David A. Waratuke, S.E.

SENIOR STRUCTURAL ENGINEER

David Waratuke, S.E. joined CTLGroup as a Senior Structural Engineer and has broad engineering experience on a national and global scale. With nearly 30 years' experience, Waratuke's work is diversified and spans forensic investigations, building renovation and repair, construction engineering support, high rise structures, convention centers, sports facilities, aviation facilities, residential structures, and unique projects including the glass observation boxes at Willis Tower. He is adept at developing creative solutions for clients and will help grow CTLGroup's structural practice.

Project Experience

Unique Projects

- ***Glass Observation Boxes, Sears Tower, 103rd Floor, Chicago, Illinois.*** Renovation of the public observation deck to include four cantilevered, retractable steel frames supporting hung structural glass walls and floors that extend outside the building envelope.

Forensics, Investigations and Peer Review

- ***Miller Park Construction Mediation, Milwaukee, Wisconsin.*** Analysis of the construction sequence and stability of a 600-ft long span retractable steel roof structure consisting of an asymmetrical cable tied arch/elastically braced upturned arch involved in a construction dispute.
- ***Miller Park, Steel Claim Mediation, Milwaukee, Wisconsin.*** Litigation support on a construction claim for the fabrication and erection of a 600-ft long retractable steel roof structure involved in a construction dispute.
- ***Gerald C. Ratner Athletic Facility, University of Chicago, Chicago, Illinois.*** Peer review for a multi-use athletic facility with two long span, cable stayed suspended roof structures.
- ***Notre Dame Stadium Expansion, University of Notre Dame, South Bend, Indiana.*** Litigation support for a structural repair claim of a precast concrete expansion to the existing football stadium.
- ***Uni-Dome, University of Northern Iowa, Cedar Falls, Iowa.*** Repair and litigation support for a structural repair claim of a steel tied arch and tension fabric sports facility renovated from a tension fabric dome.
- ***New Faith Baptist Church, Chicago, Illinois.*** Dynamic study and vibration attenuation recommendations for a cantilevered balcony system coupled to a long span roof of a new church facility.
- ***Matteson Community Center, Matteson, Illinois.*** Dynamic study and vibration attenuation recommendations for an elevated running track suspended from a long span roof of a new community center.
- ***The Grand Plaza, Chicago, Illinois.*** Peer review of the design of a pair of reinforced concrete residential towers, at 60 and 40-stories, on a nine-story shared podium totaling 1.7 million ft2.

Building Renovations

- ***Rush University Utility Plant, Chicago Illinois.*** Rennovation of an existing Rush University Hospital utility plant to support additional boilers, generators, air handling,and cliller service.
- ***Consumer Financial Protection Bureau, Washington DC.*** Bridging documents for a design build renovation of a seven story reinforced concrete waffle slab framed office building.
- ***Sears Tower Recladding Study, Chicago, Illinois.*** Feasibility study to retrofit the iconic 110-story tower with a more energy efficient exterior cladding system.
- ***Park Community Church, Chicago, Illinois.*** Renovation of existing 1920's era two and three-story concrete factory building constructed in three stages into a new four-story church facility.

Industry Experience

27 Years Experience

Credentials

University of Illinois, Urbana-Champaign, IL

M.S., Civil Engineering, Structural Primary, 1995

B.S., Civil Engineering, Structural Primary with Geotechnical, 1994

Licensure/Certification

Structural Engineer, IL
NCEES Records Program

Contact Information

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- ***Book Cadillac Hotel, Detroit, Michigan.*** Proposed renovation of a historic 29-story, steel-framed hotel built in 1924.
- ***Charles Square Center, Prague, Czech Republic.*** A new nine-story reinforced concrete office building over an existing Metro station.
- ***Bank Note Place, Chicago, Illinois.*** A $12 million renovation of an existing three and four-story reinforced concrete building to a seven story residential building.
- ***Lincoln Park Zoo, Chicago, Illinois.*** Design of a tensioned fabric structure to enclose a new carousel over an existing reinforced concrete education and administration building.
- ***Aurora YMCA, Aurora, Illinois.*** Renovation and structural modification of an existing five-story, 1950's era reinforced concrete building.
- ***North Park University New Wellness Center, 3225 West Foster Avenue, Chicago, Illinois.*** Construction of a new gymnasium and structural renovations to the existing Viking Hall and Gymnasium.
- ***Chicago Public Schools, Chicago Illinois.*** Low rise steel construction additions to the following schools: Biedler Elementary School, Lyon Elementary School, Portage Park Elementary School, Ferguson Elementary School, Armstrong Elementary School, and Ogelsby Elementary School.

