Proctor BO 1443(54)
Public Informational Meeting

Town Highway 11 (North St.) – Bridge #3 over the Vermont Railway

04/13/2017

November 27, 2017

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Introductions

Doug Bonneau, P.E.
VTrans Project Manager

Laura Stone, P.E.
VTrans Scoping Engineer

Dave Peterson, P.E.
VTrans Design Engineer

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Purpose of Meeting

- Discuss alternatives that were considered
- Provide an overview of project constraints
- Provide an understanding of our approach to the project
- Provide an opportunity to ask questions and voice concerns
- Foster support for the recommended alternative

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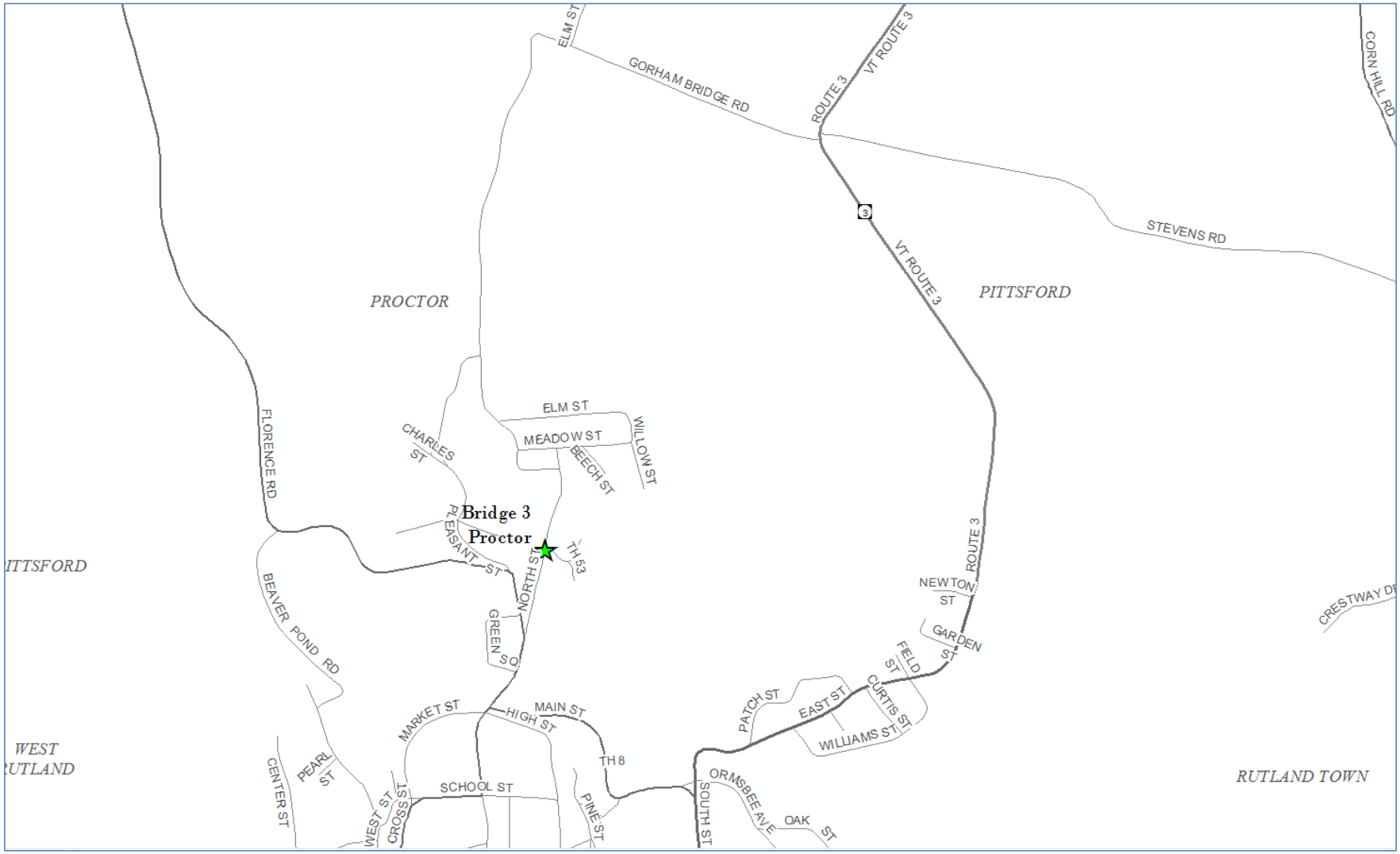

Location Map


Bridge 3
Project Location
North St
North St
North St
North St
Terrace Hill Rd
Terrace Hill Rd
Terrace Hill Rd

Meeting Overview

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

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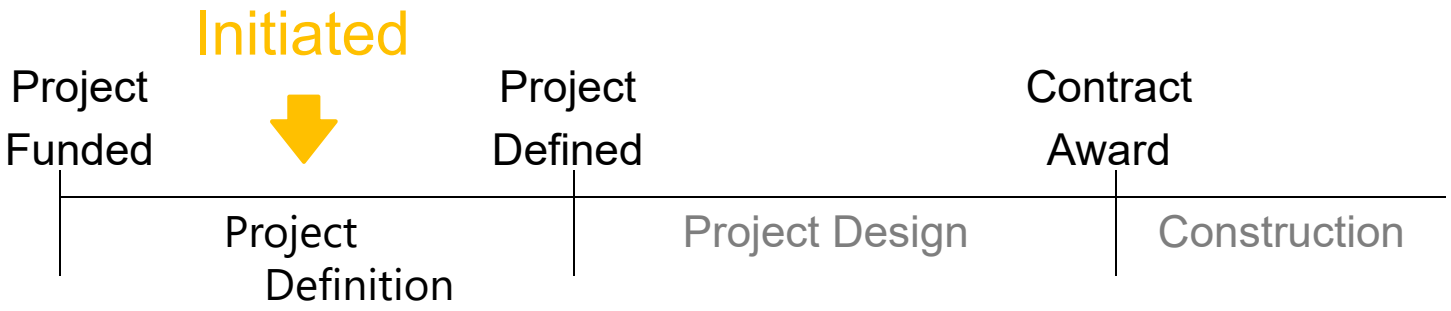
VTrans Project Development Process



- 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 needed)

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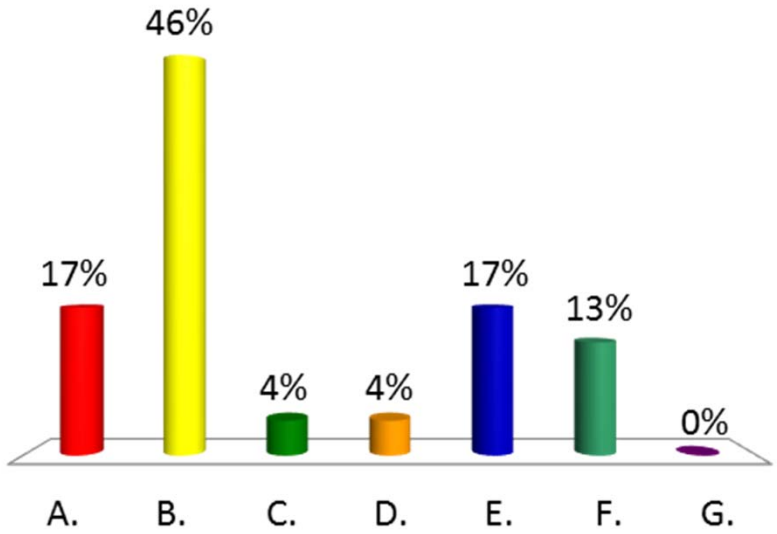
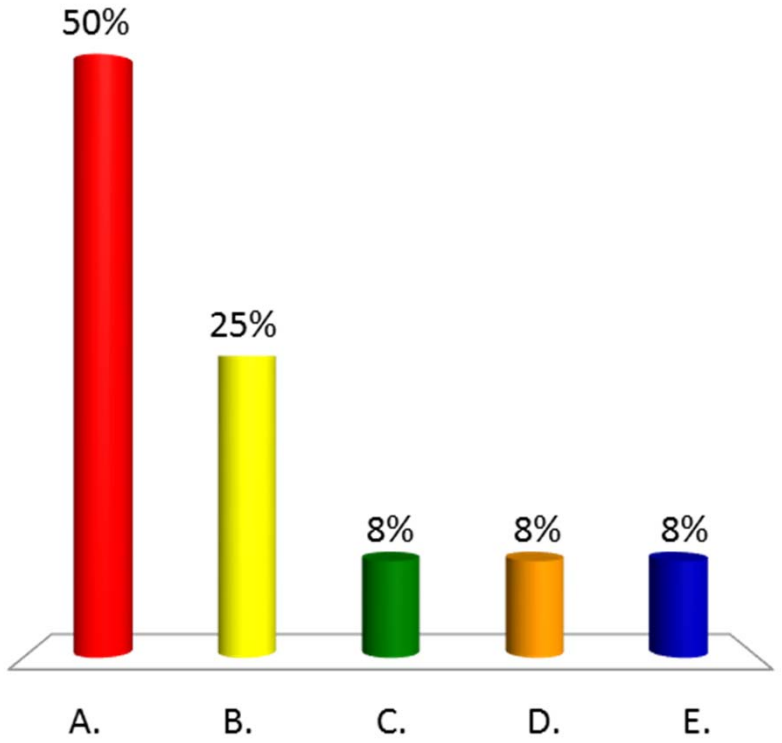
Who are you representing?

