



EDUCATION

- University of Delaware
 - Bachelor of Civil Engineering, 2012
 - Master of Civil Engineering, Structural Engineering, 2013

PRACTICE AREAS

- Bridges
- Marine and Waterfront Structure Engineering
- Structural Analysis
- Repair and Rehabilitation

REGISTRATIONS

- Professional Engineer in MD

CONTACT

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EXPERIENCE

Since joining WJE, Patrick Marra has been involved in a number of projects, including special bridge inspections, bridge instrumentation monitoring, and detailed inspections. Prior to joining WJE, Mr. Marra worked as a structural engineer for a marine structures design firm in Baltimore, Maryland. His work covered the analysis and design of a wide variety of marine structures, including heavy industrial ports, bulkhead sheet pile wall systems, vessel collision protection structures, and fixed wave attenuators.

REPRESENTATIVE PROJECTS

Bridges

- Pedestrian Bridge - Chicago, IL: Instrumentation of hanger cable clamps with monitored bolts
- Indiana Department of Transportation Special Bridge Inspections - Indianapolis, IN: Inspection of several post-tensioned reinforced concrete box girder bridges
- Sherman Minton Bridge - New Albany, IN: In-depth and fracture critical inspection of complex bridge structure

Marine and Waterfront Structure Engineering

- Facilities Inspection and Condition Assessment Program - Houston, TX: Element level inspection of several wharf assets in the Port of Houston
- Albany Port District Commission Grain Wharf Reconstruction - Albany, NY: Modeling and design of a new marginal wharf structure*

- Agency-Wide Substructure Repairs - Baltimore, MD: Design and construction support for numerous substructure repairs throughout the Port of Baltimore*
- Dundalk Marine Terminal Berth 4 - Baltimore, MD: Construction support for the reconstruction of a marginal wharf structure in the Port of Baltimore*

Structural Analysis

- Dundalk Marine Terminal Flood Protection Study - Baltimore, MD: Flood protection alternates study for portions of a marine terminal subject to flooding*
- Robinson Terminals North and South - Alexandria, VA - Above-water inspection of pier structures and subsequent load rating*
- BG&E 230kV Harbor Crossing Vessel Collision Protection - Baltimore, MD: Evaluation of alternate structure concepts for vessel collision protection structures*

Repair and Rehabilitation

- O'Hare International Airport - Chicago, IL: Pedestrian canopy evaluation
- Port of Cleveland Bulkhead Condition Assessment - Cleveland, OH: Visual condition assessment of bulkheads and shorelines*
- Masonville Vessel Berth Fender Panel Damage Assessment - Baltimore, MD: Assessment of fender panel damage for newly installed cone fenders*

*Indicates with previous firms