

RESOLUTION NO. 2011-244

Adopted by the Sacramento City Council

April 21, 2011

AUTHORIZING SUPPLEMENTAL AGREEMENT NO. 1 WITH CAROLLO ENGINEERS, INC.

BACKGROUND

- A. The Sacramento River Water Treatment Plant (SRWTP) was constructed in the 1920's and the E.A. Fairbairn Water Treatment Plant (EAFWTP) was constructed in the early 1960's. Many of the older structures at these facilities have reached the end of their service life and need to be rehabilitated or replaced.
- B. The Department of Utilities performed a condition assessment study that was completed in 2009 that identified infrastructure at the treatment plants requiring replacement or rehabilitation.
- C. On April 13, 2010, the City Council approved a Professional Services Agreement with Carollo Engineers, Inc. (Carollo) to perform the first of three phases of design consultant services for the Treatment Plants Rehabilitation Project, for an amount not to exceed \$825,494. Carollo was selected to provide all three phases of project design services through a Request for Qualifications process.
- D. In March 2011, Phase 1 (Preliminary Design) was completed. The Phase 1 services included cost benefit analyses of facility rehabilitation options, preparation of preliminary design drawings for the selected options and cost estimates for all facilities needing replacement as identified in the condition assessment study for the Water Treatment Plants Rehabilitation Project.
- E. Staff is recommending that the City Council approve Supplemental Agreement No. 1 to authorize performance of the Phase 2 final design work by Carollo and its subconsultants, for the amount not to exceed \$7,400,000, bringing the total not to exceed amount for this Professional Services Agreement to \$8,225,494.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

- Section 1. The City Manager is authorized to sign Supplemental Agreement No. 1 to the Professional Services Agreement with Carollo Engineers, Inc., to perform the Phase 2 Final Design services for the Water Treatment Plants Rehabilitation Project (Z14006000), for an amount not to exceed \$7,400,000.

Section 2. The City Manager is authorized to transfer \$1,500,000 from the Water Contingency fund to the Water Treatment Plants Rehabilitation Project (Z14006000).

Section 3. Exhibit A is made a part of this Resolution.

Table of Contents

Exhibit A - Supplemental Agreement No. 1

Adopted by the City of Sacramento City Council on April 21, 2011 by the following vote:

Ayes: Councilmembers Ashby, Cohn, D Fong, McCarty, Pannell, Sheedy, and Mayor Johnson.

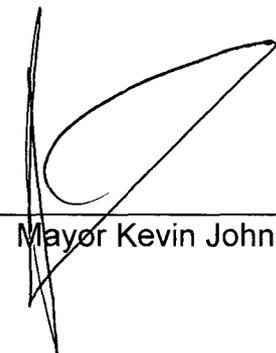
Noes: None.

Abstain: None.

Absent: Councilmembers Schenirer and King Fong

Attest:

for Dawn Bullwinkel
Shirley Concolino, City Clerk



Mayor Kevin Johnson, Mayor

SUPPLEMENTAL AGREEMENT

Project Title and Job Number: Water Treatment Plants Rehabilitation / Z14006000
Purchase Order #: 0000010129

Date: _____
Supplemental Agreement No.: 1

The City of Sacramento ("City") and Carollo Engineers, Inc. ("Contractor"), as parties to that certain Professional Services Agreement designated as Agreement Number 2010-0266, including any and all prior supplemental agreements modifying said agreement (said 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:

This supplemental agreement adds the Phase 2 Final Design Services to the Agreement. Contractor shall perform the work and services specified in "Attachment 2 to Exhibit A", which is attached hereto and incorporated herein by this reference.

2. The Contractor's billable rates for performance of the Phase 2 work and services described in section 1, above, are set forth in "Attachment 2 to Exhibit B", and the total estimated costs for such work and services are set forth in "Attachment 3 to Exhibit B," both of which are attached hereto and incorporated herein by this reference.

3. 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 \$7,400,000, and said maximum not-to-exceed amount is amended as follows:

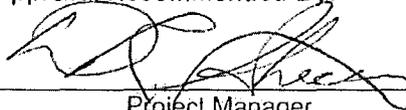
Agreement's original not-to-exceed amount:	<u>\$825,494</u>
Net change by previous supplemental agreements:	<u>\$ 0</u>
Not-to-exceed amount prior to this supplemental agreement:	<u>\$825,494</u>
Increase by this supplemental agreement:	<u>\$7,400,000</u>
New not-to exceed amount including all supplemental agreements:	<u>\$8,225,494</u>

4. Contractor agrees that the amount of increase or decrease in the not-to-exceed amount specified in section 3, 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.

5. 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.

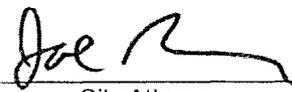
6. Except as specifically revised herein, all terms and conditions of the Agreement shall remain in full force and effect, and Contractor shall perform all of the services, duties, obligations, and conditions required under the Agreement, as supplemented and modified by this supplemental agreement.

Approval Recommended By:



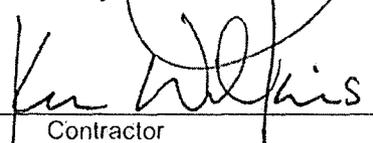
Project Manager

Approved As To Form By:



City Attorney

Approved By:



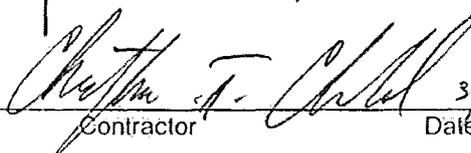
Contractor

3/30/11

Date

Approved By:

City of Sacramento



Contractor

3/31/11

Date

Attest:

City Clerk

ATTACHMENT 2 TO EXHIBIT A

**FINAL DESIGN SERVICES
SRWTP AND EAFWTP IMPROVEMENTS PROJECT (PROJECT)
CITY OF SACRAMENTO**

GENERAL

The City of Sacramento (CITY) has completed conceptual design of improvements to the Sacramento River Water Treatment Plant (SRWTP) and the E.A. Fairbairn Water Treatment Plant (EAFWTP) and will now implement final project design for the planned improvements at both plants. Some existing facilities at the SRWTP have reached the end of their service life increasing the risk of maintaining a reliable drinking water supply for CITY customers. Phase I of the design developed a concept for replacing many of the aging facilities to provide the current nameplate capacity of 160 mgd while allowing future potential expansion projects at the site.

