City of SACRAMENTO

City Council Report

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File ID: 2018-01108 | Published for 10-Day Review 08/16/2018 | **Review Item 01**

Title: (Agreements/Contracts for Review) Supplemental Agreements: Accelerated Water Meter Program Project Management Services and Construction Management and Inspection Services

Location: Citywide

Recommendation: Accept and publish for review a Motion authorizing the City Manager or the City Manager's designee to execute: 1) Supplemental Agreement No. 6 to City Agreement No. 2015-1926 with Carollo Engineers, Inc. for the Accelerated Water Meter Program (AWMP) Project Management Services, for an amount not-to-exceed $6,970,257, bringing the agreement's total not-to-exceed amount to $18,634,653, and 2) Supplemental Agreement No. 7 to City Agreement No. 2016-1429 with PSOMAS for Construction Management and Inspection Services for the AWMP (Fiscal Years 2019-21), in an amount not-to-exceed $10,919,496, bringing the agreement's total not-to-exceed amount to $16,906,371; and continue to August 28, 2018 for approval.

Contact: Marc Lee, Project Manager (916) 808-7481; Michelle Carrey, Supervising Engineer (916) 808-1438; Dan Sherry, Engineering & Water Resources Division Manager, (916) 808-1419; Department of Utilities

Presenter: None

Attachments:
1-Description/Analysis
2-Supplemental Agreement No. 6 (Carollo)
3-Supplemental Agreement No. 7 (PSOMAS)

Description/Analysis

Issue Detail: Staff recommends City Council approve Supplemental Agreement No. 6 to City Agreement No. 2015-1926 with Carollo Engineers, Inc. (Carollo) for continued program management and design services during Fiscal Years (FY) 2019-21 and approve Supplemental Agreement No 7 to City Agreement No. 2016-1429 with PSOMAS for continued construction management and inspection services during FY2019-21, for the AWMP.

Policy Considerations: The AWMP, which provides updated infrastructure for a safe and reliable drinking water supply, is consistent with City Council focus on areas of water conservation, economic development, livability, and sustainability. The proposed supplemental agreements exceed the City Manager's approval authority and require Council approval per City Code 3.64.040.

Economic Impacts: None.

Environmental Considerations: The proposed supplemental agreements, for ongoing project management services for the AWMP, are a continuation of the AWMP. The AWMP project components have been reviewed pursuant to the California Environmental Quality Act (CEQA) and Notices of Determination have been filed. On May 4, 2017, the City Council approved the environmental review for the AWMP projects as a subsequent project under the Master Environmental Impact Report for the 2035 General Plan, pursuant to CEQA. On April 24, 2018, The City Council adopted a mitigated negative declaration for the Richmond Grove and South Land Park Phase 6 WMR and adopted a mitigation reporting plan. None of the circumstances identified in CEQA Guidelines section 15162 (substantial changes in the project or circumstances, receipt of new information of substantial importance, or mitigation measures that would not be implemented) are present. No additional environmental review is required.

Sustainability: The project is consistent with the 2035 General Plan by providing a safe and reliable water supply for the Sacramento region.

Commission/Committee Action: Not applicable.

Rationale for Recommendation: On October 27, 2015, Council approved Agreement No. 2015-1926 with Carollo to provide program development services identified as Phase 1 of the AWMP program management. After successful completion of Phase 1, Council approved supplemental agreements with Carollo for Phase 2 of the AWMP which includes program implementation services such as the design, procurement, and administration of the Multiple Award Task Order Contracts (MATOC) project packages, business systems integration support, and public outreach.

On November 15, 2016, Council approved Agreement No. 2016-1429 with PSOMAS for construction management services for the AWMP.

Due to the high quality of work provided by Carollo and PSOMAS to date, it is in the best interest of the City to approve the proposed supplemental agreements, extending services through June 30, 2021.

Financial Considerations: The proposed Supplemental Agreement No. 6 with Carollo is for an amount not-to-exceed $6,970,257, increasing the agreement's not-to-exceed amount to $18,634,653.

The proposed Supplemental Agreement No. 7 with PSOMAS is for an amount not-to-exceed $10,919,496, increasing the agreement's not-to-exceed amount to $16,906,371.

Sufficient funds are available in the Residential Water Meter Program (Z14010000) to execute these agreements.

There are no General Funds planned or allocated for this project.

Local Business Enterprise (LBE): Both Carollo and PSOMAS are LBEs.

Background: The Department of Utilities (DOU) water meter implementation program approved by City Council on May 24, 2005 included the installation of 105,000 water meters and the replacement or relocation of over 175 miles of water mains located in backyards, by January 1, 2025, as required by State law.

The State experienced significant drought conditions from 2013 to2016, reinforcing the importance of metering water services as a water conservation tool. In response to the drought, DOU received City Council approval on February 24, 2015 (Resolution 2015-0056) to accelerate the installation of water meters to improve water conservation efforts within the City. Through implementation of the AWMP the City will be 100% metered by the end of 2020, four years earlier than the State-mandated installation schedule.

Significant benefits from the AWMP include:

- accelerating the availability of customer interface to monitor water usage,
- enhanced leak detection,
- quicker transition to conservation pricing for water usage,
- lower short-term costs,
- local economic boost, and
- compliance with legislative mandate by installing meters ahead of schedule.

On October 27, 2015, the City entered into Agreement No. 2015-1926 with Carollo Engineers, Inc. (Carollo) for program management services for Phase 1 of the AWMP. Phase 1 services included program development, such as the development of program controls, alternative delivery methods, a staffing analysis, and a public outreach program.

Supplemental Agreements No. 1 and No. 2 with Carollo added additional tasks in support of DOU's applications to the Drinking Water State Revolving Fund including reporting requirements for CEQA and National Historic Preservation Act, coordination with the State Water Resources Control Board and interim support to manage the Meters Matter Information Line which records customer calls related to the water meter installation projects and to respond to emails submitted to the dedicated Water Meters email account.

Due to the high quality of its work during Phase 1, Phase 2 work was extended to Carollo in Supplemental Agreement No. 3. For Phase 2, the scope of services was expanded to include program implementation. Supplemental Agreement No. 4 extended the Phase 2 scope through August 31, 2018, and Supplemental Agreement No. 5 extended services again through December 31, 2018. The proposed Supplemental Agreement No. 6 extends services through FY2021 and increases the total fee to cover the activities through final project close-out.

On November 15, 2016, the City entered into Agreement No. 2016-1429 with PSOMAS for construction management and inspection services for the AWMP. These services included providing construction management, resident engineer and construction support, and construction inspection. Due to the high quality of work performed by PSOMAS, Supplemental Agreement No. 1 extended the term of the agreement through FY2017. Supplemental Agreement No. 2 increased the total compensation to accommodate the escalation of AWMP projects, as well as updated the hourly rates in the fee schedule and extended the services through FY2018. Supplemental Agreement Numbers 3, 5 and 6 updated the hourly rates, and Supplemental Agreement No. 4 updated the hourly rates and extended the services through December 31, 2019. The proposed Supplemental Agreement No. 7 extends the services through FY2021 and increases the total fee to cover the activities through final closeout.

SUPPLEMENTAL AGREEMENT

Project Title and Job Number: Z14010001 - Program Mgmt Services for AWMP **Date:** 8/28/2018

Purchase Order #: **Supplemental Agreement No.:** 6

The City of Sacramento ("City") and Carollo Engineers, Inc. ("Contractor"), as parties to that certain Professional Services Agreement designated as Agreement Number 2015-1926, including any and all prior supplemental agreements modifying the agreement (the agreement and supplemental agreements are hereafter collectively referred to as the "Agreement"), hereby supplement and modify the Agreement as follows:

1. The scope of Services specified in Exhibit A of the Agreement is amended as follows:

   The contract sunset date is extended to July 1, 2021. Contractor shall perform the additional services specified in Task 1 (1.1 through 1.6), Task 2, and Task 3 (3.1 through 3.4), as set forth in Attachment 7 to Exhibit A, attached hereto and incorporated herein by this reference. The following attachments to Exhibit B are attched hereto and incorporated by this reference: Attachment 11 - Carollo Fee Estimate (replacing Attachment 8 to Exhibit B), and Attachment 12 - Subconsultant Fee Schedules.

2. In consideration of the additional and/or revised services described in section 1, above, the maximum not-to-exceed amount that is specified in Exhibit B of the Agreement for payment of Contractor's fees and expenses, is Increased by $6,970,257, and the Agreement's maximum not-to-exceed amount is amended as follows:

Agreement's original not-to-exceed amount:	$ 996,269
Net change by previous supplemental agreements:	$ 10,668,127
Not-to-exceed amount prior to this supplemental agreement:	$ 11,664,396.00
Increased by this supplemental agreement:	$ 6,970,257
New not-to exceed amount including all supplemental agreements:	$ 18,634,653

3. Contractor agrees that the amount of increase or decrease in the not-to-exceed amount specified in section 2, above, shall constitute full compensation for the additional and/or revised services specified in section 1, above, and shall fully compensate Contractor for any and all direct and indirect costs that may be incurred by Contractor in connection with such additional and/or revised services, including costs associated with any changes and/or delays in work schedules or in the performance of other services or work by Contractor.

4. Contractor warrants and represents that the person or persons executing this supplemental agreement on behalf of Contractor has or have been duly authorized by Contractor to sign this supplemental agreement and bind Contractor to the terms hereof.

5. Except as specifically revised herein, all terms and conditions of the Agreement shall remain in full force and effect, and Contractor shall perform all of the services, duties, obligations, and conditions required under the Agreement, as supplemented and modified by this supplemental agreement.

Approval Recommended By:

Project Manager

Approved As To Form By:

City Attorney

Approved By:

Contractor

Approved By:

City of Sacramento

Attested To By:

City Clerk

(Rev. 9-17-12)

ATTACHMENT 7 TO EXHIBIT A

SCOPE OF SERVICES

Program Management Services for the Accelerated Water Meter Program
City of Sacramento Department of Utilities
City Project No. Z14010001
July 19, 2018

The following Scope of Services has been prepared based on discussions with City of Sacramento (CITY) Department of Utilities (DOU) staff. This scope is the basis for the engineering hours and costs. The overall goal of this project is to implement the Accelerated Water Meter Program (AWMP).

The CONTRACTOR shall provide program services for the management and implementation of the Accelerated Water Meter Program, including but not limited to planning, managing, monitoring, and implementing the program, coordinating project activities, developing planning and design documents, conducting design reviews, supporting the procurement process, working with DOU engineering staff to monitor overall budgets and schedules, and assisting DOU on public relations and engineering support during construction.

The AWMP consists of two phases: Phase 1 – Program Development and Phase 2 - Program Implementation. Funding was authorized for the CONTRACTOR to complete the Phase 1 scope (Year 1) and the first two years of Phase 2 (Years 2 and 3). This detailed scope covers the remaining years of Phase 2 Program Implementation of the AWMP from Notice to Proceed through December 31, 2020. The table below lists the timing for the AWMP development and implementation:

AWMP Program Phase	**Date Range**
Phase 1: Program Development	
Year 1	November 2015 to June 2016
Phase 2: Program Implementation	
Year 2	September 6, 2016 to August 31, 2017
Year 3	September 1, 2017 to June 30, 2018 (authorized through January 1, 2019)
Year 4	**July 1, 2018 to June 30 2019**
Year 5+	**July 1, 2019 to December 31, 2020**

ACCELERATED METER PROGRAM IMPLEMENTATION

During Phase 1 - Accelerated Water Meter Program Development, an Accelerated Program Plan was developed that established the framework and tools for implementing and managing the Accelerated Meter Program. The following Phase 2 tasks outline the major program components and their associated activities to be completed for the continued implementation of the Accelerated Program Plan.

TASK 1 PROGRAM MANAGEMENT

The following subtasks describe activities that are program-wide in nature and not directly attributable to specific child CIP projects. As such, these subtasks are distinguished from the project-specific support activities associated with Task 3. Time and expenses within this task's budget that are attributable to a specific child CIP project will be allocated to each of the active child CIP project numbers based on the project's percent contribution toward the total program construction cost estimate for monthly invoices submitted by the CONTRACTOR.

SUBTASK 1.1 Project Management and Administration

This task provides for the administrative management services on CONTRACTOR's scope of services July 1, 2018 through December 31, 2020. The activities include monthly reporting, regular meetings with the project team, and monitoring of project schedule and budget. The monitoring and reporting will be integrated with the Program Management Information System (PMIS).

CONTRACTOR will monitor schedule and budget, and prepare monthly progress reports on the status of the CONTRACTOR'S scope of work for the AWMP. CONTRACTOR will submit progress reports with the monthly billing statements. CONTRACTOR will also prepare a table and spreadsheet for allocating invoiced expenses to child CIP projects associated with the AWMP in support of DOU's reimbursement requests to the State Water Board for the State Revolving Fund. CONTRACTOR shall be responsible for tasks related to the project in terms of staffing, budget, schedule, and scope; promote communication within the project team; and document key decisions and risks.

Items covered under this task include, but are not limited to:

1. Project scope, budget, and schedule management
2. Management and coordination of CONTRACTOR resources and staffing
3. Management and coordination of subconsultants
4. Monthly invoicing and schedule updates
5. Monthly progress report preparation
6. Monthly invoice allocation table and spreadsheet

Deliverables

- Monthly Invoices
- Monthly Progress Reports
- Monthly Invoice Allocation

1.1.1 - Management Support Meetings

This task provides for AWMP management support meetings for the period covered by this scope. CONTRACTOR will conduct and attend the following regular meetings to discuss

progress, current status, and planned activities with the Program Team for the duration of the AWMP.

1.1.1.1. AWMP Bi-weekly Reports and Monthly Progress Update Meetings

CONTRACTOR will prepare monthly Activities of Interest (AOI) memo for distribution to the AWMP Core Team, AWMP Project Managers, and other key stakeholders identified by DOU. The AOI provides an update and action/status indication for items within the following topic areas:

- Program-level budget, scope or schedule impacts
- Procurement Progress
- SRF, Grant, Environmental and Cultural Activities
- Public Outreach
- Projects in Construction
- Projects in Design
- AWMP Performance Measures
- Major task areas
- PMT budget, scope or schedule impacts and major sub-task areas
- CMT budget, scope or schedule impacts and major sub-task areas
- Summary of ongoing or unsatisfactory customer complaints

CONTRACTOR will hold monthly Progress Update Meetings for the AWMP Executive Team. DOU's Program Manager and the CONTRACTOR's Program Manager will jointly prepare for and lead these meetings. The meetings will consist of updates on AWMP program and project progress, action items for the coming month, discussion of the AOI memo, and other issues that may impact schedule and budget. Up to thirty (30) 1-hour meetings have been estimated under this subtask.

Deliverables

- AOI memo and supporting documents (up to 30 monthly)
- AWMP Progress Update Meetings (up to 30 monthly)
- Meeting agenda, materials, and minutes

1.1.1.2. AWMP Project Status Meetings

CONTRACTOR will hold monthly AWMP Project Status Meetings for the AWMP Core Team. The AWMP Core Team includes members of the Program Leadership Team and the Operations Leadership Team. The CONTRACTOR's Program Manager will prepare for and lead these meetings. The meetings will consist of updates on current AWMP project status, action items, information requests, critical decisions, and any issues that may impact schedule and budget. Up to thirty (30) 1-hour meetings have been estimated under this subtask.

Deliverables

- AWMP Project Status Meetings (up to 30 monthly)
- Meeting agenda, materials, and minutes

1.1.1.3. Weekly PMT/CMT Coordination Meetings

CONTRACTOR will lead weekly coordination meetings with the CMT and DOU Program Manager to support the tracking and status reporting of the construction progress and public outreach notifications, discuss recommended improvements to design and procurement documents based on feedback during construction, and identify potential public outreach concerns or issues.

Deliverables

- Weekly PMT/CMT Coordination Meetings (weekly for 24 months)

1.1.2 - State Revolving Fund Agreement Support

The CITY anticipates funding the AWMP projects with rate payer funds, bond sale funds and other potential funding sources such as State and Federal Grants in addition to a State Revolving Fund (SRF) loan. CONTRACTOR to submit draft text for updating the “Activities”, “Issues/Problems Encountered” and “Suggested Solutions” sections of the monthly Project Status Report template provided by the CITY.

Deliverables

- Draft Project Status Report form (monthly for 30 months)

1.1.3 - Annual Program Report

CONTRACTOR will prepare annual program update reports by calendar year. The annual report is intended to provide an overview of the program's progress to Department Directors, Executive Leadership, City Council, and other internal and external stakeholders.

Deliverables

- Accelerated Meter Program Report (3 reports: calendar year 2018, 2019, 2020)

SUBTASK 1.2 Program Controls

CONTRACTOR will provide overall program management, administration, and controls for implementing the AWMP based on 26 separate design/construction contracts developed by the CONTRACTOR and DOU Project Managers and six (6) procurement package phases for request for proposals. CONTRACTOR will monitor these construction contracts in PMIS for project controls tracking and monitoring tools.

For a successful AWMP, these efforts must be closely managed and monitored to meet the AWMP goals and objectives while also achieving targets for schedule, budget, and quality and to support the requirements of the City’s State Revolving Fund loan agreement. The subtasks below describe the major activity areas for project management, monitoring, and controls for the AWMP.

1.2.1 - Program Monitoring and Reporting

Using the Project Management Information System (PMIS) that was developed for this project, CONTRACTOR will monitor and report on the status of the AWMP. CONTRACTOR will monitor the scope, budget, schedule, and risks for both the AWMP as a whole as well as for the individual child capital improvement projects. The status of each child project and the aggregate of the projects will be measured against the AWMP targets for schedule, budget, quality, and other performance measures. CONTRACTOR will coordinate with AWMP team members (including subconsultants, contractors, Construction Management Team, CITY and DOU staff, etc.) to obtain status information and report on AWMP activities. Scope, budget, schedule, and risk management updates for each project will be provided to the CONTRACTOR by individual AWMP Project Managers during the project planning and design phase, and by the Construction Manager for all projects during the construction phase. CONTRACTOR will assist in developing the final reports on scope, schedule, and budget during the project closeout phase.

CONTRACTOR will report on the AWMP status as part of semi-monthly progress meetings, and prepare monthly program update summaries. The monthly summary is intended to provide updates to Department Directors for DOU and other City of Sacramento stakeholders. CONTRACTOR will incorporate local hire program results reported by the construction contractors into the monthly program update and performance measures managed through PMIS.

Deliverables

- AWMP monthly program update summary (up to 30 monthly)
- AWMP monthly council member update (up to 30 monthly)

1.2.2 - Scope Management

CONTRACTOR will provide overall management and administration of the AWMP scope. This includes monitoring the overall AWMP scope as a rollup of individual child project scopes, management of project scope changes in the context of the overall program, and monitoring of progress towards the established contract scope targets (e.g. number/type of meter installations and length of pipeline replacement). CONTRACTOR will review and confirm final scope quantities and descriptions as part of project closeout activities.

1.2.3 - Schedule Management

CONTRACTOR will manage the overall AWMP program schedule and compare it with the baseline schedule. The program schedule includes the schedule for each of the AWMP child projects. Schedules will be maintained using Microsoft Project, updated at least monthly in coordination with AWMP Project Managers and the Construction Management Team. The schedule will be published to the PMIS, integrated with the public outreach tools and with other bi-weekly and monthly reports. CONTRACTOR will perform regular reviews of AWMP activities and schedule, and compare progress of critical path activities to the AWMP schedule. CONTRACTOR will discuss schedule and critical path activities with the CITY at progress meetings and provide monthly schedule updates as part of the Program Monitoring and Reporting task. Four-week look-ahead schedules will also be prepared (up to bi-weekly) and

submitted with the AOI memo. CONTRACTOR will assist in documenting final schedule dates and milestones as part of project closeout activities.

1.2.4 - Budget and Cost Management

CONTRACTOR will manage the AWMP program budget and cost estimates, and compare them with the baseline budget and cashflow. CONTRACTOR will update AWMP project cost estimates in coordination with engineering support services, to incorporate revisions to unit costs, project timing, escalation factors, and contingency amounts. Monthly earned value analyses will be performed using the information from the construction manager and contractor status reports, construction progress payments and schedule updates, and City internal costs, to compare current financial performance against the baseline budget and schedule. CONTRACTOR will discuss financial performance with the CITY at the progress meetings and provide monthly budget updates with cashflow projections.

CONTRACTOR will maintain the PMIS workflows to support the review, processing, and approval procedures for progress pay requests submitted monthly by construction contractors for each of the meter projects, following review and processing by the Construction Management Team. CONTRACTOR will coordinate with construction inspectors, field support staff, project managers, and engineering supervisors to support the review and approval process for progress payments. Using the PMIS, CONTRACTOR will document and monitor the progress payments for compliance with contract requirements, process and track the payment approvals, and maintain a current log of contract payments. CONTRACTOR will support the financial closeout activities for the AWMP projects, including documentation of final contract costs and reconciliation with original project cost estimates for program reporting purposes.

1.2.5 - Risk Management

CONTRACTOR will manage a risk register for the AWMP that documents identified risks that could impact the ability to meet the established AWMP goals and objectives. CONTRACTOR will review the risk register on a quarterly basis, and hold up to three (3) meetings to discuss updates that are needed to individual risks, risk priorities, and risk response plans with the CITY.

1.2.6 - Document Management

Based on the standards contained in the Project Controls Plan, CONTRACTOR will utilize the PMIS to support the document management standards, enforce compliance by AWMP team members, and provide that program information is appropriately documented and archived in a searchable repository on PMIS. CONTRACTOR will update and maintain the document folders and filing structure for each of the AWMP projects, in coordination with the Construction Management Team, in accordance with the document management standards. CONTRACTOR will support the documentation archiving process during project closeout in coordination with the CITY for all hard copies, electronic files, and as-built drawings.

1.2.7 - Project Management Information System (PMIS) Administration

CONTRACTOR will continue the administration, management, and support of the Project Management Information System (PMIS) developed for this project. The PMIS will be used as the primary information system to support all of the program management and construction management activities. PMIS tasks for this scoping period will include:

- Support ongoing administration, management, and updates for PMIS workflows, data integration, document controls, and alert notifications.
- Provide PMIS user management, site security, and end user technical support for PMIS users for the duration of the AWMP.
- As requested by the CITY, implement additional refinements and minor enhancements to PMIS project and construction management functionality to support the AWMP program and project administration and reporting.

CONTRACTOR has included an assumed the level of effort of up to 16 hours per month on average for PMIS administration and refinement activities within this subtask during FY2019 and decreasing thereafter.

SUBTASK 1.3 Business Systems Integration Support

CONTRACTOR will continue the support for the business systems integration, workflows, and data management processes that support the AWMP implementation. Specific implementation support items to be provided by CONTRACTOR include the following.

1.3.1 - GIS Integration

CONTRACTOR will provide Geographic Information System (GIS) management and support for the AWMP in accordance with the following items:

- Support GIS data additions, editing, and updates as part of accelerated meter project scoping, planning, design, construction, and closeout phases.
- Assist in processing monthly updates to GIS meter-related data based on construction contractor submittal of meter source documents.
- Assist in processing monthly updates to GIS project-related data based on construction contractor submittal of pay requests with updates to construction schedules, zones, and boundaries.
- Provide monthly GIS database exports to DOU for updating AWMP child project information on Accela.
- Assist in processing of installed meter GPS points and related asset data collected by the construction management team using ArcGIS Collector mobile application.
- Assist in configuring and managing web-based GIS using ESRI ArcGIS Online with appropriate spatial data, user access, and data security, to support the CITY'S public outreach program. Update web-based GIS data on at least a monthly basis.

- Maintain and update the mobile GIS-based App for use on Apple iOS and Google Android devices to support public outreach and communications regarding the AWMP project status and upcoming activities on a parcel-basis.

CONTRACTOR has assumed the level of effort for this subtask of up to 144 hours per month on average during FY2019 and decreasing thereafter for GIS data integration, processing, configuration, and maintenance.

1.3.2 - CIS/CMMS/AMI Integration

CONTRACTOR will support meter data integration for the AWMP across the DOU Customer Information System (CIS), Computerized Maintenance Management System (CMMS), and Automated Metering Infrastructure (AMI) in accordance with the following items:

- Support project management processes for development, updates, and quality review of schedule of services, meter source documents, and construction source documents prior to selection and start of construction.
- Support construction management processes for data collection, processing, and quality review of meter source documents submitted as part of monthly construction contractor pay requests through GIS, CIS, and CMMS systems.
- Monitor the workflow and processes involved in meter data integration to support processing into the CIS and start of customer billing for metered water service within the CITY's 90-day requirement from monthly construction contractor pay requests.
- Support analysis and reporting on meter installations and data processing through GIS, CIS, and CMMS systems using PMIS tools for conformance with AWMP performance measures and program goals.
- Support project closeout activities for review and reconciliation of final installed quantities and processed meter accounts into CIS.

CONTRACTOR has assumed the level of effort for this subtask of up to 24 hours per month on average for CIS, CMMS, and AMI data integration, processing, monitoring, analysis, and reporting during FY2019 and decreasing thereafter.

1.3.3 - FIS Integration

CONTRACTOR will provide ECAPS Financial Information System (FIS) integration support for the AWMP in accordance with the following items:

- Assist with data integration of summary capital project financial data from ECAPS to PMIS for monitoring and reporting of project budgets and current financial performance.
- Support process for performance measures tracking and reporting in PMIS with data quality control, troubleshooting, and technical support.

CONTRACTOR has assumed the level of effort for this subtask of up to 8 hours per month on average for FIS data integration, processing, monitoring, and reporting during FY2019 and decreasing thereafter.

SUBTASK 1.4 Project Close-out Services

CONTRACTOR will provide post-construction support to DOU staff for close-out activities for both the final completion of individual child CIP projects and final completion for the AWMP Program. CONTRACTOR will meet with DOU key staff to develop project and program close-out workflows that identify specific close-out activities and responsibilities. CONTRACTOR will adjust AWMP project close-out workflows as needed to support the CITY's financial, contractual, and documentation close-out processes.

Where appropriate, close-out activities will be integrated into the project and program schedule of tasks and PMIS for tracking and status reporting.

The following activities are estimated to be part of the program and project close-out support needs.

- Support transfer of PMIS documents and data to DOU for archival purposes.
- Financial Analysis and summary reporting to support both DOU Finance Group accounting requirements and SRF loan agreement requirements.
- Updated documentation of established AWMP procedures and processes
- AWMP Program Summary & Outreach – Final Report and presentation materials (for City Council and Public), Public Outreach communications of the Program Conclusion

SUBTASK 1.5 Public Outreach

The AWMP is not only a significant undertaking for the Department of Utilities (DOU), it is also a highly visible and somewhat disruptive program throughout the City of Sacramento (CITY) that impacts customers, residents, community leaders, elected officials, other service providers, regulatory authorities, funding partners, and the construction community. Clear, timely, and informative communications are instrumental to encouraging trust and collaboration for the successful completion of this Program. During Phase 1, public outreach best practices and stakeholder insights were gathered, outreach materials were developed and tested with CITY residents, and a Public Outreach and Communications Plan was developed. The following Phase 2 tasks include the implementation of the recommendations of the Public Outreach and Communications Plan by CONTRACTOR with the support of CONTRACTOR’s primary public outreach subconsultant, KMP Strategies, LLC (KMP) and with Ogilvy Public Relations (OPR) available on an on-call/as-needed basis to be used if authorized by DOU. CONTRACTOR will prepare a scope and cost of OPR services for review and approval. OPR time will be billed by the hour and only direct costs actually expended will be billed.

