



SUMMARY OF QUALIFICATIONS

[www.theCMSolution.com](http://www.theCMSolution.com)

A Certified DBE/WBE/SBE/LBE Firm

CM Solutions has been specializing in project controls since 2001. We provide only exceptional people with expertise in claims consulting, CPM scheduling, change management, estimating, and cost engineering.

Our project experience has ranged from \$500,000 to over \$20 billion.

## ***Our Client is First Priority***

Our years of experience have taught us that our first priority is to fully understand our client's business and culture. By working together, we are able to bring greater control, producing higher profits, and peace of mind.

## ■ CERTIFICATIONS

- DBE** California Unified Certification Program (CUCP)
- WBE** California Public Utilities Commission (CPUC); Women's Business Enterprise National Certification (WBENC)
- WOSB** Women's Business Enterprise National Certification (WBENC)
- LBE** City of Los Angeles
- LSBE** County of Los Angeles
- SBE** State of California DGS; LA Metro; Metropolitan Water District of So Cal; Port of Long Beach

DUNS: 016406237

NAICS: 541611, 541330, 541618, 561990, 561110

## ■ SERVICES

- CPM scheduling
- Resource and cost loading analysis
- Time Impact Analysis of changes
- Cost engineering
- Estimating
- Claims preparation
- Management of change
- Document control
- IT needs assessment and solutions
- Onsite and offsite support
- System-wide integration of project controls

## ■ PUBLIC AGENCY CLIENTS

- City of Los Angeles
- Eastern Valley Municipal Water District
- Inland Empire Utilities Agencies
- LA County Public Works
- LA County Sanitation Districts
- LA Metro
- Los Angeles World Airports
- Orange County Sanitation District
- Orange County Water District
- Sempra Energy
- Southern California Edison
- State of CA Department of Water Resources

## INTEGRATED CAPABILITIES ACROSS MANY SECTORS



INFRASTRUCTURE



WATER/WASTE WATER



ENERGY



TRANSPORTATION



OIL AND GAS

## CONTACT

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## ENERGY PROJECT CONTROLS SERVICES

### **Sempra Energy - Pipeline Safety Enhancement Plan (PSEP) and Major Projects**

**Location:** Los Angeles and San Diego, CA

**Owner:** Southern California Gas and San Diego Gas and Electric

**Project Value:** Multi-Billion

Sempra Energy Utilities Pipeline Safety Enhancement Plan (PSEP) is a portfolio of projects. The earliest phase includes hundreds of miles of replacement, testing and valve replacements all over Southern California. CM Solutions is augmenting the Sempra Project Controls Team with schedulers and cost engineers by seamlessly working alongside their employees. CM Solutions is also working to develop project procedures and training materials to bring industry best practices to program management.

### **SCE Project Controls & Project Management Services**

**Location:** Pomona, CA

**Owner:** Southern California Edison

**Project Value:** Multi-billion

Southern California Edison required a team of project controls experts to develop their project controls program to support expansion and maintenance of their electrical infrastructure in Southern California. CM Solutions is working with Hill International to provide consultants for scheduling, costs controls, estimating and risk analysis/resolution for a large portfolio of projects. Services include: Long range scheduling to develop and implement Primavera P6 as an enterprise scheduling solution, providing an integrated and automated scheduling solution for custom projects, programmatic work, and maintenance and inspection tasks; cost engineers to provide financial analysis to help project managers make the best decisions; value added consulting to drive continuous improvement, bring best practices, and enhance project management.

### **San Onofre Nuclear Generating Station (SONGS)**

**Location:** San Clemente, CA

**Owner:** Southern California Edison

**Project Value:** \$200 million annually

CM Solutions developed, implemented and managed controls for the SONGS Design Engineering Organization (DEO) which provides engineering support for roughly \$200 million in annual capital improvements. CM Solutions developed and maintained a fully resource and cost loaded DEO schedule that captured work ranging from basic design support tasks to multi-million dollar construction implementation projects. CM Solutions was responsible for the management of weekly DEO schedules and corresponding update meetings with engineering team leaders and SONGS senior management. CM Solutions developed data reconciling procedures designed specifically to translate and provide granularity from plant SAP data to real time P6 schedules and reports.