High Rise Structures

- ***Project 2000, Chicago, Illinois.*** A proposed 120-story, 3.5 million ft² mixed-use composite tower comprised of office, hotel, residential, and parking facilities.
- ***Shanghai Marriott, Shanghai, China.*** Schematic design and design development of a new 40 story hotel and six story podium structure with several new ballrooms and supporting facilities.
- ***350 S. Fifth, Pittsburgh, Pennsylvania.*** A proposed 34-story steel and concrete composite office tower with underground parking.
- ***One Museum Park East, Chicago, Illinois.*** A 65-story, reinforced concrete residential tower with a five-story podium and two stories of below ground parking.
- ***One Museum Park West, Chicago, Illinois.*** A 56-story, reinforced concrete residential tower with a five-story podium and five stories of below ground parking built using a top down secant wall system.
- ***600 North Lakeshore Drive, Chicago, Illinois.*** Two reinforced concrete residential towers at 49 and 43-stories on a 10-story shared podium.
- ***UBS Tower, Chicago, Illinois.*** A 52-story, 1.7-million ft², $350 million composite office tower on two stories of below ground parking.
- ***191 N. Wacker Drive, Chicago, Illinois.*** A 42-story, 900,000 ft² composite office tower including seven levels of above ground parking and framing sloped to accommodate an easement for the reconstructed Wacker Drive.
- ***Downtown Jebel Ali – Zone 4, Jebel Ali, United Arab Emirates.*** A proposed 38-story, 168 meter tall mixed-use composite structure consisting of four vertical towers bridged horizontally into a cube, four diagonal towers at the faces, and a central four-story podium underneath a translucent photovoltaic canopy that caps the cube.
- ***Dearborn Center, Chicago, Illinois.*** A 35-story, 1.4 million ft² structural steel office tower with retail shops and parking at the base level that reuses an existing three-story deep basement and foundation system.
- ***Daily News Plaza, Chicago, Illinois.*** Proposed staged redevelopment of the existing Daily News building involving construction of a 40-story structural steel tower in the current plaza, demolition of the existing building, and then construction of a second 28-story structural steel tower and winter garden in its place over the existing Amtrak and Metra railroad tracks.
- ***215 N. Michigan Avenue, Chicago, Illinois.*** A proposed 800,000 ft² development composed of 19-floors of data communications space, a plaza concourse, various building services support space, and a Commonwealth Edison substation.
- ***The Grand Plaza, Chicago, Illinois.*** Two reinforced concrete residential towers at 60 and 40-stories on a nine-story shared podium totaling 1.7 million ft2.

- ***55 E. Erie Street, Chicago, Illinois.*** A 60-story, 744,000 ft² reinforced concrete residential tower with an 11-story podium. The tower contains retail, parking, residences, and activity floor with several three-story town homes sitting atop the podium.
- ***500 W. Erie Street, Chicago, Illinois.*** A proposed 280-foot residential development consisting of a 25-story steel framed tower and a five-story low-rise parking structure.
- ***150 North Riverside, Chicago, Illinois.*** Proposed two tower residential structure at 700 ft and 540 ft on a shared podium totaling more than 1.4 million ft² that includes town homes, retail, and parking to be built over existing Amtrak and Metra railroad tracks.

Convention and Civic Centers

- ***McCormick Hotel, Chicago, Illinois.*** Bridging documents for a design build addition to the McCormick convention complex consisting of a new 54 story hotel and six story podium structure with several new ballrooms and supporting facilities including a 150 ft long span floor subject to rhythmic excitation.
- ***Epic Deep Space, Verona, Wisconsin.*** A new $350 million plus, 11,000 seat auditorium and meeting facility with provisions for an additional 4000 seat balcony, a 300 ft long span steel roof, built into the side of a hill, and supporting a park.
- ***McCormick Place West Hall, Chicago, Illinois.*** A new 2.3 million ft², $800 million long span steel framed exhibition hall, ballroom, and meeting facility.
- ***Bartlett Community Center, Bartlett, Illinois.*** Design of a new two-story, 135,835 ft² recreational facility and remodeling of the existing facilities.

Sports Facilities

- ***Sun Life Stadium Renovations, Miami, Florida.*** Proposed $400 million in renovations to the existing stadium to include additional seating and a new cable supported long-span structural steel roof canopy.
- ***Comiskey Park Renovations, Chicago, Illinois.*** Renovations to the existing precast concrete baseball park including the removal of the north ramp, an additional left field grand entrance, new premium seats behind home plate, and modification of the upper deck to accommodate a new structural steel canopy.
- ***US Cellular Field, 35th St Redevelopment, Chicago, IL.*** Multiphase renovation of an existing multistory precast concrete pedestrian ramp, escalator tower, and multi-tiered bridge over 35th street to include retail, dining, and a new grand entry stair.

