7. Provide location of all existing buildings, concrete pads, valve boxes, water/electrical meter boxes, electrical pull boxes, telephone/cable risers, fences, hydrants, above-ground utilities, wood/concrete utility poles, overhead electrical lines, culverts, guardrails, pavement limits, headwalls, endwalls, manholes, vaults, driveways, right-of-way limits, sodded areas (clearly labeled as such in all areas), landscaping, traffic signage, pavement markings, other signage, and any other visible improvements within the above limits.

8. Provide rim and invert elevations and pipe size and type on all visible sanitary sewer and stormwater sewer structures and/or outfalls within the project limits, and coordinated within any GIS or asbuilt information available from the City of Hollywood.

9. Provide location of vegetation and individual trees greater than four (4) inches in diameter.

10. Digital maps shall delineate all field collected data as well as existing limits of nearby public right-of-ways.

11. The final survey map to be prepared at 1"=20' horizontal in a standard 22"x34" plan sheet format to include all topographic data listed, right-of-way lines, property lines (GIS derived), baselines, and easement lines based upon existing monumentation and utilities verification and subsurface utility evaluation data.

12. 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.

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 water mains will be performed by Ardaman & Associates, Inc. The scope for the geotechnical investigation includes the following:

1. Fifty (50) 8-foot deep auger borings for determination of soil strata and depth to water table.

2. Fourteen (14) 15-foot deep auger borings for determination of extent of organic material (muck).

3. Associated laboratory and office analysis.

4. Report shall include soil borings logs and classifications, existing groundwater levels, estimated seasonal high levels, pipe trench and backfill requirements, and roadway reconstruction requirements.

D. Federal Highway Water Main Replacement

This task includes work for the design, permitting, and construction administration for the replacement of the two 8-inch diameter water mains along Federal Highway.

1. Design - Prepare drawings in AutoCAD and specifications based on survey and geotechnical engineering base information. A preliminary list of drawings is presented below:

   - Plan and Profile Drawings for Federal Highway (26 sheets at 1-inch = 20-ft Scale)
   - Double Plan Drawings – Pavement Restoration (6 Sheets at 1-inch = 20-ft Scale)

2. Tetra Tech will prepare and submit the permit applications and supporting documentation necessary to obtain a utility permit from FDOT for the water main relocation along Federal Highway. Tetra Tech will prepare the corresponding Maintenance of Traffic (MOT) exhibits for water main(s) along Federal Highway 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.

3. During the construction phase, Tetra Tech and the City will provide technical services support for the water main replacement improvements along Federal Highway. Tetra Tech will consult with and advise the City and provide periodic inspection. Daily inspection will be performed by City staff. All instructions to the Contractor will be issued through the City's resident project representative or in writing on an as-needed basis. The construction phase for Federal Highway is expected to last 2 months.

E. Final Design

The final design will result in preparation of the bid documents, plan view only engineering drawings for all areas except Hollywood Boulevard, N 21St Avenue and the three railroad crossings, and project technical specifications, which will be submitted to the City for review. Because of FDOT and BC HCED permitting requirements, the bid documents will show a plan and profile for the proposed water mains along Hollywood Boulevard, N 21St Avenue, and crossing the railroad tracks. The design will be predominantly PVC pipe installed by open trench construction. Per City staff, all other roads other than Hollywood Boulevard, Sheridan Street, N 21st Avenue, Dixie Highway and Federal Highway (US1) are City roads and all road crossings will all be open trench/open cut, with the exceptions of the railroad crossings at Tyler, Johnson, and Taft Streets. The design will connect the proposed water mains on the northern portion of the project to the existing water main on Sheridan Street and proposed water mains on the southern portion of the project to the existing 24-inch diameter water main on the south side of Hollywood Boulevard. 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 incorporate City comments and a final project manual. 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. Prepare agenda, attend a kick-off meeting with the City, and prepare minutes.

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

3. 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.

4. Coordinate with the City to discuss the proposed pipeline locations and potential conflicts.

5. Private Water Service Reconnection and Routing: Tetra Tech will prepare the water service reconnection plans and details indicating the existing service connection and proposed service connection route and water meter boxes relocations from the rear easements to the dedicated City right-of-way. Time and labor associated with coordination effort with individual property owners to access property, provide notification, and location of existing water meters in rear

easements, have been included in this proposal for approximately 157 services. The following tasks are included:

- Obtain water meter atlases and records of water meter accounts as provided by the City
- Review and process available data provided by City
- Reconcile meter addresses on water meter atlas versus addresses listed by the Broward County Property Appraiser's office and actual building numbers Two (2) days for two personnel are included for site visits to the project area to verify street addresses, meter locations per atlas, walk through property to try to verify water meter/service locations, take photos of existing water meters and obtain additional available information from property owners.

