

**AGREEMENT FOR PROFESSIONAL SERVICES  
(Design Professional)**

THIS AGREEMENT is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between the City of Merced, a California Charter Municipal Corporation, whose address of record is 678 West 18<sup>th</sup> Street, Merced, California 95340, (hereinafter referred to as "City") and Stantec Consulting Services, Inc., a New York Corporation, whose address of record is 3875 Atherton Road, Rocklin, California 95765, (hereinafter referred to as "Consultant").

WHEREAS, City is undertaking a project for collection system hydraulic model conversion and south trunk sewer service alternatives analysis; and,

WHEREAS, Consultant represents that it possesses the professional skills to provide engineering services in connection with said project.

NOW, THEREFORE, the parties hereto, in consideration of the mutual covenants hereinafter recited, hereby agree as follows:

1. SCOPE OF SERVICES. The Consultant shall furnish the following services: Consultant shall provide the engineering services described in Exhibit "A" attached hereto.

No additional services shall be performed by Consultant unless approved in advance in writing by the City, stating the dollar value of the services, the method of payment, and any adjustment in contract time. All such services are to be coordinated with City and the results of the work shall be monitored by the Director of Public Works or his designee. However, the means by which the work is accomplished shall be the sole responsibility of the Consultant.

2. TIME OF PERFORMANCE. All of the work outlined in the Scope of Services shall be completed in accordance with the Schedule outlined in Exhibit "A" attached hereto and incorporated herein by reference. By mutual agreement and written addendum to this Agreement, the City and the Consultant may change the requirements in said Schedule.

3. RESERVED.

4. COMPENSATION. Payment by the City to the Consultant for actual services rendered under this Agreement shall be made upon presentation of an

invoice detailing services performed under the Scope of Services, in accordance with the fee schedule set forth in Exhibit "B" attached hereto and incorporated herein by reference. The Consultant agrees to provide all services required under the Scope of Services in Exhibit "A" within the compensation amount set forth in Exhibit "B". For Consultant's services rendered under this Agreement, City shall pay Consultant the not to exceed sum of One Hundred Thousand Three Hundred Fifty-Six Dollars (\$100,356.00).

5.     **METHOD OF PAYMENT.** Compensation to Consultant shall be paid by the City after submission by Consultant of an invoice delineating the services performed.

6.     **RECORDS.** It is understood and agreed that all plans, studies, specifications, data magnetically or otherwise recorded on computer or computer diskettes, records, files, reports, etc., in possession of the Consultant relating to the matters covered by this Agreement shall be the property of the City, and Consultant hereby agrees to deliver the same to the City upon termination of the Agreement. It is understood and agreed that the documents and other materials including but not limited to those set forth hereinabove, prepared pursuant to this Agreement are prepared specifically for the City and are not necessarily suitable for any future or other use.

7.     **CONSULTANT'S BOOKS AND RECORDS.** Consultant shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to charges for services or expenditures and disbursements charged to the City for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to the Consultant to this Agreement. Any records or documents required to be maintained shall be made available for inspection, audit and/or copying at any time during regular business hours, upon oral or written request of the City.

8.     **INDEPENDENT CONTRACTOR.** It is expressly understood that Consultant is an independent contractor and that its employees shall not be employees of or have any contractual relationship with the City. Consultant shall be responsible for the payment of all taxes, workers' compensation insurance and unemployment insurance. Should Consultant desire any insurance protection, the Consultant is to acquire same at its expense.

In the event Consultant or any employee, agent, or subcontractor of Consultant providing services under this Agreement is determined by a court of

competent jurisdiction or the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an employee of the City, Consultant shall indemnify, protect, defend, and hold harmless the City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.

9. INDEMNITY. To the fullest extent permitted by law (including, without limitation, California Civil Code Sections 2782 and 2782.8), Consultant shall indemnify, protect, defend (with legal counsel reasonably acceptable to City), save and hold City, its officers, employees, and agents, harmless from any and all claims or causes of action for death or injury to persons, or damage to property, or expense and liability of every kind, nature and description (including, without limitation, incidental and consequential damages, court costs, attorneys' fees, litigation expenses and fees of expert consultants or expert witnesses incurred in connection therewith and costs of investigation), that arise out of, pertain to, or relate to, the negligence, recklessness, willful misconduct of Consultant or its employees, subcontractors, or agents in the performance of this Agreement. It is understood that the duty of Consultant to indemnify and hold harmless includes the duty to defend as set forth in Section 2778 of the California Civil Code. Acceptance by City of insurance certificates and endorsements required under this Agreement does not relieve Consultant from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall survive the termination of this Agreement and shall apply to any damages or claims for damages whether or not such insurance policies shall have been determined to apply. By execution of this Agreement, Consultant acknowledges and agrees to the provisions of this Section and that it is a material element of consideration.