### **Natural Gas Refinery**

**Location:** Point Thomson, Alaska

**Owner:** Exxon Mobil Contractor

**Contractor:** Worley Parsons

**Project Value:** \$2.3 billion

CM Solutions assisted the design firm, Worley Parsons, by performing role of Lead Project Scheduler for a \$2 billion EPC program. CM Solutions provided overall quality and consistency control of 3-year phased project including sealift and truckable modules to the North Slope in Alaska from various locations throughout the world. CM Solutions also developed baseline schedule standards and monthly update deliverables; provided management and training to scheduling team members; and acted as construction team liaison.

### **Oil Refinery - FCC and Alkylation Facility**

**Location:** El Segundo, CA

**Owner:** Chevron

**Contractor:** Worley Parsons

**Project Value:** \$80 million

CM Solutions assisted the design firm, Worley Parsons, to provide weekly schedule updates including earned value analysis for the purpose of tracking project progress. CM Solutions coordinated with project team and project management; provided weekly reports with updated schedule data incorporating change orders; and developed various cost and schedule reports for planning and analysis.

### **Oil Refinery - Saudi Aramco Mobil Refinery (SAMREF)**

**Location:** Yanbu, Saudi Arabia

**Owner:** Exxon Mobil

**Contractor:** Worley Parsons

**Project Value:** \$2 billion

CM Solutions assisted the design firm, Worley Parsons, by performing role of Assistant Lead Project Scheduler for a \$2 billion EPC program. CM Solutions provided overall quality and consistency control of 18-unit schedules; developed baseline schedule standards and monthly update deliverables; provided management and training to scheduling team members; and served as construction team liaison.

### **Oil Refinery - Ultra Low Sulfur Diesel (ULSD)**

**Location:** North Slope, Alaska

**Owner:** Conoco Philips

**Contractor:** Worley Parsons

**Project Value:** \$300 million

CM Solutions assisted the design firm, Worley Parsons, to provide weekly schedule updates, including earned value analysis, for the purpose of tracking progress and justifying funding. CM Solutions coordinated with project team and project management; provided weekly reports with updated schedule data incorporating change orders; and developed various cost and schedule reports for planning and analysis.





## WATER/WASTEWATER PROJECT CONTROLS SERVICES

### **GRIP Advanced Water Treatment Facility**

**Owner:** The Water Replenishment District of Southern California

**Construction Manager:** MNS Engineers/GHD/Butier

**Design/Build (Contractor):** Tetra Tech / JF Shea

**Project Value:** \$110 million

The Advanced Water Treatment Facility for GRIP (Groundwater Reliability Improvement Project) is located in the City of Pico Rivera, and includes a visitor and educational center, and a pipeline running parallel to the San Gabriel River Parkway. CM Solutions was engaged by the CM firm, MNS Engineers, to provide collaborative scheduling services for this Design-Build project. Collaborative scheduling provides a single master scheduler serving both the contractor and the owner, creating greater efficiency and transparency, while avoiding claims by resolving problems at the jobsite level. CM Solutions is providing monthly schedule updates with in-depth trend analysis along with cost information, as well as bi-monthly schedule review and analysis meetings with the project stakeholders.

### **Riverside WQCP Plant Expansion Phase 1**

**Owner:** City of Riverside

**Contractor:** PCL

**Project Value:** \$192 million

The Riverside Regional Water Quality Control Plant (RWQCP) was expanded and retrofitted to meet the needs of future generations. CM Solutions was responsible for the review of the Prime Contractor's fully resource and cost loaded baseline schedule. Monthly responsibilities included schedule update reviews, staying abreast of dynamic field conditions, mitigating various claims to the Owner, and coordination with the contractor and subcontractor. CM Solutions worked with the team to strategize and optimize remaining work, as well as evaluate the risk and mitigation strategies.

### **Advanced Water Treatment Facility (AWTF)**

**Owner:** Orange County Water District (OCWD)

**Contractor:** J.F. Shea

**Project Value:** \$300 million

This advanced water treatment facility treats and processes wastewater to potable water quality and pumps it into the groundwater system. Working closely with the construction managers, CM Solutions developed the baseline schedule including complete cost and resource loading of activities in Primavera. CM Solutions also provided daily updates and maintenance of the schedule and resource data, generated monthly pay requests, coordinated with owner's representatives for review and incorporation of proposed changes to the schedule, and developed and evaluated Time Impact Analysis for changes.



