Braintree BF 0241(51)
Regional Concerns Meeting

VT Route 12 – Bridge #47 over Ayers Brook

June 18, 2019

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Introductions

Laura Stone, P.E.

VTrans Scoping Engineer

Rob Young, P.E.

VTrans Project Manager

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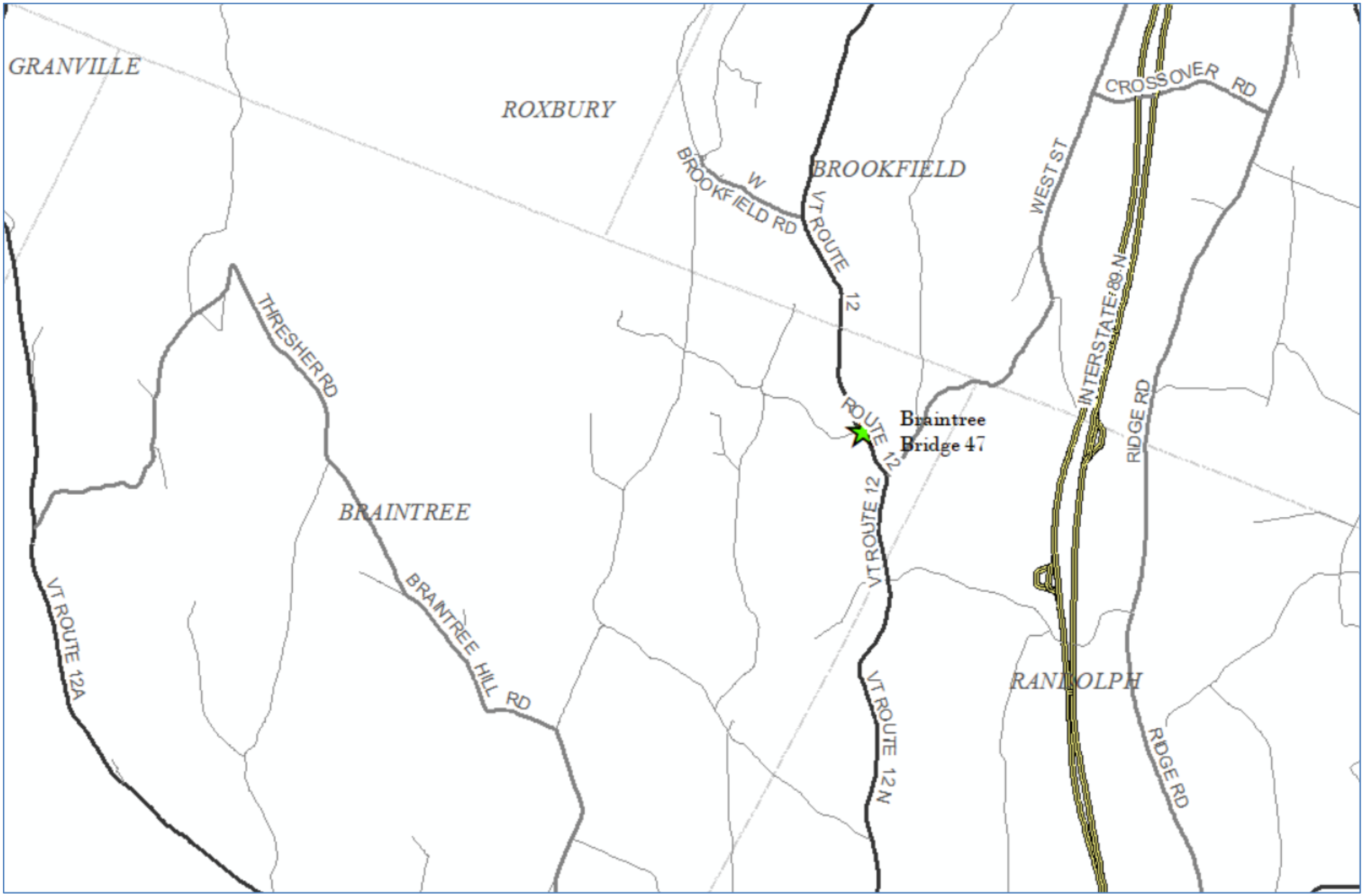
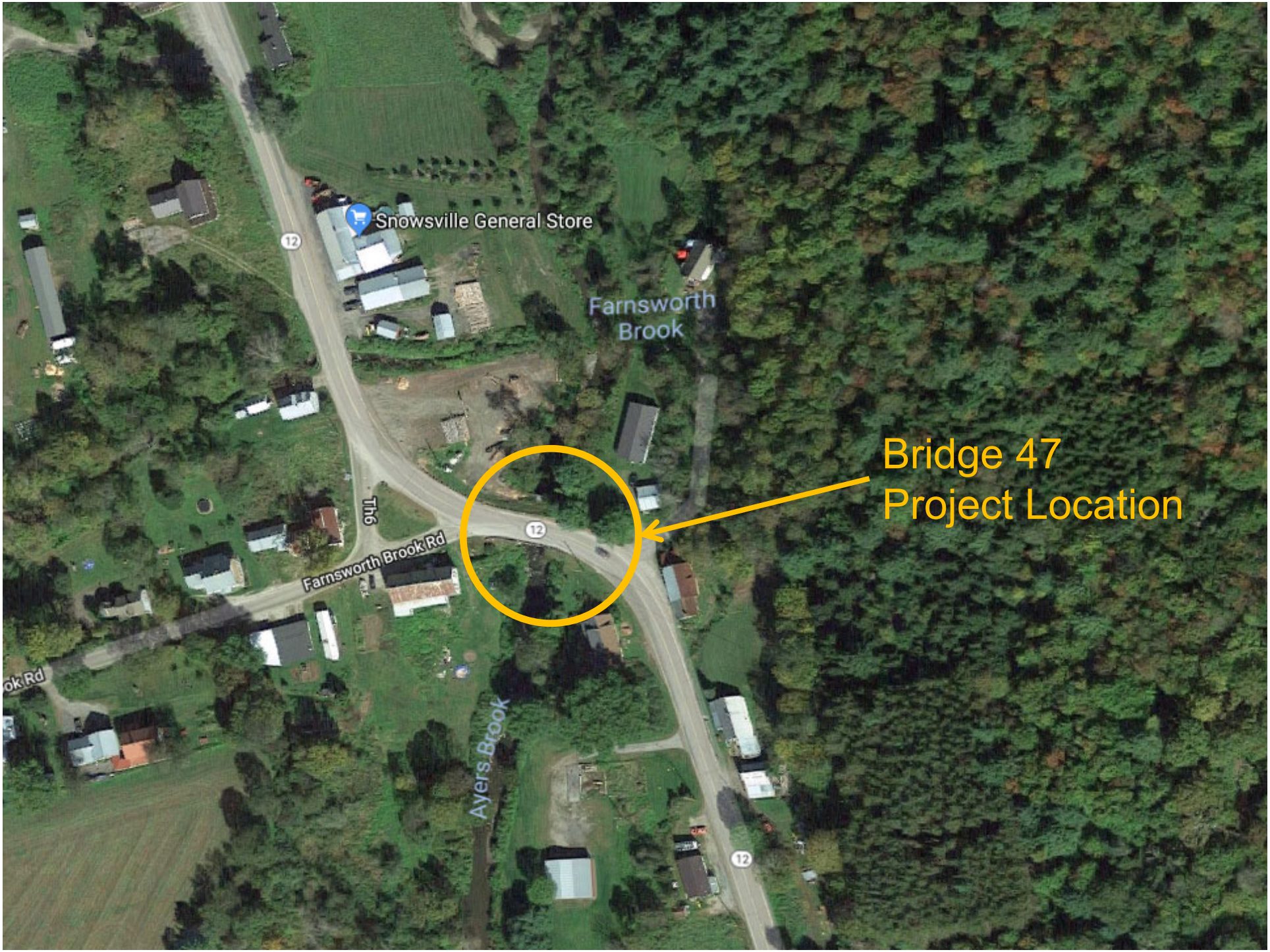
Purpose of Meeting

- 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

Accelerated Bridge Program
VTRANS



Location Map


Snowsville General Store
12
Farnsworth
Brook
Bridge 47
Project Location
TH6
12
Farnsworth Brook Rd
Ayers Brook
12

Meeting Overview

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

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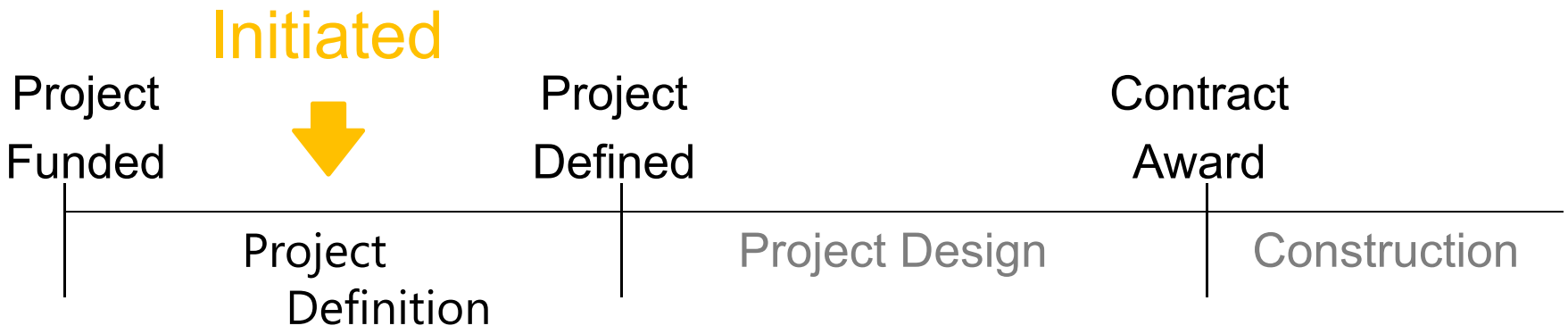
VTrans Project Development Process



