SCOPE OF SERVICES

CITY OF HOLLYWOOD
PROJECT # 16-7077

ROYAL POINCIANA SEWER EXPANSION

PRELIMINARY DESIGN, DESIGN, PERMITTING, BIDDING, AND CONSTRUCTION ADMINISTRATION SERVICES

I. PROJECT DESCRIPTION

Portions of the area between Taft Street and Sheridan Street are not sewered. The City of Hollywood is implementing a water main replacement program within this same area. To increase utility services to City residents, improve groundwater quality, and to combine projects within areas to reduce costs and disturbances within the area, the City of Hollywood requested that Tetra Tech provide this scope of services to provide engineering services under the General Engineering Consulting Services contract (City Project No. 02-1214). This scope of services is for utility coordination, flow determination, preliminary design and recommendations, final design, permitting, bidding, and construction administration and inspection services for:

- Extensions to the existing gravity sewers along N 21 Avenue,
- New gravity sewers in the unsewered areas between Taft and Sheridan Streets and N 21 Avenue and Federal Highway,
- Rehabilitation of Lift Station E-22 and its discharge force main (if required), and/or
- A new force main from a proposed lift station located at 1913 Coolidge St to the existing 60-inch diameter gravity interceptor along Taft Street or another location a few blocks south of this location.

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 utility improvements, while avoiding relocation of existing utilities, if possible. Survey and utilities verifications have been completed within the City's rights-of-way in this area as part of water main replacement program and will be utilized for this project. This project includes design of approximately 19,000 linear feet of gravity sewers, 2,500 linear feet of force mains, and up to two lift stations.

In order to provide logical, orderly completion of this assignment, the project has been broken down into seven distinct tasks, further described herein.

II. SCOPE OF SERVICES

A. Kickoff Meeting, Data Collection, and Review

Tetra Tech will prepare an agenda for the kickoff meeting, attend the kickoff meeting with the City, and prepare and transmit meeting minutes.

Tetra Tech will obtain readily available data required to proceed with preliminary design and final design tasks. Data to be obtained, reviewed, and processed includes the following:

- As-builts for the existing gravity sewers, which discharge to Lift Station E-22,
- As-builts for Lift Station E-22,
- Location map for subsurface utility excavations (SUE, not included in this scope of work, to be provided by the City)
- Current Lift Station E-22 flows,
- Water billing data, and
- Other readily available data.

Deliverables:

- Data collection list
- SUE location map

B. Preliminary Design and Recommendations

Tetra Tech will evaluate different options for the layout of sewer system, force main and sewer lift station(s) location(s). Gravity sewers, force mains, and lift stations will be evaluated in accordance with the following three project alternatives:

1. Routing all flows to Lift Station E22 and rehabilitation of this Lift Station,
2. Routing all flows to a new Lift Station located at 1913 Coolidge Street, or
3. Routing all flows to Lift Station E22 and a new Lift Station located at 1913 Coolidge Street.

Tetra Tech will make recommendations related to the consolidation of the existing and proposed lift stations, collection systems, and discharge force main(s). Recommendations will also consider the need for a building and odor control facilities for the proposed or rehabilitated lift station(s). Air quality samples will be collected for a period of 30 days at Lift Station E22 to determine if odors could be expected at the proposed lift station site at 1913 Coolidge Street.

Water billing data provided by the City will be utilized to quantify existing water usage and estimate existing wastewater flows within the project area. Estimated wastewater flows will be used as design flows for the evaluation of the collection systems, Lift Station E22, the proposed lift station on Coolidge Street, and the discharge force main(s).

Tetra Tech will review the as-built data for the existing gravity sewer system along N 21 Avenue to determine where gravity sewers can be extended from this existing system. The lengths of extensions will be determined, along the streets abutting N 21 Avenue. Once the extensions to the existing gravity sewer system have been preliminarily designed, a preliminary design layout for the remainder of the area between Taft and Sheridan Streets and N 21 Avenue and Federal Highway will be developed. Flow calculations will be developed to confirm capacity of the existing gravity systems and to size the proposed gravity systems.

A technical memorandum will be prepared to compare flows, gravity sewer extensions, new gravity sewers, the location(s) of proposed lift station(s), advantages, disadvantages, and preliminary costs related to the various options. Tetra Tech will meet with the City to obtain approval of the recommended improvements, prior to final design, due to the expedited design requirements.

Deliverables:

- Draft Preliminary Design and Recommendations Technical Memorandum
- Final Preliminary Design and Recommendations Technical Memorandum

C. Surveying

Survey services will be performed by Gibbs Land Surveyors (Surveyor) and shall provide a Boundary and Topographic Survey of the following limits of work, 1913 Coolidge Street, Hollywood, being Lot 7, Block 'A' of "Hollywood Estates", recorded in Plat Book 15, Page 57, Broward County Records. Folio # 5142 10 30 0070.

