

# James A. Gallego, P.E.

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**Education:** Bachelor of Science – Texas A&M University, College Station, Texas (1987)

**Registrations:** Professional Engineer – **California #55575**

## **Qualifications:**

Mr. Gallego has been a construction engineer on transportation projects throughout California and Nevada. He has worked on the construction of new soundwalls, retaining walls, bridges, highways, and bridge demolition. In addition, Mr. Gallego has developed manuals and has trained engineers to use multiple computer programs.

He has tracked and reviewed contractor submittals for bridge falsework, temporary earth retaining structures, portland cement and asphalt concrete mix designs, and bridge demolition plans.

Mr. Gallego specializes in the analysis and implementation of Critical Path Method (CPM) project schedules. In addition, he has also developed two project scheduling training seminars. One training seminar was designed to show Resident Engineers and Structure Representatives how to review, accept and update construction baseline project schedules. The second training seminar educates project engineers on the use of Primavera SureTrak 3.0 scheduling software.

In addition to his construction experience, he has managed over 300 Caltrans Office of Structure Construction (OSC) field computers located throughout California. In this role, Mr. Gallego developed computerized forms and spreadsheets for Caltrans, including travel expense claims, portland cement concrete mix designs, Boussinesq Strip Loading, rebar weight calculations, asphalt concrete mix designs and various interoffice documents.

Mr. Gallego created the OSC Intranet web site for field construction engineers. This Intranet web site allowed field construction engineers to access proprietary information pertaining to Materials Engineering and Testing Service's approved concrete admixture list, approved rebar coupler list and the prestress jack calibration tables. Mr. Gallego converted all of these documents to Adobe Acrobat portable document format (PDF) for universal platform compatibility.

## **Experience:**

**October 2005 – Present; Gallego Consulting Services, Inc.; Senior Project Scheduler for various water projects located throughout Northern California.** As the senior project scheduler, Mr. Gallego was responsible for the development and maintenance of baseline and update schedules for various water projects in the Sacramento Region. These projects include the flume replacement, sanitary sewer system replacement, new force main, and pump replacements. The value of this work was well over \$100 million. Mr. Gallego was responsible for creating baseline, updates and Time Impact Analysis schedules. Mr. Gallego has used Primavera Project Planner (P3) and Primavera Project Management Version 5 (P5) to develop Baseline schedules for these projects. The project schedules developed in P5 were also revenue loaded.

**September 2007 – Present; Gallego Consulting Services, Inc.; Senior Project Scheduler for California Department of Transportation District 04; Oakland, CA.** As the senior project scheduler, Mr. Gallego was responsible for the review and acceptance of the Baseline, Updates and Time Impact Analysis schedules for the \$180 million Oakland Touchdown Phase 1 bridge replacement project. This

project involved the construction of three bridge frames as part of the Bay Bridge Replacement project. The schedules on this project were created using Primavera Project Planner (P3) scheduling software and were resource and revenue loaded.

**September 2007 – December 2008; Gallego Consulting Services, Inc.; Senior Project Scheduler for California Department of Transportation District 03; Sacramento, CA.** As the senior project scheduler, Mr. Gallego was responsible for developing a Risk Analysis Baseline schedule for the Lincoln Bypass Project. Mr. Gallego was responsible for developing all aspects of the Baseline schedule, including determining scope of work, developing Work Breakdown Structure, Activity Coding, Project Calendars, and Activity Logic. Working closely with the client, Mr. Gallego was able to expedite the schedule development to create a Baseline schedule with 1182 activities so that the Designers could perform an analysis of the project's potential risks. The Engineer's Estimate of the Lincoln Bypass was \$171-million. Mr. Gallego used Primavera P5 to develop this Baseline schedule.

**December 2003 – 2008; Gallego Consulting Services, Inc.; Senior Project Scheduler for the State Route 22 Design Build Widening Project; Orange County, CA.** As the senior project scheduler, Mr. Gallego was responsible for the development and maintenance of the bid check schedule, preliminary 90-day schedule, baseline, and update schedules for this \$390-million design build highway widening project. Mr. Gallego exclusively used Primavera Project Planner (P3) scheduling software to develop and maintain the resource and revenue loaded project schedule. Mr. Gallego was responsible for all aspects of the project schedule specification including coding, calendars, layouts, filters, tabular reports and plots.

**December 2003 – 2004; Gallego Consulting Services, Inc.; Provide Project Scheduling Support to Various Bridge Construction Contractors.** As the senior project scheduler, Mr. Gallego was responsible for developing bid project schedules for various projects in California and Oregon. Mr. Gallego also developed a resource loaded project schedule tracking bridge falsework materials located throughout California. Mr. Gallego exclusively used Primavera Project Planner (P3) scheduling software to develop and maintain all project schedules. During the schedule development process, Mr. Gallego developed project specific project coding, layouts and reports as required by the bridge contractor. The project schedules developed for California Department of Transportation (Caltrans) were designed to meet all of the "Progress Schedule" requirements of the project Special Provisions.

