

## Scope of Services

AECOM has developed the scope of work to complete this project for the following pipe alignments per the Request for Proposal (RFP) requirements:

- Design for the water and sewer pipes for the South Shoreline Blvd/VTA Yard (North Shoreline) Alignment.
- Design for the water pipe for the Macon Avenue/Microsoft Property (Macon) Alignment.

The basis and assumptions for the scope are included at the end of this section. The scope of work (phases) has been developed in the order in which to execute the project. The project will be managed and designed from our San Jose office. The special investigation work will be conducted by the sub-consultants. Based on the preliminary schedule, it is estimated that a 10-month period is needed to complete the project.

## Task 1 – Project Management

Project management tasks will include project administration; attending formal and informal meetings with the City's Project Manager, other agencies, and private parties; presentations to key project stakeholders, allocating appropriate resources to tasks; updating the team and stakeholders; and verifying steps to be taken for quality deliverables.

### Task 1.1 – Project Administration

Project administration, document control, schedule and budget are the critical elements of project management. As part of our project management/ administration services, AECOM will prepare a Project Work Plan (PWP) that will serve as the basis for the internal management of the project. Budget, schedule and quality will be monitored continuously to ensure required project progress from start to completion of the project. To control project documentation, AECOM will implement a central project filing system (electronic and hard copy). AECOM will provide monthly progress reports along with the invoices showing the project completion and budget.

### Task 1.2 – Coordination Meetings

AECOM will start the project with a kick-off meeting that includes the design team leads, and appropriate City staff. Study requirements, project intent, challenges, constraints, opportunities, budget, schedule, tasks and delivery dates will be discussed. In addition, public outreach and project awareness strategies will also be discussed. Although not anticipated for this project, AECOM can support the City's public outreach plan by providing graphics and figures and attending community workshops. Subsequent meetings, including approximate dates and locations and invitation methods will be identified. The output from this meeting will be incorporated into the overall PWP. Meetings with Caltrans, VTA, and other stakeholders will be scheduled as early as possible to open communication with these agencies to expedite the approval process.

In order to meet the accelerated project schedule, we propose biweekly calls for the duration of the project; one monthly meeting to review the Project status; and six additional meetings (two each) with Caltrans, VTA and other private parties. During those meetings, we will present our findings to the City at key stages of the project and identify necessary requirements from permitting agencies and major stakeholders. These meetings will be used to communicate programmatic issues and identify necessary action items to resolve these issues and help ensure project completion within the specified project schedule.

### **Task 1.3 – Project Schedule**

The key to successful schedule control is advance planning, early establishment and communication of agreed-upon milestones and deadlines for each task, taking into consideration report review cycles required by the City. The detailed project schedule will be developed upon notice to proceed. Schedule updates will be provided monthly, or more frequently if necessary. A preliminary schedule is located behind the Fee Schedule in Part II of this proposal.

#### **Task 1 Deliverables**

- 1.1 - Monthly invoicing and progress reports
- 1.2 - Project meeting agendas and meeting minutes
- 1.3 - Monthly schedule updates

## **Task 2 – Preliminary Investigation (PHASE 1)**

AECOM understands that the preliminary investigation, site screening, alignment alternatives selection has been completed for the sewer and water pipes for the Shoreline Alignment crossing under US 101, and constructability study - 35% design has already been prepared. Therefore, the screening level investigations or data collection for this alignment will not be required. The work under Task 2 will complete the site screening and data collection for the Macon Alignment, primarily.

### **Task 2.1 – Data Collection/Mapping**

AECOM will research, collect, and review necessary data/reference material for the project. This will include manhole surveys; closed-circuit television (CCTV) logs and videos; soil and groundwater data from previous sampling; Health and Safety Plans (HASPs) from previous investigations; tree inventory and arborist reports; previous design plans; as-built improvement plans; available right-of-way documents; City Standard Provisions, Standard Details, and Design Criteria; and codes, ordinances, and policies pertaining to the proposed project design.

We have gathered substantial information/materials previously in the feasibility study for the Shoreline Alignment, and performed environmental screening for a portion of the work; therefore minimal data collection efforts will be anticipated for the Macon Alignment area.

### **Task 2.2 – Project Site Visits**

A field reconnaissance will be performed to confirm existing utilities, other conflicts, and all surface-evident existing utilities and appurtenances.

Underground Service Alert (USA) will be notified in advance of the field reconnaissance and all existing utility markings/paint via USA will also be documented and photographed.

### **Task 2.3: Preliminary Site Investigations/ Screening**

As noted above, the site screening work will be completed for the Macon Alignment. The preliminary investigations for the Shoreline Alignment (Phase I of the project) are/will be available to provide the screening information for input into the design.

The following investigations will be completed in this task:

#### **Task 2.3.1 – Geotechnical Assessment/Screening**

The proposed water and sewer lines replacement will most likely pass through alluvial soils consisting primarily of lean to highly plastic clay with lenses and layers of interbedded sand. Groundwater is expected to be relatively shallow, having been measured at a depth of 8 feet in our borings advanced for the US 101 Express Lanes project in 2009. Prior to any drilling, geotechnical screening services will be

provided, and existing available information as well as mapping will be reviewed. Our geotechnical engineer will review available data along the utility alignment, including previous exploratory data (borings and laboratory test results), and as-built information for the US 101 Shoreline/Boulevard interchange, US 101 Auxiliary Lanes project, and the geotechnical references provided by the City. Input gathered from this preliminary desktop investigation will help inform the benefits and limitations of the proposed utility alignments and identify the need for any further geotechnical field investigation required prior to final design, in a short technical memorandum.

