

March 8, 2017

Mr. Clece Aurelus, P.E.  
Engineering Support Service Manager  
City of Hollywood, Department of Public Utilities  
1621 N. 14<sup>th</sup> Avenue  
Hollywood, Florida 33022

**RE: WATER MAIN REPLACEMENT PROGRAM  
CITY OF HOLLYWOOD PROJECT NO. 16-5138  
CTA PROPOSAL NO. 2017-W03.054**

Dear Clece,

**CRAVEN THOMPSON**



**& ASSOCIATES INC.**

Engineers  
Planners  
Surveyors  
Landscape Architects

Craven Thompson & Associates, Inc. (CTA) is pleased to submit this proposal for Consulting Services per our Professional Services Agreement for General Engineering Consulting Services in connection with the Water Main Replacement within the **Project Limits** defined between Taft Street, Charleston Street, N 56<sup>th</sup> Avenue and SR 7. The limits are delineated on the attached "**EXHIBIT A**".

The proposed work will consist of survey, design, permitting, bidding and limited construction observation to replace approximately 57,000 linear feet of existing water main distribution and services are typically located in the front yards and within the road Rights of Way. It is anticipated that the surveying and engineering design and permitting only will be completed within twelve (12) months from NTP. The bidding and construction will follow according to the City of Hollywood's schedule. Specifically, our proposed scope of services and fees are as follows:

**I. SURVEYING SERVICES**

**1.1 Prepare Topographic Survey (CTA Task No. 11050)**

Prepare a topographic survey for engineering design purposes for 57,000 linear feet of service and distribution water main replacement in the **Project Limits** described above. The Survey will consist of locations and cross-section elevations in the full Rights-of-Way of the streets within the Project Limits shown in the attached "**EXHIBIT A**". A survey control baseline will be established throughout the Project Limits containing survey control points with both horizontal and vertical coordinate information in the form of x-y-z values, in State Plane, Florida East Zone, NAD83(90), US Survey Feet format. CTA will then utilize the survey control baseline to conduct a Topographic Survey of the full rights-of-ways of the streets locating multiple property corners within each block in order to establish a best-fit scenario for the rights-of-way. Utilizing the found survey control and the recorded plats within the Project Limits, CTA will create a BASEMAP for the project. Locations will include all aboveground and visible improvements; including pavement, curbing, signs, street lights, sidewalks, driveways, utility features and trees four (4) inches in diameter and above as measured at four (4) feet aboveground level.

3563 N.W. 53rd Street  
Fort Lauderdale, FL 33309-6311  
(954)739-6400  
Fax (954) 739-6409

Topographic cross-section elevations will be measured at one hundred (100) foot intervals along the entire route including ten (10) feet outside of the rights-of-way where it is accessible and safe for the survey crew members to enter private property. All sanitary and storm sewer structures will include rims, inverts and pipe sizes and directions. Elevations will be relative to North American Vertical datum of 1988 (NAVD 88) and based on National Geodetic Survey (NGS) or Florida Department of Transportation (FDOT) Benchmarks.

All survey data will meet the current standards for surveying in Florida as defined under Chapter 5J-17.050-.052, F.A.C. A copy of the CAD file and all data files will be provided to the City of Hollywood.

*Not to Exceed* ..... \$179,332.00

**II. ENGINEERING SERVICES**

2.1 Water Main Replacement (CTA Task No. 34140)

Prepare Final Engineering Plans for the replacement of approximately 57,000 linear feet of existing water service mains, 2" and 4", with new 4" - 6" water service main and water services and replacement of existing 6" - 12" distribution water mains with new 6" - 12" water distribution water mains including replacement and addition of fire hydrants. Water mains with fire hydrants will be a minimum 8" diameter pipe. The task will also include pavement restoration for the roadways and relocating the service. The majority of the existing water mains will be abandoned in place and only removed if necessary. All pipe 6" diameter and larger will be abandoned and grout filled and all pipes 2" and 4" will be capped and abandoned. This area does not have any rear yard distribution mains that require relocation mains and services to the roadways.