### **Lancaster Wastewater Treatment Plant Stage 5 Expansion**

**Owner:** Los Angeles County Sanitation District (LACSD)

**Contractor:** Taisei-T&K JV

**Project Value:** \$140 million

CM Solutions developed the fully resource and cost loaded baseline schedule. Monthly responsibilities included schedule updates, revising logic and scope to reflect ongoing dynamic field conditions, schedule and pay request approval from the owner, and subcontractor coordination. Extensive time impact analysis scenarios were performed including detailed narratives on numerous owner caused delays.

### **Palmdale Water Treatment Plant Stage 5 - Phase 1**

**Owner:** Los Angeles County Sanitation District (LACSD)

**Contractor:** W.M. Lyles

**Project Value:** \$100 million

CM Solutions developed the fully resource and cost loaded baseline schedule. Monthly responsibilities included schedule updates, revising logic and scope to reflect ongoing dynamic field conditions, schedule and pay request approval from the owner, and subcontractor coordination. Time impact analysis scenarios were performed including detailed narratives on field delays.

### **Perris Valley Regional Water Reclamation Facility Plant 3 Expansion**

**Owner:** Eastern Valley Municipal Water District (EVMWD)

**Project Manager:** Carollo Engineers

**General Contractor:** Kiewit

**Project Value:** \$150 million

This project is a water reclamation plant expansion. CM Solutions worked for the construction management firm to review and approve the baseline schedule, monthly updates, and requests for time extensions. CM Solutions did site visits, attended weekly meetings and provided a weekly progress reports to owner.

### **Joint Water Pollution Control Plant Secondary Facility**

**Owner:** Los Angeles County Sanitation District (LACSD)

**Contractor:** APC-T&K JV

**Project Value:** \$100 million

This project was a wastewater plant secondary expansion. CM Solutions developed and maintained a 10,000-activity construction schedule in Primavera, and designed and implemented an activity based resource and cost control database for integration with Primavera. CM Solutions also performed weekly evaluations of critical path and three week look-ahead schedules, prepared monthly pay requests and proposed revisions to schedule as required by change orders.

### **Moreno Valley Regional Water Reclamation Facility SCATT & APAD Expansion Projects**

**Owner:** Eastern Valley Municipal Water District (EMWD)

**Project Manager:** Carollo Engineers

**Project Value:** \$55 million

This project is a water reclamation plant expansion with secondary clarifiers and tertiary treatment (SCATT) and acid phase anaerobic digestion (APAD) facilities. CM Solutions worked for the construction management firm and was responsible for review and approval of the baseline schedule, review of all contractor monthly schedule updates and requests for time extensions. CM Solutions created a 4D schedule, coordinating both the SCATT and adjacent APAD projects. CM Solutions participated in weekly coordination meetings and provided weekly schedule progress reports to the owner.





## TRANSPORTATION PROJECT CONTROLS SERVICES

### **LAWA Landside Access Modernization Program (LAMP) & Capital Improvement Program**

Owner: Los Angeles World Airports (LAWA)

Project Value: \$20 billion

CM Solutions is providing project controls support services for the multi-year, multi-billion dollar capital improvement modernization program for the LAX airport. Projects includes the Automated People Mover (APM), a 2.25 mile train with 6 connecting stations; the Intermodal Transportation Facility (ITF) consisting of parking facilities and pickup/drop off area for shuttles and private vehicles; Consolidated Rent A Car (CONRAC), a facility for all car rental agencies; other road improvements, terminal modifications, and utilities infrastructure modifications; a connection to the LA Metro rail system; the Midfield Satellite Concourse; and various other airside and landside projects.

### **Crenshaw/LAX Transit Corridor and Southwest Yard Maintenance Facility**

Owner: LA Metro

Partner: Hill International

Project Value: \$2 billion

CM Solutions provided cost estimating support services for this 8.5 mile light rail line, which included 8 stations and the Southwestern Yard Maintenance Facility. Services included cost estimating for conceptual and budget planning, design optimization and constructability, value engineering, economic evaluations, procurement and contract administration support, change orders and contract claims.

### **LAWA 5th Feeder**

Owner: Los Angeles World Airports (LAWA)

Contractor: Steve Bubalo

Project Value: \$20 million

Project involved both new and upgraded firewater and domestic water lines and installation of new electrical duct banks. Work proceeded in a 4-phased approach, with restricted work hours, in a roughly west to east pattern across various areas within LAX.

CM Solutions developed the fully resource and cost loaded baseline schedule. Monthly responsibilities included schedule updates, revising logic and scope to reflect ongoing dynamic field conditions, schedule and pay request approval from owner, and subcontractor coordination.