6. Prepare drawings in AutoCAD and specifications based on survey and geotechnical engineering base information. A preliminary list of drawings is presented below:

   - Cover Sheet and Location Map
   - Legends, Abbreviations and General Notes
   - Key Plan
   - Overall Water Sampling Points Map
   - Double Plan Drawings (55 Sheets at 1-inch = 20-ft Scale)
   - Plan and Profile Drawings for N 21st Avenue (12 sheets at 1-inch = 20-ft Scale)
   - Plan and Profile Drawings for Hollywood Boulevard (2 sheets at 1-inch = 20-ft Scale)
   - Plan and Profile Drawings for Tyler, Johnson, and Taft Street railroad crossings (3 sheets at 1-inch = 20-ft Scale)
   - Double Plan Drawings – Pavement Restoration (65 Sheets at 1-inch = 20-ft Scale)
   - Water Service Reconnection Aerial Plans (8 sheets at 1-inch = 50-ft Scale)
   - Water Service Schedule (2 Sheets)
   - Private Water Service Installation Details (1 sheet)
   - Standard City Water Details (2 Sheets)
   - Other details (1 Sheet)
   - Pollution Prevention Notes and Specs (1 sheet)
   - Pollution Prevention Details (1 Sheet)
   - Maintenance of Traffic Plan & Details (2 Sheets)

7. Attend design review meeting at 60% and 100% completion levels, prepare agenda and minutes.

8. Prepare an engineer's estimate 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.

F. Permitting

Tetra Tech will prepare and submit the permit applications and supporting documentation necessary to obtain permits required for the project to the Broward County Health Department (BCHD), Broward County Highway Construction and Engineering Division (BCHCED), FDOT, Florida East Coast (FEC) railway, and City of Hollywood Building Department for the water main relocation project. Accordingly, Tetra Tech will perform the following tasks:

1. Prepare and submit one (1) "Notice of Intent to Use the General Permit for Construction of Water Main Extensions for PWSs [DEP Form 62-555.900(7)] to the BCHD and respond to up to two (2) "Requests for Additional Information" (RAI) issued by the regulatory agency or two (2) teleconferences with agency staff. All permit application fees are to be paid by the City.

2. Prepare and submit up to thirteen (13) water main clearance applications through the BCHD for project certification. Clearance applications are budgeted based on receipt of a single Contractor submittal containing thirteen (13) 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. The project manual and/or the drawings will specify the Contractor's responsibilities.

3. Prepare and submit up to seven (7) signed and sealed sets of plans along with Application for Initial Plan Review, Permit Application and corresponding documentation to BCHCED for review and response to two (2) anticipated "Requests for Additional Information" (RAI) issued by the regulatory agency or two (2) teleconferences with agency staff.

4. Prepare and submit two (2) signed and sealed sets of plans to the City of Hollywood Building Department for review and response to two (2) anticipated "Requests for Additional Information" (RAI) issued by the regulatory agency or two (2) teleconferences with agency staff.

5. Prepare FDOT Utility Permit applications and corresponding Maintenance of Traffic (MOT) exhibits for water main(s) along Hollywood Boulevard and Sheridan Street 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.

6. Prepare FEC Permit application and corresponding exhibits for water main(s) crossing the railroad on Tyler, Johnson, and Taft Streets 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.

7. The City will be responsible for all permitting fees.

G. Bidding and Award

The proposed improvements will be bid as one (1) project. Bidding and award activities will be led by the City. Tetra Tech will conduct the following services during the bidding process.

1. Tetra Tech will work with the City staff to provide a master copy of the Bid Set construction drawings and specifications in electronic format (PDF). It is our understanding that the City will be responsible for distribution of bid packages to potential bidders via online plan distribution.

2. Support with addenda. Tetra Tech will respond to technical questions forwarded by the City for four (4) anticipated addenda as part of this scope of services. Tetra Tech will respond to questions using the Addendum Form for expedited response time and will generate necessary supporting documents, as applicable, and submit them to the City for distribution to registered plan holders.

3. Tetra Tech will attend the pre-bid meeting at the City, prepare agenda and minutes.

4. Tetra Tech will evaluate the bids, provide support for evaluation of the apparent low bidder's utilities contractor's qualifications for undertaking the utility work on the project, and provide a recommendation of award.

H. Construction Administration

During the construction phase, Tetra Tech and the City will provide technical services support for the water main replacement improvements projects, respectively. Tetra Tech will consult with and advise the City and provide periodic inspection. Daily inspection will be performed by City staff. All instructions to the Contractor will be issued through the City's resident project representative or in writing on an as-needed basis. During the construction phase, Tetra Tech will:

1. Prepare conformed Contract Documents and attend one (1) pre-construction conference, prepare agenda and minutes.

2. Periodically observe construction of the proposed improvements. The overall project is expected to have a total duration of up to 22 months including project kick-off, shop drawing review and substantial and final completion. Periodic observation will be provided on a bi-monthly basis during active construction which will necessitate a total of 44 site visits Site visits will occur on the same days as the progress meetings.

