

February 8, 2018

Mr. Clece Aurelus, P.E.
Engineering Support Services Manager
City of Hollywood, Department of Public Utilities
1621 N. 14th Avenue
Hollywood, Florida 33022

RE: DRIFTWOOD SEPTIC TO SEWER CONVERSION PHASE I
CITY OF HOLLYWOOD PROJECT NO. 17-7085
CTA PROPOSAL NO. 2017-S03.048

Dear Clece,

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 Driftwood Septic to Sewer Conversion Phase I Project within the **Project Limits** defined between Taft Street, Charleston Street, N 66th Avenue and N 72nd Avenue. The limits are delineated on the attached **"EXHIBIT A"**.

The proposed work will consist of surveying, design, permitting and bidding assistance for approximately 91,950 linear feet of gravity sanitary sewer main and laterals in Water Main Replacement Project 5117 limits, two (2) sanitary sewer lift stations and associated force main and hydraulic calculations. The work also includes a partial redesign of the proposed water main to accommodate the sanitary sewer system. The Project is in a septic tank area and the proposed design does not include connection to the existing house service. It is anticipated that the surveying, engineering design and permitting will be completed within fifteen (15) 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 miscellaneous updates to the existing topographic survey including approximately 1,600 septic tank locations if accessible from the Right of Way and detail of potential lift station sites within the Project Limits. The Survey will consist of updated locations and topography of areas that have been altered since the 2015 survey provided for the Water Main Replacement Project 5117 Limits shown in the attached **"EXHIBIT A"**. Updated survey will be prepared for the Sanitary Sewer Design and Installation Project.

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.

Lump Sum.....\$96,514.56

CRAVEN THOMPSON



& ASSOCIATES INC.

Engineers
Planners
Surveyors
Landscape Architects

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

II. ENGINEERING SERVICES

- 2.1 Wastewater Collection and Transmission System Master Plan (CTA Project No. 34010)
Prepare a schematic sanitary sewer collection and transmission system for the Water Main Project 5117 Area and adjacent Water Main Replacement Project Area 5129. The area is generally located east of Davie Road Extension, south of Oak Street, west of N 66th Avenue and north of Taft Street. The layout will consider current project area and future connections/expansion to adjacent area including gravity layout and lift station locations. The Master Plan will provide phasing options, lift station location options, existing force main replacement options, new force main layout and sizing as well as gravity sewer layout to provide the most efficient way to provide new sanitary sewer service within the limits of Water Main Replacement Project 5117 and 5129. Existing force mains within the Project Area will be proposed to be upsized based on the recommendations of the Master Plan. Tech Memo will be issued for this Task.

Lump Sum..... \$25,735.68

- 2.2 Sanitary Sewer Design CTA Task No. 34140)
Prepare Final Engineering Plans for the design of a complete gravity sewer collection system and wastewater transmission system to serve the Driftwood Area. The sewer system will consist of gravity mains, manholes, laterals, a maximum of two (2) lift stations, force mains and flow meters. The proposed system will tie into the existing wastewater transmission system located in Taft Street and in the Project Area. The task will also include pavement restoration/replacement for the roadways affected by the proposed work. No gravity sewers exist within the Project Area and it is the intent of this task to design a new collection and transmission system to serve this area.

A hydraulic analysis of the proposed wastewater system with connection to the existing system will be performed to properly size the new lift stations and force mains. The information regarding tie-in pressures, previous wastewater studies performed, etc. will be supplied by the City of Hollywood. This task does not include connections to any property services, abandonment of septic tanks, routing of service piping on private property, etc.

Lump Sum..... \$775,616.00

- 2.3 Water Main Replacement (CTA Task No. 34140)
Prepare revised Final Engineering Plans for the replacement of approximately 91,950 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. Approximately 10% - 15% of the designed water main is anticipated to be redesigned to accommodate the new sanitary sewer.