### **Task 2.3.2 – Environmental Assessment/Screening**

This phase of the work will be limited to the desktop review of existing materials covering the project site. We will utilize the site investigation mapping (hazardous waste, groundwater testing, etc.), cultural resource mapping, and other required information already available in-house. In our review, we will include recent work performed under the Northbound Ramp Realignment Project. We will prepare a short memo outlining the potential environmental constraints that the project may encounter. This work will assist the team and the City in identifying potential impacts and if necessary define alignments or design requirements to avoid or minimize project impacts.

### **Task 2.3.3 – Hazardous Materials Screening**

Hazardous materials screening will be used to determine, if any hazardous materials are present within the project site. We prepared a hazardous materials report for the U.S. 101 Auxiliary Lane Project. Screening services will utilize this report, as well as other available information to determine issues with soils contamination and recommend soil management, soil handling and worker safety requirements.

**Building Demolition:** Hazardous materials assessment including asbestos and lead sampling will be conducted for the two potential buildings to demolish within VTA Yard which may be in conflict with the proposed alignment.

### **Task 2.4: Utility Agency Coordination**

It is anticipated that several utilities will be encountered along the proposed alignment. This will include electrical, gas, communication, cable, fiber optics, water and sewer mains and laterals. Therefore, our utility coordinator will coordinate with PG&E, AT&T, Comcast, and City Public Services Division and other utility owners to identify the utilities within the project area. Additionally, USA will be called to mark utilities by the owners.

Notice of Intent (NOI) letters that include a graphical figure illustrating all existing utilities will be prepared on behalf of the City and mailed out to the utility purveyors which are not in the project files. After receipt and compilation of all available information provided by the City and other utility owners, we will prepare the complete base mapping. Existing utility base maps will then be sent out to known utility purveyors for review, comment and confirmation on information shown. The existing utility base mapping will be updated as needed per comments received from the utility purveyors. Final conformed utility mapping will be sent to utility owners “for information only”, and will be deemed suitable for incorporation into the construction documents.

### **Task 2 Deliverables**

- 2.3.1 - Geotechnical assessment tech memo
- 2.3.2 - Environmental site assessment tech memo
- 2.3.3 - Hazardous materials investigation tech memo

## **Task 3 – Schematic Design (PHASE 2)**

A schematics design, alternative alignment evaluations for the Shoreline Alignment has already been completed. Therefore, further studies on alternative alignment development for Shoreline Alignment will

not be completed. The work under this task will be completed for Macon Alignment evaluation. The work will integrate the existing designed and evaluated components into the project schematic design.

### **Task 3.1: Pipe Alignment and Construction Methods Evaluation**

The objective of this task is to identify the extent of all the proposed utility system horizontal and vertical alignments and planned point of connections. Using the alternatives developed in the Feasibility Study (35% design completed earlier), and information gathered from Task 2, the current Shoreline Alignment will be thoroughly evaluated to determine the constraints and opportunities. For Macon alignment, a maximum of two alternatives will be studied.

Required separations between utility systems/pipes will be reflected in single and/or joint utility trenches placed within the roadway cross-sections per City and other applicable standards, such as Caltrans and California Department of Public Health. Right-of-Way or easement requirements will be identified for the alternative. The following scope of work to be completed in this task.

#### **Task 3.1.1: Pipes Alignment and Impacts Evaluation.**

The evaluation of the proposed alignments will take into consideration the construction installation means and methods, such as direct buried, jack-and-bore, etc., and project impacts on the existing conditions.

We will provide recommendation for pipe sizes and materials. The pipe material selection will consider the potential soil and groundwater contaminants around the site.

We will review and evaluate the sewer and water alignments, lateral connections, and easement needs in the project area (for both alignments) including N. 1001 Shoreline Boulevard, VTA North Yard, and Microsoft Silicon Valley Campus during construction.

#### **Task 3.1.2: Evaluate Removal of Existing Pipes.**

We will evaluate and recommend handling (i.e. removal and/or abandonment) of the existing water and sanitary sewer mains to be replaced.

#### **Task 3.1.3: Coordinate Pipeline Alignment and Easement Requirements.**

In this task we will:

- Coordinate pipeline alignments and easement needs with private development projects in the project area including the Calvena and Microsoft developments.
- Coordinate pipeline alignments and easement needs with VTA North Yard.

#### **Task 3.1.4: Prepare Technical Memorandum**

We will prepare a draft technical memorandum summarizing the key findings of the preliminary engineering study, including identification of critical constraints and opportunities, environmental requirements, constructability, cost and schedule, and recommendations on the alignment for both sewer and water pipes. The findings of the Shoreline Alignment feasibility study will be referred in the technical memorandum. The technical memo will then be presented to the City staff.

A meeting with the City will be scheduled to review the preliminary findings and recommendations, and finalize the Macon Alignment. A final technical memorandum will be submitted for City's review and approval of the findings and recommendations.

### **Task 3.2 – Caltrans Encroachment Permit and City Permits**

Based on the alignment alternative (s) selection, we will assist the City to apply for Caltrans Encroachment Permit, and other permits required to access and conduct further soil and groundwater

investigations for the project. A separate Caltrans encroachment permit application will be submitted for construction.

### **Task 3.3 - Utility and Supplemental Field Survey**

With support from sub-consultants, we will perform and prepare a topographic survey of the project areas to augment the mapping prepared for the U.S. 101 Northbound Ramp Realignment Project. The survey shall locate existing features, locate utilities, curbs, gutters, sidewalks, pavement, fences, drainage structures, trees, monuments, and other features required to design the project. Potholing of utilities will be completed in this task such that the more accurate information on utilities can be incorporated into the topographic survey. A total of 15 potholes are assumed for this proposal.

