5.4.1 Roadway Asset Inventory along the Atlantic City Expressway

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The South Jersey Transportation Authority (SJTA) requested geospatial services to extract images of highway features, including signs, ditches, sidewalks, fences, shoulders, and other structures and devices, along the 44-mile Atlantic City Expressway mainline and ramps, to assess their physical condition and document these assets and attributes within a Geographical Information System (GIS) database.

A mobile data collection methodology was used based on a four-camera, stereo, digital image-based inventorying system to collect ground based imagery along the Atlantic City Expressway. These images were then used to extract feature and attribute data of visible asset features. Linear referencing was applied to the features to identify their geographical location by milepost, and once validation was complete the information was loaded into a geodatabase. The data extraction was performed from the images using in-office computer software therefore increasing productivity and eliminating safety concern related to typical roadway surveys.

Inventorying these roadway features is the first step towards developing a comprehensive asset management system. This feature database will allow SJTA to perform analysis to identify assets that may need to be repaired, replaced, upgraded, or added to meet Federal safety requirements. As this database is geospatially enabled, SJTA can perform spatial analysis to strategically target areas that require attention. This data can also be used to create maps that can be used for analysis and mission planning.