



Waterbury BF 0284(33)
Regional Concerns Meeting
US Route 2 – Bridge #44 over Little River

August 3, 2020

Introductions

Todd Sumner, P.E.

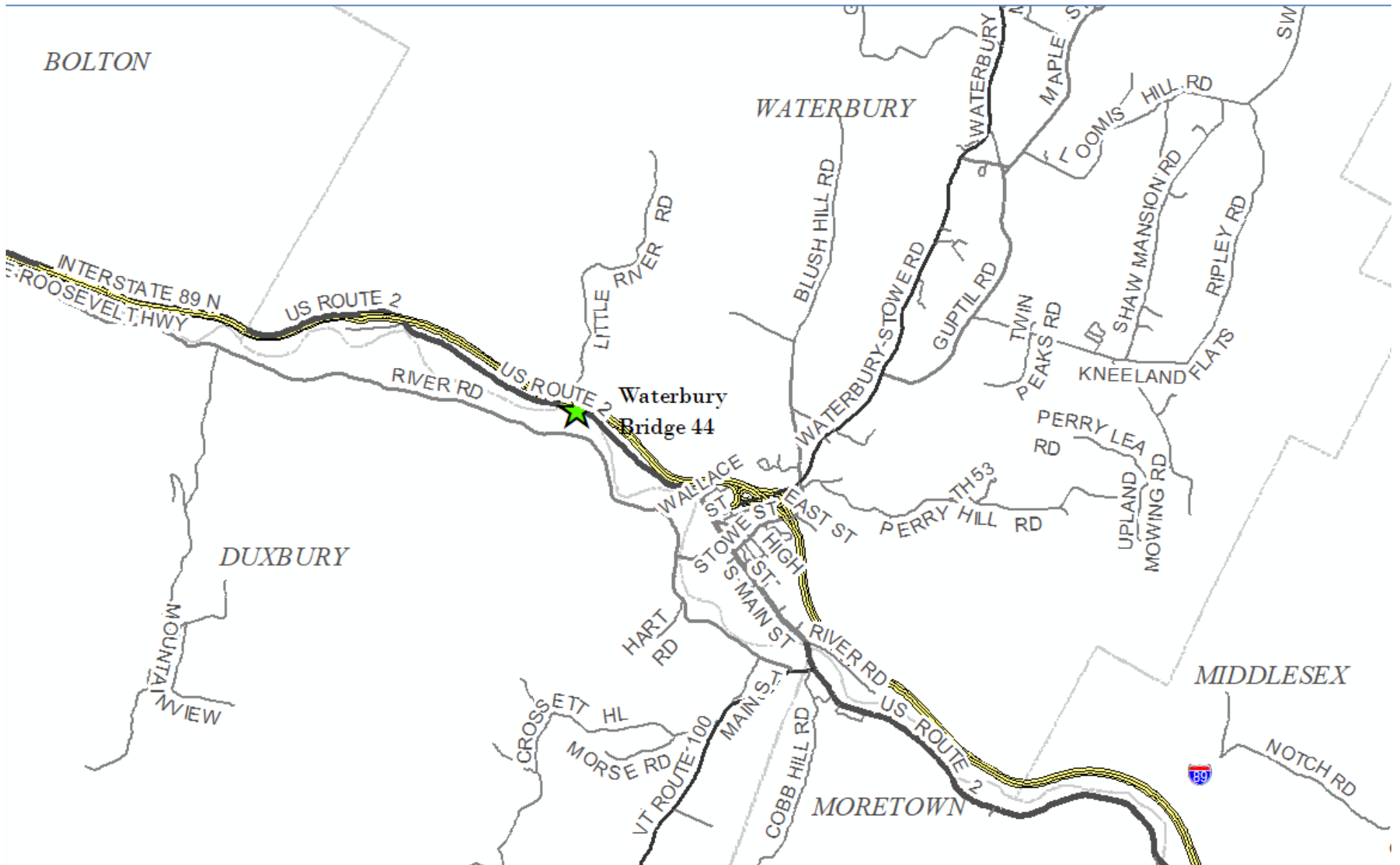
VTrans Consultant Project Manager

Laura Stone, P.E.