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



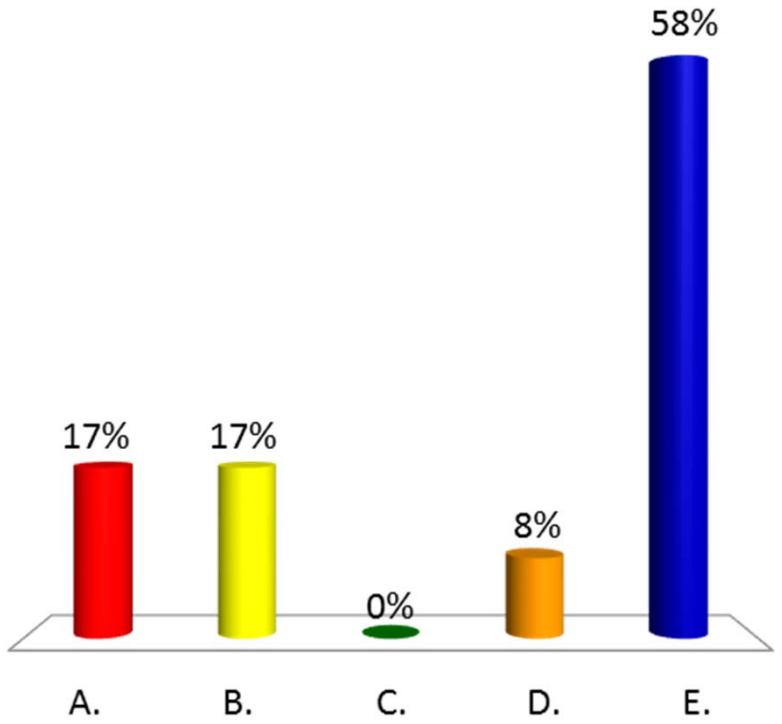
How often do you use this segment of North Street?

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



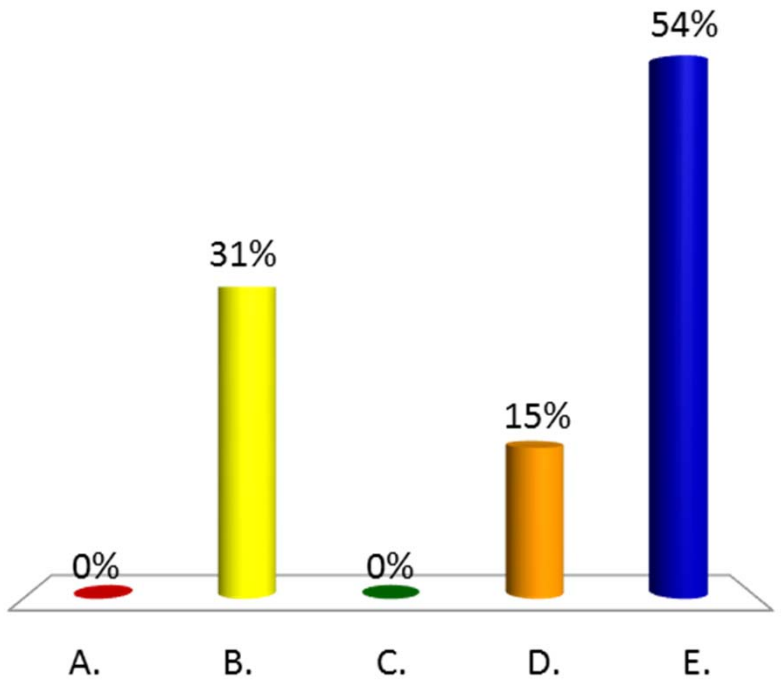
How often do you walk over the bridge?

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



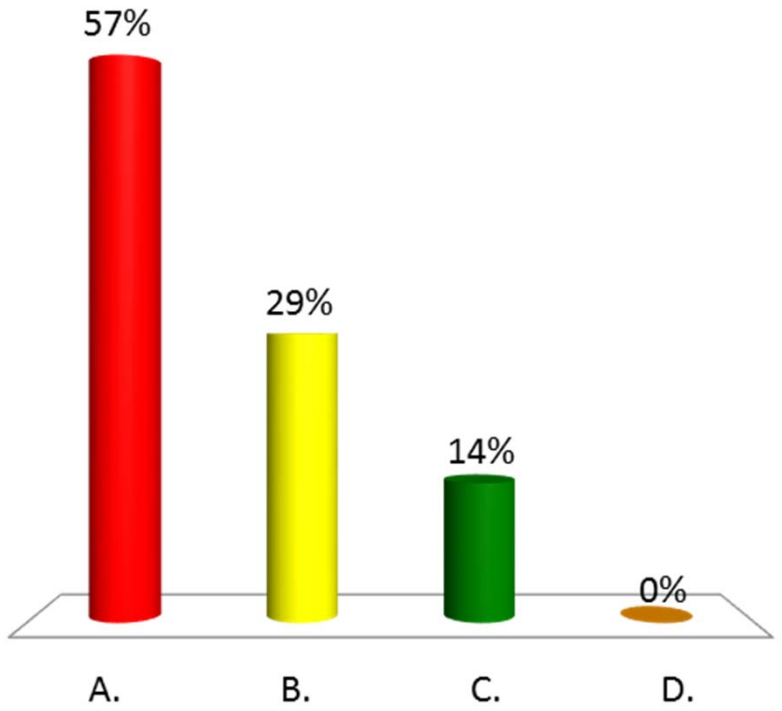
How often do you bike over the bridge?

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



Project Overview

- Existing Conditions
- Alternatives Considered
- Recommended Alternative

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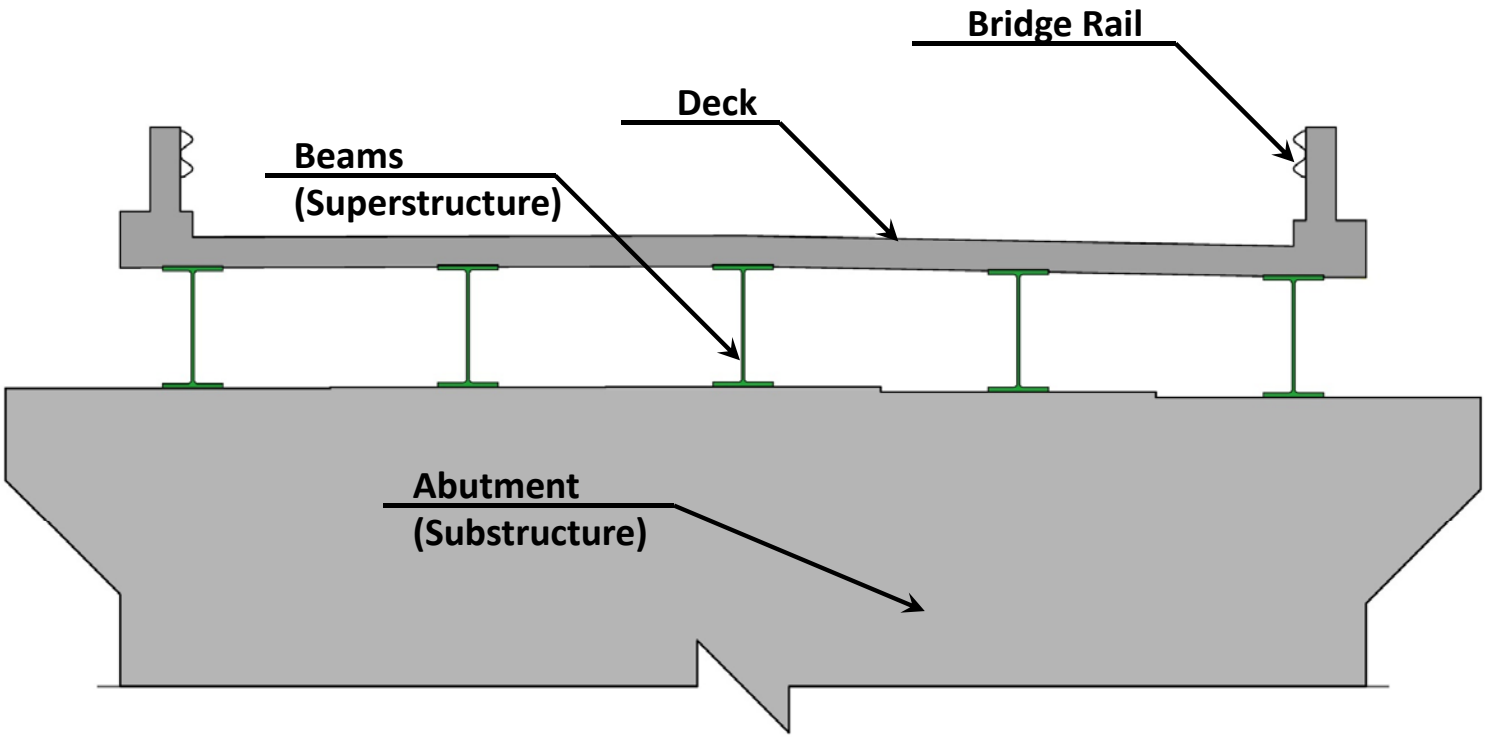
Description of Terms Used