Solids handling methods at the SRTWP and EAFWTP have also grown increasingly challenging with current solids production, lagoon operations, sludge drying, permitting, and disposal. Currently the CITY is using contract dewatering as an interim measure. The previous project evaluated and recommended new solids handling facilities at both WTPs.

For this project (PROJECT), Carollo Engineers, Inc. (CONTRACTOR) and CONTRACTOR's subconsultants will provide final design of the improvements to and/or replacements of end-of-life facilities at SRWTP and solids handling improvements at SRWTP and EAFWTP.

The Preliminary Design Report (PDR), developed as part of Phase I, defines the areas of each WTP that will be demolished, modified, or added. These areas are as follows:

FAC. No.	FACILITY NAME
SRWTP	
12	INTAKE
30	FLOW SPLIT STRUCTURE
43	FLOCCULATION/SEDIMENTATION BASIN 1
42	FLOCCULATION/SEDIMENTATION BASIN 2
41	FLOCCULATION/SEDIMENTATION BASIN 3
44	FLOCCULATION/SEDIMENTATION BASIN 4
52	OLD FILTERS 1-16
51	2003 FILTERS 1-8 & NEW FILTERS 9-16
61	CT/CLEARWELL
62	9.5 MG RESERVOIR
63	5 MG RESERVOIR
70	TREATED WATER PUMP STATION
71	HIGH SERVICE PUMP STATION
92	PLANT ELECTRICAL SUBSTATION
15	FILTER WASHWATER BASINS

15	SLUDGE LAGOONS
71	SOLIDS THICKENERS AND PS
72	DEWATERING BUILDING
15	THICKENED SLUDGE DRYING BED
EAFWTP	
16	FILTER WASHWATER BASINS
16	SLUDGE LAGOONS
73	SOLIDS THICKENERS AND PS
74	DEWATERING BUILDING

The following scope of work, design schedule, and budget information describes the work activities and requirements for conducting the Phase II final design. The scope of work details each task and related activities and design products for final design of the PROJECT. Final design includes geotechnical investigations, plant surveying, and preparation of contract documents consisting of drawings and specifications.

SCOPE OF WORK

This scope of work describes the final design of the PROJECT. The objective, work activities, and task products are described below.

Task 1.0 - Project Management

Objective: To establish and execute a management plan for coordination of work activities for the duration of final design and bidding services for the PROJECT.

Project management plan shall consist of: 1) budget and schedule monitoring; 2) product preparation and submittal; 3) project coordination between engineering design disciplines; 4) project coordination between engineering and drafting, and 5) overall project coordination between CONTRACTOR and CITY.

T1.01 Prepare project management plan including: 1) project schedule and listing of coordination meetings and activities; 2) list of drawings; 3) project communications plan; 4) quality assurance/quality control plan; 5) project team assignments; 6) documentation procedures for design engineering and design calculations, and 7) develop and maintain CAD drafting manual with drafting standards for the project.

Create and setup "ProjectWise" for sharing of design drawings, specifications, equipment data sheets, etc., between Design Team disciplines.

T1.02 Design Coordination/ Project Management. Conduct final design kick-off meetings with CITY and design team (two meetings). Provide overall project management for all disciplines, drafting staff, and subconsultants throughout the project. Maintain project budget and schedule. Plan and allocate resources to meet project staffing requirements throughout the project.

T1.03 CONTRACTOR's project manager will attend bi-weekly project managers meeting to review progress and coordinate work with CITY. It is understood that CITY's project manager will be the primary point of contact for all communication between CONTRACTOR and CITY staff. A maximum of one two-hour meeting biweekly with the CITY has been assumed for communication regarding project management of the project.

T1.04 Prepare monthly invoices and project progress reports.

Products:

P1.01 Project management plan (pdf copy).

P1.02 Monthly invoices and progress reports (1 copy).

Task 2.0 - Final Design Documents

Objective: Prepare final design drawings, specifications, and contract requirements.

The CONTRACTOR will prepare final design drawings and contract specifications for the WTPs Improvements Project. A Preliminary List of Drawings for all disciplines is provided as Attachment 1 to Exhibit A. The number of drawings by discipline is summarized below. Drawings and specifications will be prepared in accordance with the Project Design Standards prepared as part of Task 1.

Contract specifications will include: 1) Division 00 - Bidding Requirements, Contract Forms, General Conditions, and Supplemental Conditions; 2) Division 01 - General Requirements; and 3) Divisions 02 through 17 - Technical Specifications. Division 00 Sections of the contract documents will consist of the City's Standard Legal Specifications.

Within the CONTRACTOR's team, there are several firms that will be performing the work. Carollo Engineers, Inc. (CONTRACTOR) will serve as the prime consultant. CONTRACTOR will be responsible for overall execution of the work. CONTRACTOR will also be responsible for all process, mechanical, civil, demolition, HVAC, and plumbing on the project except as noted below. MWH will be responsible for all structural and instrumentation & control design on the project. MWH will also be responsible for the process/mechanical design of the High Service Pump Station. Electrical design will be performed by J Calton Engineering and CONTRACTOR. CONTRACTOR will design the electrical substation with the remaining facilities designed by J Calton Engineering. All drafting will be performed by CONTRACTOR. Mechanical and process design of the solids handling systems and facilities will be performed by Environmental Engineering and Technology (EE&T) and CONTRACTOR. Architectural design of the SRWTP HSPS and the Dewatering Buildings and Sludge Pump Station Buildings at both WTPs will be performed by Lionakis. CONTRACTOR will be responsible for miscellaneous architectural design of the remaining structures and facilities throughout the WTPs. Landscape design will be performed by Callander Associates.