The public outreach scope items include coordination with the AWMP Construction Management Team, inspectors, construction contractors, and DOU staff to coordinate messages and communications that are fresh and accurate, and that materials are distributed as contractually required.

1.5.1 - Outreach Materials, Graphic Design & Production

This task includes updating, if required, copywriting and key message information and minor graphic design services for existing AWMP public outreach materials, production of printed materials, materials distribution management, planning and oversight for notification mailings, and the adaptation of materials for use in digital form.

The following resident/property owner notifications have been developed and will continue to be produced for distribution through the end of the program:

- One (1) mailed letter announcing construction approximately eight (8) weeks before commencement (including a Frequently Asked Question document and project area map),
- One (1) standard size postcard, inviting residents and property owners to an open house, distributed approximately seven (7) weeks before construction commencement,
- One (1) mailed letter explaining the sidewalk installation option (including a Frequently Asked Questions document specific to the sidewalk option),
- One (1) mailed second-notice letter explaining the sidewalk option (including a Frequently Asked Questions document specific to the sidewalk option),
- One (1) oversized postcard to be mailed approximately two weeks before construction,
- One (1) multi-purpose door hanger to be distributed by the construction contractor for providing 1-week and 1-day advance notice to customers and other construction-related notifications
- One (1) door hanger with space to hand-write notes to residents to be distributed as needed by the CMT or construction contractor,
- Orientation packet materials, including: one (1) infographic, one (1) letter, and one (1) outside envelope (or CITY-furnished bags in lieu of envelopes). DOU's existing rate assistance program form will also be duplicated (as-is) and included in the orientation packet. The meter orientation packets will be distributed after the completion of the primary construction; packets will be distributed by the construction contractors

CONTRACTOR’s public outreach subconsultant will implement one reprint of the previously approved branded vehicle magnets for construction crew vehicles and corrugated signs with branding to be used on a-frame construction sidewalk signs. This is a one-time print run.

CONTRACTOR’s public outreach subconsultant will provide construction contractors with instructions for requesting the prepared materials; construction contractors will be responsible for obtaining printed materials from the print storage house and distributing the door hangers to impacted properties.

SRF-EPA disclosure statement requirement will be included in all introductory letters, as well as the orientation packets. The statement is printed on a quarter-page sheet.

This task includes coordination with the AWMP Construction Management Team, inspectors, construction contractors, and DOU staff to coordinate messages and communications that are fresh and accurate, and materials are distributed as contractually required.

Assumptions

- Construction contractors will pick-up/request outreach materials and hand deliver the non-mailed materials to residents
- Construction contractors will pick-up non-specific project signs and the SRF-EPR signs (as required) and install them in the project areas
- DOU will provide renter/non-resident property owner data
- DOU will procure the SRF-EPA project sign to be installed by others
- Redesign Work:
    - Open house post cards
    - 2-week construction notification postcard
    - Door hanger notifications
- Minor copywriting and graphic design updates are included for:
    - Introductory letter, FAQ and Maps
    - Open house postcard
    - Sidewalk option letter, form and FAQ
    - 1-week/1-day door hanger
    - Notes door hanger
    - Meter orientation packet envelope
    - Orientation packet infographic
    - #10 Business envelope for mailings
- Up to two (2) rounds of DOU edits on production materials
- Open house and 2-week post cards, as well as door hangers will be replaced with new versions that accommodate the SRF disclaimer text.
- Letter mailings will include the quarter-page SRF disclaimer text as an insert.
- DOU will provide business mailing data in Excel for notice dissemination
- DOU will directly cover expenses related to metal signs produced in the DOU Sign Shop
- Costs for the production and installation of non-metals is not included in this scope and fee.
- Installation of the metal and/or non-metal signs is by others.

- The existing stock of bulk printed quantities and the project progress schedule through April 2018 was used to estimate the additional bulk printing quantities listed in the Deliverables section below.

Deliverables

- Notification to construction contractors on how to request outreach materials from fulfillment house
- Minor copywriting and graphic design services for updating, if needed: introductory letter and FAQ, open house postcard, sidewalk option letter and FAQ, 2-week notification postcard, 1-week/1-day door hanger
- One-time print production in bulk of up to 40,000 introductory letters and associated FAQs
- Print production of up to 40,000 letter-size project-specific area maps to be included with the introductory letters
- One-time print production in bulk of up to 15,000 "2nd Notice" sidewalk option letters and associated FAQs
- One-time print production in bulk of up to 70,000 multi-purpose door hangers
- One-time print production in bulk of up to 1,000 blank door hangers
- One-time print production in bulk of up to 40,000 open house post cards
- One-time print production in bulk of up to 40,000 2-week notice post cards
- One-time print production in bulk of up to 40,000 orientation letters
- One-time print production in bulk of up to 40,000 orientation infographic
- One-time print production in bulk of up to 40,000 rate assistance program forms
- Up to two bulk print productions of 20,000 (each bulk run) of SRF disclaimer inserts
- [optional] One-time print production in bulk of up to 40,000 orientation packet 9 x 12 envelopes to be used if no additional blue reusable bags are provided by DOU.
- Addressing, folding, stuffing, and postage for introductory letter, open house postcards, sidewalk option letters, and 2-week notice postcard
- Assembly of meter orientation packet items
- Coordination with City of Sacramento Sign Shop for production of metal non-specific project signs and the SRF-EPA required signs, graphic design services associated with the development of the SRF-EPA required signs, and delivery of completed signs to construction trailer
- Management of graphic design, production, mailing/distribution, storage of all print materials
- Regular uploading of new and updated outreach materials to PMIS

1.5.2 - Open Houses & Community Engagement

This task includes significant support for information sharing with residents at neighborhood and community association meetings, as well as project area open houses. If needed, CONTRACTOR's public outreach subconsultant will update one (1) set of boards used at the project area open houses. In coordination with the Construction Management Team and construction contractors, CONTRACTOR's public outreach subconsultant will schedule, coordinate with Council offices, develop an agenda, set up/clean up and facilitate up to nine open houses for the Package 5 and Package 6 project areas; this assumes one open house per project area excluding the Z14010091 and Z14010093 child projects which are not anticipated to have open houses. CONTRACTOR's public outreach subconsultant will coordinate with Council offices to determine Council Members' level of participation, and request Council offices distribute open house details via their social media channels.

In accordance with SRF-EPA requirements, the PMT Public Outreach Lead will notify the DOU employee assigned to serves as the City's coordinator with the EPA Project Officer as described in the SRF loan agreement document to notify of public or media events publicizing the accomplishment of significant events related to construction projects as a result of the loan agreement, and provide the opportunity for attendance and participation by federal representatives notified at least ten (10) working days in advance.

Assumptions

- DOU staff will secure open house location sites, cover meeting site facility rental fees, provide proof of insurance, and all costs associated with any chair/table rentals.
- DOU and Construction Management Team will participate in, and present at, the open houses
- Up to two (2) rounds of DOU edits on production materials

Deliverables

- Scheduling, coordination with City Council offices and AWMP staff about open houses details, set up, staffing, and clean up at up to nine open houses.
- Update design and copy-write on open house community information boards
- Coordination with the City's contact with the EPA Project Officer or delegate to notify of public or media events publicizing the accomplishment of significant events related to construction projects as a result of this agreement, and provide the opportunity for attendance and participation by federal representatives notified at least ten (10) working days in advance.

1.5.3 - Advertising & Earned Media Management

This task includes management of both traditional and social media needs throughout the AWMP; includes close coordination of all activities with DOU. CONTRACTOR's public outreach subconsultants will review and update the media plan and media kit once during this scope period.

CONTRACTOR's public outreach subconsultants will review and update the established paid advertising plan, which could include: traffic segment sponsorships, social media advertising, digital ads, print advertising in neighborhood publications, and geo-targeted digital ads, etc.

CONTRACTOR's public outreach subconsultants will monitor digital and traditional advertising and provide DOU with monthly impression reports.

Assumptions

- Dedicated paid advertising budget allocation up to $15,000 for the following:
    - Digital Ads (Facebook, Twitter, Pandora, etc.)
    - Multilingual Advertising
- Assumes up to two (2) rounds of DOU edits on updated advertising purchase plans and advertising content

Deliverables

- Review and update the paid advertising plan, including negotiated ad rates
- Updates to existing advertisements and design and development of new ads, as needed
- Delivery and trafficking of all paid advertising units to media outlets
- Track and report on paid advertising program monthly, including impressions

1.5.4 - Electronic Communications

CONTRACTOR's subconsultant, KMP will continue to maintain and update the program website, including the "Where's My Meter?" feature and mobile application. As necessary, KMP will coordinate with City IT staff to update the AWMP-specific webpages for the duration of this scope period.

CONTRACTOR's public outreach subconsultant will include required SRF-EPA funding text that identify project funding.

In coordination with DOU Public Information Officer (PIO), CONTRACTOR's public outreach subconsultant will respond to residents' AWMP-related direct messages on DOU's existing Facebook account; the Facebook page will be checked once per regular business day. Bi-weekly, CONTRACTOR's public outreach subconsultant will post AWMP-related information to DOU's existing Facebook account.

This task also includes producing a periodic electronic newsletter (up to4 times per year), to be distributed to DOU's existing database through the gov delivery system.

Assumptions

- DOU-IT/Citywide-IT/Web Team staff will be available to provide webpage support and programming, as necessary

- All programming and layout for enhanced, dedicated project-specific webpages on DOU's existing website to be provided by DOU-IT/Citywide-IT/Web Team staff, as appropriate
- Up to two rounds of DOU edits on website copywriting and updated website content
- DOU will manage social media monitoring and engagement on Twitter and NextDoor, and non-AWMP information on Facebook
- DOU will design and provide CONTRACTOR with a gov delivery template for use in formatting periodic email distribution of eNewsletter
- DOU will provide login information and standards for engaging with social media users for program-related information on Facebook. DOU will maintain responsibility for general DOU postings and response, outside of the AWMP. DOU will continue to maintain social media accounts with non-AWMP information.

Deliverables

- Ongoing management of Program-specific webpages, to be reviewed up to twice monthly and updated at those times
- Basic webpage layout and ongoing coordination with DOU for assistance in programming
- Design and copywriting for up to ten (10) electronic newsletter
- Once-per-regular-business day, check and respond to customer inquiries on Facebook that are specifically related to the AWMP
- Bi-weekly posting of AWMP-related content to DOU's Facebook page
- Inclusion of SRF-EPA required text on program website, per requirements

1.5.5 - Internal Communication Coordination

KMP will coordinate closely with the Construction Management Team, DOU staff, City PIOs, City Council offices, 311, City Management, and other City departments to streamline communication and identify efficiencies. This includes regular communication and up to 15 in-person meetings with City Council/Mayor offices, and to serve as their primary AWMP contact.

Includes up to four (4) briefings with City Manager and City PIO staff, and preparation and attendance at up to four (4) City Council meetings. Also includes time to prepare DOU staff and the consultant teams to present before the City Council, Rate Advisory Committee, or other established City committees.

Includes preparation for and participation in semi-monthly outreach meetings with the CITY and program team, semi-monthly PMT coordination meetings, and weekly construction team meetings.

Assumptions

- CONTRACTOR's public outreach subconsultant, KMP, is authorized to directly schedule meetings with City Council/Mayor staff

Deliverables

- Ongoing coordination with the Construction Management Team, DOU staff, City PIOs, City Council offices, 311, City Management, and other City departments to streamline communication and identify efficiencies.
- Scheduling, preparation, attendance and facilitation of up to four (4) briefings with City Manager and City PIO staff
- Scheduling, preparation, attendance and facilitation of up to 15 in-person meetings with City Council/Mayor offices and construction contractors (when requested)
- Preparation and attendance at up to four (4) City Council meetings
- Preparation with City staff for their presentations before the City Council, Rate Advisory Committee, or other established City committees
- Scheduling, preparation, attendance and facilitation of semi-monthly outreach meetings with the City and program team (up to 60 semi-monthly)
- Participation in monthly PMT coordination meetings (up to 30 monthly)
- Attendance, either in-person or via conference call, at weekly contractor meetings

1.5.6 - Meter Information Line Support Services

Under this task, CONTRACTOR with the support of KMP will serve as the primary contact responsible for managing the AWMP's communication channels, which include the existing information phone line and project-specific email correspondence. The Public Outreach Lead will coordinate directly with a CITY-identified primary point of contact for public outreach during construction using procedures established throughout the AWMP implementation phase for providing timely and appropriate information to customers. CONTRACTOR with the support of KMP will also coordinate with the Construction Management Team, inspectors, and construction contractors, as needed.

The following activities are included within this task:

1. Provide ongoing customer service and project-related information training to information phone line staff
2. Review voicemails from CITY's existing meter program information line on a regular basis; to be completed daily, during regular work days
3. Enter call information into the PMIS-based customer interaction log
4. Research answers to customers' inquiries, which includes close coordination with CITY's primary point of contact for public outreach during construction
5. Within two (2) business days, provide voicemail details to CITY staff or inspectors when it is appropriate for staff/inspectors to directly return calls or, within two (2) business day calls will be returned by CONTRACTOR

6. Provide weekly updates of call information such as call volume and trending issues
7. Update and maintain a frequently asked questions and answers document to serve as a response template for the most commonly asked questions, maximizing efficiency and minimizing redundancy
8. Periodically evaluate the existing structure and determine how it can be more efficiently managed and more user-friendly
9. Arrange backup coverage when the primary information line monitor is unavailable

Assumptions

- Call volume of up to 400 calls per month, on average
- Use of the CITY's existing phone line infrastructure
- Use of the CITY's existing meter email infrastructure
- One primary point of contact within DOU and backup support identified should it be necessary
- Direct access to inspectors so information can be conveyed as efficiently as possible

Deliverables

- Information line management during business hours, Monday-Friday (excluding holidays) for the period covered by this scope
- Management of the customer interaction log
- Management of the sidewalk option request letters, and sidewalk option log
- Updated protocols for customer interaction

1.5.7 - Issues Response Plan Implementation

This task will only be used if authorized by DOU. Task includes efforts associated with communication assistance in responding to critical or emergency issues. Time will be billed by the hour and only direct costs actually expended will be billed. If additional efforts beyond the initial budgeted amount are determined necessary, as directed by the CITY, CONTRACTOR will prepare a scope and cost for review and approval.

SUBTASK 1.6 Engineering Services During Construction

CONTRACTOR will provide limited engineering and administration support services during construction for child CIP projects managed by the CONTRACTOR during that project's planning and design phases. CONTRACTOR will provide engineering support and technical input at the request of the Construction Manager on these projects during construction.

1.6.1 - Engineering Support and Technical Input during Construction

CONTRACTOR will provide engineering support and technical input to Contractor Submittals, Requests for Information (RFIs), and Design Clarification Memos (DCMs) as well as limited contract administration support for integration with the PMIS.

CONTRACTOR will assist with preparation, attend, and support Project Managers at pre-construction meetings for each child CIP project, to communicate and answer questions related to compliance with CITY and DOU contract requirements. Up to five (5) pre-construction meetings are assumed for this subtask.

CONTRACTOR will represent the PMT at weekly meetings led by the Construction Management Team for each construction contractor.

Deliverables

- Participation in weekly Construction meeting (weekly for up to 24 months)
- Participation in Pre-Construction meeting (Up to 5 meetings)

1.6.2 - Construction Contractor Performance Evaluation

CONTRACTOR will prepare a performance evaluation form for documenting performance of construction contractors during implementation of the AWMP. In coordination with oversight activities by the construction manager(s) and construction inspectors. The "report card" will document contractor-specific performance as the construction contractors implement their AWMP construction projects. At a minimum, the report card will document:

- Contractor adherence to schedule
- Quality of work
- Cleanliness
- Change order requests
- Responsiveness to residents/City concerns
- Professionalism

Utilizing the information obtained from the Performance Evaluation Forms, CONTRACTOR will participate as a member of the Performance Evaluation Audit Team described in the Phase 1 Procurement Plan to evaluate the performance of construction contractors as each construction contract agreement is implemented. CONTRACTOR will prepare a summary memo documenting the findings with respect to the established evaluation criteria.

Deliverables:

- Construction contractor evaluation summary memo

1.6.3 - Change Order Management Support

CONTRACTOR will participate in periodic Change Order Management Committee meetings and provide engineering support and technical input, as needed, for Proposed Change Orders (PCOs) associated with AWMP projects.

CONTRACTOR will coordinate the process for receipt, processing, and approvals for change orders submitted by construction contractors for each of the meter projects, following review and processing by the Construction Management Team. Using the PMIS, CONTRACTOR will maintain a current log of change orders, approval status, and total contract amounts for the duration of the AWMP, and based on guidance from DOU's Change Order Management Committee.

Deliverables

- Engineering input and responses to Construction Manager requests for assistance with submittals, RFIs, PCOs, and other construction documentation for work packages prepared by CONTRACTOR.

TASK 2 TRAVEL AND TRANSPORTATION EXPENSES

To facilitate the reimbursement accounting for the SRF loan agreement, travel and transportation related expenses such as parking, tolls, mileage, taxi/ride-share/car rental costs, airfare and lodging will be tracked under a separate task from the other billable expenses. Meals related to travel will not be billed. All other reimbursable expenses will be billed against the respective task budget.

TASK 3 PROJECT-SPECIFIC SUPPORT

The following subtasks describe activities that directly support specific child CIP projects. As such, these subtasks are distinguished from the Program-wide support activities associated with Task 1. Time and expenses within this task's budget that are attributable to a specific child CIP project will be identified by the child CIP project number for monthly invoicing submitted by the CONTRACTOR and CONTRACTOR's subconsultants.

SUBTASK 3.1 Engineering Support Services

CONTRACTOR will provide engineering support services for the planning, design, and procurement of child CIP projects within the AWMP. For the purposes of this Scope of Services, it is assumed that the CONTRACTOR will provide project management, planning and design support, and other ancillary engineering support services for the projects as listed in the table below.

Project Name	Project Number	Package	PM	PR Length (LF)	Meter Installs	RFP Date
Individual Meter Retrofits Phase 1 WMR	Z14010093	6	PMT	3,000	1,000	**Jan 2019**
River Park Phases 1 & 2 PR/WMR	Z14010101	6	PMT	52,136	1,444	**Jan 2019**
Townhomes/Condos WMR	Z14010091	6	PMT	0	2,500	**Jan 2019**
Total				**55,136 (10.4 mi)**	**4,944**	

CONTRACTOR assumes that DOU will provide project management, planning and design support, and other ancillary engineering support services for the other child CIP projects established for the AWMP.

Project Name	Project Number	Package	PM	PR Length (LF)	Meter Installs	RFP Date
Land Park Phase 5 PR/WMR	Z14010103	6	DOU	8,251	200	**Aug 2018**
Total				**8,251 (1.6 mi)**	**200**	

CONTRACTOR will also support the development of the procurement packages for the Request for Proposals for Procurement Packages 5 and 6 as described in **Task 3.2**.

Specialty engineering support services such as topographical survey mapping, utility marking, and utility test-pitting, will be provided by CONTRACTOR's subcontractors for projects managed by CONTRACTOR. CONTRACTOR will work jointly with CITY to prepare design documents and procurement packages for the meter installation and water pipeline replacement projects for the AWMP.

3.1.1 - Project Management

CONTRACTOR will provide Project Management for the CONTRACTOR-assigned child CIP projects during the planning, design, and procurement phases. CONTRACTOR will coordinate with the Project Controls support staff and utilize the PMIS to track budget, schedule, scope, and other project status items for the CONTRACTOR-assigned work packages prior to construction.

3.1.1.1. Geotechnical and Trenchless Services During Construction

CONTRACTOR's subconsultants for geotechnical services and trenchless engineering will provide engineering services during construction specific to the proposed trenchless crossing under UPRR rail facilities as a part of the River Park Phases 1 & 2 PR/WMR project (Z14010101). The scope for this subtask and the associated budget will be updated based on the selected method of trenchless construction and geotechnical findings at the conclusion of the design for Z14010101. Anticipated engineering services during construction may include: casing welding inspection, excavation pit backfill compaction testing, shop drawing review, and responding to contractor Requests for Information (RFI). An allowance of $15,000 in direct expenses is allocated for these services. If additional efforts beyond the initial budgeted amount are determined necessary, as directed by the CITY, CONTRACTOR will prepare a scope and cost for review and approval.

3.1.1.2. Permitting

CONTRACTOR will assist CITY staff with preparing permit applications and supporting documents. Based on the preliminary design for River Park Phases 1 & 2 PR/WMR (Z14010101), one trenchless crossing of Union Pacific Railroad (UPRR) rail facilities is anticipated. CONTRACTOR anticipates that one permit application will be prepared for the rail crossing. CONTRACTOR will prepare applications materials and attend one (1) 2-hour project review meeting with the permitting authority. CONTRACTOR assumes CITY will submit all permit applications and pay applicable application fees.

3.1.2 - Design Submittals

CONTRACTOR will prepare 90-percent design submittals for CITY review on all CONTRACTOR-assigned child CIP projects that include water pipeline replacements. CITY will provide written comments to CONTRACTOR. CONTRACTOR will incorporate comments into final design documents. CONTRACTOR will facilitate design review meetings with CITY staff to confirm direction and development of work packages.

The following documents are associated with the design submittals:

- 90-percent design - CONTRACTOR will submit the 90-percent design submittal to the CITY for review. Submittals will include updated project location map. Design submittal will include at a minimum: updated design documents from the 60-percent submittal level, front-end standard contracts including bid form with quantities, updated estimate on work package costs, and comment response matrix to address comments from 60-percent submittal.
- Final Design Submittal - CONTRACTOR will submit the final design submittal to the CITY for issuance with the Request for Proposals for the associated child CIP project. Final design submittal will be used to negotiate pricing with construction contractors for awarding construction contract agreements by City Council. Design submittal will include the final project location map, design criteria, meter service table, design drawings, CITY standard details and specifications, special provisions or specifications (as needed), front-end contract documents including final bid form, engineer's estimate and comment response matrix to address comments on 90-percent design submittal.

Deliverables

- For Package 6 projects: 90-percent and final design submittals

Assumptions

- CITY will provide current GIS data for parcels, customer service connection information, and existing water network
- Program Manager from the CITY will coordinate project schedule, cost, risk, and status updates for CITY-assigned work packages directly with the Project Controls support staff
- Soil borings will not be performed based on CITY's direction. Soils near surface are expected to be suitable for trenching; unsuitable soils and mitigation will be handled as needed during construction.
- Field survey will not be required in backyards
- Potholing to verify utility crossings and to establish the pipeline profile will be the responsibility of the construction contractor
- Survey and mapping will be based on NAD83 and NAVD88 datums
- Drawings will be prepared using AutoCAD 2014 or later version
- Specifications will be the City's standard specifications supplemented with unique bid schedules and construction sequencing and constraints requirements

- Specification document shall be prepared in MSWord format.
- Deliverables for Package 5 projects are included within the previously approved budget.

3.1.2.1. CID Agreement Support

CONTRACTOR will provide support to the CITY for the planning, development, and procurement of agreements with Common Interest Developments (CID) for meter installations. This effort is expected to include maintaining a tracking list of CIDs that have been identified as needing meter installations as part of the AWMP. 34 CIDs have been identified during the AWMP implementation phase prior to this scope period. CONTRACTOR will implement the plan developed prior to this scope period for contacting and meeting with CID property owners/association managers to discuss the specifics of meter installations, including number and size of meters, service connection locations, meter locations, and available easements for construction. CONTRACTOR will track these CID contacts and provide follow-up documentation of the agreement for meter installations at each of the properties. The information determined during this process will be used to support the engineering planning and development of meter projects for CID properties.

CONTRACTOR will hold semi-monthly CID Progress Meetings with DOU staff. The meetings will consist of updates on the meetings with CID representatives, CID responses, and planning/design concerns. Up to sixty (60) half-hour meetings have been estimated under this subtask.

Deliverables

- Bi-weekly Status Meetings (up to 60 meetings)

SUBTASK 3.2 Procurement Services

CONTRACTOR will implement the Procurement Plan developed as part of Phase 1. The procurement process includes issuing Requests for Proposals for each design project, proposal evaluation, negotiations, and contract award. The services described below will be provided for the following projects scheduled to be advertised and/or awarded during the period covered by this scope.

AWMP Project by RFP Package		Award Date	Project Manager
Package 5			
Z14010106	Water Meter Retrofits for the AWMP	Oct 2018	PMT/DOU
Z14010107	Pipeline Replacement for the AWMP Part 1	Nov 2018	PMT/DOU
Z14010108	Pipeline Replacement for the AWMP Part 2	Nov 2018	PMT/DOU
Package 6			
Z14010091	Common Interest Developments	Apr 2019	PMT
Z14010093	Individual Meter Retrofits and Pipe Replacements	N/A	PMT/DOU
Z14010101	River Park Phases 1 and 2	Apr 2019	DOU

3.2.1 - Request for Proposals (RFP)

CONTRACTOR will prepare draft and final versions of the RFP document for CITY review and to issue to prequalified construction contractors for the packages listed in the table above.

As necessary, CONTRACTOR will issue additional procurement documents (e.g. bid sheets) to prequalified construction contractors.

The content of the RFP document will include, but is not limited to:

- Description of the program
- Program schedule and budget
- Detailed scope of services
  - Initial AWMP task order package locations, components, and quantities
  - Technical requirements
- Preliminary design concepts (drawings and specifications)
- Proposal forms
- Performance requirements
- Contractor submittal requirements (content and process)
- Evaluation criteria and selection process
- Draft contracting documents (with input from CITY legal staff)
  - General terms and conditions
  - Technical requirements
  - Performance requirements
  - Surety and insurance provisions
  - Actual and liquidated damage provisions
  - Termination provisions
  - Incentive provisions
  - Local Hire program provisions

CONTRACTOR will prepare materials and facilitate two (2) 2-hour pre-proposal meetings to discuss with construction contractors the RFP and the overall AWMP procurement process, one meeting for the Package 5 (Z107 and Z108) projects and one meeting for the Package 6 projects.

CONTRACTOR will receive and respond as necessary to inquiries from construction contractors regarding the RFP and procurement process. As necessary, CONTRACTOR will prepare and issue up to six (6) addenda for each RFP in order to correct, clarify, or expand on RFP content.

Deliverables:

- Draft RFP documents including contracting documents
- Final RFP and supporting procurement documents for issuance to prequalified construction contractors as necessary to procure and award all initial package task orders
- Draft and final contracting documents (in coordination with CITY legal staff)
- Two (2) 2-hour pre-proposal meeting (including agenda and materials preparation as needed)
- Responses to RFP inquiries and issuance of up to six (6) addenda for each RFP (as required)

Assumptions:

- CONTRACTOR will provide services described above for the Package 6 projects.
- Procurement services for issuing the Package 5 request for proposals are included within the previously approved budget.

3.2.2 - Proposal Evaluation

CONTRACTOR will conduct an initial review of proposal submittals and facilitate two (2) 2-hour kick-off meeting with CITY evaluation committee and CITY staff to define and direct the proposal evaluation process, two meetings for the Package 5 projects (one for Z106, one for Z107/Z108) and one meeting for the Package 6 projects. CONTRACTOR will conduct an independent evaluation of the technical contents of proposal submittals, including, but not limited to:

- Design approach
- Construction approach
- Scheduling plan
- Safety
- Quality assurance/control
- Public interface

CONTRACTOR will conduct an independent evaluation of the pricing submittals contained in the proposals in terms of unit cost, package cost, and other pricing components as requested in the RFP to assist in determining the competitive unit pricing range for future task orders throughout implementation of the AWMP.