# CONTRACT CLAIMS MANAGEMENT

CM Solutions brings extensive industry experience and knowledge in evaluating and managing all types of construction claims. Our goal is to assist our clients in carrying out successful projects by resolving issues at the field level whenever possible. This most often avoids time consuming legal proceedings after the project's completion.

Because our size and style of business permit it, communications with clients are maximized and effective uses of all resources are realized. By providing adequate support and analysis, better informed business decisions are made, resulting in more effective dispute resolution.



## **Regional Plant No.4-Expansion to 14MG**

**Owner:** Inland Empire Utilities Agency (IEUA)

**Project Value:** \$4.7 million

Performed schedule analysis, evaluation and presentations of multiple delay events caused by the Owner that occurred throughout this water treatment plant upgrade project. The window method of time impact analysis was used to claim for over 400 days of a compensable time extension.

## **Lancaster Water Treatment Plant Stage 5**

**Owner:** LA County Sanitation District (LACSD)

**Project Value:** \$145 million

Evaluated multiple impacts and project delays to the \$145M treatment plant expansion. A step-by-step window method time impact analysis method was used effectively to demonstrate complex engineering and construction compensable delay issues of over 200 days.

## **Recycled Water Pipeline Projects**

**Owner:** Inland Empire Utilities Agency / Cucamonga Water District (IEUA/CWD)

**Project Value:** \$5 million

Performed multiple schedule analysis, presentation and evaluation of compensable delays that occurred within the recycled water pipeline projects at IEUA and CWD.

## **Advanced Water Treatment Facility**

**Owner:** Orange County Water District (OCWD)

**Project Value:** \$300 million

Evaluated multiple impacts and project delays to the state-of-the-art \$300M water treatment plant. The result was to successfully negotiate a 162-day time extension to the contract.

## **Perris Valley Regional Water Reclamation Plant 3 Expansion**

**Owner:** Eastern Municipal Water District (EMWD)

**Project Value:** \$1.5 million overhead claim

Evaluated multiple impacts and project delays for the agency and helped successfully defend 1.5 million dollar extended overhead claim by the contractor.





## ENERGY

Project Name	Project Type	Project Description	Owner/Agency	Construction Manager	General Contractor	Construction Amount	Project Dates
SCE Project Controls & Project Management Services	Power Transmission	CM Solutions is working with Hill Int'l to provide consultants for scheduling, cost controls, estimating and risk analysis/ resolution for a large portfolio of projects.	Southern California Edison (SCE)	N/A	N/A	Multi-billion	2017 - present
Pipeline Safety Enhancement Plan (PSEP) for Natural Gas Lines	Natural Gas Line Safety Program	Sempra Energy Utilities Pipeline Safety Enhancement Plan (PSEP) is a portfolio of projects. CM Solutions is augmenting the Sempra Project Controls Team with schedulers and cost engineers by seamlessly working along side their employees. CM Solutions is also working to develop project procedures and training materials to bring industry best practices to program management.	Sempra Energy (San Diego Gas and Electric Company / Southern California Gas Company)	N/A	N/A	Multi-billion	2014 - present
Richmond Modernization	Refinery	Refinery expansion project, previously halted in 2009, including new compressors, pipeline expansion and regulatory upgrades.	Chevron	Worley Parsons	n/a	\$300M	2015 - 2018
PSR Improvement	Refinery	CM Solutions provided scheduling services for this project involving various site preparation activities including clearing and grading; infrastructure improvements; and extension of existing services and utilities.	Shell	Worley Parsons	n/a	\$60M	2015 - 2018
Solar Power Generating Facility	Solar	Electrical upgrades including new transformers, equipment pads, shelters, cabling, security and lighting, for 3MW solar power generating facility for F.E. Weymouth Water Treatment Plant.	Metropolitan Water District (MWD)	MWD	Kana	\$3M	2015-2016
Pt. Thomson Project, North Slope in Alaska	Natural Gas Refinery	CM Solutions assisted the design firm, Worley Parsons, by performing duties of Lead Project Scheduler. Responsibilities included overall quality control of 3-yr phased project, development of baseline schedule standards and monthly update deliverables, management of scheduling team and construction team liaison.	Exxon Mobil	Worley Parsons	N/A	\$2.3B	2012-2014
SONGS (San Onofre Nuclear Generating Station)	Nuclear Energy	CM Solutions developed, implemented and managed controls for the SONGS Design Engineering Organization (DEO) which provides engineering support for roughly \$200MM in capital improvements yearly. Developed and maintained fully resource & cost loaded schedule including weekly schedule update meeting, and provide weekly reports for senior management.	Southern California Edison (SCE)	N/A	N/A	\$200M	2011-2013
FCC and Alkylation Facility	Oil Refinery	CM Solutions assisted the design firm, Worley Parsons, to provide weekly schedule updates including earned value analysis for the purpose of tracking project progress. Responsibilities included coordination with project team and project management, update of schedule data for weekly reports, incorporation of change orders, and development of various cost and schedule reports for planning and analysis.	Chevron	Worley Parsons	Brinderson	\$80M	2007-2009
Sulfur Recovery Unit	Oil Refinery	CM Solutions assisted the design firm, Worley Parsons, to provide weekly schedule updates including earned value analysis for the purpose of tracking project progress. Responsibilities included coordination with project team and project management, update of schedule data for weekly reports, incorporation of change orders, and development of various cost and schedule reports for planning and analysis.	Chevron	Worley Parsons	S&B	\$160M	2007-2009
Ultra Low Sulfur Diesel (ULSD)	Oil Refinery	CM Solutions assisted the design firm, Worley Parsons, to provide weekly schedule updates, including earned value analysis, for the purpose of tracking progress and justifying funding. Responsibilities included: coordinating with project team and project management, updating schedule data for weekly reports, incorporating change orders, and developing various cost and schedule reports for planning and analysis.	Conoco Phillips	Worley Parsons	N/A	\$300M	2005-2007