### **Task 3.4: Soil and Groundwater Investigations**

Soil and groundwater testing is required for geotechnical assessment, soil and groundwater contamination and disposal, as well as for corrosion testing and cathodic protection design. Therefore, the samples for all these investigations will be collected at once (by geotechnical drilling) to effectively manage schedule and budget.

#### **Task 3.4.1 Soil Boring and Sample Collecting for Geotechnical Investigation**

We propose a total of 10 borings for the project alignment. Four (4) borings approximately 40 feet deep close to the jacking pits, and additional six (6) borings shallow (15 feet) deep are proposed. Drilling and sampling will be performed in accordance with ASTM D 1586 "Standard Test Method for Penetration Test and Split-Barrel.

**Lab Testing:** Samples obtained in the field from our exploratory borings will be brought to our laboratory for further classification and testing. Physical tests will be made on selected samples to help identify the material classifications and consistencies and might include:

- Grain size analysis (ASTM D 422)
- Plasticity index (Atterbergs Limits) determinations (ASTM D 4318)
- Moisture content
- Dry density
- Unconfined compression strengths (ASTM D 2166)

**Engineering Analysis:** Boring logs will be prepared, using the field logs, laboratory test results, and visual classification of samples. The seismic setting and geologic hazards along the alignment will also be discussed. Based on the results of the field exploration and laboratory tests, as well as engineering analysis, judgment and experience, we will provide geotechnical opinions and recommendations as in the geotechnical technical memorandum.

#### **Task 3.4.2: Soil and Ground Water Disposal Plan Development.**

Up to 14 soil samples and eight groundwater samples will be submitted to a California State-certified laboratory for the following analyses:

- o Field screening of the soil will be conducted using a photo-ionization detector (PID). Soil samples will be collected from areas of visible staining, odors, or elevated PID readings.
- o Volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8260B
- o California Assessment Manual (CAM)-17 Metals by EPA Method 6010

If individual metals are reported above the total threshold limit concentrations, select samples will be re-analyzed for soluble metals using the Waste Extraction Test to assess suitability for landfill disposal. A maximum of eight samples will be analyzed by this method.

Based on the lab results, we will prepare an environmental investigation report including geotechnical soil disposal plan along the project construction site with analytical results for the landfill disposal. Preparation of a Health and Safety Plans (HASP) may be required by the EPA due to known presence of TCE and proximity to MEW Superfund area. The fee to develop HASP is not included at this time.

### **Task 3.4.3: Soil Testing for Resistivity and Corrosion.**

V&A Engineering will perform the soil testing for corrosion and cathodic protection design of pipe casings and other appurtenant components. The scope will include:

- Data review, which will include a review of alignment, geotechnical information, and preliminary plans and specifications for pipeline design.
- In-situ soil resistivity testing to measure soil resistivity using the Wenner four-electrode method along the proposed alignments. The resistivity testing will be conducted at 800- to 1,000-foot intervals to a depth of 20 feet below grade or the proposed pipeline depth, whichever is shallower.
- Soil analysis and testing of up to seven soil samples for as-received and saturated resistivities; pH; and concentrations of chlorides, sulfates, and bicarbonates.
- Soil corrosivity report. The degree of corrosivity of the soil with respect to ductile iron and steel pipe and forged fittings/valves. Recommendations will be made for corrosion control of the proposed material options. A draft electronic copy of the report will be submitted for review. Comments will be incorporated and a final electronic copy will be provided.

### **Task 3.4.4.: Evaluate SWPPP Requirement**

We will evaluate the need for Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP) in accordance with the latest provisions in the National Pollution Discharge Elimination System (NPDES) Construction General Permit, as required by the State Water Resources Control Board (SWRCB). A SWPPP is required for disturbed areas greater than one (1) acre during construction and a Waste Discharge Identification (WID) number will be obtained from the SWRCB. For the sites less than one-acre disturbance, a WPCP is needed. Based on the preliminary estimates, it appears that the project will not disturb more than one acre of the soil. Therefore, our fee estimate accounts only for the WPCP preparation for the site.

### **Task 3.4.5: Dewatering Needs Assessment**

The proposed alignments are in the close proximity of existing Superfund sites with active groundwater extraction wells. Groundwater is shallow in the area. Therefore, the need for the groundwater dewatering system, impact of dewatering on existing contamination, and extraction wells will be evaluated. The cost to perform any detailed hydrogeological studies is not included.

### **Task 3.5: Environmental Investigations**

AECOM previously prepared environmental studies for the US 101/Shoreline Boulevard project. We propose to use the information from those studies and update it for the study area affected by this project. Based on the project's location and scope, we will conduct the following evaluations.

- Cultural Resources: Portions of the project area were previously surveyed for cultural sensitivity. We will review the record searches for areas not already covered by existing studies. Assembly Bill 52 consultation is not required for projects exempt from CEQA, and therefore our scope of work assumes that tribal consultation is not needed, and is not proposed.
- Site Survey. We will perform a one day site visit to evaluate the existing trees in the project area and identify if the project would remove any "protected trees" (as defined by the City which includes heritage trees within the City right-of-way) during environmental compliance phase
- Nesting Bird Survey: If construction will take place during the nesting migratory bird season, we will perform surveys in accordance with the Migratory Bird Treaty Act during the pre-construction stage



(Task 6). We assume that surveys will take place up to five days prior to construction. Only one survey during the nesting season is included in this scope of work.

