

Green Line Extension Visualization

Compiled 3D animations, live models, and stills were needed to demonstrate the extension of the MBTA Green Line, both from the rider's perspective and affected nearby properties, beginning in Cambridge and heading north to Medford.

PROJECT RESULTS

Kleinfelder's 3D imagery has made the Green Line Extension team aware of potential issues—including noise reduction and impacts to the adjacent land—to drastically decrease risk and ambiguity in the project. This has helped to accelerate project approval and construction.



ORGANIZATION AND MODEL MANAGEMENT

There are many challenges the 3D team faces in a project of this scope including condensing all station models and topography to a size that is manageable in 3D software. Additionally, it is imperative that the 3D team remains organized using proper model management to quickly navigate and retrieve key files, thus saving time. If the file sizes are too big, it can be very difficult to maneuver and navigate within a scene, and it also drastically increases render time.

ACCELERATING THE PROJECT APPROVAL PROCESS

The 3D team has developed a procedure for condensing station models to a suitable size. Typically, they start out between 4-8 million polygons. The team condenses each file down to a couple thousand polygons by using key optimization techniques where possible, or by manually re-building assets otherwise. The team also has developed a proper file naming, storage, and archiving process for our client, breaking the four miles of track into a south, mid, and north file structure to keep file sizes manageable. Kleinfelder's 3D imagery has made the Green Line Extension team aware of potential issues—including noise reduction and impacts to the adjacent land—to drastically decrease risk and ambiguity in the project. This has helped to accelerate project approval and construction.

Location:

Somerville, Medford, &
Cambridge, Massachusetts

Owner:

Massachusetts Bay
Transit Authority (MBTA)

