



MARCOR G. PLATT

SENIOR STRUCTURAL ENGINEER PE, SE, PMP

EDUCATION

MS, Civil Engineering, structural emphasis, Brigham Young University 2009

BS, Civil Engineering, mathematics minor, Brigham Young University 2008

PROFESSIONAL REGISTRATION

Registered professional and/or structural engineer in 17 States

Arizona	PE	54152	2012	Nevada	SE	24268	2016
Arizona	SE	61487	2016	New Mexico	PE	23741	2016
California	PE	82381	2013	North Carolina	PE	052387	2021
California	SE	6955	2021	Oregon	PE	97108PE	2021
Colorado	PE	52284	2017	South Carolina	PE	39684	2021
Florida	PE	92067	2021	Tennessee	PE	124759	2021
Hawaii	SE	PE 17252	2016	Texas	PE	124000	2016
Illinois	SE	081.008670	2021	Utah	SE	9846086	2016
Kentucky	PE	35682	2020	Washington	PE, SE	21016915	2021
Louisiana	PE	45881	2021				

PROFESSIONAL AFFILIATIONS

Project Management Professional (PMP)

American Society of Civil Engineers (ASCE), Structural Engineers Institute (SEI)

National Council Structural Engineers Associations' (NCSEA)

Structural Engineers Association of Utah (SEAU)

EXPERIENCE SUMMARY

Marcor Platt has over twelve years engineering and project management experience in the fields of residential, commercial, and industrial building structural design and retrofit, electrical transmission line structural design, and forensic engineering and expert witnessing. His residential and commercial building design and retrofit experience includes landscape structures, studio apartments, houses, restaurants, theaters, pharmacies, solar arrays, and other miscellaneous structures utilizing all major construction materials and specialty materials. His industrial design experience includes steel and concrete structures to support machinery, platforms, fall protection, piping, HVAC units, and other structures. His transmission line structural experience includes designing the structural support for both high-voltage and low-voltage electrical power lines.

His forensic engineering experience includes investigating roof failures, wall failures, foundation damage, corrosion, ancillary structure damage, and other miscellaneous damage resulting from hail, wind, snow, tornado, hurricane, lightning, volcano, tropical storm, vehicle impact, or other natural or man-made forces. His expert witness experience includes testifying at depositions and trials regarding project management, structural failures, structural adequacy, structural damage, property compliance with building codes, and other subjects.

**FORENSIC
ENGINEERING AND
EXPERT
WITNESS**

2021 – Present
Senior Structural Engineer
Precision Systems Engineering, Sandy, UT

Performing forensic engineering services throughout the southwest United States and gulf coast, including Utah, California, Nevada, Colorado, and Louisiana. Projects include both single and multi-discipline studies involving structural engineering, civil engineering, mechanical engineering, electrical engineering, geotechnical engineering, surveying, and equine expertise.

2019 – 2021
Forensic Engineer and Expert Witness
Wright Engineers, Chandler, AZ

Performed forensic engineering and expert witness services for projects in Arizona and California. For each project, performed one of more site studies, organized findings into one or more reports, and testified at depositions and trials, or will testify at upcoming trials. Examples include:

- *Expert witness regarding heavy moisture penetration at a residence in Thatcher, AZ.* (<http://www.jaburgwilk.com/jaburg-wilk-wins-unanimous-defense-verdict-for-usaa>). Researched and reviewed weather data, existing deposition transcripts, cost estimates, reports, and other data. Prepared two reports. Performed diaphragm and shear wall deflection calculations. Testified at a deposition and on three occasions at the trial.
- *Expert witness at a hearing in San Francisco, California, before the California Public Utilities Commission, regarding a proposed transmission line by Southern California Edison for the Riverside Transmission Reliability Project.* (<http://docs.cpuc.ca.gov/SearchRes.aspx?docformat=ALL&DocID=329742188>) Reviewed existing data requests, generated new data requests, and responded to opposing counsel's data requests. Researched pricing, engineering specifications, markets, material supply and availability, project management, geotechnical conditions, and other factors. Performed a statistical analysis and consulted with other experts. Prepared a report and issued an errata when errors in the consulting expert's data were discovered. Attended and testified at the three-day hearing.
- *Forensic expert to evaluate 27 city-issued violations at an apartment building in Phoenix, AZ.* Performed three site studies and prepared three reports. Researched historical imagery, permit and violations history; reviewed existing and historical building codes including the IBC, IEBC, NEC, IFC, IFGC, and IMC; analyzed cable conduit and building structural properties; and researched manufacturing dates for steel sash and glass block windows and masonry units. Preparing to testify as an expert at upcoming municipal and federal trials.
- *Expert Witness regarding the structural adequacy of a builder wall between residence properties in Scottsdale, AZ.* Performed a site study and prepared two reports regarding the wall's structural adequacy. Specified a repair solution involving carbon fiber reinforced polymer. Testified in deposition regarding findings and conclusions.