### **Task 3.6: Prepare and Process CEQA Exemption**

AECOM will prepare a CEQA Exemption for the project applying CEQA Guidelines Section 15061, also known as the General Rule Exemption. Section 15061 (b) (3) states that a project is exempt from CEQA if:

“The activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.”

Based on the project’s location and that the activity is limited to utility installation, we believe the project meets this criteria and assume that the City, as lead CEQA agency, would sign the completed Categorical Exemption (CE). Because the project specific actions were not specifically anticipated in the existing North Bayshore Precise Plan or the City’s General Plan, we do not propose to tier of the two documents. As such, a Categorical Exemption is recommended for CEQA approval of the project. Although unanticipated, if the project is identified during the course of our work to have the potential for a significant environmental impact that cannot be avoided or requires mitigation, an Initial Study/ Mitigated Negative Declaration can be prepared. This would require an amended scope of work and budget.

The following subtasks will be performed as part of the CEQA documentation:

#### **Task 3.6.1. Draft Exemption and Notice of Exemption (NOE).**

We will prepare a memo documenting that the reasons the project is exempt from CEQA and attach the required forms or supporting information. All technical analysis will be qualitative. We will use existing data from the North Bayshore Precise Plan. The analysis will contain the following information:

- Project Description: This section will describe the project location, surrounding project area and proposed project uses, as well as a description of the project area’s environmental setting.
- Exempt Status and Reason Why the Project is Exempt: This section will explain the exemption class chosen and how the project meets the exemption class conditions. Through implementation of applicable federal, state and local regulatory standards we anticipate that all potential project impacts can be defined as a less than significant level.

We will address one round of consolidated comments and edits on the Draft CE and attachments from the City of Mountain View public works and planning staff. Staff time for addressing any additional rounds of comments will be billed on an hourly basis.

#### **Task 3.6.2: Final CE Analysis and NOE.**

Upon receiving comments on the Draft CE, we will address comments and resolve any outstanding issues. We will then prepare the NOE for filing. The NOE is a public notice; the CEQA Exemption Analysis is for the decision-maker’s administrative record and does not need to be made public. We can serve as point of contact for further questions or lead agency needs, as needed. We assume the City of Mountain View will submit the NOE to the Santa Clara County Clerk and pay all necessary fees.

### **Task 3.7: Prepare and Process EPA Documents**

If needed, we will prepare and process EPA documents related to contaminated soil and groundwater discharge. At this time, the complete scope of work on the EPA documentation needs is not known. Therefore, the fee and the assumptions are provided in the Additional Services.

### **Task 3.8: Develop 35% Design**

The 35% design for the Shoreline Alignment was completed in 2014. AECOM will use the same design, and will integrate the Macon Alignment design in one package for 35% submittal to the City.

#### **Task 3.8.1: 35% Design (PS&E)**

We will prepare: a) design plans, b) specifications outline, and critical specifications sections, and c) preliminary cost estimate.

**Design Calculations:** We will prepare the design calculations to support the 35% Design including:

- Geotechnical design
- Structural design
- Hydraulics design of pipes

Calculations will be submitted with the 35% submittal.

#### **Task 3.8.2: Attend 35% Design Review Meeting:**

AECOM will meet with the City staff to review 35% design.

#### **Task 3.8.3: Response to 35% Design Review Comments**

Upon review and resolution of comments, we will prepare a final response to comment for 35% design, and the plans will be updated accordingly for the next submittal.

#### **Task 3 Deliverables**

- 3.1.4 - Alignment evaluation – tech memo
- 3.3 - Topographic map
- 3.4.1 - Soil investigation report
- 3.4.2 - Soil and groundwater disposal report
- 3.4.3 - Soil resistivity report
- 3.5 - Environmental investigation reports
- 3.6.1 – Exemption Memo and Notice of Exemption
- 3.6.2 - CEQA/CE document
- 3.8 - 35% design and calculations

## **Task 4: Design Development - Construction Documents (PHASE 3)**

Upon resolving comments on schematic (35%) design, we will prepare the construction documents in accordance with the RFP requirements as follows.

### **Task 4.1: Develop 65% Design**

We will prepare and submit 65% construction documents, including drawings, technical specifications, engineer's estimate, calculations, and other necessary documents.

#### **Task 4.1.1: 65% Design (PS&E):**

We will prepare the 65% PS&E package to standard City Construction Notes, project specific notes, applicable City Standard Details. The 65% submittal will include:

- 65% plans, specifications, and cost estimate
- Construction phasing plans
- Traffic control plans



Design Calculations: We will update the design calculations to support the design as needed. Calculations will be submitted with the 65% submittal.

**Task 4.1.2: Legal and Plat Map Development.**

Legal descriptions and plat maps for temporary and permanent easements will be developed for the proposed water and sewer main relocations. A draft package will be submitted to the City for review and comment. For budgeting purposes it is assumed that up to six (6) plat maps and legal descriptions will be developed.

**Task 4.1.3: Attend 65% Design Review Meeting.**

AECOM will meet with the City staff to review the 65% design and resolve any comments on the submittal.

**Task 4.1.4: Response to 65% Design Comments.**

Upon review and resolution of comments, AECOM will prepare a response to comment for 65% design, and the plans will be updated in the 95% design submittal.

**Task 4.2: Develop 95% Design**

The 95% design will include the following tasks:

**Task 4.2.1: 95% Design (PS&E).**

After responding to 65% design review comments, we will prepare and submit the 95% construction documents. This submittal will include responses to reviewer comments. The same review and revision process described above for the 65% submittal shall repeat for the 95% submittal.

Based on comments, design calculations, if required will be updated, and re-submitted with the 95% PS&E.