VTrans Scoping Engineer

Purpose of Meeting

- Provide an understanding of our approach to the project
- Provide an overview of project constraints
- Discuss our selected alternative
- Provide an opportunity to ask questions and voice concerns



Location Map

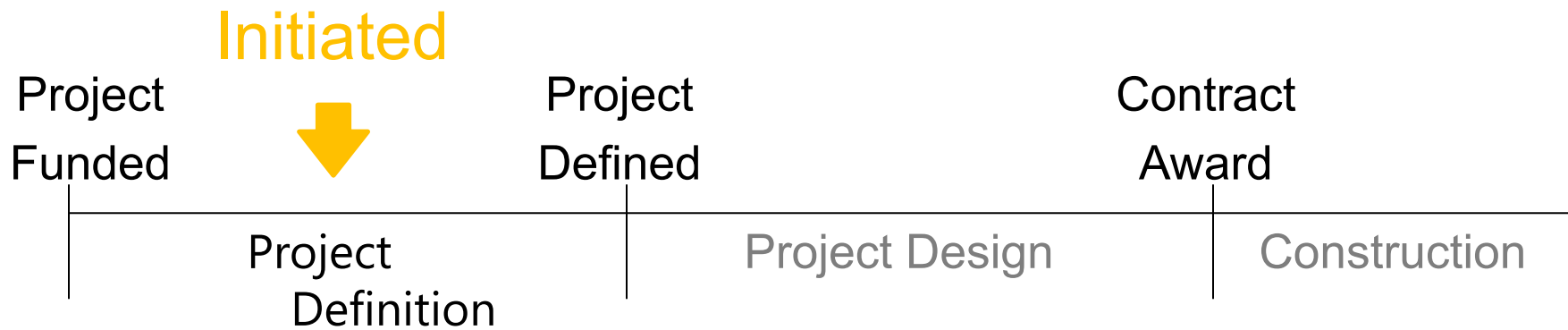


Bridge 44
Project Location

Meeting Overview

- VTrans Project Development Process
- Project Overview
 - Existing Conditions
 - Alternatives Considered
 - Selected Alternative
- Maintenance of Traffic
- Schedule
- Summary
- Questions