Cross Section of Bridge

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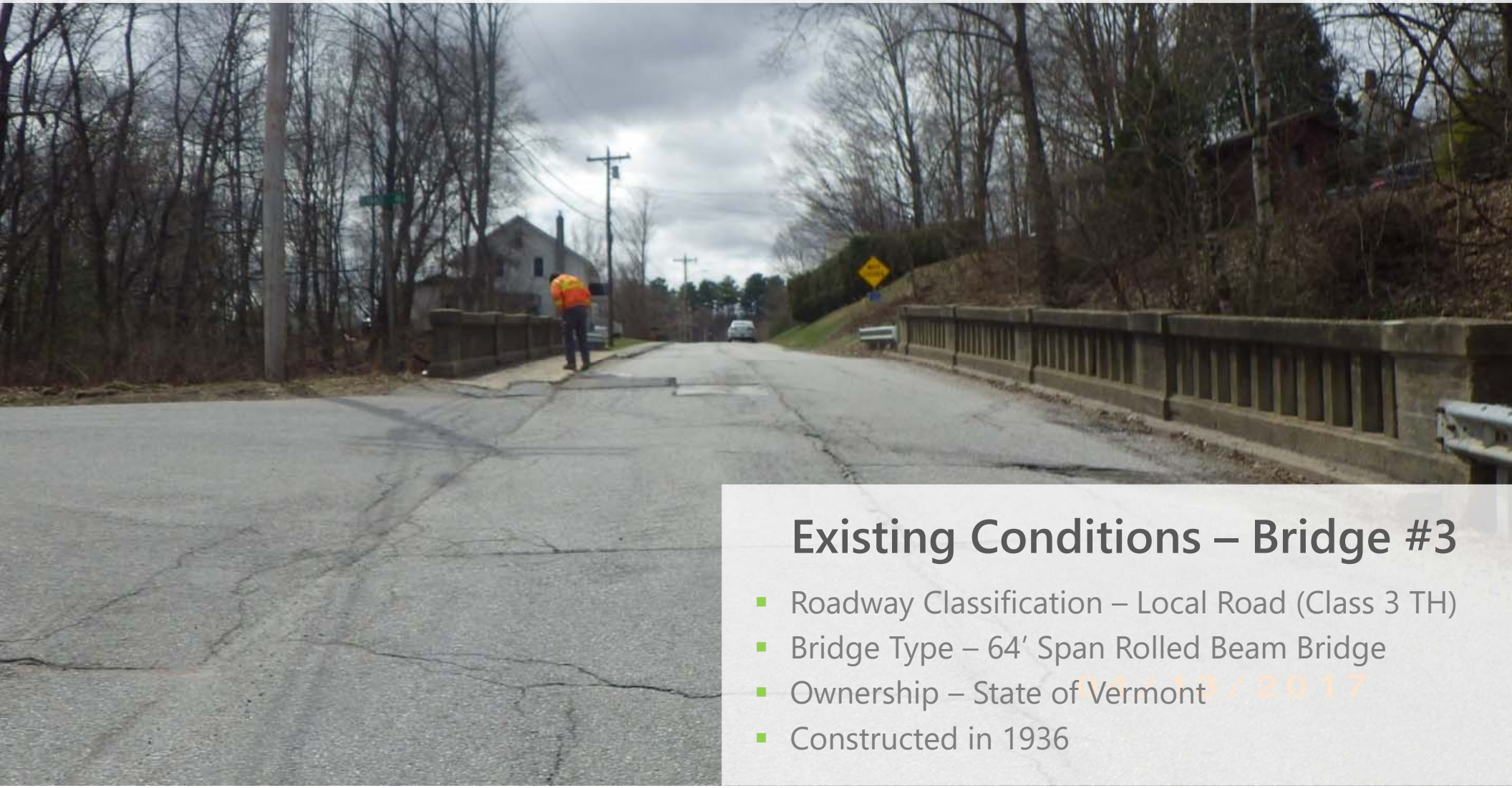
Looking South over Bridge



Existing Conditions – Bridge #3

- Roadway Classification – Local Road (Class 3 TH)
- Bridge Type – 64’ Span Rolled Beam Bridge
- Ownership – State of Vermont
- Constructed in 1936

Existing Conditions – Bridge #3

- The deck is in serious condition
  - At risk for full depth pop outs
- The superstructure is in poor condition
  - Potential for beam crushing due to heavy corrosion and section loss
- There are delaminations and loose concrete at the stemwalls with some efflorescence.
- The shoulders on North Street are substandard by 1 foot throughout the project area.
- There is a substandard vertical crest curve over the bridge.
- The bridge does not meet the minimum vertical clearance for the railway.

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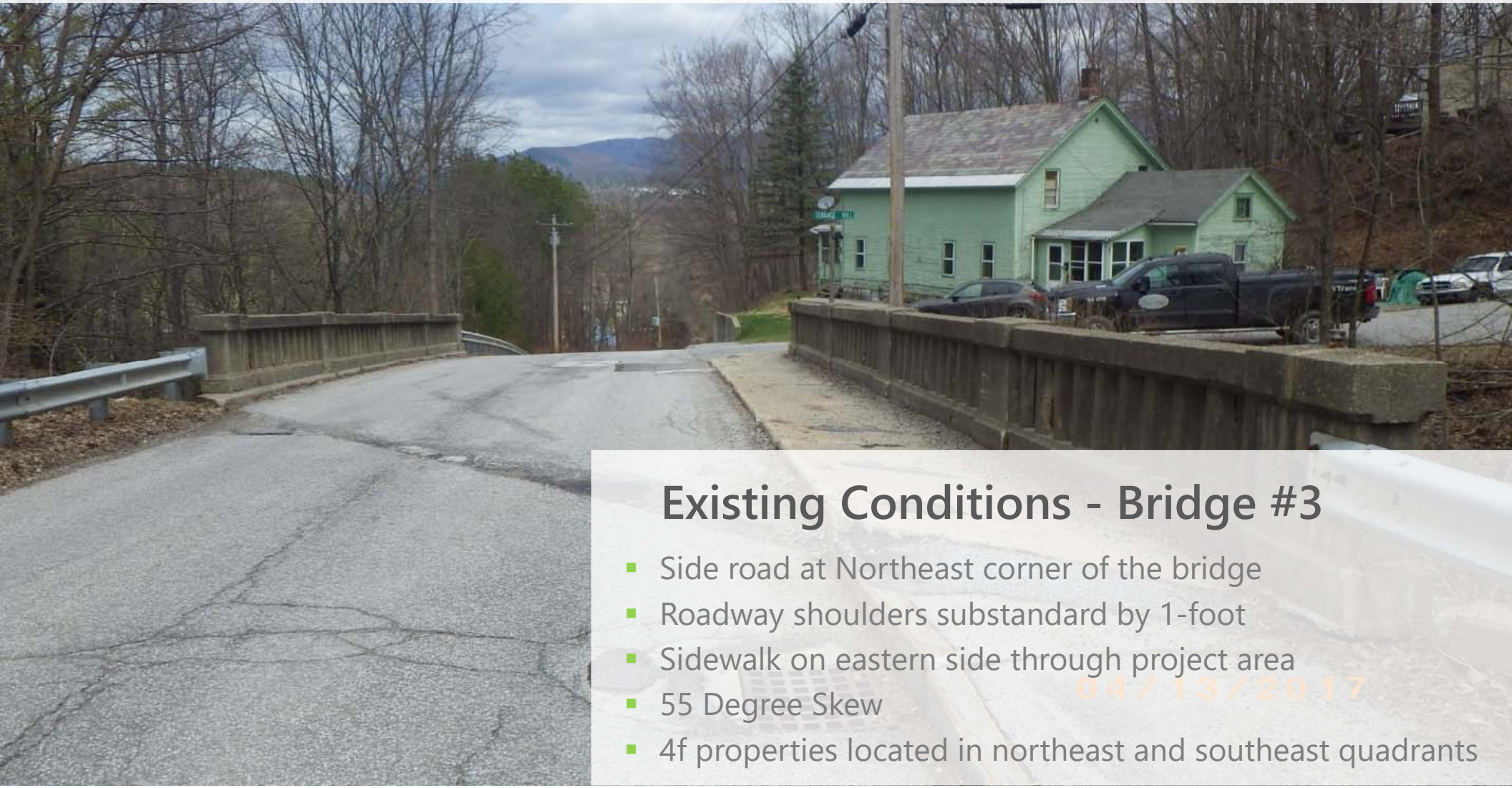
Deck and Superstructure Deterioration

Existing Conditions - Bridge #3

- Deck Rating 3 (Serious)
- Superstructure Rating 4 (Poor)
- Substructure Rating 6 (Satisfactory)