- 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

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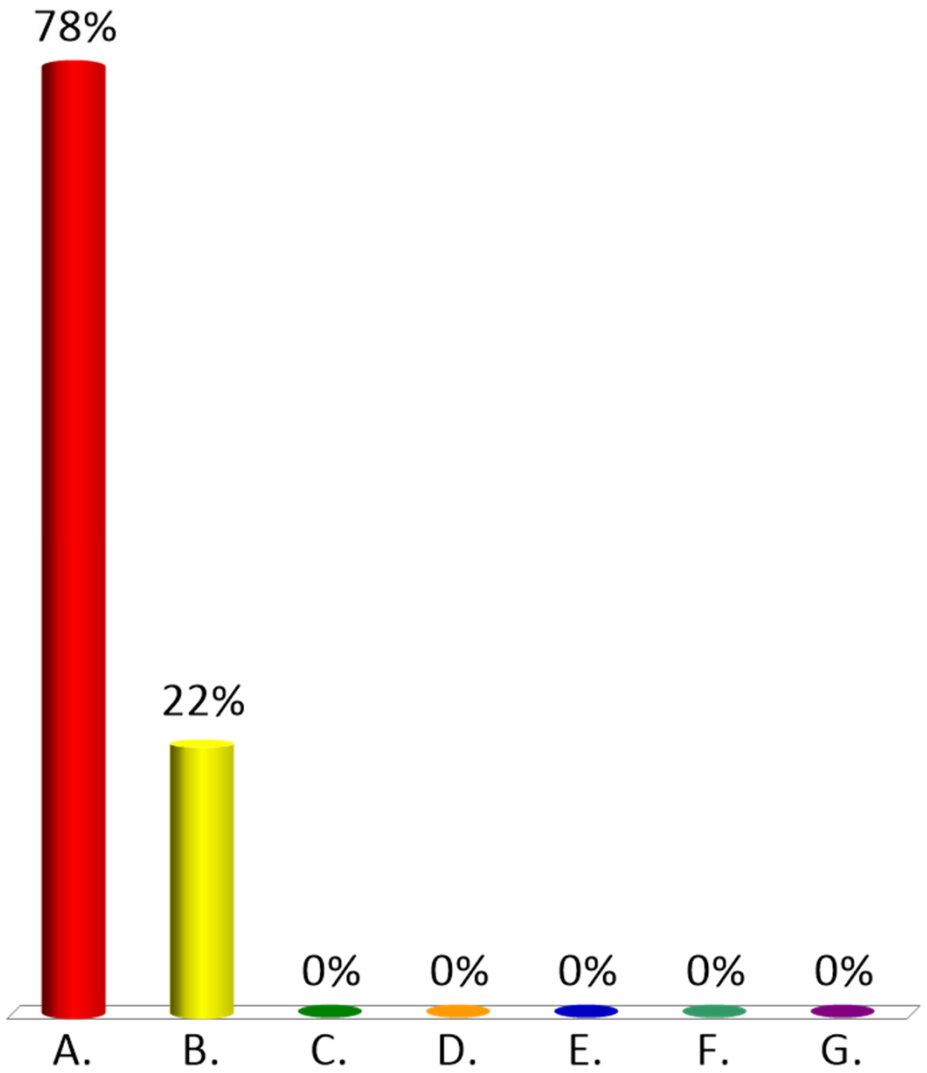
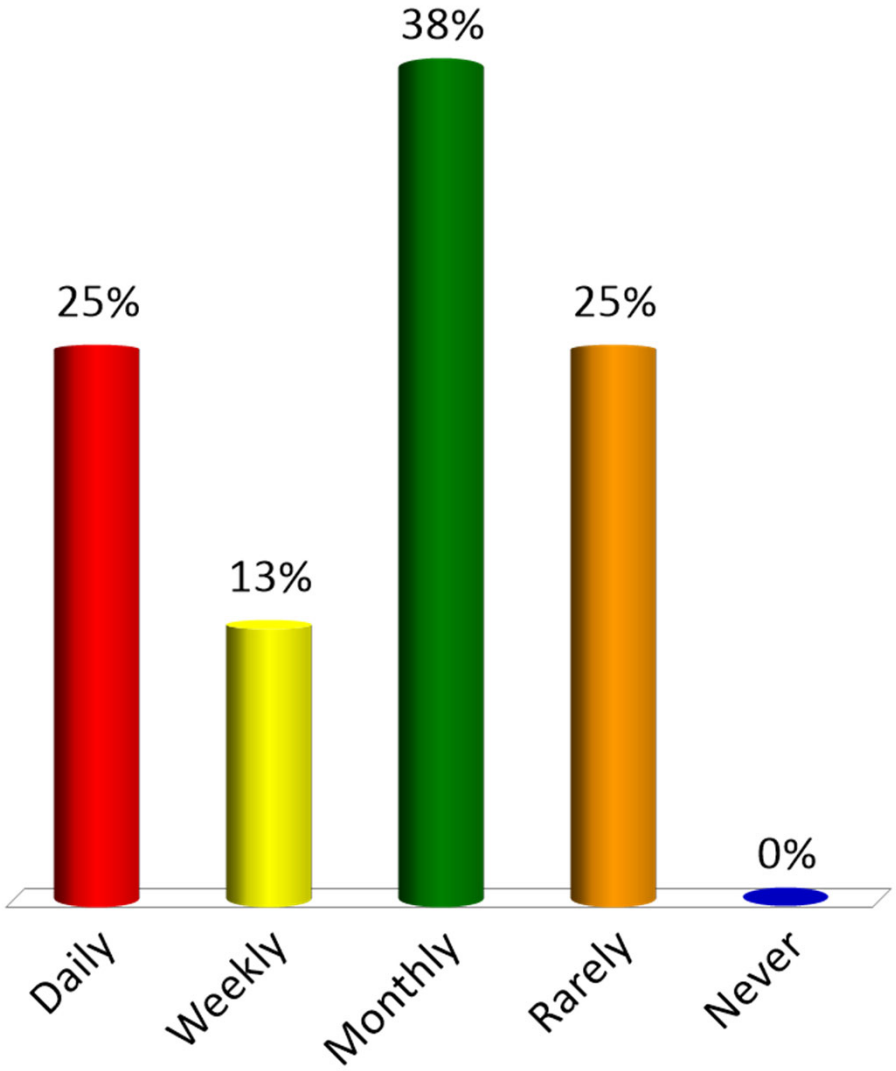
Who are you representing?

A. Municipal Official
B. Resident
C. Emergency Services
D. Local Business
E. Independent Organization
F. Press
G. Other



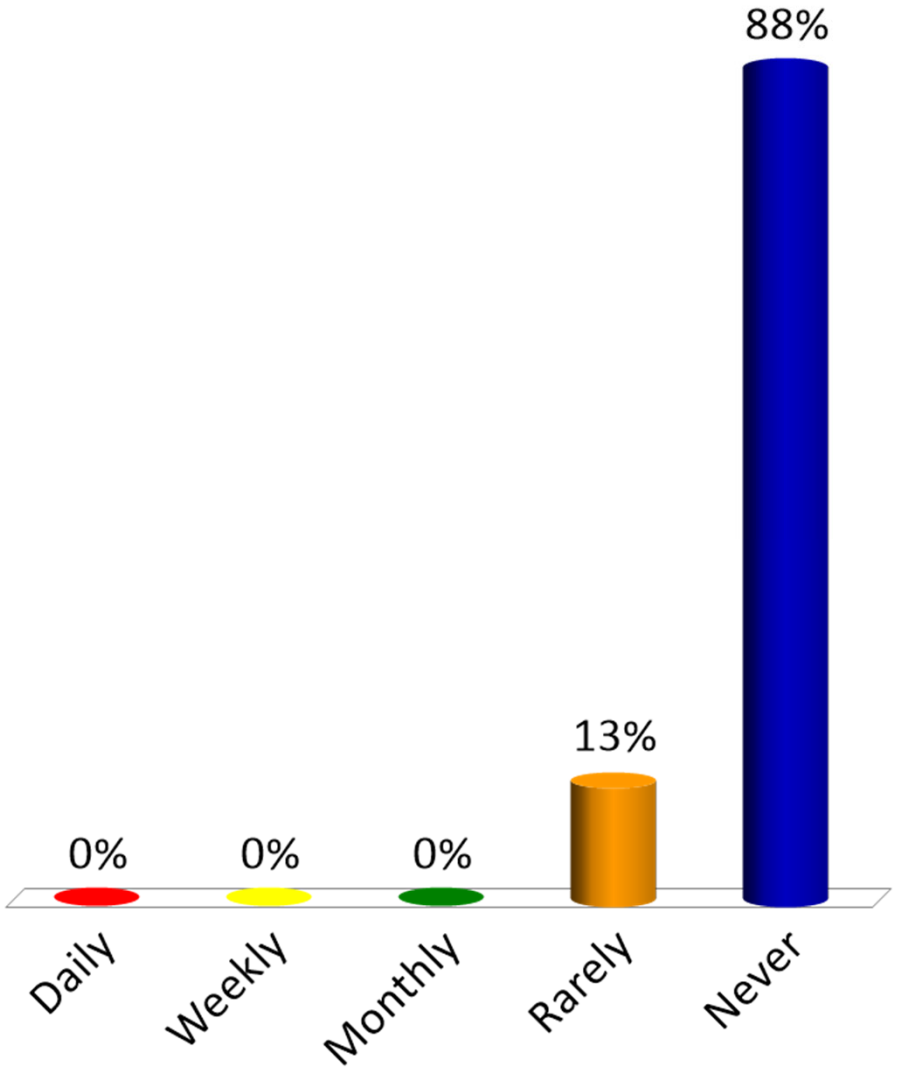
How often do you use this segment of Vermont Route 12?

