



HUDSON'S SITE

DETROIT, MICHIGAN, USA

For decades, the iconic J.L. Hudson's flagship store occupied the entire 1200 block of Woodward Avenue and stood as the tallest department store/retail building in the world. The building no longer stands but construction is now underway on redeveloping the site. The new development will also set a record. At 912 feet, it will be the tallest building in Michigan's history.

The two below grade levels will be constructed mostly for parking inside the existing walls of the former Hudson's Store and Premier Garage. Retail, commercial, cultural and office space will occupy the remaining floors up to a height of 14-stories for the Block structure. A 62-story high-rise hotel/residential tower housing up to 500 units will stand above the street at the south end of the site for the structure.

The boring logs for the site showed that ground conditions consisted of approximately 120 feet of lean clay underlain by 8 feet of hardpan and a limestone bedrock.

Foundations will consist of caissons drilled into the hardpan and limestone bedrock so the aim of the O-Cell test was to provide as much information as possible for these layers.

The O-Cell test was performed on the test caisson in November 2018. The test used a reduced diameter bottom plate on the base of the O-Cell assembly. By doing so, engineers were able to apply the load over a smaller area allowing the test to prove much higher unit end bearing values. The engineer was then able to use these values in their design reducing the foundation construction costs by an estimated \$500,000.

PROJECT INFORMATION

- Owner: Bedrock Detroit
- Architect: SHoP
- Engineer: SME
- Drilling Contractor: Rohrscheib Sons Caissons, Inc.
- Project Cost: \$909 million
- Completion Date: Summer 2022

SERVICES PROVIDED

- Single Level O-Cell load test
- Load test program design