Passengers looking out the window from Terminal C at Reagan National may notice a manmade twelve foot high grass-covered hill next to the airfield. The hill is a critical component that will enable the operation of a new 14-gate concourse to replace Gate 35X, as part of “Project Journey.”

Project Journey will transform the passenger experience by providing passengers with greater connectivity, more shopping and dining choices, and a more pleasant post-security environment. The new concourse will have direct, enclosed access to planes via jetbridges, spacious holdrooms, new concessions, and an American Airlines Admirals Club lounge. It will eliminate the need for travelers to ride buses from the terminal to board regional jets parked outside.

The hill is known as “surcharge” in construction industry lingo and was built using a total of more than 4,000 truckloads of crushed aggregate and dirt material. Since the area where the new concourse will stand is on land reclaimed from the Potomac River, ground water saturates the subsoil several feet beneath the surface. The soil must be strengthened before layers of pavement supporting heavy parked aircraft can be constructed.

The surcharge does its job by applying pressure to expel ground water beneath layers of topsoil. It is closely monitored for stability, settlement, and water pressure. Four piezometers — or water meters — and 27 settlement plates, installed at various depths, provide measurements down to the millimeter. Weekly readings provide a progress report as the soil compacts.

Soil settlement began in April and is expected to stabilize in the fall. Grading and construction of a 36-inch thick apron pavement will follow. Aircraft parking will be relocated to the site, then a second surcharge supporting the new 14-gate concourse will be built.

Overseeing this phase of construction project is Shimelis Meskellie, a civil engineer with the Metropolitan Washington Airports Authority, whose prior experience includes managing construction of the I-495 and I-95 express lanes in Virginia. His primary challenge is keeping the airport running with little to no impact on existing flight operations, particularly for American Airlines, whose regional operation is closest to the construction site. “There is a balance,” he says, “as we proceed without affecting overall airport operations and deliver the project on-time and on-budget.”

While working on public-facing projects is fun for Meskellie, he says his top priority is safety, for both employees and the public, and environmental compliance.

He also relies heavily on his team and outside contractors. “Implementing a construction contract is a coordinated team effort,” Meskellie says. “Successful delivery of the contract signifies good coordination effort among the teams and working as a coordinator, I … take pride as team player and leader.”

“It is not a personal pride,” he adds. “It is a team effort.”