CONTRACTOR will facilitate three (3) 4-hour workshops (two meetings for the Package 5 projects and one meeting for the Package 6 projects) attended by the evaluation committee and other CITY staff as required to discuss the findings of the evaluation committee and develop a ranking of construction contractors' proposal submittals for the award of initial task order packages.

CONTRACTOR will prepare draft and final versions of a summary report that describes the proposal evaluation process and findings, two reports for the Package 5 projects and one report for the Package 6 projects.

Deliverables:

- Three (3) 2-hour proposal evaluation kick-off meeting and three (3) 4-hour proposal evaluation findings meeting (including agenda and materials preparation as needed)
- Draft and final proposal evaluation summary report, two reports for the Package 5 projects and one report for the Package 6 projects
- City Council meeting materials support for the award of Package 5 and Package 6 projects (assumes up to three council award meetings)

Assumptions:

- CONTRACTOR will provide services described for up to three (3) procurement packages: two for Package 5 and one for Package 6.

3.2.3 - Contract Negotiations

CONTRACTOR will support CITY in negotiating contracts for the Package 5 and Package 6 child CIP project contract agreements with construction contractors. As necessary, CONTRACTOR will work with CITY legal to develop modified language for contracting documents in response to negotiation outcomes.

CONTRACTOR will facilitate meetings attended by CITY legal and CITY staff to negotiate terms of contractor delivery of the initial task order packages.

Deliverables

- Meeting agenda and summaries for contract negotiation meetings
- Modified contracting documents (supported by CITY legal staff)

Assumptions

- Assumes the projects associated with the Package 5 and Package 6 RFPs will be distributed among up to six (6) individual construction contracts.
- Assumes up to two (2) negotiation meetings for each construction contract.

3.2.4 - Authorization of Construction Contract Award

CONTRACTOR will facilitate preparation of CITY's recommendation for City Council to authorize and approve the contract agreement for each construction contractor selected for the Package 5 and 6 projects.

CONTRACTOR will facilitate preparation of CITY’s recommendation for City Council to award the negotiated agreements.

SUBTASK 3.3 Environmental Support

This subtask is to prepare environmental documentation for project areas Z14010091 and Z14010093 of the Accelerated Water Meter Project (AWMP) and Distribution Main Replacement Program. CONTRACTOR'S subconsultant, Environmental Science Associates (ESA), will prepare a Tiered Initial Study (IS) that will evaluate the proposed project as a subsequent project within the scope of the 2035 City of Sacramento General Plan (2035 General Plan) Master Environmental Impact Report (EIR) consistent with California Environmental Quality Act (CEQA) Guidelines section 15177.

CONTRACTOR'S subconsultant will use the City's IS Checklist template to prepare the Tiered IS for these two projects. It is assumed that the CITY will take care of the noticing and consultation requirements for Assembly Bill (AB) 52.

3.3.1 - Administrative Draft Tiered Initial Study

CONTRACTOR'S subconsultant will prepare an administrative draft Tiered IS for CITY and CONTRACTOR review and comment. The administrative draft Tiered IS will include a project description based on information provided by CITY and CONTRACTOR and will be prepared using the City's IS Checklist template. Each resource topic will: (1) present standards of significance; (2) summarize the analysis under the 2035 General Plan MEIR including cumulative impacts; (3) discuss project-specific impacts; and (4) identify any potentially new or additional project-specific significant environmental effects that were not analyzed in the 2035 General Plan Master EIR and any mitigation measures that may avoid or mitigate the identified effects to a less-than-significant level, if necessary. The air quality analysis will include a general discussion of potential temporary construction air emissions. The CONTRACTOR'S subconsultant will model short-term emissions attributable to the proposed project. Project construction emissions will be estimated based on construction data (e.g., duration of construction, project phasing, amount of earth disturbed, and types and number of equipment to be used). Biological resource analyses will be based on the September 2, 2016 *Biological Resources Document - Accelerated Water Meter Project* (biological resources technical memorandum), and information collected for the South Land Park and Richmond Grove Mitigated Negative Declaration (MND). Cultural resource evaluation will be based the Cultural Resources Inventory Report being prepared for the proposed project (see Subtask 1.2).

Assumptions:

- Noticing and consultation requirements for Assembly Bill (AB) 52 will be done by the CITY

Deliverables:

- Electronic version in MS Word and pdf of the administrative draft Tiered IS

3.3.2 - Tiered IS Cultural Resources Technical Report

CONTRACTOR'S subconsultant will conduct a cultural resources study and prepare a cultural resources technical report in support of project compliance with CEQA. The updated analysis will include, to the greatest extent feasible, incorporation of the information provided in the cultural resources technical reports completed for the other phases of the Project. CONTRACTOR'S subconsultant will complete the following tasks:

1) **Archival Review**. CONTRACTOR'S subconsultant will conduct supplemental records searches at the North Central Information Center (NCIC) and Northwest Information Center (NWIC) of the California Historical Resources Information Center (CHRIS) to acquire documentation of previously recorded archaeological resources and previous cultural resources studies conducted in and within ½ mile of the project area. The research will include a review of historic topographic maps and aerial photography, and will provide information regarding the potential sensitivity of the project area for cultural resources. These supplemental records searches will only cover areas not covered by records searches from previous phases of the Project. CONTRACTOR'S subconsultant will also request, from the California Native American Heritage Commission (NAHC), a review of the NAHC's Sacred Lands File for the project area.

2) **Technical Reports**. CONTRACTOR'S subconsultant will prepare a Cultural Resources Inventory Report (CRIR) and, if required, a Post-Review Discovery Plan (PRDP). The CRIR will document the methods and findings of the CHRIS records searches, other archival research, any Native American coordination (to be conducted by the CITY), and will provide recommendations for project implementation. If authorized by the CITY, CONTRACTOR'S subconsultant will also prepare a PRDP that will present protocol for treatment of any previously unidentified cultural resources identified during project implementation. The PRDP will be based on the PRDP from the previous phase of the AWMP. CONTRACTOR'S subconsultant will submit one electronic draft copy of each document to the CITY for review. CONTRACTOR'S subconsultant will prepare a final version of each document, incorporating one round of comments, and provide one electronic copy of each final version to the CITY. CONTRACTOR'S subconsultant will provide a copy of each document to the NCIC and NWIC after CITY approval of the documents. This scope assumes that no cultural resources that have not been previously evaluated for California Register-eligibility are in the project area and that, therefore, no cultural resources will need to be evaluated to see if they qualify as an historical resource or unique archaeological resource, pursuant to CEQA.

Deliverables:

- Electronic version in MS Word and pdf of the Cultural Resources Inventory Report
- Electronic version in MS Word and pdf of the Post-Review Discovery Plan

Assumptions:

- No cultural resources that have not been previously evaluated for California Register-eligibility are in the project area.
- The proposed project does not have the potential to result in indirect impacts to cultural resources. Therefore, the proposed project areas will comprise the project footprint.
- Any required Native American correspondence/consultation will be conducted by the CITY, who will provide the results to ESA for completion of the CRIR and PRDP.

3.3.3 - Tiered Initial Study and Determination of Consistency

Based on comments received on the administrative draft Tiered IS, CONTRACTOR'S subconsultant will revise the document and provide a screencheck Tiered IS to CITY and CONTRACTOR to confirm that agreed to revisions have been incorporated. In the event that no new impacts or necessary mitigation measures are identified in the Tiered IS, pursuant to CEQA Guidelines section 15177(b)(3), CONTRACTOR'S subconsultant will prepare a Determination of Consistency that will include the relevant subsections and requirements of CEQA Guidelines section 15177 and will be provided to the CITY along with the Tiered IS for inclusion in the City's staff report.

Deliverables:

- Electronic version in MS Word pdf of the screencheck draft IS
- Electronic version in MS Word and pdf of draft IS
- Electronic version in MS Word and pdf of Determination of Consistency

3.3.4 - [Optional] Tiered Initial Study and Notice of Availability to Adopt a Mitigated Negative Declaration and Final Mitigated Negative Declaration

This task will only be authorized by DOU. In the event that new impacts or mitigation measures are identified in the Tiered IS, CONTRACTOR'S subconsultant will prepare a Notice of Intent (NOI) to Adopt a MND for public circulation. CONTRACTOR'S subconsultant will also prepare the Notice of Completion (NOC) and will deliver the draft IS along with the NOC to the State Clearinghouse to initiate the 30-day public review period. It is assumed that the CONTRACTOR'S subconsultant will deliver the IS and NOI to Adopt a MND to the State Clearinghouse and will arrange for publication of the notice in the Sacramento Bee. It is assumed that the CITY will distribute the draft Tiered IS and NOI to Adopt a MND to Responsible and Trustee agencies and other interested parties. CONTRACTOR'S subconsultant will work with CITY to prepare a distribution list. It is assumed that CITY of Sacramento will post availability of the draft Tiered IS and NOI to Adopt a MND (or ND) with the Sacramento County Clerk and place the notice in the newspaper. CONTRACTOR'S subconsultant will mail the NOI to agencies and interested members of the public based on the distribution list.

Following close of the public comment period, CONTRACTOR'S subconsultant will review comments received and prepare a memorandum summarizing the general issues raised and responses to those issues. As part of this task and if needed, CONTRACTOR'S subconsultant will prepare a Mitigation Monitoring and Reporting Program (MMRP) which will summarize any additional mitigation measures recommended in the Tiered IS. The MMRP will be in table format and will include mitigation measures, timing of the action and parties responsible for implementation and monitoring. Following CITY and CONTRACTOR review, CONTRACTOR'S subconsultant will revise the memorandum and the MMRP and prepare the information in the form of an Errata to be included with Tiered IS and NOI to Adopt a MND for Sacramento City Council consideration. It is assumed that the CITY will prepare the Notice of Determination (NOD) and file it with the State Clearinghouse, and County Clerk's office and will pay applicable California Department of Fish and Wildlife fees, if any are required.

Assumptions:

- CONTRACTOR'S subconsultant will deliver the IS and NOI to Adopt a MND to the State Clearinghouse and will arrange for publication of the notice in the Sacramento Bee.
- CITY will distribute the draft Tiered IS and NOI to Adopt a MND to Responsible and Trustee agencies and other interested parties.
- CITY will post availability of the draft Tiered IS and NOI to Adopt a MND (or ND) with the Sacramento County Clerk and place the notice in the newspaper.
- CITY will prepare the Notice of Determination (NOD) and file it with the State Clearinghouse, and County Clerk's office.
- CITY will pay applicable California Department of Fish and Wildlife fees, if any are required.

Deliverables:

- Electronic version in MS Word and pdf of draft IS and NOI to Adopt a MND
- 15 paper copies of the draft IS and NOI to Adopt a MND and 30 CDs (15 for the Clearinghouse and 15 to distribute)
- NOC
- Electronic version in MS Word and pdf of the draft memorandum summarizing comments received and responses
- Electronic version in MS Word and pdf of the MMRP (if needed)
- Errata including comment summary, any changes to the IS and final MMRP (if needed) (3 paper copies and electronic version in MS Word, pdf and CD with complete MND (or ND) document)

SUBTASK 3.4 Cultural and Archaeological Services

3.4.1 - Workforce Training for Archaeological Monitoring

CONTRACTOR'S subconsultant, ESA, will provide workforce training to support implementation of the Worker Environmental Awareness Program plan cultural resources component as described in the *City of Sacramento Accelerated Water Meter Project Post-Review Discover Plan*. The workforce training consist of a short (15 minute or less) presentation to be delivered by a qualified archaeologist to all construction personnel and staff to cover procedures to be followed if archaeological materials are encountered during Project-related construction activities. An allowance of up to 4-hrs per project for the Package 5 and 6 projects is allocated for this subtask. CONTRACTOR and ESA assume that no more than two training sessions per project are necessary for training all construction personnel. Construction contractor is responsible for identifying and scheduling all construction personnel for the training.

SCHEDULE

The Work described in this scope of services above is through December 31, 2020. It has been assumed that CITY comments on deliverables will be provided within 2 weeks of each draft submittal.

COST

Cost for this scope of services is detailed in the attached budget table, Attachment 9 to Exhibit B. Costs will be billed on a monthly basis on a time and materials not-to-exceed basis. Hourly rates are as shown in the attached Fee Schedule and are subject to annual adjustments. DOU's Program Manager may approve by email subsequent reallocation between tasks within the authorized budget.

Additional Contract Provisions Applicable to this Project

CITY shall furnish CONTRACTOR available studies, reports and other data pertinent to CONTRACTOR's services; obtain or authorize CONTRACTOR to obtain or provide additional reports and data as required; furnish to CONTRACTOR services of others required for the performance of CONTRACTOR's services hereunder, and CONTRACTOR shall be entitled to use and rely upon all such information and services provided by CITY or others in performing CONTRACTOR's services under this Agreement.

CONTRACTOR has no control over the cost of labor, materials, equipment, or services, or the schedules furnished by others, or over the way CITY's pumps, plants and/or associated processes, and distribution system are operated and/or maintained. Data projections and estimates are based on CONTRACTOR's opinion based on experience and judgment. CONTRACTOR cannot and does not guarantee that actual costs and/or quantities realized will not vary from the data projections and estimates prepared by CONTRACTOR and CONTRACTOR does not and will not be liable to and/or indemnify CITY and/or any third party related to any inconsistencies between CONTRACTOR's data projections and estimates and actual costs and/or quantities realized by CITY and/or any third party in the future.

The services to be performed by CONTRACTOR are intended solely for the benefit of CITY. No person or entity not a signatory to this Agreement shall be entitled to rely on CONTRACTOR's performance of its services hereunder, and no right to assert a claim against CONTRACTOR by assignment of indemnity rights or otherwise shall accrue to a third party as a result of this Agreement or the performance of CONTRACTOR'S services hereunder.

Engineers...Working Wonders With Water™

City of Sacramento, California
AWMP Program Management Services

AWMP Year 4 (FY19): Fee Estimate	Carollo Engineers [1]																10 months (FY2019) 9/18 - 6/19
Program Management Services	Program Dir.	Program Advisor QA/QC[2]	Program Mgr.[2]	Controls / Sys Integ Lead[2]	Project Controls Support	PC & Proc. Support	GIS	Procrmt Lead[2]	Engr Lead[2]	Cost Estimator	Engr Coord.	Project Mngtmt	Engr Support	Engr Support	Prj. Admin.	CAD / Desig		
	Cleveland	Buss / Vanier	James	Baker	Crossley	Wilner	Christensen	Rhorer	Gillogly	Shankel	Weintraub	Peterson	Eckard	Burnitt / Lamb	Admin & Intern	CAD / Dsgn	**Total Hours**	**Total Labor Cost**
Task Description	$ 277	$ 277	$ 257	$ 277	$ 217	$ 217	$ 177	$ 277	$ 277	$ 257	$ 217	$ 217	$ 177	$ 177	$ 117	$ 159	**Hrs**	**$**
Phase 2 AWMP Implementation																		
Task 1.0 Program Management	**80**	**80**	**846**	**327**	**780**	**770**	**1,723**	**130**	**244**	**0**	**1,385**	**0**	**337**	**200**	**1,723**	**20**	**8,644**	**$ 1,700,173**
Subtasks 1.1 - 1.5 Program-Wide Support	80	80	842	327	780	770	1,723				1,030		337	200	1,723	20	7,912	$ 1,518,328
Subtask 1.5.7 Issues Response Plan Implementation			4						4		8						16	$ 3,876
Subtask 1.6 Engineering services during constr.								130	240		347						717	$ 177,970
Task 2.0 Transportation & Travel Expenses	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**
Lodging, parking, tolls, mileage, airfare																		
Tasks 3.0 Project-Specific Support	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**217**	**0**	**8**	**347**	**347**	**1,387**	**0**	**0**	**0**	**2,305**	**$ 458,908**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt								217		8	347	347	1,387				2,305	$ 458,908
Subtask 3.3 - 3.4 Enviro & Cultural Support																	0	$ -
Subtask 3.3.4 [optional] Tiered IS, NOA and MND																	0	$ -
PROGRAM IMPLEMENTATION TOTAL	**80**	**80**	**846**	**327**	**780**	**770**	**1,723**	**347**	**244**	**8**	**1,731**	**347**	**1,723**	**200**	**1,723**	**20**	**10,949**	**$ 2,159,081**
Percent Commitment (ave/month):	5%	5%	49%	19%	45%	44%	99%	20%	14%	0%	100%	20%	99%	12%	99%	1%		

[1] Rates are based on the 2018 Carollo Fee Schedule escalated 2%.

[2] Substitutions for core team members are allowed per written approval from the City.

City of Sacramento, California
AWMP Program Management Services

AWMP Year 4 (FY19): Fee Estimate	Woodard & Curran (WC) [1]												6 months (FY2019) 1/19 - 6/19	CTS	Arrow	Blackburn	Bennett
Program Management Services	Project Manager	Package 4/6 Design Manager	Package 5 Design Manager	Project Engineer	QA/QC	Enviro Support	Financial Support	CAD	Admin	**Total Hours**	**Total Labor Costs**	**Total Expenses**	**Total Cost**	**Survey Mapping**	**Potholing**	**Geotech**	**Trenchless Design**
	Matson (EPS-13)	Brown (EPS-6)	(EPS-6)	Randeni/ Kraetsch (EPS-2)	Bichette (EPS-9)	Dumas (EPS-10)	Wilcox (EPS-6)	Jung (Tech-4)	Thomas (AD-3)								
Task Description	$ 277	$ 235	$ 235	$ 188	$ 277	$ 277	$ 235	$ 161	$ 119	**Hrs**	**$**	**$**	**$**	**$**	**$**	**$**	**$**
Phase 2 AWMP Implementation																	
Task 1.0 Program Management	**24**	**128**	**128**	**0**	**0**	**0**	**0**	**0**	**24**	**304**	**69,580**	**-**	**69,580**	**0**	**0**	**0**	**0**
Subtasks 1.1 - 1.5 Program-Wide Support	24	24	24						24	96	20,784	-	20,784				
Subtask 1.5.7 Issues Response Plan Implementation										0	-	-	-				
Subtask 1.6 Engineering services during constr.		104	104							208	48,797	-	48,797				
Task 2.0 Transportation & Travel Expenses	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**600**	**660**	**0**	**0**	**0**	**0**
Lodging, parking, tolls, mileage, airfare										0	-	600	660				
Tasks 3.0 Project-Specific Support	**0**	**38**	**0**	**0**	**0**	**0**	**0**	**57**	**0**	**95**	**18,101**	**2,000**	**20,301**	**0**	**0**	**0**	**0**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt		38						57		95	18,101	2,000	20,301				
Subtask 3.3 - 3.4 Enviro & Cultural Support										0	-	-	-				
Subtask 3.3.4 [optional] Tiered IS, NOA and MND										0	-	-	-				
PROGRAM IMPLEMENTATION TOTAL	**24**	**166**	**128**	**0**	**0**	**0**	**0**	**57**	**24**	**399**	**$ 87,681**	**$ 2,600**	**$ 90,541**	**0**	**0**	**0**	**0**

Percent Commitment (ave/month):

City of Sacramento, California
AWMP Program Management Services

AWMP Year 4 (FY19): Fee Estimate	Environmental Science Associates (ESA) [1]														12 months (FY2019) 7/18 - 6/19
Program Management Services	Senior Director III	Director II	Manag. Assoc. II	Manag. Assoc. I	Senior Assoc. II	Senior Assoc. I	Assoc. III	Assoc. II	Project Tech III	Project Tech II	Project Tech II	**Total Hours**	**Total Labor Costs**	**Total Expenses**	**Total Cost**
Task Description	$ 277	$ 230	$ 194	$ 179	$ 163	$ 153	$ 138	$ 128	$ 122	$ 102	$ 87	**Hrs**	**$**	**$**	**$**
Phase 2 AWMP Implementation															
Task 1.0 Program Management	**38**	**2**	**2**	**32**	**8**	**64**	**20**	**50**	**6**	**20**	**4**	**246**	**40,449**	**2,070**	**42,519**
Subtasks 1.1 - 1.5 Program-Wide Support	38	2	2	32	8	64	20	50	6	20	4	246	40,449	2,070	42,519
Subtask 1.5.7 Issues Response Plan Implementation												0	-	-	-
Subtask 1.6 Engineering services during constr.												0	-	-	-
Task 2.0 Transportation & Travel Expenses	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**-**
Lodging, parking, tolls, mileage, airfare												0	-	-	-
Tasks 3.0 Project-Specific Support	**12**	**0**	**0**	**0**	**0**	**16**	**0**	**8**	**0**	**6**	**4**	**46**	**7,756**	**-**	**-**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt												0	-	-	-
Subtask 3.3 - 3.4 Enviro & Cultural Support												0	-	-	-
Subtask 3.3.4 [optional] Tiered IS, NOA and MND	12					16		8		6	4	46	7,756	-	-
PROGRAM IMPLEMENTATION TOTAL	**50**	**2**	**2**	**32**	**8**	**80**	**20**	**58**	**6**	**26**	**8**	**292**	**$ 48,205**	**$ 2,070**	**$ 42,519**

Percent Commitment (ave/month):

City of Sacramento, California
AWMP Program Management Services

AWMP Year 4 (FY19): Fee Estimate	KMP Strategies [1]						9 months (FY2019) 10/18 - 6/19	Ogilvy Public Relations (OPR)									6 months (FY2019) 1/19 - 6/19
Program Management Services	Project Manager	Project Assistant	Project Assistant	Total Hours	Total Labor Costs	Total Expenses	Total Cost	Sr. VP	Project Manager	Design Manager	Production & Adveritsing	PR Support Staff	Admin Support	Total Hours	Total Labor Costs	Total Expenses	Total Cost
	Modeste	Painter							Manke	Designer	Childs/ Nybo	Pollo/ Blanco	Intern				
Task Description	$ 158	$ 122	$ 77		$	$	$	$ 235	$ 180	$ 115	$ 160	$ 140	$ 65		$	$	$
Phase 2 AWMP Implementation																	
Task 1.0 Program Management	**1,280**	**1,123**	**228**	**2,631**	**$ 357,265**	**$ 18,000**	**$ 375,265**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ (55,000)**	**$ (55,000)**
Subtasks 1.1 - 1.5 Program-Wide Support	1,256	1,107	228	2,591	$ 351,512	$ 6,000	$ 357,512		0	0	0	0	0	0	$ -	$ (55,000)	$ (55,000)
Subtask 1.5.7 Issues Response Plan Implementation	24	16		40	$ 5,753	$ -	$ 5,753		0	0				0	$ -	$ -	$ -
Subtask 1.6 Engineering services during constr.				0	$ -	$ 12,000	$ 12,000							0	$ -	$ -	$ -
Task 2.0 Transportation & Travel Expenses	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**
Lodging, parking, tolls, mileage, airfare				0	$ -	$ -	$ -								$ -	$ -	$ -
Tasks 3.0 Project-Specific Support	**0**	**0**	**0**	**0**	**$ -**	**$ 12,000**	**$ 12,000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt				0	$ -	$ 12,000	$ 12,000							0	$ -	$ -	$ -
Subtask 3.3 - 3.4 Enviro & Cultural Support				0	$ -	$ -	$ -							0	$ -	$ -	$ -
Subtask 3.3.4 [optional] Tiered IS, NOA and MND				0	$ -	$ -	$ -							0	$ -	$ -	$ -
PROGRAM IMPLEMENTATION TOTAL	**1,280**	**1,123**	**228**	**2,631**	**$ 357,265**	**$ 30,000**	**$ 387,265**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ (55,000)**	**$ (55,000)**
Percent Commitment (ave/month):	82%	72%	15%														

City of Sacramento, California
AWMP Program Management Services

AWMP Year 4 (FY19): Fee Estimate												FY2019
Program Management Services	**Total Hours Carollo+ WC, KMP, OPR, ESA**	**Total Labor Cost Carollo+ WC, KMP, OPR, ESA**	**Subconsultant Expenses WC, KMP, OPR, ESA**	**Other Direct Costs (ODC)**								
				Minor Subs & Software Licenses	**Markup** (WC)	**Markup** (KMP&OPR)	**Markup** (Other Subs)	**PECE**	**Reproductions**	**Travel**	**Total ODC Cost**	**Total Cost**
Task Description	**Hrs**	**$**	**$**	$	5%	7%	10%		$	$	**$**	**$**
Phase 2 AWMP Implementation												
Task 1.0 Program Management	**11,825**	**$ 2,167,468**	**$ (34,930)**	**$ 10,000**	**$ 3,479**	**$ 22,419**	**$ 5,252**	**$ 103,161**	**$ -**	**$ -**	**$ 144,311**	**$ 2,276,849**
Subtasks 1.1 - 1.5 Program-Wide Support	10,845	$ 1,931,073	$ (46,930)	$ 10,000	$ 1,039	$ 21,176	$ 5,251.91	$ 94,418	$ -	$ -	$ 131,885	$ 2,016,028
Subtask 1.5.7 Issues Response Plan Implementation	56	$ 9,629	$ -	$ -	$ -	$ 403	$ -	$ 191	$ -	$ -	$ 594	$ 10,222
Subtask 1.6 Engineering services during constr.	925	$ 226,766	$ 12,000	$ -	$ 2,439.84	$ 840	$ -	$ 8,553	$ -	$ -	$ 11,833	$ 250,599
Task 2.0 Transportation & Travel Expenses	**0**	**$ -**	**$ 600**	**$ -**	**$ 33**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 20,000**	**$ 20,033**	**$ 20,633**
Lodging, parking, tolls, mileage, airfare	0	$ -	$ 600	$ -	$ 33	$ -	$ -	$ -	$ -	$ 20,000	$ 20,033	$ 20,633
Tasks 3.0 Project-Specific Support	**2,446**	**$ 484,765**	**$ 14,000**	**$ -**	**$ 1,015**	**$ 840**	**$ -**	**$ 27,504**	**$ 1,200**	**$ -**	**$ 30,559**	**$ 529,323**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt	2,400	$ 477,008	$ 14,000	$ -	$ 1,015.05	$ 840	$ -	$ 27,504	$ 1,200	$ -	$ 30,559	$ 521,567
Subtask 3.3 - 3.4 Enviro & Cultural Support	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtask 3.3.4 [optional] Tiered IS, NOA and MND	46	$ 7,756	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,756
PROGRAM IMPLEMENTATION TOTAL	**14,271**	**$ 2,652,233**	**$ (20,330)**	**$ 10,000**	**$ 4,527**	**$ 23,259**	**$ 5,252**	**$ 130,665**	**$ 1,200**	**$ 20,000**	**$ 194,903**	**2,826,805**

Percent Commitment (ave/month):