Notwithstanding any other provisions hereof, the designations of responsibility specified herein are provided solely to indicate which firms will be performing which services, and such designations do not affect or limit in any way CONTRACTOR's contractual responsibility for the performance and completion of all work and services described herein, whether such work and

services are designated to be performed by CONTRACTOR or by any subconsultant retained by CONTRACTOR.

SUMMARY OF DRAWINGS			
Design Discipline	Responsible Firm(s)	Number of Drawings	
		SRWTP	EAFWTP
General	CONTRACTOR	37	15
Civil/Demolition	CONTRACTOR	84	21
Landscaping	Callander Associates	8	5
Architectural	Lionakis/ CONTRACTOR	58	15
Structural	MWH	131	27
Process Mechanical	CONTRACTOR /MWH/EET	135	46
HVAC Mech/Plumbing	CONTRACTOR	28	8
Electrical	J Calton Engineering/ CONTRACTOR	169	55
Instrumentation	MWH	78	34
SUBTOTAL		735	226
TOTAL		961	

Activities:

T2.01 Refine conceptual design elements as required to meet final design objectives, local codes, geotechnical issues, survey results, and potholing, if performed. Specific items under this subtask include:

- Confirm existing facility elevations for hydraulic grade line design and new facility elevations to meet current flood design requirements.
- Changes to property acquisition assumptions
- Confirmation of inclusion of VFDs at SRWTP intake
- Create and setup "ProjectWise" for sharing of design drawings, specifications, equipment data sheets, etc., between Design Team disciplines
- Incorporate any California Department of Public Health comments on the PDR.
- Confirm the design concept for the flocc/sed basin and the filters is to match exactly the existing 2003 expansion facilities.
- Confirm the architectural concept for major new structures is to match the 2003 expansion concept of a Spanish mission style.
- Identify all applicable codes and their current versions that apply to the project. This includes the most recent versions of the California Code of Regulations (CCR) Title 24, applicable as of January 1, 2011. Significant updates to existing Parts and new Parts are applicable to this project and must be followed. Other applicable rules, regulations, and guidelines will be identified from other primacy agencies such as the Central Valley Regional Water Quality Control Board (CVRWQCB) and the California Air Resources Board as applicable.

CONTRACTOR will prepare a technical memorandum to capture any identified updates from the PDR determined as part of this subtask. The current scope of work for tasks described below are based on the assumptions currently described in the Preliminary Design Report and those stated above. If the scope of work for design changes in any way during this task the CITY and CONTRACTOR will review the impact to this scope and associated design budget.

2.01.1 Geotechnical Investigations. Under this subtask, CONTRACTOR's subconsultant AGS will perform geotechnical investigations to provide design information for civil and structural design efforts at both WTPs.

- 1. Review of Available Data. AGS will review the available published geotechnical, geologic, and seismologic data and the existing data in existing files pertinent to the proposed construction and the site.
- 2. Field Exploration Program. AGS will conduct a field exploration program consisting of drilling three borings extending to a depth of about 100 feet at SRWTP and two borings at EAFWTP to a depth of 50 feet. AGS will drill the borings at the locations of the proposed structuring where subsurface information does not exist. AGS will obtain Standard Penetration Test (SPT), Shelby tube, modified California, and bulk samples of the soils, as appropriate for various soils encountered. AGS will contact the water treatment plant personnel to identify underground utility locations and verify clearance before initiation of the field exploration program. The field exploration program will be performed under technical supervision of a qualified engineer/geologist who has extensive experience on the soil conditions in the area. AGS's engineer/geologist will record a log of each boring drilled and the conditions

encountered at the site. AGS will backfill the borings with the cement grout. AGS will dispose of the cuttings generated from the drilling operations and restore the ground surface to the original condition to the extent possible.

- 3. Geotechnical Laboratory Testing Program. AGS will perform a laboratory testing program on samples of earth materials obtained during the field exploration program. The laboratory tests will include moisture content, dry density, Atterberg limits, sieve analyses, consolidation, unconfined compression, direct shear, triaxial shear, and compaction tests, as appropriate for various soils encountered.
- 4. Engineering Analyses and Report Preparation. AGS will perform engineering analyses using the field and laboratory data to develop site-specific geotechnical conclusions and recommendations for design and construction of the project. AGS's geotechnical findings, conclusions, and recommendations along with the supporting field and laboratory data will be presented in an engineering report.
- 5. Analyze impact of placing piles in same location as existing piles within the existing Basin 2 area. Recommend fate of existing piles and new pile layout.
- 6. Meetings and Consultation. AGS will meet and consult with the design team, as required during the design phase of the project. Two meetings have been included during the design phase of the study.
- 7. Review of Specifications and Design Drawings. AGS will review specifications and design drawings to verify that they are prepared in accordance with geotechnical conclusions and recommendations at both treatment plants.

2.01.2 Surveying. Under this subtask CONTRACTOR's subconsultant, CTA, will perform a survey of the SRWTP and EAFWTP. The purpose of this subtask is to provide an accurate background from which to perform design activities, including identification of existing grades, surface treatments, structures, and utilities that can be identified without potholing. Geotechnical borings will also be located on the survey map.