A. Daily
B. Weekly
C. Monthly
D. Rarely
E. Never



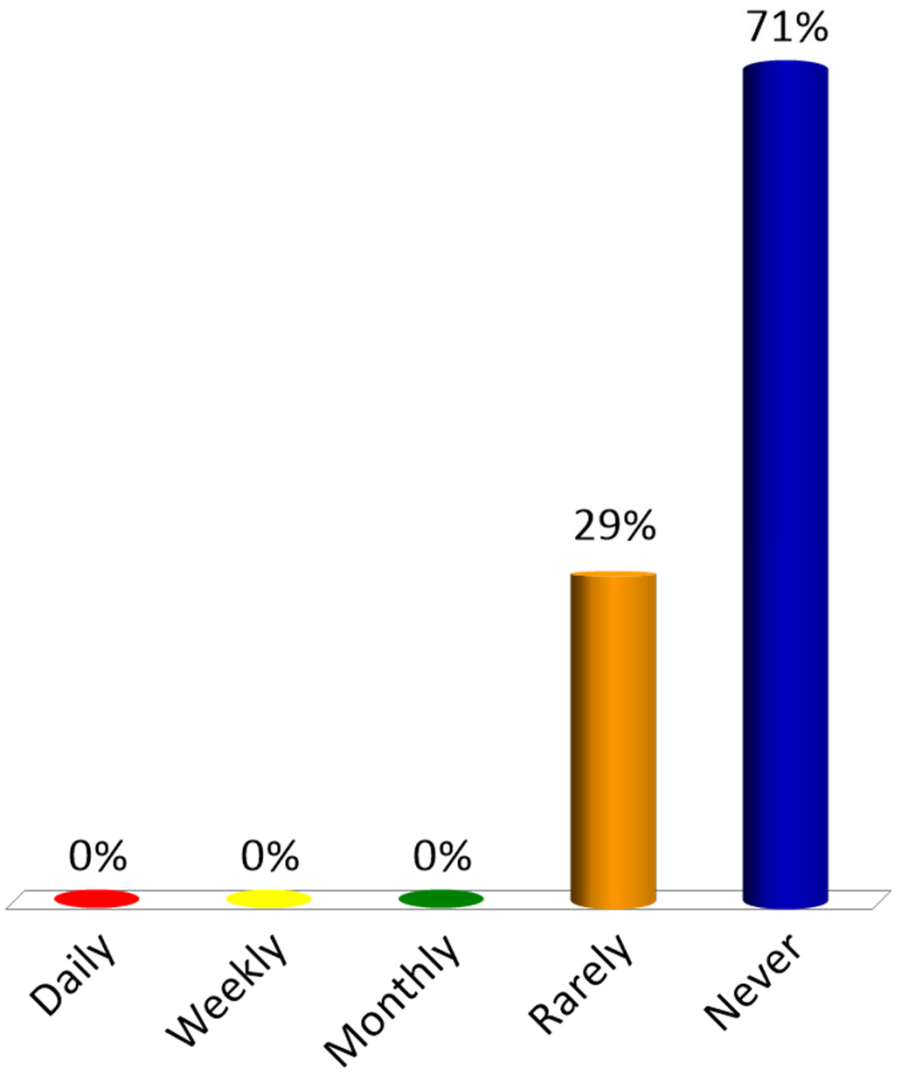
How often do you walk over the bridge?

A. Daily
B. Weekly
C. Monthly
D. Rarely
E. Never



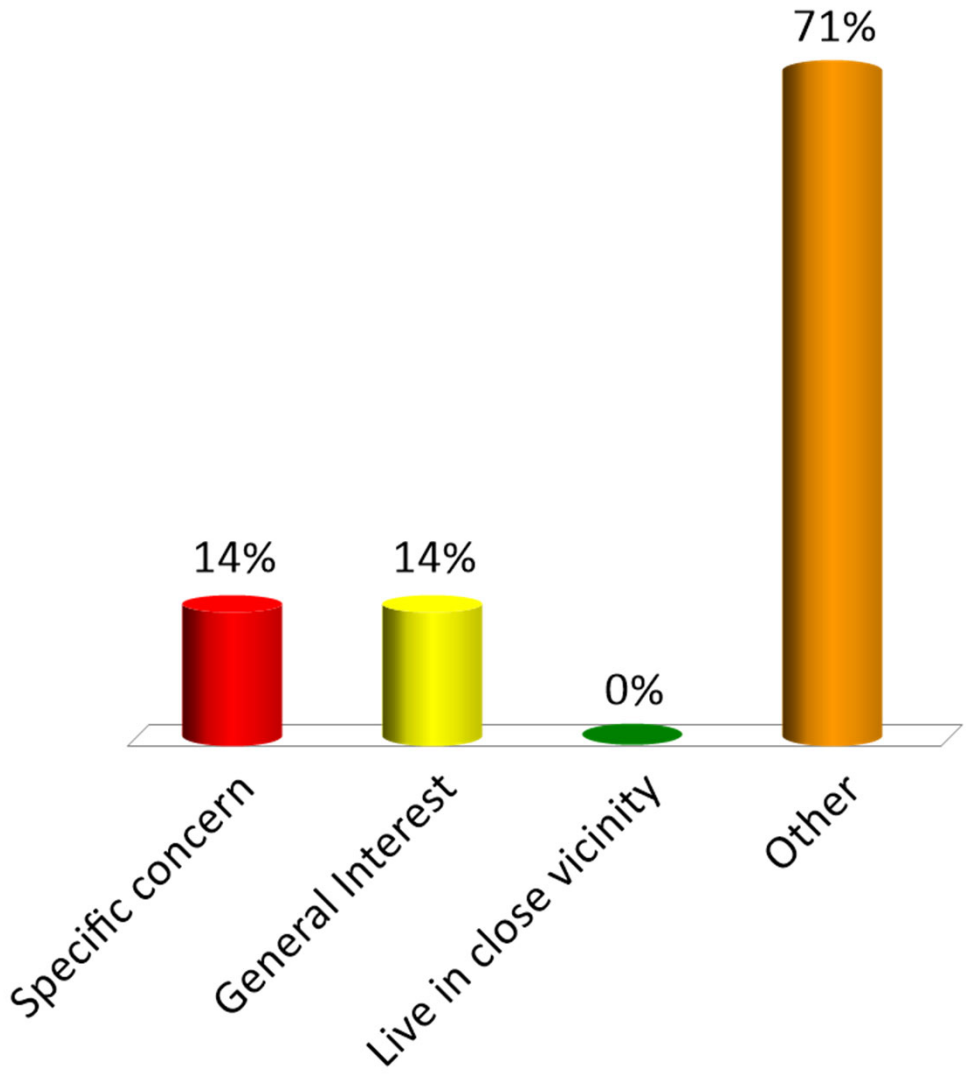
How often do you bike over the bridge?