City of Sacramento, California
AWMP Program Management Services

AWMP Year 5 (FY20): Fee Estimate	Carolo Engineers [1]																	
Program Management Services	Program Dir.	Program Advisor QA/QC[2]	Program Mgr.[2]	Controls / Sys Integ Lead[2]	Project Controls Support	PC & Proc. Support	GIS	Procrmt Lead[2]	Engr Lead[2]	Cost Estimator	Engr Coord.	Project Mngtmt	Engr Support	Engr Support	Prj. Admin.	CAD / Desig	**Total Hours**	**Total Labor Cost**
	Cleveland	Buss / Vanier	James	Baker	Crossley	Wilner	Christensen	Rhorer	Gillogly	Shankel	Weintraub	Peterson	Eckard	Burnitt / Lamb	Admin & Intern	CAD / Dsgn		
Task Description	$ 283	$ 283	$ 262	$ 283	$ 222	$ 222	$ 181	$ 283	$ 283	$ 262	$ 222	$ 222	$ 181	$ 181	$ 120	$ 162	**Hrs**	**$**
Phase 2 AWMP Implementation																		
Task 1.0 Program Management	**48**	**24**	**801**	**392**	**936**	**924**	**1,548**	**416**	**296**	**8**	**1,444**	**416**	**1,028**	**240**	**1,428**	**20**	**9,969**	**$ 2,053,150**
Subtasks 1.1 - 1.5 Program-Wide Support	48	24	793	392	936	924	1,548	156		8	1,028	208	612	240	1,428	20	8,365	$ 1,680,121
Subtask 1.5.7 Issues Response Plan Implementation			8						8								16	$ 4,361
Subtask 1.6 Engineering services during constr.								260	288		416	208	416				1,588	$ 368,668
Task 2.0 Transportation & Travel Expenses	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**
Lodging, parking, tolls, mileage, airfare																	0	$ -
Tasks 3.0 Project-Specific Support	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**$ 2,097**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt																	0	$ -
Subtask 3.3 - 3.4 Enviro & Cultural Support																	0	$ -
Subtask 3.3.4 [optional] Tiered IS, NOA and MND			8														8	$ 2,097
PROGRAM IMPLEMENTATION TOTAL	**48**	**24**	**809**	**392**	**936**	**924**	**1,548**	**416**	**296**	**8**	**1,444**	**416**	**1,028**	**240**	**1,428**	**20**	**9,977**	**$ 2,055,248**
Percent Commitment (ave/month):	2%	1%	39%	19%	45%	44%	74%	20%	14%	0%	69%	20%	49%	12%	69%	1%		

[1] Future rates are estimated based on 2% escalation. **[2] Substitutions for core team members are allowed per written approval from the City.**

City of Sacramento, California
AWMP Program Management Services

AWMP Year 5 (FY20): Fee Estimate	Woodard & Curran (WC) [1]												12 months (FY2020)	CTS	Arrow	Blackburn	Bennett
Program Management Services	Project Manager	Package 4/6 Design Manager	Package 5 Design Manager	Project Engineer	QA/QC	Enviro Support	Financial Support	CAD	Admin	**Total Hours**	**Total Labor Costs**	**Total Expenses**	**Total Cost**	**Survey Mapping**	**Potholing**	**Geotech**	**Trenchless Design**
	Matson (EPS-13)	Brown (EPS-6)	Haug (EPS-6)	Randeni/ Kraetsch (EPS-2)	Bichette (EPS-9)	Dumas (EPS-10)	Wilcox (EPS-6)	Jung (Tech-4)	Thomas (AD-3)								
Task Description	$ 283	$ 239	$ 239	$ 191	$ 283	$ 283	$ 239	$ 164	$ 122	**Hrs**	**$**	**$**	**$**	**$**	**$**	**$**	**$**
Phase 2 AWMP Implementation																	
Task 1.0 Program Management	**96**	**152**	**152**	**0**	**0**	**0**	**0**	**0**	**48**	**448**	**105,755**	**-**	**105,755**	**0**	**0**	**10,000**	**5,000**
Subtasks 1.1 - 1.5 Program-Wide Support	96	48	48						48	240	55,982	-	55,982			10,000	5,000
Subtask 1.5.7 Issues Response Plan Implementation										0	-	-	-				
Subtask 1.6 Engineering services during constr.		104	104							208	49,773	-	49,773				
Task 2.0 Transportation & Travel Expenses	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**600**	**660**	**0**	**0**	**0**	**0**
Lodging, parking, tolls, mileage, airfare										0	-	600	660				
Tasks 3.0 Project-Specific Support	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**-**	**0**	**0**	**0**	**0**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt										0	-	-	-	0	0	0	0
Subtask 3.3 - 3.4 Enviro & Cultural Support										0	-	-	-				
Subtask 3.3.4 [optional] Tiered IS, NOA and MND										0	-	-	-				
PROGRAM IMPLEMENTATION TOTAL	**96**	**152**	**152**	**0**	**0**	**0**	**0**	**0**	**48**	**448**	**$ 105,755**	**$ 600**	**$ 106,415**	**0**	**0**	**10,000**	**5,000**

Percent Commitment (ave/month):

City of Sacramento, California
AWMP Program Management Services

AWMP Year 5 (FY20): Fee Estimate	Environmental Science Associates (ESA) [1]														12 months (FY2020)
Program Management Services	Senior Director	Director	Managing Assoc. II	Managing Assoc. I	Senior Assoc. II	Senior Assoc. I	Assoc. III	Assoc. II	Project Tech III	Project Tech II	Project Tech II	**Total Hours**	**Total Labor Costs**	**Total Expenses**	**Total Cost**
Task Description	$ 283	$ 234	$ 198	$ 182	$ 166	$ 156	$ 140	$ 130	$ 125	$ 104	$ 88	**Hrs**	**$**	**$**	**$**
Phase 2 AWMP Implementation															
Task 1.0 Program Management	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**-**
Subtasks 1.1 - 1.5 Program-Wide Support												0	-	-	-
Subtask 1.5.7 Issues Response Plan Implementation												0	-	-	-
Subtask 1.6 Engineering services during constr.												0	-	-	-
Task 2.0 Transportation & Travel Expenses	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**200**	**200**
Lodging, parking, tolls, mileage, airfare												0	-	200	200
Tasks 3.0 Project-Specific Support	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**-**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt												0	-	-	-
Subtask 3.3 - 3.4 Enviro & Cultural Support												0	-	-	-
Subtask 3.3.4 [optional] Tiered IS, NOA and MND												0	-	-	-
PROGRAM IMPLEMENTATION TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ 200**	**$ 200**

Percent Commitment (ave/month):

City of Sacramento, California
AWMP Program Management Services

AWMP Year 5 (FY20): Fee Estimate	KMP Strategies [1]						12 months (FY2020)	Ogilvy Public Relations (OPR) [1]									12 months (FY2020)
Program Management Services	Project Manager	Project Assistant	Project Assistant	Total Hours	Total Labor Costs	Total Expenses	Total Cost	Sr. VP	Project Manager	Design Manager	Production & Adveritsing	PR Support Staff	Admin Suppor t	Total Hours	Total Labor Costs	Total Expenses	Total Cost
	Modeste	Painter							Manke	Designer	Childs/ Nybo	Pollo/ Blanco	Intern				
Task Description	$ 161	$ 125	$ 78		$	$	$	$ 240	$ 184	$ 117	$ 163	$ 143	$ 66		$	$	$
Phase 2 AWMP Implementation																	
Task 1.0 Program Management	**1,670**	**1,495**	**300**	**3,465**	**$ 479,364**	**$ 32,000**	**$ 511,364**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**
Subtasks 1.1 - 1.5 Program-Wide Support	1,654	1,479	300	3,433	$ 474,787	$ 12,000	$ 486,787		0	0	0	0	0	0	$ -	$ -	$ -
Subtask 1.5.7 Issues Response Plan Implementation	16	16		32	$ 4,578	$ -	$ 4,578		0	0		0		0	$ -	$ -	$ -
Subtask 1.6 Engineering services during constr.				0	$ -	$ 20,000	$ 20,000							0	$ -	$ -	$ -
Task 2.0 Transportation & Travel Expenses	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**
Lodging, parking, tolls, mileage, airfare				0	$ -	$ -	$ -							0	$ -	$ -	$ -
Tasks 3.0 Project-Specific Support	**0**	**0**	**0**	**0**	**$ -**	**$ 25,000**	**$ 25,000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt				0	$ -	$ 25,000	$ 25,000							0	$ -	$ -	$ -
Subtask 3.3 - 3.4 Enviro & Cultural Support				0	$ -	$ -	$ -								$ -		$ -
Subtask 3.3.4 [optional] Tiered IS, NOA and MND				0	$ -	$ -	$ -							0	$ -	$ -	$ -
PROGRAM IMPLEMENTATION TOTAL	**1,670**	**1,495**	**300**	**3,465**	**$ 479,364**	**$ 57,000**	**$ 536,364**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**
Percent Commitment (ave/month):	80%	72%	14%														

City of Sacramento, California
AWMP Program Management Services

AWMP Year 5 (FY20): Fee Estimate

Task	Program Management Services Description	Total Hours Carollo+ WC, KMP, OPR, ESA	Total Labor Cost Carollo+ WC, KMP, OPR, ESA	Subconsultant Expenses WC, KMP, OPR, ESA	Other Direct Costs (ODC) Minor Subs & Software Licenses	Markup (WC)	Markup (KMP&OPR)	Markup (Other Subs)	PECE	Reproductions	Travel	Total ODC Cost	12 months (FY2020) Total Cost
		Hrs	$	$	$	5%	7%	10%		$	$	$	$
Phase 2 AWMP Implementation													
	Task 1.0 Program Management	**13,882**	**$ 2,638,269**	**$ 32,000**	**$ 25,000**	**$ 5,288**	**$ 35,796**	**$ 4,000**	**$ 121,155**	**$ 800**	**$ -**	**$ 192,038**	**$ 2,862,307**
	Subtasks 1.1 - 1.5 Program-Wide Support	12,038	$ 2,210,890	$ 12,000	$ 25,000	$ 2,799	$ 34,075	$ 4,000.00	$ 101,824	$ -	$ -	$ 167,699	$ 2,390,588
	Subtask 1.5.7 Issues Response Plan Implementation	48	$ 8,939	$ -	$ -	$ -	$ 320	$ -	$ -	$ -	$ -	$ 320	$ 9,260
	Subtask 1.6 Engineering services during constr.	1,796	$ 418,441	$ 20,000	$ -	$ 2,488.64	$ 1,400	$ -	$ 19,330	$ 800	$ -	$ 24,019	$ 462,459
	Task 2.0 Transportation & Travel Expenses	**0**	**$ -**	**$ 800**	**$ 15,000**	**$ 33**	**$ -**	**$ 1,520**	**$ -**	**$ -**	**$ 24,000**	**$ 40,553**	**$ 41,353**
	Lodging, parking, tolls, mileage, airfare	0	$ -	$ 800	$ 15,000	$ 33	$ -	$ 1,520	$ -	$ -	$ 24,000	$ 40,553	$ 41,353
	Tasks 3.0 Project-Specific Support	**8**	**$ 2,097**	**$ 25,000**	**$ -**	**$ -**	**$ 1,750**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,750**	**$ 28,847**
	Subtasks 3.1 - 3.2 Engineering Design & Procrmt	0	$ -	$ 25,000	$ -	$ -	$ 1,750	$ -	$ -	$ -	$ -	$ 1,750	$ 26,750
	Subtask 3.3 - 3.4 Enviro & Cultural Support	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtask 3.3.4 [optional] Tiered IS, NOA and MND	8	$ 2,097	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,097
PROGRAM IMPLEMENTATION TOTAL		**13,890**	**$ 2,640,367**	**$ 57,800**	**$ 40,000**	**$ 5,321**	**$ 37,546**	**$ 5,520**	**$ 121,155**	**$ 800**	**$ 24,000**	**$ 234,341**	**2,932,508**

Percent Commitment (ave/month):

City of Sacramento, California
AWMP Program Management Services

AWMP Year 5+ (FY21): Fee Estimate	Carollo Engineers [1]																6 months (FY2021) 07/20 - 12/20
Program Management Services	Program Dir.	Program Advisor QA/QC[2]	Program Mgr.[2]	Controls / Sys Integ Lead[2]	Project Controls Support	PC & Proc. Support	GIS	Procrmt Lead[2]	Engr Lead[2]	Cost Estimator	Engr Coord.	Project Mngtmt	Engr Support	Engr Support	Prj. Admin.	CAD / Desig	**Total Hours**	**Total Labor Cost**
	Cleveland	Buss / Vanier	James	Baker	Crossley	Wilner	Christensen	Rhorer	Gillogly	Shankel	Weintraub	Peterson	Eckard	Burnitt / Lamb	Admin & Intern	CAD / Dsgn		
Task Description	$ 289	$ 289	$ 267	$ 289	$ 226	$ 226	$ 185	$ 289	$ 289	$ 267	$ 226	$ 226	$ 185	$ 185	$ 122	$ 166	**Hrs**	**$**
Phase 2 AWMP Implementation																		
Task 1.0 Program Management	**24**	**12**	**244**	**196**	**468**	**462**	**774**	**72**	**120**	**0**	**618**	**48**	**250**	**120**	**506**	**20**	**3,934**	**$ 824,697**
Subtasks 1.1 - 1.5 Program-Wide Support	24	12	244	196	468	462	774	24	24		514		250	120	506	20	3,638	$ 748,774
Subtask 1.5.7 Issues Response Plan Implementation																	0	$ -
Subtask 1.6 Engineering services during constr.								48	96		104	48					296	$ 75,923
Task 2.0 Transportation & Travel Expenses	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**
Lodging, parking, tolls, mileage, airfare																	0	$ -
Tasks 3.0 Project-Specific Support	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt																	0	$ -
Subtask 3.3 - 3.4 Enviro & Cultural Support																	0	$ -
Subtask 3.3.4 [optional] Tiered IS, NOA and MND																	0	$ -
PROGRAM IMPLEMENTATION TOTAL	**24**	**12**	**244**	**196**	**468**	**462**	**774**	**72**	**120**	**0**	**618**	**48**	**250**	**120**	**506**	**20**	**3,934**	**$ 824,697**
Percent Commitment (ave/month):	2%	1%	23%	19%	45%	44%	74%	7%	12%	0%	59%	5%	24%	12%	49%	2%		

[1] Future rates are estimated based on 2% escalation.

[2] Substitutions for core team members are allowed per written approval from the City.

City of Sacramento, California
AWMP Program Management Services

AWMP Year 5+ (FY21): Fee Estimate	Woodard & Curran (WC) [1]												6 months (FY2021) 07/20 - 12/20	CTS	Arrow	Blackburn	Bennett
Program Management Services	Project Manager	Package 4/6 Design Manager	Package 5 Design Manager	Project Engineer	QA/QC	Enviro Support	Financial Support	CAD	Admin	**Total Hours**	**Total Labor Costs**	**Total Expenses**	**Total Cost**	**Survey Mapping**	**Potholing**	**Geotech**	**Trenchless Design**
	Matson (EPS-13)	Brown (EPS-6)	(EPS-6)	Randeni/ Kraetsch (EPS-2)	Bichette (EPS-9)	Dumas (EPS-10)	Wilcox (EPS-6)	Jung (Tech-4)	Thomas (AD-3)								
Task Description	$ 289	$ 244	$ 244	$ 195	$ 289	$ 289	$ 244	$ 168	$ 124	**Hrs**	**$**	**$**	**$**	**$**	**$**	**$**	**$**
Phase 2 AWMP Implementation																	
Task 1.0 Program Management	**24**	**48**	**48**	**0**	**0**	**0**	**0**	**0**	**24**	**144**	**33,339**	**-**	**33,339**	**0**	**0**	**0**	**0**
Subtasks 1.1 - 1.5 Program-Wide Support	24	48	48						24	144	33,339	-	33,339				
Subtask 1.5.7 Issues Response Plan Implementation										0	-	-	-				
Subtask 1.6 Engineering services during constr.										0	-	-	-				
Task 2.0 Transportation & Travel Expenses	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**600**	**660**	**0**	**0**	**0**	**0**
Lodging, parking, tolls, mileage, airfare										0	-	600	660				
Tasks 3.0 Project-Specific Support	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**-**	**0**	**0**	**0**	**0**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt										0	-	-	-	0	0	0	0
Subtask 3.3 - 3.4 Enviro & Cultural Support																	
Subtask 3.3.4 [optional] Tiered IS, NOA and MND										0	-	-	-				
PROGRAM IMPLEMENTATION TOTAL	**24**	**48**	**48**	**0**	**0**	**0**	**0**	**0**	**24**	**144**	**$ 33,339**	**$ 600**	**$ 33,999**	**0**	**0**	**0**	**0**

Percent Commitment (ave/month):

City of Sacramento, California
AWMP Program Management Services

AWMP Year 5+ (FY21): Fee Estimate	Environmental Science Associates (ESA) [1]														6 months (FY2021) 07/20 - 12/20
Program Management Services	Senior Director	Director	Managing Assoc. II	Managing Assoc. I	Senior Assoc. II	Senior Assoc. I	Assoc. III	Assoc. II	Project Tech III	Project Tech II	Project Tech II	**Total Hours**	**Total Labor Costs**	**Total Expenses**	**Total Cost**
Task Description	$ 289	$ 239	$ 202	$ 186	$ 170	$ 159	$ 143	$ 133	$ 127	$ 106	$ 90	**Hrs**	**$**	**$**	**$**
Phase 2 AWMP Implementation															
Task 1.0 Program Management	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**-**
Subtasks 1.1 - 1.5 Program-Wide Support												0	-	-	-
Subtask 1.5.7 Issues Response Plan Implementation												0	-	-	-
Subtask 1.6 Engineering services during constr.												0	-	-	-
Task 2.0 Transportation & Travel Expenses	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**200**	**200**
Lodging, parking, tolls, mileage, airfare												0	-	200	200
Tasks 3.0 Project-Specific Support	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**-**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt												0	-	-	-
Subtask 3.3 - 3.4 Enviro & Cultural Support															
Subtask 3.3.4 [optional] Tiered IS, NOA and MND												0	-	-	-
PROGRAM IMPLEMENTATION TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ 200**	**$ 200**

Percent Commitment (ave/month):

City of Sacramento, California
AWMP Program Management Services

AWMP Year 5+ (FY21): Fee Estimate	KMP Strategies [1]						6 months (FY2021) 07/20 - 12/20	Ogilvy Public Relations (OPR) [1]									0 months (FY2021)
Program Management Services	Project Manager	Project Assistant	Project Assistant	Total Hours	Total Labor Costs	Total Expenses	Total Cost	Sr. Vice President	Project Manager	Design Manager	Production & Adveritsing	PR Support Staff	Admin Support	Total Hours	Total Labor Costs	Total Expenses	Total Cost
	Modeste	Painter							Manke	Designer	Childs/ Nybo	Pollo/ Blanco	Intern				
Task Description	$ 164	$ 127	$ 80		$	$	$	$ 244	$ 187	$ 120	$ 166	$ 146	$ 68		$	$	$
Phase 2 AWMP Implementation																	
Task 1.0 Program Management	**820**	**728**	**160**	**1,708**	**$ 240,321**	**$ 20,000**	**$ 260,321**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**
Subtasks 1.1 - 1.5 Program-Wide Support	820	728	160	1,708	$ 240,321	$ 20,000	$ 260,321							0	$ -	$ -	$ -
Subtask 1.5.7 Issues Response Plan Implementation				0	$ -	$ -	$ -							0	$ -	$ -	$ -
Subtask 1.6 Engineering services during constr.				0	$ -	$ -	$ -							0	$ -	$ -	$ -
Task 2.0 Transportation & Travel Expenses	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**
Lodging, parking, tolls, mileage, airfare				0	$ -	$ -	$ -							0	$ -	$ -	$ -
Tasks 3.0 Project-Specific Support	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt				0	$ -	$ -	$ -							0	$ -	$ -	$ -
Subtask 3.3 - 3.4 Enviro & Cultural Support					$ -	$ -	$ -										
Subtask 3.3.4 [optional] Tiered IS, NOA and MND				0	$ -	$ -	$ -							0	$ -	$ -	$ -
PROGRAM IMPLEMENTATION TOTAL	**820**	**728**	**160**	**1,708**	**$ 240,321**	**$ 20,000**	**$ 260,321**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ -**	**$ -**
Percent Commitment (ave/month):	79%	70%	15%														

City of Sacramento, California
AWMP Program Management Services

AWMP Year 5+ (FY21): Fee Estimate												6 months (FY2021) 07/20 - 12/20
Program Management Services	**Total Hours Carollo+ WC, KMP, OPR, ESA**	**Total Labor Cost Carollo+ WC, KMP, OPR, ESA**	**Subconsultant Expenses WC, KMP, OPR, ESA**	**Other Direct Costs (ODC)**								
				Minor Subs & Software Licenses	**Markup** (WC)	**Markup** (KMP&OPR)	**Markup** (Other Subs)	**PECE**	**Reproductions**	**Travel**	**Total ODC Cost**	**Total Cost**
Task Description	**Hrs**	**$**	**$**	$	5%	7%	10%		$	$	**$**	**$**
Phase 2 AWMP Implementation												
Task 1.0 Program Management	**5,786**	**$ 1,098,357**	**$ 20,000**	**$ 10,000**	**$ 1,667**	**$ 18,222**	**$ 1,000**	**$ 48,845**	**$ -**	**$ -**	**$ 79,734**	**$ 1,198,091**
Subtasks 1.1 - 1.5 Program-Wide Support	5,490	$ 1,022,434	$ 20,000	$ 10,000	$ 1,667	$ 18,222	$ 1,000.00	$ 45,170	$ -	$ -	$ 76,059	$ 1,118,493
Subtask 1.5.7 Issues Response Plan Implementation	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtask 1.6 Engineering services during constr.	296	$ 75,923	$ -	$ -	$ -	$ -	$ -	$ 3,675	$ -	$ -	$ 3,675	$ 79,598
Task 2.0 Transportation & Travel Expenses	**0**	**$ -**	**$ 800**	**$ -**	**$ 33**	**$ -**	**$ 20**	**$ -**	**$ -**	**$ 12,000**	**$ 12,053**	**$ 12,853**
Lodging, parking, tolls, mileage, airfare	0	$ -	$ 800	$ -	$ 33	$ -	$ 20	$ -	$ -	$ 12,000	$ 12,053	$ 12,853
Tasks 3.0 Project-Specific Support	**0**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Subtasks 3.1 - 3.2 Engineering Design & Procrmt	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtask 3.3 - 3.4 Enviro & Cultural Support			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtask 3.3.4 [optional] Tiered IS, NOA and MND	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
PROGRAM IMPLEMENTATION TOTAL	**5,786**	**$ 1,098,357**	**$ 20,800**	**$ 10,000**	**$ 1,700**	**$ 18,222**	**$ 1,020**	**$ 48,845**	**$ -**	**$ 12,000**	**$ 91,787**	**1,210,944**

Percent Commitment (ave/month):

City of Sacramento, California
AWMP Program Management Services

AWMP Year 4 - 5+: Fee Estimate	FY19 - FY21 (7/18 - 12/20)	FY2019 (7/18 - 6/19)	FY2020 (7/19 - 6/20)	FY2021 (7/20 - 12/20)
Program Management Services	**Total Cost**	**Total Cost**	**Total Cost**	**Total Cost**
Task Description	**$**	**$**	**$**	**$**
Phase 2 AWMP Implementation				
Task 1.0 Program Management Subtasks 1.1 - 1.5 Program-Wide Support Subtask 1.5.7 Issues Response Plan Implementation Subtask 1.6 Engineering services during constr.	**$ 6,337,247**	**$ 2,276,849**	**$ 2,862,307**	**$ 1,198,091**
Task 2.0 Transportation & Travel Expenses Lodging, parking, tolls, mileage, airfare	**$ 74,839**	**$ 20,633**	**$ 41,353**	**$ 12,853**
Tasks 3.0 Project-Specific Support Subtasks 3.1 - 3.2 Engineering Design & Procrmt Subtask 3.3 - 3.4 Enviro & Cultural Support Subtask 3.3.4 [optional] Tiered IS, NOA and MND	**$ 558,171**	**$ 529,323**	**$ 28,847**	**$ -**
PROGRAM IMPLEMENTATION TOTAL	**6,970,257**	**2,826,805**	**2,932,508**	**1,210,944**

Attachment 12 to Exhibit B

Subconsultant Fee Schedules

2018 Sacramento AWMP Rates		
RMC Labor Category (2017	**W&C Labor Category (2018)**	**Rate ($/hour)**
EPS-1	Engineer 1 (E1) Scientist 1 (S1) Geologist 1 (G1) Planner 1 (P1) Technical Specialist 1 (TS1)	157
EPS-2/EPS-3	Engineer 2 (E2) Scientist 2 (S2) Geologist 2 (G2) Planner 2 (P2) Technical Specialist 2 (PS2)	184
EPS-4	Engineer 3 (E3) Scientist 3 (S3) Geologist 3 (G3) Planner 3 (P3) Technical Specialist 3 (TS3)	208
EPS-5	Project Engineer 1 (PE1) Project Specialist 1 (PS1) Project Geologist 1 (PG1) Project Planner 1 (PP1) Project Technical Specialist 1 (PTS1)	212
EPS-6	Project Engineer 2 (PE2) Project Specialist 2 (PS2) Project Geologist 2 (PG2) Project Planner 2 (PP2) Project Technical Specialist 2 (PTS2)	230
EPS-7	Project Manager 1 (PM1) Technical Manager 1 (TM1)	230
EPS-8	Project Manager 2 (PM2) Technical Manager 2 (TM2)	230
EPS-9/EPS-10	Senior Project Manager (SPM) Senior Technical Manager (STM)	272
EPS-11/EPS-12/EPS-13	Senior Technical Practice Leader (STPM)	272
EPS-13/EPS-14	National Practice Leader (NPL) Strategic Business Unit Leader (SBUL)	272
Tech-1	Software Engineer 1 (SE1)	140
Tech-2	Designer 1 (D1)	145
Tech-3	Designer 2 (D2)	155
Tech-4/Tech-5	Designer 3 (D3) Senior Software Developer (SSD)	158
Tech-6/Tech-7	Senior Designer (SD)	170
AD-1/AD-2	Project Assistant (PA)	108
AD-3	Marketing Assistant (MA) Graphic Artist (GA)	117
AD-4/AD-5	Senior Accountant (SA) Billing Manager (BM)	129
AD-6/AD-7	Marketing Manager (MM) Graphics Manager (GM)	150

Note: The individual hourly rates include salary, overhead and profit. Other direct costs (ODCs) such as reproduction, delivery, mileage (as allowed by IRS guidelines), and travel expenses will be billed at actual cost plus 10%. Subconsultants will be billed as actual cost plus 10%. RMC, a Woodard and Curran Company, reserves the right to adjust its hourly rate structure at the beginning of each year for all ongoing contracts.

Project Manager $155
Project Assistant $120
Project Assistant $60

Direct Expenses – billed at cost plus 10%
Mileage – billed at the Federal Mileage Rate

Rate/Fee Schedule

Ogilvy Public Relations

Senior Vice President $235/hour

Project Manager $180/hour

Designer $115/hour

Production & Advertising $160/hour

PR Support Staff $140/hour

Administrative Support Staff $65/hour

Note: This Fee Schedule provided for the purposes of establishing labor rates as listed in Section I, Level III and the following direct costs anticipated if an archeological discovery is encountered during construction:
- Travel, communication and documentation expenses for on-site visits and subsequent reporting as listed in Section II.A.1, II.B and II.C
- Topographical survey equipment as listed in Section II.D

Reimbursement for other direct costs require prior written approval from the City of Sacramento.

Environmental Science Associates & Subsidiaries
2017 Schedule of Fees

I. Personnel Category Rates

Charges will be made at the Category hourly rates set forth below for time spent on project management, consultation or meetings related to the project, field work, report preparation and review, travel time, etc. Time spent on projects in litigation, in depositions and providing expert testimony will be charged at the Category rate times 1.5.

Labor Category	Level I	Level II	Level III
Senior Director	250	265	285
Director	200	215	230
Managing Associate	165	180	195
Senior Associate	140	150	160
Associate	100	120	130
Project Technicians	80	95	115

(a) The range of rates shown for each staff category reflects ESA staff qualifications, expertise and experience levels. These rate ranges allow our project managers to assemble the best project teams to meet the unique project requirements and client expectations for each opportunity.

