

# TRANSPORTATION CONTRACTOR FOCUSED



Borton  Lawson  
ENGINEERING | ARCHITECTURE

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From construction management to design-build project completion, the Borton-Lawson Transportation team provides contractors efficient and economical methods of traffic delivery.

## ALTERNATE DESIGN & VALUE ENGINEERING

Borton-Lawson has a proven track record of identifying more economical project design concepts. Our team works with contractors pre-bid and post-bid, even after the project is completed, to recognize cost effective solutions and deliver design modifications to the project owner for ultimate acceptance. Borton-Lawson has completed successful alternate design and value engineering projects in 9 of the 11 PennDOT districts, as well as with the Pennsylvania Turnpike Commission.

Alternate design and value engineering projects can include:

- ▶ Bridge Beams
- ▶ Bridge Substructures
- ▶ Bridge Foundations
- ▶ Retaining Walls
- ▶ CIP vs. Precast Culverts
- ▶ Traffic Control Sequencing

## DESIGN-BUILD

Borton-Lawson has over 10 years of experience working exclusively with contractors on PennDOT & Pennsylvania Turnpike Commission design-build projects, with multiple members of our staff holding the Design-Build Institute of America, Design-Build Professional (DBIA) Certification.

The expertise and efficiency of our design-build staff provides:

- ▶ Faster Project Delivery
- ▶ Cost Savings
- ▶ Better Quality
- ▶ Decreased Administrative Burden
- ▶ Reduced Owner Risk
- ▶ Fewer Litigation Claims



## PERMIT MODIFICATIONS

Sometimes a contractor's vision on how to complete a project in the most cost and time effective manner is different than the designer's intent. In this scenario, coordination with the appropriate agencies and permit modifications are typically required to realize the contractor's vision. Borton-Lawson has been chosen by numerous contractors to complete these permit modifications on their behalf.

We streamline the effort to ensure that all permit modifications are approved within the allotted timeframe to build the project.

Permit modifications can include:

- ▶ Revised causeway staging
- ▶ Revised causeway elevations
- ▶ Cofferdam modifications
- ▶ Drainage modifications
- ▶ Revised construction staging

## EXCAVATION SUPPORT SYSTEMS

Borton-Lawson has designed numerous temporary and permanent excavation support and protection systems for abutment and pier foundations, retaining wall foundations, and roadway embankments.

Borton-Lawson will work with contractors to provide the most cost effective temporary excavation support systems, including:

- ▶ Anchored Walls
- ▶ Cantilever Walls
- ▶ Mechanically Stabilized Earth Walls
- ▶ Cofferdams
- ▶ Prefabricated Modular Walls

## HAULING PERMITS & LOAD ANALYSIS

Borton-Lawson has been the critical point of ensuring project delivery for various moving and rigging clients and contractors who have required load rating analyses of structures to ensure successful delivery of their freight. Without the load rating analysis provided by Borton-Lawson proving the adequacy of the structure designs, some delivery routes would have been significantly lengthened to avoid crossing any structures, resulting in increased cost to our clients, and some deliveries would not have been feasible; resulting in lost revenue for our clients.

The Borton-Lawson hauling permit and load analysis process ensures:

- ▶ Successful Delivery Of Large Freight
- ▶ Shorter Delivery Routes
- ▶ Assessment Of The Adequacy Of Structure Designs
- ▶ Low Client Costs

## CONSTRUCTION ENGINEERING

Each project has its own set of anticipated, as well as unforeseen, construction support design services that are needed for successful completion. Borton-Lawson has provided these services for numerous contractors throughout the Commonwealth on a variety of PennDOT and PTC projects. From standard overhang bracket designs, to the non-standard construction anomalies that occur and require special analysis to ensure acceptable construction, Borton-Lawson has experienced staff that is capable of meeting any contractor's construction support needs.

Borton-Lawson has provided contractors with the following construction support engineering services:

- ▶ Bridge Demolition Plans
- ▶ Bridge Overhang Bracket Designs
- ▶ Underdeck Shielding
- ▶ Bridge Beam Erection Plans
- ▶ Temporary Bridge Beam Jacking Designs



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