Lump Sum..... \$34,225.92

2.4 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 Environmental Protection (FDEP)
- City of Hollywood
- Broward County Highway Construction and Engineering Division (BCHCED)
- Broward County Traffic Engineering Division (BCTED)
- Broward County Environmental Protection and Growth Management Department (BCEPGMD) (Water and Wastewater)
- Florida Department of Health Broward County (HRS)(Modify Existing Permit)

Lump Sum \$41,356.80

2.5 Geotechnical Services (CTA Task No. 31006)

Geotechnical services to include up to twenty-five (25) soil borings a maximum of forty (40') feet in depth per boring.

Lump Sum..... \$23,294.72

2.6 Test Hole Locations (CTA Task No. 33160)

Test hole locations of existing utilities to assist in design of proposed infrastructure. Locate up to fifty (50) test holes within the Project Area with accurate horizontal and vertical information in the form of x-y-z coordinates.

Each Test Hole (\$700/TH x 50 TH)..... \$35,000.00

2.7 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.

Lump Sum..... \$21,427.20

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 &
REIMBURSABLES \$1,055,170.88**

DELIVERABLES:

1. Technical Memo
 - Technical memo will include the Master Plan and schematic layout of wastewater collection and transmission systems within the Project Area and adjacent contributing areas.
2. 90% Design Phase Submittals.
 - Eight (8) hard copies and a digital copy (pdf) of design plans and OPCC will be issued for City staff review. Digital copy (pdf) of specifications will be provided with 90% design submittal.
3. 100% Final Submittals
 - One (1) hard copy of design plans signed and sealed along with Digital copy (pdf).

<u>Drawings</u>	<u>Sheets</u>
Cover Sheet	1
General Notes, Key Map, Phasing	15
Demolition Plans	8
Water and Wastewater Plan Sheets	110
Wastewater Profile Sheets	112
Lift Station Sheets.....	18
Pavement Markings and Signage	110
Construction Details	16
 - One (1) hard copy and digital copy (pdf): Project Manual for Bidding Purposes
 - Front End Documents (provided by City for inclusion in Project Manual)
 - Technical Specifications including Division 1 and 2
 - Geotechnical Report.
 - Test Hole Data
 - Copies of approved permits
 - One (1) digital copy (pdf) of 100% Contract Documents

PROJECT UNDERSTANDING

- The City of Hollywood proposes to expand the existing wastewater collection and transmission system within the existing Rights of Way and Easements in the Driftwood Area west of NW 66th Avenue, north of Taft Street, east of NW 72nd Avenue and south of Charleston Street, including the triangular area west of NW 72nd Avenue, north of Charleston Street to Dave Road Extension and the area north of Charleston Street, east of N 69th Avenue, west of N 66th Avenue and south of Pershing Street.
- It is anticipated that the areas outside of Water Main Replacement Project Area 5117 will be constructed in a future phase and connected to the Project Area.
- Survey locations and investigation of septic tank locations are based on 1,600 structures and an average less than of 15 minutes per structure. We will locate as many structures as possible within the budget.
- The Driftwood Project will consist of one Bid Package or Phase.

- It is anticipated two (2) lift stations will be designed to provide sewer services to the Project Area.
- Proposed sanitary sewer laterals are proposed from the gravity sanitary sewer main to the front property line of each property and capped. Removal, abandonment and hook up of existing on-site facilities will be performed by others.
- Design and permitting of the Project will be performed as one phase.
- Construction shall be performed in one phase.
- The general scope of services includes basin delineation, sewage flow projections, pipe sizing and hydraulics, design, preparation of construction documents, permitting, bid and award assistance for the Project Area.
- Survey, Design and permitting shall be completed within fifteen (15) months of the Notice to Proceed.

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. Roadway Design and Permitting.
2. Dewatering Plans and Calculations.
3. Corrosion Protection systems.
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.
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.

INFORMATION PROVIDED BY CITY

1. Permit applications fees and recording fees.
2. Atlases, As-Built, GIS, Calculations for all Utilities within the Project in ACAD and/or GIS format.
3. Pressure readings, drawdown tests, previous wastewater studies, etc. on existing lift stations within and adjacent to the Project Area.

Acceptance

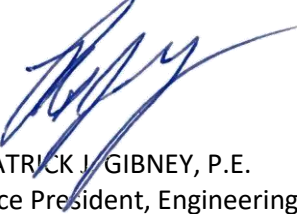
This proposal and fee schedules are based on acceptance within 60 days of the date of preparation. If not accepted by you within that time period, we reserve the right to re-evaluate the terms and conditions contained herein.