## WATER / WASTEWATER

Project Name	Project Type	Project Description	Owner/Agency	Construction Manager	General Contractor	Construction Amount	Project Dates
Puente Valley Operable Unit, Intermediate Zone Interim Remediation	Water	CM Solutions was engaged to provide scheduling services to the general contractor, for this groundwater quality management and remediation plan. Services included development of a schedule for the RFP, followed with a baseline schedule. Work includes monthly updates and 3-week look ahead schedules.	Northrop Grumman	MWH Constructors (Stantec)	RC Foster	\$35M	2018 - Present
Groundwater Reliability Improvement Project (GRIP)	Water	CM Solutions was engaged by the CM firm, MNS, to provide collaborative scheduling services for this Design-Build (DB) project. Collaborative scheduling provides a single master scheduler for both the contractor and the owner, creating greater efficiency and transparency while avoiding claims by resolving problems at the jobsite level.	Water Replenishment District of Southern California (WRD)	MNS Engineers / GHD / Butier	Tetrattech/JF Shea	\$110M	2017 - present
Goldsworthy	Water	Add new equipment and upgrades to Goldsworthy Desalter plant.	WRD (Water Replenishment District)	Carollo Engineers	Shimmick	\$11.2M	2016-present
Mentone Pump Station	Water	Upgrade/new pump stations, new switchyard with new transformers, office buildings.	DWR	DWR	Ames Construction	\$24M	2015-present
Carpentaria Sludge Tank Replacement	Wastewater	A new disinfection chemical feed facility with improved aerated sludge holding tanks, positive displacement aeration blowers, sludge feed pumps and a solids transfer pump; and new equipment controls (PLCs).	IEUA	MNS		\$5.5M	2014-present
Riverside WQCP Plant Expansion Phase 1	Wastewater Treatment	CM Solutions worked for the construction management firm to review and approve the baseline schedule, monthly updates and request for time extensions.	City Of Riverside	Carollo Engineers	PCL	\$192M	2012-2017
LA Glendale WRP HPE and Air Piping Improvement	Wastewater	HPE and air piping improvements.	City of LA, Dept. of Public Works, Bureau of Sanitation	City of LA, Bureau of Sanitation	PPC	\$2.5M	2015-2017
City of Corona Ion Exchange Treatment Plant	Water	New facility includes civil site work and new building. CM Solutions provided scheduling services, including preparing the baseline schedule and monthly updates, as well as CPM analysis.	City of Corona	City of Corona	RC Foster	\$7M	2015-2017
Jensen Valve Replacement	Water	Replacement of automatic valves at the Jensen Water Treatment Plant.	MWD	KANA	KANA	\$3.5M	2015-2016
Clay Van Buren Sewage Lift Station	Wastewater	Pump lift station revamp with new pumps, new piping tie-ins, new generator pad and install new generator, new electrical vaults, ductbanks, instrumentation.	MWD	KANA	KANA	\$3M	2015-2016
Silver Lake Reservoir Complex Storage Replacement Phase 1	Wastewater Treatment	This project is designed and constructed to comply with the State Department of Dams (DSOD) standards. Construction amenities for the first of the two concrete reservoirs under construction includes an on-site concrete batch plant for the concrete pours which can vary from 300 CY to 830 CY per day and an on-site rock crushing facility.	LADWP	Webcor, Obayashi Lyles a joint venture	Multiple Primes	\$139M	2012- 2016
LACSD JAO Upgrade	Wastewater	Air handling system modifications.	LACSD	LACSD	W.M. Lyles	\$7.3M	2014-2016
LA Glendale Reclamation Plant	Wastewater	Removal of tertiary filters and associated systems and structural work from one plant and reinstall at the LA Glendale plant.	City of LA, Dept. of Public Works, Bureau of Sanitation	City of LA, Bureau of Sanitation	PPC	\$3.1M	2013-2015
DWR East Branch Extension Phase II Mentone	Pipeline	72" South Foothill pipeline section (2 miles) and the 66" (4 miles) East Foothill pipeline section to Crafton Hills Pump Station. Extension of the California Aqueduct.	DWR	DWR	Spinello	\$38.5M	2012-2015
Pumping Plant Upgrade	Wastewater	Upgrades to an existing sewer pumping plant.	City of Long Beach	City of Long Beach	Steve P. Rados Inc.	\$37M	2013-2015





