PIVOT ENGINEERS

# RANDALL W. POSTON, PhD., PE, SE, NAE

## SENIOR CONSULTANT

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### PRACTICE AREAS

- Structural Engineering
- Structural Concrete Corrosion
- Investigation of Structural Failures
- Structural Concrete Repair and Strengthening

### REGISTRATIONS

- Professional Engineer: AL, AR, CA, FL, IN, KY, MD, NC, OK, OR, PA, TN, TX, VA, WA, WI
- Structural Engineer: AZ, GA, MA, OK, UT

### HONORS AND AWARDS

- Neil Armstrong Distinguished Visiting Fellow at Purdue University
- National Academy of Engineering, elected 2017
- University of Texas Cockrell School of Engineering Distinguished Graduate

### PROFESSIONAL ACTIVITIES

- American Concrete Institute (ACI)
- Precast/Prestressed Concrete Institute
- Post-tensioning Institute
- American Society of Civil Engineers
- International Association of Bridge and Structural Engineering
- Structural Engineers Association of Texas
- International Federation for Structural Concrete

### EDUCATION

The University of Texas at Austin
BSCE with Highest Honors, 1978
MSE in Structural Engineering, 1980
PhD in Structural Engineering, 1984

### EXPERIENCE

An internationally recognized expert in structural engineering, Dr. Poston has established himself as one of the preeminent structural consultants in the United States. Dr. Poston has authored and delivered hundreds of papers and presentations related to the structural engineering industry and championed the repair of existing structures for upwards of 40 years.

### REPRESENTATIVE PROJECTS

**Surfside Building Collapse -** Investigated the probable cause of collapse of 17-story reinforced concrete building that had been in service for 41 years

**Pedestrian Bridge Collapse -** Investigated the probable cause of failure of two long-span, external tendon-supported, timber bridges being constructed at a community college.

**Scaffolding Collapse -** Investigated the probable cause of collapse of an 8-story temporary scaffolding being utilized for construction of the masonry envelope of a new hospital building.

**Dormitory Building Deflections -** Investigated excessive deflection in flat-plate floor slabs of three dormitory buildings and developed remediation strategies.

**Pier Degradation -** Assessed the safety and concrete material degradation due to alkali-silica reactivity of a pier terminal. Developed remediation design to upgrade the facility to code requirements.

**Guggenheim Museum -** Investigated the deterioration of shotcrete walls. Conducted corrosion testing of embedded reinforcement. Developed corrosion mitigation strategies and provided peer review of final remediation design.

**Mandalay Bay Seawall -** Evaluated the condition of existing 6-mile seawall. Evaluation included nondestructive testing, assessing concrete damage, and assessing impact of corrosion.

**25-Story Building -** Investigated the corrosion of unbonded post-tensioning tendons in the two-way floor slabs and the seismic vulnerability of the as-constructed moment-resisting frames.