

TIGER 9

EXECUTIVE SUMMARY



Submitted by:



Anna Hunt Marsh Bridge



Charles Dana Bridge

Hinsdale, NH - Brattleboro, VT - NH Route 119 Bridge Project

Project Website: <https://www.nh.gov/dot/projects/hinsdalebrattleboro12210/index.htm>

The Hinsdale, NH – Brattleboro, VT NH Route 119 Bridge Project replaces two bridges carrying NH Route 119 over the Connecticut River by constructing a new bridge approximately 1,000' downstream. The Anna Hunt Marsh Bridge and the Charles Dana Bridge connect the Towns of Hinsdale, New Hampshire and Brattleboro, Vermont by way of a small island located in the Connecticut River. The bridges were originally constructed in 1920. The Project proposes a single new bridge to bypass the current two bridges, leaving the historical structures to be maintained for use by pedestrians, bicyclists and for other modes of transportation.

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Project Description

The New Hampshire Department of Transportation (NHDOT) proposes to bypass the Anna Hunt Marsh Bridge (NHDOT Bridge No. 041/040, CT. River Br. No. 2) and the Charles Dana Bridge (NHDOT Bridge No. 042/044, CT River Br. No. 1) which carry the Connecticut River between the rural Towns of Hinsdale, New Hampshire and Brattleboro, Vermont. The Anna Hunt Marsh Bridge is jointly owned by the NHDOT (93%) and the Vermont Agency of Transportation (VTrans) (7%) and maintained by the NHDOT, while the Charles Dana Bridge is owned and maintained solely by the NHDOT. The proposed project will create a bypass for the Functionally-Obsolete bridges by way of a new, single, bridge located just downstream of the current location.

The existing structures were constructed in 1920. The Anna Marsh Bridge is a fracture-critical Parker Truss with a span length of 324 feet (') and is in fair condition. The bridge is posted for a minimum vertical clearance of 11'-4" which is below the minimum required vertical clearance of 16'-6". The Charles Dana Bridge is also in fair condition and has a total length of 297' consisting of a 200' span fracture-critical Parker Truss and two steel girder approach spans. The bridge is posted for a minimum vertical clearance of 11'-10", also below the minimum required vertical clearance noted above. Both bridges have a roadway width of 20'-4 inches (") (two 10'-2" travel lanes and no shoulders) and both bridge sidewalk configurations include 6' cantilevered sidewalks outside the upstream trusses.



Figure 1 - Anna Hunt Marsh Bridge - Photo Left; Charles Dana Bridge - Photo Right (Looking North / Upstream)

Annual Average Daily Traffic (AADT) over the bridge was 8,900 vehicles per day (vpd) (3,248,500 annually) and 11,100 vpd at the adjacent railroad crossing and intersection in Brattleboro in 2016, with 5.6% being trucks. NH Route 119 is an Urban Collector and is the southernmost Connecticut River crossing between New Hampshire and Vermont. According to the New Hampshire Employment Security, Economic and Labor Market Information Bureau's 2010 statistics, approximately 46% of working Hinsdale residents commute to Vermont to their jobs, or 932 out of 2,036 workers. Without this crossing, nearly half of the working population of this rural community would be required to take a 16.9-mile detour to and from work each day or seek other employment.

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The project includes bypassing the existing bridges with a new concrete deck and steel girder bridge downstream of the existing bridges on an improved roadway alignment. The new bridge will be a 1,782' long, 8-span, curved steel girder structure with a typical section of two 12' travel lanes, two 8' shoulders and one 6' sidewalk, for a rail-to-rail width of 46'.

A new bridge with an open structure will result in unlimited vertical clearance and eliminate the substandard existing vertical clearance and the potential for vehicular impact with the bridge. Improvements will also include raising the elevation of the bridge to eliminate a dangerous at-grade railroad crossing for vehicles with the New England Central Railroad (NECR) at the westerly end of the Anna Marsh Bridge in Brattleboro. Although pedestrians and bicyclists will still use the rehabilitated truss bridges, the new bridge will provide a substantial safety improvement for operators of vehicles, pedestrians, bicyclists and train operators.