Aviation Facilities

- ***Hangar Facilities, Jeddah, Saudi Arabia.*** Bid support for design-build tender of a hangar and heavy maintenance complex that included an alternate for six 190 meter span multi plane hangar bays for Saudi Arabian Airlines at King Abdulaziz International Airport.
- ***Engine Repair Facility, Jeddah, Saudi Arabia.*** A new steel framed engine repair facility and test cell for Saudi Arabian Airlines at King Abdulaziz International Airport.
- ***Hangar and Cargo Facilities, Muscat, Oman.*** Tender design for new hangar, ground maintenance, and cargo facilities at Muscat International Airport.
- ***Hangar and Cargo Facilities, Salalah, Oman.*** Tender design for new hangar, ground maintenance, and cargo facilities at Salalah Airport.
- ***United Cargo Relocation, Chicago, Illinois.*** Construction of a new steel framed cargo handling facility for United Airlines at O'Hare International Airport.
- ***CP-69 Perimeter Security Enhancements, Doha, Qatar.*** Security enhancements at the New Doha International Airport including perimeter fence, checkpoints, and supporting electrical substation facilities.
- ***Backup Training and Approach Center, Doha, Qatar.*** A new reinforced concrete training and redundant air traffic control facility at New Doha International Airport.

Communication Structures

- ***Cellular One.*** Design of mat and single caisson foundations to resist gravity and lateral loads for numerous 100 to 150-foot tall telecommunications towers located throughout the Chicago area.

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Industrial Facilities

- ***John Deere, Sao Paulo, Brazil.*** Industrial manufacturing complex including a new factory, offices, process, and support facilities near Sao Paulo, Brazil.
- ***Deere/Hitachi, Sao Paulo, Brazil.*** Industrial manufacturing complex including a new factory, offices, process, and support facilities near Sao Paulo, Brazil.
- ***American Metal Fibers, Inc., Aurora, Illinois.*** A 56,250 ft² warehouse and office facility.
- ***O'Hare Express, Building J, Chicago, Illinois.*** A 160,000 ft² warehouse and office facility.

Residential Structures

- ***Avalon of Mont Clare, Chicago Illinois.*** A proposed seven-story masonry, precast concrete, and steel framed senior living facility.
- ***St. Joseph Village, Chicago, Illinois.*** A sprawling three-story masonry, precast, and steel framed senior care and living facility.
- ***Southwest Crossing, Naperville, Illinois.*** A four-story, 600-unit wood framed apartment complex.
- ***Willow/Damen Town homes, Chicago, Illinois.*** A three-story, 67-unit town home complex.

Commercial Structures

- ***MidCity National Bank, Mount Prospect, Illinois.*** A 15,000 ft² steel framed banking facility.
- ***Sterling Federal Bank, Dixon, Illinois.*** A 6,000 ft² steel framed banking facility.
- ***Hollywood Casino Parking Garage, Aurora, Illinois.*** Foundation design for a nine-story precast concrete structure.

Educational Facilities

- ***UNO Soccer Academy, Chicago, Illinois.*** A new three-story, 63,000 ft² steel framed educational facility.
- ***Chicago Academy of Math Science and Language, Chicago, Illinois.*** A proposed new five-story educational facility.
- ***Chicago State University Library, Chicago, Illinois.*** A new four-story, 145,000 ft2 structural steel library facility.
- ***Kennedy King College, Chicago, Illinois.*** A redevelopment of the existing campus consisting of five buildings totaling approximately 500,000 ft².

Chicago Municipal Building Permit Review

- ***The Shornham, Lakeshore East, Chicago, Illinois.*** Structural review of a 50-story reinforced concrete residential tower.
- ***The Wyndham, Lakeshore East, Chicago, Illinois.*** Structural review of a 38-story reinforced concrete residential tower.
- ***Prentice Women's Hospital, Chicago, Illinois.*** Structural review of new 17-story steel framed healthcare facility.

Crane Installations

- ***150 N Riverside, Chicago, Illinois.*** Design of an interior climbing tower crane installation and core wall reengineering for 55-story steel and reinforced concrete composite office tower.
- ***151 N Franklin, Chicago, Illinois.*** Design of a tower crane support platform, lateral tie-back systems, and reengineering of steel floor framing and concrete core walls for a 35-story steel and reinforced concrete composite office tower.

All projects reflected on this resume were completed with previous employers.