10. INSURANCE. During the term of this Agreement, Consultant shall maintain in full force and effect at its own cost and expense, the following insurance coverage:

a. Workers' Compensation Insurance. Full workers' compensation insurance shall be provided with a limit of at least One Hundred Thousand Dollars (\$100,000) for any one person and as required by law, including Employer's Liability limits of \$1,000,000.00 per accident. The policy shall be endorsed to waive the insurer's subrogation rights against the City.

b. General Liability.

- (i) Consultant shall obtain and keep in full force and effect general liability coverage at least as broad as ISO commercial general liability coverage occurrence Form CG 0001.
- (ii) Consultant shall maintain limits of no less than One Million Dollars (\$1,000,000) per occurrence for bodily injury, personal injury and property damage.
- (iii) The City, its officers, employees, volunteers and agents are to be named as additional insureds under the policy, as respects liability arising out of work or operations performed by or on behalf of the Consultant.
- (iv) The policy shall stipulate that this insurance will operate as primary insurance for work performed by Consultant and its sub-contractors, and that any other insurance or self insurance maintained by City or other named insureds shall be excess and non-contributory.
- (v) Consultant shall maintain its commercial general liability coverage for three (3) years after completion of the work and shall add an additional insured endorsement form acceptable to the City naming the City of Merced, its officers, employees, agents and volunteers for each year thereafter for at least three (3) years after completion of the work. Copies of the annual renewal and additional insured endorsement form shall be sent to the City within thirty (30) days of the annual renewal.

c. Automobile Insurance.

- (i) Consultant shall obtain and keep in full force and effect an automobile policy of at least One Million Dollars (\$1,000,000) per accident for bodily injury and property damage.
- (ii) The City, its officers, employees, volunteers and agents are to be named as additional insureds under the policy, as respects automobiles owned, leased, hired or borrowed by the Consultant.

- (iii) The policy shall stipulate that this insurance will operate as primary insurance for work performed by Consultant and its sub-contractors, and that any other insurance or self insurance maintained by City or other named insureds shall be excess and non-contributory.

d. Professional Liability Insurance. Consultant shall carry professional liability insurance appropriate to Consultant's profession in the minimum amount of One Million Dollars (\$1,000,000). Architects and engineers' coverage is to be endorsed to include contractual liability.

e. Qualifications of Insurer. The insurance shall be provided by an acceptable insurance provider, as determined by City, which satisfies all of the following minimum requirements:

- (i) An insurance carrier admitted to do business in California and maintaining an agent for service of process within this State; and,
- (ii) An insurance carrier with a current A.M. Best Rating of A:VII or better (except for workers' compensation provided through the California State Compensation Fund).

f. Certificate of Insurance. Consultant shall complete and file with the City prior to engaging in any operation or activity set forth in this Agreement, certificates of insurance evidencing coverage as set forth above and which shall provide that no cancellation or expiration by the insurance company will be made during the term of this Agreement, without thirty (30) days written notice to City prior to the effective date of such cancellation—including cancellation for nonpayment of premium. In addition to any other remedies City may have, City reserves the right to withhold payment if Consultant's insurance policies are not current.

11. ASSIGNABILITY OF AGREEMENT. It is understood and agreed that this Agreement contemplates personal performance by the Consultant and is based upon a determination of its unique personal competence and experience and upon its specialized personal knowledge. Assignments of any or all rights, duties or obligations of the Consultant under this Agreement will be permitted only with the express written consent of the City.

12. **TERMINATION FOR CONVENIENCE OF CITY.** The City may terminate this Agreement any time by mailing a notice in writing to Consultant that the Agreement is terminated. Said Agreement shall then be deemed terminated, and no further work shall be performed by Consultant. If the Agreement is so terminated, the Consultant shall be paid for that percentage of the phase of work actually completed, based on a pro rata portion of the compensation for said phase satisfactorily completed at the time the notice of termination is received.

