

## TRANSPORTATION ENGINEERING SERVICES

*Delta has provided responsive, cost effective, and innovative solutions for transportation and infrastructure projects for public and private clients since 1976. Our portfolio of services includes the planning, design and analysis of bridges, culverts, highways, city streets, rural roads, sidewalks, parking lots, parking structures, greenways, streetscapes, and recreational trails.*

*In addition, we provide specialty bridge engineering services, traffic planning and analysis, transportation-related studies, disaster recovery engineering services, and a full suite of construction inspection and support services.*



### BRIDGE ENGINEERING & BRIDGE SPECIALTY SERVICES

Delta provides analysis, design, and inspection services for a wide range of new bridge construction and bridge rehabilitation projects ranging from Fiber Reinforced Polymer (FRP) bridge decks to multi-span concrete bridge structures. We have extensive experience with all bridge types including highly specialized services related to the rehabilitation of historic, metal truss, and concrete arch bridges.

### TRAFFIC ENGINEERING

Our traffic engineering services address safety and efficiency issues related to planned developments and existing facilities. Virtually all infrastructure improvement projects require thoughtful advance planning of traffic consequences in the early development stages as well as during the construction phase.



### HIGHWAY ENGINEERING

Our highway design services range from conducting simple corridor studies to full development of multi-million dollar highways and intersections. We use state-of-the-art design and visualization tools to develop design alternatives and collaborate closely with our clients to determine the best solutions.

### PEDESTRIAN & RECREATIONAL ENHANCEMENTS

We assist municipalities and non-profits with the planning and development of business district "makeovers," recreational trails, and park facilities. Our project management services consider the full range of agency and funding requirements and coordination, public participation and consensus building, alternatives analysis, and design execution.



### ACCELERATED BRIDGE CONSTRUCTION

Utilizing Accelerated Bridge Construction (ABC) technology helps to minimize impacts to the public. Delta has experience with utilizing Prefabricated Bridge Element Systems (PBES) when developing bridge alternatives for our clients.

### CONTRACTOR SUPPORT

Our service is designed to build trust. We support contractors by helping to mitigate potential delays, assist with the challenges of building bridges and highways, navigate regulatory restrictions, and recognize size limitations. Our objective is to team with contractors to deliver fast-track engineering solutions to construction site issues that may impact project schedule and budget.

### VISUALIZATION & RENDERINGS

Visualizations and renderings have become an important tool that has found its way into the transportation industry such as modeling bridges, highways, vehicles, pedestrians, and bicyclists on projects. Visualization improves public outreach and aids in the ability to fund, develop, and deliver timely, cost-effective, and safe transportation systems in synch with society's needs.

### PARKING GARAGE INSPECTION

We have qualified professional engineers that have experience and knowledge of parking structures, construction materials and design codes. We specialize in the evaluation of existing parking structures that have experienced deterioration during their service life.



## TRANSPORTATION ENGINEERING SERVICES

*Delta has built a solid reputation for listening to our clients and for delivering responsive service that exceeds expectations. Representative lists of transportation and infrastructure services that we provide are presented below. If you have additional requirements, please contact our leaders for further information.*

### BRIDGE ENGINEERING

- Bridge Rehabilitations & Replacements
- Historic Bridge Restoration
- Bridge Deck Evaluations and Repairs
- Trusses & Arches
- Bridge Preservation Programs
- Foundation Design
- Precast Bridge Components
- Temporary and Specialty Structures
- Structural & Safety Flag Mitigation
- Structural Integrity Evaluations
- In-Depth Inspections
- Substructure Evaluations and Repairs
- Bridge Erection & Demolition Plans
- Culvert Design

### BRIDGE SPECIALTY SERVICES

- Environmental & Geotech Coordination
- Concrete Deterioration Evaluation
- Hydraulic and Scour Analysis & Repair
- Bridge Load Ratings
- Seismic Design & Fatigue Analysis
- SHPO Coordination
- Bridge Type Studies
- Value Engineering
- Section 4(f) and 6(f) Evaluations

### TRAFFIC ENGINEERING

- Traffic Impact & Corridor Studies
- Traffic Signal Design & Optimization
- Maintenance & Protection of Traffic
- Intersection & Safety Improvements
- Traffic Signs & Event Traffic Plans

### HIGHWAY ENGINEERING

- Highway/Roadway Design
- Interchange Design
- Roundabout Design
- Pavement Rehab/Reconstruction
- Geometric Improvements
- Signage/Pavement Marking
- Feasibility Studies
- Design Visualization
- NYSDOT Design Reports
- Intersection Safety Improvements
- Parking Studies & Design
- Utility & Lighting Design
- Corridor Studies & Scoping Reports
- NPDES Permits
- Stormwater Pollution Prevention Plans

### PEDESTRIAN & RECREATIONAL ENHANCEMENTS

- Streetscape & Aesthetic Enhancements
- ADA-Compliant Pedestrian Amenities
- Sidewalk Design & Improvements
- Bicycle & Pedestrian Accommodations
- Pedestrian Bridges
- Trails, Greenways, & Riverwalks

### ACCELERATED BRIDGE CONSTRUCTION

- Precast Deck Panels
- Precast Abutment Systems
- Prefabricated Trusses
- Precast Bent Caps
- Precast Columns
- Precast Barriers

### CONTRACTOR SUPPORT

- Temporary Shoring/Formwork
- Temporary Vehicle and Pedestrian Bridges
- Jacking Operations
- Crane Picks/Lifts
- Temporary Foundations
- Permanent/Temporary Soldier Pile and Lagging
- Bridge Deck Overhang Brackets
- Cofferdams
- Excavation and Support Systems
- Traffic Control Plans

### VISUALIZATION & RENDERINGS

- Bridges
- Highway Facilities
- Pedestrian and Bicycle Facilities
- Trails and Parks

### PARKING GARAGE INSPECTION

Report Contents:

- Overall general physical condition of structure
- Extent and cause of deterioration
- Recommendations for available preventative maintenance
- Unsafe Conditions
- Conditions that should be Remediated Immediately to Prevent an Unsafe Condition/Structure
- Risks Associated with Failure to Address
- Time Frame for Future Assessments

## EXPERIENCED LEADERSHIP



### CHRISTOPHER J. MABY, CPES

Mr. Maby is the Director of Transportation/Civil Engineering Services in the Endwell office for Delta. Chris is a seasoned civil engineer with 37 years of wide-ranging experience in the areas of due diligence for developments, site planning and design, including grading and earthwork, roadway and pavement design, and ADA / PROWAG compliant pedestrian facilities.

Contact Chris  
607-231-6625  
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## OFFICE LOCATIONS

### Greater Binghamton Region

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### Syracuse Region

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### New York State Capital Region

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### National Capital Region

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