Sacramento River WTP

1. Provide field surveys to establish project control and six (6) aerial mapping ground control points for the area within the project boundary plus a 50' boundary. This includes all necessary research and data preparation. The horizontal datum will be based upon the California Coordinate System, Zone II, NAD 83 from localized control or NGS monuments. The vertical datum will be based upon City of Sacramento benchmarks. Two permanent control points will be set on site and tied to the project control for future use.
2. Retain the services of Radman Aerial Surveys to provide the aerial photography, analytical aerotriangulation and digital mapping for this project. The area will be photographed at a scale of 1"=250' using calibrated precision mapping cameras, with all compiled data being collected to meet a 1"=20' map scale with 1' contours. Deliverables to CONTRACTOR will include ink-on-paper check plots and digital mapping files in AutoCAD format on CD's.
3. The need for additional ground surveys to confirm critical design elements, locating utilities and the identification of improvements or structures that may not be apparent on the aerial photography is anticipated. Therefore, this budget includes 16 hours of a field survey crew and 8 hours of a land surveyor to field walk the site and add the additional data to the aerial mapping.

4. It is also anticipated that geotechnical borings and utility pothole locations will need to be located within the project area. The assumption is that the borings and potholes will have reference points left by others and those points will be surveyed. Therefore, this budget includes 4 hours of field survey crew and 2 hours of a land surveyor to locate and add that information after the original field surveying has been completed.

Fairbairn WTP

1. Provide field surveys to establish project control and five (5) aerial mapping ground control points for the area within the project boundary plus a 50' boundary. This includes all necessary research and data preparation. The horizontal datum will be based upon the California Coordinate System, Zone II, NAD 83 from localized control or NGS monuments. The vertical datum will be based upon City of Sacramento benchmarks. Two permanent control points will be set on site and tied to the project control for future use.
2. Retain the services of Radman Aerial Surveys to provide the aerial photography, analytical aerotriangulation and digital mapping for this project. The area will be photographed at a scale of 1"=250' using calibrated precision mapping cameras, with all compiled data being collected to meet a 1"=20' map scale with 1' contours. Deliverables to CONTRACTOR will include ink-on-paper check plots and digital mapping files in AutoCAD format on CD's.
3. The need for additional ground surveys to confirm critical design elements, locating utilities and the identification of improvements or structures that may not be apparent on the aerial photography is anticipated. Therefore, this budget includes 16 hours of a field survey crew and 8 hours of a land surveyor to field walk the site and add the additional data to the aerial mapping.
4. It is also anticipated that geotechnical borings and utility pothole locations will need to be located within the project area. The assumption is that the borings and potholes will have reference points left by others and those points will be surveyed. Therefore, this budget includes 4 hours of field survey crew and 2 hours of a land surveyor to locate and add that information after the original field surveying has been completed.

2.01.3 Potholing. Under this subtask, CONTRACTOR will contract with a potholing contractor and direct potholing investigations at the SRWTP and EAFWTP sites to identify and/or confirm locations of key underground utilities. An allowance of \$10,000 has been assumed to cover these services throughout the design process.

2.01.4 As part of the project, the previous 411 Building will be demolished. It is unknown whether there are any hazardous materials to be handled with special procedures during demolition. CONTRACTOR will hire an environmental surveying firm to investigate the building for possible hazardous materials and generate a report detailing any issues found. Due to the age of the building, it is not anticipated that any issues will be identified..

- T2.02 30% Review Meeting. CONTRACTOR's project manager will attend and facilitate a review meeting with CITY staff to review status of the project at approximately a 30% level of design completion. Facility design concepts will be reviewed including layout and sizing, as well as site layout and major yard piping completed at that time. Any items requiring CITY input will be identified and discussed. CONTRACTOR will take minutes to capture CITY input to the design concepts presented. CONTRACTOR will relay to the project team for incorporation into the design concepts.

Deliverables: - Meeting Minutes from the 30 percent review meeting

- T2.03 Prepare and submit 50 percent plans and specifications. CONTRACTOR will prepare and submit 50 percent complete set of plans and major project technical specifications at a draft level.

When the submittal is delivered to the CITY, a review workshop will be held, to be attended by the CONTRACTOR's project manager and project engineer. The purpose of the workshop is to present a summary of the deliverable and identify any decision points or specific feedback that is requested from the CITY. Following submittal to the CITY and a review period, CONTRACTOR will meet with the CITY again to discuss design issues, make design decisions, and receive comments. CONTRACTOR will also hold an internal team and discipline coordination meeting to coordinate and review comments received from the CITY.

Deliverables: - One pdf copy of the 50 percent plans and outline specifications
10 Half-size sets of plans and specifications
- Meeting Minutes from the 50 percent review meeting

- T2.04 Prepare and submit 90 percent plans and specifications. CONTRACTOR will prepare and submit 90 percent complete set of plans and project specifications, including CITY front-end specifications customized to the project at a draft level.

Deliverables: - One pdf copy of the 90 percent plans
10 Half-size sets of plans and specifications

- T2.05 Submit 90 percent documents for regulatory review. Following a review period CONTRACTOR will attend meeting with CITY and California Department of Public Health to receive review comments.

- T2.06 When the submittal is delivered to the CITY a review workshop will be held, to be attended by the CONTRACTOR's project manager and project engineer. The purpose of the workshop is to present a summary of the deliverable and identify any decision points or specific feedback that is requested from the CITY. Following submittal to the CITY and a review period, CONTRACTOR will meet with the CITY again to discuss design issues, make design decisions, and receive comments. CONTRACTOR will also hold an internal team and discipline coordination meeting to coordinate and review comments received from the CITY.

Deliverables: - Meeting Minutes from the 90 percent review meeting

T2.07 CONTRACTOR will incorporate comments, conduct internal team coordination meetings and finalize plans and specifications.

T2.08 CONTRACTOR will prepare completed contract documents, ready for printing. It is assumed that a single set of construction documents will be prepared for the work included in this project at both WTPs.

Deliverables: -- 10 Half-size sets of plans and specifications

1 Full-size set of plans on bond

- Two CDs of electronic design files in AutoCAD 2007 and *.pdf formats.