13. **CONFORMANCE TO APPLICABLE LAWS.** Consultant shall comply with its standard of care regarding all applicable Federal, State, and municipal laws, rules and ordinances. No discrimination shall be made by Consultant in the employment of persons to work under this contract because of race, color, national origin, ancestry, disability, sex or religion of such person.

Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act (8 U.S.C.A. 1101 *et seq.*), as amended; and in connection therewith, shall not employ unauthorized aliens as defined therein. Should Consultant so employ such unauthorized aliens for the performance of work and/or services covered by this Agreement, and should any agency or instrumentality of the federal or state government, including the courts, impose sanctions against the City for such use of unauthorized aliens, Consultant hereby agrees to, and shall, reimburse City for the cost of all such sanctions imposed, together with any and all costs, including attorneys' fees, incurred by the City in connection therewith.

14. **WAIVER.** In the event that either City or Consultant shall at any time or times waive any breach of this Agreement by the other, such waiver shall not constitute a waiver of any other or succeeding breach of this Agreement, whether of the same or any other covenant, condition or obligation. Waiver shall not be deemed effective until and unless signed by the waiving party.

15. **INCONSISTENT OR CONFLICTING TERMS IN AGREEMENT AND EXHIBITS.** In the event of any contradiction or inconsistency between any attached document(s) or exhibit(s) incorporated by reference herein and the provisions of the Agreement itself, the terms of the Agreement shall control.

Any exhibit that is attached and incorporated by reference shall be limited to the purposes for which it is attached, as specified in this Agreement. Any contractual terms or conditions contained in such exhibit imposing additional obligations on the City are not binding upon the City unless specifically agreed to

in writing, and initialed by the authorized City representative, as to each additional contractual term or condition.

16. **AMBIGUITIES.** This Agreement has been negotiated at arms' length between persons knowledgeable in the matters dealt with herein. Accordingly, any rule of law, including, but not limited to, Section 1654 of the Civil Code of California, or any other statutes, legal decisions, or common-law principles of similar effect, that would require interpretation of any ambiguities in this Agreement against the party that drafted this Agreement is of no application and is hereby expressly waived.

17. **VENUE.** This Agreement and all matters relating to it shall be governed by the laws of the State of California and any action brought relating to this agreement shall be held exclusively in a state court in the County of Merced.

18. **AMENDMENT.** This Agreement shall not be amended, modified, or otherwise changed unless in writing and signed by both parties hereto.

19. **INTEGRATION.** This Agreement constitutes the entire understanding and agreement of the parties and supersedes all previous and/or contemporaneous understanding or agreement between the parties with respect to all or any part of the subject matter hereof.

20. **AUTHORITY TO EXECUTE.** The person or persons executing this Agreement on behalf of the parties hereto warrants and represents that he/she/they has/have the authority to execute this Agreement on behalf of their entity and has/have the authority to bind their party to the performance of its obligations hereunder.

21. **COUNTERPARTS.** This Agreement may be executed in one or more counterparts with each counterpart being deemed an original. No counterpart shall be deemed to be an original or presumed delivered unless and until the counterparts executed by the other parties hereto are in the physical possession of the party or parties seeking enforcement thereof.

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IN WITNESS WHEREOF, the parties have caused this Agreement to be executed on the date first above written.


CITY OF MERCED  
A California Charter Municipal  
Corporation

BY: \_\_\_\_\_  
City Manager

ATTEST:  
STEVE CARRIGAN, CITY CLERK

BY: \_\_\_\_\_  
Assistant/Deputy City Clerk

APPROVED AS TO FORM:

BY:  \_\_\_\_\_  
City Attorney                      16/30/19  
Date

ACCOUNT DATA:

BY: \_\_\_\_\_  
Verified by Finance Officer



CONSULTANT  
STANTEC CONSULTING SERVICES,  
INC., A New York Corporation

BY: David W Price  
(Signature)

David W. Price  
(Typed Name)

Its: Principal  
(Title)

BY: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Typed Name)

Its: \_\_\_\_\_  
(Title)