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

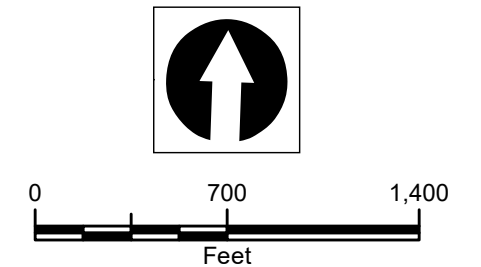
EXHIBIT B
STAFF TIME ESTIMATE

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 2.6	Task 2.7			Hours	Cost
Administration													
Principal	\$201.60											0	\$0.00
Administrative Assistant	\$77.76								24			24	\$1,866.24
Sub Total												24	\$1,866.24
Engineering													
Principal Engineer	\$201.60		12	160	8	8	4		4			196	\$39,513.60
Sr. Supervising Engineer	\$181.44		24	1000	40	80	8	4	24			1,180	\$214,099.20
Senior Engineer	\$129.60		40	1200	60	88	8	8	40			1,444	\$187,142.40
Project Engineer	\$115.20		80	1600	80	120		8	80			1,968	\$226,713.60
Senior CADD Technician	\$95.04		48	2000	88							2,136	\$203,005.44
												0	\$0.00
Sub Total												6,924	\$870,474.24
Construction													
Construction Manager	\$152.64											0	\$0.00
Senior Field Representative	\$95.04											0	\$0.00
												0	\$0.00
Sub Total												0	\$0.00
Surveying													
Principal Surveyor	\$158.40	40										40	\$6,336.00
Professional Land Surveyor	\$135.36	80						8				88	\$11,911.68
Land Surveyor	\$112.32	88										88	\$9,884.16
Senior CADD Technician	\$95.04	120						36				156	\$14,826.24
Survey Laserscan Crew	\$250.00											0	\$0.00
Survey Crew (3 Man)	\$161.28	360						48				408	\$65,872.32
Sub Total												780	\$108,830.40
Landscape Arch./ Planning													
Principal LA Planner	\$158.40											0	\$0.00
Sr. Project LA Planner	\$132.48											0	\$0.00
Project LA Planner	\$115.20											0	\$0.00
Senior CADD Technician	\$95.04											0	\$0.00
												0	\$0.00
Sub Total												0	\$0
Cost per Task		\$96,514.56	\$25,735.68	\$743,616.00	\$34,225.92	\$41,356.80	\$3,294.72	\$15,000.00	\$21,427.20		\$0.00	\$981,170.88	
Budget per Task		\$96,514.56	\$25,735.68	\$743,616.00	\$34,225.92	\$41,356.80	\$3,294.72	\$15,000.00	\$21,427.20		\$0.00	\$981,170.88	
Subconsultants													
Electrical		\$32,000.00										\$32,000.00	
Geotechnical Soil Borings		\$20,000.00										\$20,000.00	
Test Hole Locations - 50 Locations		\$20,000.00										\$20,000.00	
Subconsultants Sub Total		\$0.00	\$0.00	\$32,000.00	\$0.00	\$0.00	\$20,000.00	\$20,000.00	\$0.00		\$0.00	\$72,000.00	
Total		\$96,514.56	\$25,735.68	\$775,616.00	\$34,225.92	\$41,356.80	\$23,294.72	\$35,000.00	\$21,427.20	\$0.00	\$0.00		
Direct Expenses											\$2,000.00	\$2,000.00	
Grand Total		\$96,514.56	\$25,735.68	\$775,616.00	\$34,225.92	\$41,356.80	\$23,294.72	\$35,000.00	\$21,427.20	\$0.00	\$2,000.00	\$1,055,170.88	

EXHIBIT 'A'

City of Hollywood

PROJECT NO. 17-7085



Legend

-  PROJECT LIMITS
-  Hollywood Limits

Driftwood Septic to Sewer
Conversion Project - Phase 1



Craven Thompson & Associates, Inc.
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