Construction of two massive buildings that will be home to new security screening checkpoints serving 48 airline gates has transitioned to a significant new phase. Several months of preparatory work to evaluate site conditions, refine design specifications and carefully remove physical obstacles laid the groundwork for production of foundations and columns to move forward.

The work site, sandwiched between Terminal B/C and an elevated Metrorail station platform, is a carefully choreographed ballet of people, equipment and supplies that makes most of its progress in early mornings while much of the traveling world sleeps.

The star attraction is the drilling rig attached to a heavy-duty mobile crane that moves into position, then is secured so its 24-inch diameter auger can penetrate the soil as much as 40 feet down. After the auger backs out, trucks pour up to six cubic yards of fresh concrete to fill the void. Lastly, crews plunge rebar into the mix to add strength to the underground column as the concrete cures. This pile-forming process will be repeated along the length of the future structure. The auger cast pile method was selected to make sturdy foundations for the new checkpoints, which will be framed above with more than 1,000 tons of steel and straddle eight lanes and two sidewalks used by arriving airline passengers.

Greg Michna oversees contractor activity for the New Security Checkpoints project. Watching the schedule closely, Michna’s mission is to keep the project on pace and leap unforeseen hurdles. “We’re going to look closely at how much activity we can perform without negatively impacting passengers using Terminal B/C,” which is just a few yards away from the heavy equipment, Michna says.

As if working in a narrow corridor isn’t complex enough, pile-making will eventually move closer to the terminal and beneath the ticketing roadway, where overhead clearance is limited. Specialized equipment and a different strategy will be employed to drill where the road limits activity to roughly 30 feet above the ground. So augers must be attached in segments as each hole deepens. This adds to the total estimated time to produce each pile.

Michna, who managed construction at Dulles International Airport during excavation of a subterranean mezzanine behind the airport’s main terminal a decade ago, recalls piles were added to support existing structures — but nothing on the scale of the building coming to Reagan National. Nearly 100 piles, topped by concrete caps and steel support columns, will each have the load-bearing strength to support about 120 tons.

Pile and column installation will span several months, but the heavy sitework will expand and contract nightly with the never-ending cycle of passenger flight schedules. For Michna, that means prioritizing the contractor’s work to hit the ground running after midnight and retreat from prime space by 9 a.m. “It may seem like a full shift,” Michna says, “but when you account for time to setup, making safe attachments and establishing a work rhythm, you really have to make the most of the time you have left before passengers start coming back in.”

After piles are completed, steel columns, beams and stringers will be lifted into place to form the backbone of the building. According to Michna, that’s when the project team begins realizing their work makes a difference. “Getting out of the ground is significant,” Michna says. “Because after that happens, you have fewer unforeseen conditions and your operations conform more closely to the work plan. It makes people feel good to be a part of something big.”

To learn more about the construction, visit FlyReagan.com/ProjectJourney.