*Not to Exceed* ..... \$309,210.52

2.2 Permitting (CTA Task No. 33100)

Consultant shall prepare applications and such documents and design data as may be required for approvals of all such governmental authorities as have jurisdiction over the Project regarding Engineering Design. Engineering and Environmental Permit may include the following:

- Florida Department of Transportation (FDOT)
- Florida Department of Environmental Protection (FDEP)
- City of Hollywood
- Broward County Highway Construction and Engineering Division (BCHCED)
- Broward County Traffic Engineering Division (BCTED)
- Broward County Health Department (BCHD)

*Not to Exceed* ..... \$16,028.80

- 2.3 Geotechnical Services (CTA Task No. 31006)  
Geotechnical services to include up to fifteen (15) soil borings a maximum of twelve (12') feet in depth per boring.  
*Not to Exceed* ..... \$11,019.92
- 2.4 Test Hole Locations (CTA Task No. 33160)  
Test hole locations of existing utilities to assist in design of proposed infrastructure. Locate up to thirty five (35) test holes within the Project Area with accurate horizontal and vertical information in the form of x-y-z coordinates.  
*Not to Exceed* ..... \$22,714.20
- 2.5 Contract Document Preparation, Bidding Assistance (CTA Task No. 31100)  
Prepare Contract Documents, attend Pre-Bid Meetings, Prepare Addendums, answer RFI's, prepare Bid Analysis, etc.  
*Not to Exceed* ..... \$18,429.24

**III. CONSTRUCTION OBSERVATION SERVICES**

- 3.1 Limited Construction Observation (CTA Task No. 31120)  
Provide limited construction observation for the proposed improvements as required during the course of construction of the project. The fee is based on the City of Hollywood providing full time day-to-day inspections on the work progress, review and approval of pay request and review of as-builts. This task includes inspections required by regulatory agencies and principal Governments, observation of testing and reporting of results and final inspection. Inspections will be part-time, approximately eight (8) hours per week for a Field Inspector, two (2) hours per week for a Construction Manager and two (2) hours for a Senior Engineer for an anticipated construction schedule of fifteen (15) months to complete the construction of the water line and roadway restoration. Construction Manager will oversee Project, approve changes to Contract, interpret Contract Documents, attend selected meetings and approve pay requests. In addition to limited site inspections, construction services will also include attendance at pre-construction conference, progress meetings, site meetings, review of shop drawings for specified materials and equipment and determination if the improvements are in substantial conformance with the contract plans. Provide project partial certifications, up to six (6) and final certification, final close-out documents, and submit as-built drawings to appropriate agencies. This does not include preparation of survey information for as-builts. It is anticipated that the City of Hollywood will provide full time construction observations services during the Project.  
*Not to Exceed* ..... \$82,244.00

**IV. REIMBURSABLE EXPENSES**

4.1 Reimbursable Expenses (CTA Task No. XPEN)

Reimbursable expenses shall include printing, mylars, copying, postage, photographic services, Federal Express and courier services.

*Budget, Estimate..... \$2,000.00*

**TOTAL, SURVEYING, ENGINEERING, CONSTRUCTION OBSERVATION &  
REIMBURSABLES ..... \$640,978.68**

Five Test Holes will be performed on the existing 12" Water Main on 56<sup>th</sup> Avenue from Douglas Street to Taft Street to determine material of pipe as the first task.

**SERVICES NOT INCLUDED**

Additional services will be performed as authorized in writing by the Client.  
Additional services include but are not limited to the following:

1. Hydraulic Modeling.
2. Sanitary Sewer Design and Permitting.
3. Roadway Design and Permitting.
4. Permit/Certification Fees.
5. Sketch and Legal Descriptions.
6. Storm Drainage Improvements/Calculations/Permitting.
7. Site Planning.
8. Maintenance of Traffic Plans.
9. Traffic Studies.
10. Signalization Design and Plans.
11. Landscape Architectural and Tree Removal permitting Services.
12. Construction Observation Services after twenty four (24) months of construction.
13. Material testing.
14. Services required by additional governmental regulations which might be put into effect after the date of this agreement.
15. Any additional services requested by Client.

**Acceptance**

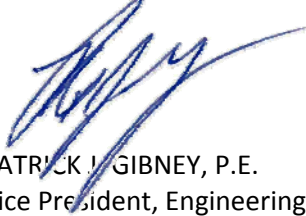
This proposal and fee schedules are based on acceptance within 60 days of the date of preparation. If not accepted by you within that time period, we reserve the right to re-evaluate the terms and conditions contained herein.

The above will be subject to the terms and conditions as specified in the Contract Documents. If the proposed work and fees contained herein are agreeable with you, please provide a Purchase Order and a Notice to Proceed.