Taxpayer I.D. No. 11-2167170

ADDRESS: 3875 Atherton Road  
Rocklin, CA 95765-3716

TELEPHONE: (916) 773-8100

FAX: (916) 773-8444

E-MAIL: \_\_\_\_\_



Stantec Consulting Services Inc.  
3875 Atherton Road, Rocklin CA 95765-3716

October 21, 2019  
File: 184030360

**Attention: Ken Elwin, Director of Public Works**  
City of Merced  
1776 Grogan Avenue  
Merced, CA 95341

**Reference: Collection System Hydraulic Model Conversion and South Trunk Sewer Service Alternatives Analysis**

Dear Ken,

Stantec Consulting Services, Inc. (Stantec) is pleased to submit this letter proposal for services to assist the City with conversion of the existing hydraulic model of the wastewater collection system to a different software platform and complete an alternatives assessment of options for trunk sewer sizing and alignment to serve buildout of the future South Trunk as was originally proposed in the Wastewater Collection System Master Plan (WCSMP).

Our proposed scope of work is as follows:

**STAGE 1: HYDRAULIC MODEL CONVERSION AND UPDATE**

It is understood the City desires a more cost-effective software platform that City staff can use in-house. Stantec will rebuild the current hydraulic model of the City's wastewater collection system in the City's preferred hydraulic modeling software platform.

**TASK 1.1 MODEL RECONSTRUCTION**

Based on our understanding of the City's needs, we proposed to convert the existing InfoWorks ICM (version 6.5.5.13016) to the latest version of PCSWMM by Computational Hydraulics, Inc. (CHI). PCSWMM is a cost-effective software package that runs the EPA SWMM5 computational engine. The initial transition will export the existing physical infrastructure database from the current model for use in the development of the updated model. The new model will be constructed by importing data extracted from the current model into the PCSWMM software package. A basic check of the model network components (pipes, manholes, and lift stations) and associated connectivity from the initial export will be made for missing data (e.g. manhole rim elevation, pipe invert elevation, pipe diameter, pipe length) and physical inconsistencies (e.g. reverse pipe slopes). The Infoworks flow generation data will be evaluated and exported and used to develop the SWMM5 flow generation. It is likely that the Infoworks and PCSWMM input data for flows will not be compatible and will require adjustment and validation to confirm both models result in similar output results.

NOTE: It should be cautioned that the existing Infoworks model may not have enough information available to properly develop the PCSWMM flow generation model, which is why we are recommending flow

Reference: Collection System Hydraulic Model Conversion and South Trunk Sewer Service Alternatives Analysis

monitoring and calibration in Task 1.2. Without the additional data and calibration efforts, the model will continue to be unvalidated to actual system flows and hence unreliable to properly assess future design considerations that the City is looking to assess,

### **TASK 1.2 FLOW MONITORING AND MODEL RECALIBRATION**

It is recommended that the City perform flow monitoring within the collection system to collect data which would allow the model to be recalibrated. This effort was last undertaken for the existing model in 2006. Significant changes have occurred in the number of services connected to the system, as well as improvements to portions of the existing sewer facilities.

In order to support the accurate calibration of the new model, we are recommending that the City will conduct flow monitoring at 10 discrete locations within the City's existing collection system for up to 8 weeks between the months of October 2019 and February 2020, in order to adequately capture wet weather flow events. Data should include flow, velocity and depths recorded at all sites using a 5 minutes frequency and will include dry weather and wet weather periods. Rain data for the monitoring period should also be collected at a similar frequency.

The data collected during the flow-monitoring period will allow the trunk model to be recalibrated under current wet weather conditions.

It is understood that the City will provide all flow data results in excel format and a Technical Report to summarize results of the flow monitoring.

### **TASK 1.3 MODEL UPDATE AND CALIBRATION**

The flow data provided by the City, should provide information to substantiate the basin-level will inflow and infiltration (I/I) and base flow projections to facilitate a more refined calibration of the hydraulic model. Ensuring that model simulations match actual sewer performance by properly calibrating the model is very important and even more so when such a tool will form the basis for significant investment and asset management decisions by projecting future infrastructure needs.

Flow data provided by the City flow study will be used by Stantec to calibrate the updated PC-SWMM model. The calibrated model will be evaluated to determine if any significant capacity restrictions exist within the collection system that were not identified in the WCSMP.