The scope of work includes:

1. Preparation of a Boundary and Topographic Survey of the above site to minimum standards of Florida Statutes.
2. Survey to include property lines and easements of record per record plats. A title search may be required to verify the existence of easements not part of the record plat. A title search and records search are provided as part of this scope.
3. The survey to include a legal description of the above site showing Section, Township, Range and Tax Folio Number as provided from Broward County Records.
4. The survey shall be performed using State Plane Coordinates and to include benchmarks and control points.
5. Provide electrical conduits, poles, lights, cables, utility markers, overhead utility lines, transformers, lighting control panels, etc.
6. Provide location of catch basins, storm sewer inlets and associated piping in, and which crosses through the area to be surveyed including the inverts of associated pipes.
7. Provide location of sanitary sewer manholes on-site and in the streets, including the inverts of gravity sewer pipes.
8. Provide valves and valve box locations.
9. Provide above-ground visible and overhead utilities evident by visual inspection, service boxes and paint lines (by others).
10. Provide location of fences and gates (type of fence and gates to be shown on survey).

11. Provide location of shrubs and trees identifying tree trunk diameter, name of shrubs and trees or botanical classification (to the best of the surveyors' knowledge).

12. Identify perimeter of the property from right-of-way to right-of-way.

13. Provide location of edge of pavement and centerline of roads, curbs, gutter and any appurtenances of the area surveyed.

14. Provide reference benchmarks and spot elevations on a 20 foot grid in open space where possible, and all vertical changes. The spot elevations shall extend across the alley to the north and across the Coolidge Street Right-of-Way to the south and extend, where possible 5 feet east and west of the property line. Elevations will be referenced to NAVD88 Datum.

Deliverables:

- 5 signed and sealed survey plans of the project site containing the above survey information drawn at a scale of 1"=20'.
- An AutoCAD drawing file of the site.

D. Geotechnical Investigation

Geotechnical services will be performed by Professional Service Industries, Inc. (PSI). PSI will perform ten (10) Standard Penetration Test (SPT) borings, throughout the piping corridors, advanced to a depth 15 feet below existing grade.

Two Standard Penetration Test (SPT) borings for this project will be performed at the Lift Station E22 site or the proposed pump station site. One SPT boring will be performed to a depth of 40 feet (2 times the anticipated depth of the lift station) at the deepest section of the proposed substructure and one SPT boring will be performed to 20 feet at the location where the sewer/pipe(s) are anticipated to connect to the lift station from the street.

The SPT borings will be performed with a truck-mounted rig using mud rotary wash drilling procedures. Samples of the in-place materials will be recovered with a standard split barrel driven with a 140-pound hammer falling 30 inches (the Standard Penetration Test in accordance with ASTM D1586).

After completion of drilling, all boreholes will be backfilled with excavated soil/rock and the asphalt surface patched as necessary, and the site generally cleaned as required.

Underground utility clearance will be required prior to commencing the drilling of the borings. Therefore, PSI will contact "Sunshine One-Call" Service to obtain underground public utility clearance. We assume that any private underground utilities existing in the exploratory area will be identified to us by others. Also, we anticipate Maintenance of Traffic (MOT) will be required to perform the field work as many of the borings will be performed within the existing roadways. Flagmen, cones/barricades, arrow boards, etc. will be used.

A geotechnical engineer will review the soil samples and representative samples will be tested for physical properties such as gradation, moisture content and organic content, if deemed necessary. The results of our work will be transmitted in a report which will specifically contain the information listed below:

1. A plan of the site showing the location of the soil borings.
2. Logs of the exploratory borings will be provided, which furnish the results of the SPT sampling.
3. Classification of the soil borings based on ASTM D2487.
4. Groundwater levels noted in out SPT borings at the time of drilling.
5. Associated laboratory testing results, if any.
6. A general discussion of the observed soil and groundwater table conditions across the site.
7. Geotechnical recommendations pertaining to the lift station substructure (e.g. allowable bearing capacity and modulus of subgrade reaction, lateral earth pressure coefficients, and other pertinent geotechnical design parameters).
8. Recommendations for pipe and manhole bedding materials.
9. Other construction suggestions related to this project.

Deliverables:

- 2 signed and sealed geotechnical reports

E. Gravity Sewer System Final Design

The final design will be based on the accepted recommendations developed as part of Task B. Gravity sewers, force mains, and lift stations will be designed in accordance with one of the following three project alternatives:

1. Routing all flows to Lift Station E22 and rehabilitation of this Lift Station,
2. Routing all flows to a new Lift Station located at 1913 Coolidge Street, or
3. Routing all flows to Lift Station E22 and a new Lift Station located at 1913 Coolidge Street.