Should you have any questions regarding the above, please do not hesitate to call.

Sincerely,

**CRAVEN THOMPSON & ASSOCIATES, INC.**



PATRICK J. GIBNEY, P.E.  
Vice President, Engineering

PJG/tg

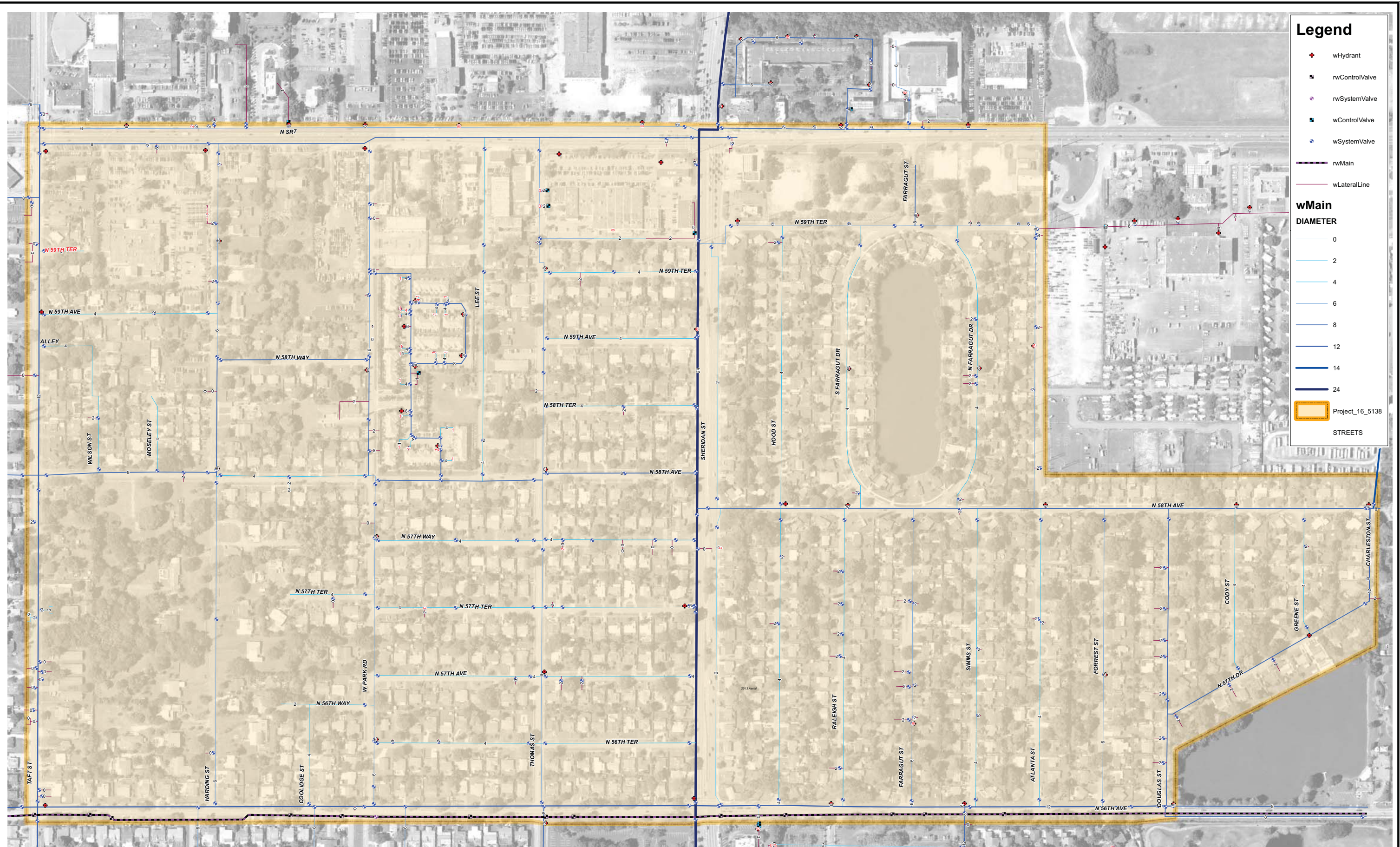
Enclosures

**EXHIBIT B**  
**STAFF TIME ESTIMATE**

Personnel	Hourly Rate	Hours per Task									Totals	
		Task 1.1	Task 2.1	Task 2.2	Task 2.3	Task 2.4	Task 2.5	Task 3.1	Task 4.1	Task 5.1	Hours	Cost
<b>Administration</b>												
Principal	\$175.00										0	\$0.00
Administrative Assistant	\$60.75						24				24	\$1,458.00
Sub Total											24	\$1,458.00
<b>Engineering</b>												
Principal Engineer	\$175.00		40	4	4	4	4	8			64	\$11,200.00
Sr. Supervising Engineer	\$162.68		364	24	8	8	40	40			484	\$78,737.12
Senior Engineer	\$127.31		620	48	8	16	60	80			832	\$105,921.92
Project Engineer	\$88.56		880	60			24				964	\$85,371.84
Senior CADD Technician	\$78.30		1100			16					1,116	\$87,382.80
											0	\$0.00
Sub Total											3,460	\$368,613.68
<b>Construction</b>												
Construction Manager	\$126.90							160			160	\$20,304.00
Senior Field Representative	\$126.90										0	\$0.00
Field Representative	\$78.30							560			560	\$43,848.00
Sub Total											720	\$64,152.00
<b>Surveying</b>												
Principal Surveyor	\$129.60	40									40	\$5,184.00
Professional Land Surveyor	\$94.50	320				16					336	\$31,752.00
Land Surveyor	\$88.56										0	\$0.00
Senior CADD Technician	\$78.30	360									360	\$28,188.00
Survey Laserscan Crew	\$250.00										0	\$0.00
Survey Crew	\$113.40	800				40					840	\$95,256.00
Sub Total											1,576	\$160,380.00
<b>Landscape Arch./ Planning</b>												