The hydraulic model and corresponding development scenarios will be updated to incorporate the latest planning data (provided by the City as *All Sewer Ad Data Sets.mpk*) assessed as part of the most recent WCSMP effort to develop the sewer assessment district(s) associated with build-out infrastructure financing. The existing system model will be revised to consider the most recent map of existing sewer service accounts provided by the City and flow monitoring data that is proposed to be collected in the following subtask. The buildout scenario will also be updated to reflect data provided by the City. The updated build-out scenario will be used in the development of infrastructure alternatives to serve the southern portion of the City's planning area, as described in Task 2.

Reference: Collection System Hydraulic Model Conversion and South Trunk Sewer Service Alternatives Analysis

#### **TASK 1.4 MODEL SCENARIOS AND RESULTS EVALUATION**

After performing the calibration, the model will be expanded upon in an effort to recreate future development scenarios that were originally evaluated within the WCSMP. An additional scenario will be developed simulating conditions under the buildout development conditions presented in the City's General Plan. This scenario will present buildout development of the City's planning area at a slightly lower density than what had been previously been considered. Stantec will develop and assess system capacity the following collection system model scenarios:

1. Existing Collection System – Dry Weather Flow
2. Existing Collection System – Wet Weather Flow
3. Buildout of the City SUDP Area – Wet Weather Flow
4. Buildout at General Plan Density – Wet Weather Flow

The results of each model scenario will be evaluated for discrepancies that exist from what had been presented in the 2017 Master Plan. System capacity will be presented in figures which will be incorporated into the TM described in the subsequent task.

#### **TASK 1.5 UPDATED MODEL AND SCENARIO RESULTS TECHNICAL MEMORANDUM**

Stantec will prepare a Technical Memorandum (TM) summarizing the results of the updated model scenarios and preceding tasks. The TM will describe any significant discrepancies that exist between the results from the updated model and those presented in the WCSMP. A technical memorandum will be produced outlining the differences and why they exist.

#### **STAGE 1 – DELIVERABLES**

- Conference call with City staff to confirm software platform selection and timing of the reconstruction/conversion of the hydraulic model
- Assistance with specifications for software platform and equipment (if desired)
- Updated PCSWMM (or other platform if selected) Hydraulic Model Files
- Technical Memorandum describing model development methodology and results as well as summarizing the methodology and results of the flow monitoring conducted by the City

#### **STAGE 2: SOUTH TRUNK SEWER SERVICE ALTERNATIVES ANALYSIS**

The City's WCSMP presents planning level infrastructure concepts required to provide wastewater collection service to the City's General Plan area under build-out development conditions. The infrastructure required to serve the southern area and is referred to as the South Trunk within the WCSMP. Additional consideration of the existing trunk system capacity and specific infrastructure improvements thereto may be preferable to the future trunk sewers as proposed in the WCSMP to serve south Merced.

**Reference:** Collection System Hydraulic Model Conversion and South Trunk Sewer Service Alternatives Analysis

This Stage involves an alternatives assessment to consider options for infrastructure improvements required to provide wastewater collection service for build-out development of the service area associated with the "South Trunk" as identified in the WCSMP. The updated (converted) hydraulic model will be utilized to consider and define various alternatives. Phased system improvements will also be evaluated as part of the analysis to accommodate a somewhat slower rate of development when compared to that of the surrounding UC Merced.

#### **TASK 2.1 SOUTH TRUNK – CAPACITY, DEMAND, AND ALIGNMENT ASSESSMENT**

Flow projections for the South Trunk service area will be updated to reflect the most recent planning data collected as part of the sewer assessment district development effort. This projection will then be compared to the design capacity of the South Trunk as presented in the WCSMP. Should any deficiencies exist in the WCSMP recommended South Trunk capacity, the proposed design will be revised to provide sufficient capacity to convey build-out flow from the service area. Similarly, if excess capacity is projected to exist in the current recommended design, the South Trunk recommendations will be optimized.

#### **TASK 2.2 GERARD TRUNK – EXISTING CAPACITY ASSESSMENT**

The existing and remaining capacity of the main trunk of the collection system serving the southern planning area, known as the Gerard Trunk, will be determined and evaluated as it relates to its ability to serve portions of this existing and future sewer service area. The collection of flow monitoring data described in Task 1.2 will be coordinated to collect data necessary for this effort. Capacity deficiencies will be identified, and record drawings will be requested from the City to confirm model inputs and associated results. The results of the updated model assessment and system capacity evaluation will be documented in a TM and presented in figures depicting the system.