**Task 4.2.2: Final Legal and Plat Map Development.**

Legal descriptions and plat maps for temporary and permanent easements will be finalized based on the draft package developed for the proposed water and sewer main relocations.

**Task 4.2.3: Attend 95% Design Review Meeting.**

We will meet with the City staff to review the 95% design and review comments.

**Task 4.2.4: Response to 95% Design Comments.**

Upon review and resolution of comments, AECOM will prepare a response to comment for 95% Design and the plans will be updated in the 100% design submittal.

**Task 4.3: Develop 100% Draft Construction Documents**

**4.3.1: 100% Draft PS&E.**

AECOM will prepare and submit "Draft" 100% construction documents based on the City's 95% design review comments. This submittal will include responses to reviewer comments.

**4.3.2: 100% Design Review Meeting.**

We will meet with the City staff to review comments on the "Draft" 100% submittal. We will revise plans, specifications, cost estimate, and calculations, as necessary, to reflect City comments and directions.

**Task 4.3.3: Response to 100% Design Comments.**

Upon review and resolution of comments, we will prepare a response to comment for 95% design and the plans will be updated in the final submittal.

#### **Task 4.4: Prepare and Submit Caltrans Encroachment Permit Application.**

We will assist the City in preparing the necessary documents to apply for an encroachment for the installation of the water and sewer mains across U.S. 101. We will submit the 100% PS&E along with the encroachment permit application to Caltrans. Our permit experts will start communication with Caltrans in advance such that permit application can be filed and permits can be issued in an expedited manner.

#### **Task 4.5: Develop Final Design**

Any comments from the draft 100% submittal and Caltrans Encroachment Permit review will be incorporated into the Final 100% PS&E.

#### **Task 4 Deliverables\***

- 4.1 - 65% Design Submittal
- 4.1.2 – Legal Description and Plat Maps
- 4.2 – 95% Design
- 4.3 – 100% Draft Design
- 4.4 – 100% Final Design

\*The number of sets for the design documents will be as defined in RFP

### **Task 5: Bidding (PHASE 4)**

After completion of design, we will assist in bidding and advertisement of the project. This includes the following:

#### **Task 5.1: Attend Pre-Bid Conference.**

We will attend a pre-bid conference with the City.

#### **Task 5.2: Respond to Bidders Questions**

We will assist the City, as required, in responding to bidders' inquiries and requests for clarifications in writing.

#### **Task 5.3: Prepare and Issue Addenda**

Any addendum for the bid documents will be prepared as needed.

#### **Task 5 Deliverables**

- 5.1 - Minutes of pre-bid conference
- 5.2 - Response to bidders' Questions
- 5.3 - Addenda to bid documents

### **Task 6: Construction Support (PHASE 5)**

We will provide the following construction support services. The following tasks are anticipated during construction:

- Attend a preconstruction conference
- Provide construction staking for the project
- Review and approve shop drawings and submittals

- Respond to RFIs, as necessary
- Assist the City to resolve issues during construction, as necessary
- Review post-construction CCTV logs and DVDs or videos to determine acceptability of the rehabilitated sanitary sewer.
- Assist the City in evaluating any necessary contract change orders and construction claims

## **Task 7 - Post-construction (PHASE 6)**

AECOM will provide the following post-construction support services.

- Prepare record drawings. After construction, the City will transmit to the Consultant the contractor's redlined record drawings
- Submit one (1) signed, stamped set of record drawings on Mylar incorporating the changes during construction
- Submit AutoCAD and PDF files of the record drawings to the City

**DRAWING SHEET ESTIMATE FOR PROJECT**

For the Project we have estimated the following sheets to complete the design.

Design Sheet Estimate		
Sheet Title	No. of Sheets	Scale
Title Sheet	1	NTS
General Notes	1	NTS
Typical Sections	2	As shown
Survey & Utility Map	8	1" + 40'
Demolition Plan - Water	4	1" + 40'
Demolition Plan - Sanitary Sewer	3	1" + 40'
Buildings Demolition Plan	2	1" + 40'
Plan and Profile - Water (Including laterals)	16	1" = 20"
Plan and Profile - Sanitary Sewer (Including laterals)	14	1" = 20"
Details	5	As shown
Traffic Control/Stage Construction Plan	7	1" + 40'
<b>Total</b>	<b>63</b>	

## ADDITIONAL SERVICES

### Health and Safety Plan (HASP) for Contaminated Soil and Groundwater Management

A HASP will be required to handle contaminated soil and groundwater and disposal purposes. At this time, it is unknown if the project will encounter contaminated soil and groundwater. However, if encountered, AECOM can prepare the HASP for managing contaminated soil and groundwater that can also be submitted to the EPA if required.

### Preparing and Processing EPA Document

AECOM can prepare and process EPA documents if contaminated soil and groundwater encountered at the site and need permits from local sanitary district or the regional water quality control board (RWQCB). Additionally, we can coordinate with the local sanitary agency or the RWQCB on obtaining the permits to discharge the contaminated groundwater to sanitary sewer or storm drain. The design of any remediation system for the contaminated groundwater or soil treatment is not included in the fee.

## ASSUMPTIONS

We have made the following assumptions to develop the scope and fee for this project.