- - Two CDs of specifications in *.pdf format.

**FINAL DESIGN COMPLETION ROADMAP
WATER TREATMENT PLANTS REHABILITATION PROJECT**

Design Discipline	50% Complete	90% Complete	100% Complete
Civil/Landscaping	Major Piping Plan Complete Pipeline Profiles Site Plan Complete Drainage Layout Complete	Changes from 50% Rww Finalize Roadways Finalize Piping Plans Finalize Grading Plans Specifications 90% Planting & Irr. Plan	Changes from 90% Review Finalize Drawings Finalize Specifications
Architectural	Plans Complete Exterior Elevations Complete Interior Walls 50% Complete	Changes from 50% Review Final Detail Sheets / Callouts Specifications 90%	Changes from 90% Review Finalize Drawings Finalize Specifications
Structural	Plan Views Complete Sections Complete Structural Calculations at 75%	Changes from 50% Review Create Detail Sheets / Callouts Insert Rebar into Plans/Sections Complete Structural Calculations Specifications 90%	Changes from 90% Review Finalize Drawings Finalize Specifications
Process Mechanical	Plans Created Sections Shown Equipment Shown Equipment Data Sheets Complete Specifications at 50%	Changes from 50% Review Create Detail Sheets / Callouts Equipment Tags Complete Specifications 90%	Changes from 90% Review Finalize Drawings Finalize Specifications
HVAC/Plumbing	Plans Created Equipment List Complete Data Sheets Complete Loads Determined Duct Routings Shown	Changes from 50% Review Create Detail Sheets / Callouts Equipment Tags Complete Specifications 90%	Changes from 90% Review Finalize Drawings Finalize Specifications
Electrical	Power Plan Complete Single Lines Complete Loads Identified & Calculated MCC's Identified Electrical Rooms Laid Out Specifications Outlined	Changes from 50% Review Detail Sheets and Callouts Equipment Tagging Specifications 90% Drawings 90%	Changes from 90% Review Finalize Drawings Finalize Specifications
Instrumentation	P&IDs 95% Complete Loop/Control Descriptions Complete Tagging 95% Complete Control Diagram Done	Changes from 50% Rww Create Detail Sheets / Callouts Finalize Equipment Tagging I/O Listings Specifications 90%	Changes from 90% Review Finalize Drawings Finalize Specifications

T2.09 Quality Assurance/Quality Control

Objective: Provide quality control of final design products.

CONTRACTOR will conduct Quality Assurance/Quality Control measures to minimize conflicts within design disciplines and between design disciplines. Intermediate design checks will be conducted at the 50 percent and 90 percent completion stages. This program consists of discipline and inter-discipline checks as outlined in the Design Checklist Procedures as provided in the Project Management Plan of Task 1.0 above.

In addition, the CONTRACTOR will hold internal design team coordination meetings after each submittal. These workshops will provide high quality design documents through efficient detailed coordination between all disciplines and team members.

T2.10 Construction Cost Estimate and Constructability Reviews

Objective: Provide updated construction costs of the project and constructability reviews of project elements.

T2.10.1 CONTRACTOR and its subconsultants will review project at 50 percent completion, evaluate, and identify constructability issues and construction sequencing plan. At 90 percent completion develop detailed contractor sequencing, scheduling, and limitations to be incorporated into the final contract documents.

T2.10.2 Prepare construction cost estimate at 50 percent completion.

T2.10.3 Update construction cost estimate at 90 percent completion.

T2.10.4 Update construction cost estimate for Final Plans and Specifications.

Products:

P2.10.1 Constructability review technical memorandum at 50% deliverable.

P2.10.3 Estimate at 50 percent design completion (electronic copy sent to City).

P2.10.4 Estimate at 90 percent design completion (electronic copy sent to City).

P2.10.5 Final construction cost estimate (electronic copy sent to City).

Task 3.0 Architectural Design Committee Approval Process Support

Objective: To assist the CITY with the Architectural Design Committee approval process for new buildings to be constructed at EAFWTP and SRWTP as needed.

T3.01 CONTRACTOR and CONSTRUCTOR's subconsultant, Lionakis, will provide services and development of presentation materials to support the CITY during the review process, which is anticipated to be required as part of this project. An allowance of \$9,000 has been provided for this assistance, which will be further defined during the final design process.

Task 4.0 LEED Checklist Compliance Assistance

Objective: To assist the CITY with the goal of complying with LEED concepts to the extent reasonably possible given the types of facilities to be designed and constructed.

T4.01 All of the planned facilities to be constructed as part of this project are considered "unoccupied" spaces. Therefore, the ability of the project to qualify for LEED Silver certification is extremely difficult. Therefore the CITY will attempt to qualify for as many LEED Silver "points" as possible given the type of project, and the desire to meet the intent of LEED Silver certification. CONTRACTOR and our subconsultants will assist the CITY in evaluating project components, approaches, and documentation, to meet the LEED Silver concepts.

CONTRACTOR will coordinate with discipline engineers and architects to select equipment and materials, and design operating strategies to gain LEED qualifying points. Certain components will be compared to a baseline approach to determine improvements in sustainable design to determine qualifications in the various categories. At the end of the project, CONTRACTOR will compile a checklist identifying the sustainable concepts that were incorporated.

Any requirements for equipment, materials, or construction methods and documentation will be incorporated by the CONTRACTOR into the Contract Documents.

FINAL DESIGN SCHEDULE

Final design for the project will be conducted over a 15-month period beginning May 1, 2011 and finishing by August 1, 2012. A listing of key milestone dates is summarized below. It is critical that this schedule be maintained to maintain the project budget. Any significant delays in the project schedule, other than delays arising from any act or omission of the CONTRACTOR or any of its subconsultants, may result in costs that are not included in the current project budget and will be brought to the attention of the CITY, provided that CONTRACTOR understands and acknowledges that no additional compensation will be due unless approved by CITY in accordance with the provisions of Sections 1 and 2 of this Agreement.