#### **TASK 2.3 IDENTIFY EXISTING SYSTEM CAPACITY IMPROVEMENT ALTERNATIVES**

This subtask will evaluate alternative capacity improvements that can be made to the existing trunk system to support build-out development within the southern planning area (currently proposed to be served by the South Trunk and existing trunk sewers). Upsizing portions of the Gerard Trunk, running parallel sections of pipe, localized pump stations, flow diversions, and other potential improvements to the existing system will be considered. Depending on improvement needs, one upsizing alternative for the Gerard Trunk and Main Trunk connecting it to the WWTF will be developed for use in the alternative analysis.

After refining the sizing requirements for the proposed South Trunk and evaluating potential improvements to the existing system, Stantec will consider alternative alignments for the South Trunk. Portions of the proposed South Trunk run parallel to existing trunks in the collection system, optimizing future connections to utilize remaining capacity within the existing system may limit the extent and capacity required of the future South Trunk. One alternative alignment for the South Trunk will be developed for use in the alternative analysis.

#### **TASK 2.4 ALTERNATIVES ANALYSIS AND TECHNICAL MEMORANDUM**

Under this task, three sewer servicing alternatives will be assessed to determine the best apparent alternative. The alternatives will consist of the following:

**Reference:** Collection System Hydraulic Model Conversion and South Trunk Sewer Service Alternatives Analysis

- Alternative 1 – Optimized WCSMP South Trunk (Task 2.1)
- Alternative 2 – Existing System Improvements (Task 2.2 & 2.3)
- Alternative 3 – South Trunk Alternative Alignment (Task 2.3)

A detailed analysis of alternatives will be performed with sufficient detail to provide budget level opinions of probable cost for each alternative. Costs will be preliminary in nature and appropriately conservative with contingency and soft cost allowances for topographical survey, geotechnical investigation, detailed design, construction support and CEQA, environmental permitting and possible mitigation requirements.

After assessing the alternatives and preparing preliminary cost estimates, the results will be presented to the City. Stantec will provide a recommendation of the best apparent alternative considering cost, risks, and potential for phasing. A TM will be prepared describing and illustrating each alternative and documenting potential risks and benefits for each. The TM will present the results of the alternatives assessment and potential phasing of improvements for the best apparent alternative. The results of the updated model assessment and system capacity for the Girard Trunk (Task 2.1) will also be documented in the TM and presented in figures depicting the system.

## **STAGE 2 – DELIVERABLES**

- Draft South Trunk Sewer Service Alternatives Analysis TM
- Final South Trunk Sewer Service Alternatives Analysis TM

## **PROJECT MANAGEMENT**

We have assumed that Stantec coordination and review with City staff will primarily be performed via phone and email. This scope provides for three (3) phone or web-based meetings with City staff. The meetings will be for the purpose of obtaining initial project input, followed by input and comments from City staff on the draft submittals.

Stantec will proactively manage its team, review work progress, schedule work assignments, and maintain budget through the duration of the project. The project management and QA/QC includes:

- Establishing necessary agreements with the City
- Maintaining open communications with the City staff
- Development of a project implementation plan (PIP), also referred to a project management plan (PMP)
- Implementation of quality control procedures throughout the duration of the project, including development of a quality management plan (QMP)
- Monitoring and controlling the progress of the work to assure compliance with schedule and budget
- Producing monthly project invoices, progress reports, and budget summaries for submittal to the City

**Reference:** Collection System Hydraulic Model Conversion and South Trunk Sewer Service Alternatives Analysis

- Obtaining prior approval from the City, including authorization, for changes in scope

This scope and fee do not include contingency to incorporate additional project parameters or refinement than identified herein, but follow-up work or refinement may be desired and can be added at City direction with approval of a change order(s) to this scope of services and associated budget authorization.