3. Attend up to 22 monthly progress meetings. The City Project Manager will be responsible for preparing meeting minutes for distribution.

4. Provide interpretation or clarification of the design documents during active construction (up to 22 months) when requested.

5. Review shop drawings and other submittals up to two (2) times per submittal subject area for general conformance with the Contract Documents. The Contract Documents will require the Contractor to pay for additional reviews.

6. Evaluate and determine the acceptability of substitute materials and equipment proposed by the Contractor.

7. Assist the City's full time Project Inspector or Project Manager with review of applications for payment, test reports for soils, concrete and other materials on a monthly basis.

8. Assist the City's Project Manager to evaluate claims made by the Contractor and prepare change orders as required.

9. Conduct substantial and final completion inspections and checklists.

10. Prepare record drawings, incorporating changes made during construction by City to BCHD and BCHCED based on record information furnished by the Contractor and provide four (4) sets of prints and one (1) compact disk with an electronic version (PDF) of the documents and AutoCAD 2011 drawing files to the City. The record drawings will be tied into the State Plane Coordinate System to facilitate future integration with the City's GIS system. Also, provide project certification to regulatory agencies certifying that the project is complete and in general conformance with permits issued.

III. SERVICES NOT INCLUDED

A. Other Permits - This proposal does not include permitting services for any permits not previously listed.

B. Costs for advertising the Project are to be paid by the City.

C. Obtaining easements on property for construction of the project is not included in this scope.

D. Coordination with homeowners is not included in this scope and no time has been budgeted for attendance at any meetings not previously listed. For private water service relocation and reconnection, the Contractor will coordinate with property owners to obtain signed Right-of-Entry forms consenting to allow contractors to perform the necessary work within the private property.

E. All construction related layout and record drawing survey work and geotechnical services, including materials testing and other services are to be provided by the Contractor. This pertains only to such work that is completed during the construction phase.

F. Services related to permitting pipeline construction through wetlands or environmentally sensitive areas are not anticipated and are not included in this scope.

G. Hydraulic modeling.

H. All permitting fees are to be paid by the City.

I. Services related to any stormwater and/or wastewater improvements design, permitting, bidding and construction administration.

IV. COMPENSATION SUMMARY

The total Lump Sum compensation for the Scope of Services described in Section II is $955,986. The compensation for the Scope of Services by task is summarized below.

	Task	Cost
A	Surveying	$ 330,066
B	Utilities Verification	$ 38,160
C	Geotechnical	$ 16,390
D	Federal Highway Water Main Replacement	$ 63,280
E	Final Design	$ 328,315
F	Permitting	$ 46,880
G	Bidding Assistance	$ 14,710
H	Construction Services	$ 107,790
I	Reimbursable Expenses	$ 10,395
	Total Lump Sum	**$ 955,986**

V. SCHEDULE

See Attachment A for breakdown of schedule by tasks based on duration.

Price Proposal

Water Main Replacement Program

Hollywood Blvd. to Sheridan Street - Federal Highway to N. 21 Ave

Submitted to: City of Hollywood (Attn: Clece Aurelus,

Contract Type: Lump Sum

Project Phases / Tasks	Total Labor Hrs	Professional (9) (Caban, Ken)	Professional (7) (Shawn Hooker)	Professional (7) (Veria-Feria, Alicia)	Professional (4) (Betty Morris)	Engineering Technician (5) (Hernan Lopez)	Engineering Technician (5) (Paula Davalos)	Word Processing Operator (4) (Moore, Susan)
Bill Rate >		185.00	120.00	120.00	80.00	75.00	75.00	65.00
Proj Area >								
Totals	**5,944**	**336**	**906**	**1,745**	**20**	**576**	**2,059**	**302**
A Surveying/Utilities Verification/Subsurface Utility Eval	-	-	-	-	-	-	-	-
1 Surveying	-	-	-	-	-	-	-	-
2 Subsurface Utility Evaluation	-	-	-	-	-	-	-	-
B Utilities Verification	**367**	**26**	**26**	**149**	**8**	**20**	**124**	**14**
C Geotechnical	-	-	-	-	-	-	-	-
D Federal Highway Water Main Replacement	**669**	**14**	**94**	**163**	-	**90**	**308**	-
1 - Design (28 Sheets P&P 7 Sheets Double plan)	598	10	80	128		90	290	
2 - Permitting	38		6	22			10	
3 - Construction Administration	33	4	8	13			8	
E Final Design	**3,366**	**152**	**510**	**815**	**12**	**436**	**1,387**	**54**
F Permitting	**442**	**28**	**56**	**190**	-	-	**126**	**42**
G Bidding Services	**124**	**24**	**24**	**42**	-	-	**14**	**20**
H Construction Services	**976**	**92**	**196**	**386**	-	**30**	**100**	**172**
I ODCs	-	-	-	-	-	-	-	-

