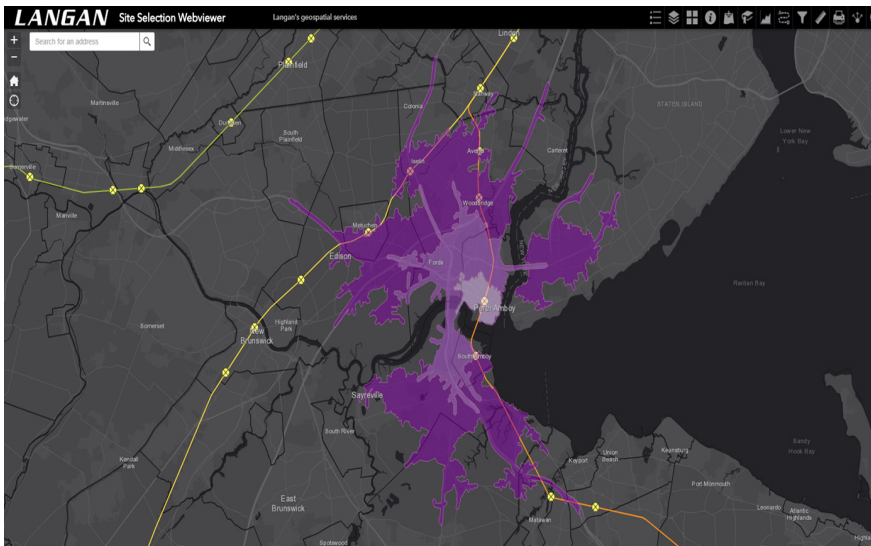# LANGAN

GIS for Traffic & Transportation

Langan provides a variety of services in the transportation industry to solve challenges throughout any phase of a project. We provide GIS analytical solutions to:

- Assess emergency response needs
- Understand parking utilization
- Model traffic and vehicle trips
- Plan public transit

- Maintain and operate roads
- Design new transportation infrastructrue
- Manage events and emergencies accross your city, county, or state

To achieve this, we use the latest ArcGIS software technology from Esri as well as various third-party and open-source software packages. In addition, Langan is a WAZE global event partner, allowing us to integrate our systems with real-time traffic feeds where applicable.

Solutions are delivered to clients through web-based applications that include interactive 2D and 3D mapping, dashboards to understand key performance metrics, and the ability to re-run some analysis on the fly as conditions change in design or real-time.

Examples include travel time assessment, service area calculation, vehicle routing with directions, etc. This includes real-time vehicle tracking with "breadcrumb" paths using third-party applications such as Verizon's network fleet and IoT sensors that interoperate with GIS. In addition, these interfaces provide the ability to query data to prepare reports on specific areas of interest to help document and drive decision-making.
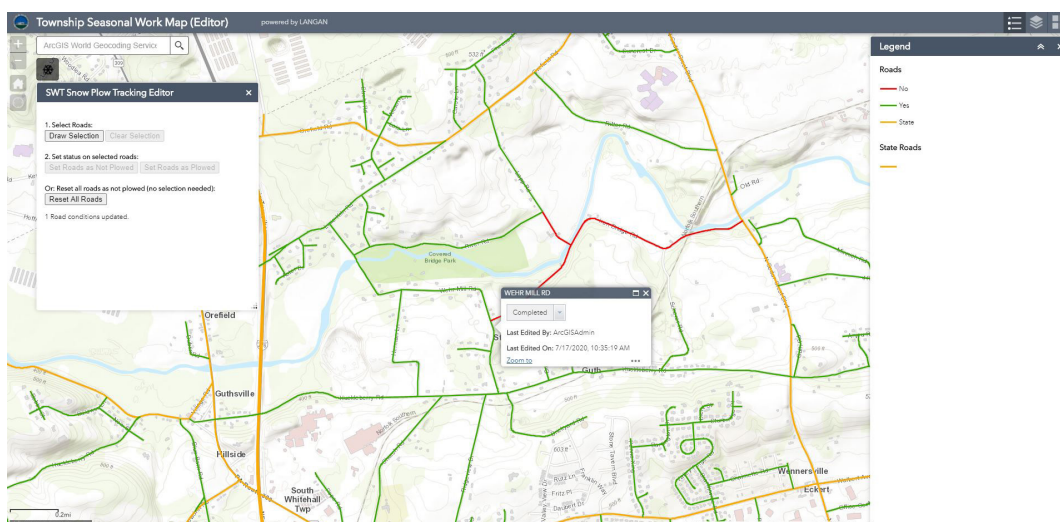
GIS for Traffic & Transportation

In addition to analytics and applications, Langan collects field data to support projects. For example, traffic counts, road asset surveys, and pavement condition assessments can all contribute to delivered solutions. We leverage GIS-based field forms accessed via laptop, tablet, or mobile device to conduct these assessments. These applications allow the client or our field staff to collect data in real time and upload the data for display in a desktop or web environment through a web-services architecture enabled by enterprise-level databases.

Example applications where Langan has utilized GIS technology for our clients include:

- Transportation Routing and Travel Time Analysis
  (walk / drive time)
- Territory Analysis and Route Optimization
- Real-time web-based Vehicle Tracking and Activity Reporting Dashboards
  (i.e., actively plowing, etc.)
- 911 Response Times and Territories
- Vehicular Traffic and Parking Studies
- Modeling Travel Demand Forecasts
- Transit Improvement Plans
- Capital Improvement Planning
- Procedurally Generated Rights-of-Way

- Operation & Maintenance Tracking / Reporting
- Mobile LiDAR Scanning and Asset Inventory
- GeoAI Imagery Analysis and Condition Assessment for Transportation Assets
  (e.g., roadway surface and striping, signage, guardrails, signals, etc.)
- Conceptual Design
  (bikeways, greenways, streetscapes, etc.)
- Master Planning
  (2D and 3D analysis and visualization)
- Toll Road Traffic and Revenue Forecasts
- Event / Game Day routing

At Langan, we integrate GIS with transportation and traffic analysis to provide our clients with the best possible tools for collecting, accessing, and displaying information to make informed decisions about their projects.