A. Daily
B. Weekly
C. Monthly
D. Rarely
E. Never

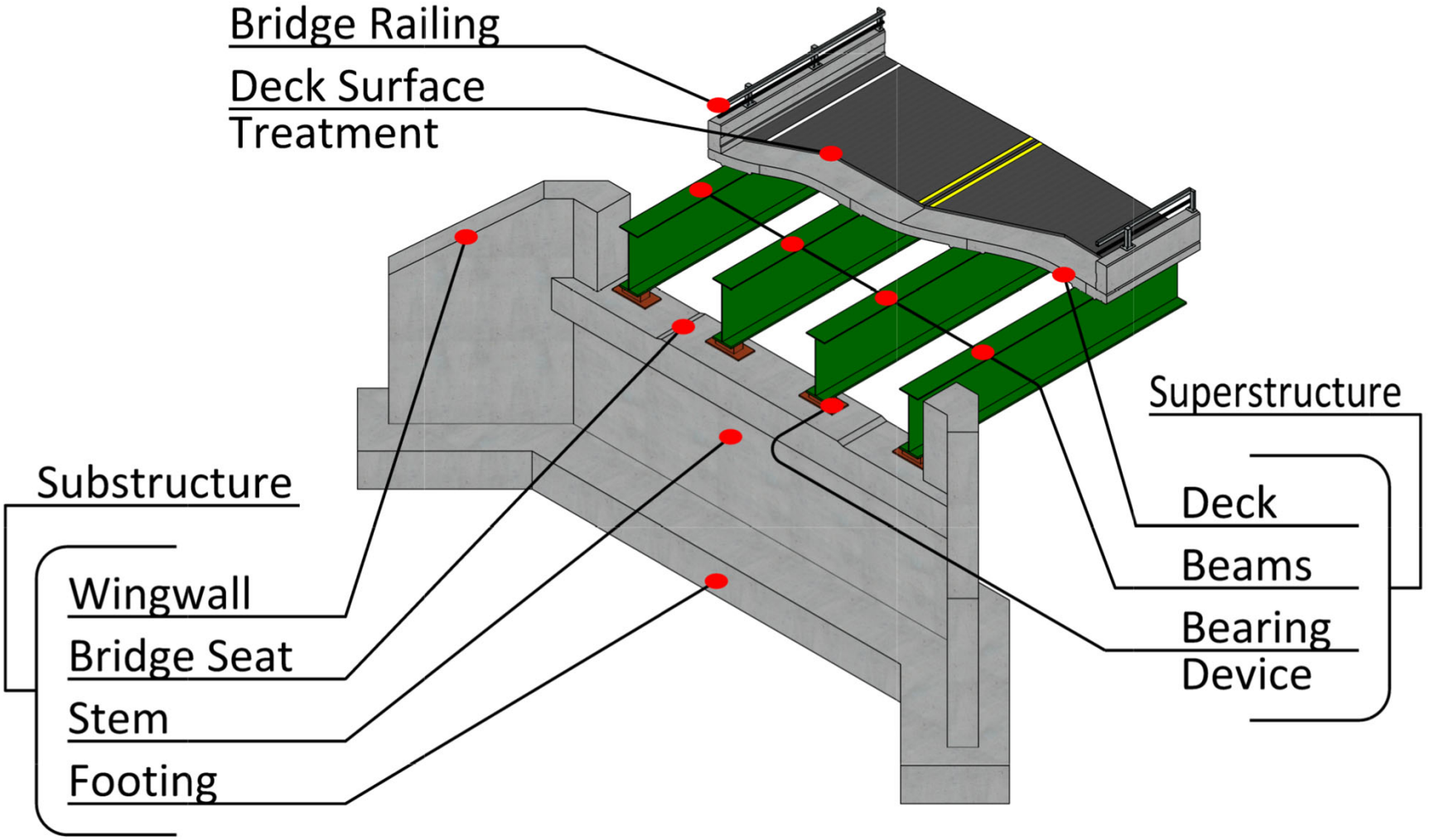


What is your reason for attending this meeting?

A. Specific concern
B. General Interest
C. Live in close vicinity
D. Other



Description of Terms Used



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Looking South over Bridge

Existing Conditions – Bridge #47

- Roadway Classification – Major Collector
- Bridge Type – 33’ Long T-Beam Bridge/Multi-Plate Arch
- Ownership – State of Vermont
- Constructed in 1928, reconstructed in 1969

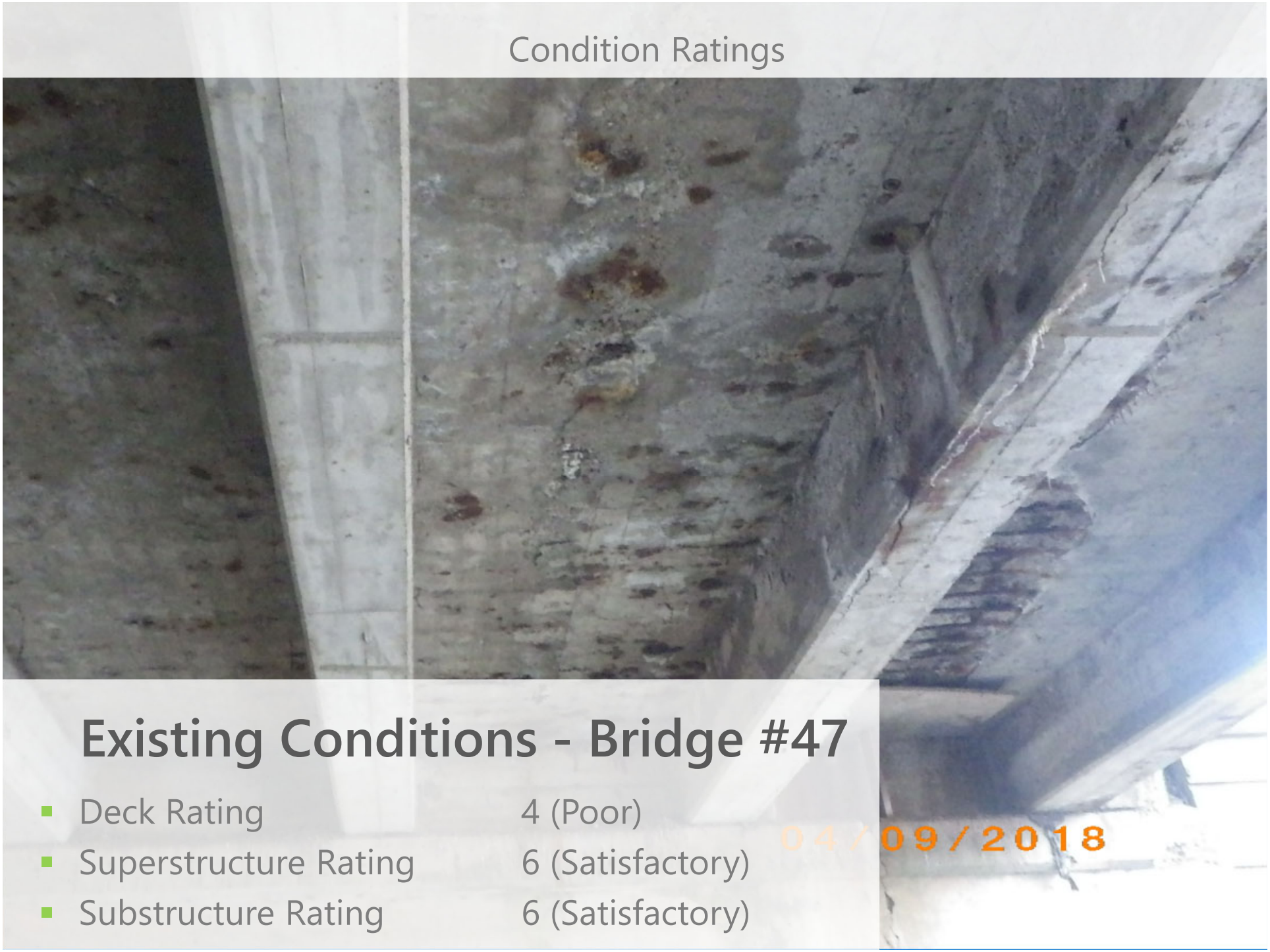
Looking North over Bridge

Existing Conditions – Bridge #47

- Sharp S-Curve
- Located at Intersection

Existing Conditions – Bridge #47

- The bridge deck on the T-Beam's has widespread deterioration and saturation on the soffit.
- The T-Beams have scattered longitudinal cracking with large delaminations.
  - Some of the spalling has reached the pavement, and full depth holes may occur at any time.
- The abutments and wingwalls have fine map cracking throughout with light staining.
- There are substandard horizontal curves at both approaches and a substandard vertical sag curve at the approach on the North end of the bridge.
- The bridge does not meet the minimum Bank Full Width requirements.