Labor Plan — 7 Resource

Price Summary / Totals

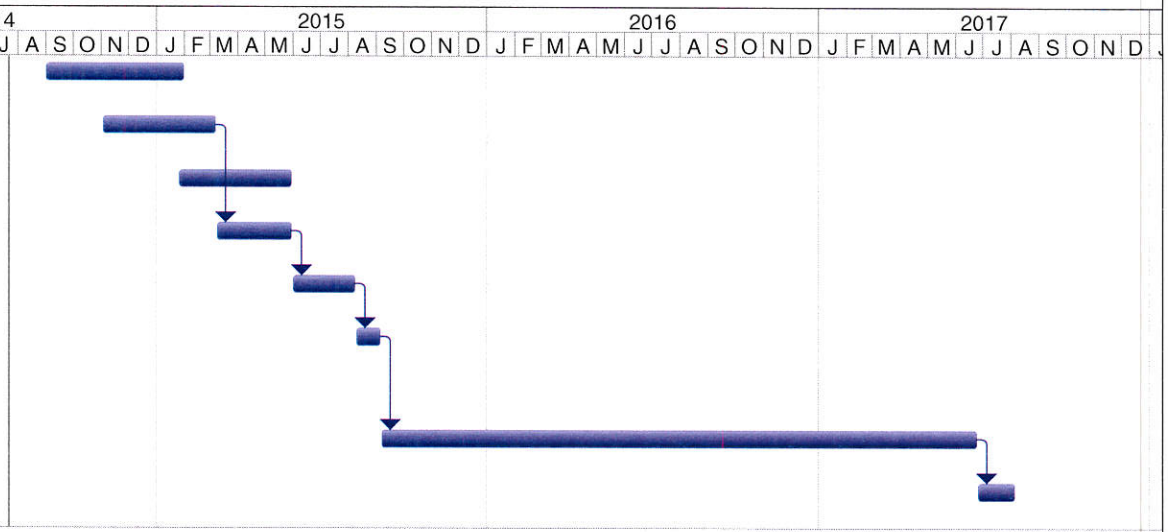
Task Pricing Totals	955,986
Specify Add'l Fees on Setup	0
Technology Use Fee	
Total Price	**955,986**

Pricing by Resource

Project Phases / Tasks	Labor Rate Esc.	Labor	Subs	Travel	Mat'ls & Equip	ODCs	Task Pricing Totals
Totals	**0.00%**	**599,135**	**346,456**	-	-	**10,395**	**955,986**
A Surveying/Utilities Verification/Subsurface Utility Eval		-	**330,066**	-	-	-	**330,066**
1 Surveying		-	**317,416**	-	-	-	**317,416**
2 Subsurface Utility Evaluation		-	**12,650**	-	-	-	**12,650**
B Utilities Verification		**38,160**	-	-	-	-	**38,160**
C Geotechnical		-	**16,390**	-	-	-	**16,390**
D Federal Highway Water Main Replacement		**63,280**	-	-	-	-	**63,280**
1 - Design (28 Sheets P&P 7 Sheets Double plan)		55,310					55,310
2 - Permitting		4,110					4,110
3 - Construction Administration		3,860					3,860
E Final Design		**328,315**	-	-	-	-	**328,315**
F Permitting		**46,880**	-	-	-	-	**46,880**
G Bidding Services		**14,710**	-	-	-	-	**14,710**
H Construction Services		**107,790**	-	-	-	-	**107,790**
I ODCs		-	-	-	-	**10,395**	**10,395**

ATTACHMENT A
CITY OF HOLLYWOOD
WATER MAIN & FORCE MAIN REPLACEMENT PROGRAM
FROM SHERIDAN STREET TO HOLLYWOOD BLVD
BETWEEN FEDERAL HIGHWAY TO N. 21 AVENUE

ID	Task Name	Duration
1	Surveying & Geotechnical	110 days
2	Design/Spec 60%	90 days
3	Permitting	90 days
4	Design/Spec 100%	60 days
5	Bidding/Evaluation	50 days
6	Construction initiation (Shop Dwg, etc.)	20 days
7	Construction of Improvements	470 days
8	Construction & Project Close Out	30 days