Looking North over Bridge



Existing Conditions - Bridge #3

- Side road at Northeast corner of the bridge
- Roadway shoulders substandard by 1-foot
- Sidewalk on eastern side through project area
- 55 Degree Skew
- 4f properties located in northeast and southeast quadrants

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Western Fascia

Existing Conditions - Bridge #3

- Steep Slopes
- Bridge 3 is a historic resource
- Substandard vertical clearance for railroad

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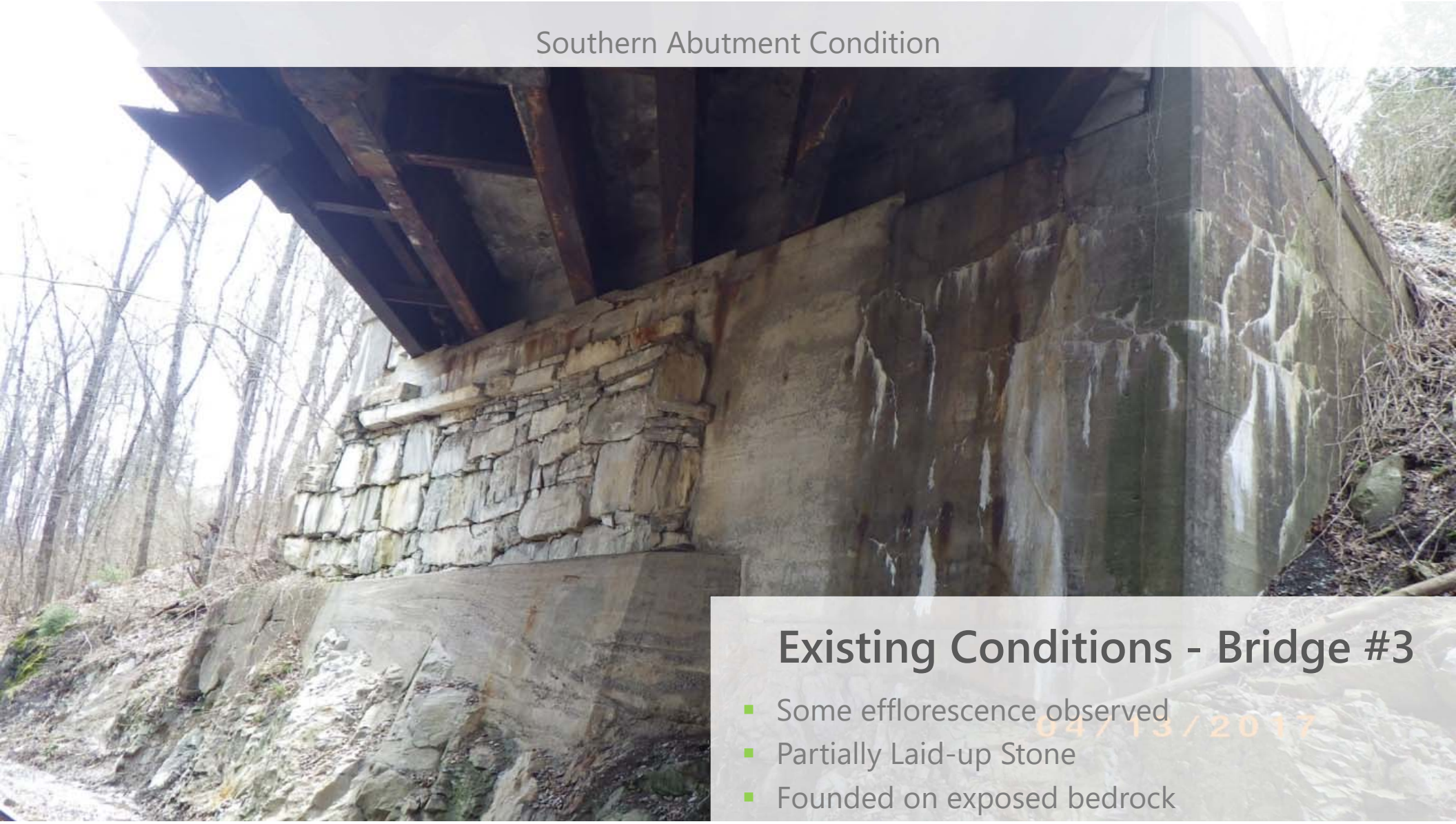
Eastern Fascia

Existing Conditions - Bridge #3

- Retaining wall located in southeast quadrant

Southern Abutment Condition



Existing Conditions - Bridge #3

- Some efflorescence observed
- Partially Laid-up Stone
- Founded on exposed bedrock

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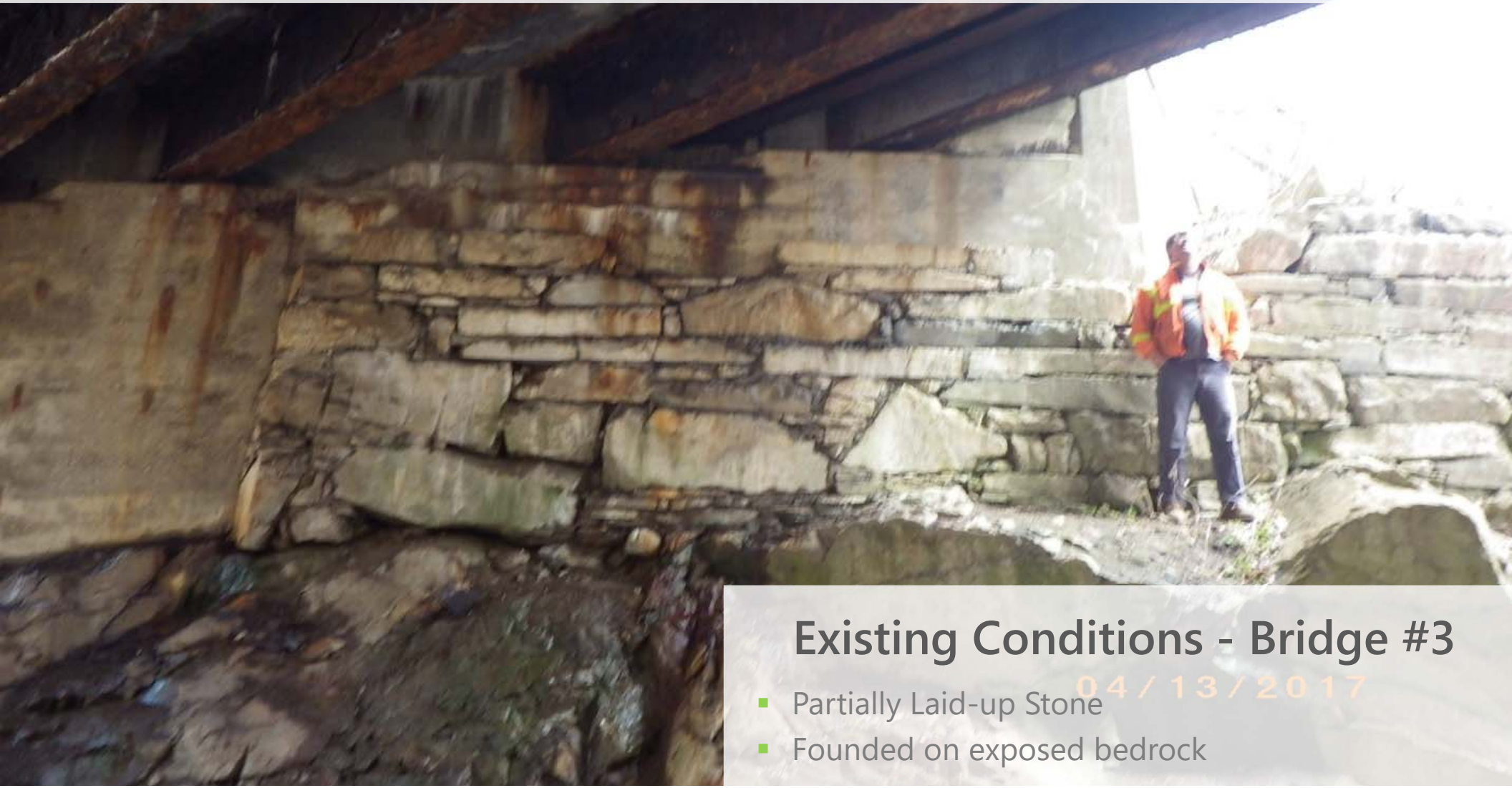
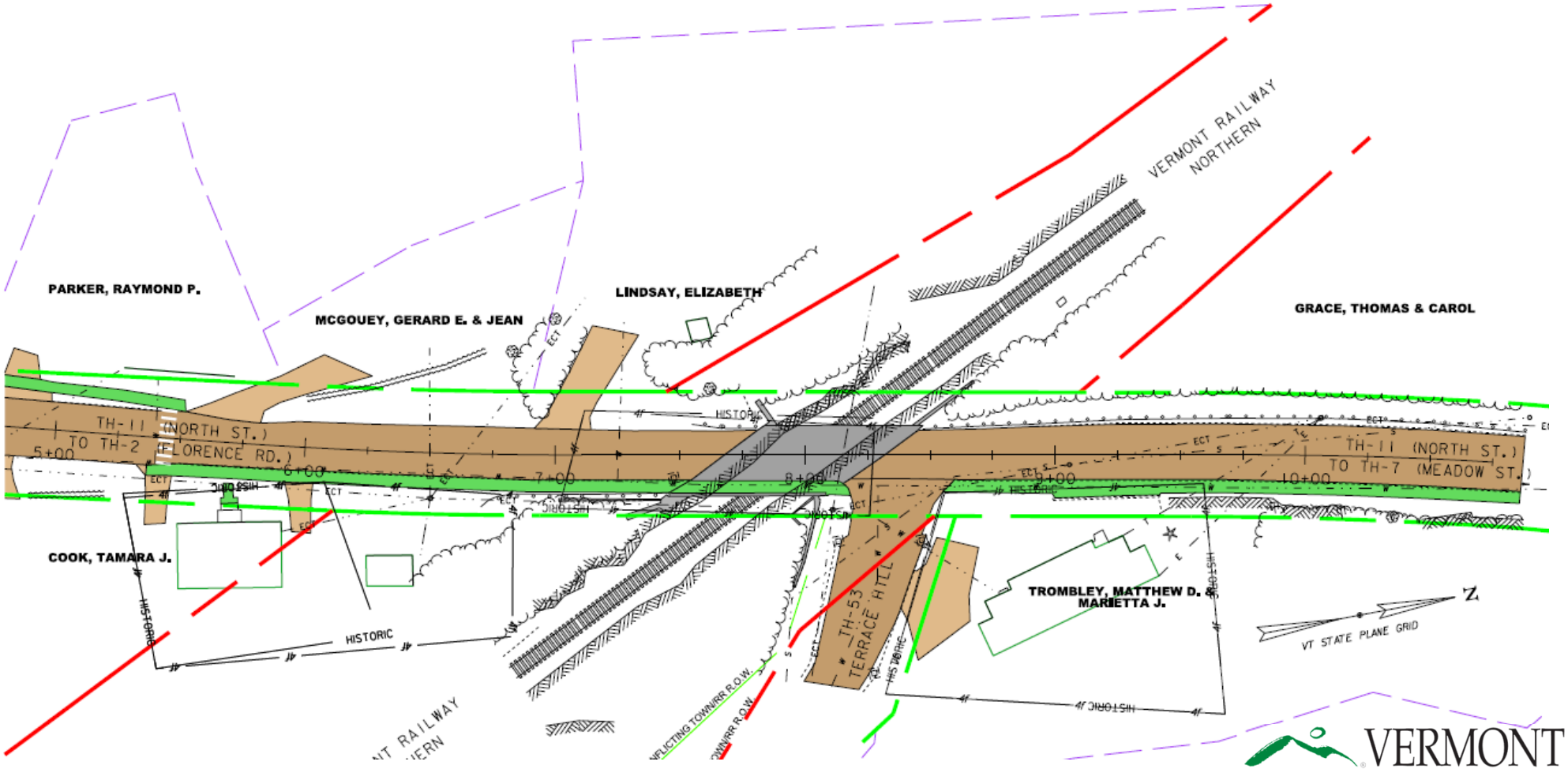
Northern Abutment Condition