This task includes preparation of the bid documents for the accepted alternative, including the following:

- plan and profile view engineering drawings for the proposed gravity sewer mains at 1-inch = 20-ft horizontal and 2-ft vertical Scale, and
- project technical specifications and cost estimates.

The design will be predominantly gravity PVC pipe installed by open trench construction. All other roads other than Sheridan Street and Federal Highway (US1) are City roads and all road crossings will all be open trench/open cut. The design will not enter the ROW of Federal Highway or Sheridan Street. The proposed gravity sewers will provide a sewer lateral and cleanout at the property line, based on existing cleanout / septic tank location for each existing building/parcel, for connections by others. Existing and proposed water main conflicts will be adjusted, as required. This project will require three (3) reviews, which will be at the 60%, 90%,

and 100% completion levels. The 60% improvements submittal will include plan and profile drawings. The 90% and 100% completion level will incorporate City comments and comments received during permitting.

Five (5) sets of drawings and specifications will be provided to the City for each review. Also, an engineer's opinion of probable construction cost will accompany the 60%, 90%, and 100% design documents. Tasks to be conducted as part of this task include:

1. Site Visit: Tetra Tech staff will visit the project site with members of the City to observe existing conditions and evaluate the pipeline corridors. One (1) day has been included in the proposal for this activity.

2. 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
    - Plan and Profile Drawings for Gravity Sewer (40 sheets at 1-inch = 20-ft horizontal and 2-ft vertical Scale)
    - Double Panel Plan Drawings – Pavement Restoration (5 Sheets at 1-inch = 20-ft Scale, assuming most pavement restoration is covered in the water main improvement drawings)
    - Standard City Sewer Details (2 Sheets)
    - Other details (1 Sheet)

3. Prepare technical specifications and modify the City's front end specifications, as required.

4. Attend design review meeting at 60%, 90%, and 100% completion levels, prepare agenda and minutes.

5. Prepare an engineer's estimate of construction cost based on previous bid tabulations, vendor quotes, and estimates provided by Contractors.

<u>Deliverables:</u>

- Five (5) Copies of the 60 percent gravity sewer plans, and cost estimate.
- Five (5) Copies of the 90 percent gravity sewer plans, specifications, and cost estimate.
- Five (5) Copies of the 100 percent gravity sewer plans, specifications, and cost estimate.
- Electronic files of the gravity sewer plans, specification, and cost estimate.

F. Lift Station E22 Rehabilitation and Discharge Force Main Design

If the selected alternative includes rehabilitation of Lift Station E22, this task includes preparation of the bid documents for the accepted alternative, including the following:

- plan and profile view engineering drawings for the proposed force main from Lift Station E22 to its discharge point at 1-inch = 20-ft horizontal and 2-ft vertical Scale,

- plan, section and details for the existing lift station improvements, and
- project technical specifications and cost estimates.

The proposed force main will be designed from Lift Station E22 to its tie-in location on McKinley Street and N 20 Avenue and will include a new flow meter, if required. The design will be predominantly pressure PVC pipe installed by open trench construction. All other roads other than Sheridan Street and Federal Highway (US1) are City roads and all road crossings will all be open trench/open cut. The design will not enter the ROW of Federal Highway or Sheridan Street. Existing and proposed water main conflicts will be adjusted, as required. This project will require three (3) reviews, which will be at the 60%, 90%, and 100% completion levels. The 60% improvements submittal will include plan and profile drawings and an engineer's opinion of probable construction cost. The 100% completion level will incorporate City comments and comments received during permitting.

This task also includes design for the rehabilitation of Lift Station E22. Lift station calculations will be developed for the following:

- Duplex lift station sizing calculations.
- Wet well sizing calculations.
- Discharge force main headloss calculations.
- Lift station cycle time.
- Wet well and valve vault flotation calculations.

Five (5) sets of drawings and specifications will be provided to the City for each review. Also, an engineer's opinion of probable construction cost will accompany the 60%, 90%, and 100% design documents. Tasks to be conducted as part of this task include:

1. Site Visit: Tetra Tech staff will visit the project site with members of the City to observe existing conditions and evaluate the force main corridor, and the existing lift station site.

2. 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 Force Main(s) (2 sheets at 1-inch = 20-ft horizontal and 2-ft vertical Scale)
    - Lift Station E22 Site Plan
    - Lift Station E22 Demolition Plan
    - Lift Station E22 Mechanical Plan
    - Lift Station E22 Piping Plan
    - Lift Station E22 Electrical Plan
    - Lift Station E22 Details
    - Standard City Sewer Details (2 Sheets)
    - Other details (1 Sheet)

3. Prepare technical specifications and modify the City's front end specifications, as required.

4. Attend design review meeting at 60%, 90%, and 100% completion levels, prepare agenda and minutes.

5. Control panel, power and control systems and Supervisory Control and Data Acquisition (SCADA) and Remote Terminal Unit (RTU) equipment per City standards.

