Carlton Olson

SENIOR PRINCIPAL + GROUP DIRECTOR

focuses primarily on the evaluation and condition assessment of various reinforced concrete structures, which include conventionally reinforced and prestressed concrete structures including foundations, dams, stadiums, parking structures, building facades, bridges, industrial structures, liquid containing structures, cooling towers, and several historic structures. These evaluations often utilize specialized nondestructive testing techniques such as impulse radar, impulse response, impact-echo, optical fiberscope, and ultrasonic testing. At CTLGroup, Mr. Olson has supervised and performed numerous field and laboratory forensic investigations of materials performance issues. His contract reports include definitive findings regarding causes of damage and deterioration, materials testing, analysis and development of repair procedures, specifications and drawings.

Academic Credentials

M.S. in Cvil Engineering
University of Illinois, Urbana, 1981

B.S. in Civil Engineering
University of Illinois, Urbana, 1980

Professional Affiliations

American Concrete Institute

International Concrete Repair Institute

Contact Information

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Representative Project Experience

Structural Performance Evaluations

Petrochemical Facilities

- Served as site engineer/plaintiff's representative for litigation support involving corrosion-induced deterioration of reinforced concrete foundations supporting LNG process equipment on Das Island, Abu Dhabi, UAE.
- Conducted field evaluation and assisted with repair design of a coke drum support structure at the Motiva refinery located in Norco, LA.
- Led multiple project teams that completed evaluation and repair design of numerous reinforced concrete ring walls foundations supporting petrochemical tanks at BP terminals in Manhattan, IL and Dubuque, IA.

Building and Facility Structural Evaluation/Condition Assessment

- Conducted field and laboratory studies to evaluate durability of concrete slabs at nuclear weapon processing buildings 776/777 and 707 located at DOE Rocky Flats Environmental Site in Golden, CO.
- Evaluated condition and provide recommendations for a 43-acre precast channel slab roof at NASA's Michoud Assembly Building 103 in New Orleans, LA.
- Conducted and directed multiple evaluations on large reinforced concrete deep space antenna pedestals which exhibited ASR cracking distress and concrete consolidation issues at NASA/JPL Deep Space Antenna Stations located in Goldstone, California, Madrid, Spain and Canberra, Australia.
- Led project team that evaluated large mat foundation supporting the Merdeka PNB 118 story high rise in Kuala Lumpur, Malaysia.

Historic Structures

- Completed a condition assessment of a 130 year old roof comprised of cinder concrete cast on wrought iron corrugated deck at the Chicago Avenue Pumping Station in Chicago, IL.
- Conducted a condition assessment of reinforced concrete approach slabs for the Lincoln Memorial in Washington D.C
- Putnam and Carroll County, IN: Evaluation and assessment of three historic reinforced concrete arched bridges.

Nuclear Facilities

- Project co-lead for multiple re-licensing commitments at the Davis-Besse Nuclear Plant, Oak Harbor, OH; Project Manager for ongoing nondestructive evaluation of Shield Building since 2010.
- Served as Project Manager for nondestructive evaluation of Crystal River Unit 3

Nuclear Containment Building, Crystal River, FL.
- Led project team on field evaluation of Track Alley at Palisades nuclear plant located in Covert, MI.
- Nondestructive Radar Testing of Cooling Water Intake Structure, Indian Point Unit 3 Nuclear Plant Peekskill, NY
- Nondestructive Radar Testing in Containment Building, TVA Browns Ferry Unit 3, Athens, AL:.

Publications

Reinforced Concrete Antenna Pedestal Evaluation of concrete consolidation using nondestructive testing and statistical analysis by Benjamin P. Saldua, Ethan C. Dodge, Peter R. Kolf, and Carlton A. Olson Concrete International, APRIL 2018

Michols, K. A., Davis, A. G., and Olson, C. A., "Evaluating Historic Concrete Bridges," Concrete Repair Bulletin, July/August 2001.

Volz, J. S., Olson, C. A., Oesterle, R. G. and Gebler, S. H., "Are They Pour Lines or Cold Joints?," Concrete Construction, April 1997.

Gebler, S. and Olson, C., "Assessing Durability of Reinforced Concrete Structures," presented at American Institute of Architects Reengineering II: The Internal Workshop Conference, Washington, DC, March 1997.

Corley, W. G., Vincent, J. F., Lim, M. K., and Olson, C. A., "Nondestructive Evaluation and Repair of an Understrength Building," Seminario Internacional Evaluacion de Estructuras de Concreto, Mexico, May 30 and 31, 1991.

O'Connor, J. P. and Olson, C. A., "Deterioration in a Precast Prestressed Concrete Parking Garage," Concrete International, November 1990, pp. 52-54.

Lim, M. K. and Olson, C. A., "Use of Non-Destructive Impulse Radar in Evaluating Civil Engineering Structures," Proceedings, Nondestructive Evaluation of Civil Structures and Materials, University of Colorado, Boulder, October 1990, pp. 167-176.