Existing Conditions - Bridge #3

- Partially Laid-up Stone
- Founded on exposed bedrock

Existing Conditions



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Design Criteria and Considerations

- ADT of 820
- DHV of 120
- % Trucks: 7.2
- Design Speed of 25 mph
- Railroad Clearance
- Historic bridge
- Historic Section 4(f) properties on eastern side of bridge
- Waterline relocation

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Alternatives Considered – Bridge #3

- No Action
  - Additional maintenance required within 10 years
- Superstructure Replacement – at grade or vertical raise option
  - Structural deficiencies would be addressed
  - Widen to minimum standard (9'/2')
  - 40 year design life
  - Vertical raise would improve vertical clearance, but would not meet AREMA standard
- 65' Span Full Bridge Replacement – at grade or vertical raise option
  - Vertical raise option would meet AREMA standards
  - 10' - 15' tall abutments founded on exposed bedrock
  - 80 year design life
- 40' Span Full Bridge Replacement – at grade or vertical raise option
  - Vertical raise option would meet AREMA standards
  - 20' - 25' tall abutments
  - 80 year design life
- Full Bridge Replacement w/ Buried Structure and vertical raise
  - Vertical raise option would meet AREMA standards
  - Could either be founded on strip footings or on pedestal walls depending on configuration
  - 80 year design life

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Selected Alternative - Bridge #3

- Full Bridge Replacement – 65’ Span
  - Raise Roadway 3 Feet
    - Lowering of the rail line is not practical due to ledge
  - Widen Bridge slightly to meet minimum standard
  - Abutments placed on existing bedrock outcrop
  - Meets minimum vertical clearance per AREMA
  - 80 year design life
  - Right-of-Way needed

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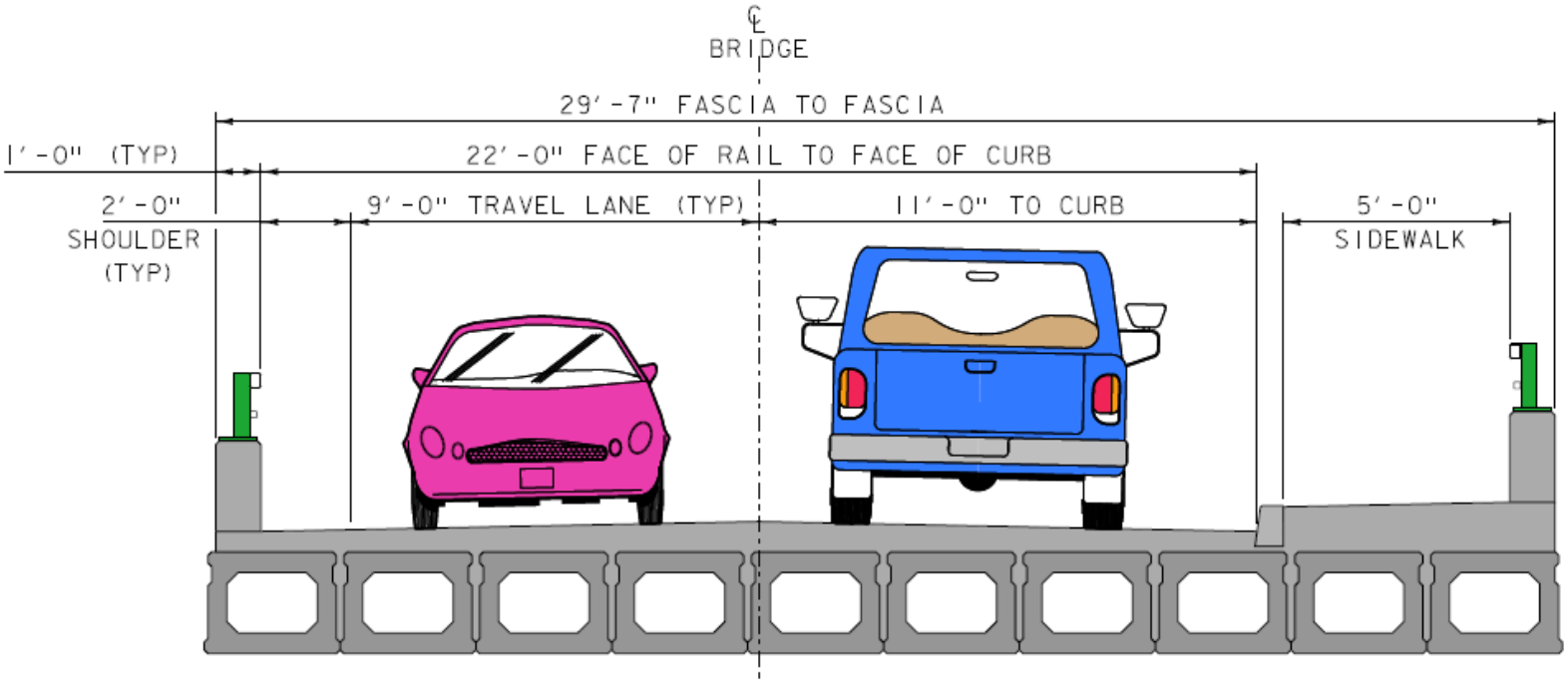
Proposed Typical Section



