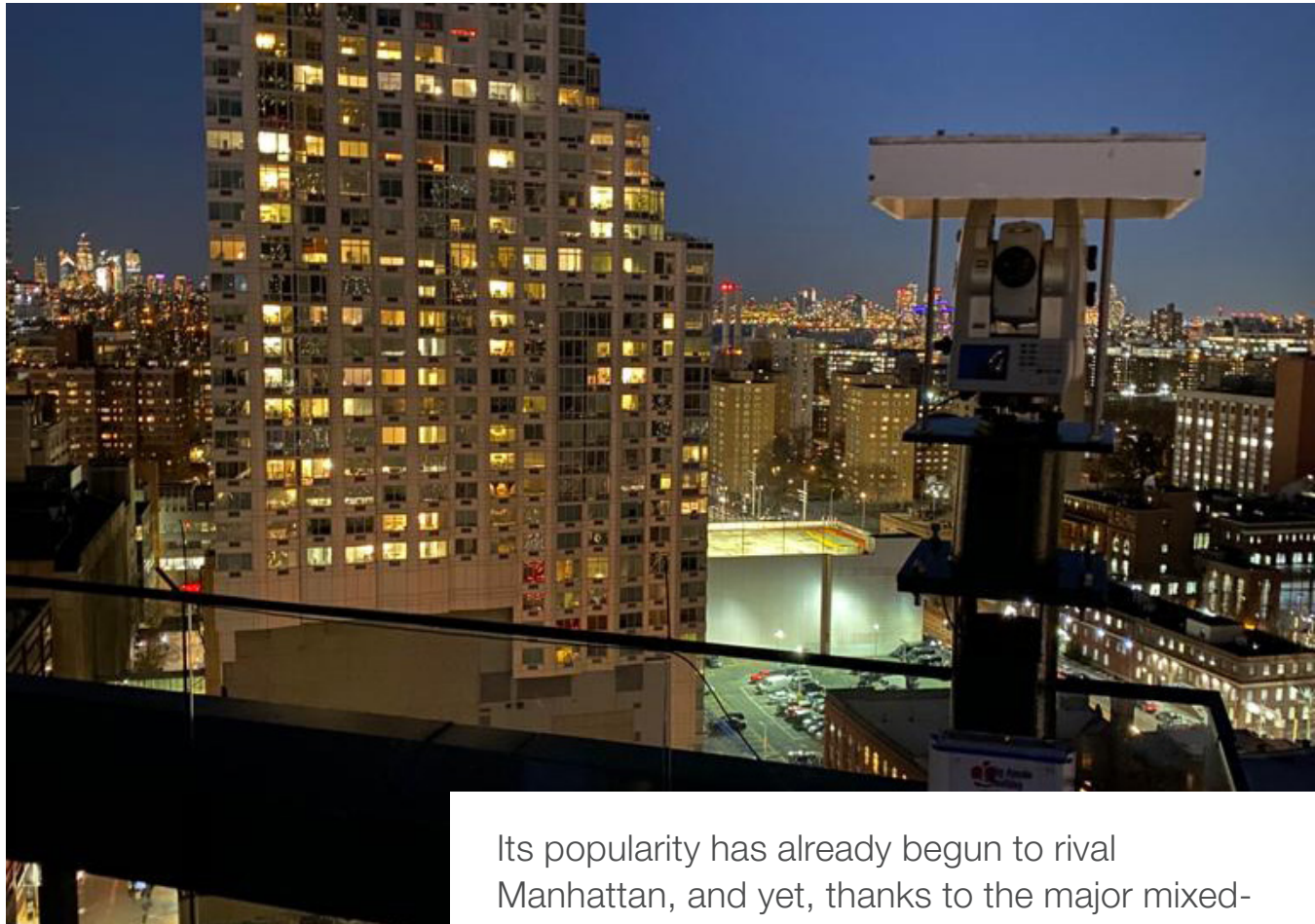




Taking Brooklyn to New Heights

Major Developments Soars with Topcon monitoring technology



MONITORING

Company Rabsky Group
Dealer Specto Technology
System Integrator Big Apple Group

Project Scope

Major mixed-use development project the centerpiece of which an 81-story, 1,833,706 square foot (sf) mixed-use structure

Solutions Used

Topcon MS1AX2 Automated Motorized, Total Station (AMTS), Delta Link, and Delta Watch

Its popularity has already begun to rival Manhattan, and yet, thanks to the major mixed-use development project planned by The Rabsky Group, the borough of Brooklyn is going to reach heights rarely before imagined.

Located at 625 Fulton Street, the centerpiece of the historic development will be a spectacular 81-story, 1,833,706 square foot (sf) mixed-use structure whose vertical height is a breathtaking 941 feet. This will make it the tallest building on the renovated bustling Brooklyn skyline for some time to come.

The massive scale of the building's footprint allows for a host of community benefits, including a 640-seat public elementary school, 739,000 sf of commercial office space, 50,547 sf of commercial retail space, and 902 affordable dwelling units. The project even allows for 350 below-grade accessory parking spaces on two sub-cellar levels and a total of 0.25 acres of outdoor publicly accessible open space and a 2,410-sf enclosed publicly accessible area. Mammoth in scope, beautiful in form.

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Of course, creating a development of this magnitude requires all-encompassing, flawless, state-of-the-art monitoring. The following is a list of structures currently adjacent to the construction site — or that will be installed — which need to be optically monitored for movement:

1. 80 Dekalb Avenue — A mixed residential and commercial building built in 2011. It's an elevator apartment building with semi-fireproof stores. The building has 35-stories with 370 units, of which 365 are for residential use.
2. Rockwell Place Soldier Piles — Soldier piles along the eastern boundary line of 625 Fulton Street.
3. Fulton Street Secant Piles — Secant piles along the south western boundary line of 625 Fulton Street.
4. Hudson Avenue Soldier Piles — Soldier piles along the western boundary line of 625 Fulton Street.
5. Two NYC Sewer Manholes on Hudson Avenue — Manholes located on the sidewalk outside, along western boundary line of 625 Fulton Street.

The above-mentioned structures will be monitored with a Topcon MS1AX2 Automated Motorized Total Station (AMTS) located on the northeastern roof corner of 1 Flatbush Avenue/556 Fulton Street. The current unit setup is running completely on solar power. Baseline readings were taken on 12/10/2020 for points located on 80 Dekalb Avenue and used for the Manual Epoch data in the Delta Watch software. As piles are installed on site, points will be included in the Delta Link unit using the Manual Point and Learn method and/or the Reflector Prescan method and then processed in Delta Watch.

Continuous monitoring of structures using the MS1AX2 AMTS not only covers the minimum required readings needed at all phases of excavation and construction as specified in the SOE plans, but also addresses thermal changes daily and seasonally and allows for passive alarm notification if something starts to move unexpectedly.

Real Time data collection is presented via The Eagle.io platform supported by Google Earth Imaging and topographical information.

The critical foundation portion of the project where the monitoring will be occurring should continue through most of 2021, with a top-off completion date predicted somewhere in 2023.