6. Stand-by power generator system connection.

7. Prepare an engineer's estimate of construction cost based on previous bid tabulations, vendor quotes, and estimates provided by Contractors.

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%, 90%, and 100% completion level.

Deliverables:

- Five (5) Copies of the 60 percent Lift Station E22 Rehabilitation and Force Main plans, and cost estimate.
- Five (5) Copies of the 90 percent Lift Station E22 Rehabilitation and Force Main plans, specifications, and cost estimate.
- Five (5) Copies of the 100 percent Lift Station E22 Rehabilitation and Force Main plans, specifications, and cost estimate.
- Electronic files of the Lift Station E22 Rehabilitation and Force Main plans, specification, and cost estimate.

G. Coolidge Street Lift Station and Force Main Design

If the selected alternative includes a proposed lift station at 1913 Coolidge Street, this task includes preparation of the bid documents for the accepted alternative, including the following:

- plan and profile view engineering drawings for the proposed force main from the proposed lift station at 1913 Coolidge Street to its discharge point at 1-inch = 20-ft horizontal and 2-ft vertical Scale,
- plan, section and details for the proposed lift station improvements, and
- project technical specifications and cost estimates.

The proposed force main will be designed from the proposed lift station site at 1913 Coolidge Street to an existing manhole on the 60-inch diameter gravity sewer, on Taft Street, midway between N 19 and N 20 Avenues and will include a flow meter. The design will be predominantly pressure PVC pipe installed by open trench construction. All other roads other than Sheridan Street and Federal Highway (US1) are City roads and all road crossings will all be open trench/open cut. The design will not enter the ROW of Federal Highway or Sheridan Street. Existing and proposed water main conflicts will be adjusted, as required. This project will require three (3) reviews, which will be at the 60%, 90%, and 100% completion levels. The 60% improvements submittal will include plan and profile drawings and an engineer's opinion of

probable construction cost. The 100% completion level will incorporate City comments and comments received during permitting.

This task also includes design of a proposed lift station at 1913 Coolidge Street. Lift station calculations will be developed for the following:

- Duplex lift station sizing calculations.
- Wet well sizing calculations.
- Discharge force main headloss calculations.
- Lift station cycle time.
- Wet well and valve vault flotation calculations.

Five (5) sets of drawings and specifications will be provided to the City for each review. Also, an engineer's opinion of probable construction cost will accompany the 60%, 90%, and 100% design documents. Tasks to be conducted as part of this task include:

1. Site Visit: Tetra Tech staff will visit the project site with members of the City to observe existing conditions and evaluate the pipeline corridor and the proposed lift station site.

2. 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 Force Main(s) (4 sheets at 1-inch = 20-ft horizontal and 2-ft vertical Scale)
    - Lift Station at 1913 Coolidge Street Site Plan
    - Lift Station at 1913 Coolidge Street Mechanical Plan
    - Lift Station at 1913 Coolidge Street Piping Plan
    - Lift Station at 1913 Coolidge Street Structural General Notes
    - Lift Station at 1913 Coolidge Street Wet Well and Vault Valve Structural Plan, Sections and Details
    - Lift Station at 1913 Coolidge Street Electrical Plan
    - Lift Station at 1913 Coolidge Street Details
    - Lift Station at 1913 Coolidge Street Power/Control (MPE) and Wiring Schedule
    - Lift Station at 1913 Coolidge Street Electrical Control Panel and Details
    - Lift Station at 1913 Coolidge Street RTU Installation Wiring Diagrams
    - Standard City Sewer Details (2 Sheets)
    - Other details (1 Sheet)

3. Prepare technical specifications and modify the City's front end specifications, as required.

4. Attend design review meeting at 60%, 90%, and 100% completion levels, prepare agenda and minutes.

5. Coordination meetings with the City and Florida Power and Light Company (FPL).

9. FPL electrical service point.

10. Control panel, power and control systems and Supervisory Control and Data Acquisition (SCADA) and Remote Terminal Unit (RTU) equipment per City standards.

11. Stand-by power generator system connection.

12. Prepare an engineer's estimate of construction cost based on previous bid tabulations, vendor quotes, and estimates provided by Contractors.

13. 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%, 90%, and 100% completion level.

Deliverables:

- Five (5) Copies of the 60 percent Coolidge Street Lift Station and Force Main plans, and cost estimate.
- Five (5) Copies of the 90 percent Coolidge Street Lift Station and Force Main plans, specifications, and cost estimate.
- Five (5) Copies of the 100 percent Coolidge Street Lift Station and Force Main plans, specifications, and cost estimate.
- Electronic files of the Coolidge Street Lift Station and Force Main plans, specification, and cost estimate.