Project: COH Sheridan to Hollywood from Federal to N. 21 Ave
Date: Tue 7/22/14

Task Split

EXHIBIT A

Surveying – Gibbs Land Surveyor

GIBBS LAND SURVEYORS

2131 HOLLYWOOD BOULEVARD SUITE 204 HOLLYWOOD, FLORIDA 33020
PHONE: 954-923-7666 FAX: 954-923-7668
SSEELEY@GIBBSLANDSURVEYORS.COM

August 6, 2014

Ken Caban, P.E.
Tetra Tech
150 West Flagler Street
Suite 1625
Miami, FL 33130

RE: **City of Hollywood – Watermain replacement project - Hollywood Boulevard to Sheridan Street between Federal Highway (included) and North 21 Avenue (87,998 linear feet)**

Dear Mr. Caban:

We are pleased to submit the following proposal for Professional Land Surveying services on the above referenced project.

LIMITS OF WORK

1. Those Street and Avenue rights-of-way lying between the north right-of-way line of Hollywood Boulevard and the centerline of Sheridan Street and between the center line of Federal Highway and the west right-of-way line of North 21 Avenue per the City GIS utility atlas sheets provided by your office; TOGETHER WITH:
2. The westerly extension of Tyler Street, Johnson Street and Taft Street, from N 21 Avenue, across the Railroad Tracks, across Dixie Highway, to extend 100 feet west of the Dixie Highway right-of-way;
3. Hollywood Boulevard, full right-of-way, from the west right-of-way line of 21st Avenue, east to the east right-of-way line of 19th Avenue;
   LESS: 643 l.f. of alley between Wilson Street and Harding Street.
   LESS: 127 l.f of alley between Buchanan Street and Pierce Street.

SCOPE OF WORK

Land Survey Services:

1. Perform a topographic survey locating and identifying all applicable visible existing above-ground and underground utilities as marked within the above limits.
2. Locate and/or provide permanent construction controls on site in State Plane Coordinates (1983 adjustment) and vertical control based on North American Vertical Datum of 1988 Benchmark system (NAVD88). Horizontal control data shall be relative to the Florida State Plane Coordinate system, East Zone, North American Datum of 1983/1990 adjustment.
3. Platted right-of-ways or easement and property boundaries shall be plotted on survey drawings for the project route.
4. Baseline shall be established and monumented at the beginning and end of the project and all changes in direction. Monumentation found in the field to determine the right-of-ways shall be indicated on the survey with state plane coordinate values and vertical elevations (x,y,z) assigned to the above in the digital file.

5. Provide cross-sections at 100 foot intervals to extend 5 feet beyond the right-of-way lines.

6. Provide centerline elevations at 100 foot intervals within the alley rights-of-way.
7. Provide location of all existing buildings, concrete pads, valve boxes, water/electrical meter boxes, electrical pull boxes, telephone/cable risers, fences, hydrants, above-ground utilities, wood/concrete utility poles, overhead electrical lines, culverts, guardrails, pavement limits, headwalls, endwalls, manholes, vaults, driveways, right-of-way limits, landscaping, traffic signage, other signage, pavement markings, and any other visible improvements within the above limits.
8. Identify swale material denoting grass, dirt or gravel.
9. Provide rim and invert elevations and pipe size and type on all visible gravity sewer structures and/or outfalls (sanitary and storm drainage) within the above limits.
10. Provide location of vegetation and individual trees greater than four (4) inches in diameter.
11. Digital maps shall delineate all field collected data as well as existing limits of nearby public right-of-ways.
12. Provide location of utilities where possible based on field observation and utility records provided to this office.
13. Record horizontal and vertical location of existing pipes at proposed connection locatons and other soft dig locations as provided to this office..
14. The final survey map to be prepared at 1"=20' horizontal in a standard 22"x34" plan sheet format to include all topographic data listed, right-of-way lines, property lines (GIS derived), baselines, and platted easement lines based upon existing monumentation and utilities verification and subsurface utility evaluation data..
15. Provide 5 signed and sealed copies of the survey showing all of the above survey information.