Existing Conditions - Bridge #47

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

Southern Abutment

Existing Conditions - Bridge #47

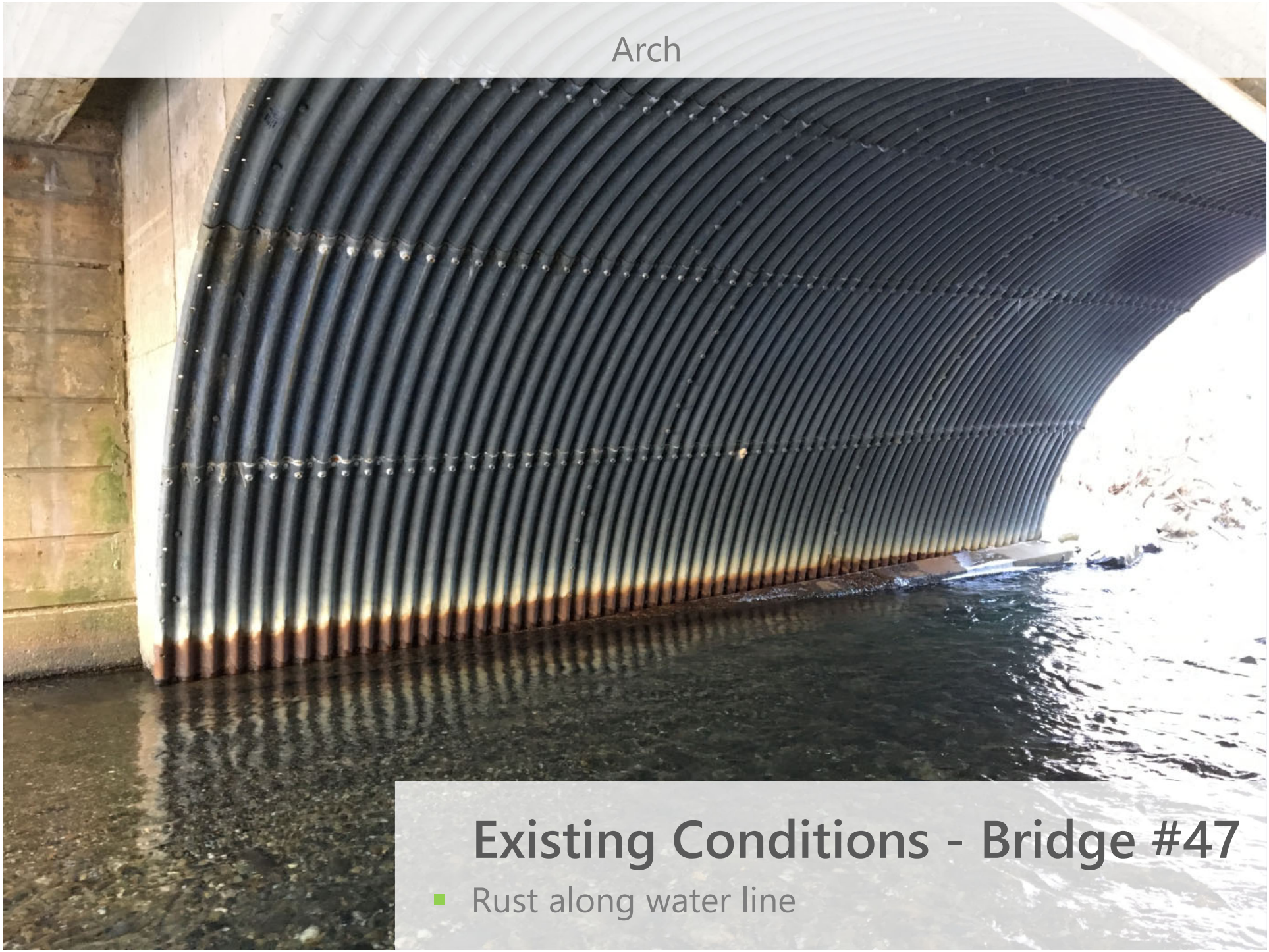
- Minor Spalling
- Full Height Vertical Crack

Northern Abutment

Existing Conditions - Bridge #47

- Fine Cracking

Arch



Existing Conditions - Bridge #47

- Rust along water line

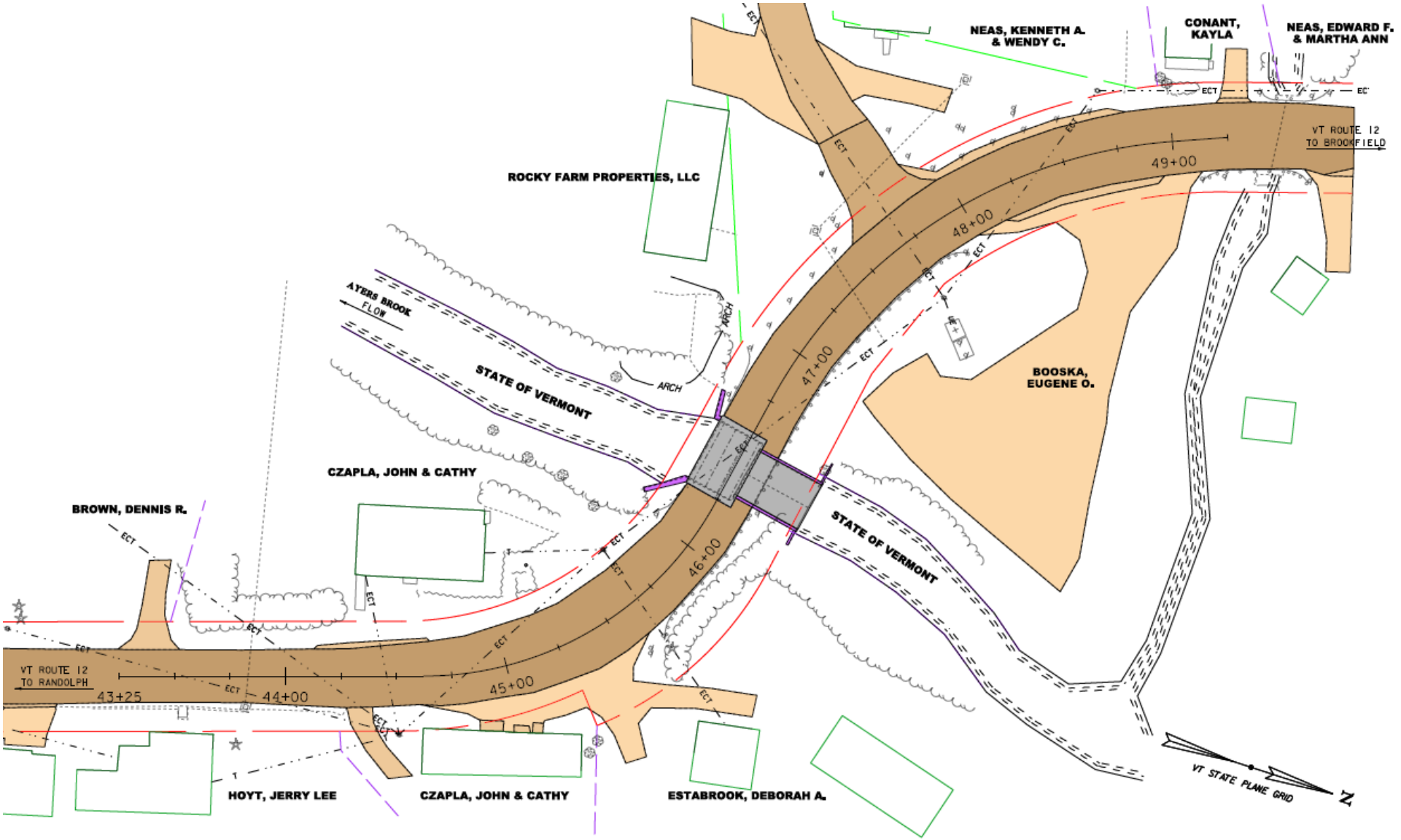
Resources – Looking Upstream

Existing Conditions - Bridge #47

- Northern Long Eared Bat Habitat
- Archaeological Resources
- Prime Agricultural Soils
- Wildlife Corridor
- Aerial Utilities with buried service lines
- Buried Fiber Optic

04/09/2018

Existing Conditions



Design Criteria and Considerations

- Average Daily Traffic of 440 veh/day
- Design Hourly Volume of 70 veh/hr
- % Trucks: 7.2
- Design Speed of 30 mph (signed for 30 mph with a cautionary sign for 20 mph)

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Alternatives Considered – Bridge #47

- No Action
  - Additional maintenance required within 10 years
- All Alternatives 4′-11′-11′-4′ Typical
- Partial Superstructure Replacement
  - Arch portion of bridge would remain in place
  - Substandard BFW
  - 40 year design life
- Full Bridge Replacement On Alignment with Bridge
  - Integral or Spread footings – TBD in design
  - Meets hydraulics standard and BFW
  - 75 year design life
- Full Bridge Replacement On Alignment with Buried Structure
  - Concrete pedestals above OHW
  - Meets hydraulics standard and BFW
  - Eliminates design difficulties of reverse curve
  - 75 year design life

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Selected Alternative - Bridge #47

- Partial Superstructure Replacement
  - 11’/4’ typical
  - 40 year design life
  - Arch portion of bridge would remain in place
    - Extend pedestal wall to above OHW mark
  - Meets hydraulic standard
  - Does not meet minimum bankfull width standard