H. Permitting

Tetra Tech will prepare and submit permit applications and supporting documentation necessary to obtain permits from the Broward County Environmental Protection and Growth Management Department (EPGMD) and City of Hollywood Building Department for the gravity collection system, improvements to Lift Station E22, the Coolidge Lift Station, and discharge force main(s), as appropriate to the recommended improvements. Accordingly, Tetra Tech will perform the following tasks:

1. Prepare and submit one (1) "Notification/Application for Constructing a Domestic Wastewater Collection/Transmission System" [DEP Form 62-604.300(8) (a))] and one (1) "Application to Construct a Wastewater Collection/Transmission System" [Broward County Domestic Wastewater Licensing Program Form] to the EPGMD and respond to "Requests for Additional Information" (RAI) issued by the regulatory agency. All permit application fees are to be paid by the CITY.

2. Prepare and submit five (5) signed and sealed sets of plans to the City of Hollywood Building Department for review and response to "Requests for Additional Information" (RAI) issued by the regulatory agency.

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

Deliverables:

- Permit application submittals.
- Final approved permits.

I. Bidding and Award

The proposed improvements will be bid with the City Water Main Replacement Program Project Number 14-5124. Bidding and award activities will be led by the City. Tetra Tech will conduct the following additional 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 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.

Deliverables:

- Five (5) Copies of the bid plans, specification, and cost estimate.
- Electronic files of the plans, specification, and cost estimate.

J. Construction Administration

The proposed sanitary sewer improvements will be constructed with the City Water Main Replacement Program Project Number 14-5124. During the construction phase, Tetra Tech will provide additional technical services for the gravity sewers, force mains, Lift Station E22, and/or the proposed lift station at 1913 Coolidge Street. Tetra Tech will consult with and advise the City related to the gravity sewer, lift stations, and force main improvements. All instructions to the Contractor will be issued through the City or in writing on an as-needed basis. It is assumed this project will be constructed with the water main improvements in the area and attendance at the monthly construction progress meetings is already included in the scope of work for the water main project. Minimal additional effort will be required during the progress meetings and to prepare portions of the meeting minutes related to the gravity sewers, force main, and lift station improvements. During the construction phase, Tetra Tech will provide the following services to augment the services already being provided as part of the water main project:

1. Prepare conformed Contract Documents to include the sanitary sewer improvements defined herein.

2. Attend monthly progress meetings. A portion of these services are already provided as part of the approved Work Order for Water Main Replacement Project 14-5124. Additional scope and fee are required for the expected duration of the gravity sewer, lift station, and force main improvements. Construction of the gravity sewers, force main, and lift station improvements is expected to add up to 13 months to the overall project,

including assuming one month for startup, 11 months of construction time, and one month for project closeout and construction completion.

3. Provide interpretation or clarification of the gravity sewer, lift stations, and force main design documents during active construction, when requested.

4. Review shop drawings and other submittals for general conformance with the Contract Documents.

5. Provide interpretation or clarification of the design documents during active construction when requested.

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

7. Assist the 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. Attend lift station start up/testing with the presence of the lift manufacturer's representative and City operations staff. All testing reports and documentation is to be provided to the Consultant for review and adherence to lift station design criteria.

11. Finalize "Request for Approval to Place a Domestic Wastewater Collection/Transmission System into Operation" [DEP Form 62-604.300(8)(b))] permit through Broward County for project certification. Clearance applications are budgeted based on receipt of a single Contractor submittal containing five (5) hardcopy sets and one (1) AutoCAD CD set of as-built drawings that depict the information required in the contract documents along with signed passing pressure test forms.

12. Prepare record drawings, incorporating changes made during construction for City and EPGMD based on record information furnished by the Contractor and provide five (5) sets of prints and one (1) compact disk with an electronic version (PDF) of the documents and AutoCAD 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.

<u>Deliverables:</u>

- Conformed contract documents
- Shop drawing review comments
- Responses to request for clarification
- Substantial and final completion checklists
- Record drawings

K. Additional Design and Other Services Allowance

This task includes an allowance for additional design or other services, including design and permitting of a lift station building and/or odor control facilities and other services, should they be required. Use of this allowance, requires a written proposal and written authorization from the City's Project Manager.

L. Reimbursable Expenses

Reimbursable expenses including reproductions, fees, and other costs that may be incurred as part of this project will be paid and invoiced under this task.

Deliverables:

- Reimbursable costs receipts

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. 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.

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

F. Hydraulic modeling.

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

H. Additional work due to a bid protest.

I. Services related to the stormwater 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 $498,990. The compensation for the Scope of Services by task is summarized below.

