



SITE RETAINING WALL IN PLACE AT DETROIT EVENTS CENTER, FUTURE HOME OF THE DETROIT RED WINGS

INFORMATION COURTESY OF G2 CONSULTING



Construction of a new arena for the Detroit Red Wings in the District Detroit development has begun near downtown Detroit, and G2 Consulting Group is a part of the multitude of design and construction professionals contributing to this marquee project. The new arena will hold over 20,000 spectators, cost \$627 million to construct and feature a unique, glass-roofed concourse connecting it to offices and shops surrounding it. The arena is a key part of the new, \$1.2 billion District Detroit, a 50-block development in the heart of the city, with sports and entertainment venues and mixed-use neighborhoods with new residential and retail outlets.

HOK is designing the new arena, which will house retail outlets, the arena's box office, and the offices of the Red Wings built outside the arena bowl. A translucent roof will be erected between the buildings and the arena itself, forming an indoor "street" that will serve as the arena's concourse and will remain open year-round, even when events are not occurring inside.

The ice surface in this eight-story arena is being built 40 feet below street level. Working with Hardman Construction, subcontractor to lead contractor Barton Malow-Hunt-White, G2 is responsible for design of the earth retention systems for this massive excavation, the deepest excavation in Detroit since construction of Ford Field. Blaze Contracting, Inc., Detroit was the excavation contractor. Because construction is occurring in an urban environment, protection of underground infrastructure is of utmost importance. The site is surrounded by critical utilities, including (at the onset) a 14-story hotel.

All eyes are focused on meeting the arena project deadline: puck drop for the 2017 hockey season. After receiving official notice to proceed in late March 2015, G2 literally worked day and night to complete their initial design submittal one week later – even as other design details were continuing to be finalized.



▲ TOP

The ice surface in this eight-story arena is being built 40 feet below street level. G2 designed several earth retention systems to facilitate the required excavation which extends to as much as 48 feet deep. Blaze Contracting performed the excavation work.

Photo Courtesy of Jeff Loeser, Hardman Construction

▲ MIDDLE

Following extensive analysis of geotechnical data, G2 proposed conventional earth retention systems to maintain bottom stability of this 500 foot by 600 foot area – a creative solution in this case that is far less expensive and accelerates the schedule.

Photo Courtesy of Olympia Development of Michigan

▲ BOTTOM

Working with Hardman Construction, subcontractor to lead contractor Barton Malow-Hunt-White, G2 Consulting Group is responsible for design of the project's earth retention systems.

Photo Courtesy of Olympia Development of Michigan

Following extensive analysis of geotechnical data, G2 proposed conventional earth retention systems to maintain bottom stability of this 500 foot by 600 foot area – a creative solution in this case that is far less expensive and accelerates the schedule. In addition, G2's design coordinated closely with other construction trades that required access to the site to maintain flow of heavy traffic needed for the excavation, foundation, and concrete work.

G2 designed several earth retention systems to facilitate the required excavation which extends to as much as 48 feet deep. One stretch of the earth retention system supported excavation near and then demolition of the adjacent Park Avenue Hotel. G2 is very proud to be a part of the professional design and construction team for this iconic Detroit project. The firm's staff is committed to doing whatever it takes to help construction go smoothly and efficiently.

DESIGN TEAM

- Architect of Record: HOK, Kansas City, Missouri
- Associate Architect: Hamilton Anderson Associates
- Associate Architect: SmithgroupJJR
- Civil Engineering: Giffels Webster
- Structural Engineering: Magnusson Klemencic Associates, Desai/Nasr, Inc.
- **Owner/Developer:** Detroit Downtown Development Authority
- **General Contractor/Construction Manager:** G2 is working with Hardman Construction, subcontractor to lead contractor Barton Malow-Hunt-White.
- **Project Size:** 819,000-square-foot (60,000 m2) sports and entertainment district in and around downtown Detroit that will include mixed-use neighborhoods with new residential and retail outlets, between Midtown and downtown, near Ford Field and Comerica Park.
- **Project Cost:** \$627 million
- **Scheduled Completion Date:** September 2017



Detroit Events Center

A Hockey Puck Wasn't The First Thing To Drop...



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it was 13 stories of imploded Park Avenue Hotel – and G2's retaining wall held.

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After submitting initial designs for earth retention systems for this massive, 40-foot deep excavation just one week after receiving official notice to proceed, G2 then modeled the impact of imploding an adjacent hotel using earthquake engineering. Results showed that the system would not fail, allowing rapid demolition of the hotel by implosion and maintaining an expedited schedule.

LEARN MORE about this project @ g2consultinggroup.com/detroit-events-center-future-home-of-the-detroit-red-wings/



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