PROPOSED BRIDGE TYPICAL SECTION

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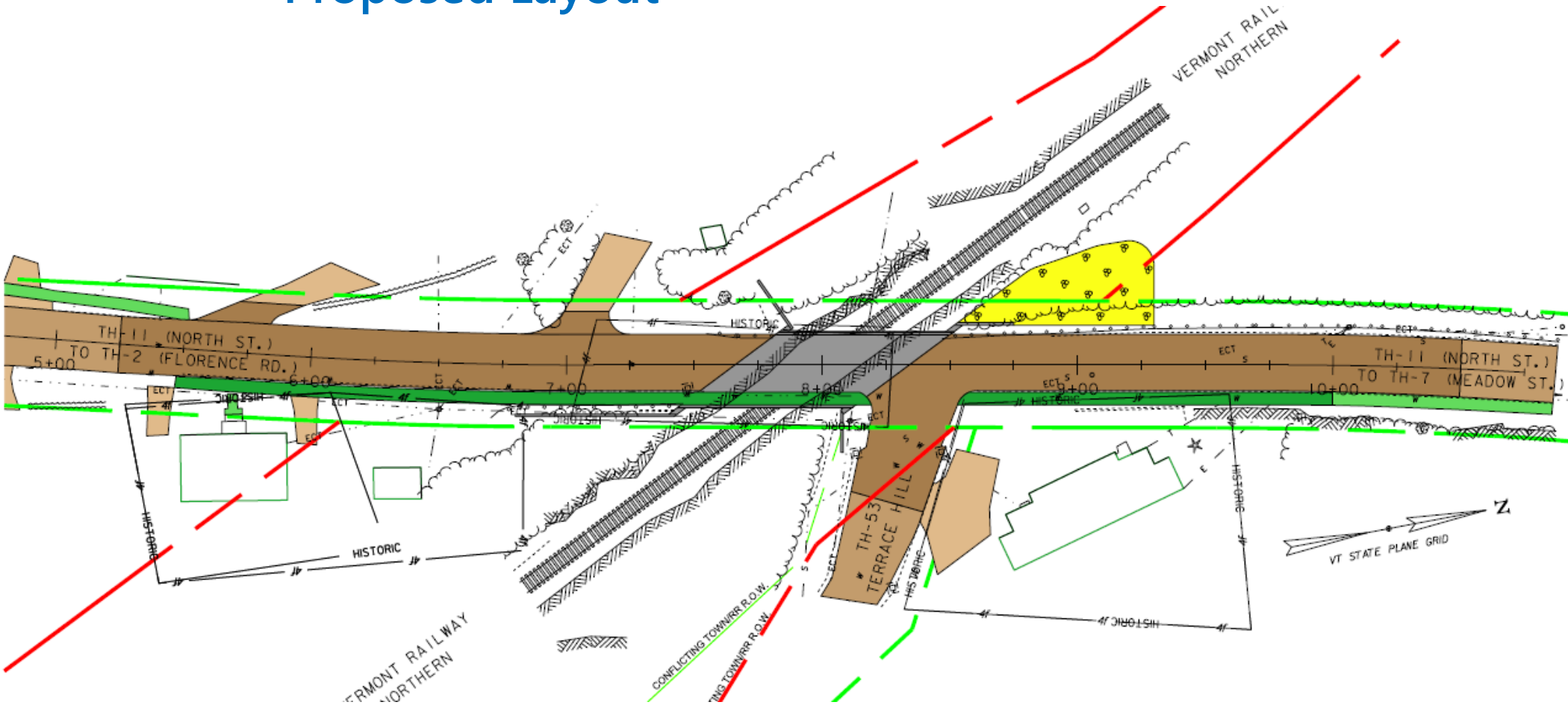
Proposed Layout



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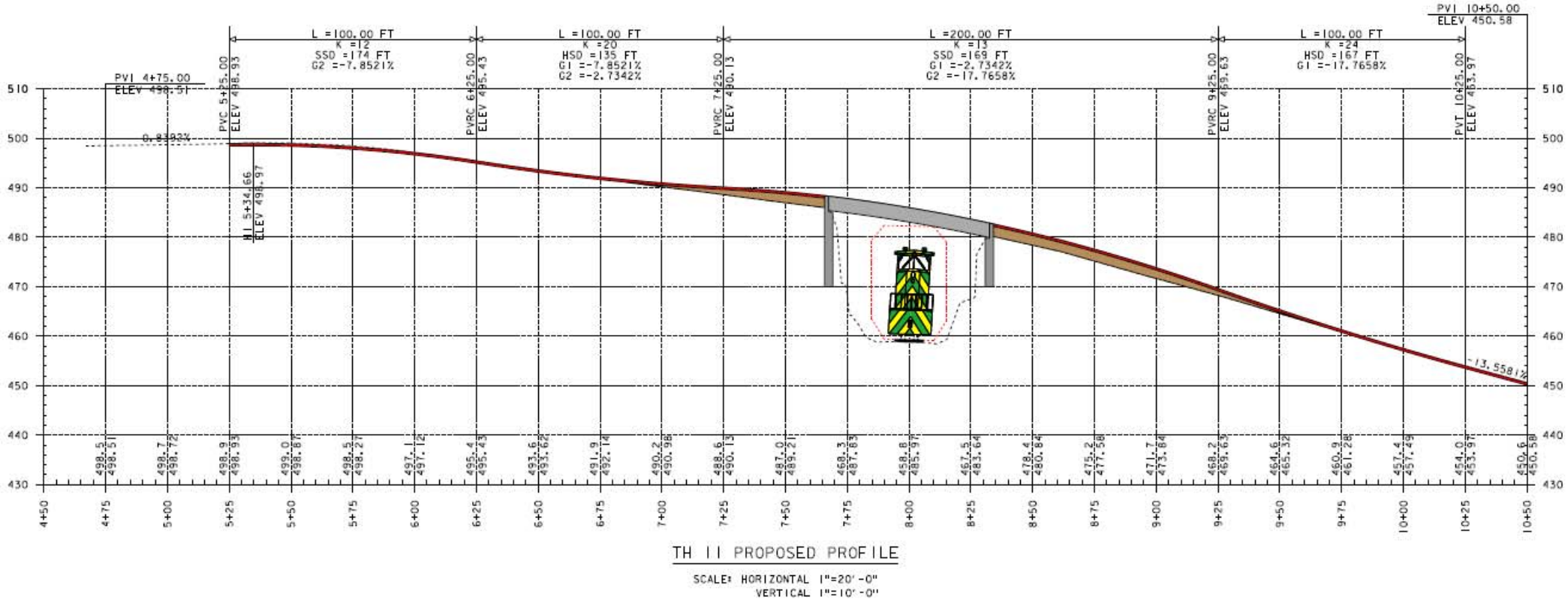
Proposed Profile



TH 11 PROPOSED PROFILE

SCALE: HORIZONTAL 1"=20'-0"
VERTICAL 1"=10'-0"

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Maintenance of Traffic Options Considered

- Offsite Detour
  - Several local bypass routes; shortest is 1.2 miles end-to-end
- Temporary Bridge
  - One-way with signals, Eastern side of bridge
  - Biggest impacts to Right-of-Way, adjacent properties, and historic resources
- ROW needed for all options

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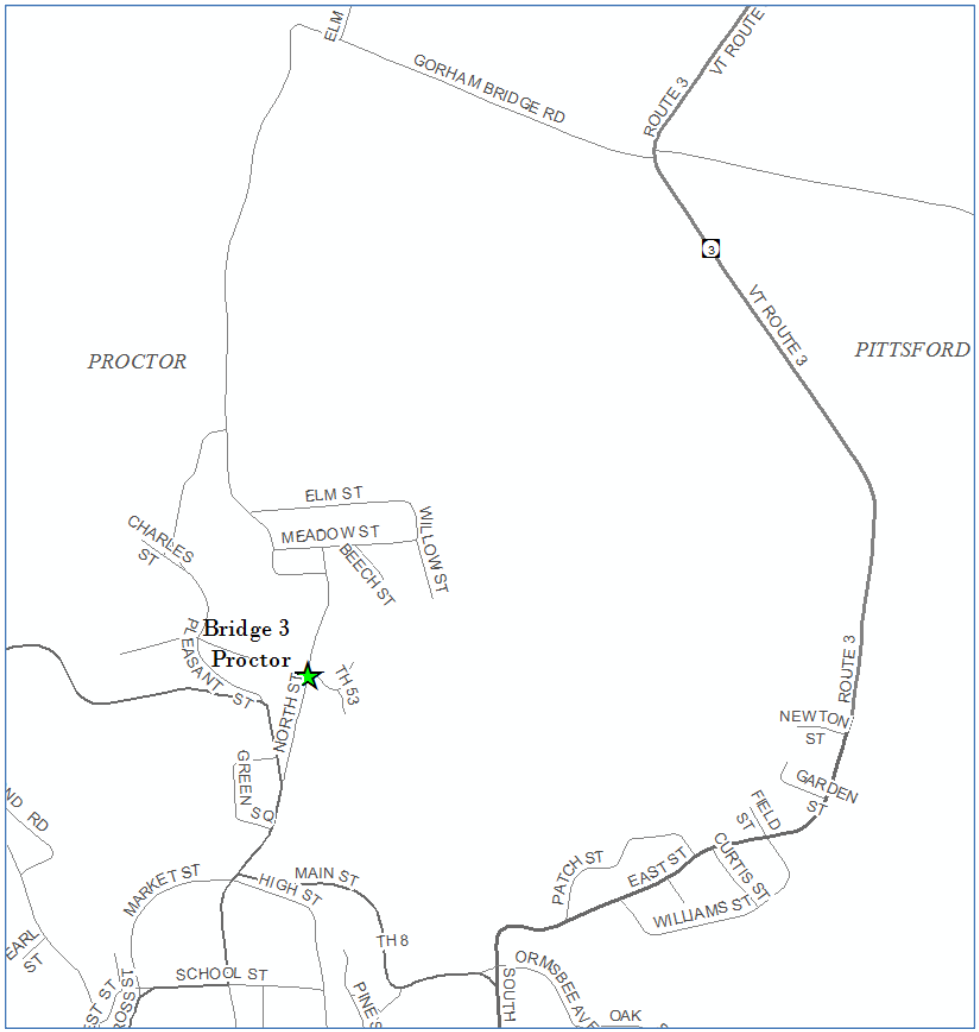
Selected Maintenance of Traffic