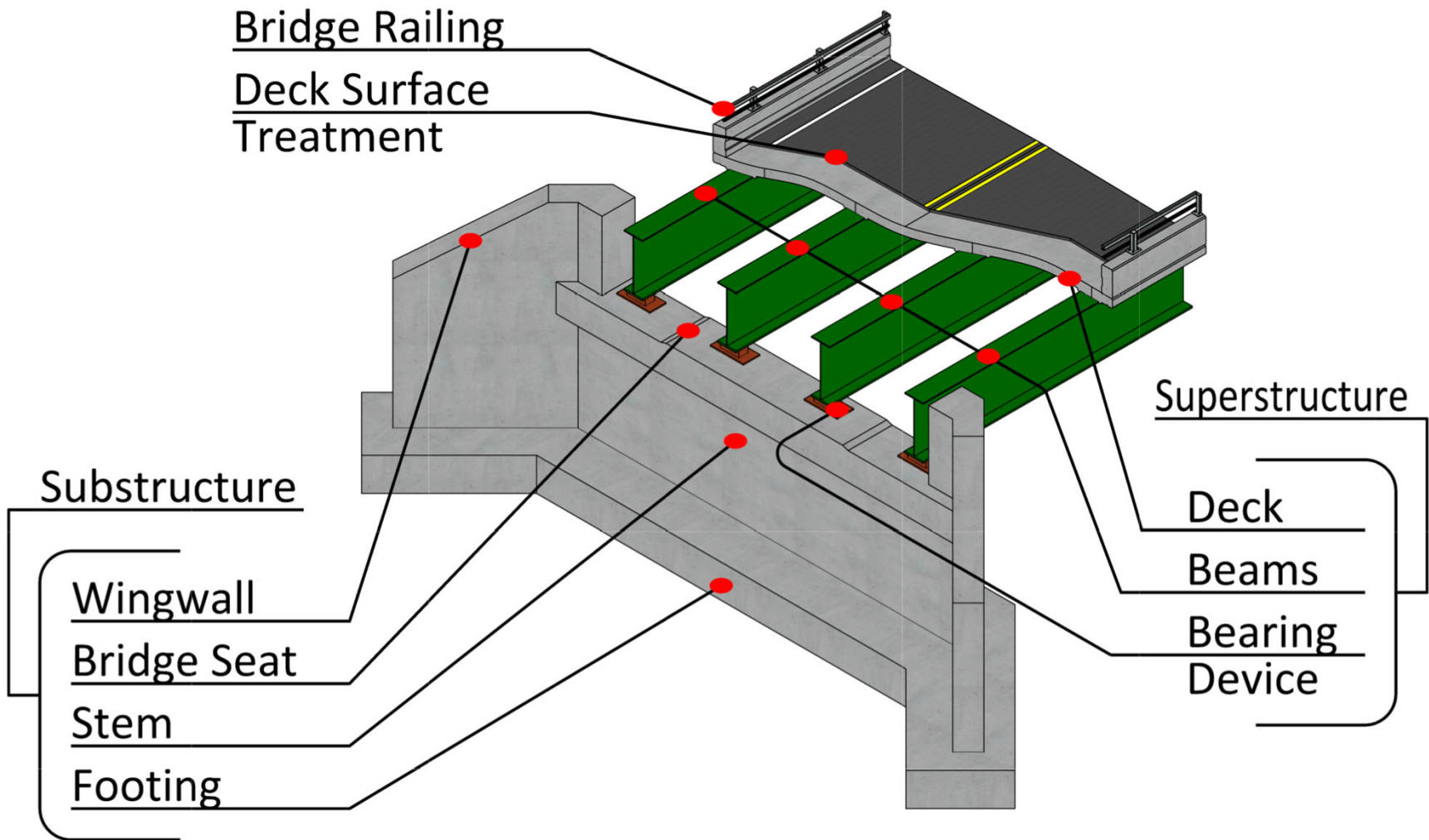
VTrans Project Development Process



- Identify resources & constraints
- Evaluate alternatives
- Public participation
- Build Consensus

- Quantify areas of impact
- Environmental permits
- Develop plans, estimate and specifications
- Right-of-Way process if necessary

Description of Terms Used



Looking West over Bridge 44



Existing Conditions – Bridge #44

- Roadway Classification – Major Collector
- Bridge Type – 243 Long, 3-Span Rolled Beam Bridge
- Ownership – State of Vermont
- Constructed in 1961, Repainted in 1984

Existing Conditions – Bridge #44

- Deck: The bridge deck is in poor condition with large delaminations and spalling throughout with scattered areas of saturation. The spalling penetrates up to and beyond the second layer of reinforcing.
- Superstructure: The Rolled Beams have paint peeling mostly along the flanges and the beam ends. The beam ends have heavy rust scale and minor to moderate section loss.
- Substructure: While the abutments are in good condition, both piers are in poor condition.
 - Pier seats/caps: There are large areas of spalling with surrounding delaminations. In many areas, this spalling has exposed the second layer of reinforcement and has undermined a portion of the downstream fascia beam at pier 2.
 - Pier Columns: The pier columns have heavy deterioration with large areas of spalling that penetrates into the layer of reinforcing steel with surrounding delaminations in the downstream columns.

Condition Ratings



Existing Conditions - Bridge #44

- Deck Rating 4 (Poor)
- Superstructure Rating 6 (Satisfactory)
- Substructure Rating 4 (Poor)