The safe and dependable operation of this crossing is critical to providing connectivity for the regional transportation between these two states and providing access to employment in Vermont for residents of the rural area of Hinsdale and the region. TIGER funding will accelerate the construction of this important project.

Beneficial outcomes of the project will include but not be limited to:

- Improved reliability and safety of the crossing
- Improved multi-modal safety for vehicles, pedestrians, bicyclists, and trains
- Quicker emergency response times due to the elimination of vehicle delays caused by the at-grade railroad crossing
- Provide access to economic opportunities in the rural region for businesses and residents
- Address regional transportation needs, and ensure the continued economic vitality of these two communities and the region
- Facilitate the movement of goods to national and international export markets
- Provide / create jobs in the region for the entire duration of the construction activities
- Enhance the quality of life in these two communities and the wider region
- Ensure continued efficient access to nearby medical facilities in the area

NHDOT believes this application meets the criteria for the rural aspect of the TIGER Grant Program and further, that it represents the type of project envisioned. Receipt of TIGER Grant funds will also allow NHDOT to reduce future GARVEE debt payments and to focus, near-term, toward addressing the needs of other bridges which would not otherwise be possible without TIGER funding for this project.

Project Location

The project location extends from Hinsdale to Brattleboro over the Connecticut River via NH Route 119, by way of two bridges spanning either side of an island situated mid-way between the two shorelines. The western bridge, the Anna Hunt Marsh Bridge, is located on the Brattleboro side and intersects at a grade crossing of the NECR and Vermont Routes 5 and 142, known to

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locals as “Malfunction Junction”. The eastern side of the channel is home to the Charles Dana Bridge where NH Route 119 follows the river shoreline through the town of Hinsdale.

For the purposes of the TIGER Discretionary Grants program, the project location is considered rural, with Brattleboro being identified as an Urban Cluster. Brattleboro’s population, based on the 2010 Census is 12,046 and Hinsdale’s population is 4,046 also based on the 2010 Census.

The bridge is a critical facility for the movement of people and goods, locally, regionally, nationally, and internationally. NH Route 119 is the southernmost connection from the rural southwest region of New Hampshire to Interstate 91 connecting the region to Canada to the north, and New England’s larger ports and intermodal facilities to the south.