**June 2003 – May 2005; Employee of HNTB Corporation; Peninsula Corridor Joint Powers Board (Caltrain) Centralized Equipment Maintenance and Operations Facility (CEMOF) Design Schedule; San Jose, California.** As the senior project schedule analyzer, Mr. Gallego was responsible for implementing HNTB's design project schedule for design activities. Mr. Gallego used Primavera Project Planner (P3) to develop and maintain the project schedule. During the schedule development process, Mr. Gallego developed project coding, layouts and reports as required by the client (Caltrain).

**October 2001 – October 2003; Employee of HNTB Corporation; Caltrans District 59 On-call; Rocklin, California.** As the senior project schedule analyzer, Mr. Gallego was responsible for the project schedules of multiple transportation construction projects located throughout the Caltrans – North Region (Districts 1, 2 and 3). Mr. Gallego's responsibilities included analyzing project documents to ensure that contractor submitted project schedules (baseline and updated schedules) adhered to contract requirements.

In addition, Mr. Gallego implemented a training program advising Caltrans Resident Engineers and Structure Representatives on the proper processes and procedures for the implementation of the Critical Path Method (CPM) progress schedule specification. Mr. Gallego developed Microsoft PowerPoint presentations, practice project schedules, Microsoft Excel schedule workbooks, and Microsoft Word training manuals. The training presentation and course materials allowed project engineers to calculate the forward and backward passes of a project schedule and to review all of the requirements of the Caltrans CPM specification.

**June 1999 – October 2001; Employee of Washington Group International; Route 101 Hillsdale Interchange Modifications; San Mateo, California.** As the Resident Engineer, Mr. Gallego was responsible for all aspects of the interchange modification project. The work included constructing new on and off ramps to San Mateo and Foster City. The work included constructing new retaining walls, soundwall, asphalt concrete paving and signalized intersections.

The duties of the Resident Engineer included monthly progress payments, contract change orders, and ensuring contract compliance. In addition, Mr. Gallego negotiated with the contractor to mitigate potential claims and resolve other contract issues.

Furthermore, Mr. Gallego was the liaison between the City of San Mateo, the construction manager, project designer, Caltrans and contractor.

Mr. Gallego developed monthly newsletters and provided information needed to update the web site of the City of San Mateo. In addition, Mr. Gallego was the first line of contact for citizens expressing their concerns about the project.

**February 1999 – June 1999; Employee of Washington Group International; Southern Segment Las Vegas Beltway – Section 4; Las Vegas, Nevada.** The project included constructing two prestressed concrete box girder bridges over the new Las Vegas Beltway. Mr. Gallego was the lead structure inspector for these two bridges and he provided training to junior engineers on the project.

His duties included calculating the elevation grades of the bridge soffit and deck. These elevations were based on the profile grade and cross slopes of the structural sections. The skews of the abutments and pier cap were factored in the elevation grade calculations. The calculated grades were used to develop cut / fill sheets that were used to verify actual field elevations.

Mr. Gallego also worked with the construction contractor to develop a suitable concrete mix design that would provide highly workable concrete. Because of the rebar spacing and prestress ductwork in the structure girders, the contractor needed a high performance concrete with maximum slump (penetration). Through their partnership, they were able to design a concrete mix that satisfied all of the project requirements and provided the workability needed.

**August 1998 – February 1999; Employee of Washington Group International; Route 101 Central Viaduct Concrete Retrofit; San Francisco, California.** As a transportation engineer, Mr. Gallego was placed in charge of the project's CPM schedule. He reviewed and approved all of the required schedule submittals including baseline schedule, updated schedules, and contractor supplied computer system. He also conducted the construction schedule monthly meetings. Using the approved project schedule, Mr. Gallego was able to recognize which Contract Change Orders warranted time extensions based upon delays to activities that affect the controlling operation on the Critical Path.

In and effort to mitigate future claims, Mr. Gallego was also placed in charge of the project's photo survey, crack monitoring, sewer survey, and vibration monitoring. He has reviewed submittals for completeness and met with Contractor and Subcontractor representatives to ensure compliance with specifications.

Mr. Gallego has also worked with Caltrans Specifications writers to improve the specifications pertaining to the CPM schedule, photo surveys and crack monitoring. These changes will be incorporated into future Caltrans construction projects.