Eastern Abutment



Existing Conditions - Bridge #44

Western Abutment



Existing Conditions - Bridge #44

Eastern Pier



Existing Conditions - Bridge #44

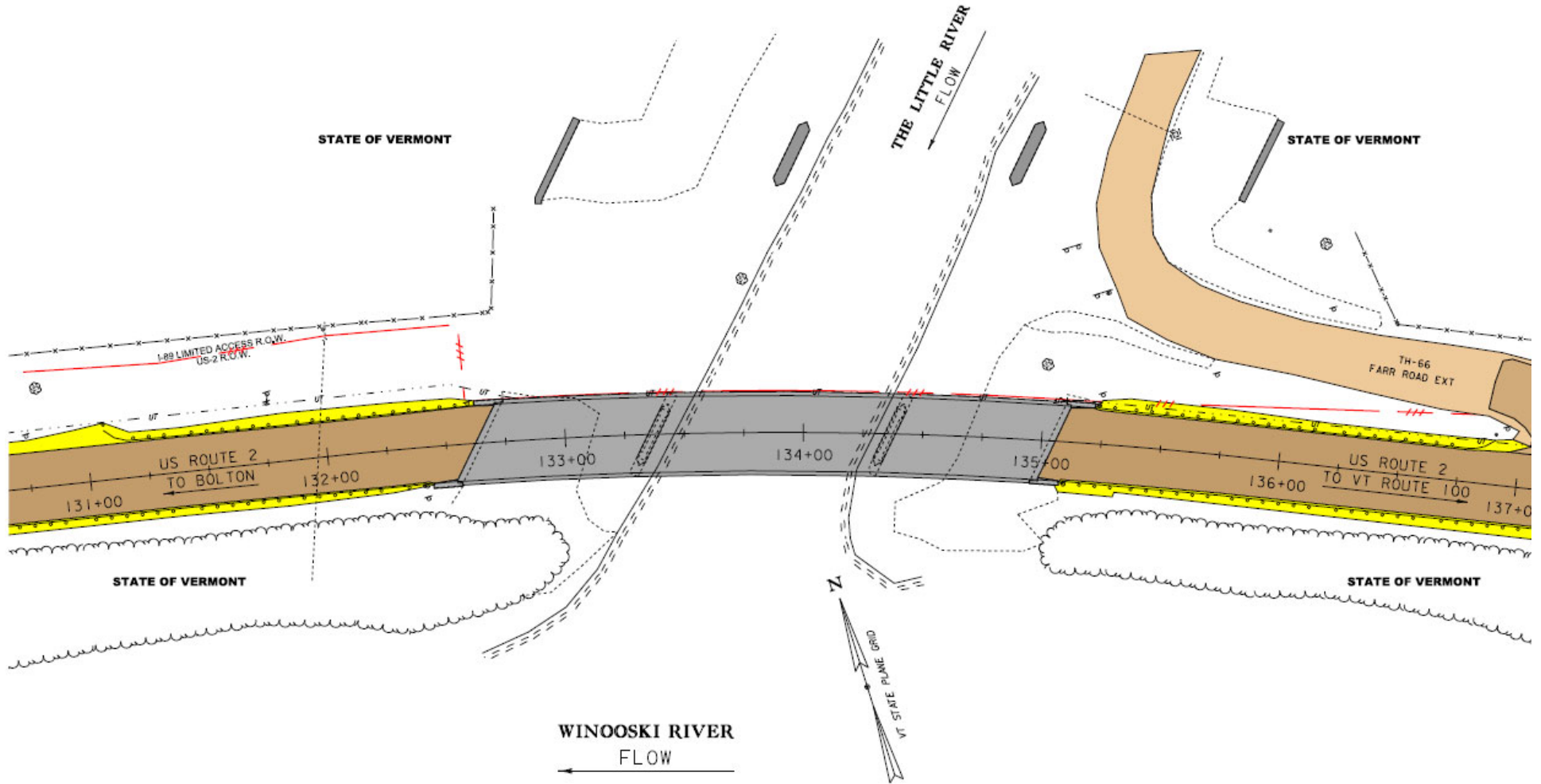
Resources – Looking Downstream



Existing Conditions - Bridge #44

- Wildlife Corridor
- Northern Long Eared Bat Habitat

Existing Conditions



Design Criteria and Considerations

- Average Daily Traffic of 3,000 veh/day
- Design Hourly Volume of 460 veh/hr
- % Trucks: 5.8
- Design Speed of 50 mph
- Utilities – Underground (Consolidated Communications Buried Cable with 6" conduit attached to bridge)
- High Priority Bike Corridor