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Proposed Typical Section

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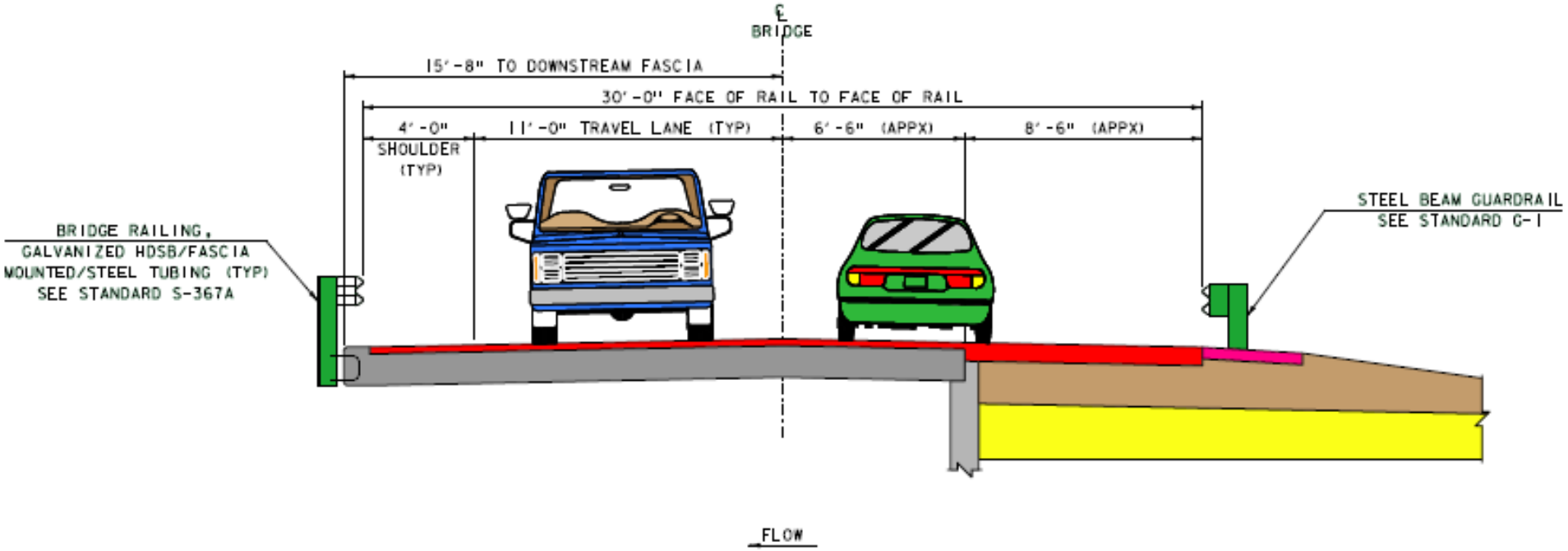

Proposed Layout

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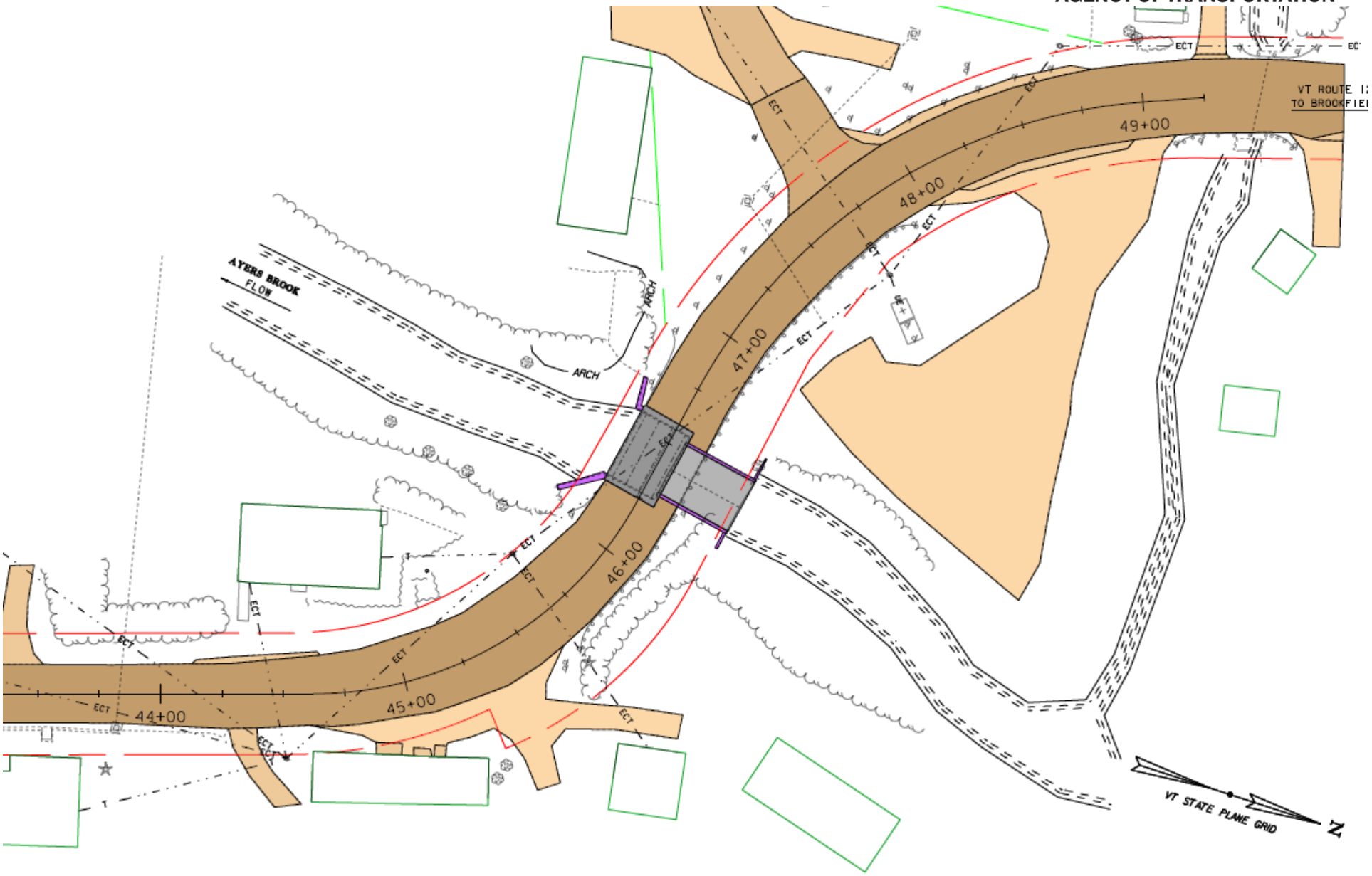

Proposed Profile

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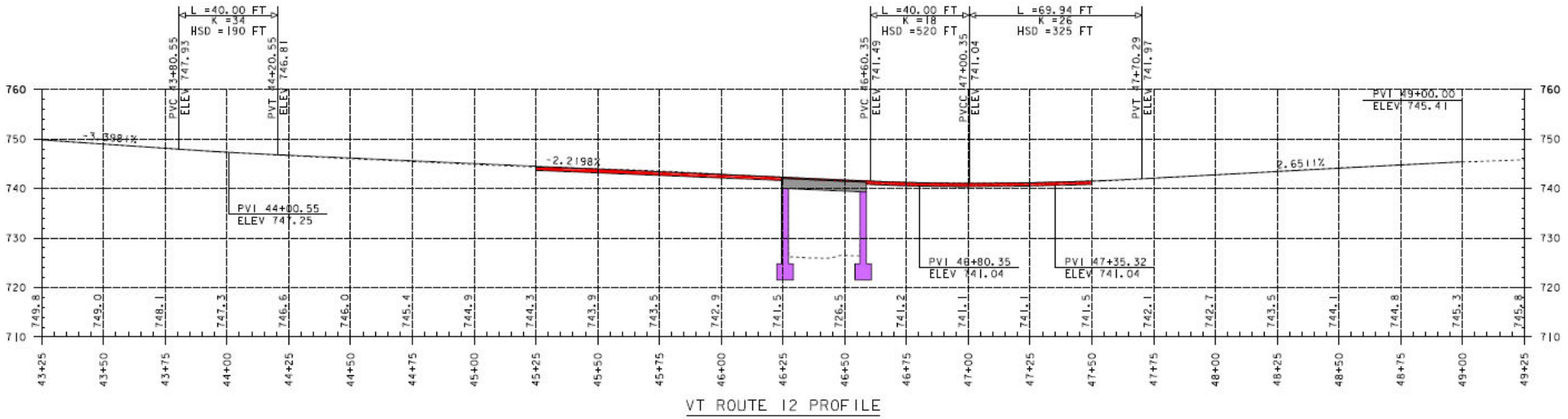

VT ROUTE 12 PROFILE

Maintenance of Traffic Options Considered

- Offsite Detour
- Temporary Bridge
- Phased Construction

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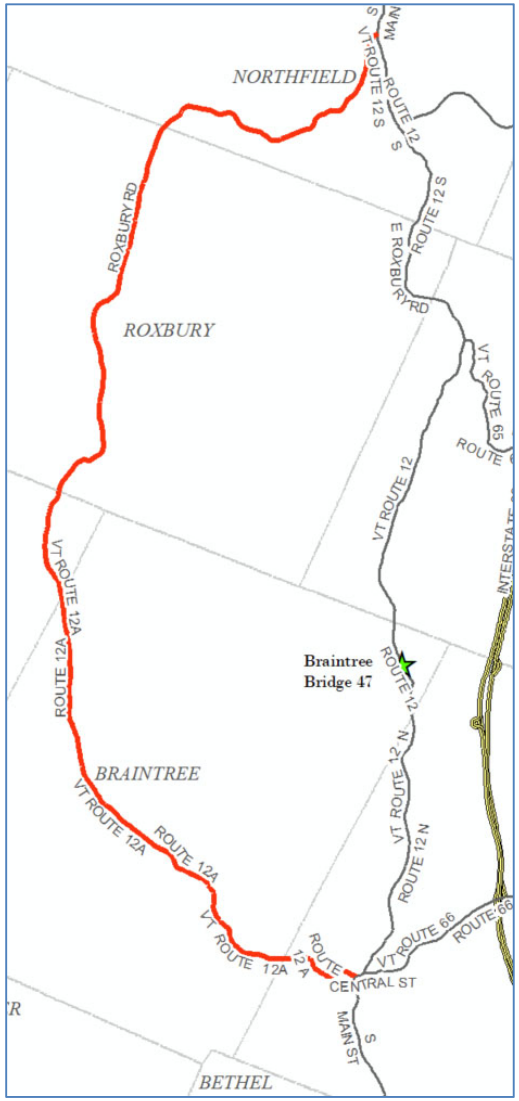
Selected Method of Traffic Maintenance