	Task	Cost
A	Kickoff Meeting, Data Collection and Review	$ 7,670
B	Preliminary Design and Recommendations	$ 72,530
C	Surveying	$ 3,850
D	Geotechnical Investigation	$ 8,415
E	Gravity Sewer System Final Design	$ 213,970
F	Lift Station E22 and Discharge Force Main Design	$ 40,985
G	Coolidge Street Lift Station and Force Main Design	$ 43,965
H	Permitting	$ 16,680
I	Bidding and Award	$ 13,150
J	Construction Administration	$ 37,675
K	Additional Design and Other Services Allowance	$ 40,000
L	Reimbursable Expenses	$ 1,000
	Total Lump Sum	**$ 498,990**

V. SCHEDULE

This project is to be completed within the timeframe of completion of the water main and lift station projects within this area. A schedule is provided as attachment A.

Price Proposal

COH Royal Poinciana Sewer Expansion

Design and CA for septic to sanitary conversion

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

Contract Type: Lump Sum

Labor Plan

10 Resource

	Bill Rate >	185.00	150.00	130.00	130.00	150.00	130.00	85.00	90.00	80.00	70.00
	Proj Area >										
Project Phases / Tasks	**Total Labor Hrs**	Professional (9)	Professional (8)	Professional (7)	Professional (7)	Professional (8)	Professional (7)	Professional (4)	Professional (5)	Engineering Technician (5)	Word Processing Operator (4)
	4,321	139	403	636	96	59	79	838	932	1,044	95
Task A - Kickoff Meeting, Data Collection and Review	**61**	**8**	**15**	**15**	**-**	**1**	**-**	**20**	**-**	**-**	**2**
Task B - Preliminary Design and Recommendations	**668**	**40**	**80**	**148**	**-**	**-**	**-**	**202**	**88**	**110**	**-**
Task C - Surveying	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Task D - Geotechnical Investigation	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Task E - Gravity Sewer System Final Design	**2,226**	**48**	**149**	**210**	**36**	**-**	**-**	**386**	**672**	**672**	**53**
Task F - Lift Station E22 and Discharge Force Main Design	**363**	**7**	**21**	**72**	**28**	**27**	**38**	**34**	**86**	**42**	**8**
Task G - Coolidge Street Lift Station and Force Main Design	**389**	**7**	**21**	**72**	**28**	**27**	**38**	**34**	**86**	**68**	**8**
Task H - Permitting	**170**	**3**	**18**	**24**	**-**	**-**	**-**	**65**	**-**	**58**	**2**
Task I - Bidding and Award	**117**	**12**	**19**	**15**	**3**	**3**	**2**	**18**	**-**	**35**	**10**
Task J - Construction Administration	**327**	**14**	**80**	**80**	**1**	**1**	**1**	**79**	**-**	**59**	**12**
Task K - Design and Other Services Allowance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Task L - Reimbursables	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Totals	**4,321**	**139**	**403**	**636**	**96**	**59**	**79**	**838**	**932**	**1,044**	**95**

Price Summary / Totals

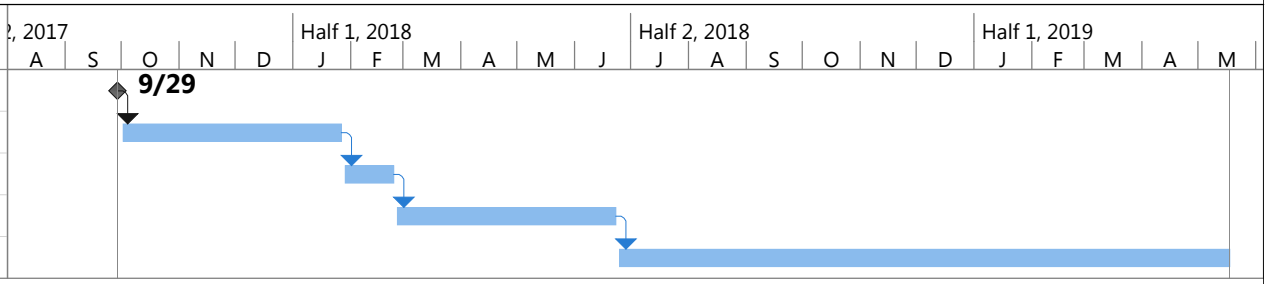
Task Pricing Totals	498,990
Specify Add'l Fees on Setup	0
Technology Use Fee	
Total Price	**498,990**