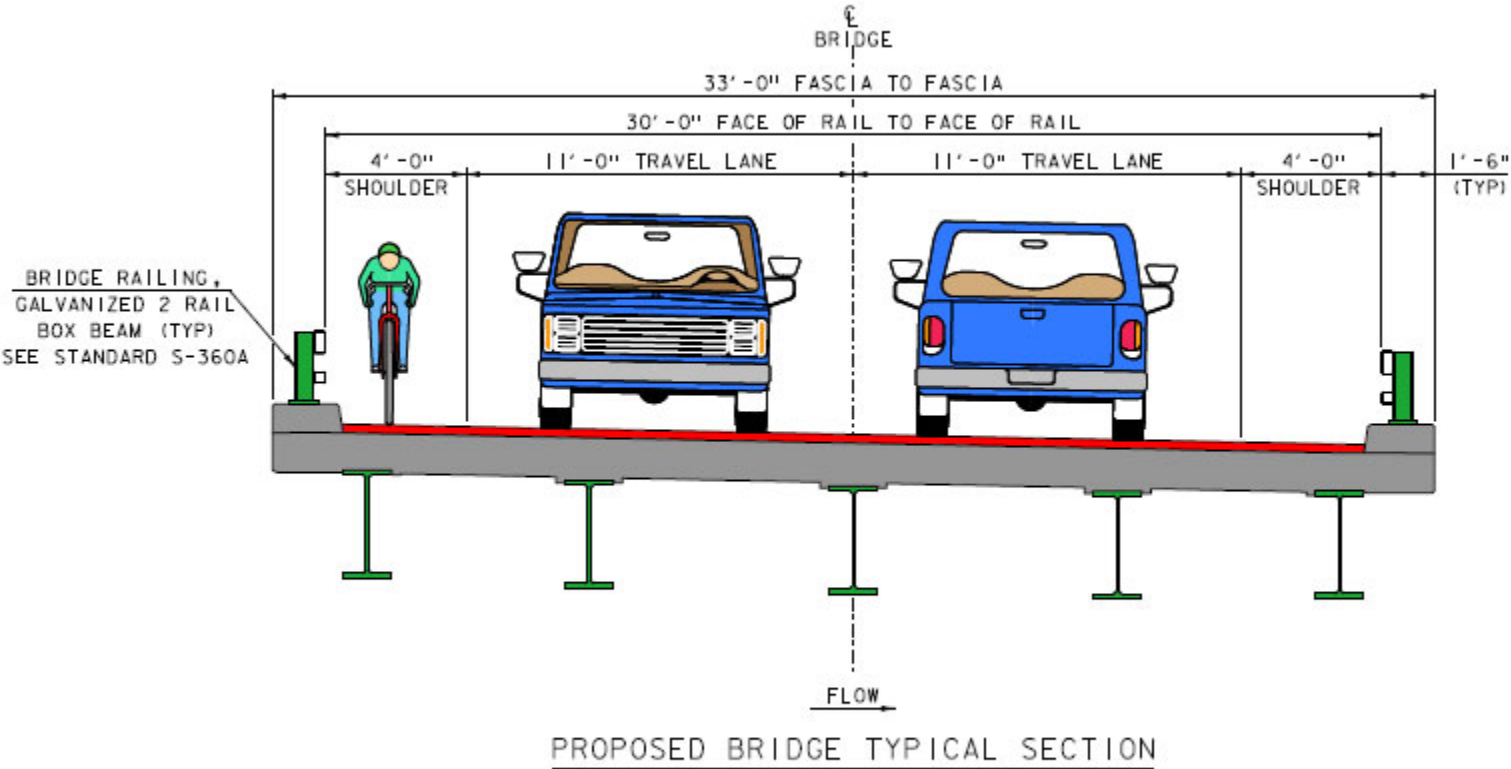
Alternatives Considered – Bridge #44

- No Action
 - Additional maintenance required within 10 years
- Deck Replacement
 - Extensive repairs to pier columns and caps
 - 11'4' typical section
 - 30-year design life
- Superstructure Replacement
 - Extensive repairs to pier columns and caps
 - New bearings and bridge seats
 - 11'4' minimum typical section
 - 60-year design life
- Full Bridge Replacement On Alignment
 - Maintain horizontal alignment
 - 11'4' typical section
 - 75-year design life
 - Relocate Buried Communications Cable