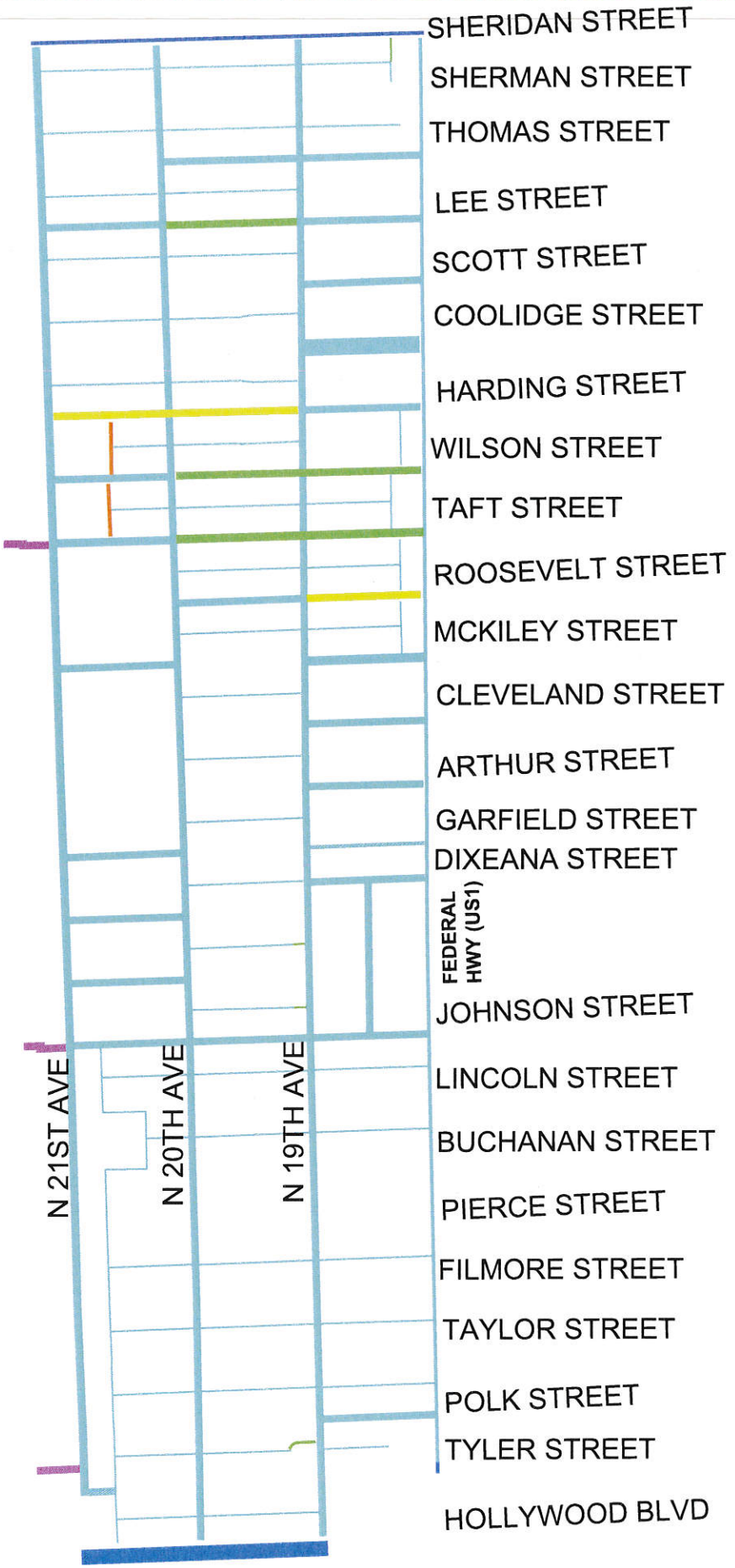
The above SCOPE OF WORK will be performed for a fee of **$288,559.75**

Any supplemental title work, if required, will be paid by the City. Any additional surveying as requested will be performed at the following hourly rates:

Principal	$125.00/hour
Survey Crew Supervisor	85.00/hour
Field Crew	100.00/hour
Cad Drafter - Survey Technician	60.00/hour
Secretary	35.00/hour

Sincerely,

Stephen K. Seeley, (for the firm)



1 of 1

CITY OF HOLLYWOOD
WATER MAIN REPLACMENT PROGRAM
HOLLYWOOD BLVD TO SHERIDAN ST. (N 21ST AVE to US1)

RIGHT-OF-WAYS TO BE SURVEYED

MARK | DATE | DESCRIPTION | BY

TETRA TECH

EXHIBIT B

Subsurface Utility Evaluation – Keith and Associates

KEITH & ASSOCIATES, INC.
consulting engineers
301 East Atlantic Boulevard, Pompano Beach, Florida 33060-6643
Tel: 954-788-3400 Fax: 954-788-3500

July 16, 2014

Kenneth L. Caban, PE, BCEE
Southeast Florida Regional Manager
Tetra Tech | Engineering and Architecture
150 West Flagler Street, Suite 1625
Miami, FL 33130
Cell 305.849.3404
Email ken.caban@tetratech.com

RE: Agreement for Professional Services
Project Name: City of Hollywood Water Main-Hollywood to Sheridan-Federal to N 21 Ave
Project Location Hollywood, FL
Our Project/Proposal Number: 08646.M0 (01)

Dear Mr. Caban:

In accordance with your request and subsequent discussions between members of our association and yourself, this agreement between Keith & Associates, Inc. ("CONSULTANT"), and Tetra Tech | Engineering and Architecture ("CLIENT") for professional services is submitted for your consideration and approval. CONSULTANT will begin work after receipt of a fully executed copy of this Agreement. Such receipt shall constitute written notice to proceed.