LISTING OF KEY MILESTONES	
Project Milestone	Scheduled Date
Begin Final Design	May 1, 2011
30 Percent Review Meeting	October 15, 2011
50 Percent Submittal	February 15, 2012
Review Comments (50%)	March 7, 2012
90 Percent Submittal	June 1, 2012
Review Comments (90%)	June 21, 2012
Final Design Complete	August 1, 2012

ATTACHMENT 2 TO EXHIBIT B

CAROLLO ENGINEERS, INC.
FEE SCHEDULE

As of March 1, 2011

	<u>Hourly Rate</u>
Engineers/Scientists	
Assistant Professional	\$134.00
Professional	165.00
Project Professional	197.00
Lead Project Professional	213.00
Senior Professional	234.00
Senior Process Specialist	315.00
Technicians	
Technicians	100.00
Senior Technicians	142.00
Support Staff	
Document Processing / Clerical	90.00
Project Equipment Communication Expense (PECE) Per DL Hour	9.50
Other Direct Expenses	
Travel and Subsistence	at cost
Mileage	IRS Reimbursement Rate
Subconsultant	cost + 10%
Other Direct Cost	cost + 10%
Expert Witness	Rate x 2.0

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

MWH Schedule of Fees
March 2011 to March 2012

CITY shall pay ENGINEER, as compensation for Services ("Compensation"), at the following hourly rates:

Labor Classification	Hourly Rate
Senior Technical Leaders	213
Senior Discipline Leaders	180
Senior Project Engineers	146
Project Engineers	120
Engineer/Senior Technicians	100
Designer/Technicians	90
Clerical	88

Non-salary expenses and outside services attributable to the Project shall include:

- Living and traveling expenses of employees when away from the home office on business connected with the Services;
- An associated project cost ("APC") rate for telecommunications, postage, computers, word processors, incidental photocopying, and related equipment in the amount of \$9.50 per labor hour;
- The identifiable costs of reproduction, printing and binding applicable to the Project;
- A CAD rate in the amount of \$16.75 per computer aided design/drafting hour to cover the hardware, software and related expenses of CAD; and
- The actual cost of outside and subcontracted services identifiable to the Project.

Non-salary expenses and outside services will be charged at the above stated cost plus 10% markup to cover overhead, administration, other indirect costs and profit.

Charges for Services provided by CONSULTANT's approved water quality laboratory will be in accordance with the published laboratory fee schedule in effect at the time the services are furnished.

J Calton Engineering Schedule of Fees

March 2011

Labor Classification	2011 Hourly Rate	2012-2013 Hourly Rate
Engineer	\$135	\$145

This fee schedule is subject to annual revisions.



FEE SCHEDULE
Effective January 1, 2010 – December 31, 2010

<u>Classification</u>	<u>Hourly Rates</u>
Managing Principal	\$195.00
Principal.....	\$185.00
Associate Principal	\$170.00
Senior Associate/Director of Healthcare Planning	\$160.00
Associate	\$155.00
<u>Architectural Services</u>	
Senior Project Director	\$155.00
Project Director	\$140.00
Senior Project Manager	\$130.00
Specifications Writer	\$130.00
Architectural Rendering Specialist	\$125.00
Senior Architect.....	\$115.00
Project Manager.....	\$115.00
Project Architect.....	\$110.00
Senior Designer – Architecture	\$105.00
Staff Architect	\$100.00
Project Designer - Architecture.....	\$90.00
Staff Designer - Architecture.....	\$80.00
Senior Drafter - Architecture.....	\$75.00
Designer - Architecture	\$75.00
Specification Technician	\$75.00
Drafter – Architecture.....	\$65.00
<u>Interior Design Services</u>	
Project Director – Interiors	\$130.00
Project Manager – Interiors	\$115.00
Senior Designer – Interiors	\$105.00
Project Designer – Interiors	\$85.00
Staff Designer – Interiors	\$70.00
Designer – Interiors	\$60.00
<u>Planning Services</u>	
Senior Planner	\$110.00
Staff Planner	\$75.00
<u>Structural Engineering Services</u>	
Project Director	\$135.00
Senior Project Manager -Engineering	\$135.00
Senior Engineer	\$130.00
Project Engineer	\$125.00
Staff Engineer	\$110.00
Senior Designer – Engineering	\$105.00
Senior Drafter – Engineering	\$105.00
Project Designer – Engineering	\$100.00
Project Drafter – Engineering	\$90.00
Staff Designer – Engineering	\$95.00
Designer – Engineering	\$85.00
Staff Drafter – Engineering	\$80.00
Drafter – Engineering	\$65.00
<u>Project Support Services</u>	
Senior Graphic Designer	\$120.00
Graphic Designer	\$90.00
Senior Project Coordinator	\$70.00
Project Coordinator	\$60.00
Staff Technician	\$50.00
Office Assistant	\$45.00
Consultants	Direct Cost + 10%
Reimbursables	Direct Cost + 10%
<i>Blueprints, Photocopies, Shipping, Photography, Plotting, Renderings, Travel Expenses, Agency Fees, etc.</i>	
Auto Travel	\$.50 per mile

**EE&T
FEE SCHEDULE**

As of March 1, 2011

	<u>Hourly Rate</u>
Engineers/Scientists	
Engineer	115.00
Manager	140.00
Senior Manager	155.00
Technical Manager	175.00
Technicians	
Technicians	70.00
Other Direct Expenses	
Travel and Subsistence	at cost
Mileage	IRS Reimbursement Rate
Other Direct Cost	cost + 10%



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FEE SCHEDULE
[Effective 1/1/2010]

<u>PROFESSIONAL AND SUPPORT SERVICES</u>	<u>2010-2011 HOURLY RATE</u>
Senior Principal A/E *	\$195
Principal A/E	\$170
Senior A/E	\$145
Project A/E	\$120
Senior Staff A/E	\$110
Staff A/E	\$100
CAD Drafter	\$ 95
Senior Field Technician ** ***	\$ 90
Field Technician ** ***	\$ 80
Project Administrator ***	\$ 70
Clerical Administrator ***	\$ 55

* Architects, Engineers, Scientists, Geologists

** Field technician services require a minimum of 4 consecutive hours per day followed by 2-hour increments. We require 24 hours advance notice for scheduling. Two hours will be charged for any cancellation within 24 hours.