**WATER/WASTEWATER (continued)**

Project Name	Project Type	Project Description	Owner/Agency	Construction Manager	General Contractor	Construction Amount	Project Dates
Process Demonstration Unit	Biosolids Recycling	CM Solutions provided senior project management services including design, cost estimates, schedule and construction of a full scale commercialization plant. KORE's modular disposal solution transforms biosolids into a commercial-grade diesel fuel as an innovative recovery option to wastewater utilities worldwide.	KORE Infrastructure	KORE Infrastructure	N/A	Multi-million	2014-2015
Visalia Water Conservation Plant Upgrade	Wastewater Treatment	Improve wastewater treatment facilities at the City's existing water conservation plant. Develop initial recycled water conveyance system for disposal and reuse of treated effluent generated by the plant.	City of Visalia	Jacobs Engineering	W.M. Lyles Co.	\$92M	2014-2015
City of Paso Robles Wastewater Treatment Plant Upgrade	Wastewater Treatment	The project consisted of providing a complete upgrade to virtually all systems of the existing wastewater treatment plant facilities to bring the plant into compliance with State regulations, while increasing the capacity to 4.9 million gallon per day.	City of Paso Robles	Carollo Engineering	W.M. Lyles Co.	\$37M	2013- 2015
Lancaster WWTP Stage 5 Expansion	Wastewater Treatment	CM Solutions was responsible for the development of the fully resource and cost loaded baseline schedule. Monthly responsibilities included schedule updates, revising logic and scope to reflect ongoing dynamic field conditions, schedule and pay request approval from the Owner and subcontractor coordination.	Los Angeles County Sanitation District (LACSD)	LACSD	Taisei-T&K	\$140M	2008-2015
Chino II Concentrate Reduction Facility	Pump Station	A potable water supply 2.75 mgd secondary RO system with softening, clarification, and filtration pretreatment.	Chino Basin Desalter Authority	West Municipal Water District	W.M. Lyles	\$15M	2013-2014
LACSD Valencia Plant	Wastewater	Replace boilers and steam piping at Valencia plant.	LACSD	LACSD	W.M. Lyles	\$3M	2012-2014
WWTP Upgrade	Wastewater	Complete upgrade to virtually all systems of the existing wastewater treatment plant facilities, increasing the capacity to 4.9 million gallons per day.	City of Paso Robles	City of Paso Robles	W.M. Lyles	\$36.5M	2013-2014
Water Conservation Plant Upgrade	Water	Extensive recycling water distribution system to distribute tertiary effluent from the upgraded plant to city owned facilities and various irrigation and agricultural users.	City of Visalia	City of Visalia	W.M. Lyles	\$92M	2014
LADWP Headworks West - Silverlake	Water	New construction of water storage facility, including inlet and outlet tie-ins, foundation preparation, and underground piping.	LADWP	LADWP	Webcor Obayashi Lyles JV	\$110M	2014
Contractor Pre Qualification Selection	Wastewater Treatment	Review and evaluate various general contractors pre-qualifying for contracts under \$2M.	IEUA	IEUA	N/A	Under \$2M	2014
Palmdale WTP Stage 5-Phase 1	Wastewater Treatment	Expansion of an existing wastewater treatment facility. CM Solutions was responsible for the development of the fully resource and cost loaded baseline schedule. Monthly responsibilities include schedule updates, revising logic and scope to reflect ongoing dynamic field conditions, schedule and pay request approval from the Owner and subcontractor coordination.	Los Angeles County Sanitation District (LACSD)	LACSD	W.M. Lyles	\$100M	2008-2012
Rehab College Ave Pump Station	Wastewater Treatment	Rehabilitation of an existing pump station.	Orange County Sanitation District	OCSD	Olsson Construction	\$4M	2008-2010
Rehab Westside Pump Station	Wastewater Treatment	Rehabilitation of an existing pump station.	Orange County Sanitation District	OCSD	Olsson Construction	\$4M	2008-2010
TITP Centrifuge Improvements CIP 5163	Wastewater Treatment	Centrifuge improvements.	City of Los Angeles	City of Los Angeles	Olsson Construction	\$4M	2008-2010
Perris Valley RWRF Plant 3 Expansion	Wastewater Treatment	Expansion of an existing wastewater treatment facility.	Eastern Valley Municipal District	Carollo	Kiewit	\$150M	2007-2011