I. PURPOSE OF AGREEMENT/PROJECT DESCRIPTION

The purpose of this Agreement is to outline the scope of services recommended by CONSULTANT and accepted by CLIENT, and to establish the contractual conditions between CONSULTANT and CLIENT with respect to the proposed services.

II. SCOPE OF SERVICES

Section 1 - Engineering Services

Not a part of this Agreement.

Section 2 - Planning Services

Not a part of this Agreement.

Section 3 - Surveying Services

Not a part of this Agreement.

Section 4 – Landscape Architecture Services

Not a part of this Agreement.

Section 5 – Subsurface Utility Engineering (SUE) Services

Keith and Associates (CONSULTANT) appreciate the opportunity to provide SUE/Survey services on this very important project. CONSULTANT will follow ASCE Standard 38-02 – "Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data" during the field and office operations for this project. The quality levels discussed below are defined within the standard. CONSULTANT is to provide professional services associated with designation and location of existing subsurface utilities .CONSULTANT shall locate specific utilities along US-1 Federal Highway, Hollywood Boulevard and Sheridan Street remaining locations will be provided by the client. Gravity systems, service laterals, irrigation and overhead facilities are not included in this investigation.

Task 001 Location Services - (Quality Level 'A')
(Vacuum Excavations)

CONSULTANT will perform up to (30) test holes at specific sites requested by the design engineer. Test holes will be utilized to expose utilities to minimize any potential for damage. Test holes performed will be of minimum size (usually 1' by 1'). Backfill of test holes will be performed utilizing the removed material, if suitable. Areas will be restored back as close as possible to their original condition. Installation of an identifiable above ground marker will be performed at each test hole location. Field markers will consist of a nail and disk in asphalt, or an iron rod and cap with survey stake in grassed areas. Test holes performed in the street will be patched using cold patch. The test hole number and utility will be identified on the ground or on the stake, as appropriate. A test hole summary report will be created providing coordinates, depth of cover, type, size and material if applicable.

The Lump Sum Fee for this Task shall be.....$11,500.00

Technical Limitations

Services will be provided with due diligence and in a manner consistent with standards of the subsurface utility locating industry. Every reasonable effort will be made to locate all utility systems of interest whether indicated on record plans available to us or not. However, no guarantee can be made that all existing utility systems can be detected, located or exposed. It may not be possible to detect utilities without prior knowledge, such as systems that are not depicted on record prints available to us. Typically the horizontal location effort will include electromagnetic induction, power source detection, and ground penetrating radar (GPR). Electromagnetic induction is a method in which a transmitted signal is applied to a metallic target. As long as the target is metallic and unbroken, the target can be traced and a receiver at the surface is used to detect the transmitted signal. If the signal cannot be applied directly to the target, induction may be produced from the surface. In this scenario bleed-off of the transmitted signal to an adjacent facility is possible, sometimes resulting in erroneous information. PVC, HDPE, concrete pipe and other non-metallic facilities cannot be located by electromagnetic methods. Power source detection is a technique used to locate naturally occurring magnetic fields that exist around cables while generating a signal (electric, telephone, CATV for example). Ground penetrating radar (GPR) is available to assist in locating non-metallic utilities

and other facilities that are unidentifiable using traditional electromagnetic techniques. The accuracy of these techniques is subject to the limitation of the available technology and certain factors and field conditions beyond our control, such as the size, depth and conductivity of the target, the site conditions and access, soil conditions, depth to water table and the existence of adjacent buried materials and debris. The targeting of subsurface utilities, although highly reliable, is expressly understood to represent an approximate location of the facility marked on the ground surface. Facilities located from the surface are usually found within two feet of the surface mark. Once a possible facility has been located from the surface, vacuum excavation services should be used to visually verify and to provide the accurate horizontal location and vertical measurements (a test hole). Vacuum excavation techniques are used to provide a cost-effective service that causes minimal disturbance to the site, the utility, vehicle traffic, and is acceptable to the permitting agencies. The size of the test hole excavation is kept to a minimum, in most cases the nominal size of a test hole is 8" x 8". This service represents the best available data on subsurface utilities given a cost-effective investigation using air/vacuum excavation. Visual verification in the test hole below the water table is not possible. An air lance probe can be used in these instances to a reasonable depth of approximately 6 feet, although results to greater depths may be possible. The bottom of the utility pipe and conduit is sometimes not directly available and in most cases can be derived from the crown of the pipe and the pipe diameter. Pipes with a diameter of 16"or less can usually be determined by exposing a potion or the entire pipe as needed. If pipe diameter is critical on pipe facilities greater than 16", additional test holes may be required to obtain both edges. The bottom depth of multiple conduit and encased duct banks is determined by excavating down one edge of the utility. Additional test holes are needed to accurately document edges, configuration and top and bottom depths. Conditions under multiple or encased duct bank facilities cannot be excavated and therefore the existence of another facility cannot be confirmed. It is important to remember that the bottom edge of the facility may not represent its lowest point, and the shape or configuration of the facility may not be the same on both sides. Locating underground utilities is not an exact science. The reporting of a negative result (no facility found) should not be used as a positive determination that the subject area is clear of all facilities or that the facility does not exist. CLIENT shall hold harmless and indemnify Keith and Associates, Inc. (K&A) against any losses as a result of limitations within the equipment, but not against negligence on the part of K&A. Use of this service does not relieve interested parties from their responsibility to make required notification prior to excavation, nor does it relieve utility owners of their responsibility to mark the location of their facilities. K&A will not be responsible for damage caused by others. K&A will not be responsible for utilities that cannot be located with the equipment and techniques provided, or those located underneath other utilities. If records research is not part of the scope of services, the utility owner's marks will be used to identify the utility. K&A will not be responsible for correcting mistakes made by other locators. Where vacuum excavation services are used and no utility is found at the mark provided by the utility at a depth of 5 feet, the excavation will be backfilled, referenced and invoiced as one test hole.