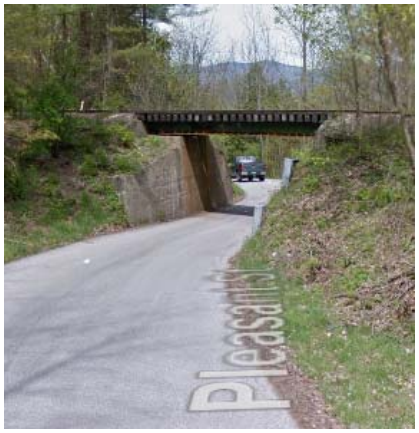
Road Closure

- Detour chosen by Town and signed by State
- Shortest route is 1.2 miles end-to-end
- Allowable two week alternating one way traffic prior to the closure
- 90 day closure
- Two way, two lane traffic following construction
- Temporary pedestrian bridge
- No truck access during detour

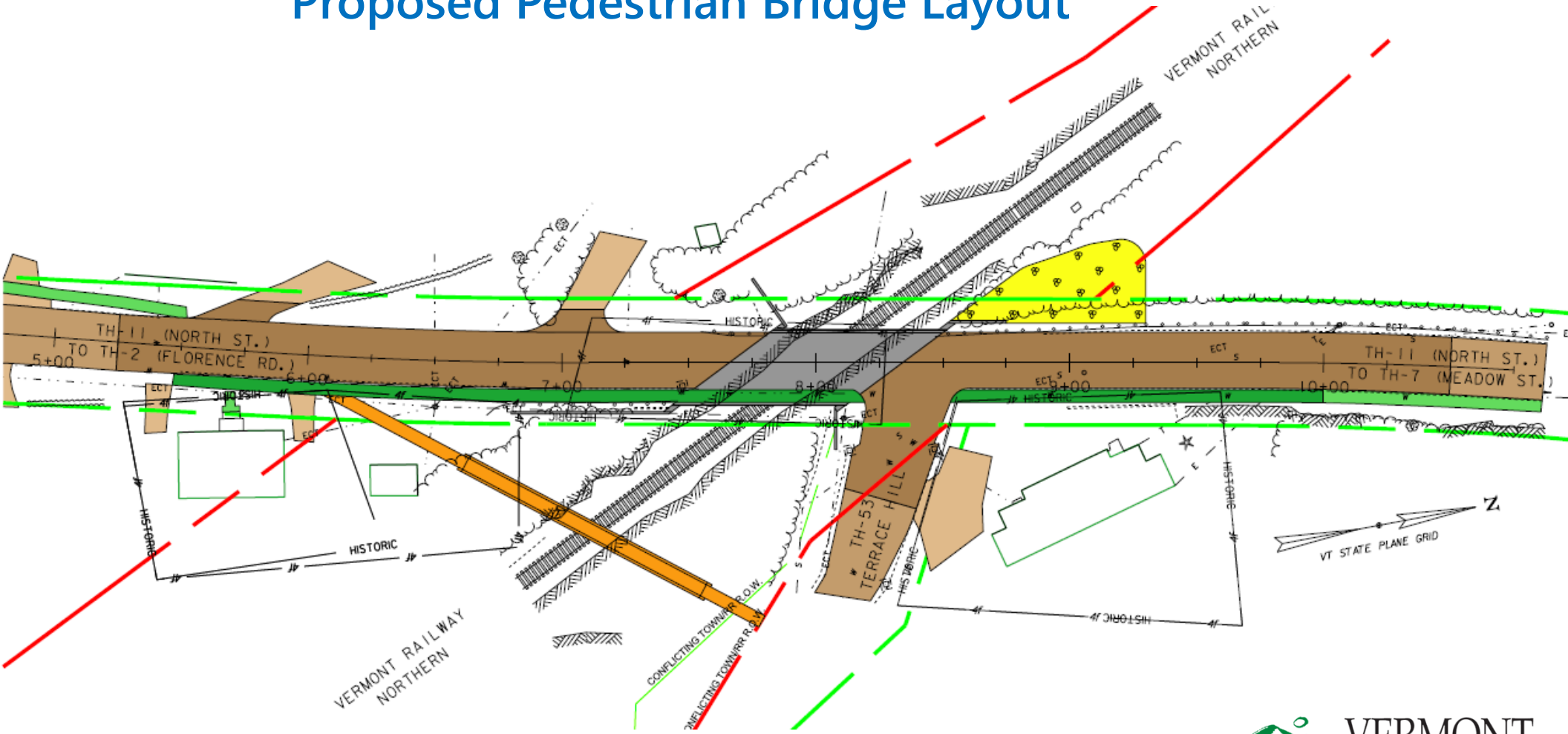
Traffic Control – Local Detour



- The shortest local detour route, has an End-to-End distance of 1.2 miles
  - North Street, to Bridge Road, Gorham Bridge Road, Pleasant Street, and Florence Road, back to North Street
- No truck access during closure
  - Covered bridge located on Gorham Bridge Road
  - Railroad bridge with minimal under clearance located above Pleasant Street



Proposed Pedestrian Bridge Layout



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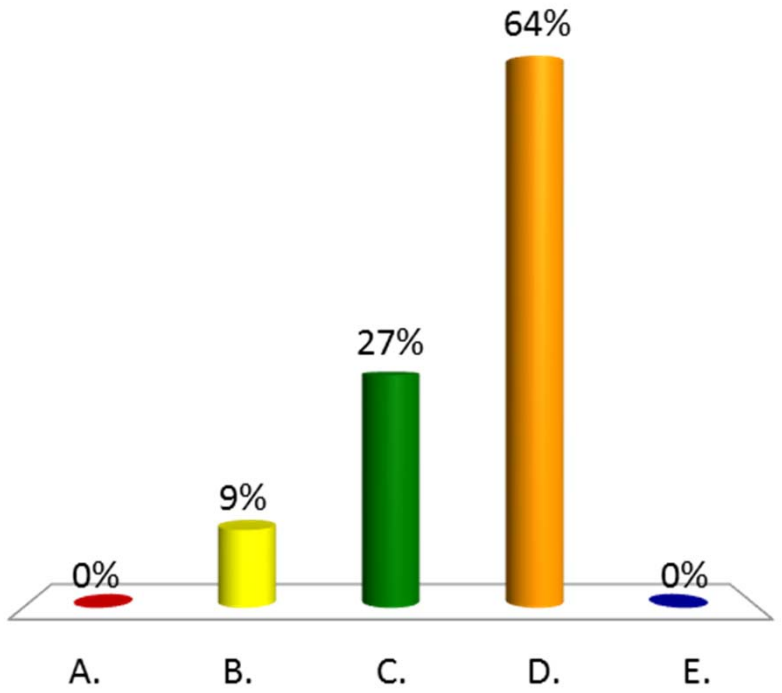
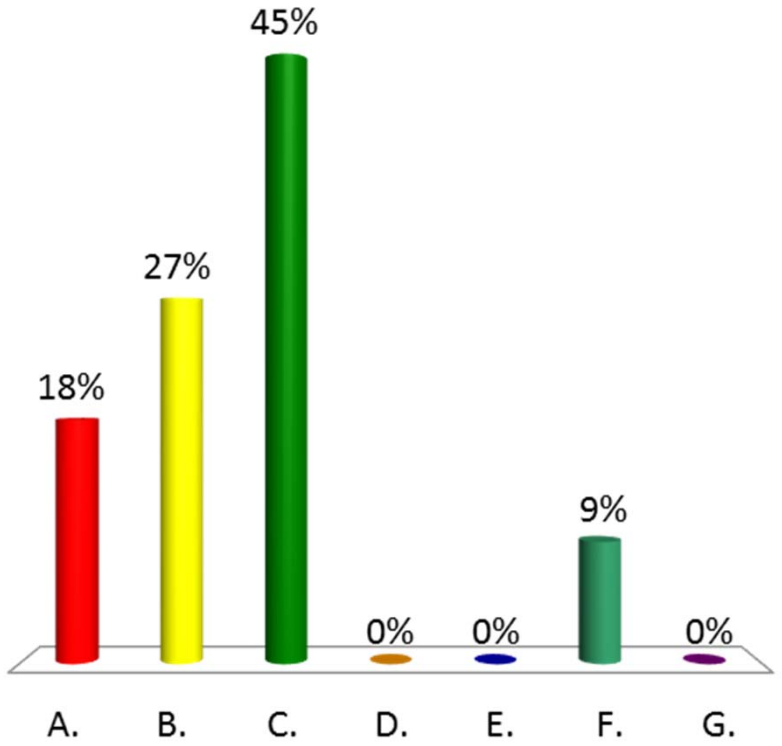
What would be the maximum acceptable length of closure for Bridge #3?

