PERSONNEL QUALIFICATIONS

Prateek P. Shah | Associate III

EDUCATION

- Purdue University
  - Bachelor of Science, Civil Engineering, 2016
  - Master of Science, Civil Engineering, 2017
  - Doctor of Philosophy, Civil Engineering, 2021

PRACTICE AREAS

- Seismic
- Structural Analysis
- Concrete Structures
- Litigation Consulting
- Failure/Damage Investigations
- Instrumentation/Monitoring/ Load Testing

PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- Earthquake Engineering Research Institute

CONTACT

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EXPERIENCE

Prateek Shah is engaged in projects involving assessment, evaluation, and repair of new and existing structures. Dr. Shah specializes in seismic assessment, repair and retrofit of structures, nonlinear analysis of structures, damage investigation, and large-scale structural testing.

Prior to joining WJE, Dr. Shah worked at Purdue University's Bowen Lab for Large-Scale Civil Engineering Research, where his primary research focused on estimating seismic drift demands, post-earthquake reconnaissance, and repair and rehabilitation of reinforced concrete structures. He has also conducted instrumentation and structural testing of several large-scale structural elements subjected to static and dynamic loads.

REPRESENTATIVE PROJECTS

Seismic

- Historic Structure - Alcatraz Island, CA: Seismic repair and retrofit of historic unreinforced concrete building
- Residential Building - Los Angeles, CA: Conceptual retrofit design of nonductile, lift slab, reinforced concrete building
- Commercial Office - San Francisco, CA: Weld inspection of steel moment frame building containing pre-Northridge earthquake details
- Universidad Sagrado Corazon - San Juan, PR: Seismic evaluation of reinforced concrete and masonry buildings using ASCE 41-17

Structural Analysis

- Pedestrian Bridge - Emeryville, CA: Nonlinear dynamic analysis of pedestrian bridge subjected to earthquake motions
- Wastewater Treatment Plant - Oakland, CA: Analysis of pneumatic membrane roof subjected to wind loads and varying internal pressures
- Library Building - Annapolis, MD: Analysis of foundation system of library building subjected to gravity and wind loads

Concrete Structures

- Barbours Cut Terminal Wharfs 4 and 5 - La Porte, TX: Structural analysis and design of reinforced concrete beams used to support STS cranes in a hurricane region
- Residential Building - Miami, FL: Design of retrofit for reinforced concrete slabs exhibiting shear-induced distress

Litigation Consulting

- High-Rise Building - Brooklyn, NY: Investigation of construction defects in reinforced concrete columns
- Aircraft Hangars - China Lake, CA: Investigation of cost overruns caused by deficient seismic design of steel hangars
- Medical Office Building - Las Vegas, CA: Investigation of deficiencies in post-tensioned concrete slab

Failure/Damage Investigations

- Garage Collapse - Jacksonville, FL: Investigation and stabilization of partially collapsed precast girders
- Office Building - San Francisco, CA: Investigation of fractured screws used to fasten cross-laminated timber members
- Residential Building - Redwood City, CA: Investigation of post-tensioned concrete podium slab subjected to construction fire
- Nepal Earthquake - Kathmandu: Damage assessment survey of earthquake-damaged reinforced concrete structures *

Instrumentation/Monitoring/Load Testing

- Vibration Monitoring - Bal Harbor, FL: Development of construction-era monitoring plan for high-rise buildings
- Puebla Earthquake - Mexico City, Mexico: Damage assessment and instrumentation of earthquake-damaged reinforced concrete structures *
- Seismic Response of Structures - West Lafayette, IN: Earthquake simulation tests to investigate seismic response of long-period structures *

** Work performed prior to joining WJE*