Subsurface Utility Engineering Conditions and Understandings

The utility markings are for design purposes only. The Florida One Call must be notified forty-eight (48) hours in advance of any excavation.

CONSULTANT will not access confined spaces. If confined spaces need to be accessed for locating purposes then the client will be notified and further arrangements will be made for said access. Additional fees may be applicable.

Additional requests outside the scope of services, when requested by client and/or client's representative, will be invoiced on an hourly basis.

This proposal assumes site access is available and work can be performed between the hours of 7:30 AM and 5:00 PM Monday through Friday.

CONSULTANT'S TOTAL LUMP SUM FEE.....$11,500.00

EXHIBIT C

Geotechnical – Ardaman & Associates, Inc.

Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants
2608 W 84 Street, Hialeah, FL 33016
PH 305-825-2683, FX 305-825-2686

July 11, 2014
Proposal No.: 14-2426 Revised

Mr. Kenneth L. Caban, P.E, BCEE
Southeast Florida Regional Manager
Tetra Tech
150 West Flagler Street, Suite 1625
Miami, FL 33130

PROPOSAL FOR GEOTECHNICAL ENGINEERING SERVICES
WATER MAIN REPLACEMENT PROGRAM
HOLLYWOOD BLVD TO SHERIDAN
AND FEDERAL HIGHWAY TO N 21 AVE.
HOLLYWOOD, FL

In accordance with your request, we are pleased to submit our proposal to perform subsurface explorations and geotechnical studies for the above project. The purpose of the exploration is to obtain general subsurface soil information so that recommendations can be provided for site preparation procedures, foundations, and other geotechnical aspects of the project.

We understand your project will consist of the water main replacement in the area included between Federal Highway and N 21 Avenue between Hollywood Blvd and Sheridan in Hollywood. Based on our experience with subsurface conditions in the general site vicinity and our understanding of the proposed structural loads, we propose to perform fifty (50) Standard Penetration Test (SPT) borings to a depth of 8 feet below existing ground surface and ten (10) SPT borings to a depth of 15 feet below existing ground surface.

An engineering report will be prepared which will present the findings of our exploration and our recommendations for site preparation and foundation design.

It is our understanding that the boring locations will be accessible to our truck-mounted drilling equipment. Also notice that clearance for utilities within the subject property should be provided prior to drilling operations. We estimate that about 30 One Call tickets will be required to clear utilities along the project alignment.

Our estimate of the cost of our geotechnical services for this project is as follows:

• Mobilization	$ 700.00
• Staking/coordinating/utility clearance (30 tickets, 60 borings)	$ 3,800.00
• Drilling	
50 borings to 8'	$ 5,000.00
10 borings to 15'	$ 2,000.00
• Laboratory testing	$ 500.00
• Engineering	$ 1,700.00
Total	$13,700.00

Weather conditions permitting, we will start the field exploration program within ten working days after receiving your authorization to proceed.

Should we encounter conditions on the site that warrant more investigative effort than anticipated, we will inform you immediately. We will not proceed with additional work without your approval.

Please contact us if you should have any questions concerning the scope of work or the fee estimate.

If the terms above are acceptable to you, please return one signed copy of our Proposal Acceptance Form as an indication of your acceptance and authorization to proceed with the work.

Very truly yours,
ARDAMAN & ASSOCIATES, INC.
A TETRA TECH COMPANY

Evelio Horta, Ph.D., P.E., G.E.
Vice President