**FORENSIC
ENGINEERING AND
EXPERT
WITNESS**

2016 – 2019

Forensic Engineer

Donan Engineering, Gilbert, Arizona

Performed forensic engineering for over 500 projects in Arizona, California, New Mexico, Texas, Utah, Nevada, Colorado, and Hawaii. For each project performed an investigation; photographed evidence; took measurements; performed tests; researched applicable weather data including hail, wind, snowfall, rain, tornado, lightning, earthquake, and volcano; and submitted a report outlining methods, findings, and conclusions. Examples include:

- *Masonry fence wall failure, Buckeye, AZ:* Determined the masonry fence wall failure for several hundred feet of residential fence was due wind and the wall built according to an inadequate Maricopa County detail. Published findings in a company journal.
- *Holy Cross Church in Phoenix, AZ:* Evaluated the structural integrity of glulam beams supporting the church's existing roof, and found the beams to have been inadequately fabricated.
- *Residential structural investigation, Rowlett, TX:* Determined the cause of slab and wall cracks was due to a tornado having passed near but not through the property.
- *Retaining wall, Honolulu, HI:* Determined the damage to the retaining wall was due to massive floods, and the impacts of tree trunks and boulders carried down the adjacent flooded canal.
- *Lodge in Big Bear, CA:* Determined that destruction of the deck and damage to the roof trusses and a bearing wall were due to heavy snow causing a spruce fir tree to crash into the structure.
- *Residential water tank investigation, Island of Hawaii, HI:* Determined that a residential water storage tank rusting and bursting was due to the tank lacking sufficient overflow piping pressure head to discharge major rain water.
- *Mobile home investigation, Williams, AZ:* Determined that blasting activities at a nearby rock quarry caused the home to shift at its foundation support.
- *Manufacturing facility, Tucson, AZ:* Evaluated roofs, walls, trash enclosures, roll-up doors, canopies, HVAC condenser fins, downspouts, and other metal surfaces for hail damage and for the approximate date of hail impact. Determined approximately half the damages occurred after a specific date.

**DESIGN
ENGINEERING
AND PROJECT
MANAGEMENT**

2021 – Present
Senior Structural Engineer
Precision Systems Engineering, Sandy, UT

Currently performing structural engineering for commercial (multi-story wood and steel apartments over post-tensioned concrete podium slabs) and industrial structures.

2015 – 2016; 2019 – 2021
Structural Project Manager
Wright Engineers, Chandler, AZ and Irvine, CA

Performed engineering and project management for multiple structural projects throughout Arizona and California. Examples include:

- Retrofitted two post-tensioned elevated slabs of a four-story concrete and steel moment-frame building in Scottsdale, AZ. Retrofits included fiber-reinforced polymer (FRP) sheets and concrete capitals.
- Designed a solar array over an existing courtyard in northern Phoenix, AZ utilizing unique parabolic steel arches supported on Teflon bearing pads on existing concrete tilt-up walls.
- Investigated and evaluated church buildings throughout southern California for seismic safety and providing overall recommendations for retrofits.
- Retrofitted commercial buildings in San Clemente and Bakersfield, CA which included a three-legged tower to cantilever over the existing roof of a masonry building.
- Worked with numerous large-operation bakeries for structural retrofits, evaluations, and improvements throughout the Phoenix, AZ metro area.
- Designed tapered masonry monument structures up to 24 feet in height at various locations in the Phoenix, AZ metro area.
- Designed Del Taco and Subway Restaurants, Cinepolis theaters, a Rite Aid pharmacy, and other buildings in multiple states utilizing special masonry shear walls and special steel moment frames.
- Designed steel support structure for cooling towers, modules, overhead fall protection, and other functions associated with large HVAC units.

2014 – 2015
Project Engineer
Patel Burica & Associates, Inc., Irvine, CA

Performed engineering and project management for multiple structural projects throughout Southern California. Examples include:

- Designed single-family residential models with multiple elevations and options.
- Designed sports/recreation structures including basketball hoops, baseball dugouts and backstops, and poles for field lighting.
- Developed a spreadsheet to facilitate design of masonry trash-enclosure structures.

**DESIGN
ENGINEERING
AND PROJECT
MANAGEMENT**

2009 – 2014

Project Engineer (2012 – 2014)

Design Engineer (2009 – 2012)

Electrical Consultants, Inc., Salt Lake City, UT and Tucson, AZ

Performed engineering and project management for electrical transmission line projects throughout the United States. For each project, designed wood poles, tapered steel poles, lattice towers, connecting hardware and foundations. Examples include:

- *Freeport MacMoRan (FMI) open pit copper mine land reclamation projects in Miami, AZ and Bisbee, AZ.* Project engineer for several 22.9 kV transmission line relocations to accommodate reclamation projects. Determined line layout and designed supporting structures including wood poles, guy wires, and hardware. Managed budget and schedule, and improved management for each successive transmission line.
- *Spinning Spur Wind 2 project in Amarillo, TX.* Project Engineer for an Engineer-Procure-Construct (EPC) 40-mile, 345 kV transmission line for wind turbines. Designed 100 plus tapered steel poles ranging up to 120 feet in height. Designed deep reinforced concrete drilled shafts. Construction was completed one month ahead of schedule.
- *Tehachapi Renewable Transmission Project (TRTP) Segment 7 in Los Angeles, CA.* Project Engineer for a 16-mile 500 kV transmission line across the Los Angeles metro area. Performed structural design including analyzing steel lattice towers supporting cables and determining electrical clearance calculations. Took over the project midway through when it was overbudget and behind schedule. Revised project budget and schedule and completed the project within the new budget and schedule.

PUBLICATIONS

“Visualizing and Modeling Mining-Induced Surface Subsidence” Thesis presented to the faculty of Brigham Young University

“Should I hire an engineer? The danger of excluding the design professional” Donan Engineering Online Journal