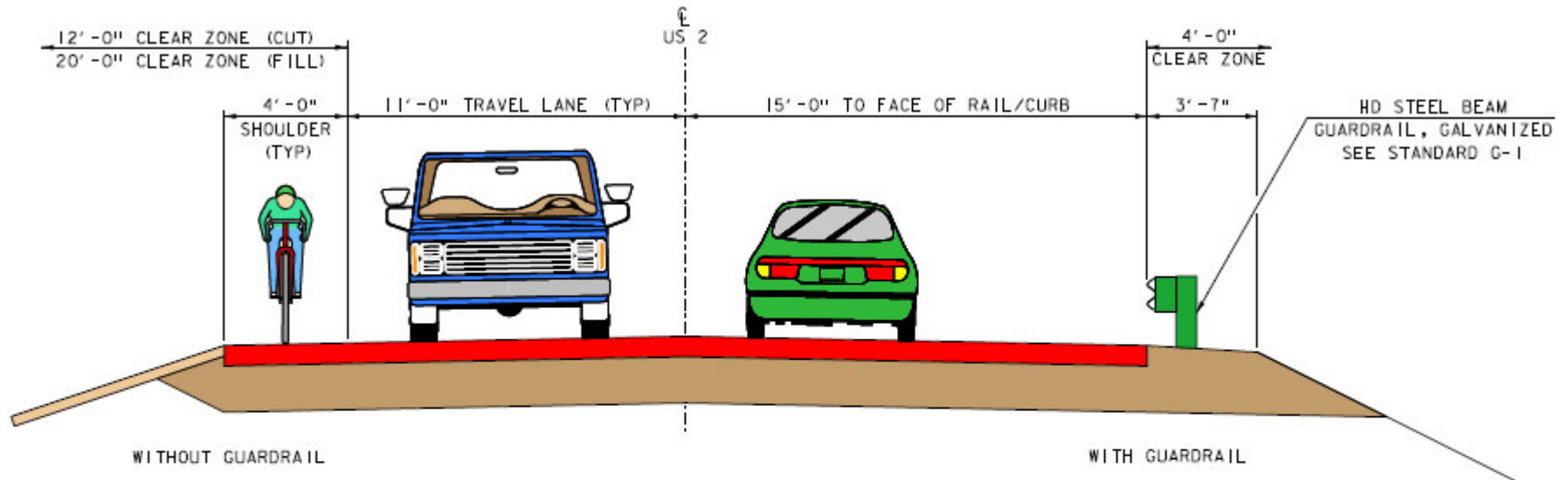
Selected Alternative - Bridge #44

- Superstructure Replacement
 - 11'¼' minimum typical section
 - 60-year design life
 - No Right of Way

