



## Bay Area Rapid Transit (BART)

# Improving efficiency and simplifying critical business processes

*For more than four decades, Bay Area Rapid Transit (BART) has been an efficient and reliable way for San Francisco's Bay Area residents to commute: what began as a futuristic dream in 1972 has grown to be a vital part of the regional culture and economy.*

### About Bay Area Rapid Transit (BART)

BART is a public transportation system serving four counties in the San Francisco Bay Area; their rapid transit system operates 46 stations across 112 miles of track, with an estimated average ridership in 2016 of 433,000 trips per weekday, and close to 129 million trips for the entire year. During peak commuting hours, more than 60,000 people ride through the Transbay Tube (an underwater rail tunnel connecting San Francisco and Oakland) in each direction.

Also noteworthy is that BART is powered substantially by renewable energy. BART trains are 100% electric, with 67% of that power coming from clean hydroelectric and solar sources. Each year, BART calculates it avoids an estimated 6.8 million pounds of CO<sub>2</sub> from entering the atmosphere, which is one reason why the Federal Transit Administration (FTA) has deemed BART the cleanest system of its kind in the United States.

As is the case with any complex rapid transit system, the track network is in continual need of maintenance and repair. In 2015, BART contracted Latitude Geographics to assist with the development of their Track Allocation System (TAS) that would allow BART employees to create, schedule, visualize, and publish information associated with disruptive events, such as track maintenance and construction.

### The Challenge

BART was looking to replace their current paper-based system, which they considered inefficient and labor intensive. Each time a section of track was to undergo a disruptive event, Track Allocation staff had to fill out and submit a detailed paper form that could take more than 30 minutes to complete. The manual nature of the process also made it prone to transcription errors.

“ Any time BART can improve efficiency and simplify business processes, it is a worthwhile investment. ”



Clayton Statham, TAS GIS Architect - BART

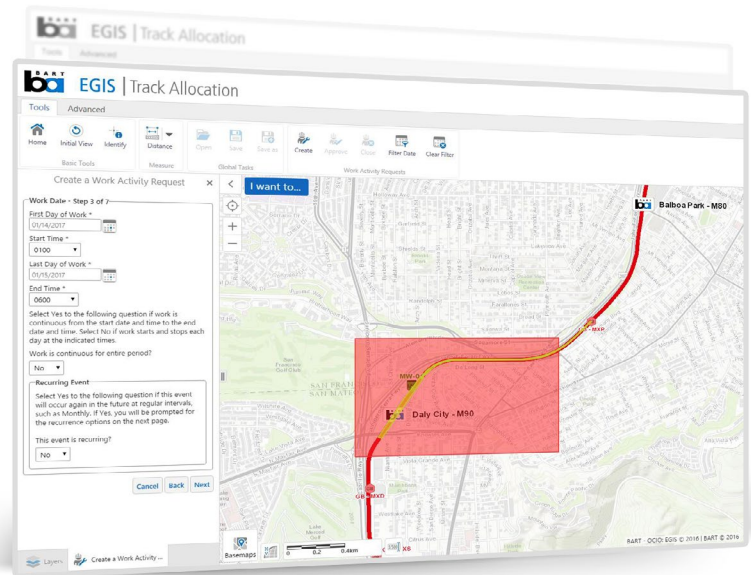
## The Solution

BART's new TAS was developed as a Geocortex Viewer for HTML5 application, and leverages both Geocortex Workflow and Geocortex Reporting technology. The application allows end-users to draw a box that selects the exact area and assets where work activity will occur, then auto-populates a System Access/Track Allocation Work Request Form. This improves accuracy by eliminating the possibility of transcription errors from paper to digital. Each request specifies the location, date/time, and the type of work that will be performed. TAS leverages over 40 spatial data layers (current aerial imagery, speed restriction zones, third rail segments, track features, and more) that aid in identifying safety hazards or other areas of concern.

## The Results

TAS was launched in March 2016, and in less than nine months the application had a user base of 160 employees and recorded more than 7,000 track allocation requests. According to BART, they have been able to resolve many of the inefficiencies and pain points that were persistent in the previous process: not only does the new application significantly reduce the time to submit a request, it also enhances worker safety.

Ted Burgwyn, Track Allocation Program Manager at BART, notes: “The labor reduction has been tremendous. Prior to the new TAS, our weekly track allocation review meetings would consistently last over four hours. Since the successful TAS implementation, these meetings have been reduced to less than two hours. Dozens of high-level managers must attend these meetings, and the time savings quickly add up.”



BART's Track Allocation System

Burgwyn adds, “On the user side, our regular track allocation requesters find that the time it takes to submit a request can be as little as five minutes.”

“Managing a large, complex infrastructure poses significant logistical challenges”, Clayton explains, “so any time BART can improve efficiency and simplify business processes, it is a worthwhile investment. After the success we’ve experienced with TAS, we’re very excited to further integrate Esri and Geocortex technology into our day-to-day operations.”