MARCOR G. PLATT, SE, PE, 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 20 States

Arizona	PE	54152	2012		Louisiana	PE	45881	2021
Arizona	SE	61487	2016		Nevada	SE	24268	2016
Arkansas	PE	21202	2022		Nebraska	SE	E-19375	2022
California	PE	82381	2013		New Mexico	PE	23741	2016
California	SE	6955	2021		North Carolina	PE	052387	2021
Colorado	PE	52284	2017		Oregon	PE, SE	97108SE	2022
Connecticut	PE	36195	2022					
Florida	PE	92067	2021		South Carolina	PE	39684	2021
Hawaii	SE	17252	2016		Tennessee	PE	124759	2021
Illinois	SE	081.00 8670	2021		Texas	PE	124000	2016
					Utah	SE	9846086	2016
Kentucky	PE	35682	2020		Washington	PE, SE	21016915	2021

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers (ASCE), Structural Engineers Institute (SEI)
National Council Structural Engineers Associations (NCSEA)
Structural Engineers Association of Utah (SEAU)
American Concrete Institute (ACI) Intermountain Chapter
American Institute of Steel Construction (AISC)
Project Management Institute (PMI), Project Management Professional (PMP)

EXPERIENCE SUMMARY

Marcor Platt has fourteen 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, and other miscellaneous damage resulting from hail, wind, snow, rain, fire, tornado, hurricane, lightning, volcano, tropical storm, vehicle impact, corrosion, heat or other natural or man-made forces. His expert witness experience includes providing written and oral testimony regarding project management, structural analysis, building code compliance, and other subjects.

FORENSIC ENGINERING AND EXPERT WITNESS

2021 – 2023
Owner and Senior Engineer
Marcor Forensic and Expert Consulting, South Jordan, UT

- *Structural Forensic Expert*. Forensic civil and structural expert throughout the Southwestern United States, Pacific Northwest, and other states as required. Perform site reconnaissance, document existing conditions, conduct testing as required, perform calculations, conduct research, and publish findings and conclusions in an expert report (samples available upon request).
- *Website*: https://marcorforensicexpert.com

2021 – 2023
Senior Structural Engineer
Precision Systems Engineering, Sandy, UT

Performing forensic engineering services throughout the southwest United States, gulf coast, and Pacific Northwest including Utah, California, Nevada, Colorado, Oregon, Washington, 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.

- *Forensic expert regarding booth failure at the 2019 CES in Las Vegas, NV.* Studied a LED video wall which gradually leaned forward until it fell and injured two people on the second day of the 2019 CES in Las Vegas, Nevada. Reassembled, examined, and tested the video wall; performed electrical, heat transfer, and stability calculations; and ultimately found that the failure was due to lack of adequate ventilation for the LED panels. Published findings and calculations in a report.
- *Forensic expert regarding a flood analysis at Hexcel Facilities in Kent, WA*. Lead a team of structural and civil engineers to evaluate the flood risk at the Hexcel facility in Kent, Washington in response to an insurance company claim of a two-feet floodwater risk. Conducted hydrologic and hydraulic analyses considering drainage from the 100-year-flood water from both the nearby creek and direct precipitation. Found the floodwater risk to be no more than an inch and published extensive findings in a report.
- *Expert witness regarding construction defects at a residence in Alpine, UT.* Lead a team of structural, civil, mechanical, and electrical engineers to investigate construction defects at a 7500 square foot residence. Wrote a detailed report outlining a structural analysis of the foundation and documenting wood framing, civil, mechanical, and electrical issues to be further investigated.
- *Expert witness regarding concrete roof tile damage at a residence in Henderson, NV.* Researched and reviewed weather data, performed destructive testing of roof tiles, reviewed existing deposition transcripts and disclosures, calculated aerodynamic uplift on roof tiles, calculated local wind effects, and prepared two reports. Testified at a deposition,
- *Forensic Engineering study of damage to an apartment complex in Rangely, CO.* Performed a two-day, detailed investigation of two apartment complexes. Documented extensive cracking and floor sloping, and performed calculations of the structural adequacy of walls, floor, roofs, and the foundation. Presented findings in a detailed forensic report.