- The design period is 10 months instead of six months specified by the City in the RFP.
- *Alternative alignment evaluation, schematic design, and 35% design for the Shoreline Boulevard/VTA Yard alignment has been completed earlier in 2014. Therefore, any further refinement or alignment evaluation will not be performed. The existing 35% design will be integrated into the Macon Avenue/Microsoft property alignment design.*
- Caltrans encroachment permit and city permits, and the permits from any private party to conduct investigations will take a maximum of three weeks.
- The project does not involve any creek, water, or sensitive biological habitat areas and AECOM assumes that no specific studies for these issues are necessary
- No additional pavement area is proposed, and therefore no water quality studies or permits are anticipated and no associated studies proposed
- It is assumed that no new utility easements would be necessary that would affect existing land uses
- Traffic and noise effects during construction would be temporary and transitory, and AECOM assumes these are short term, can be qualitatively described, and no site specific studies or assessments are proposed
- We assume that only one nesting bird survey will be necessary.
- The project does not appear to involve any creek, water, or sensitive biological habitat areas and AECOM assumes that no specific studies for these issues are necessary.
- No additional surveys will be necessary to assess potential cultural resources in the project area.
- No additional pavement area is proposed, and therefore no water quality studies or permits are anticipated and no associated studies proposed.
- It is assumed that no new utility easements would be necessary that would affect existing land uses.
- Air Quality, greenhouse gas emissions, traffic and noise effects during construction would be temporary and transitory, and AECOM assumes these are short term, can be qualitatively described, and no site specific studies or assessments are proposed.

## ITEMS NOT INCLUDED IN SCOPE

The following items are not included in the scope of work.

1. Design of shoring: We will not design shoring or jack and bore methodology. It will be contractor's responsibility to provide the plans for shoring and jack and bore method.
2. Preparation for SWPPP may not be required, and fee is not included.

3. Health and Safety Plan (HASP) preparation for working around TCE contaminated soil and groundwater.
4. Impact of dewatering from project construction on existing groundwater extraction wells is not anticipated. Therefore, fees for monitoring of any existing extraction wells or groundwater monitoring wells, contaminants movement monitoring or conducting detailed hydrogeology are not scoped in this proposal.
5. Prepare and process EPA documents.
6. Public outreach program.
7. Right-of-way appraisal, acquisitions and negotiations for temporary and permanent easements are not included.
8. Fees associates with permits or applications.
9. Boiler plate specifications will be provided by the City.
10. Design of contaminated soil and groundwater remediation and disposal system.
11. Initial Study/ Mitigated Negative Declaration.
12. Infiltration testing

### **STANDARDS FOR PROJECT DESIGN**

- Technical specifications will reference City standards for materials and construction methods, as specified in the Standard Provisions, as much as reasonably possible before considering non-City standard material and methods of installation. AECOM will provide detailed technical specifications for those items that are not covered by the Standard Provisions
- 2015 Caltrans Standard Specifications and Standard Details as Standard Specifications