Principal LA Planner	\$129.60										0	\$0.00
Sr. Project LA Planner	\$127.31										0	\$0.00
Project LA Planner	\$88.56										0	\$0.00
Senior CADD Technician	\$78.30										0	\$0.00
Sub Total											0	\$0.00
<b>Cost per Task</b>		\$154,332.00	\$309,210.52	\$16,028.80	\$3,019.92	\$11,339.20	\$18,429.24	\$82,244.00	\$0.00	\$0.00		\$594,603.68
<b>Budget per Task</b>		\$154,332.00	\$309,210.52	\$16,028.80	\$3,019.92	\$11,339.20	\$18,429.24	\$82,244.00	\$0.00	\$0.00		\$594,603.68
<b>Subconsultants</b>												
Mobile Lidar		\$25,000										\$25,000.00
Geotechnical Soil Borings					\$8,000.00							\$8,000.00
Test Hole Locations - 35 Locations						\$11,375.00						\$11,375.00
Subconsultants Sub Total		\$25,000.00	\$0.00	\$0.00	\$8,000.00	\$11,375.00	\$0.00	\$0.00	\$0.00	\$0.00		\$44,375.00
<b>Total</b>		\$179,332.00	\$309,210.52	\$16,028.80	\$11,019.92	\$22,714.20	\$18,429.24	\$82,244.00	\$0.00			\$594,603.68
<b>Direct Expenses</b>									\$2,000.00			\$2,000.00
<b>Grand Total</b>		\$179,332.00	\$309,210.52	\$16,028.80	\$11,019.92	\$22,714.20	\$18,429.24	\$82,244.00	\$2,000.00	\$0.00		\$640,978.68



# EXHIBIT "A"



**Legend**

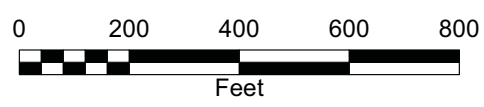
- ◆ wHydrant
- rwControlValve
- rwSystemValve
- wControlValve
- wSystemValve
- rwMain
- wLateralLine

**wMain DIAMETER**

- 0
- 2
- 4
- 6
- 8
- 12
- 14
- 24

Project\_16\_5138

STREETS



**CITY OF HOLLYWOOD - WATER LINE REPLACEMENT**  
 CITY PROJECT - 5138 (57,000 LINEAL FEET OF ROADWAY)

**Craven Thompson & Associates, Inc.**  
 Engineers - Planners - Surveyors - GIS  
 3563 NW 53rd Street, Fort Lauderdale, FL 33309  
 (Tel) 954-739-6400 (Fax) 954-739-6409  
 www.craventhompson.com