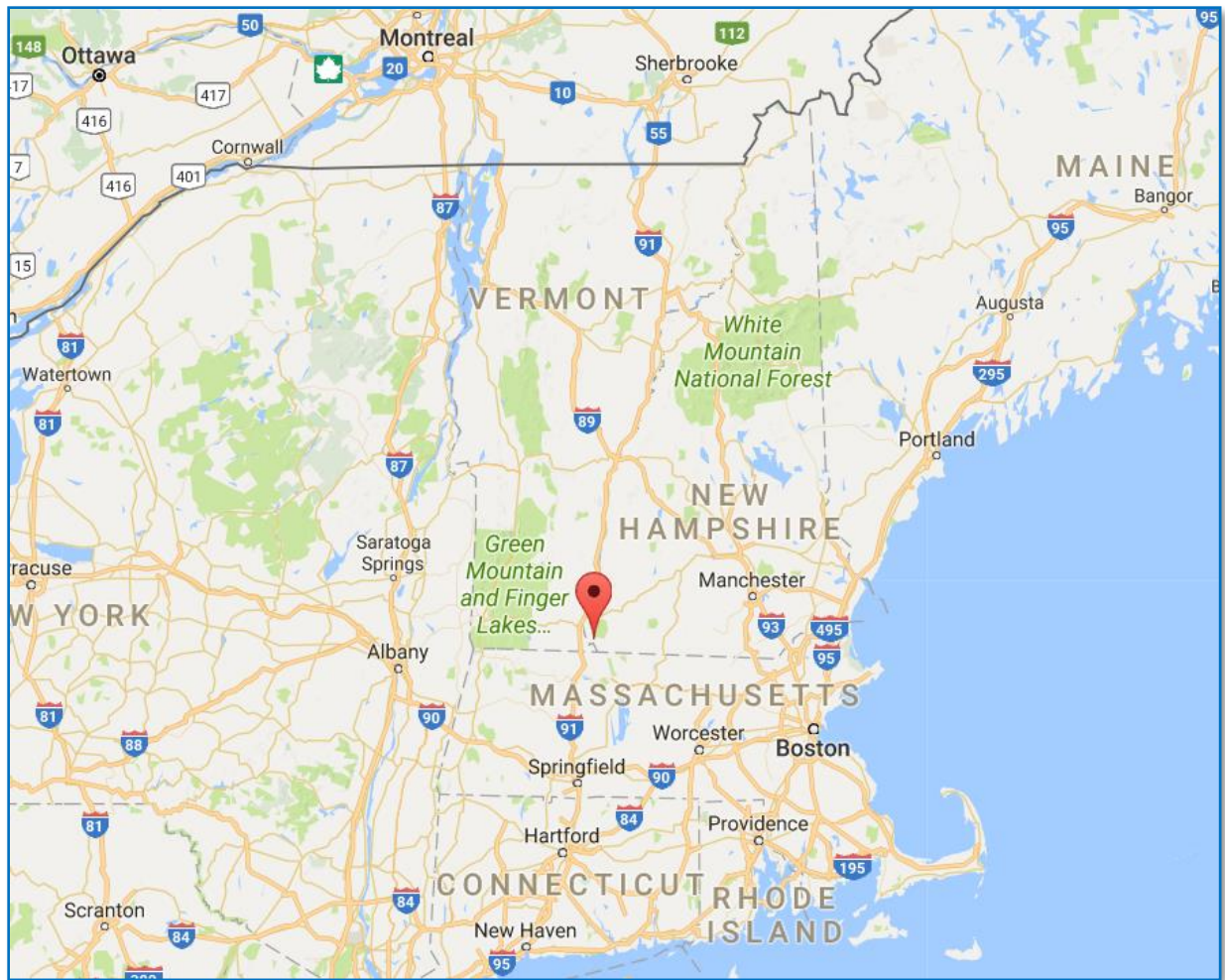


Figure 2 - Connections to Existing Transportation Infrastructure

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Project Costs

This project has a total cost of \$59.44 million, of which, \$20 million will come from TIGER funding and \$39.44 million will come from other New Hampshire and Vermont state and federal funding sources. TIGER investments represent approximately 34% of the total project's funding. The project cost breakouts are as follows:

Project Costs by State and Project Component

	PE	ROW	Construction	Total
New Hampshire	\$900,550	\$270,000	\$42,580,000	\$43,750,550
Vermont	\$184,450	\$8,080,000	\$7,420,000	\$15,684,450
Total \$\$	\$1,085,000	\$8,350,000	\$50,000,000	\$59,435,000
Total %	1.8%	14.1%	84.1%	100.0%

Construction Project Costs by State and Funding Source

	New Hampshire	Vermont	Total \$\$	Total %
TIGER Grant Funds	\$20,000,000	-----	\$20,000,000	40.0%
Federal Formula	-----	\$5,936,000	\$5,936,000	11.9%
State Funds (SB 367)	\$8,516,000	\$1,484,000	\$10,000,000	20.0%
State Funds (Toll Credits)	\$8,516,000	-----	\$8,516,000	17.0%
GARVEE Bonds	\$5,548,000	-----	\$5,548,000	11.1%
Total \$\$	\$42,580,000	\$7,420,000	\$50,000,000	100.0%
Total %	85.2%	14.8%	100.0%	