**WATER/WASTEWATER (continued)**

Project Name	Project Type	Project Description	Owner/Agency	Construction Manager	General Contractor	Construction Amount	Project Dates
Advanced Water Treatment Facility	Wastewater Treatment	CM Solutions developed the baseline schedule including complete cost and resource loading of activities in Primavera E/C. CM Solutions also provided daily update and maintenance of the schedule and resource data, generated monthly pay requests from the database, coordinated with owners representatives for review and incorporation of proposed changes to the project schedule, developed and evaluated Time Impact Analysis for changes.	Orange County Water District	Montgomery Watson	J.F. Shea	\$300M	2004-2007
San Jose Wastewater Treatment Facility	Wastewater Treatment	Project manager for the \$8 million mechanical, electrical and structural modification to existing aeration tanks and new chemical storage facilities and pumping stations. Developed lump sum estimate, resource loaded baseline schedule and handled subcontractor's schedule requirements and contracts.	Los Angeles County Sanitation District (LACSD)	LACSD	Olsson Construction	\$8M	2002-2003
Joint Water Pollution Control Plant Secondary Facility	Wastewater Treatment	Responsible for development and maintenance of 10,000-activity construction schedule. Designed and implemented activity based resource and cost control database for integration with Primavera, performed weekly evaluation of critical path and three-week look-ahead schedule, prepared resource/cost reports and graphs, milestone reports, predecessor/successor reports, earned value reports, ninety-day construction schedule, submittal reports, ninety-day construction schedule, submittal reports, and other tools as needed by the owner. Prepared monthly pay requests and proposed revisions to record schedule as required by change orders.	Los Angeles County Sanitation District (LACSD)	CRSS	APC-T&K JV	\$100M	1999-2001
Yucaipa Pipeline Feeder Project	Pipeline	Project superintendent/site manager for the \$18 million 54" buried pipeline project. Project involved extensive close-quarter deep excavations through existing utilities and residential neighborhoods.	California Department of Water Resources	J.F. Shea	J.F. Shea	\$18M	1989-1990





## TRANSPORTATION

Project Name	Project Type	Project Description	Owner/Agency	Construction Manager	General Contractor	Construction Amount	Project Dates
LAWA Landside Access Modernization Program (LAMP) & Capital Improvements	Airports	CMS is providing projects controls support services for the multi-year, multi-billion dollar capital improvement program for LAX, including the Automated People Mover, the Intermodal Transportation Facilities, car rental facilities, and various other landside and airside projects.	Los Angeles World Airports (LAWA)	Various	Various	\$20B	2016 - Present
Crenshaw/LAX Transit Corridor and Southwest Yard Maintenance Facility	Rail	CM Solutions provided cost estimating support services for this 8.5 mile light rail line, which included 8 stations and the Southwestern Yard Maintenance Facility.	Los Angeles Metro	N/A	N/A	\$2B	2016 - 2017
LAWA 5th Feeder	Airports	Installation of new firewater/domestic water lines, electrical vaults/conduit/tie-ins at LAX.	Los Angeles World Airports (LAWA)	LAWA	Steve Bubalo Construction	\$16.3M	2014-2016

