



MAIN STREET BRIDGE REPLACEMENT & US 202 RECONSTRUCTION

Town of Peterborough, New Hampshire & New Hampshire Department of Transportation

Hoyle Tanner partnered with the Town of Peterborough and NHDOT on this federally-funded Local Public Agency (LPA) project from the Engineering Study through final design, bidding and construction phases, including the environmental permitting and NEPA processes. Replacement of the historic, but structurally deficient, Main Street Bridge over the Contoocook River in downtown Peterborough was the catalyst for this comprehensive and complex transportation project with a total construction cost of nearly \$15 million that also included realignment, widening, and reconstruction of approximately 850' of US Route 202 including both sidewalks; construction of a new stone-faced steel King-pile and sheeting retaining wall; in-situ stabilization of an historic boulder retaining wall; reconstruction of a portion of the Transcript Dam; lining of an historic granite canal; and extensive utility coordination and relocation work. As the prime consultant, Hoyle Tanner assembled and managed an extensive team of specialized subconsultants to complete the project. Close coordination with stakeholders, including the New Hampshire Division of Historical Resources and the Peterborough Heritage Commission, was required throughout the project development process.



SCALE
\$15 million

With a total construction value of nearly \$15 million, the Main Street Bridge / US Route 202 project is one of the largest projects to be completed under the NHDOT LPA program. New Hampshire based Beck & Bellucci was the prime contractor for this project which is an excellent example of the successful completion of a complicated and multi-faceted municipally-managed project utilizing a combination of funding sources.

SOCIAL VALUE
preservation of design

The investment in this project will pay dividends for future generations by maintaining the downtown character of Peterborough through preservation of design for major structural elements; most notably the bridge elevation photographs shown in the before and after pictures above. This is accomplished by providing reliable infrastructure assets with increased traffic volume and load capacity while encouraging safe pedestrian use.

UNIQUENESS
preservation meets innovation

The centerpiece of this project is replacement of the existing Main Street Bridge, a historically significant structure and excellent example of a widely used bridge type of the 1930s era - the concrete rigid-frame with arch effect. Maintaining the appearance of the existing bridge was one of the most important goals of the project, driving the 'Preservation of Design' approach used for the replacement structure. Modern design and construction techniques were adapted into the new bridge which was designed to emulate the existing structure by matching its geometry and overall appearance through the reuse of the existing stone facing on the new structure. Other innovations include the use of a king-pile retaining wall system on US Route 202 to reduce construction footprint, rehabilitation of the existing boulder wall with grout injection and micropiles, and sliplining of the existing stone masonry canal.

COMPLEXITY
multiple projects

The project grew in scale and complexity during each phase through stakeholder input and needs, expanding from the original focus on replacement of the Main Street Bridge and US Route 202 roadway and retaining wall improvements to encompass elements such as dam abutment reconstruction, canal lining, public and private utility relocations, coordination with the adjacent Peterborough Public Library Renovation project, and assessment and handling of contaminated groundwater and soils.

PROJECT DELIVERY
success through collaboration

Many stakeholders helped guide the project to successful completion including Town officials, downtown business merchants, abutters, NHDOT, NHDHR, NHDES, NOAA and FHWA. Beginning in 2009, Hoyle Tanner either facilitated or participated with a significant role in over 50 public and/or agency meetings to gain support for, and consensus on, this complex project. Utility planning and coordination was also critical for this project and included over a dozen utility coordination meetings. Extensive coordination with NHDOT also ensured that the Main Street Bridge was re-opened to traffic prior to the first traffic-impacting phase of the NHDOT's adjacent NH Route 101 bridge replacement project.