(b) From time to time, ESA retains outside professional and technical labor on a temporary basis to meet peak workload demands. Such contract labor may be charged at regular Employee Category rates.

(c) ESA reserves the right to revise the Personnel Category Rates annually to reflect changes in its operating costs.

II. ESA Expenses

A. Travel Expenses

1. Transportation

   a. Company vehicle – IRS mileage reimbursement rate
   b. Common carrier or car rental – actual multiplied by 1.15

2. Lodging, meals and related travel expenses – direct expenses multiplied by 1.15

B. Communications Fee

In-house costs for phone, e-mail, fax, regular postage, walk-up copier, and records retention – project labor charges multiplied by 3%

C. Printing/Reproduction Rates

Item	Rate/page
8 1/2 x 11 b/w	$0.05
11 x 17 b/w	$0.10
8 1/2 x 11 color	$1.00
11 x 17 color	$2.00
Covers	$0.50
Binding	$1.00
HP Plotter	$25.00
CD	$10.00
Digital Photography	$20.00 (up to 50 images)

D. Equipment Rates

Item	Rate/Day	Rate/Week	Rate/Month
Project Specific Equipment:			
Vehicles – Standard size	$ 40[a]	$ 180	
Vehicles – 4x4 /Truck	85		
Vehicles – ATV	125		
Laptop Computers	50	200	$ 500
LCD Projector	200	600	
Noise Meter	50		
Electrofisher	300	1,200	
Sample Pump	25		
Field Traps	40		
Digital Planimeter	40		
Cameras/Video/Cell Phone	20		200
Miscellaneous Small Equipment	5		
Computer Time (i.e. GIS)	120[b]		
Stilling Well / Coring Pipe (3 inch aluminum)	3/ft		
Backpack Sprayer	25		
Beach Seine	50		
Otter Trawl	100		
Wildlife Acoustics Bat Detector	125	400	
Topographic Survey Equipment:			
Auto Level	40		
Total Station	200	600	
RTK-GPS	300	1,200	
RTK-GPS Smartnet Subscription	50	200	
Trimble GPS	75	350	900
Tablet GPS	100	400	1,000
Laser Level	60		
Garmin GPS or equivalent	25		250
Hydrologic Data Collection, Water Current, Level and Wave Measurement Equipment:			
ISCO 2150 Area Velocity Flow Logger	$ 25	$ 100	$ 400
Logging Rain Gage	10	40	125
Marsh-McBirney Hand-Held Current Meter	50	200	
FloWav Surface Velocity Radar	50	200	

Item	Rate/Day	Rate/Week	Rate/Month
Logging Water Level - Pressure Transducer	10	40	125
Logging Barometric Pressure Logger	10	40	125
Well Probe	20	80	
Bottom-Mounted Tripod / Mooring	25	100	400
Handheld Suspended Sediment Sampler	20		250
Water Quality Equipment:			
Logging Turbidimeter/Water Level Recorder	$ 25	$ 100	$ 400
In-Situ Troll 9500 logging water quality multiprobe		200	800
Logging Temperature Probe	3	10	40
Hach Hand-Held Turbidimeter Recording Conductivity Meter w/Datalogger	50	200	
Refractometer	20	80	
YSI Hand-Held Salinity Meter or pH meter	30	120	
Hand-Held Conductivity/Dissolved Oxygen Probe (YSI 85)	40	160	
HOBO Salinity Gauge			125
Water Quality Sonde			800
YSI 650 with 6920 Multi Probe	180	500	1500
ISCO 6712 Portable Sampler w/ISCO 2105 Module	40	250	900
Sedimentation / Geotechnical Equipment:			
Peat Corer	$ 75	$ 300	
60lb Helly-Smith Bedload Sampler with Bridge Crane	175	700	
Suspended Sediment Sampler with Bridge Crane	75	300	
Vibra-core	100	400	
Shear Strength Vane	50	200	
Auger (brass core @ $ 5/each)	20	80	
Boats:			
14 foot Aluminum Boats with 15 HP Outboard Motor	$ 100	$ 400	
Single or Double Person Canoe	30	120	
17' Boston Whaler w/ 90 HP Outboard	500	2,000	

[a] Actual project charges will be either the IRS mileage reimbursement rate or the daily rate, whichever is higher.

[b] GIS computer time will be charged at $15.00 per hour.

III. Subcontracts

Subcontract services will be invoiced at cost multiplied by 1.15.

IV. Other

There shall be added to all charges set forth above amounts equal to any applicable sales or use taxes legally levied in lieu thereof, now or hereinafter imposed under the authority of a federal, state, or local taxing jurisdiction.

Note: This Fee Schedule is provided for the purposes of establishing labor rates as listed. Reimbursement for direct expenses other than labor requires prior written approval from the City of Sacramento.

BENNETT
trenchless engineers

2018 FEE SCHEDULE

Principal - Design, CM	$250 / hr
Senior Project Manager	$225 / hr
Project Manager	$210 / hr
Senior Project Engineer	$210 / hr
Senior Construction Inspector	$200 / hr
Senior Scientist	$200 / hr
Project Engineer	$190 / hr
Associate Engineer	$160 / hr
Eng. Assistant/AutoCAD Spec	$150 / hr
Construction Inspector	$140 / hr
Executive Assistant	$125 / hr
Office Manager	$100 / hr
Clerical Assistant	$ 75 / hr

DIRECT EXPENSES

All travel, subconsultant services, photocopying, and other direct expenses are billed at actual costs plus 5%. Mileage is billed at IRS business mileage allowance rates.

PAYMENT TERMS

All invoiced payments are due within 30 days of the invoice date, unless otherwise agreed to in contract provisions.

INSURANCE LIMITS

Statutory limits coverage for workers' compensation for Bennett Trenchless Engineers employees, Client employees, and additional insured agreed to in contract provisions. $1,000,000 per incident, $2,000,000 aggregate, maximum coverage for general liability, professional liability, and $1,000,000 aggregate for automobile liability. Additional coverage limits can be provided, subject to agreement in contract provisions.

950 Glenn Drive, Suite 115, Folsom, CA 95630
916-294–0095- tel

2018 FEE SCHEDULE

As of January 1, 2018

Role	Hourly Rate
Administrative Staff	$90
Project Manager	$110
Senior Project Manager	$130

DIRECT EXPENSES
All travel, application time @ Encroachments department, subconsultant services, photocopying, and other direct expenses are billed at actual costs plus 5%. Mileage is billed at IRS business mileage allowance rates.

This fee schedule is subject to annual revisions due to labor adjustments

1850 Diesel Drive | Sacramento, 95838 | p(916) 640-0600 | f(916) 640-0700 | www.arrowcon.com

Auburn Main Office:
11521 Blocker Drive, Suite 110
Auburn, CA 95603
(530) 887-1494, Fax (530) 887-1495

West Sacramento Office:
2491 Boatman Avenue
West Sacramento, CA 95691
(916) 375-8706, Fax (916) 375-8709

www.blackburnconsulting.com

Note: This Fee Schedule is provided for the purposes of establishing labor rates, minimum basic charges, equipment rates, and laboratory fees as listed. Reimbursement for direct expenses other than those requires prior written approval from the City of Sacramento.

2018 SCHEDULE OF FEES & SERVICES

Geotechnical ▪ Geo-Environmental ▪ Construction Services ▪ Forensics

PROFESSIONAL HOURLY RATES:

Project Engineer/Geologist I	$140	CAD/GIS	$135
Project Engineer/Geologist II	$150	Lab Aide	$85
Senior Engineer/Geologist	$165	Lab Manager	$140
Project Manager	$185	Technician Manager	$140
Senior Project Manager	$210	Clerical	$80
Principal	$235	Project Assistant	$100
Senior Principal	$265	Senior Administrative	$140
Expert Testimony & Deposition	$450		

SPECIAL INSPECTION PERSONNEL HOURLY RATES:

	Non-Prevailing Wage	Prevailing Wage
Group 1 *ASNT Level II-III, DSA Shotcrete, Lead Inspector, NICET Level IV*	$135	$165
Group 2 *AWS-CWI, ICC Certified Structural Inspector, NICET Level III, Building/Construction Inspector, Shear Wall/Floor System Inspector*	$135	$160
Group 3 *Soils/Asphalt, Earthwork Grading, Excavation and Backfill, NICET Level II*	$115	$140
Group 4 *ACI, ICC Fireproofing, NICET Level I, Proofload Testing, Torque Testing*	$115	$140

MINIMUM BASIC CHARGES:

Outside Equipment & Services	Cost plus 20%
Vehicle Charge	$8.00 per hour or $0.85 per mile
Per Diem	Location specific, minimum $125 per night
Technician Services	Charge includes time from office and return to office, minimum charge - 2 hours
Overtime	Over 8 hours: 1.5 x Hourly Rate Before 7:00am or after 4:00pm: 1.5 x Hourly Rate Rush Charge (less than 24 hours notice): 1.5 x Hourly Rate Saturday: 1.5 x Hourly Rate (minimum: 4 hr. increments) Sunday & Holiday: 2.0 x Hourly Rate (minimum: 4 hr increments)
Report Copies	4 Report copies provided
Additional Report Copies	$100 for binding up to 50 pages, plus postage

EQUIPMENT: *(personnel not included)*

Hand Sampling Equipment	$250 / Day	Double Ring Infiltrometer Equipment	$290 / Day
Nuclear Moisture/Density Testing	$16 / Test	Liquid Level Equipment	$250 / Day
6" Sand Cone Testing	$40 / Test	Pachometer	$125 / Day
12" Sand Cone Testing	$185 / Test	Rock Point Load Test Equipment	$125 / Day
Coring Bit Charge	$40 / Core	Roto Hammer	$120 / Day
Coring Machine	$250 / Day	Schmidt Hammer	$100 / Day
Dynamic Cone Penetrometer	$270 / Day	Torque Wrench	$65 / Day
Electrical Resistivity Equipment	$240 / Day	Seismic Refraction:12 Channel	$460 / Day
Generator	$60 / Day	Traffic Control/Safety	$290 / Day
Groundwater Level Indicator	$60 / Day	Concrete Vapor Emission Test Kit	$30 / Ea
Inclinometer Survey Equipment	$600 / Day	pH Test Strip Package	$50 / Ea

Revised 11-21-17

Auburn Main Office:
11521 Blocker Drive, Suite 110
Auburn, CA 95603
(530) 887-1494, Fax (530) 887-1495

West Sacramento Office:
2491 Boatman Avenue
West Sacramento, CA 95691
(916) 375-8706, Fax (916) 375-8709

Fresno Office:
4186 W. Swift Avenue, Suite 107
Fresno, CA 93722
(559) 438-8411, Alt. (559) 276-4246

www.blackburnconsulting.com

2018 LABORATORY FEE SCHEDULE

Geotechnical ▪ Geo-Environmental ▪ Construction Services ▪ Forensics

SOIL CLASSIFICATION		
#200 Sieve Wash	ASTM D1140	$118
Sieve Analysis to #200	ASTM D6913, CAL 202	$184
Standard Hydrometer with Sieve Analysis	ASTM D422	$362
Plasticity Index	ASTM D4318	$265
Specific Gravity - Soils	AASHTO T100	$113
MOISTURE / DENSITY		
Moisture Content	ASTM D2216, CAL 226	$43
Moisture/Density		$81
SOIL COMPACTION		
Standard Proctor (*4" or 6" mold*)	ASTM D698	$330
Modified Proctor (*4" or 6" mold*)	ASTM D1557	$330
California Impact	CAL 216	$330
Check Point (*Standard or Modified*)		$151
VOLUME CHANGE		
One-Dimensional Consolidation	ASTM D2435	$519
(6 load increments, includes 2 time rate curves and 2 rebound decrements)		
Additional Load or Rebound Decrement		$35/ea
Additional Time Rate Curves		$113/ea
Expansion Index	ASTM D4829	$265
Settlement Swell	ASTM D4546	$163
STRENGTH		
Unconfined Compression	ASTM D2166	$151
Compression, Rock *Prep & Photos included*	ASTM D7012	$175
Rock Point Load (up to six points)	ASTM D5731	$70
Compression Test of Cored Concrete Spec.		$125
California Bearing Ratio (CBR), with curve	ASTM D1883	$822
California Bearing Ratio (CBR), without curve	ASTM D1883	$493
Resistance Value	CAL 301, ASTM D2844	$357
Direct Shear: *(per point)*		
Undisturbed	ASTM D3080	$206
Remolded	ASTM D3080	$265
Triaxial Compression: *(per point) Photos of failure upon request*		
Undrained, Unconsolidated w/out Pore Pressure	ASTM D2850	$184
Consolidated, Undrained w/ Pore Pressure Measurements	ASTM D4767	$541
Consolidated, Drained		$779
Consolidated, Undrained, no Pore Pressure Measurements		$303
Specimen Remolding		$118

CORROSIVITY ANALYSIS		
Corrosion Analysis Package	CAL 643, 417, 422	$336
Includes Soil Resistivity, Soil pH, Sulfates / Chlorides. Minimum size is 1,000 grams		
pH	CTM643	$43
Resistivity	CTM643	$141
PERMEABILITY		
Flex-wall Permeability	ASTM D5084	
Either Constant head or Falling Head / rising Tail Water. Method depends on soil type		$476
Each Additional Effective Stress		$118
Specimen Remodeling		$118
TREATED SOIL TESTS		
% Lime for Stabilization - per point (%)	ASTM D6276	$131
pH of Soil	CTM643	$43
Modified Proctor	ASTM D1557	$395
Unconfined Compression Test	ASTM D5102	$221
One Dimensional Swell	ASTM D4546	$221
AGGREGATES		
Bulk Specific Gravity - Course & Fine Aggregate	ASTM C127 & 128, CAL 206, 207	$113
Coarse Durability	CAL 229	$195
Fine Durability	CAL 229	$195
Sand Equivalent	CAL 217, ASTM D2419	$136
Cleanness Value	CAL 227	$184
Moisture Content	CAL 226/370	$103
Percent of Crushed Particles (per size fraction)	CAL 205	$173
Fine Aggregate Angularity	AASHTO T304, Method A	$173
Flat and Elongated Particles (per size)	AASHTO D 4791	$173
Combined Grading 1" through no. 200	CAL 201/202	$184
Bin Grading (First 2 Bins)	CAL 201/202	$184
Each Bin Thereafter		$70
LP-9 (RAP) Burn	LP-9, CT382	$113
ASPHALT		
Bulk Specific Gravity - Compacted Hot Mix Asphalt	CAL 308	$55
Theoretical Max Specific Gravity (Rice)	CAL 309	$201
LTMD (Set of 5)	CAL 375	$400
Binder Content		
Ignition Oven Correction Factor	CAL 382	$341
Ignition Oven	CAL 382	$201
Solvent	AASHTO T164	$254
Stability (Set of 3)	CAL 366	$357
Void Content		
With Stability and Rice	CAL 367	$38
CONCRETE & MASONRY		
Concrete Compression Test 6" x 12" or 4" x 8"	ASTM C39	$38
Masonry or Grout Compression		$55

Other Tests Quoted Upon Request

SUPPLEMENTAL AGREEMENT

Project Title and Job Number: Z14010001 - Construction Mgmt and Inspection Services for AWMP **Date:** 8/28/2018

Purchase Order #: 40263 **Supplemental Agreement No.:** 7

The City of Sacramento ("City") and Psomas ("Contractor"), as parties to that certain Professional Services Agreement designated as Agreement Number 2016-1429, including any and all prior supplemental agreements modifying the agreement (the agreement and supplemental agreements are hereafter collectively referred to as the "Agreement"), hereby supplement and modify the Agreement as follows:

1. The scope of Services specified in Exhibit A of the Agreement is amended as follows:

   The contract sunset date is extended to July 1, 2021.
   The Cost Proposal - Construction Management and Inspection Services sepecified in Attachment 3 of Exhibit B of the Agreement are replaced and amended and restated Attachment 3 to Exhibit B, attached hereto and incorporated herein by this reference.

   This supplement shall establish the labor rates for Twining per Attachment 5 to Exhibit B, attached hereto and incorporated herein by this reference.

2. In consideration of the additional and/or revised services described in section 1, above, the maximum not-to-exceed amount that is specified in Exhibit B of the Agreement for payment of Contractor's fees and expenses, is Increased by $10,919,496, and the Agreement's maximum not-to-exceed amount is amended as follows:

Agreement's original not-to-exceed amount:	$ 1,602,716
Net change by previous supplemental agreements:	$ 4,384,159
Not-to-exceed amount prior to this supplemental agreement:	$ 5,986,875
Increased by this supplemental agreement:	$10,919,496
New not-to exceed amount including all supplemental agreements:	$ 16,906,371

3. Contractor agrees that the amount of increase or decrease in the not-to-exceed amount specified in section 2, above, shall constitute full compensation for the additional and/or revised services specified in section 1, above, and shall fully compensate Contractor for any and all direct and indirect costs that may be incurred by Contractor in connection with such additional and/or revised services, including costs associated with any changes and/or delays in work schedules or in the performance of other services or work by Contractor.

4. Contractor warrants and represents that the person or persons executing this supplemental agreement on behalf of Contractor has or have been duly authorized by Contractor to sign this supplemental agreement and bind Contractor to the terms hereof.

5. Except as specifically revised herein, all terms and conditions of the Agreement shall remain in full force and effect, and Contractor shall perform all of the services, duties, obligations, and conditions required under the Agreement, as supplemented and modified by this supplemental agreement.

Approval Recommended By:

Project Manager

Approved As To Form By:

City Attorney

Approved By:

Contractor

Attested To By:

Approved By:

City of Sacramento

City Clerk

(Rev. 9-17-12)

Cost Proposal for
City of Sacramento Department of Public Utilities
Transaction #:P17141311005
Construction Management and Inspection Services for Accelerated Water Meter Program

Project Cost Estimate Summary for Duration of Project (Fiscal Year 2017-2021)

TASK	FY - 2017	FY - 2018	FY - 2019	FY - 2020	FY - 2021	Total Cost
Project Management	$644,145	$1,440,578	$1,611,093	$1,317,021	$513,124	$5,525,961
ODCs - See ODC Sheet	$16,280	$16,280	$4,070	$2,035	$2,035	$40,700
Construction Phase	$455,840	$2,644,403	$3,265,900	$2,295,231	$527,580	$9,188,955
Material Testing (Twining)	$5,000	$55,000	$60,000	$40,000	$40,000	$200,000
Archeological/Tribal Support (ESA)	$0	$0	$100,000	$50,000	$0	$150,000
Arborist Support (Acorn Aboricultural)	$0	$0	$15,000	$10,000	$10,000	$35,000
Contract Administration Support	$18,308	$37,536	$24,121	$28,118	$9,560	$117,642
General Administrative Support	$73,508	$200,442	$214,996	$290,625	$171,666	$951,237
Total Cost Before Contingency	$1,213,081	$4,479,239	$5,401,163	$4,033,030	$1,273,965	$16,209,495
Subconsultant M 5%	$0	$0	$103,855	$80,158	$27,324	$211,337
Total Cost	**$1,213,081**	**$4,394,239**	**$5,505,018**	**$4,113,188**	**$1,301,289**	**$16,420,832**

VARIABLES	
0%	**Contingency Percentage**
2%	**Consumer Price Increase Percentage**

Total AWMP Construction Costs: **$240,890,000**
CMT Percentage: **6.8%**

City's Estimated Budget: **$13,000,000**
Project Cost Estimate: **$16,420,832**
Dollar Amount Over / Under: **($3,420,832)**

MODEL ASSUMPTION CONTROLS

TASK		RATES (2% CPI escalation per year)					
Project Management		FY - 2017	FY - 2018	FY - 2019	FY - 2020	FY - 2021	FREQUENCY
	Principal in Charge (Frank Martin, PE, QSP)*	$205	$209.10	$213.28	$217.55	$221.90	Hourly
	Assistant Project Manager (Fred Sharp)*	$200	$204.00	$208.08	$212.24	$216.49	Hourly
	Construction Manager (Manny Sousa)*	$185	$204.00				Hourly
	Construction Manager (Sherri Berexa, PE, QSP)*		$195.00	$198.90	$202.88	$206.94	Hourly
	Assistant Resident Engineer (Rob Sharp)*	$165	$168.30	$188.00	$191.76	$195.60	Hourly
	Assistant Resident Engineer (Brodie Downs)*	$165	$148.00	$141.00	$143.82	$146.70	Hourly
	Assistant Resident Engineer (Tim Grossmann)*			$160.00	$163.20	$166.46	Hourly
	Student Summer Intern (Psomas)			$60.00	$61.20	$62.42	Hourly
	Construction Technician (Eric Katapoudis)	$125	$127.50	$130.05	$132.65	$135.30	Hourly
	Construction Technician (Nolan Shultz)	$125	$127.50	$130.05	$132.65	$135.30	Hourly
	Construction Technician OT		$150.00	$155.00	$160.00	$165.00	Hourly
	ODCs - See ODC Sheet	$16,280	$16,280	$4,070	$2,035	$2,035	By Receipt
Construction Inspection							
	Lead Construction Inspectors (Chris Estep)*	$160	$163.20	$166.46	$169.79	$173.19	Hourly
	Lead Construction Inspectors (Mike Waldron)*	$160	$163.20	$166.46	$169.79	$173.19	Hourly
	Construction Inspector 1 (Joe Krewer) (88,103)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 2 (Rich Herrick) (72, 82, 104, 97)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 3 (Phil King) (90)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 4 (Luke Miller) (84, 76, 101)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 5 (Johnny Wynn) (73, 67)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 6 (Brett Kerby) (81, 96, 91)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 7 (Luke Wallace) (80, 87, 99)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 8 (Psomas) (89, 95)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 9 (Psomas) (92)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 10 (VC&A) (98)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 11 (Psomas) (94)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 12 (VC&A) (93)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 13 (Psomas)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 14 (VC&A)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 15 (Psomas)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 16 (VC&A)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector 17 (Psomas)	$150	$153.00	$162.00	$165.24	$168.54	Hourly
	Construction Inspector Overtime		$183.00				Hourly
	Construction Inspector Double-Time		$213.00				Hourly
	Material Testing (Twining)	$5,000	$55,000	$60,000	$40,000	$40,000	Hourly Plus Tests
	Archeological/Tribal Support (ESA)		$80,000	$150,000			Hourly Plus Tests
	Arborist Support (Acorn Aboricultural)		$5,000	$15,000	$10,000	$10,000	Hourly Plus Tests
Contract Administration							
	Contract Administration (Psomas)	$92	$93.84	$95.72	$97.63	$99.58	Hourly
General Administrative							
	Peak Administrative Support (TBD - Psomas/Sharp)	$92	$93.84	$95.72	$97.63	$99.58	Hourly
	Office Technician (Todd Scott)			$125.00	$127.50	$130.05	Hourly
	Administration (Todd Scott)	$92	$93.84	$95.72	$97.63	$99.58	Hourly

Cost Proposal for
City of Sacramento Department of Public Utilities
Transaction #:P17141311005
Construction Management and Inspection Services for Accelerated Water Meter Program

Project Cost Estimate for Fiscal Year 2017

TASK	ROLE	FISCAL YEAR 2017												Total Hours each	QTY	Hourly Rate	Cost
		2016						2017									
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun				
Project Management																	
	Principal in Charge (Frank Martin, PE, QSP)*						34	46	20	24	40	40	40	**244**	**1**	**$205**	**$50,020**
	Assistant Project Manager (Fred Sharp)*						112	168	104	160	160	176	176	**1056**	**1**	**$200**	**$211,200**
	Construction Manager (Manny Sousa)*						99	152	0	0	160	176	176	**763**	**1**	**$185**	**$141,155**
	Assistant Resident Engineer (Rob Sharp)*						114	168	160	184	160	176	176	**1138**	**1**	**$165**	**$187,770**
	Construction Technician (Eric Katapoudis)										80	176	176	**432**	**1**	**$125**	**$54,000**
	ODCs - See ODC Sheet																**$16,280**
Construction Inspection																	
	Lead Construction Inspectors (Chris Estep)*						35	126.5	99.5	124	160	176	176	**897**	**1**	**$160**	**$143,520**
	Lead Construction Inspectors (Mike Waldron)*						0	0	0	0	160	176	176	**512**	**1**	**$160**	**$81,920**
	Construction Inspector 1 (Joe Krewer) (88,103)										160	176	176	**512**	**1**	**$150**	**$76,800**
	Construction Inspector 2 (Rich Herrick) (72, 82, 104, 97)										160	176	176	**512**	**1**	**$150**	**$76,800**
	Construction Inspector 3 (Phil King) (90)													**0**	**1**	**$150**	**$0**
	Construction Inspector 4 (Luke Miller) (84, 76, 101)													**0**	**1**	**$150**	**$0**
	Construction Inspector 5 (Johnny Wynn) (73, 67)													**0**	**1**	**$150**	**$0**
	Construction Inspector 6 (Brett Kerby) (81, 96, 91)													**0**	**1**	**$150**	**$0**
	Construction Inspector 7 (Luke Wallace) (80, 87, 99)										160	176	176	**512**	**1**	**$150**	**$76,800**
	Construction Inspector 8 (Psomas) (89, 95)													**0**	**1**	**$150**	**$0**
	Construction Inspector 9 (Psomas) (92)													**0**	**1**	**$150**	**$0**
	Construction Inspector 10 (VC&A) (98)													**0**	**1**	**$150**	**$0**
	Construction Inspector 11 (Psomas) (94)													**0**	**1**	**$150**	**$0**
	Construction Inspector 12 (VC&A) (93)													**0**	**1**	**$150**	**$0**
	Construction Inspector 13 (Psomas)													**0**	**1**	**$150**	**$0**
	Construction Inspector 14 (VC&A)													**0**	**1**	**$150**	**$0**
	Material Testing (Twining)																**$5,000**
Contract Administration																	
	Contract Administration (Psomas)						19.5	14.5	35	34	32	32	32	**199**	**1**	**$92**	**$18,308**
General Administrative																	
	Peak Administrative Support (TBD - Psomas/Sharp)						111	40	16	40		40	40	**287**	**1**	**$92**	**$26,404**
	Office Technician (Todd Scott)										160	176	176	**512**	**1**	**$92**	**$47,104**
																Subtotal:	**$1,213,081**
																0%	**$0.00**
																Total:	**$1,213,081**

Assumptions Used:

1. Cost Proposal assumes work from Fiscal Year 2017 through Fiscal Year 2021.
2. Direct costs include inspection equipment allowance and web-based management tools including laptops, wireless hot spots, City of Sacramento subscriptions, etc.

Notes:

1. All rates include base pay, fringe benefits, and overhead.
2. All hours are billed in conformance to the California Labor Code and prevailing wage requirements.
3. This cost proposal is valid through Fiscal Year 2021.
4. Additional inspection support can be provided at a rates listed on for fiscal years on the 'Cost Summary' tab.
5. Rates do not include any overtime. No overtime has been included in this proposal.