## FACILITIES

Project Name	Project Type	Project Description	Owner/Agency	Construction Manager	General Contractor	Construction Amount	Project Dates
Huntington Hospital Seismic Upgrades & Capital Improvement Projects	Hospitals	CM Solutions is providing an integrated project schedule, with a broad range of services including gathering performance information, monitoring, and predicting look-aheads, as well as communicating project status with various stakeholders. Work includes preparation of a baseline schedule with monthly updates.	Huntington Memorial Hospital	N/A	Bernards, Swinerton	\$300M	2017 - Present
Pleasant Valley State Prison - Renovation of Multiple Facilities	Prison	Scheduling for rehabilitation of multiple buildings, construction of new buildings, and various site improvements, including grading, storm drainage, paving, conduit, and electrical in all facilities.	California Dept of Corrections & Rehabilitation (CDCR)	CDCR	Bowe Contractors	\$15.4M	2016-2018
Tehachapi State Prison - Health Care Facility	Prison	CMS was engaged to provide scheduling services for the contractor for the renovations to the health care facilities, including site improvements.	California Dept of Corrections & Rehabilitation (CDCR)	CDCR	Bowe Contractors	\$13.8M	2015 - 2017
La Mirada High School	Schools	CM Solutions worked with the contractor to develop and maintain the project schedule. CM Solutions performed time impact analysis for the basis of time extensions.	Los Angeles Unified School District (LAUSD)	Murphy	Mallcraft	\$15M	2002

## CLAIMS

Project Name	Project Type	Project Description	Owner/Agency	Construction Manager	General Contractor	Construction Amount	Project Dates
Lancaster WWTP Stage 5 Expansion	Wastewater Treatment	Evaluated multiple impacts and project delays to the \$145M treatment plant expansion. A step-by-step window method Time Impact Analysis was used to effectively demonstrate complex engineering and construction compensable delay issues of over 200 days.	Los Angeles County Sanitation District (LACSD)	LACSD	Taisei-T&K	\$145M	2008-2013
Palmdale Water Reclamation Plant Stage 5	Wastewater Treatment	Evaluated multiple impacts and project delays to the \$120M water reclamation plant expansion. A step-by-step window method schedule analysis method was prepared to demonstrate complex construction delay issues which was effective in securing a 80-day non-compensable contract time extension for the contractor.	Los Angeles County Sanitation District (LACSD)	N/A	W.M. Lyles	\$120M	2008-2012
Queensway Southbound Ramps J & K Over Scenic Harbor Drive	Civil Construction	Performed forensic analysis, created historical baseline schedule and as-built schedule files incorporating multiple delay issues. Evaluated impacts and project delays for the project and prepared a Time Impact Schedule Analysis, which was used to effectively secure a 185 working day contract time extension for the contractor.	LA County Department of Public Works	N/A	AM Classic Construction	\$3.8M	2009-2011
Advanced Water Treatment Facility	Wastewater Treatment	Evaluated multiple impacts and project delays to the \$300M water treatment plant, the result of which was to successfully negotiate a 162-day extension on the contract.	Orange County Water District	Montgomery Watson	J.F. Shea	\$300M	2010-2011
Recycled Water Pipeline Projects	Wastewater Treatment	Performed multiple schedule analyses, presentation and evaluation of compensable delays that occurred within the recycled water pipeline projects at IEUA and CWD.	Inland Empire Utilities Agency (IEUA) / Cucamonga Water District (CWD)	N/A	Pacific Tank Construction, VCI Construction, CP Construction	\$5M	2009-2010
Regional Plant No. 4 Expansion to 14MG	Wastewater Treatment	Performed schedule analysis, evaluation and presentations of multiple delay events caused by the owner that occurred throughout the water treatment plant upgrade project. The window method of Time Impact Analysis was used to claim for over 400 days of a compensable time extension.	Inland Empire Utilities Agency (IEUA)	IEUA	Taisei-T&K	\$45M	2008-2012
Perris Valley RWRF Plant 3 Expansion	Wastewater Treatment	Evaluated multiple impacts and project delays for the agency and helped successfully defend \$1.5M in extended overhead claim by the contractor.	Eastern Valley Municipal Water District	Carollo	Kiewit	\$180M	2008-2009