Pricing by Resource

	Labor	Subs	ODCs	Task Pricing Totals
	485,725	12,265	1,000	**498,990**
Task A - Kickoff Meeting, Data Collection and Review	**7,670**	**-**	**-**	**7,670**
Task B - Preliminary Design and Recommendations	**72,530**	**-**	**-**	**72,530**
Task C - Surveying	**-**	**3,850**	**-**	**3,850**
Task D - Geotechnical Investigation	**-**	**8,415**	**-**	**8,415**
Task E - Gravity Sewer System Final Design	**213,970**	**-**	**-**	**213,970**
Task F - Lift Station E22 and Discharge Force Main Design	**40,985**	**-**	**-**	**40,985**
Task G - Coolidge Street Lift Station and Force Main Design	**43,065**	**-**	**-**	**43,065**
Task H - Permitting	**16,680**	**-**	**-**	**16,680**
Task I - Bidding and Award	**13,150**	**-**	**-**	**13,150**
Task J - Construction Administration	**37,675**	**-**	**-**	**37,675**
Task K - Design and Other Services Allowance	**40,000**	**-**	**-**	**40,000**
Task L - Reimbursables	**-**	**-**	**1,000**	**1,000**
Totals	**485,725**	**12,265**	**1,000**	**498,990**

ATTACHMENT A
CITY OF HOLLYWOOD
ROYAL POINCIANA SEWER EXPANSION

ID	Task Name	Start	Finish
1	Authorization	Fri 9/29/17	Fri 9/29/17
2	Design	Mon 10/2/17	Fri 1/26/18
3	Permitting	Mon 1/29/18	Fri 2/23/18
4	Bidding	Mon 2/26/18	Fri 6/22/18
5	Construction	Mon 6/25/18	Fri 5/17/19



Project: ROYAL POINCIANA SEWER EXTENSION
Date: Tue 7/18/17

Task		Inactive Summary		External Tasks	
Split		Manual Task		External Milestone	
Milestone		Duration-only		Deadline	
Summary		Manual Summary Rollup		Progress	
Project Summary		Manual Summary		Manual Progress	
Inactive Task		Start-only			
Inactive Milestone		Finish-only			

GIBBS LAND SURVEYORS

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

June 22, 2017

Ken Caban
Tetra Tech
450 N Park Road Suite 502
Hollywood FL 33021

RE: **1913 Coolidge Street, Hollywood**

Dear Mr. Caban:

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

LIMITS OF WORK

1913 Coolidge Street Hollywood, being Lot 7, Block 'A' of "Hollywood Estates", recorded in Plat Book 15, Page 57, Broward County Records. Folio # 5142 10 30 0070

SCOPE OF WORK

1. Prepare a Boundary and Topographic Survey of the above site.
2. Survey to include property lines and easements of record per record plats. A title search may be required to verify the existence of easements not part of the record plat. Title search and records search is not a part of this scope.
3. The survey to include a legal description of the above sites showing Section, Township, Range and Tax Folio Number as provided from Broward County Records.
4. The survey shall be performed using State Plane Coordinates and to include benchmarks and control points.
5. Provide electrical conduits, poles, lights, cables, utility markers, overhead utility lines, transformers, lighting control panels, etc.
6. Provide location of catch basins, storm sewer inlets and associated piping in, and which crosses through the area to be surveyed including the inverts of all associated pipes.
7. Provide location of sanitary sewer manholes (on-site and in the street and associated piping which crosses through the area to be surveyed including the inverts of pipes.
8. Provide valves and valve boxes including depth of box and top of pipe elevations.
9. Provide all above-ground visible and overhead utilities evident by visual inspection, service boxes and paint lines (by others).

10. Provide location of fences and gates (type of fence and gates to be shown on survey).
11. Provide location of shrubs and trees identifying tree trunk diameter, name of shrubs and trees or botanical classification (to the best of the surveyors knowledge).
12. Provide perimeter of the property from right-of-way to right-of-way.
13. Provide location of edge of pavement and centerline of roads, curbs, gutter and any appurtenances of the area surveyed.
14. Provide reference benchmarks and spot elevations on a 20 foot grid in open space where possible, and all vertical changes. The spot elevations shall extend across the alley to the north and across the Coolidge Street Right-of-Way to the south and extend, where possible 5 feet east and west of the property line. Elevations will be referenced to NAVD88 Datum.
15. Provide Title Search by Paramount Title Services
16. Provide the following:
    (a) 5 signed and sealed survey plans of the project site containing the above survey information drawn at a scale of 1"=20'.
    (b) An AutoCAD drawing file of the site.
    (c) Title Opinion

The above SCOPE OF WORK will be performed for a fee of **$3,500.00**
Any additional surveying as requested will be performed at the following hourly rates:

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

Sincerely,

Stephen R. Seeley, PSM

7950 NW 64th Street.
Miami, FL 33166
phone: 305.471.7725
fax: 305.593.1915
intertek.com/building
psiusa.com

July 17, 2017

Tetra Tech
6303 Blue Lagoon Drive, Suite 305
Miami, Florida 33126

To: Mr. Kenneth L. Caban, P.E.
South Florida Regional Manager

Re: Proposal for Geotechnical Engineering Services
City of Hollywood Urban Hydrology Improvements
Hollywood, Florida
PSI Proposal No. 0397-216055

Dear Mr. Caban:

As requested, **Professional Service Industries, Inc. (PSI)** is pleased to submit this proposal to perform a geotechnical engineering study for the above referenced project. Included herein is our understanding of the proposed improvements along with a scope of services, fee estimate and anticipated schedule to conduct these services.