Cost Proposal for
City of Sacramento Department of Public Utilities
Transaction #:P17141311005
Construction Management and Inspection Services for Accelerated Water Meter Program

Project Cost Estimate for Fiscal Year 2018

TASK	ROLE	Fiscal Year 2018										Total Hours each	QTY	Hourly Rate	Cost
		2017				2018									
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun				
Project Management															
	Principal in Charge (Frank Martin, PE, QSP)*	80	64	40	40	40	64	66	64	40	40	**538**	**1**	**$209**	**$112,496**
	Assistant Project Manager (Fred Sharp)*	160	168	160	160	168	76	88	84	44	42	**1150**	**1**	**$204**	**$234,600**
	Construction Manager (Manny Sousa)*	160	168	160	160	168	152	176	168			**1312**	**1**	**$204**	**$252,838**
	Construction Manager (Sherri Berexa, PE, QSP)*									176	168	**344**	**1**	**$195**	**$70,176**
	Assistant Resident Engineer (Rob Sharp)*	160	168	160	160	168	152	176	168	176	168	**1656**	**1**	**$168**	**$278,705**
	Assistant Resident Engineer (Brodie Downs)*							176	168	176	168	**688**	**1**	**$148**	**$101,824**
	Assistant Resident Engineer (Tim Grossmann)*											**0**	**1**		**$0**
	Student Summer Intern (Psomas)										168	**168**	**1**	**$60**	**$10,080**
	Construction Technician (Eric Katapoudis)	160	168	160	160	168	152	176	168	176	168	**1656**	**1**	**$128**	**$211,140**
	Construction Technician (Nolan Shultz)		84	80	80	80	76	176	168	176	168	**1088**	**1**	**$128**	**$138,720**
	Construction Technician Overtime						40	40	40	40	40	**200**	**1**	**$150**	**$30,000**
	ODCs - See ODC Sheet														**$16,280**
Construction Inspection															
	Lead Construction Inspectors (Chris Estep)*	160	168	160	160	168	152	176	168	176	168	**1656**	**1**	**$163.20**	**$270,259**
	Lead Construction Inspectors (Mike Waldron)*	160	168	160	160	168	152	176	168	176	168	**1656**	**1**	**$163.20**	**$270,259**
	Construction Inspector 1 (Joe Krewer) (88,103)	160	168	160	160	168	152	176	168	176	168	**1656**	**1**	**$153.00**	**$253,368**
	Construction Inspector 2 (Rich Herrick) (72, 82, 104,	160	168	160	160	168						**816**	**1**	**$153.00**	**$124,848**
	Construction Inspector 3 (Phil King) (90)	160	168	160	160	168	152	176	168	176	168	**1656**	**1**	**$153.00**	**$253,368**
	Construction Inspector 4 (Luke Miller) (84, 76, 101)	160	168	160	160	168	152	176				**1144**	**1**	**$153.00**	**$175,032**
	Construction Inspector 5 (Johnny Wynn) (73, 67)	160	168	160	160	168	152	176	84			**1228**	**1**	**$153.00**	**$187,884**
	Construction Inspector 6 (Brett Kerby) (81, 96, 91)	160	168	160	160	168	152	176	84			**1228**	**1**	**$153.00**	**$187,884**
	Construction Inspector 7 (Luke Wallace) (80, 87, 99)					80	152	176	168	176	84	**836**	**1**	**$153.00**	**$127,908**
	Construction Inspector 8 (Psomas) (89, 95)					80	152	176	168	176	168	**920**	**1**	**$153.00**	**$140,760**
	Construction Inspector 9 (Psomas) (92)					80	152	176	168	176	168	**920**	**1**	**$153.00**	**$140,760**
	Construction Inspector 10 (VC&A) (98)					80	152	176	168	176	168	**920**	**1**	**$153.00**	**$140,760**
	Construction Inspector 11 (Psomas) (94)								80	176	168	**424**	**1**	**$153.00**	**$64,872**
	Construction Inspector 12 (VC&A) (93)											**0**	**1**	**$153.00**	**$0**
	Construction Inspector 13 (Psomas)								80	176	168	**424**	**1**	**$153.00**	**$64,872**
	Construction Inspector 14 (VC&A)											**0**	**1**	**$153.00**	**$0**
	Construction Inspector 15 (Psomas)											**0**	**1**	**$153.00**	**$0**
	Construction Inspector 16 (VC&A)								80	176	168	**424**	**1**	**$153.00**	**$64,872**
	Construction Inspector 17 (Psomas)								80	176	168	**424**	**1**	**$153.00**	**$64,872**
	Construction Inspector Overtime	40	30	30	30	32	40	40	80	111	120	**553**	**1**	**$183.00**	**$101,174**
	Construction Inspector Double-Time	0	20	20	10	0	0	0	0	0	0	**50**	**1**	**$213.00**	**$10,650**
	Material Testing (Twining)														**$55,000**
	Archeological/Tribal Support (ESA)														**$80,000**
	Arborist Support (Acorn Aboricultural)														**$5,000**
Contract Administration															
	Contract Administration (Psomas)	40	40	40	40	40	40	40	40	40	40	**400**	**1**	**$94**	**$37,536**
General Administrative															
	Peak Administrative Support (TBD - Psomas/Sharp)	80	80	80	80	80	80	0	0	0	0	**480**	**1**	**$94**	**$45,043**
	Administration (Todd Scott)	160	168	160	160	168	152	176	168	176	168	**1656**	**1**	**$94**	**$155,399**
														Subtotal:	**$4,479,239**
														0%	**$0.00**
														Total:	**$4,479,239**

Assumptions Used:

1. Cost Proposal assumes work for Fiscal Year 2018.
2. Direct costs include inspection equipment allowance and web-based management tools including laptops, wireless hot spots, City of Sacramento subscriptions, etc.

Notes:

1. All rates include base pay, fringe benefits, and overhead.
2. All hours are billed in conformance to the California Labor Code and prevailing wage requirements.
3. This cost proposal is valid through Fiscal Year 2018.
4. Additional inspection support can be provided at rates listed for fiscal year 2018 on the 'Cost Summary' tab.
5. Billing rates for staff in non-Prevailing Wage positions will apply regardless of whether it is straight time, premium time, or overtime.
6. Overtime and Double-Time rates shown above appoly only for Prevailing Wage Inspection Positions

* - Substitution of key positions noted need to be approved in writing by the City prior to being implemented.

Cost Proposal for
City of Sacramento Department of Public Utilities
Transaction #:P17141311005
Construction Management and Inspection Services for Accelerated Water Meter Program

Project Cost Estimate for Fiscal Year 2019

TASK	ROLE	FISCAL YEAR 2019												Total Hours each	QTY	Hourly Rate	Cost
		2018						2019									
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun				
Project Management																	
	Principal in Charge (Frank Martin, PE, QSP)*		16	32	32	32	32	32	32	32	32	32	32	**336**	**1**	**$213**	**$71,663**
	Construction Manager (Sherri Berexa, PE, QSP)*		92	152	176	160	160	168	152	168	176	176	160	**1740**	**1**	**$199**	**$346,086**
	Assistant Resident Engineer (Rob Sharp)*		92	152	176	160	160	168	152	168	176	176	160	**1740**	**1**	**$188**	**$327,120**
	Assistant Resident Engineer (Tim Grossmann)*			152	176	160	160	168	152	168	176	176	160	**1648**	**1**	**$160**	**$263,680**
	Student Summer Intern (Psomas)		92	80									80	**252**	**1**	**$60**	**$15,120**
	Construction Technician (Eric Katapoudis)		92	152	176	160	160	168	152	168	176	176	160	**1740**	**1**	**$130**	**$226,287**
	Construction Technician (Nolan Shultz)		92	152	176	160	160	168	152	168	176	176	160	**1740**	**1**	**$130**	**$226,287**
	Construction Technician OT		46	76	88	80	80	84	76	84	88	88	80	**870**	**1**	**$155**	**$134,850**
	ODCs - See ODC Sheet																**$4,070**
Construction Inspection																	
	Lead Construction Inspectors (Chris Estep)*		92	152	176	160	160	168	152	168	176	176	160	**1740**	**1**	**$166.46**	**$289,647**
	Lead Construction Inspectors (Mike Waldron)*		92	152	176	160	120	84	76	84	120	120	120	**1304**	**1**	**$166.46**	**$217,069**
	Construction Inspector 1 (Joe Krewer) (88,103)		92	152	176	160	160	168	152	168	168	168	168	**1732**	**1**	**$162.00**	**$280,584**
	Construction Inspector 2 (Rich Herrick) (72, 82, 104, 97)		92	152	176	160	160	168	152	168	176	176	160	**1740**	**1**	**$162.00**	**$281,880**
	Construction Inspector 3 (Phil King) (90)		92	152	176	160	160	168	152					**1060**	**1**	**$162.00**	**$171,720**
	Construction Inspector 4 (Luke Miller) (84, 76, 101)		92	152	176	160		168	152	168	176	176	160	**1580**	**1**	**$162.00**	**$255,960**
	Construction Inspector 5 (Johnny Wynn) (73, 67)		92	152	176	160	160	168	152	168	176	176	160	**1740**	**1**	**$162.00**	**$281,880**
	Construction Inspector 6 (Brett Kerby) (81, 96, 91)		92	152	176	160	160	168	152	168	176	176	160	**1740**	**1**	**$162.00**	**$281,880**
	Construction Inspector 7 (Luke Wallace) (80, 87, 99)		92	152	176	160	160	168	152	168	176	176	160	**1740**	**1**	**$162.00**	**$281,880**
	Construction Inspector 8 (Psomas) (89, 95)		92	152	176	160	160	168	152					**1060**	**1**	**$162.00**	**$171,720**
	Construction Inspector 9 (Psomas) (92)						160	168	152	168	176	176	160	**1160**	**1**	**$162.00**	**$187,920**
	Construction Inspector 10 (VC&A) (98)						160	168	152	168	176	176	160	**1160**	**1**	**$162.00**	**$187,920**
	Construction Inspector 11 (Psomas) (94)						160	168	152	168	176	176	160	**1160**	**1**	**$162.00**	**$187,920**
	Construction Inspector 12 (VC&A) (93)						160	168	152	168	176	176	160	**1160**	**1**	**$162.00**	**$187,920**
	Construction Inspector Overtime		40	80	80	40	24	24	24	40	40	80	80	**552**	**1**	**$192.00**	**$105,984**
	Construction Inspector Double-Time													**0**	**1**	**$222.00**	**$0**
	Material Testing (Twining)																**$60,000**
	Archeological/Tribal Support (ESA)																**$100,000**
	Arborist Support (Acorn Aboricultural)																**$15,000**
Contract Administration																	
	Contract Administration (Psomas)		12	24	24	24	24	24	24	24	24	24	24	**252**	**1**	**$96**	**$24,121**
General Administrative																	
	Peak Administrative Support (TBD - Psomas/Sharp)				40	40	40	40	40	40				**240**	**1**	**$96**	**$22,972**
	Office Technician (Todd Scott)		46	76	88	80	80	84	76	84	88	88	80	**870**	**1**	**$125**	**$108,750**
	Administration (Todd Scott)		46	76	88	80	80	84	76	84	88	88	80	**870**	**1**	**$96**	**$83,274**
																Subtotal:	**$5,401,163**
	Subconsultant Markup (5%)																**$103,855**
																Total:	**$5,505,018**

Assumptions Used:

1. Cost Proposal assumes work from Fiscal Year 2017 through Fiscal Year 2021.
2. Direct costs include inspection equipment allowance and web-based management tools including laptops, wireless hot spots, City of Sacramento subscriptions, etc.

Notes:

1. All rates include base pay, fringe benefits, and overhead.
2. All hours are billed in conformance to the California Labor Code and prevailing wage requirements.
3. This fiscal year covers the City's Fiscal Year 2018/2019.
4. Additional inspection support can be provided at rates listed for fiscal year 2018 on the 'Cost Summary' tab.
5. Billing rates for staff in non-Prevailing Wage positions will apply regardless of whether it is straight time, premium time, or overtime.
6. Overtime and Double-Time rates shown above appoly only for Prevailing Wage Inspection Positions
7. Personnel can be substituted or added at the positions and billing rate shown, upon approval from City Project Manager.
8. Updates to this cost proposal can be submitted and approved through email as long as labor rates are not changed and the total budget (for the fiscal year) is not increased.

* - Substitution of key positions noted need to be approved in writing by the City prior to being implemented.

Cost Proposal for
City of Sacramento Department of Public Utilities
Transaction #:P17141311005
Construction Management and Inspection Services for Accelerated Water Meter Program

Project Cost Estimate for Fiscal Year 2020

TASK	ROLE	FISCAL YEAR 2020												Total Hours	QTY	Hourly Rate	Cost
		2019						2020									
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun				
Project Management																	
	Principal in Charge (Frank Martin, PE, QSP)*	32	24	24	24	16	16	16	16	16	16	16	16	**232**	**1**	**$218**	**$50,471**
	Construction Manager (Sherri Berexa, PE, QSP)*	176	176	160	176	152	168	168	152	176	176	160	176	**2016**	**1**	**$203**	**$409,002**
	Assistant Resident Engineer (Rob Sharp)*	176	176	160	176	152	168	84	76	88	88	80	88	**1512**	**1**	**$192**	**$289,941**
	Assistant Resident Engineer (Tim Grossmann)*	176	176	160	176	152	168	84	76	88	40			**1296**	**1**	**$163**	**$211,507**
	Student Summer Intern (Psomas)	176	176	80										**432**	**1**	**$61**	**$26,438**
	Construction Technician (Eric Katapoudis)	176	176	80	80									**512**	**1**	**$133**	**$67,917**
	Construction Technician (Nolan Shultz)	176	176	160	176	152	168	168	152	80	80	80	80	**1648**	**1**	**$133**	**$219,184**
	Construction Technician OT	40	40	40	40	24	24	24	24	16	16	16	16	**320**	**1**	**$133**	**$42,560**
	ODCs - See ODC Sheet																**$2,035**
Construction Inspection																	
	Lead Construction Inspectors (Chris Estep)*	176	176	160	176	152	168	168	152	176	176	160	176	**2016**	**1**	**$169.79**	**$342,303**
	Lead Construction Inspectors (Mike Waldron)*	120	120	80	80	80	80	40	40	40				**680**	**1**	**$169.79**	**$115,459**
	Construction Inspector 1 (Joe Krewer) (88,103)	176	176	160	176	152	168	168	152					**1328**	**1**	**$165.24**	**$219,439**
	Construction Inspector 2 (Rich Herrick) (72, 82, 104, 97)	176	176	160	176	152	168							**1008**	**1**	**$165.24**	**$166,562**
	Construction Inspector 3 (Phil King) (90)													**0**	**1**	**$165.24**	**$0**
	Construction Inspector 4 (Luke Miller) (84, 76, 101)	176	176	160	176	152	168	168	152	176	176	160	176	**2016**	**1**	**$165.24**	**$333,124**
	Construction Inspector 5 (Johnny Wynn) (73, 67)	176	176	160	176									**688**	**1**	**$165.24**	**$113,685**
	Construction Inspector 6 (Brett Kerby) (81, 96, 91)	176	176	160	176	152	168	168	152	176	176	160	176	**2016**	**1**	**$165.24**	**$333,124**
	Construction Inspector 7 (Luke Wallace) (80, 87, 99)	176	176	160										**512**	**1**	**$165.24**	**$84,603**
	Construction Inspector 8 (Psomas) (89, 95)	176	176	80										**432**	**1**	**$165.24**	**$71,384**
	Construction Inspector 9 (Psomas) (92)	176	176	160	176	152	168	168	152					**1328**	**1**	**$165.24**	**$219,439**
	Construction Inspector 10 (VC&A) (98)	176	176											**352**	**1**	**$165.24**	**$58,164**
	Construction Inspector 11 (Psomas) (94)	176	176											**352**	**1**	**$165.24**	**$58,164**
	Construction Inspector 12 (VC&A) (93)	176	176	160	176									**688**	**1**	**$165.24**	**$113,685**
	Construction Inspector Overtime	80	80	64	40	24	16	16	16	16	16	16	16	**400**	**1**	**$165.24**	**$66,096**
	Construction Inspector Double-Time													**0**	**1**	**$165.24**	**$0**
	Material Testing (Twining)																**$40,000**
	Archeological/Tribal Support (ESA)																**$50,000**
	Arborist Support (Acorn Aboricultural)																**$10,000**
Contract Administration																	
	Contract Administration (Psomas)	24	24	24	24	24	24	24	24	24	24	24	24	**288**	**1**	**$98**	**$28,118**
General Administrative																	
	Peak Administrative Support (TBD - Psomas/Sharp)													**0**	**1**	**$98**	**$0**
	Office Technician (Todd Scott)	176	176	160	176	152	168	168	152	176	176	160	176	**2016**	**1**	**$128**	**$257,040**
	Administration (Todd Scott)	88	88	80	88									**344**	**1**	**$98**	**$33,585**
																Subtotal:	**$4,033,030**
	Subconsultant Markup (5%)																**$80,158**
																Total:	**$4,113,188**

Assumptions Used:
1. Cost Proposal assumes work from Fiscal Year 2017 through Fiscal Year 2021.
2. Direct costs include inspection equipment allowance and web-based management tools including laptops, wireless hot spots, City of Sacramento subscriptions, etc.

Notes:
1. All rates include base pay, fringe benefits, and overhead.
2. All hours are billed in conformance to the California Labor Code and prevailing wage requirements.
3. This cost proposal is valid through City's Fiscal Year 2019/2020.
4. Additional inspection support can be provided at a rates listed on for fiscal years on the 'Cost Summary' tab.
5. Billing rates for staff in non-Prevailing Wage positions will apply regardless of whether it is straight time, premium time, or overtime.
6. Overtime and Double-Time rates shown above appoly only for Prevailing Wage Inspection Positions
7. Personnel can be substituted or added at the positions and billing rate shown, upon approval from City Project Manager.
8. Updates to this cost proposal can be submitted and approved through email as long as labor rates are not changed and the total budget (for the fiscal year) is not increased.

* - Substitution of key positions noted need to be approved in writing by the City prior to being implemented.

Cost Proposal for
City of Sacramento Department of Public Utilities
Transaction #:P17141311005
Construction Management and Inspection Services for Accelerated Water Meter Program

Project Cost Estimate for Fiscal Year 2021

TASK	ROLE	FISCAL YEAR 2021												Total Hours	QTY	Hourly Rate	Cost
		2020						2021									
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun				
Project Management																	
	Principal in Charge (Frank Martin, PE, QSP)*	16	16	16	16	16	16	40	40					**176**	**1**	**$222**	**$39,054**
	Construction Manager (Sherri Berexa, PE, QSP)*	176	168	168	168	152	176	160	152					**1320**	**1**	**$207**	**$273,155**
	Assistant Resident Engineer (Rob Sharp)*	80	80	80	80	80	80	160	152					**792**	**1**	**$196**	**$154,911**
	Assistant Resident Engineer (Tim Grossmann)*													**0**	**1**	**$166**	**$0**
	Student Summer Intern (Psomas)													**0**	**1**	**$62**	**$0**
	Construction Technician (Eric Katapoudis)													**0**	**1**	**$135**	**$0**
	Construction Technician (Nolan Shultz)	88	84	84	84									**340**	**1**	**$135**	**$46,003**
	Construction Technician OT																**$0**
	ODCs - See ODC Sheet																**$2,035**
Construction Inspection																	
	Lead Construction Inspectors (Chris Estep)*	176	168	168	168	152	176							**1008**	**1**	**$173.19**	**$174,575**
	Lead Construction Inspectors (Mike Waldron)*													**0**	**1**	**$173.19**	**$0**
	Construction Inspector 1 (Joe Krewer) (88,103)													**0**	**1**	**$168.54**	**$0**
	Construction Inspector 2 (Rich Herrick) (72, 82, 104, 97)													**0**	**1**	**$168.54**	**$0**
	Construction Inspector 3 (Phil King) (90)													**0**	**1**	**$168.54**	**$0**
	Construction Inspector 4 (Luke Miller) (84, 76, 101)	176	168	168	168	152	176							**1008**	**1**	**$168.54**	**$169,893**
	Construction Inspector 5 (Johnny Wynn) (73, 67)													**0**	**1**	**$168.54**	**$0**
	Construction Inspector 6 (Brett Kerby) (81, 96, 91)	176	168	168	168	152	176							**1008**	**1**	**$168.54**	**$169,893**
	Construction Inspector 7 (Luke Wallace) (80, 87, 99)													**0**	**1**	**$168.54**	**$0**
	Construction Inspector Overtime	16	16	16	16	8	8							**80**	**1**	**$165.24**	**$13,219**
	Construction Inspector Double-Time													**0**	**1**	**$165.24**	**$0**
	Material Testing (Twining)																**$40,000**
	Archeological/Tribal Support (ESA)																
	Arborist Support (Acorn Aboricultural)																**$10,000**
Contract Administration																	
	Contract Administration (Psomas)	16	16	16	16	16	16							**96**	**1**	**$100**	**$9,560**
General Administrative																	
	Peak Administrative Support (TBD - Psomas/Sharp)													**0**	**1**	**$100**	**$0**
	Office Technician (Todd Scott)	176	168	168	168	152	176	160	152					**1320**	**1**	**$130**	**$171,666**
	Administration (Todd Scott)													**0**	**1**	**$100**	**$0**
																Subtotal:	**$1,273,965**
	Subconsultant Markup (5%)																**$27,323.53**
																Total:	**$1,301,289**

Assumptions Used:

1. Cost Proposal assumes work from Fiscal Year 2017 through Fiscal Year 2021.
2. Direct costs include inspection equipment allowance and web-based management tools including laptops, wireless hot spots, City of Sacramento subscriptions, etc.

Notes:

1. All rates include base pay, fringe benefits, and overhead.
2. All hours are billed in conformance to the California Labor Code and prevailing wage requirements.
3. This cost proposal is valid through City's Fiscal Year 2020/2021.
4. Additional inspection support can be provided at a rates listed on for fiscal years on the 'Cost Summary' tab.
5. Billing rates for staff in non-Prevailing Wage positions will apply regardless of whether it is straight time, premium time, or overtime.
6. Overtime and Double-Time rates shown above appoly only for Prevailing Wage Inspection Positions
7. Personnel can be substituted or added at the positions and billing rate shown, upon approval from City Project Manager.
8. Updates to this cost proposal can be submitted and approved through email as long as labor rates are not changed and the total budget (for the fiscal year) is not increased.

* - Substitution of key positions noted need to be approved in writing by the City prior to being implemented.

Cost Proposal for
City of Sacramento Department of Public Utilities
Transaction #:P17141311005
Construction Management and Inspection Services for Accelerated Water Meter Program

Project Cost Estimate Summary for Duration of Project (Fiscal Year 2017-2021)

TASK	FY - 2017	FY - 2018	FY - 2019	FY - 2020	FY - 2021	Total Cost
Project Management						
Principal in Charge (Frank Martin, PE, QSP)*	$50,020	$112,496	$71,663	$50,471	$39,054	$323,704
Assistant Project Manager (Fred Sharp)*	$211,200	$234,600	$0	$0	$0	$0
Construction Manager (Manny Sousa)*	$141,155	$252,838	$0	$0	$0	$393,993
Construction Manager (Sherri Berexa, PE, QSP)*	$0	$70,176	$346,086	$409,002	$273,155	$1,098,419
Assistant Resident Engineer (Rob Sharp)*	$187,770	$278,705	$327,120	$289,941	$154,911	$1,238,447
Assistant Resident Engineer (Brodie Downs)*	$0	$101,824	$0	$0	$0	$0
Assistant Resident Engineer (Tim Grossmann)*	$0	$0	$263,680	$211,507	$0	$475,187
Student Summer Intern (Psomas)	$0	$10,080	$15,120	$26,438	$0	$51,638
Construction Technician (Eric Katapoudis)	$54,000	$211,140	$226,287	$67,917	$0	$559,344
Construction Technician (Nolan Shultz)		$138,720	$226,287	$219,184	$46,003	$630,194
Construction Technician OT		$30,000	$134,850	$42,560	$0	$207,410
ODCs - See ODC Sheet	$16,280	$16,280	$4,070	$2,035	$2,035	$40,700
TOTAL	**$660,425**	**$1,456,858**	**$1,615,163**	**$1,319,056**	**$515,159**	**$5,019,037**
Construction Inspection						
Lead Construction Inspectors (Chris Estep)*	$143,520	$270,259	$289,647	$342,303	$174,575	$1,220,304
Lead Construction Inspectors (Mike Waldron)*	$81,920	$270,259	$217,069	$115,459	$0	$684,708
Construction Inspector 1 (Joe Krewer) (88,103)	$76,800	$253,368	$280,584	$219,439	$0	$830,191
Construction Inspector 2 (Rich Herrick) (72, 82, 104, 97)	$76,800	$124,848	$281,880	$166,562	$0	$650,090
Construction Inspector 3 (Phil King) (90)	$0	$253,368	$171,720	$0	$0	$425,088
Construction Inspector 4 (Luke Miller) (84, 76, 101)	$0	$175,032	$255,960	$333,124	$169,893	$934,009
Construction Inspector 5 (Johnny Wynn) (73, 67)	$0	$187,884	$281,880	$113,685	$0	$583,449
Construction Inspector 6 (Brett Kerby) (81, 96, 91)	$0	$187,884	$281,880	$333,124	$169,893	$972,781
Construction Inspector 7 (Luke Wallace) (80, 87, 99)	$76,800	$127,908	$281,880	$84,603	$0	$571,191
Construction Inspector 8 (Psomas) (89, 95)	$0	$140,760	$171,720	$71,384	$0	$383,864
Construction Inspector 9 (Psomas) (92)	$0	$140,760	$187,920	$219,439	$0	$548,119
Construction Inspector 10 (VC&A) (98)	$0	$140,760	$187,920	$58,164	$0	$386,844
Construction Inspector 11 (Psomas) (94)	$0	$64,872	$187,920	$58,164	$0	$310,956
Construction Inspector 12 (VC&A) (93)	$0	$0	$187,920	$113,685	$0	$301,605
Construction Inspector 13 (Psomas)	$0	$64,872	$0	$66,096	$13,219	$144,187
Construction Inspector 14 (VC&A)	$0	$0	$0	$0	$0	$0
Construction Inspector 15 (Psomas)	$0	$0	$0	$0	$0	$0
Construction Inspector 16 (VC&A)	$0	$64,872	$0	$0	$0	$64,872
Construction Inspector 17 (Psomas)	$0	$64,872	$0	$0	$0	$64,872
Construction Inspector Overtime	$0	$101,174	$0	$0	$0	$101,174
Construction Inspector Double-Time	$0	$10,650	$0	$0	$0	$10,650
Material Testing (Twining)	$5,000	$55,000	$60,000	$40,000	$40,000	$200,000
Archeological/Tribal Support (ESA)			$100,000	$50,000	$0	$150,000
Arborist Support (Acorn Aboricultural)			$15,000	$10,000	$10,000	$35,000
TOTAL	**$460,840**	**$2,699,403**	**$3,440,900**	**$2,395,231**	**$577,580**	**$9,573,955**
Contract Administration						
Contract Administration (Psomas)	$18,308	$37,536	$24,121	$28,118	$9,560	$117,642
TOTAL	**$18,308**	**$37,536**	**$24,121**	**$28,118**	**$9,560**	**$117,642**
General Administrative						
Peak Administrative Support (TBD - Psomas/Sharp)	$26,404	$45,043	$22,972	$0	$0	$94,419
Office Technician (Todd Scott)	$47,104		$108,750	$257,040	$171,666	$584,560
Administration (Todd Scott)		$155,399	$83,274	$33,585	$0	$272,258
TOTAL	**$73,508**	**$200,442**	**$214,996**	**$290,625**	**$171,666**	**$951,237**
Total Cost Before Contingency	**$1,213,081**	**$4,394,239**	**$5,295,179**	**$4,033,030**	**$1,273,965**	**$16,209,495**
Sub Markup 5%	$0	$0	$103,855	$80,158	$27,324	$211,337
Total Cost	**$1,213,081**	**$4,394,239**	**$5,399,034**	**$4,113,188**	**$1,301,289**	**$16,420,832**

		City's Estimated Budget:	**$13,000,000**
Total Construction Costs:	**$240,890,000**	**Project Cost Estimate:**	**$16,420,832**
CMT percentage:	**6.8%**	**Dollar Amount Over / Under:**	**($3,420,832)**

City of Sacramento Department of Public Utilities

Construction Management and Inspection for Services for Accelerated Water Meter Program

Other Direct Expenses

		UNIT	QTY	UNIT COST	SUBTOTAL	TOTAL
A)	**VEHICLES (Includes insurance, gas and O&M)[1]**					
	Psomas/Sharp/Vali Cooper				$0	
	PM/Resident Engineer/Assistant Resident Engineer	Month	0	Included in Hourly Rate		
	Lead Construction Inspectors	Month	0	Included in Hourly Rate		
	Construction Inspectors	Month	0	Included in Hourly Rate		
B)	**FIELD EQUIPMENT & SUPPLIES[2]**					
	Field Survey Equipment[3]	Month		Included in Hourly Rate		
	Video Camera & Supplies[2]	LS	0	Included in Hourly Rate		
	Tools & Miscellaneous[3]	LS	1	$2,500		$2,500
C)	**OFFICE**					
	Office Space with Security	Month	0	Department of Utilities		
	Janitorial Service	Month	0	Department of Utilities		
	Utilities	Month	0	Department of Utilities		
	Telephone	Month	0	Department of Utilities		
	Office Equipment (Desk, Chairs, Tables, etc)	Month	0	Department of Utilities		
	Copy/Fax Machine (Including Paper)	Month	0	Department of Utilities		
	Office First Aid Supplies	Month	0	Department of Utilities		
	Water Services & Refrigerator	Month	0	Department of Utilities		
	Wireless Internet Set-up & Removal	LS	0	Department of Utilities		
	Internet DSL Access	Month	0	Department of Utilities		
	Initial Office Supplies	LS	1	$0	$0	$0
	Office Supplies	Month	51	$200	$10,200	$10,200
	Postage/Courier/Reproduction[5]	Month	0	If Requested by City[6]		
	Photos & Prints[5]	Month	0	$0	$0	$0
D)	**COMPUTERS**					
	Laptop Computers (with Software)[2]	Month	Each	Included in Hourly Rate		
	Misc. Hardware/Software (Speciality Applications)[4/6]	LS	0	If Requested by City		
	IT Staff (Computer Network Set-up/Take-down)	LS	0	N/A		$0
	GPS Equipment	LS	2	$12,000		$24,000
E)	**TRAVEL[6]**					
	Plant/Source Inspection (Airfare,Hotel,Car,Perdiem)	Each	1	$2,000	$2,000	$2,000
F)	**MISCELLANEOUS EXPENSES**	LS	1	$2,000	$2,000	$2,000
G)	**TOTAL OTHER DIRECT EXPENSES**				**TOTALS:**	**$40,700**

NOTES:

1) Vehicle costs are included in hourly rates for all staff.
2) Standard Equipment (e.g. cell phones, hand levels, digital cameras, etc.) are included in the hourly rates.
3) Represents specialized tools and/or equipment that may be requested by the City.
4) Represents specialized computer hardware and software that maybe requested by the City.
5) Items designated are normally provided by the Contractor as specified within the Contract Special Provisions.
6) Purchases of office supplies, miscellaneous computer hardware or software and any travel costs shall be invoiced to City by direct receipt. No mark-ups shall be applied to these receipts.
7) All equipment purchased and reimbursed through ODC's shall become property of the City at the end of the contract and shall be in working order

TWINING

All Schedules of Fees contained herein (2017 - 2020) are provided for the purposes of establishing labor and material testing rates as listed in the various sections. Reimbursement for direct costs other than labor and material testing requires prior written approval from the City of Sacramento. Since the entire City of Sacramento is within 50 miles of the Sacramento area office, the additional $0.070 per mile as identified in the Travel Time and Mileage General Condition will not apply.