Mr. Gallego prepared a 50-page training manual entitled "*Project Management using the Critical Path Method*" and conducted two classes wherein he trained Caltrans Resident Engineers and Structure Representatives to properly review and approve contractor submitted baseline construction schedules. The class also instructed the engineers on how to conduct monthly scheduling meetings, and the differences between updated and revised schedules (as defined by Caltrans specifications). The

participants were required to calculate the early start, early finish, late start, total float and free float during the forward and backward passes of a construction schedule.

**April 1996 – August 1998; Employee of California Department of Transportation (Caltrans); Computer System Specialist; Office of Structure Construction (District 59); Sacramento, California.** As the Computer System Specialist, Mr. Gallego was responsible for over 300 field computers located throughout California. His duties included developing and implementing a uniform computer system for over 150 Pentium-based computers running Windows OS. The computer programs included specialized spreadsheets to determine lateral loading using Boussinesq Strip Loading equations and to determine if concrete mix designs met contract specifications.

Mr. Gallego created the OSC Intranet web site for remote construction engineers. This Intranet web site provided access to proprietary information pertaining to the approved concrete admixture list, rebar coupler list and prestress jack calibration tables. All of these documents were converted to Adobe Acrobat portable document format (PDF) for universal platform compatibility.

He also provided computer software training to field engineers throughout the state of California. This software training included Microsoft's Word and Excel, Windows OS, Lotus Notes, and applications developed and designed by Mr. Gallego. He has successfully completed courses designed to train individuals to become trainers. Using that training, he assisted in the implementation of Lotus Notes by installing and configuring the software program, and by providing training to individuals in a classroom setting.

**April 1995 – April 1996; Employee of California Department of Transportation (Caltrans); Route 13 / 24 Interchange; Oakland, California.** As the lead construction engineer on the Route 13 / 24 interchange construction project, Mr. Gallego was responsible for aspects of a 200-foot-long, cut-and-cover tunnel, concrete box girder bridge, bridge demolition and various permanent and temporary earth retaining structures. His responsibilities included resolving project plan conflicts, determining contractor pay estimates and analyzing the contractor's project schedule.

Unique structures found on this project included a 48-foot-high temporary soil nail retaining wall, multiple cantilevered retaining walls (some over 30 feet tall), temporary timber and steel pedestrian overcrossing, and the seismically-segmented tunnel over the Hayward fault.

Mr. Gallego was responsible for the Structures portion of the Contractor's project schedule (CPM). He used Primavera SureTrak to analyze and review the schedule for completeness. He also organized the monthly scheduling meetings. He used the approved project schedule to determine which Contract Change Orders warranted time extensions based upon delays to activities that affect the controlling operation on the Critical Path.

Mr. Gallego reviewed the contractor's submittals for bridge demolition, concrete mix designs, multiple temporary earth retaining structures and bridge falsework plans. He used MathCAD to quickly analyze the review of bridge falsework and temporary earth retaining structures.

After reviewing concrete mix designs for the project, he created a Microsoft Excel spreadsheet to perform mix design checks. The spreadsheet verifies that all design aspects of a mix design conform to the requirements of the contract. A version of this spreadsheet is on every Caltrans bridge construction computer, and can be downloaded from the OSC Intranet web site.

**November 1993 – April 1995; Employee of California Department of Transportation (Caltrans); North Main Street Overcrossing; Walnut Creek, California.** Mr. Gallego was a bridge construction engineer for the North Main Street overcrossing over Interstate 680. Duties included inspecting all aspects for a 684-foot-long, post-tensioned, concrete box girder bridge, including concrete pile driving, 96-inch pile shafts, staged falsework construction and superstructure. The project also called for

demolishing the existing North Main Street overcrossing after the first stage of the new structure was completed.

**October 1992 – November 1993; Employee of California Department of Transportation (Caltrans); Cloverdale Bypass, State Route 101; Cloverdale, California.** The project constructed three highway bridges on State Route 101 and three railroad bridges. Mr. Gallego was personally responsible for the construction of two railroad bridges: one a concrete grade separation structure, the other a built-up steel girder bridge.

The concrete box girder grade separation railroad structure consisted of two conventionally reinforced concrete slab bridges at spans 1, 2, 5, and 6, and a post-tensioned concrete box girder at spans 3 and 4. This structure required complete construction of spans 3 and 4 before constructing the slab bridges at either end. The back wall of the box girder was also the bearing seat of the slab bridges.

The built-up steel girder bridge had a span of over 66-feet and a depth of over eight feet. The steel decking of this bridge was welded to the joist before water-proofing and rock ballast.

His duties also included assisting other engineers with highway bridge construction, verifying concrete mix designs, driving concrete piles and checking layouts of the various structures.