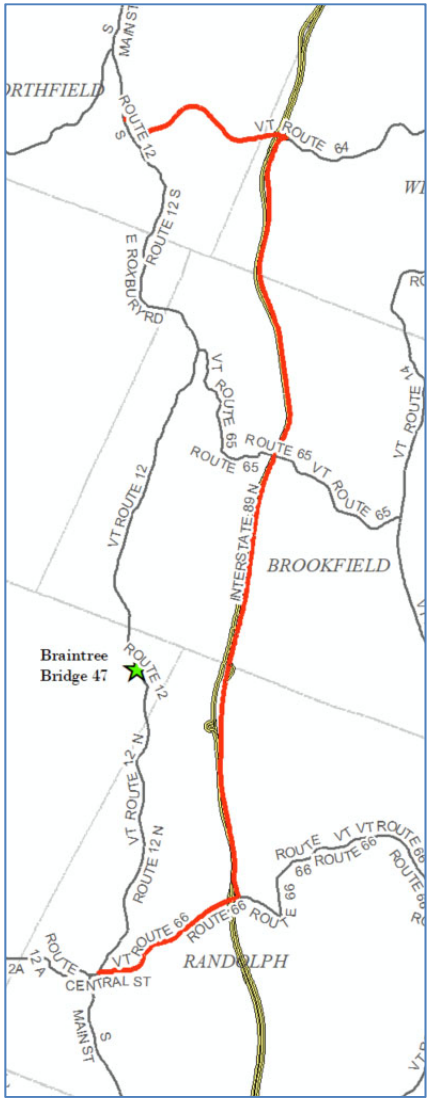
Road Closure

- Detour chosen and signed by State
- Shortest regional detour is 32.4 miles end-to-end
- 21 day closure
- Shortest local bypass route is 6.7 miles end-to-end

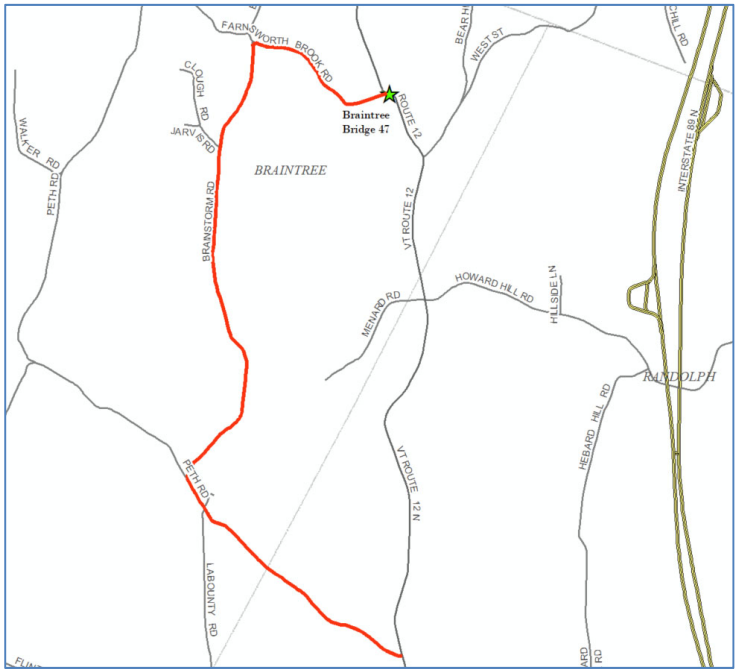
Traffic Control – Offsite Detour

- 2 Regional Detour Routes available ranging from 32.4 miles to 39.4 miles end-to-end





- Vermont Route 12, to Vermont Route 12A, back to VT Route 12
- Vermont Route 12, to Vermont Route 64, Interstate 89, and VT Route 66 back to VT Route 12
- Shortest Local Detour: 6.7 miles end-to-end (1.5 Miles added)



Preliminary Project Schedule

- Construction Start – Summer 2021 or 2022
  - Total Cost Estimate: $784,910

Accelerated Bridge Program
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Project Summary

- Partial Superstructure Replacement with Traffic Maintained on an Offsite Detour
  - 11’/4’ typical
  - 40 year design life
  - Minor ROW of Way Possibly Needed
  - Aerial Utility Relocation
  - 21 Day Bridge Closure

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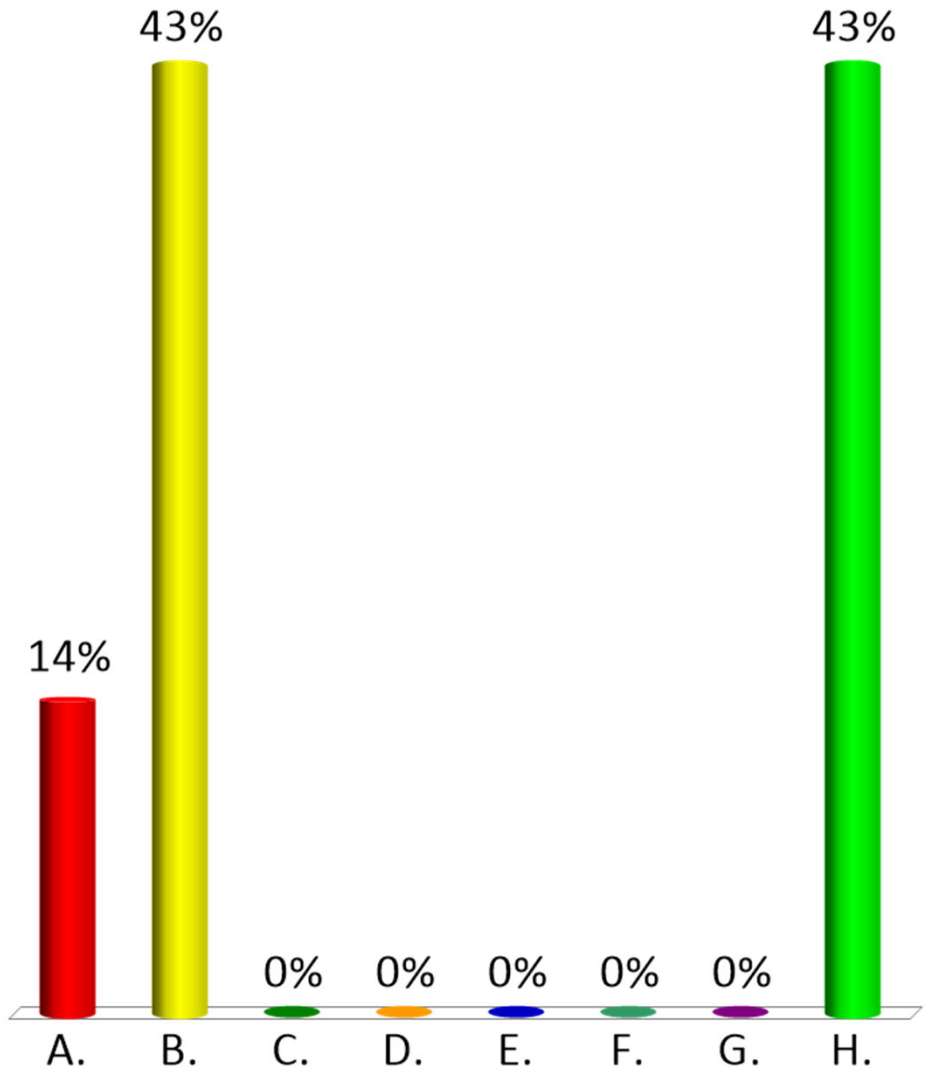
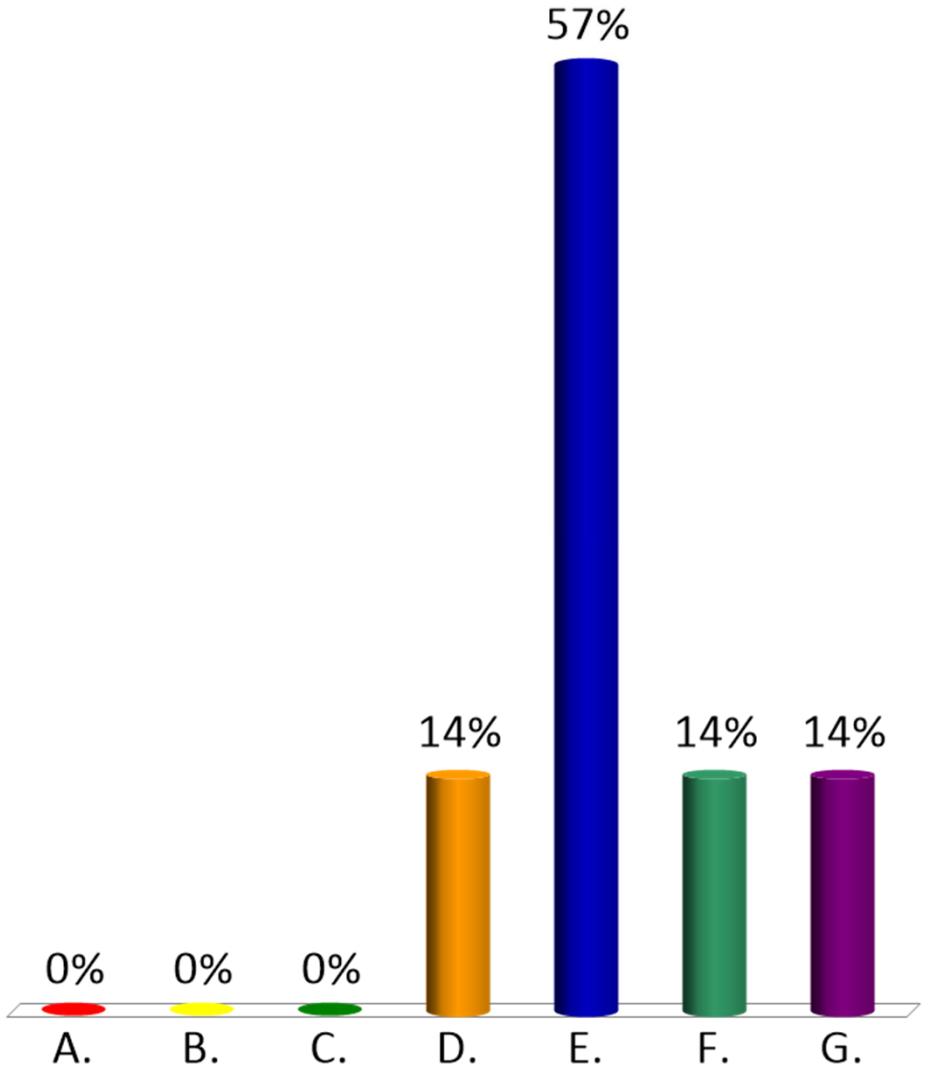
Which would you be most concerned about?