Schedule of Fees 2016 - 2017 Prevailing Wage

NOTE: Twining's rates will be adjusted annually each July 1st to reflect increased costs.

Personnel Rates: Per Hour Unless Otherwise Noted

Task Code	Engineering and Consulting Personnel	Rate
10013	Project Engineer/Manager	$ 141.16

Task Code	Field Inspection Personnel	Rate
70101	Soils Technician	$ 119.31

Task Code	Concrete Tests (Field Made Specimens)	Rate
20201	6" x 12" or 4" x 8" Cylinder: Compression Strength (ASTM C39)	$ 40.00
20205	Core Compression including Trimming (ASTM C42)	$ 60.00
20207	6" x 6" x 18" Flexural Beams Not Exceeding Referenced Size (ASTM C78, C293 or CTM 523)	$ 90.00

Task Code	Soils and Aggregate Tests, continued	Rate
70319	Direct Shear Test: Undisturbed - Slow [CD] (ASTM D308	$ 225.00
70321	Direct Shear Test: Undisturbed - Fast [CU] (ASTM D3080)	$ 195.00
70378	Durability Index: Per Method - A,B,C, or D (CTM 229, ASTM D3744)	$ 210.00
70325	Expansion Index (ASTM D4829, UBC 18-2)	$ 160.00
30507	Flat and Elongated Particle (ASTM D4791)	$ 225.00
30508	Flat or Elongated Particle (ASTM D4791)	$ 195.00
70331	Maximum Density: Methods A/B/C (ASTM D1557, D698, CTM 216)	$ 250.00
70333	Maximum Density: Check Point (ASTM D1557, D698)	$ 65.00
70335	Maximum Density: AASHTO C [Modified] (AASHTO T-180)	$ 250.00
70337	Moisture Content (ASTM D2216,CTM 226)	$ 25.00
70339	Moisture and Density: Ring Sample (ASTM D2937)	$ 30.00
70341	Moisture and Density: Shelby Tube Sample (ASTM D2937)	$ 40.00
70340	Moisture-Density Relations of Soil-Cement Mixtures Premixed in the Field (ASTM D558)	$ 225.00
70342	Moisture-Density Relations of Soil-Cement Mixtures Mixed in the Lab (ASTM D558)	$ 295.00
30401	Organic Impurities (ASTM C40, CTM 213)	$ 90.00
70343	Permeability (ASTM D5084)	$ 250.00
80001	Potential Reactivity: Chemical Method (ASTM C289)	$ 475.00
70394	Potential Reactivity: Mortar Bar Expansion Method, 14-Day Exposure (ASTM C1260)	$ 750.00
70398	Potential Reactivity: Concrete Bar Expansion, Method (ASTM C1293), 12 month	$ 2,400.00
70399	Potential Reactivity: Concrete Bar Expansion, Method (ASTM C1293), 24 month	$ 2,600.00
70397	Potential Reactivity of Aggregate Combination, 14-Day Exposure, Mortar (ASTM C1567)	$ 900.00
70345	R-Value: Soil (ASTM 2844, CTM 301)	$ 325.00
70347	R-Value: Aggregate Base (ASTM D2844, CTM 301)	$ 355.00
70349	Sand Equivalent (ASTM D2419, CTM 217)	$ 125.00
70351	Sieve #200 Wash Only (ASTM D1140, CTM 202)	$ 90.00
70353	Sieve with Hydrometer: 3/4" Gravel to Clay (ASTM D422, CTM 203)	$ 225.00
70355	Sieve with Hydrometer: Sand to Clay (ASTM D422, CTM 203)	$ 215.00

Task Code	Non-Destructive Testing Personnel	Rate
10305	Combination NDE Technician/Welding Inspector	$ 99.00

Task Code	Specimen Pick-Up	Rate
20107	Technician for Specimen Pick-Up Not Listed Above (Per Hour, 2-Hour Minimum)	$ 75.00
20109	Technician for Specimen Pick-Up Before 5:00 a.m. or After 5:00 p.m. Monday thru Friday, or All Day Saturday (Per Hour, 2-Hour Minimum Plus Mileage)	$ 98.00

Task Code	Soils and Aggregate Tests	Rate
70357	Sieve Analysis Including Wash (ASTM C136, CTM 202)	$ 140.00
70359	Sieve Analysis Without Wash (ASTM C136, CTM 202)	$ 105.00
70360	Sieve Analysis: Split Sieve (ASTM C136, CTM 202)	$ 215.00
70361	Sieve Analysis Without Wash: With Cobbles (ASTM C136, CTM 202)	$ 210.00
70371	Triaxial	Quotation
70373	Unconfined Compression (ASTM D2166, CTM 221)	$ 135.00
70305	Chloride and Sulfate Content (CTM 417, CTM 422)	$ 130.00
30403	Clay Lumps and Friable Particles (ASTM C142)	$ 175.00
30321	Cleanness Value: 1" x #4 (CTM 227)	$ 175.00
30322	Cleanness Value: 1.5" x .75" (CTM 227)	$ 275.00
70393	Collapse Potential/Index (ASTM D5333)	$ 175.00
70396	Compressive Strength of Molded Soil-Cement Cylinders (ASTM D1633)	$ 105.00
70309	Consolidation Test: Full Cycle (ASTM 2435, CTM 219)	$ 195.00
70311	Consolidation Test: Time Rate per Load Increment (ASTM D2435, CTM 219)	$ 45.00
70313	Corrosivity Series: Sulfate, Cl, pH, Resistivity (CTM 643, 417, and 422)	$ 245.00
70315	Crushed/Fractured Particles (ASTM D5821, CTM 205)	$ 175.00
70317	Direct Shear Test: Remolded and/or Residual (ASTM D3080)	$ 245.00
30317	Unit Weight Per Cubic Foot (ASTM C29, CTM 212)	$ 80.00
30319	Voids in Aggregate with Known Specific Gravity (ASTM C29, CTM 212)	$ 80.00

Task Code	Asphalt Concrete Tests	Rate
75033	Bulk Specific Gravity of Compacted Sample or Core: SSD (CTM 308C and ASTM D2726)	$ 45.00
75036	Bulk Specific Gravity of Compacted Sample or Core: Parafin Coated (CTM 308A and ASTM D1188)	$ 70.00
75024	Extraction: % Bitumen (CTM 382, ASTM D6307)	$ 155.00
75028	Extraction: % Bitumen, Correction Factor (CTM 382, ASTM D6307)	$ 325.00
75042	Lab Tested Maximum Density: Hveem, 3 briquettes (CTM 304, CTM 308, ASTM D1561, ASTM D1188)	$ 200.00
75057	Hveem Stabilometer Test, Premixed, 3 briquettes (CTM 304, CTM 366, ASTM D1560, ASTM D1561)	$ 200.00
75050	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, SSD, 1 briquette (ASTM D6925, ASTM D2726)	$ 75.00
75052	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, Parafin, 1 briquette (ASTM D6925, ASTM D1188)	$ 85.00
75051	Maximum Theoretical Specific Gravity [RICE] (CTM 309, ASTM D2041)	$ 150.00
75107	Marshall Stability and Flow 6" Specimen, Premixed, 3 briquettes (ASTM D5581)	$ 215.00
75063	Moisture Content (CTM 370)	$ 85.00
75075	Effect of Moisture on Asphalt Paving Mixtures, Pre-Mixed (AASHTO T283, ASTM D4867)	$ 900.00
75111	Hamburg Wheel Track Test, 20,000 passes, 4 briquettes (AASHTO T324)	$ 1,500.00

General Conditions

NOTE: A minimum of 24 hours notice is required for testing and inspection services.

Administrative Fees

All administrative costs including report distribution and Twining ConstructionHive system are billed at the following percentage of the monthly invoice total: 5%
Note that hard copies of reports will be sent only to governing jurisdictions that mandate them. All other parties will receive reports electronically. The administrative fee above will be increased by 1% if additional hard copies of reports are requested.

Minimum Charges (Inspection and Technician Personnel Only - Other Personnel Charged on Portal to Portal Basis)

2-Hour Minimum: Inspector arrives at jobsite, no work to perform.
4-Hour Minimum: 1 to 4 hours of inspection
8-Hour Minimum: Over 4 to 8 hours of inspection

Regular Time

The first 8 hours worked Monday through Friday between 5:00 a.m. and 5:00 p.m.

Time and One-Half (All Types of Inspection)

All shifts will be billed based on the time and date of their start. Any increment past 8 hours through 12 hours worked Monday through Friday and the first 12 hours on Saturday.

Double Time (All Types of Inspection)

All shifts will be billed based on the time and date of their start. After the first 12 hours worked Monday through Saturday, all day Sunday, holidays, and the first Saturday following the first Friday in June and December. Holidays are New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the day after Thanksgiving, and Christmas Day.

Meal Period

When personnel are required by their duties to work more than five consecutive hours without a one-half hour uninterrupted meal period,one half hour at double time rate will be charged in addition to any applicable overtime for actual hours worked.

Shift Differential (Applies to Regularly Scheduled Shifts Only)

A $6.00 per hour shift differential premium will be charged for all inspection hours that fall outside of the 5:00 a.m. to 5:00 p.m. time period. Twining will require 48-hour notice prior to beginning a shift that will include hours falling outside this time period. Should this notice not be provided, all work performed on that shift will be billed at the overtime rate.

If three shifts per day are required, the first shift will be billed at the standard rate. The second shift shall be billed in accordance with the previous paragraph.
The third shift shall be billed at 8 hours for the first 6 1/2 hours worked and overtime for all hours thereafter.

General Conditions, continued

Travel Time and Mileage
For projects outside a 50-mile radius from the nearest Twining facility, $0.70 per excess mile to and from the project will be charged for inspectors and technicians. Other than small tools, whenever project related equipment is required to be transported to and from the project site, time and mileage for inspectors and field technicians will be billed on a portal to portal basis. For all projects, $0.70 per mile and applicable travel time will be charged portal to portal for engineers, consultants, supervisors, and laboratory technicians from the laboratory to the project site and return.

For work locations located 100 miles or more from Twining, travel time will be charged at the relevant rate for inspectors and technicians in addition to a subsistence allowance.

Saturday Sample Pick-Ups
In order to be in strict conformance with testing standards, it may be required that Saturday pick-ups be performed (e.g. concrete specimens cast on Friday must be picked up on Saturday in order to be in conformance with ASTM C31 requiring specimens to be moved to their final curing location within 48 hours of casting.) Applicable charges for Saturday work will apply when this is required. Should these charges not be authorized then Twining will not be responsible for any negative consequences.

Reimbursable Expenses
Parking, air fare, car rental, food and lodging, etc. will be charged at cost plus 15% per processed invoice, unless provided by client.

Project Specific Documents
Costs presented assume that client will provide project specific documents (plans, specifications, submittals, RFIs, etc.) for all inspection personnel. Should project specific documents be provided electronically through a for fee service, the client will be responsible for providing access and paying any fees for the service.

Project Site Facilities
Prices quoted assume that initial curing facilities for test samples that comply with relevant test standards and project requirements and desk space for inspection staff are provided. Additional costs will apply should Twining be required to provide such facilities.

Laboratory Testing Hours
Please note that laboratory testing will be billed on an hourly basis for non-standard tests. If testing is required to be performed on Saturdays, Sundays, holidays, or before 5:30 a.m. or after 4:00 p.m. on weekdays, an additional hourly charge with a minimum of one hour will be applied for the laboratory technician. 1.5 x regular test rate will be charged for rush testing.

Charges for Subcontracted Services

Material sent to outside laboratory for testing:	Cost plus 20%
Material sent to outside fabricator or machine shop:	Cost plus 20%
Glu-Lam beam inspection:	Cost plus 20%
Other subcontractors:	Cost plus 20%
Project exclusive equipment purchase:	Cost plus 20%

Limit of Liability
All contracts are subject to errors and omissions coverage limits of $50,000.00, or contract amount whichever is greater. Higher limits available by quotation.

Certified Payroll
Certified payroll will be provided, upon request, at an additional charge of $100.00/month.

Final Reports Required by Jurisdiction
If a final report or affidavit is required, we must first review all inspection and testing reports and clear up any unresolved issues on these reports. These issues will typically require approval by the engineer or architect of record. This process can take several weeks or just a day, depending on the number and complexity of the issues. Cost for final reports will be billed hourly.

Terms of Payment
Fees charged are for professional and technical services and are due upon presentation. If not paid within 30 days from date of invoice, they are considered past due and a finance charge of 1½% per month will be added to the unpaid balance (APR 18%).

All invoice errors or necessary corrections shall be brought to the attention of Twining within 15 days of receipt of invoice. Thereafter, customer acknowledges invoices are correct and valid. Twining reserves the right to terminate its services to a customer without notice if all invoices are not current. Upon such termination of services, the entire amount accrued for all services performed shall immediately become due and payable. Customer waives any and all claims against Twining, its subsidiaries, affiliates, servants and agents for termination of work on account of these terms.

In the event of any litigation arising from or related to any agreement to provide services whether verbal or written, the prevailing party shall be entitled to recover from the non-prevailing party all reasonable costs incurred, including staff time, court costs, attorney's fees and all other related expenses in such litigation. Additionally, in the event of a non-adjudicative settlement of litigation between the parties or a resolution of dispute by arbitration, that same process shall determine the prevailing party.

Specimen Disposal
Specimens will be discarded after testing unless Twining has been notified prior to testing that the customer wishes to retrieve the specimens or storage arrangements are made.

Oversize Specimens
An extra charge will be made when test specimens require more than one person to handle due to size or weight.

Schedule of Fees 2017 - 2018 Prevailing Wage

NOTE: Twining's rates will be adjusted annually each July 1st to reflect increased costs.

Personnel Rates: Per Hour Unless Otherwise Noted

Task Code	Engineering and Consulting Personnel	Rate
10013	Project Engineer/Manager	$ 146.80

Task Code	Field Inspection Personnel	Rate
70101	Soils Technician	$ 124.08

Task Code	Concrete Tests (Field Made Specimens)	Rate
20201	6" x 12" or 4" x 8" Cylinder: Compression Strength (ASTM C39)	$ 40.00
20205	Core Compression including Trimming (ASTM C42)	$ 60.00
20207	6" x 6" x 18" Flexural Beams Not Exceeding Referenced Size (ASTM C78, C293 or CTM 523)	$ 90.00

Task Code	Soils and Aggregate Tests	Rate
30503	Abrasion: LA Rattler (ASTM C131)	$ 185.00
30505	Abrasion: LA Rattler (ASTM C535)	$ 195.00
70301	Atterberg Limits/Plasticity Index (ASTM D4318, CTM204	$ 150.00
70303	California Bearing Ratio Excluding Maximum Density (ASTM D1883): Soil	$ 550.00
70304	California Bearing Ratio Excluding Maximum Density (ASTM D1883): Cement-Treated Soil	$ 650.00
70344	Cement-Treated Soil/Base Mix Design: includes three trial cement contents with three unconfined compressive strength specimens per cement content	$ 2,950.00
70305	Chloride and Sulfate Content (CTM 417, CTM 422)	$ 130.00
30403	Clay Lumps and Friable Particles (ASTM C142)	$ 175.00
30321	Cleanness Value: 1" x #4 (CTM 227)	$ 175.00
30322	Cleanness Value: 1.5" x .75" (CTM 227)	$ 275.00
70393	Collapse Potential/Index (ASTM D5333)	$ 175.00
70396	Compressive Strength of Molded Soil-Cement Cylinders (ASTM D1633)	$ 105.00
70309	Consolidation Test: Full Cycle (ASTM 2435, CTM 219)	$ 195.00
70311	Consolidation Test: Time Rate per Load Increment (ASTM D2435, CTM 219)	$ 45.00
70313	Corrosivity Series: Sulfate, Cl, pH, Resistivity (CTM 643, 417, and 422)	$ 245.00
70315	Crushed/Fractured Particles (ASTM D5821, CTM 205)	$ 175.00
70317	Direct Shear Test: Remolded and/or Residual (ASTM D3080)	$ 245.00

Task Code	Soils and Aggregate Tests, continued	Rate
30317	Unit Weight Per Cubic Foot (ASTM C29, CTM 212)	$ 80.00
30319	Voids in Aggregate with Known Specific Gravity (ASTM C29, CTM 212)	$ 80.00

Task Code	Asphalt Concrete Tests	Rate
75033	Bulk Specific Gravity of Compacted Sample or Core: SSD (CTM 308C and ASTM D2726)	$ 45.00
75036	Bulk Specific Gravity of Compacted Sample or Core: Parafin Coated (CTM 308A and ASTM D1188)	$ 70.00
75024	Extraction: % Bitumen (CTM 382, ASTM D6307)	$ 155.00
75028	Extraction: % Bitumen, Correction Factor (CTM 382, ASTM D6307)	$ 325.00
75042	Lab Tested Maximum Density: Hveem, 3 briquettes (CTM 304, CTM 308, ASTM D1561, ASTM D1188)	$ 200.00
75057	Hveem Stabilometer Test, Premixed, 3 briquettes (CTM 304, CTM 366, ASTM D1560, ASTM D1561)	$ 200.00

Task Code	Non-Destructive Testing Personnel	Rate
10305	Combination NDE Technician/Welding Inspector	$ 99.00

Task Code	Specimen Pick-Up	Rate
20107	Technician for Specimen Pick-Up Not Listed Above (Per Hour, 2-Hour Minimum)	$ 75.00
20109	Technician for Specimen Pick-Up Before 5:00 a.m. or After 5:00 p.m. Monday thru Friday, or All Day Saturday (Per Hour, 2-Hour Minimum Plus Mileage)	$ 98.00

Task Code	Soils and Aggregate Tests, continued	Rate
70319	Direct Shear Test: Undisturbed - Slow [CD] (ASTM D3080)	$ 225.00
70321	Direct Shear Test: Undisturbed - Fast [CU] (ASTM D3080)	$ 195.00
70378	Durability Index: Per Method - A,B,C, or D (CTM 229, ASTM D3744)	$ 210.00
70325	Expansion Index (ASTM D4829, UBC 18-2)	$ 160.00
75004	Fine Aggregate Angularity (AASHTO T304, ASTM C1252, CTM 234)	$ 185.00
30507	Flat and Elongated Particle (ASTM D4791)	$ 225.00
30508	Flat or Elongated Particle (ASTM D4791)	$ 195.00
70331	Maximum Density: Methods A/B/C (ASTM D1557, D698, CTM 216)	$ 250.00
70333	Maximum Density: Check Point (ASTM D1557, D698)	$ 65.00
70335	Maximum Density: AASHTO C [Modified] (AASHTO T-180)	$ 250.00
70337	Moisture Content (ASTM D2216,CTM 226)	$ 25.00
70339	Moisture and Density: Ring Sample (ASTM D2937)	$ 30.00
70341	Moisture and Density: Shelby Tube Sample (ASTM D2937)	$ 40.00
70340	Moisture-Density Relations of Soil-Cement Mixtures Premixed in the Field (ASTM D558)	$ 225.00
70342	Moisture-Density Relations of Soil-Cement Mixtures Mixed in the Lab (ASTM D558)	$ 295.00
30401	Organic Impurities (ASTM C40, CTM 213)	$ 90.00
70343	Permeability (ASTM D5084)	$ 250.00
80001	Potential Reactivity: Chemical Method (ASTM C289)	$ 475.00
70394	Potential Reactivity: Mortar Bar Expansion Method, 14-Day Exposure (ASTM C1260)	$ 750.00
70398	Potential Reactivity: Concrete Bar Expansion, Method (ASTM C1293), 12 month	$ 2,400.00
70399	Potential Reactivity: Concrete Bar Expansion, Method (ASTM C1293), 24 month	$ 2,600.00
70397	Potential Reactivity of Aggregate Combination, 14-Day Exposure, Mortar (ASTM C1567)	$ 900.00
70345	R-Value: Soil (ASTM 2844, CTM 301)	$ 325.00
70347	R-Value: Aggregate Base (ASTM D2844, CTM 301)	$ 355.00
70349	Sand Equivalent (ASTM D2419, CTM 217)	$ 125.00
70351	Sieve #200 Wash Only (ASTM D1140, CTM 202)	$ 90.00
70353	Sieve with Hydrometer: 3/4" Gravel to Clay (ASTM D422, CTM 203)	$ 225.00
70355	Sieve with Hydrometer: Sand to Clay (ASTM D422, CTM 203)	$ 215.00
70357	Sieve Analysis Including Wash (ASTM C136, CTM 202)	$ 140.00
70359	Sieve Analysis Without Wash (ASTM C136, CTM 202)	$ 105.00
70360	Sieve Analysis: Split Sieve (ASTM C136, CTM 202)	$ 215.00
70361	Sieve Analysis Without Wash: With Cobbles (ASTM C136, CTM 202)	$ 210.00

75050	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, SSD, 1 briquette (ASTM D6925, ASTM D2726)	$ 75.00
75052	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, Parafin, 1 briquette (ASTM D6925, ASTM D1188)	$ 85.00
75051	Maximum Theoretical Specific Gravity [RICE] (CTM 309, ASTM D2041)	$ 150.00
75107	Marshall Stability and Flow 6" Specimen, Premixed, 3 briquettes (ASTM D5581)	$ 215.00
75063	Moisture Content (CTM 370)	$ 85.00

Task Code	Asphalt Concrete Tests, continued	Rate
75075	Effect of Moisture on Asphalt Paving Mixtures, Pre-Mixed (AASHTO T283, ASTM D4867)	$ 900.00
75116	Hamburg Wheel Track Test, 25,000 passes, 4 briquettes (AASHTO T324)	$ 1,500.00
70363	Soundness: Sodium or Magnesium Sulfate, 5 Cycles (ASTM C88)	$ 450.00
70365	Specific Gravity and Absorption: Coarse (ASTM C127, CTM 206)	$ 100.00
70367	Specific Gravity and Absorption: Fine (ASTM C128, CTM 207)	$ 165.00
70369	Swell/Settlement Potential: One Dimensional (ASTM D4546)	$ 105.00
70371	Triaxial	Quotation
70373	Unconfined Compression (ASTM D2166, CTM 221)	$ 135.00

General Conditions

NOTE: A minimum of 24 hours notice is required for testing and inspection services.

Administrative Fees

All administrative costs including report distribution and Twining ConstructionHive system are billed at the following percentage of the monthly invoice total: 5%
Note that hard copies of reports will be sent only to governing jurisdictions that mandate them. All other parties will receive reports electronically. The administrative fee above

Minimum Charges (Inspection and Technician Personnel Only - Other Personnel Charged on Portal to Portal Basis)

2-Hour Minimum: Inspector arrives at jobsite, no work to perform.
4-Hour Minimum: 1 to 4 hours of inspection
8-Hour Minimum: Over 4 to 8 hours of inspection

Regular Time

The first 8 hours worked Monday through Friday between 5:00 a.m. and 5:00 p.m.

Time and One-Half (All Types of Inspection)

All shifts will be billed based on the time and date of their start. Any increment past 8 hours through 12 hours worked Monday through Friday and the first 12 hours on Saturday.

Double Time (All Types of Inspection)

All shifts will be billed based on the time and date of their start. After the first 12 hours worked Monday through Saturday, all day Sunday, holidays, and the first Saturday

Meal Period

When personnel are required by their duties to work more than five consecutive hours without a one-half hour uninterrupted meal period,one half hour

Shift Differential (Applies to Regularly Scheduled Shifts Only)

A $6.00 per hour shift differential premium will be charged for all inspection hours that fall outside of the 5:00 a.m. to 5:00 p.m. time period. Twining will require 48-hour notice

If three shifts per day are required, the first shift will be billed at the standard rate. The second shift shall be billed in accordance with the previous paragraph.
The third shift shall be billed at 8 hours for the first 6 1/2 hours worked and overtime for all hours thereafter.