**October 1991 – October 1992; Employee of California Department of Transportation (Caltrans); Soundwall & Retrofit Project; San Francisco, California.** Mr. Gallego worked on the construction of one-mile of soundwall on State Route 101, south of the Interstate 280 / 101 Interchange in San Francisco. He was responsible for grade and alignment checks for the cast-in-drilled-hole (CIDH) piles and footings. This involved calculating and verifying the grades according to the designed profile.

He was also assigned to various pedestrian and highway overcrossing retrofit projects along State Route 101 and Interstate 280. The work included seismic anchor slab construction for longitudinal support, "stealth" walls for lateral support, abutment diaphragm bolsters, and enlarging footings and column casings.

**January 1991 – October 1991; Employee of California Department of Transportation (Caltrans); Office of Structure Design; Sacramento, California.** As part of his rotational program in the Engineering Service Center, Mr. Gallego was assigned to Design Section 9, where he assisted design engineers in calculating the final quantity estimates for multiple bridge projects in Fresno, California.

**May 1990 – January 1991; Employee of California Department of Transportation (Caltrans); Central Freeway Viaduct Retrofit State Route 101; San Francisco, California.** This contract was the original retrofit design of the Central Viaduct in San Francisco, California. The retrofit scheme called for the installation of steel plates to envelop the concrete columns. Unfortunately, the design was inadequate, and the contract was terminated. Mr. Gallego developed a Microsoft Excel spreadsheet to track the quantities and multiple locations of flat and rolled steel plate for salvaging. Caltrans ultimately used the spreadsheet to auction off a million pounds of steel plate.

**December 1989 – May 1990; Employee of California Department of Transportation (Caltrans); Highway Operations Branch; San Francisco, California.** On his final rotation as a junior civil engineer, he assisted the Highway Operations Branch in determining new traffic patterns throughout the San Francisco Bay Area. This work was urgent due to the 1989 Loma Prieta earthquake.

At the end of this assignment, Mr. Gallego transferred out of Caltrans District 4 to the Office of Structure Construction (Caltrans District 59).

**October 1989 – November 1989; Employee of California Department of Transportation (Caltrans); Emergency Design Build Repairs; 580 / 80 Interchange and San Francisco – Oakland Bay Bridge, Oakland, California.** After the 1989 Loma Prieta earthquake, Mr. Gallego was assigned to the Office of Structure Construction; initially to assist with the emergency repair of the Interstate 580 / 80 Interchange and finally to the San Francisco Oakland Bay Bridge (SFOBB). Because of the urgency of the situation, work was performed 24 hours a day.

As the sole engineer on the night shift of the SFOBB repair work, he resolved contract plan disputes. The work consisted of removing the damaged structure, jacking the structure into place, removing and replacing original rivets, installing new bearing seats, erecting new stringers, setting prefabricated concrete decks, placing concrete in the closure pour, and installing new guard railing. The earthquake occurred on October 17, 1989. Because of this work, the SFOBB was reopened to traffic on November 17, 1989, exactly one month after the earthquake.

**May 1989 – October 1989; Employee of California Department of Transportation (Caltrans); Interstate 280 Slide Repair; San Mateo County, California.** Mr. Gallego's assignment consisted of repairing a slide on the southbound lanes of Interstate 280. After receiving the engineer's design, he developed a plan to reduce the overburden loading of asphalt concrete on the slide area. Using the actual field elevations determined by surveyors, he was able to plot actual lane line profiles. He next compared the actual profiles with an optimal profile calculated using Lotus 1-2-3, and plotted with VersaCAD.

After the optimal profile was selected, Mr. Gallego used the newly calculated elevations and actual elevations to determine the cut/fill grades. He also calculated fill volume, using the average end area method, to determine the tonnage of asphalt needed for the project. Because of this, the quantity of asphalt concrete required was reduced, resulting in substantial cost savings.

**May 1989 – October 1989; Employee of California Department of Transportation (Caltrans); State Route 84; Woodside, California.** On this project, Mr. Gallego tracked the multiple and variously-sized asphalt concrete shoulder replacement quantities using a Lotus 1-2-3 spreadsheet. Initiated by bicyclists, this project's intent was solely for their safety. The spreadsheet used the shoulder's width, depth and length to determine the tonnage of asphalt concrete needed for the project.

Mr. Gallego visually surveyed the 25-mile-long site to revise work areas. Taking into account existing conditions, the project scope was changed to improve overall ride quality and safety for intended end-users.

**May 1988 – May 1989; Employee of California Department of Transportation (Caltrans); District 4 Highway Design; San Francisco, California.** As part of his rotational program Mr. Gallego was assigned to the North Region Highway Design Section, where he assisted design engineers in calculating the final quantity estimates for multiple highway projects in Northern, California.