#### **PROJECT MANAGEMENT DELIVERABLES**

- Project Implementation Plan/ Project Management Plan
- Quality Management Plan (QMP)
- Invoices, Progress Reports, and Budget Summaries
- Meeting Minutes

#### **OPTIONAL TASK 4: MODEL O&M AND TRAINING WORKSHOP**

- Prepare O&M Manual for PCSWMM Model
- Stantec to provide one day model training workshop to City staff on model development, ongoing use and maintenance, and available analysis tools and procedures

#### **PROJECT ASSUMPTIONS AND UNDERSTANDING**

- Data from the most recent Sewer Assessment District formation effort, conducted by Stantec, will be utilized in revising and updating the hydraulic model.
- The model will be reconstructed to include pipes that are included in the City's current model. New areas of the collection system will also be added as part of this effort.
- Only the existing and buildout model scenarios will be developed, no interim scenarios will be developed or assessed as part of this effort, interim scenarios can be added at City direction, with approval of a change order(s) to this scope of services and associated budget authorization.
- Although planning data will be updated for the entire General Plan area, the alternatives assessment will only consider alternative improvements for the South Trunk as defined in the WCSMP.
- The South Trunk service area (area considered in the sewer service alternatives analysis) is generally bounded by West Ave to the west, Yosemite Pkwy to the north, and the City's SUDP boundary to the south and east.
- The assessment of potential improvements to the existing system will be limited to trunk sewer lines, defined as those 10-inches and larger.

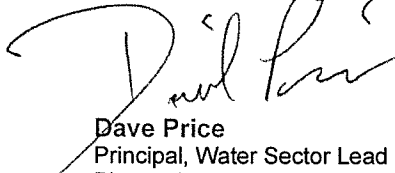
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**Reference:** Collection System Hydraulic Model Conversion and South Trunk Sewer Service Alternatives Analysis

- Assessment of treatment capacity at the City's WWTF is excluded from this scope of services. It is assumed that treatment will be provided through connection fees and that capacity exists or will be provided over time as sewer connections are made.
- No specific environmental field surveys or mapping efforts are included, though these can be added if an apparent constraint appears critical for resolving the viability of an alternative.
- It is assumed the City can spot check critical survey information and provide record or as-built drawings as requested for use in this project. No survey allowance has been provided in this scope and fee.
- This preliminary cost estimate used in the Alternatives Analysis is considered as AACE Class 5, suitable for concept screening.

Regards,

Stantec Consulting Services Inc.



Dave Price  
Principal, Water Sector Lead  
Phone: (360) 560-1069

Attachment: Exhibit A – Cost Proposal



# Engineering Services Cost Proposal for the Collection System Hydraulic Model Conversion and South Trunk Sewer Service Alternatives Analysis

	Principal	Project Manager	Engineer	Graphics Specialists & Administrative Assistant	TOTAL HOURS	TOTAL STANTEC LABOR	Direct Costs / Materials / Subs	TOTAL
	\$234	\$219	\$159	\$143				
<b>Stage 1 - Hydraulic Model Conversion and Update</b>								
1.1 Model Reconstruction	2	8	20		30	\$5,400		\$5,400
1.2a Flow Monitoring Coordination		2	4	4	10	\$1,646		\$1,646
1.2b Model Recalibration	2	8	40		50	\$8,580		\$8,580
1.3 Model Update	2	8	20		30	\$5,400		\$5,400
1.4 Model Scenarios and Results Evaluation	2	8	40	16	66	\$10,868		\$10,868
1.5 Model Update and Scenario Results TM	4	8	40	16	68	\$11,336		\$11,336
<b>Stage 2 - South Trunk Sewer Service Analysis</b>								
2.1 South Trunk - Capacity, Demand, and Alignment Assessment		8	20		28	\$4,932		\$4,932
2.2 Gerard Trunk - Existing Capacity Assessment		8	30	4	42	\$7,094		\$7,094
2.3 Identify Existing System Capacity Improvement Alternatives	2	8	40	8	58	\$9,724		\$9,724
2.4 Alternatives Analysis and TM	2	4	40	16	62	\$9,992		\$9,992
<b>Project Management and Meetings</b>								
a Coordination and Meetings (2 assumed) with City Staff	4	16	16	4	40	\$7,556		\$7,556
b Project Management and QA/QC	8	16	8	8	40	\$7,792		\$7,792
	28	102	318	76	524	\$90,320	\$0	\$90,320
<b>Optional Tasks</b>								
a Hydraulic Model Training Workshop with City Staff	4	16	28	8	56	\$10,036		\$10,036
	4	16	28	8	56	\$10,036	\$0	\$10,036

Notes:

- 1 Work efforts are based on the description of tasks provided in the proposal.
- 2 Work efforts do not include contingency, new authorization will be required for new or changed scope conditions.



EXHIBIT B