Travel Time and Mileage

For projects outside a 50-mile radius from the nearest Twining facility, $0.70 per excess mile to and from the project will be charged for inspectors and technicians. Other than

For work locations located 100 miles or more from Twining, travel time will be charged at the relevant rate for inspectors and technicians in addition to a subsistence allowance.

Saturday Sample Pick-Ups

In order to be in strict conformance with testing standards, it may be required that Saturday pick-ups be performed (e.g. concrete specimens cast on Friday must be picked up

Reimbursable Expenses

Parking, air fare, car rental, food and lodging, etc. will be charged at cost plus 15% per processed invoice, unless provided by client.

Project Specific Documents

Costs presented assume that client will provide project specific documents (plans, specifications, submittals, RFIs, etc.) for all inspection personnel. Should project specific documents be provided electronically through a for fee service, the client will be responsible for providing access and paying any fees for the service.

Project Site Facilities

Prices quoted assume that initial curing facilities for test samples that comply with relevant test standards and project requirements and desk space for inspection staff are provided. Additional costs will apply should Twining be required to provide such facilities.

Laboratory Testing Hours

Please note that laboratory testing will be billed on an hourly basis for non-standard tests. If testing is required to be performed on Saturdays, Sundays, holidays, or before

Charges for Subcontracted Services

Material sent to outside laboratory for testing:	Cost plus 20%
Material sent to outside fabricator or machine shop:	Cost plus 20%
Glu-Lam beam inspection:	Cost plus 20%
Other subcontractors:	Cost plus 20%
Project exclusive equipment purchase:	Cost plus 20%

Limit of Liability

All contracts are subject to errors and omissions coverage limits of $50,000.00, or contract amount whichever is greater. Higher limits available by quotation.

Certified Payroll
Certified payroll will be provided, upon request, at an additional charge of $100.00/month.

Final Reports Required by Jurisdiction
If a final report or affidavit is required, we must first review all inspection and testing reports and clear up any unresolved issues on these reports. These issues will typically

Terms of Payment
Fees charged are for professional and technical services and are due upon presentation. If not paid within 30 days from date of invoice, they are considered past due and a

All invoice errors or necessary corrections shall be brought to the attention of Twining within 15 days of receipt of invoice. Thereafter, customer acknowledges invoices are

In the event of any litigation arising from or related to any agreement to provide services whether verbal or written, the prevailing party shall be entitled to recover from the non-

Specimen Disposal
Specimens will be discarded after testing unless Twining has been notified prior to testing that the customer wishes to retrieve the specimens or storage arrangements are

Oversize Specimens
An extra charge will be made when test specimens require more than one person to handle due to size or weight.

Schedule of Fees 2018 - 2019 Prevailing Wage

NOTE: Twining's rates will be adjusted annually each July 1st to reflect increased costs.

Personnel Rates: Per Hour Unless Otherwise Noted

Task Code	Engineering and Consulting Personnel	Rate
10013	Project Engineer/Manager	$ 152.67

Task Code	Field Inspection Personnel	Rate
70101	Soils Technician	$ 129.04

Task Code	Concrete Tests (Field Made Specimens)	Rate
20201	6" x 12" or 4" x 8" Cylinder: Compression Strength (ASTM C39)	$ 40.00
20205	Core Compression including Trimming (ASTM C42)	$ 60.00
20207	6" x 6" x 18" Flexural Beams Not Exceeding Referenced Size (ASTM C78, C293 or CTM 523)	$ 90.00

Task Code	Soils and Aggregate Tests	Rate
30503	Abrasion: LA Rattler (ASTM C131)	$ 185.00
30505	Abrasion: LA Rattler (ASTM C535)	$ 195.00
70301	Atterberg Limits/Plasticity Index (ASTM D4318, CTM204	$ 150.00
70303	California Bearing Ratio Excluding Maximum Density (ASTM D1883): Soil	$ 550.00
70304	California Bearing Ratio Excluding Maximum Density (ASTM D1883): Cement-Treated Soil	$ 650.00
70344	Cement-Treated Soil/Base Mix Design: includes three trial cement contents with three unconfined compressive strength specimens per cement content	$ 2,950.00
70305	Chloride and Sulfate Content (CTM 417, CTM 422)	$ 130.00
30403	Clay Lumps and Friable Particles (ASTM C142)	$ 175.00
30321	Cleanness Value: 1" x #4 (CTM 227)	$ 175.00
30322	Cleanness Value: 1.5" x .75" (CTM 227)	$ 275.00
70393	Collapse Potential/Index (ASTM D5333)	$ 175.00
70396	Compressive Strength of Molded Soil-Cement Cylinders (ASTM D1633)	$ 105.00
70309	Consolidation Test: Full Cycle (ASTM 2435, CTM 219)	$ 195.00
70311	Consolidation Test: Time Rate per Load Increment (ASTM D2435, CTM 219)	$ 45.00
70313	Corrosivity Series: Sulfate, Cl, pH, Resistivity (CTM 643, 417, and 422)	$ 245.00
70315	Crushed/Fractured Particles (ASTM D5821, CTM 205)	$ 175.00
70317	Direct Shear Test: Remolded and/or Residual (ASTM D3080)	$ 245.00
30317	Unit Weight Per Cubic Foot (ASTM C29, CTM 212)	$ 80.00
30319	Voids in Aggregate with Known Specific Gravity (ASTM C29, CTM 212)	$ 80.00
70319	Direct Shear Test: Undisturbed - Slow [CD] (ASTM D308	$ 225.00
70321	Direct Shear Test: Undisturbed - Fast [CU] (ASTM D3080)	$ 195.00
70378	Durability Index: Per Method - A,B,C, or D (CTM 229, ASTM D3744)	$ 210.00
70325	Expansion Index (ASTM D4829, UBC 18-2)	$ 160.00
75004	Fine Aggregate Angularity (AASHTO T304, ASTM C1252, CTM 234)	$ 185.00
30507	Flat and Elongated Particle (ASTM D4791)	$ 225.00
30508	Flat or Elongated Particle (ASTM D4791)	$ 195.00
70331	Maximum Density: Methods A/B/C (ASTM D1557, D698, CTM 216)	$ 250.00

Task Code	Non-Destructive Testing Personnel	Rate
10305	Combination NDE Technician/Welding Inspector	$ 99.00

Task Code	Specimen Pick-Up	Rate
20107	Technician for Specimen Pick-Up Not Listed Above (Per Hour, 2-Hour Minimum)	$ 75.00
20109	Technician for Specimen Pick-Up Before 5:00 a.m. or After 5:00 p.m. Monday thru Friday, or All Day Saturday (Per Hour, 2-Hour Minimum Plus Mileage)	$ 98.00

Task Code	Soils and Aggregate Tests, continued	Rate
70340	Moisture-Density Relations of Soil-Cement Mixtures Premixed in the Field (ASTM D558)	$ 225.00
70342	Moisture-Density Relations of Soil-Cement Mixtures Mixed in the Lab (ASTM D558)	$ 295.00
30401	Organic Impurities (ASTM C40, CTM 213)	$ 90.00
70343	Permeability (ASTM D5084)	$ 250.00
80001	Potential Reactivity: Chemical Method (ASTM C289)	$ 475.00
70394	Potential Reactivity: Mortar Bar Expansion Method, 14-Day Exposure (ASTM C1260)	$ 750.00
70398	Potential Reactivity: Concrete Bar Expansion, Method (ASTM C1293), 12 month	$ 2,400.00
70399	Potential Reactivity: Concrete Bar Expansion, Method (ASTM C1293), 24 month	$ 2,600.00
70397	Potential Reactivity of Aggregate Combination, 14-Day Exposure, Mortar (ASTM C1567)	$ 900.00
70345	R-Value: Soil (ASTM 2844, CTM 301)	$ 325.00
70347	R-Value: Aggregate Base (ASTM D2844, CTM 301)	$ 355.00
70349	Sand Equivalent (ASTM D2419, CTM 217)	$ 125.00
70351	Sieve #200 Wash Only (ASTM D1140, CTM 202)	$ 90.00
70353	Sieve with Hydrometer: 3/4" Gravel to Clay (ASTM D422, CTM 203)	$ 225.00
70355	Sieve with Hydrometer: Sand to Clay (ASTM D422, CTM 203)	$ 215.00
70357	Sieve Analysis Including Wash (ASTM C136, CTM 202)	$ 140.00
70359	Sieve Analysis Without Wash (ASTM C136, CTM 202)	$ 105.00
70360	Sieve Analysis: Split Sieve (ASTM C136, CTM 202)	$ 215.00
70361	Sieve Analysis Without Wash: With Cobbles (ASTM C136, CTM 202)	$ 210.00
70363	Soundness: Sodium or Magnesium Sulfate, 5 Cycles (ASTM C88)	$ 450.00
70365	Specific Gravity and Absorption: Coarse (ASTM C127, CTM 206)	$ 100.00
70367	Specific Gravity and Absorption: Fine (ASTM C128, CTM 207)	$ 165.00
70369	Swell/Settlement Potential: One Dimensional (ASTM D4546)	$ 105.00
70371	Triaxial	Quotation
70373	Unconfined Compression (ASTM D2166, CTM 221)	$ 135.00

Task Code	Asphalt Concrete Tests	Rate
75075	Effect of Moisture on Asphalt Paving Mixtures, Pre-Mixed (AASHTO T283, ASTM D4867)	$ 900.00
75116	Hamburg Wheel Track Test, 25,000 passes, 4 briquettes (AASHTO T324)	$ 1,500.00
75033	Bulk Specific Gravity of Compacted Sample or Core: SSD (CTM 308C and ASTM D2726)	$ 45.00
75036	Bulk Specific Gravity of Compacted Sample or Core: Parafin Coated (CTM 308A and ASTM D1188)	$ 70.00
75024	Extraction: % Bitumen (CTM 382, ASTM D6307)	$ 155.00
75028	Extraction: % Bitumen, Correction Factor (CTM 382, ASTM D6307)	$ 325.00

Task Code	Soils and Aggregate Tests, continued	Rate
70333	Maximum Density: Check Point (ASTM D1557, D698)	$ 65.00
70335	Maximum Density: AASHTO C [Modified] (AASHTO T-180)	$ 250.00
70337	Moisture Content (ASTM D2216,CTM 226)	$ 25.00
70339	Moisture and Density: Ring Sample (ASTM D2937)	$ 30.00
70341	Moisture and Density: Shelby Tube Sample (ASTM D2937)	$ 40.00

Task Code	Asphalt Concrete Tests	Rate
75042	Lab Tested Maximum Density: Hveem, 3 briquettes (CTM 304, CTM 308, ASTM D1561, ASTM D1188)	$ 200.00
75057	Hveem Stabilometer Test, Premixed, 3 briquettes (CTM 304, CTM 366, ASTM D1560, ASTM D1561)	$ 200.00
75050	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, SSD, 1 briquette (ASTM D6925, ASTM D2726)	$ 75.00
75052	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, Parafin, 1 briquette (ASTM D6925, ASTM D1188)	$ 85.00
75051	Maximum Theoretical Specific Gravity [RICE] (CTM 309, ASTM D2041)	$ 150.00
75107	Marshall Stability and Flow 6" Specimen, Premixed, 3 briquettes (ASTM D5581)	$ 215.00
75063	Moisture Content (CTM 370)	$ 85.00

General Conditions

NOTE: A minimum of 24 hours notice is required for testing and inspection services.

Administrative Fees

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Note that hard copies of reports will be sent only to governing jurisdictions that mandate them. All other parties will receive reports electronically. The administrative fee above

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2-Hour Minimum: Inspector arrives at jobsite, no work to perform.
4-Hour Minimum: 1 to 4 hours of inspection
8-Hour Minimum: Over 4 to 8 hours of inspection

Regular Time

The first 8 hours worked Monday through Friday between 5:00 a.m. and 5:00 p.m.

Time and One-Half (All Types of Inspection)

All shifts will be billed based on the time and date of their start. Any increment past 8 hours through 12 hours worked Monday through Friday and the first 12 hours on Saturday.

Double Time (All Types of Inspection)

All shifts will be billed based on the time and date of their start. After the first 12 hours worked Monday through Saturday, all day Sunday, holidays, and the first Saturday

Meal Period

When personnel are required by their duties to work more than five consecutive hours without a one-half hour uninterrupted meal period,one half hour

Shift Differential (Applies to Regularly Scheduled Shifts Only)

A $6.00 per hour shift differential premium will be charged for all inspection hours that fall outside of the 5:00 a.m. to 5:00 p.m. time period. Twining will require 48-hour notice

If three shifts per day are required, the first shift will be billed at the standard rate. The second shift shall be billed in accordance with the previous paragraph.
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For projects outside a 50-mile radius from the nearest Twining facility, $0.70 per excess mile to and from the project will be charged for inspectors and technicians. Other than

For work locations located 100 miles or more from Twining, travel time will be charged at the relevant rate for inspectors and technicians in addition to a subsistence allowance.

Saturday Sample Pick-Ups

In order to be in strict conformance with testing standards, it may be required that Saturday pick-ups be performed (e.g. concrete specimens cast on Friday must be picked up

Reimbursable Expenses

Parking, air fare, car rental, food and lodging, etc. will be charged at cost plus 15% per processed invoice, unless provided by client.

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Costs presented assume that client will provide project specific documents (plans, specifications, submittals, RFIs, etc.) for all inspection personnel. Should project specific documents be provided electronically through a for fee service, the client will be responsible for providing access and paying any fees for the service.

Project Site Facilities

Prices quoted assume that initial curing facilities for test samples that comply with relevant test standards and project requirements and desk space for inspection staff are provided. Additional costs will apply should Twining be required to provide such facilities.

Laboratory Testing Hours

Please note that laboratory testing will be billed on an hourly basis for non-standard tests. If testing is required to be performed on Saturdays, Sundays, holidays, or before

Charges for Subcontracted Services

Material sent to outside laboratory for testing:	Cost plus 20%
Material sent to outside fabricator or machine shop:	Cost plus 20%
Glu-Lam beam inspection:	Cost plus 20%
Other subcontractors:	Cost plus 20%
Project exclusive equipment purchase:	Cost plus 20%

Limit of Liability

All contracts are subject to errors and omissions coverage limits of $50,000.00, or contract amount whichever is greater. Higher limits available by quotation.

Certified Payroll

Certified payroll will be provided, upon request, at an additional charge of $100.00/month.

Final Reports Required by Jurisdiction
If a final report or affidavit is required, we must first review all inspection and testing reports and clear up any unresolved issues on these reports. These issues will typically

Terms of Payment
Fees charged are for professional and technical services and are due upon presentation. If not paid within 30 days from date of invoice, they are considered past due and a

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Specimen Disposal
Specimens will be discarded after testing unless Twining has been notified prior to testing that the customer wishes to retrieve the specimens or storage arrangements are

Oversize Specimens
An extra charge will be made when test specimens require more than one person to handle due to size or weight.

Schedule of Fees 2019 - 2020 Prevailing Wage

NOTE: Twining's rates will be adjusted annually each July 1st to reflect increased costs.

Personnel Rates: Per Hour Unless Otherwise Noted

Task Code	Engineering and Consulting Personnel	Rate
10013	Project Engineer/Manager	$ 158.78

Task Code	Field Inspection Personnel	Rate
70101	Soils Technician	$ 134.20

Task Code	Concrete Tests (Field Made Specimens)	Rate
20201	6" x 12" or 4" x 8" Cylinder: Compression Strength (ASTM C39)	$ 40.00
20205	Core Compression including Trimming (ASTM C42)	$ 60.00
20207	6" x 6" x 18" Flexural Beams Not Exceeding Referenced Size (ASTM C78, C293 or CTM 523)	$ 90.00

Task Code	Soils and Aggregate Tests	Rate
70319	Direct Shear Test: Undisturbed - Slow [CD] (ASTM D308	$ 225.00
70321	Direct Shear Test: Undisturbed - Fast [CU] (ASTM D3080)	$ 195.00
70378	Durability Index: Per Method - A,B,C, or D (CTM 229, ASTM D3744)	$ 210.00
70325	Expansion Index (ASTM D4829, UBC 18-2)	$ 160.00
75004	Fine Aggregate Angularity (AASHTO T304, ASTM C1252, CTM 234)	$ 185.00
30507	Flat and Elongated Particle (ASTM D4791)	$ 225.00
30508	Flat or Elongated Particle (ASTM D4791)	$ 195.00
70331	Maximum Density: Methods A/B/C (ASTM D1557, D698, CTM 216)	$ 250.00
70333	Maximum Density: Check Point (ASTM D1557, D698)	$ 65.00
70335	Maximum Density: AASHTO C [Modified] (AASHTO T-180)	$ 250.00
70337	Moisture Content (ASTM D2216,CTM 226)	$ 25.00
70339	Moisture and Density: Ring Sample (ASTM D2937)	$ 30.00
70341	Moisture and Density: Shelby Tube Sample (ASTM D2937)	$ 40.00
70340	Moisture-Density Relations of Soil-Cement Mixtures Premixed in the Field (ASTM D558)	$ 225.00
70342	Moisture-Density Relations of Soil-Cement Mixtures Mixed in the Lab (ASTM D558)	$ 295.00
30401	Organic Impurities (ASTM C40, CTM 213)	$ 90.00
70343	Permeability (ASTM D5084)	$ 250.00
80001	Potential Reactivity: Chemical Method (ASTM C289)	$ 475.00
70394	Potential Reactivity: Mortar Bar Expansion Method, 14-Day Exposure (ASTM C1260)	$ 750.00
70398	Potential Reactivity: Concrete Bar Expansion, Method (ASTM C1293), 12 month	$ 2,400.00
70399	Potential Reactivity: Concrete Bar Expansion, Method (ASTM C1293), 24 month	$ 2,600.00
70397	Potential Reactivity of Aggregate Combination, 14-Day Exposure, Mortar (ASTM C1567)	$ 900.00
70345	R-Value: Soil (ASTM 2844, CTM 301)	$ 325.00
70347	R-Value: Aggregate Base (ASTM D2844, CTM 301)	$ 355.00
70349	Sand Equivalent (ASTM D2419, CTM 217)	$ 125.00
70351	Sieve #200 Wash Only (ASTM D1140, CTM 202)	$ 90.00
70353	Sieve with Hydrometer: 3/4" Gravel to Clay (ASTM D422, CTM 203)	$ 225.00
70355	Sieve with Hydrometer: Sand to Clay (ASTM D422, CTM 203)	$ 215.00
70357	Sieve Analysis Including Wash (ASTM C136, CTM 202)	$ 140.00
70359	Sieve Analysis Without Wash (ASTM C136, CTM 202)	$ 105.00

Task Code	Non-Destructive Testing Personnel	Rate
10305	Combination NDE Technician/Welding Inspector	$ 99.00

Task Code	Specimen Pick-Up	Rate
20107	Technician for Specimen Pick-Up Not Listed Above (Per Hour, 2-Hour Minimum)	$ 75.00
20109	Technician for Specimen Pick-Up Before 5:00 a.m. or After 5:00 p.m. Monday thru Friday, or All Day Saturday (Per Hour, 2-Hour Minimum Plus Mileage)	$ 98.00

Task Code	Soils and Aggregate Tests, continued	Rate
30503	Abrasion: LA Rattler (ASTM C131)	$ 185.00
30505	Abrasion: LA Rattler (ASTM C535)	$ 195.00
70301	Atterberg Limits/Plasticity Index (ASTM D4318, CTM204)	$ 150.00
70303	California Bearing Ratio Excluding Maximum Density (ASTM D1883): Soil	$ 550.00
70304	California Bearing Ratio Excluding Maximum Density (ASTM D1883): Cement-Treated Soil	$ 650.00
70344	Cement-Treated Soil/Base Mix Design: includes three trial cement contents with three unconfined compressive strength specimens per cement content	$ 2,950.00
70305	Chloride and Sulfate Content (CTM 417, CTM 422)	$ 130.00
30403	Clay Lumps and Friable Particles (ASTM C142)	$ 175.00
30321	Cleanness Value: 1" x #4 (CTM 227)	$ 175.00
30322	Cleanness Value: 1.5" x .75" (CTM 227)	$ 275.00
70393	Collapse Potential/Index (ASTM D5333)	$ 175.00
70396	Compressive Strength of Molded Soil-Cement Cylinders (ASTM D1633)	$ 105.00
70309	Consolidation Test: Full Cycle (ASTM 2435, CTM 219)	$ 195.00
70311	Consolidation Test: Time Rate per Load Increment (ASTM D2435, CTM 219)	$ 45.00
70313	Corrosivity Series: Sulfate, Cl, pH, Resistivity (CTM 643, 417, and 422)	$ 245.00
70315	Crushed/Fractured Particles (ASTM D5821, CTM 205)	$ 175.00
70317	Direct Shear Test: Remolded and/or Residual (ASTM D3080)	$ 245.00

Task Code	Soils and Aggregate Tests, continued	Rate
30317	Unit Weight Per Cubic Foot (ASTM C29, CTM 212)	$ 80.00
30319	Voids in Aggregate with Known Specific Gravity (ASTM C29, CTM 212)	$ 80.00

Task Code	Asphalt Concrete Tests	Rate
75033	Bulk Specific Gravity of Compacted Sample or Core: SSD (CTM 308C and ASTM D2726)	$ 45.00
75036	Bulk Specific Gravity of Compacted Sample or Core: Parafin Coated (CTM 308A and ASTM D1188)	$ 70.00
75024	Extraction: % Bitumen (CTM 382, ASTM D6307)	$ 155.00
75028	Extraction: % Bitumen, Correction Factor (CTM 382, ASTM D6307)	$ 325.00
75042	Lab Tested Maximum Density: Hveem, 3 briquettes (CTM 304, CTM 308, ASTM D1561, ASTM D1188)	$ 200.00
75057	Hveem Stabilometer Test, Premixed, 3 briquettes (CTM 304, CTM 366, ASTM D1560, ASTM D1561)	$ 200.00

70360	Sieve Analysis: Split Sieve (ASTM C136, CTM 202)	$ 215.00
70361	Sieve Analysis Without Wash: With Cobbles (ASTM C136, CTM 202)	$ 210.00
70363	Soundness: Sodium or Magnesium Sulfate, 5 Cycles (ASTM C88)	$ 450.00
70365	Specific Gravity and Absorption: Coarse (ASTM C127, CTM 206)	$ 100.00
70367	Specific Gravity and Absorption: Fine (ASTM C128, CTM 207)	$ 165.00
70369	Swell/Settlement Potential: One Dimensional (ASTM D4546)	$ 105.00
70371	Triaxial	Quotation
70373	Unconfined Compression (ASTM D2166, CTM 221)	$ 135.00

75050	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, SSD, 1 briquette (ASTM D6925, ASTM D2726)	$ 75.00
75052	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, Parafin, 1 briquette (ASTM D6925, ASTM D1188)	$ 85.00
75051	Maximum Theoretical Specific Gravity [RICE] (CTM 309, ASTM D2041)	$ 150.00
75107	Marshall Stability and Flow 6" Specimen, Premixed, 3 briquettes (ASTM D5581)	$ 215.00
75063	Moisture Content (CTM 370)	$ 85.00

Task Code	Asphalt Concrete Tests, continued	Rate
75075	Effect of Moisture on Asphalt Paving Mixtures, Pre-Mixed (AASHTO T283, ASTM D4867)	$ 900.00
75116	Hamburg Wheel Track Test, 25,000 passes, 4 briquettes (AASHTO T324)	$ 1,500.00

General Conditions

NOTE: A minimum of 24 hours notice is required for testing and inspection services.

Administrative Fees

All administrative costs including report distribution and Twining ConstructionHive system are billed at the following percentage of the monthly invoice total: 5%
Note that hard copies of reports will be sent only to governing jurisdictions that mandate them. All other parties will receive reports electronically. The administrative fee above

Minimum Charges (Inspection and Technician Personnel Only - Other Personnel Charged on Portal to Portal Basis)

2-Hour Minimum: Inspector arrives at jobsite, no work to perform.
4-Hour Minimum: 1 to 4 hours of inspection
8-Hour Minimum: Over 4 to 8 hours of inspection

Regular Time

The first 8 hours worked Monday through Friday between 5:00 a.m. and 5:00 p.m.

Time and One-Half (All Types of Inspection)

All shifts will be billed based on the time and date of their start. Any increment past 8 hours through 12 hours worked Monday through Friday and the first 12 hours on Saturday.

Double Time (All Types of Inspection)

All shifts will be billed based on the time and date of their start. After the first 12 hours worked Monday through Saturday, all day Sunday, holidays, and the first Saturday

Meal Period

When personnel are required by their duties to work more than five consecutive hours without a one-half hour uninterrupted meal period,one half hour

Shift Differential (Applies to Regularly Scheduled Shifts Only)

A $6.00 per hour shift differential premium will be charged for all inspection hours that fall outside of the 5:00 a.m. to 5:00 p.m. time period. Twining will require 48-hour notice

If three shifts per day are required, the first shift will be billed at the standard rate. The second shift shall be billed in accordance with the previous paragraph.
The third shift shall be billed at 8 hours for the first 6 1/2 hours worked and overtime for all hours thereafter.

Travel Time and Mileage

For projects outside a 50-mile radius from the nearest Twining facility, $0.70 per excess mile to and from the project will be charged for inspectors and technicians. Other than

For work locations located 100 miles or more from Twining, travel time will be charged at the relevant rate for inspectors and technicians in addition to a subsistence allowance.

Saturday Sample Pick-Ups

In order to be in strict conformance with testing standards, it may be required that Saturday pick-ups be performed (e.g. concrete specimens cast on Friday must be picked up

Reimbursable Expenses

Parking, air fare, car rental, food and lodging, etc. will be charged at cost plus 15% per processed invoice, unless provided by client.

Project Specific Documents

Costs presented assume that client will provide project specific documents (plans, specifications, submittals, RFIs, etc.) for all inspection personnel. Should project specific documents be provided electronically through a for fee service, the client will be responsible for providing access and paying any fees for the service.

Project Site Facilities

Prices quoted assume that initial curing facilities for test samples that comply with relevant test standards and project requirements and desk space for inspection staff are provided. Additional costs will apply should Twining be required to provide such facilities.

Laboratory Testing Hours

Please note that laboratory testing will be billed on an hourly basis for non-standard tests. If testing is required to be performed on Saturdays, Sundays, holidays, or before

Charges for Subcontracted Services

Material sent to outside laboratory for testing:	Cost plus 20%
Material sent to outside fabricator or machine shop:	Cost plus 20%
Glu-Lam beam inspection:	Cost plus 20%
Other subcontractors:	Cost plus 20%
Project exclusive equipment purchase:	Cost plus 20%

Limit of Liability
All contracts are subject to errors and omissions coverage limits of $50,000.00, or contract amount whichever is greater. Higher limits available by quotation.

Certified Payroll
Certified payroll will be provided, upon request, at an additional charge of $100.00/month.

Final Reports Required by Jurisdiction
If a final report or affidavit is required, we must first review all inspection and testing reports and clear up any unresolved issues on these reports. These issues will typically

Terms of Payment
Fees charged are for professional and technical services and are due upon presentation. If not paid within 30 days from date of invoice, they are considered past due and a

All invoice errors or necessary corrections shall be brought to the attention of Twining within 15 days of receipt of invoice. Thereafter, customer acknowledges invoices are

In the event of any litigation arising from or related to any agreement to provide services whether verbal or written, the prevailing party shall be entitled to recover from the non-

Specimen Disposal
Specimens will be discarded after testing unless Twining has been notified prior to testing that the customer wishes to retrieve the specimens or storage arrangements are

Oversize Specimens
An extra charge will be made when test specimens require more than one person to handle due to size or weight.