A. 45 days
B. 60 days
C. 75 days
D. 90 days
E. 120 days



Which time of year would be most acceptable for Bridge #3 to be closed

A. April
B. May
C. June
D. July
E. August
F. September
G. Other



Project Summary

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- Full Bridge Replacement (65’ Span) on Raised Vertical Alignment:
  - Precast superstructure
  - Traffic Maintained on offsite detour during 3 month closure
  - Temporary pedestrian bridge
  - Raise Roadway by 3 Feet
  - Widen Bridge slightly to meet minimum standard
  - Both abutments placed back on the bedrock outcrop
  - 23’ vertical clearance provided for railroad (meets minimum standard per AREMA)
  - 80 year design life
  - Right-of-Way needed
  - Utility relocation needed (municipal water line and aerial utilities)
  - Coordination with waste haulers to ensure continuous service during the closure
  - Construction – Summer 2021 or 2022

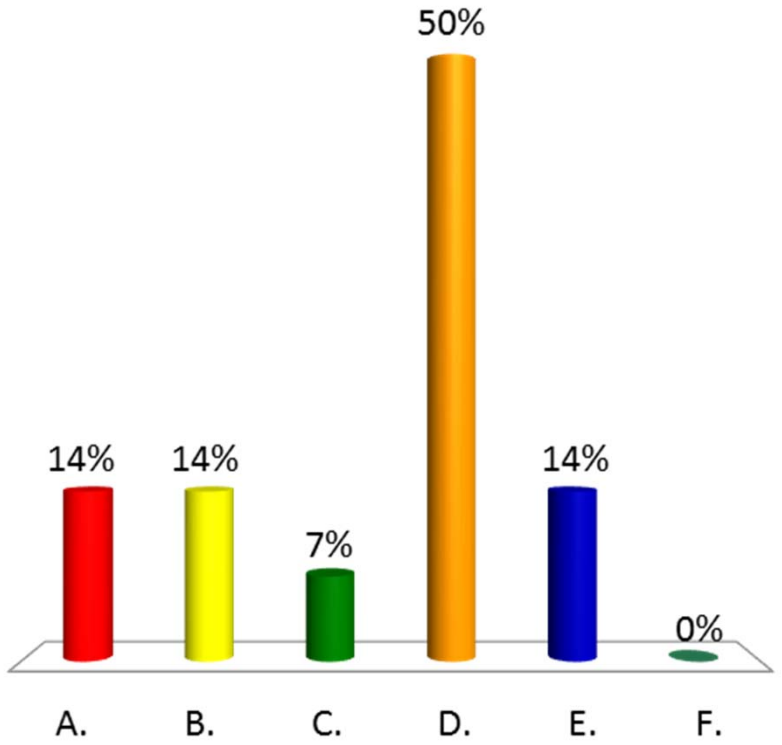
What Will the New Bridge Look Like?

Proposed Example - Bridge #3

- Combination Rail – Historic Requirements

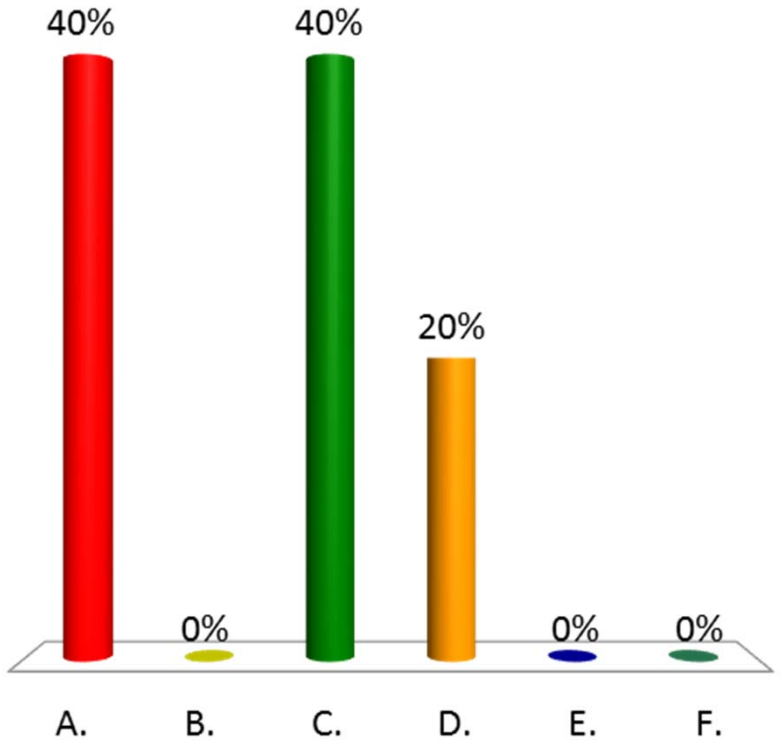
Which would you be most concerned about?

A. Bridge Aesthetics
B. Environmental Impacts
C. Recreational Impacts
D. Closure Length
E. Other
F. Not Really Concerned



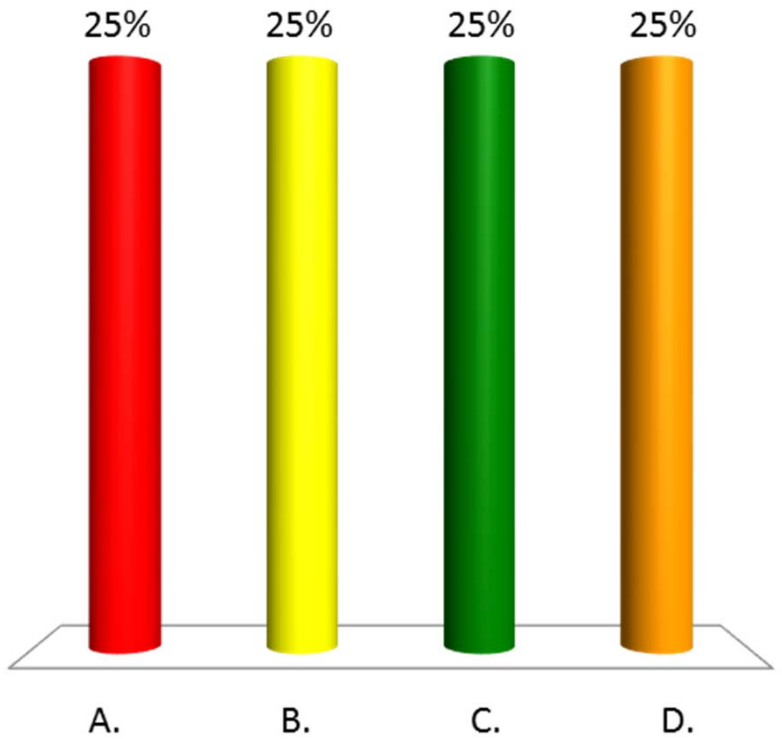
Which design aspect is the most important to you?

A. Shoulder width/bicycle accommodations
B. Aesthetics – Bridge Railing
C. Construction Year
D. Construction Duration
E. Cost
F. Other



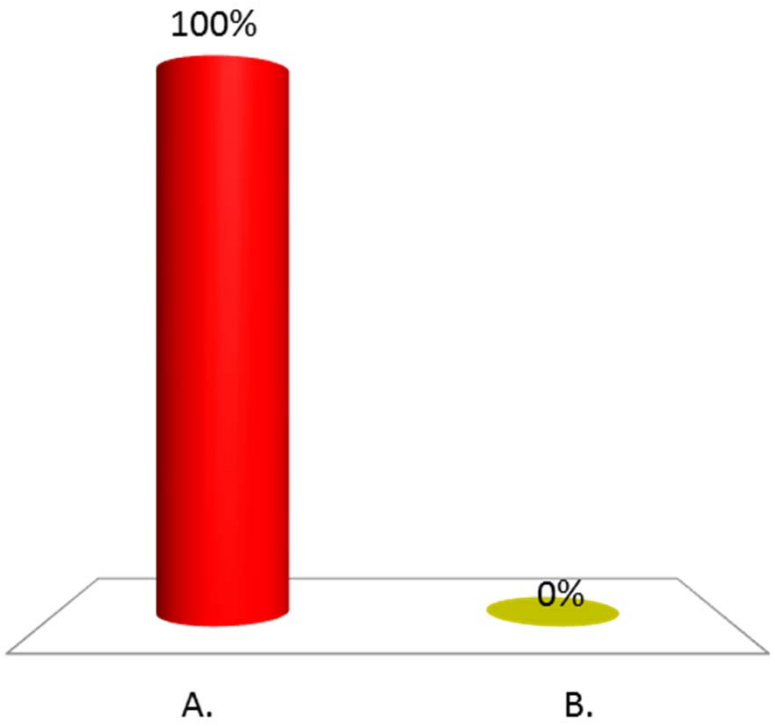
Did you find this presentation to be?

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



Do you find the recommended scope of work satisfactory?

A. Yes
B. No



Preliminary Project Schedule

- Construction – Summer 2021 or 2022

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For more information:

- https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/16B003

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Questions and Comments

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November 27, 2017

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