

CURRICULUM VITAE

JOSEPH S.C. BONADIMAN, P.E.

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PROFESSION:

Registered Civil Engineer in the States of California (# C-30238), Colorado (# 16973), and Nevada (# 5671 - Inactive). Has California licenses as an Agricultural Engineer (# 97), General Engineering Contractor, General Building Contractor (A & B # 313503), Registered Earthquake Damage Assessor (# SA951114) and Energy Auditor. Chief Executive Officer of Joseph E. Bonadiman and Associates, Inc., an engineering, surveying, planning and construction management firm founded in Los Angeles, California in 1941. Chairman of the Board of CIVILDESIGN[®] Corporation, consulting engineers.

EDUCATION:

Los Angeles Pierce College. Associate in Science
California State University at Fresno. Bachelor of Science, Civil Engineering.
Century University. Master of Science, Civil Engineering.
Columbus University. Doctor of Philosophy, Civil Engineering.
Additional continuing education studies in Hydrology and Hydraulics, Ground Water Hydrology, Nuclear Site Hardening, Forensic Engineering, Water and Wastewater Systems and Planning at UCLA, Cal Poly Pomona, University of Iowa, Calif State University at Long Beach, West Virginia University and University of Washington.

COLLEGE LECTURING, PUBLICATIONS AND TECHNICAL PAPERS:

Guest lecturer for the University of California at several campuses, addressing groups such as the National Association of Home Builders, Southern California Adjusters Association, American Society of Civil Engineers, Society of Real Estate Appraisers and the Western Mobile Home Park Association. Authored papers and reports on ecological systems, recreational developments, structural steel systems, mobile home and recreational vehicle parks, energy systems, Computer-Aided Design and Drafting (CADD), along with environmental, wastewater and water treatment, and Forensic Engineering, have been a peer reviewer and have been peer reviewed. Editor of CIVILDESIGN[®]/CIVILCADD[®] *Pipe Network Analysis* and CIVILCADD[®] *Computer Aided Design and Drafting*.

MEMBERSHIPS:

Fellow, American Society of Civil Engineers
Member, National Society of Professional Engineers
Member, The American College of Forensic Examiners

Fellow, National Academy of Forensic Engineers
Member, Association of Energy Engineers
Member, American Water Works Association

CIVIC AND FRATERNAL ACTIVITIES:

The California Club, Los Angeles (Member)
San Bernardino Area Chamber of Commerce
Aircraft Owners and Pilots Association
Serra International (Past President)

Easter Seal Society (Past President)
Thursday Morning Group (President)
California State Polytechnic University,
Engineering Industry Action Council (Member)

REPRESENTATIVE PROFESSIONAL ACTIVITIES:

The following projects by Mr. Bonadiman are listed as examples to show an interested party, the various types of experience that he has gained over his years as an engineer. More specific projects can be assembled from hundreds of others not included in this list, if necessary, for a particular type of case or project.

- Project engineer and expert witness for a forensic investigation on two 50,000 square foot freezers for the Van De Kamp Food Company, San Diego, California. The cause for the failure of the buildings had to be determined and corrected in record time due to the thousands of pounds of tuna soon to arrive at the dock.
- Project engineer for the design of an earth dam in Bishop, CA. This 450 foot long dam was designed for the County of Inyo in connection with a David Grunsky Act application. This State of California funded project was the only one approved for the County.
- Design engineer on an innovative modular building. The building used a rigid frame plastic design, with stressed skin wall panels. The rigid frame was built in a one-man welding shop while the stress panels were built in a two-man cabinet shop, indicating the ease of construction. Building was then erected by mostly non-experienced tradesmen. This was an original design that proved to be very cost effective.
- Staff engineer for the design of the Meadowbrook Redevelopment Project in the City of San Bernardino, CA. This project made land available for new development and necessitated the integration of existing older infrastructure with new construction. This development was one of the most successful redevelopment projects in California at the time.
- Principal engineer for the San Bernardino County Medical Society's building. Originally designed to be a 2-story structure, with the second story to be constructed at a later date, this building was so efficiently designed that added to the economies, it allowed the Medical Society to build both stories at the same time.
- Staff engineer on a hydrology analysis, study and design for a compacted soil cement levy for the County of Ventura. The Arroyo Las Posas Wash carried a Q100 of 33,000 CFS. Due to the location of the wash, no acceptable rock to race the levy was available. Therefore, an analysis was made as to the most inexpensive way to protect the levy from erosion. Compacted soil cement was recommended and used successfully for the first time in Ventura County.
- Principal senior engineer for St. Adelaide's Catholic Church in Highland, CA. Despite the low construction budget, it is considered one of the most attractive churches in the San Bernardino Diocese. A feature of the design was that the tower would be an integral part of the church. Reasonable cost on the church had to be maintained. As a solution, certain items were purchased in Mexico and finished to U.S. standards so that they could be incorporated into the structure.
- Principal engineer for a FEMA study and design on a large channel in Highland, CA. Calculated flow of the channel was 30,000 cfs. The study was submitted to FEMA for approval and terminated with a FEMA map provision for the overflow area of the wash.
- Principal engineer for a set of three fire stations for the City of San Bernardino, CA. The fire

stations were designed to be used at multiple locations within the City of San Bernardino. They were designed to be site adapted and de-mountable so that they could be relocated as the fire demand changed within the City.