A. Construction delays on VT Route 12
B. Closure Duration
C. Bridge Aesthetics
D. Environmental Impacts
E. Recreational Impacts
F. Business Impacts
G. Other
H. Not really concerned



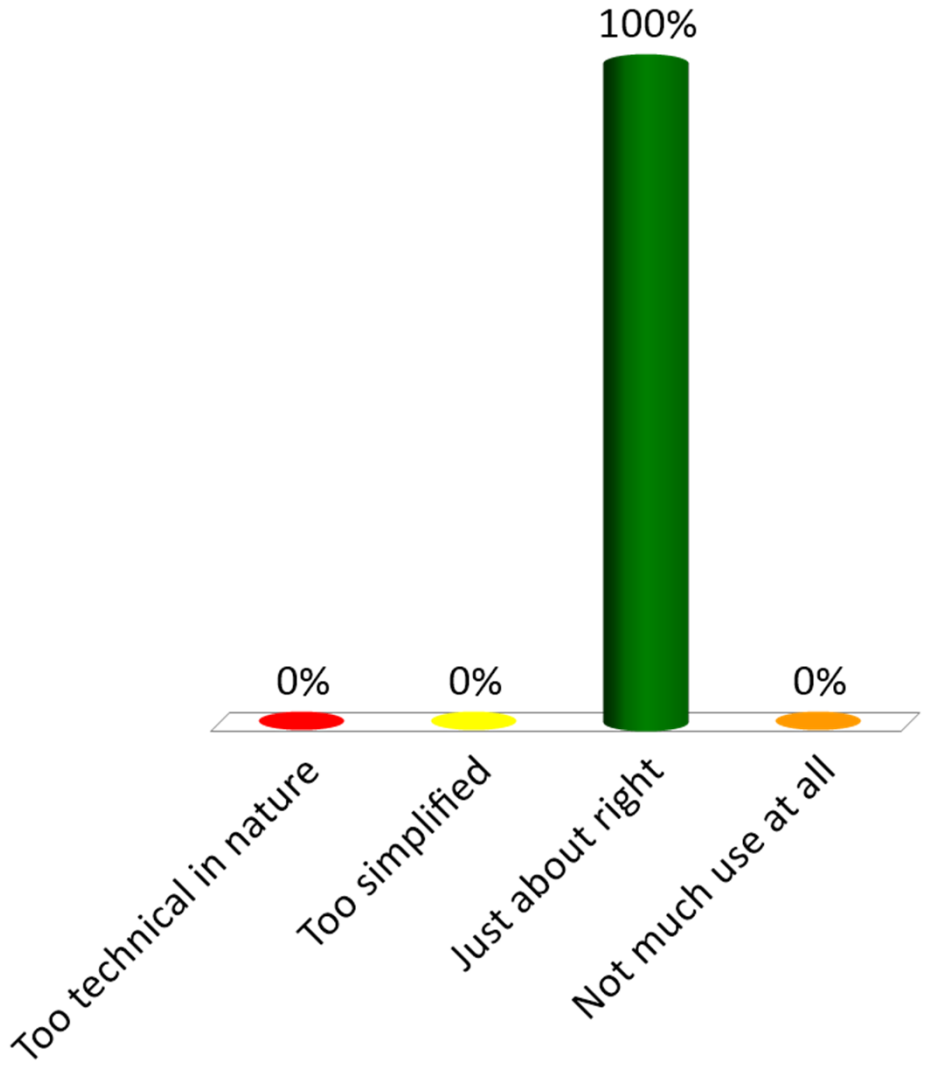
Which design aspect is the most important to you?

A. Shoulder width/bicycle accommodations
B. Aesthetics - Bridge Railing
C. Construction year
D. Construction Duration
E. Closure Duration
F. Cost
G. Other



Did you find this presentation to be?

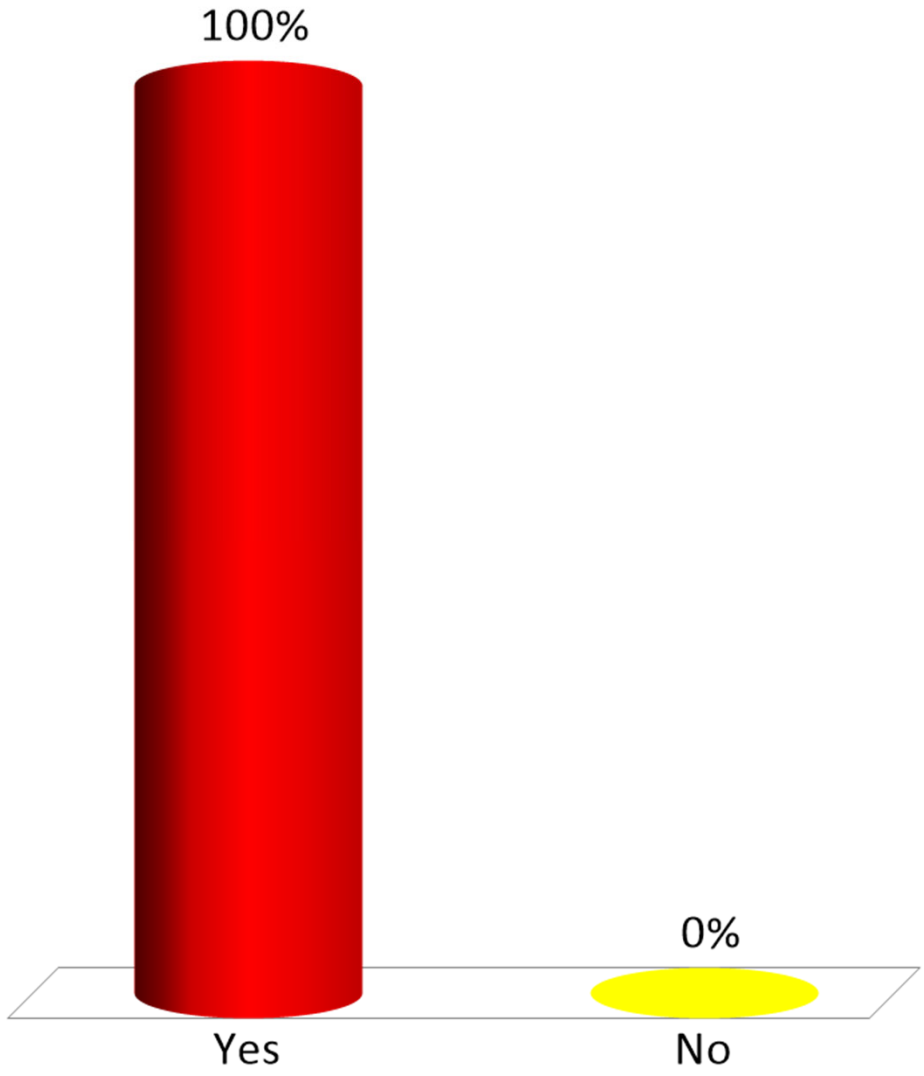
A. Too technical in nature
B. Too simplified
C. Just about right
D. Not much use at all



Do you find the selected scope of work satisfactory?

A. Yes

B. No



For more information:

- https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/12C578

Braintree BF 0241(51)
Questions & Comments

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