Proposed Typical Section - Bridge

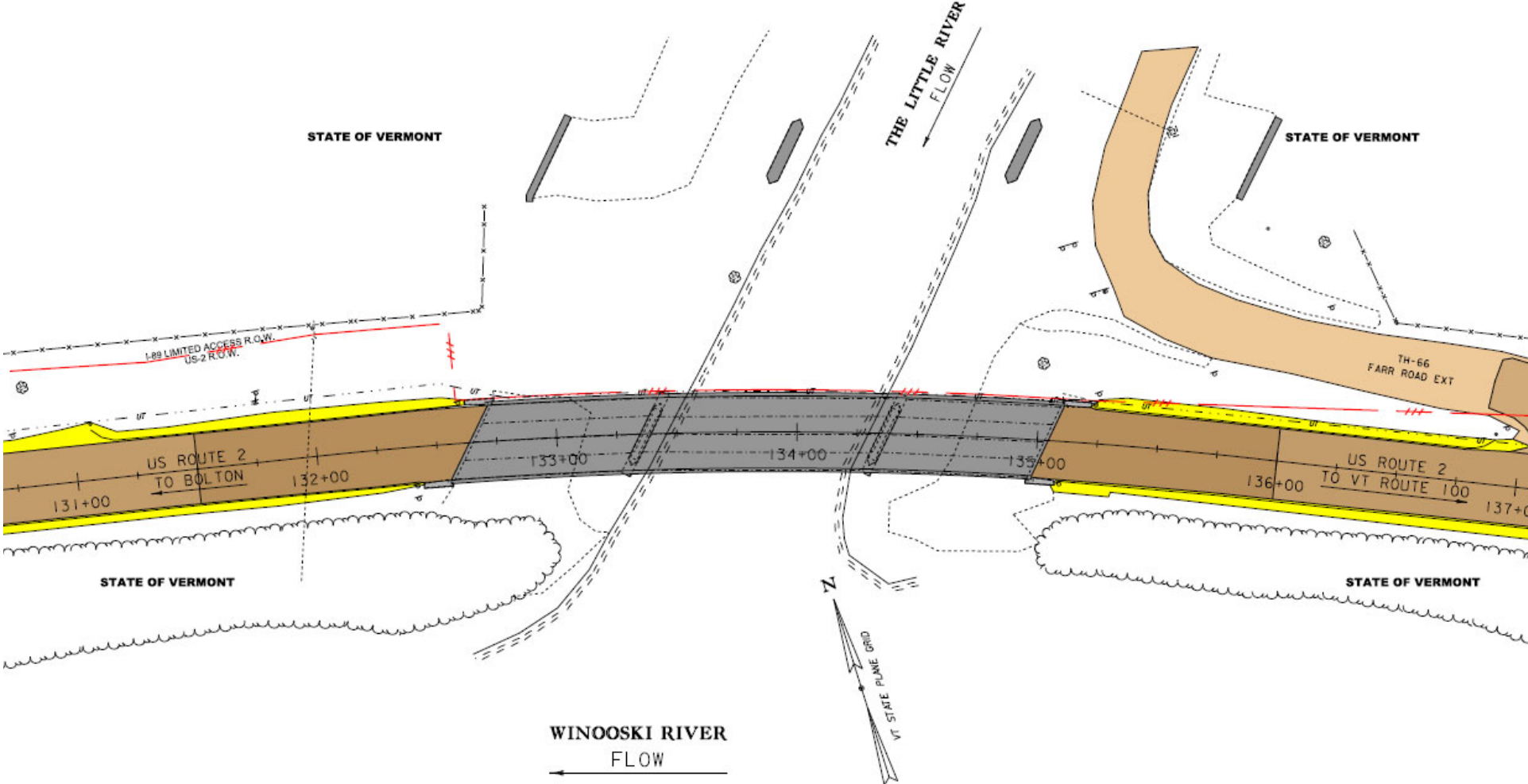


Proposed Typical Section - Roadway

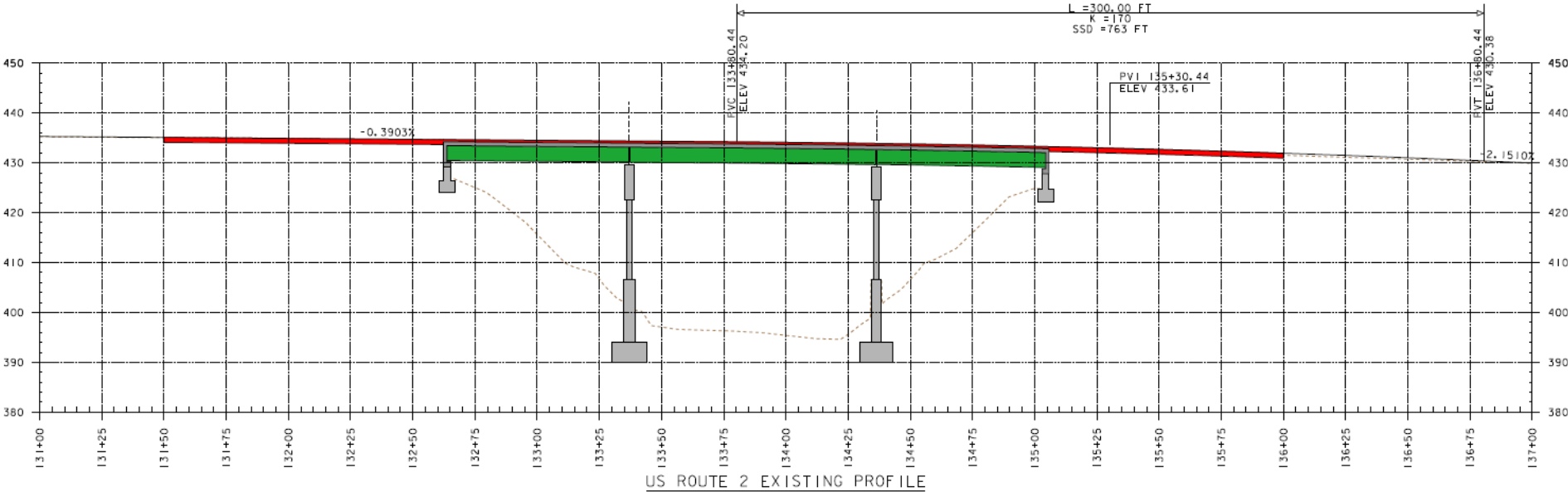


PROPOSED US ROUTE 2 TYPICAL SECTION

Proposed Layout



Proposed Profile



Maintenance of Traffic Options Considered

- Offsite Detour
- Phased Construction
- Temporary Bridge

Selected Method of Traffic Maintenance



Temporary Bridge

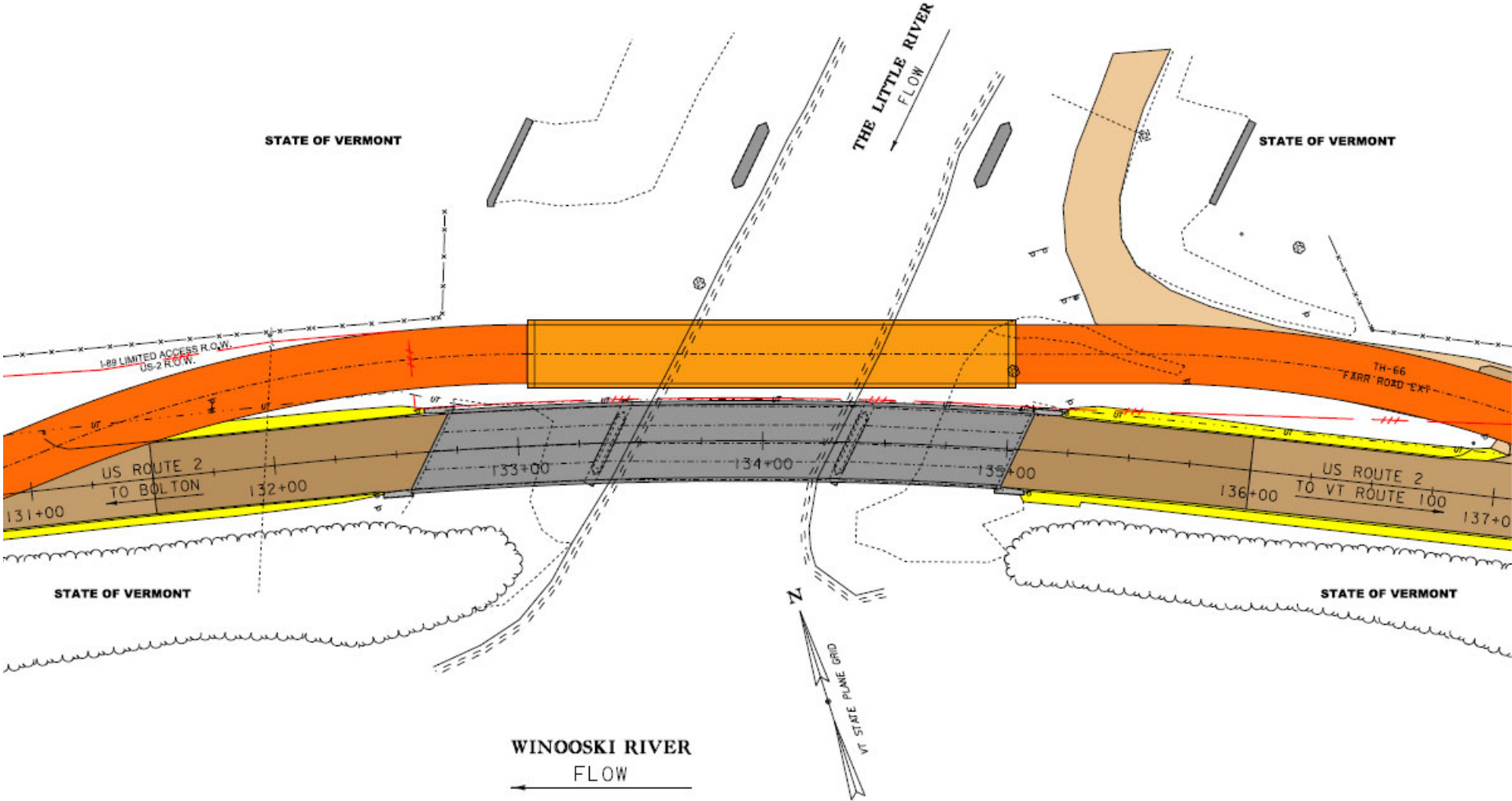
- Two Lane Temporary Bridge Upstream



Temporary Bridge

- Two-Way temporary bridge placed in buffer between US Route 2 and Interstate 89
- No Right-of-Way Needed

Upstream Temp Bridge Layout



Preliminary Project Schedule

- Construction Start – 2023
 - Total Cost Estimate: \$4,600,000

Project Summary

- Superstructure Replacement with Traffic Maintained on a Two-Way Temporary Bridge
 - 11'¼' minimal typical section
 - 60-year design life
 - No Right of Way Needed
 - Buried communications cable relocation

- Construction Year: 2023

For more information:

- <https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/12C602>



Waterbury BF 0284(33) Questions and Comments

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