*** Overtime rates for work in excess of 8 hours per day or 40 hours per week are 1.5 times the regular hourly rates for weekdays and Saturday and 2.0 times the regular hourly rates for Sunday and holidays. Overtime for professional services is billed at the regular hourly rate.

OTHER DIRECT COSTS [ODC]

Reimbursable for other direct costs are billed at cost plus 12 percent. These reimbursable costs include, but are not limited to:

1. Consultant and Subcontracted Services
2. Travel: Airfare, Auto Rental, Parking, Toll
3. Subsistence: Lodging, Meals and Incidentals
4. Auto Mileage: \$0.51 per mile
5. Field Vehicles: \$65 per day
6. Other Direct Expenses: Field Expenses, Equipment Rental, Special Fees, Permits, Printing, Reproduction, Express Mail, Delivery, etc.
7. Rates for health/safety and field instrumentation equipment rental will be furnished upon request.

The Fee Schedule is subject to revision periodically or at the end of each year. New rates will be used for all Fee Schedule contracts after each revision is made.



Callander Associates
Landscape Architecture, Inc.

Standard Schedule of Compensation 2011 RC (Rancho Cordova)

General

The following list of fees and reimbursable expense items shall be used in providing service in the agreement. These amounts shall be adjusted in January, upon issuance of an updated Standard Schedule of Compensation:

Hourly Rates

Senior Principal	\$201/hour	Construction Manager	\$120/hour
Principal	\$147/hour	Assistant 1	\$108/hour
Associate 1	\$142/hour	Assistant 2	\$100/hour
Associate 2	\$130/hour	Assistant 3	\$91/hour
Associate 3	\$117/hour	Assistant 4	\$85/hour
Project Manager 1	\$130/hour	Assistant 5	\$73/hour
Project Manager 2	\$117/hour	Assistant 6	\$68/hour
Project Manager 3	\$113/hour	Word Processor	\$85/hour
Project Manager 4	\$108/hour	Accounting	\$100/hour
Project Manager 5	\$100/hour		

Reimbursable Expenses

All costs for photography, printing and plotting, special delivery, insurance certificate charges, charges for waivers of subrogation, local business licenses, sales taxes, assessments, fees, mileage, all CADD and visual simulation ancillary costs, such as data transfers, tapes and outside services, and all other costs directly related to the project will be billed as a reimbursable expense at our cost plus a fifteen percent (15%) administration charge. The cost of professional liability insurance and all costs associated with cell phones, electronic mail, faxes, long distance phone charges and related telecommunications shall be charged as a combined surcharge of 2.5% on the total fees.

Payments

Payments are due within ten days after monthly billing with amounts more than thirty days past due subject to a 1.5% per month interest charge. Retainer amounts, if indicated, are due upon signing the agreement and shall be applied to the final invoice for the project.

FeeSchedule2011RC(letterhead).docx
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Landscape Architecture
Urban Design
Land Planning
Park and Recreation Planning
Environmental Planning

Peter Callander, ASLA Principal
Mark Slichter, ASLA, Principal
Brian G. Fletcher, ASLA, Principal
Erik Smith, ASLA, Principal
Benjamin W. Woodside, ASLA, Principal

HOURLY RATES & BILLING POLICY

Effective February 1, 2009, the following hourly rates will be charged for services rendered:

OFFICE	RATE	FIELD	RATE
Principal	\$165.00	Licensed Surveyor	\$135.00
Project Manager	150.00	Field Supervisor	125.00
Licensed Surveyor	135.00	One Person Survey Crew	135.00
Project Engineer	125.00	Two Person Survey Crew	210.00
Planner	125.00		
Engineer 1	115.00	Three Person Survey Crew	285.00
Engineer 2	95.00		
Office Surveyor	115.00		
Survey Technician	95.00		
Cadd Operator 1	95.00		
Cadd Operator 2	85.00		
Project Assistant	85.00		
Clerical/Printing/Deliveries	45.00		

All outside and subcontracted services are billed at our cost plus ten percent (10%). All travel expenses such as lodging, meals and transportation will be charged at cost. Travel in company vehicles will be charged at \$.50 per mile beyond a 40 mile radius.

Cost of normal survey stakes and other field supplies are included in the above rates. Special type monuments will be charged at cost.

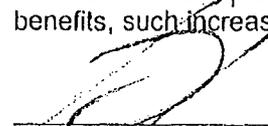
Reproduction expenses will be charged at our cost plus ten percent (10%).

Filing and checking fees and other outside charges are to be paid directly by the Client.

Billings will be monthly. Invoices are due and payable upon presentation. Interest at the rate of 1½% per month, commencing 30 days after invoice date, will be charged on delinquent accounts.

Cooper, Thorne & Associates, Inc., shall have the right to curtail any work on a project 30 days after invoices are due and payable, subject to five days written notice.

In the event of any increases in costs, due to the granting of wage increases and/or other employee benefits, such increases shall be adjusted proportionately to all hourly rates.