- Project engineer on a specific plan for a 700-acre hillside development containing single and multiple family homes in the City of Loma Linda. This project anticipated movement of approximately 25 million yards of earth. The project was dissected by the San Jacinto fault, which necessitated extensive geological analysis.
- Principal engineer for the City of Colton's Main Library in Colton, CA. This project was designed for the City and the City required the firm to work with a separate construction manager in the building of the library. The library was designed and constructed so that a second story could be added in the future when present space requirements were exceeded.
- Principal engineer for the design standards of the CIVILDESIGN®/CIVILCADD® Civil Engineering Software. Started the project in 1979 and continues to be the principal engineer in charge. This is the most complete Civil Engineering software designed by a single coordinated software design group of civil engineers.
- Principal engineer on an environmental study and report on the Sunrise Ranch, a 2,000 acre multi-use development in Highland, CA. This project contained single family, multiple families and a golf course. The property had multiple types of topography along with historical significance.
- Principal engineer on the Glen Helen Regional Park and vicinity Master Plan. This project consisted of primarily County property, but included some private and National Forest property. The study covered approximately 3,000 acres. The plan developed the basis for a multi use recreational facility in the Northern part of San Bernardino.
- Principal engineer for all on and off site design including grading, streets, paving and storm drain, for a \$10 million State facility at the National Orange Show Grounds in San Bernardino, CA. A condition by the State on this project was that all working drawings had to be in digital format.
- Principal engineer on 72 miles of water transmission main, water storage tanks, wells, and a booster station in the community of Phelan, San Bernardino County, CA. This project from start to completed working drawings took three months.
- Principal engineer on two 8,000 space recreational vehicle and camping facilities for two U.S. Festivals. The two temporary facilities were the largest for recreational vehicles ever designed and constructed.
- Principal engineer on three miles of 84" diameter storm sewer in the cities of Rialto and Colton, CA. Design and construction of this line was complicated due to its location in Valley Boulevard, which had large crossing utilities.
- Principal engineer on the only temporary on and off ramps from a major U.S. freeway. Both ramps were designed and built to state and federal standards. Cooperation had to be obtained through Cal Trans as well as the Federal Highway Commission.
- Project engineer on a 75-acre industrial development for the City of Colton. This city project was to provide industrial property for companies wishing to locate in the city. This project was done under a

State 1915 Improvement District Act.

- Project engineer on the design of a 400-space mobile Home community in the vicinity of Vail, CO. This project included a complete sewer and water system with the treated sewage of such quality that it was discharged directly into the Eagle River.
- Project engineer for two one-year contracts to do all engineering and architectural design at Norton Air Force Base in San Bernardino, CA. This project included civil, electrical, mechanical and architectural designs.
- Project engineer for a 100 mile survey of Edwards Air Force Base, CA. This project included re-monumentation of the base. The project was done for the U.S. Corps of Engineers and required much historical review going back to the 1840's.
- Project engineer on 20 miles of 48" water transmission main in sections of between 4.3 miles and 5 miles in length for the San Bernardino Valley Municipal Water District, which is a contractor for State water.
- Design engineer for a hydrogeneration systems for Sheep Creek Water Company. Systems designed were to retrieve energy using hydrogenerators as opposed to pressure reducers located in water transmission lines.
- Design engineer on the hydrology study and design of 2 ½ miles of a 10' x 11' box culvert for the City of San Bernardino. Project paid for through a United States government grant. Because this box culvert ran through the main part of the city, a study had to be completed for a significant portion of the City prior to the design of the storm drain facility.
- Design engineer for a hydrology study and the design of a channel protection for a portion of the San Luis Ray River in the County of San Diego. The San Luis Ray River has a Q100 of 46,000 CFS and a design with a backwater analysis was necessary to protect properties next to the river.
- Staff engineer on the Scottish Rite Masonic Temple in San Bernardino, CA. This structure was designed to be built in phases. The structure was unique in that it was constructed much as an industrial building. The building turned out to be very functional and contained all the amenities necessary for that type structure and use.
- Construction manager on various engineering and building construction projects. Management of construction projects enables the engineer to bridge the gap between engineering construction in a way that makes his cost estimates and timetables meaningful.
- Principal engineer for the first incinerator waste-heat-boiler combination to be used in Southern California, which met all the requirements of the Regional Air Pollution Control Board. The incinerator was able to take all the waste, both infectious and noninfectious--from Saint Bernardine's Medical Center, incinerate it, pass the gases through a waste heat boiler and produce steam of sufficient quantity to meet all the hospital's requirements.
- Principal engineer on cogeneration system for Anaheim Memorial Hospital. The cogeneration system consisted of a natural gas-fired engine driving a generator to produce electricity. The heat from the engine was used to meet a portion of the hospital's hot water requirements.