TASK ITEM	Project Management			Civil Engineering										Total Hours by Task	Subtotal Fee by Task (AECOM Labor)	Sub-Consultant Cost/ODCs	Reimbursables	Total by task			
	Project Manager (Ramsey Hissen, PE)	Quality Control/Civil Lead (Daniel Ho, PE)	Project Controls (Rick Moreland)	Sr. Civil Engineer (Manjit Saini, PE, QSD)	Utility Design (Yevgeni Philipovitch, PE)	Traffic Control/Stage Construction (Eilee Abi-Jaoude)	Utility Coordination (Sang Kim, PE)	Survey/Mapping (Brian Coleson, PLS)	Environmental Lead (Jeff Zimmerman)	Senior Environmental Planner (Florentina Craciun)	Environmental Planner (Elliott Schwimmer)	Cultural Resources (Kathleen Kubal, RPA)	Hazmat/Soil/Groundwater Investigation (Vern Elarth)						Geotech/Env. Studies (Allen Moore, GE)	Specifications (Maria Sedghi)	CADD/Civil Support (Edgar Andeles)
<b>Task 1 - Project Management</b>																					
Task 1.1 - Project Administration	40	24	50	8														122	\$ 1,500	\$ 34,396	
Task 1.2 - Coordination Meetings	50	24		24	8		16		16	8				8				8		\$ 40,800	
Task 1.3 - Project Schedule	4	16																130		\$ 5,616	
<b>Sub-total Hours</b>	<b>94</b>	<b>64</b>	<b>50</b>	<b>32</b>	<b>8</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>16</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>260</b>				
<b>Sub-total Fee</b>	<b>\$ 35,720</b>	<b>\$ 16,384</b>	<b>\$ 10,000</b>	<b>\$ 6,208</b>	<b>\$ 1,640</b>	<b>\$ -</b>	<b>\$ 3,216</b>	<b>\$ -</b>	<b>\$ 3,520</b>	<b>\$ 1,056</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,568</b>	<b>\$ -</b>	<b>\$ -</b>		<b>\$ 79,312</b>	<b>\$ -</b>	<b>\$ 1,500</b>	<b>\$ 80,812</b>
<b>Task 2 - Preliminary Investigation [PHASE 1]</b>																					
2.1 - Data Collection/Mapping					12											30	42			\$ 6,090	
2.2 - Project Site Visits		4		8	8									4			24			\$ 5,000	
<b>2.3 Preliminary Site Investigations</b>																					
2.3.1 - Geotechnical Assessment/Screening				2										8						\$ 1,956	
2.3.2 - Environmental Assessment/Screening				2					8											\$ 2,148	
2.3.3 - Hazardous Materials Assessment				2									8						\$ 5,000	\$ 6,604	
2.4 - Utility Agencies Coordination					4		16									8	28			\$ 5,004	
<b>Sub-total Hours</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>14</b>	<b>24</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>12</b>	<b>0</b>	<b>38</b>	<b>104</b>				
<b>Sub-total Fee</b>	<b>\$ -</b>	<b>\$ 1,024</b>	<b>\$ -</b>	<b>\$ 2,716</b>	<b>\$ 4,920</b>	<b>\$ -</b>	<b>\$ 3,216</b>	<b>\$ -</b>	<b>\$ 1,760</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,216</b>	<b>\$ 2,352</b>	<b>\$ -</b>	<b>\$ 4,598</b>		<b>\$ 21,802</b>	<b>\$ 5,000</b>	<b>\$ -</b>	<b>\$ 26,802</b>
<b>Task 3 - Schematic Design [PHASE 2]</b>																					
<b>3.1 - Pipe Alignment and Construction Methods (Microsoft Property Only)</b>																					
3.1.1 - Pipes Alignment Evaluation and Impacts		4		8										6		16	34			\$ 5,688	
3.1.2 - Evaluate Existing Pipes Removal				8													8			\$ 1,552	
3.1.3 - Coordinate Pipeline Alignment and Easement Needs				2			16	16								24	58			\$ 9,084	
3.1.4 - Technical Memorandum of Preliminary Findings (Draft & Final)		4		16	8				2	8	8			8		16	70			\$ 11,576	
3.2 - Caltrans Encroachment and City Permits				16												8	24			\$ 4,072	
3.3 - Utilities and Topographic Survey, Potholing				12					120							16	148		\$ 40,000	\$ 500	\$ 64,084
<b>3.4 - Soil and Groundwater Investigations</b>																					
3.4.1 - Soil Borings, Sample Collection, Testing		4		4									24	130		16	178		\$ 30,000	\$ 1,000	\$ 63,864
3.4.2 - Soil Disposal Report and Groundwater Disposal Plan				8								60	8				76				\$ 12,240
3.4.3 - Soil Testing for Resistivity and Corrosion				4													4		\$ 15,000		\$ 15,776
3.4.4 - Evaluate Need for SWPPP or WPCP				8								8					16				\$ 2,768
3.4.5 - Dewatering Needs Assessment				8										16			24				\$ 4,688
<b>3.5 - Environmental Investigations</b>																					\$ -
3.5.1 - Nesting Migratory Birds and Raptors Investigation											16						16			\$ 500	\$ 2,116
3.5.2 - Cultural Resources Investigation												8					8			\$ 1,000	\$ 1,888
3.6 - Prepare and Process Environmental Documents				8					12	26	70						116				\$ 14,694
3.7 - Prepare and Process EPA Required Documents																	0				\$ -
<b>3.8 - Develop 35% Design</b>																					
3.8.1 - 35% Design		4		16	8								2	6		80	116			\$ 1,000	\$ 17,928
3.8.2 - Attend 35% Design Review Meeting	2	4															6			\$ 500	\$ 2,284
3.8.3 - Response to 35% Design Review Comments		4		16												8	28				\$ 5,096
<b>Sub-total Hours</b>	<b>2</b>	<b>24</b>	<b>0</b>	<b>134</b>	<b>16</b>	<b>0</b>	<b>16</b>	<b>136</b>	<b>14</b>	<b>34</b>	<b>94</b>	<b>8</b>	<b>94</b>	<b>174</b>	<b>0</b>	<b>184</b>	<b>930</b>				
<b>Sub-total Fee</b>	<b>\$ 760</b>	<b>\$ 6,144</b>	<b>\$ -</b>	<b>\$ 25,996</b>	<b>\$ 3,280</b>	<b>\$ -</b>	<b>\$ 3,216</b>	<b>\$ 21,896</b>	<b>\$ 3,080</b>	<b>\$ 4,488</b>	<b>\$ 9,494</b>	<b>\$ 888</b>	<b>\$ 14,288</b>	<b>\$ 34,104</b>	<b>\$ -</b>	<b>\$ 22,264</b>		<b>\$ 149,898</b>	<b>\$ 85,000</b>	<b>\$ 4,500</b>	<b>\$ 239,398</b>