 David R. Crosariol, President

ATTACHMENT 3 TO EXHIBIT B

ESTIMATE OF ENGINEERING COSTS FOR FINAL DESIGN
CITY OF SACRAMENTO REHABILITATION PROJECT
CITY OF SACRAMENTO

3/31/2011

TASK DESCRIPTION	CAROLLO/MVII TEAM LABOR HOURS											SUBCONSULTANTS / OUTSIDE SERVICES								CADD/PECE	TOTAL ESTIMATED COSTS	
	Chris Cleveland Project Manager	Bryant Bench Senior Technical Leader	Senior Technical Leaders	Senior Discipline Leaders	Senior Project Engineers	Project Engineers	Engineers/Senior Technicians	Designers/Technicians	Clerical/WPs	Total Labor Hours	Total Labor Costs	J Calton Engineering	EET	Lionakis Architects	CTA (Survey)	AGS Geotechnical	Callander Assoc	Total Sub Hours	Total Subconsultant Services			Other Direct Costs
BASIC FINAL DESIGN SERVICES																						
Task 1.0 - Project Management																						
T1.01 Project Management Plan	24	0	0	0	0	40	0	40	8	112	\$ 18,616							0	\$0	\$2,000	\$1,064	\$21,680
T1.02 Design Coordination/Project Management	1,000	60	0	0	0	0	0	300	160	1,520	\$305,040	50						50	\$7,700	\$0	\$14,440	\$327,180
T1.03 Project Managers Meetings	60	32	0	0	0	0	0	0	0	92	\$21,528							0	\$0	\$2,500	\$874	\$24,902
T1.04 Monthly Project Reports	60	32	0	0	0	16	0	0	30	138	\$26,868	50						50	\$7,700	\$2,500	\$1,311	\$38,379
Subtotal	1,144	124	0	0	0	56	0	340	198	1,862	\$ 372,052	100	0	0	0	0	0	100	\$ 15,400	\$ 7,000	\$ 17,689	\$ 412,141
Task 2.0 - 5.0 Final Design Documents																						
T2.01 Refine Conceptual Design Elements	70	40	16	80	80	88	0	80	4	458	\$84,092							797	\$138,435	\$23,000	\$4,275	\$249,802
T2.02-T4 Prepare Plans and Specifications																						
50% Submittal	616	249	1,069	1,681	3,326	3,575	2,193	3,426	1,063	17,197	\$ 2,647,212	1,266	1,786	1,337			108	4,498	\$745,768	\$49,511	\$182,904	\$3,625,395
Gen/Civil/Demo/Landscaping	143	63	0	0	203	1,188	296	891	304	3,089	\$ 478,764							100	100			
Architectural/Structural	110	33	240	990	1,757	220	1,282	165	109	4,905	\$ 719,472			1,324								1,324
Process Mech/HVAC/Plumbing	132	76	135	1	760	1,432	386	1,165	381	4,468	\$ 689,544		1,742									1,742
Elec/I&C	110	0	166	465	63	570	130	1,205	38	2,746	\$ 406,770	1,040										1,040
Specifications	77	22	55	110	132	132	0	0	209	737	\$ 118,745	119										119
Cost Estimating/ Quality Management	44	55	473	115	411	33	100	0	21	1,252	\$ 233,917	108	44	13			8					173
90% Submittal	136	136	583	917	1,814	1,950	1,196	1,869	580	9,380	\$ 1,443,934	690	974	729			34	2,428	\$402,807	\$27,006	\$99,766	\$1,973,512
Gen/Civil/Demo/Landscaping	78	35	0	0	111	648	161	486	166	1,685	\$ 261,144							30	30			
Architectural/Structural	60	18	131	540	958	120	699	90	59	2,675	\$ 392,439			722								722
Process Mech/HVAC/Plumbing	72	41	74	1	414	781	211	636	208	2,437	\$ 376,115		950									950
Elec/I&C	60	0	91	254	34	311	71	657	21	1,498	\$ 221,875	567										567
Specifications	42	12	30	60	72	72	0	0	114	402	\$ 64,770	65										65
Cost Estimating/ Quality Management/Constr.	24	30	258	63	224	18	54	0	12	683	\$ 127,591	58	24	7			4					93
Bid Docs Submittal	168	68	291	458	907	975	598	934	290	4,690	\$ 721,967	350	487	365			34	1,236	\$204,791	\$13,503	\$49,883	\$990,144
Gen/Civil/Demo/Landscaping	39	17	0	0	55	324	81	243	83	842	\$ 130,572							30	30			
Architectural/Structural	30	9	65	270	479	60	350	45	30	1,338	\$ 196,220			361								361
Process Mech/HVAC/Plumbing	36	21	37	0	207	391	105	318	104	1,219	\$ 188,057		475									475
Elec/I&C	30	0	45	127	17	155	35	329	10	749	\$ 110,937	284										284
Specifications	21	6	15	30	36	36	0	0	57	201	\$ 32,385	32										32
Cost Estimating/ Quality Management/Constr.	12	15	129	31	112	9	27	0	6	342	\$ 63,795	34	12	4			4					54
Subtotal	1,190	493	1,959	3,136	6,127	6,588	3,987	6,310	1,937	31,725	\$ 4,897,204	2,306	3,248	2,431	167	630	176	8,958	\$1,491,801	\$113,019	\$336,828	\$6,838,852
Task 3.0 - Arch. Design Com. Support	11	0	0	0	0	4	0	0	0	15	\$3,362			40				40	\$5,500		\$143	\$9,000
Task 4.0- LEED Concept Support	40	0	200	40	140	40	150	22	60	692	\$111,044	30	20	60				110	\$20,365	\$2,000	\$6,574	\$139,983
SUBTOTAL	2,385	617	2,159	3,176	6,267	6,688	4,137	6,672	2,195	34,294	\$ 5,383,662	2,436	3,268	2,531	167	630	176	9,208	\$ 1,533,067	\$ 122,019	\$ 361,233	\$7,400,000