PROJECT INFORMATION

It is our understanding that the project will consist of the following:

- *Gravity Sewer and Force Mains:*

  Replacement of gravity sewers and force mains between Taft Street and Sheridan Street and North 21st Avenue and Federal Highway in the City of Hollywood, Broward County, Florida.

- *Wastewater Pump Station:*

  Construction of a wastewater pump station within the vacant lot at 1913 Coolidge Street in the City of Hollywood, Broward County, Florida. We understand that the deepest section of the proposed pump station will be approximately 20 feet. Plans showing the footprint and location of the pump station within the site were not available at the time this proposal was prepared.

Should any of the noted details be inconsistent, PSI requests that you contact us immediately to allow us to make any necessary modifications to this proposal.

SCOPE OF SERVICES

- *Gravity Sewer and Force Mains:*

  As requested, we will perform ten (10) Standard Penetration Test (SPT) borings advanced to a depth of approximately 15 feet below existing grade.

  We anticipate Maintenance of Traffic (MOT) will be required to perform the field work as many of the borings will be performed within the existing roadways. Flagmen, cones/barricades, arrow boards, etc. will be used in accordance with FDOT MOT Design Standards 600 series.

- *Wastewater Pump Station:*

  PSI proposes to drill two (2) Standard Penetration Test (SPT) borings; one (1) to a depth of approximately 40 feet (two times the depth of the pump station) at the deepest section of the proposed substructure and one (1) to approximately 20 feet at the sewer/pipe(s) connecting to the pump station from the street.

The SPT borings will be performed with a truck-mounted rig using mud rotary wash drilling procedures. Samples of the in-place materials will be recovered with a standard split barrel driven with a 140-pound hammer falling 30 inches (the Standard Penetration Test in accordance with ASTM D1586). After completion of drilling, all boreholes will be backfilled with excavated soil/rock, the asphalt surface patched as necessary, and the site generally cleaned as required.

Underground utility clearance will be required prior to commencing the drilling of the borings. Therefore, PSI will contact “Sunshine One-Call” Service to obtain underground public utility clearance. We assume that any private underground utilities existing in the exploratory area will be identified to us by others.

GEOTECHNICAL ENGINEERING AND REPORTING

A geotechnical engineer will review the soil samples and representative samples will be tested for physical properties such as gradation, moisture content and organic content, if deemed necessary. The results of our work will be transmitted in an electronic report which will specifically contain the information listed below:

1. A plan of the site showing the SPT soil boring locations.
2. Logs of the exploratory borings will be provided, which furnish the results of the SPT sampling.
3. Classification of the soil borings based on ASTM D2487.
4. Groundwater levels noted in out SPT borings at the time of drilling.
5. Associated laboratory testing results, if any.
6. A general discussion of the observed soil and groundwater table conditions across the site.
7. Geotechnical recommendations pertaining to the pump station substructure (e.g. allowable bearing capacity and modulus of subgrade reaction, lateral earth pressure coefficients, and other pertinent geotechnical design parameters).
8. Recommendations for pipe and manhole bedding materials.
9. Other construction suggestions related to this project.

SCHEDULE AND FEES

Our study can begin one (1) day after we receive authorization to proceed. We will start drilling after underground utilities have been located and identified, which may take two (2) to four (4) business days. The field drilling should be completed in three (3) work days, assuming no delays due to weather. The written report of the subsurface exploration will be available within one (1) week following the field demobilization. We estimate that our study will be completed within two (2) weeks from your notice to proceed. Preliminary verbal results can be provided as our field work progresses, if requested.

Based on our general knowledge of the subsurface conditions near the proposed project sites, our understanding of your requirements and assuming all the fieldwork will be performed in one (1) mobilization, we propose to complete the subsurface exploration and geotechnical engineering evaluation described in this proposal for a lump sum fee of **$7,650.00.**

The geotechnical work proposed herein will be carried out in accordance with our **General Conditions** attached hereto.

CLOSURE

PSI appreciates your consideration of our firm for this project. To formally authorize us, kindly indicate so by providing us with a signed agreement of our proposal. We look forward to working with you on this project. If you have any questions or if you require additional information, please do not hesitate to contact us.

Sincerely,

PROFESSIONAL SERVICE INDUSTRIES, INC.
Certificate of Authorization No: 3684

Morgan Dickinson, P.E.
Regional Engineer/Principal Consultant

Daniel Gonzalez, E.I.
Staff Engineer

Attachments: General Conditions
Fees Breakdown

AUTHORIZED BY:	INVOICE TO:
Signature	Firm
Name	Address
Title	
Date	Attention