FORENSIC ENGINERING AND EXPERT WITNESS

- *Expert witness regarding contractor work at a property near Clayton, CA.* Lead a team of civil, mechanical, electrical, equine, and geotechnical experts to investigate multiple construction activities at the property and determine the impacts of each activity. Prepared six reports personally and in conjunction with civil engineers and supervised the preparation of two additional reports by an electrical engineer and equine expert.

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:

- *Forensic expert regarding a roof collapse due to rainwater in Medford, OR.* Lead a team of structural engineers to evaluate a collapsed roof and fractured joists following a record rainstorm at the former Sears building in Medford, Oregon. Rebutted two other expert reports attributing fractured joists to pre-existing conditions and/or hanging loads in the building. Rebutted another expert report regarding code requirements to make the building safe and habitable for future occupancy.
- *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 erratum 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 ENGINERING 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 the church roof's existing glulam beam supports 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***:** Evaluated a retaining wall damaged due to massive floods and the impacts of tree trunks and boulders from the adjacent flooded canal.
- *Lodge in Big Bear, CA***:** Evaluated destruction of a deck and damage to roof trusses and a bearing wall 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 water from large tropical storms.
- *Porte Cochere impact damage, Happy Jack, AZ:* Identified and structurally evaluated all damage to a Porte Cochere following impact from a garbage truck. Rebutted another expert's opinions regarding cause and severity of damage identified.

DESIGN ENGINEERING AND PROJECT MANAGEMENT

2021 – 2023
Owner and Senior Engineer
Marcor Structural Expert Network PLLC (MarcorSEN Engineering), South Jordan, UT

Structural Design Engineer. Perform structural engineering for both retrofits and new construction for residential, commercial, and other structures, including:

- *HSR America, Los Angeles, CA:* Providing structural engineering for an elevated high-speed shuttle rail (400 mph). Rail is supported by cable stays and longitudinal cables anchored to towers ranging from 150 feet to 350 feet tall, spaced from 1/22 mile to ¼ mile apart. Towers are supported on pile caps with deep drilled shafts. Providing multiple studies and preliminary tower, track, and deep foundation design.
- *Cummins Diesel Services, HI, NV, CA:* Provide evaluation and retrofit of structural members supporting fall protection equipment in metal buildings. Perform catenary cable analysis to support dynamic fall loads, and make recommendations to retrofit existing members to support fall protection anchorage.
- *Martin's Diesel Retrofit:* Provide structural plans and calculations to raise the roof over the garage and add a second story over the office at a mechanics shop.

DESIGN ENGINEERING AND PROJECT MANAGEMENT

2021 – 2023
Senior Structural Engineer
Precision Systems Engineering, Sandy, UT

Performed structural engineering for multi-story residential/commercial structures and heavy and light concrete and steel industrial structures.

- Seismic retrofit of a 155-foot-tall water tower in West Valley City, Utah. During the March 18, 2020 earthquake in Salt Lake City, Utah, the Hexcel water tower was observed to sway dangerously back and forth. Hexcel commissioned PSE to study the tower and provide a seismic upgrade, which will including installing deep drilled shafts and adding columns and additional steel structural supports.
- Performed structural design for (3) four and five story wood and steel apartment structures over podium post tensioned slabs in Salt Lake City and Bountiful, Utah.
- Performed structural design for multiple tornado shelters in Wyoming, Nebraska, and Texas.

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.

DESIGN ENGINEERING AND PROJECT MANAGEMENT

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.

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 McMoRan (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 AND PRESENTATIONS

"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

"Enhancing our Expertise by Studying Structural Failure" Presentation at the 2023 Structural Engineers Association of Utah (SEAU) Conference