TASK ITEM	Project Management			Civil Engineering															Subtotal Fee by Task (AECOM Labor)	Sub-Consultant Cost/ODCs	Reimbursables	Total by task
	Project Manager (Ramsey Hissen, PE)	Quality Control/Civil Lead (Daniel Ho, PE)	Project Controls (Rick Moreland)	Sr. Civil Engineer (Manjit Saini, PE, QSD)	Utility Design (Yevgeni Philipovitch, PE)	Traffic Control/Stage Construction (Eilee Abi-Jaoude)	Utility Coordination (Sang Kim, PE)	Survey/Mapping (Brian Coleson, PLS)	Environmental Lead (Jeff Zimmerman)	Senior Environmental Planner (Florentina Craciun)	Environmental Planner (Elliott Schwimmer)	Cultural Resources (Kathleen Kubal, RPA)	Hazmat/Soil/Groundwater Investigation (Vern Elarth)	Geotech/Env. Studies (Allen Moore, GE)	Specifications (Maria Sedghi)	CADD/Civil Support (Edgar Andeles)	Total Hours by Task					
<b>Task 4 - Detail Design Development - Construction</b>																						
<b>4.1 - Develop 65% Design</b>																						
4.1.1 - 65% Design (PS&E)		8		80	24	24								16	40	160	352		\$ 3,000	\$ 1,000	\$ 62,080	
4.1.2 - Legal Descriptions and Plat Maps				4				60								24	88				\$ 13,340	
4.1.3 - Attend 65% Design Review Meeting	2	2		4													8				\$ 2,048	
4.1.4 - Response to 65% Design Review Comments		4		16													20				\$ 4,128	
<b>4.2 - Develop 95% Design</b>																						
4.2.1 - 95% Design (PS&E)		8		60	16	8	16							8	40	140	296		\$ 2,500	\$ 1,500	\$ 52,044	
4.2.2 - Final Legal Descriptions and Plat Maps				4				24								16	44				\$ 6,576	
4.2.3 - Attend 95% Design Review Meeting	2	2		4													8				\$ 2,048	
4.2.4 - Response to 95% Design Review Comments		4		16													20				\$ 4,128	
<b>4.3 - Develop 100% Design [Draft]</b>																						
4.3.1 - 100% Design (PS&E)		8		24	16	8	4							8	40	128	236		\$ 2,500	\$ 1,500	\$ 41,196	
4.3.2 - Attend 100% Design Review Meeting	2	2		12													16				\$ 3,600	
4.1.3 - Response to 100% Design Review		4		12													16				\$ 3,352	
4.4 - Prepare and Submit Caltrans Encroachment		2		12													14				\$ 2,840	
4.5 - Complete 100% Final Design		4		12	8	8										16	60	108			\$ 17,116	
<b>Sub-total Hours</b>	<b>6</b>	<b>48</b>	<b>0</b>	<b>260</b>	<b>64</b>	<b>48</b>	<b>20</b>	<b>84</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>136</b>	<b>528</b>	<b>1,226</b>					
<b>Sub-total Fee</b>	<b>\$ 2,280</b>	<b>\$ 12,288</b>	<b>\$ -</b>	<b>\$ 50,440</b>	<b>\$ 13,120</b>	<b>\$ 11,232</b>	<b>\$ 4,020</b>	<b>\$ 13,524</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 6,272</b>	<b>\$ 25,432</b>	<b>\$ 63,888</b>		<b>\$ 202,496</b>	<b>\$ 8,000</b>	<b>\$ 4,000</b>	<b>\$ 214,496</b>	
<b>Task 5 - Bidding [PHASE 4]</b>																						
5.1 - Attend Pre-bid Conference	2	2		4													8			\$ 400	\$ 2,448	
5.2 - Respond to Bidders Questions		4		16	4												24				\$ 4,948	
5.3 - Prepare and Issue Addenda		2		4	8											8	22				\$ 3,896	
<b>Sub-total Hours</b>	<b>2</b>	<b>8</b>	<b>0</b>	<b>24</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>54</b>					
<b>Sub-total Fee</b>	<b>\$ 760</b>	<b>\$ 2,048</b>	<b>\$ -</b>	<b>\$ 4,656</b>	<b>\$ 2,460</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 968</b>		<b>\$ 10,892</b>	<b>\$ -</b>	<b>\$ 400</b>	<b>\$ 11,292</b>	
<b>Task 6 - Construction Support [PHASE 5]</b>																						
6.1 - Attend Pre-construction Conference	1	2		2													5			\$ 1,400	\$ 2,680	
6.2 - Provide Construction Staking		2		8				40									50				\$ 8,504	
6.3 - Review and Approve Shop Drawings		4		16	40												60				\$ 12,328	
6.4 - Respond to RFIs				16	24												40				\$ 8,024	
6.5 - Resolve Construction Issues	1	4		16	16												37				\$ 7,788	
6.6 - Review Post Construction Logs					24												24				\$ 4,920	
6.7 - Review Contract Change Orders		4		16	16												36				\$ 7,408	
<b>Sub-total Hours</b>	<b>2</b>	<b>16</b>	<b>0</b>	<b>74</b>	<b>120</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>252</b>					
<b>Sub-total Fee</b>	<b>\$ 760</b>	<b>\$ 4,096</b>	<b>\$ -</b>	<b>\$ 14,356</b>	<b>\$ 24,600</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 6,440</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>		<b>\$ 50,252</b>	<b>\$ -</b>	<b>\$ 1,400</b>	<b>\$ 51,652</b>	
<b>Task 7 - Post Construction [PHASE 7]</b>																						
7.1 - Prepare and Submit Record Drawings		2		4												40	46			\$ 400	\$ 6,528	
<b>Sub-total Hours</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>46</b>					
<b>Sub-total Fee</b>	<b>\$ -</b>	<b>\$ 512</b>	<b>\$ -</b>	<b>\$ 776</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 4,840</b>		<b>\$ 6,128</b>	<b>\$ -</b>	<b>\$ 400</b>	<b>\$ 6,528</b>	
<b>TOTAL HOURS</b>	<b>106</b>	<b>166</b>	<b>50</b>	<b>542</b>	<b>244</b>	<b>48</b>	<b>68</b>	<b>260</b>	<b>38</b>	<b>42</b>	<b>94</b>	<b>8</b>	<b>102</b>	<b>226</b>	<b>136</b>	<b>798</b>	<b>2,904</b>					
Billing Rate	\$ 380	\$ 256	\$ 200	\$ 194	\$ 205	\$ 234	\$ 201	\$ 161	\$ 220	\$ 132	\$ 101	\$ 111	\$ 152	\$ 196	\$ 187	\$ 121						
<b>Total Labor 2018</b>	<b>\$ 40,280</b>	<b>\$ 42,496</b>	<b>\$ 10,000</b>	<b>\$ 105,148</b>	<b>\$ 50,020</b>	<b>\$ 11,232</b>	<b>\$ 13,668</b>	<b>\$ 41,860</b>	<b>\$ 8,360</b>	<b>\$ 5,544</b>	<b>\$ 9,494</b>	<b>\$ 888</b>	<b>\$ 15,504</b>	<b>\$ 44,296</b>	<b>\$ 25,432</b>	<b>\$ 96,558</b>		<b>\$ 520,780</b>	<b>\$ 98,000</b>	<b>\$ 12,200</b>	<b>\$ 630,980</b>	