

# Peterborough 27712

## Public Informational Meeting



**U.S. 202 & N.H. 123 over the Contoocook River**  
**January 25, 2024**

# Overview

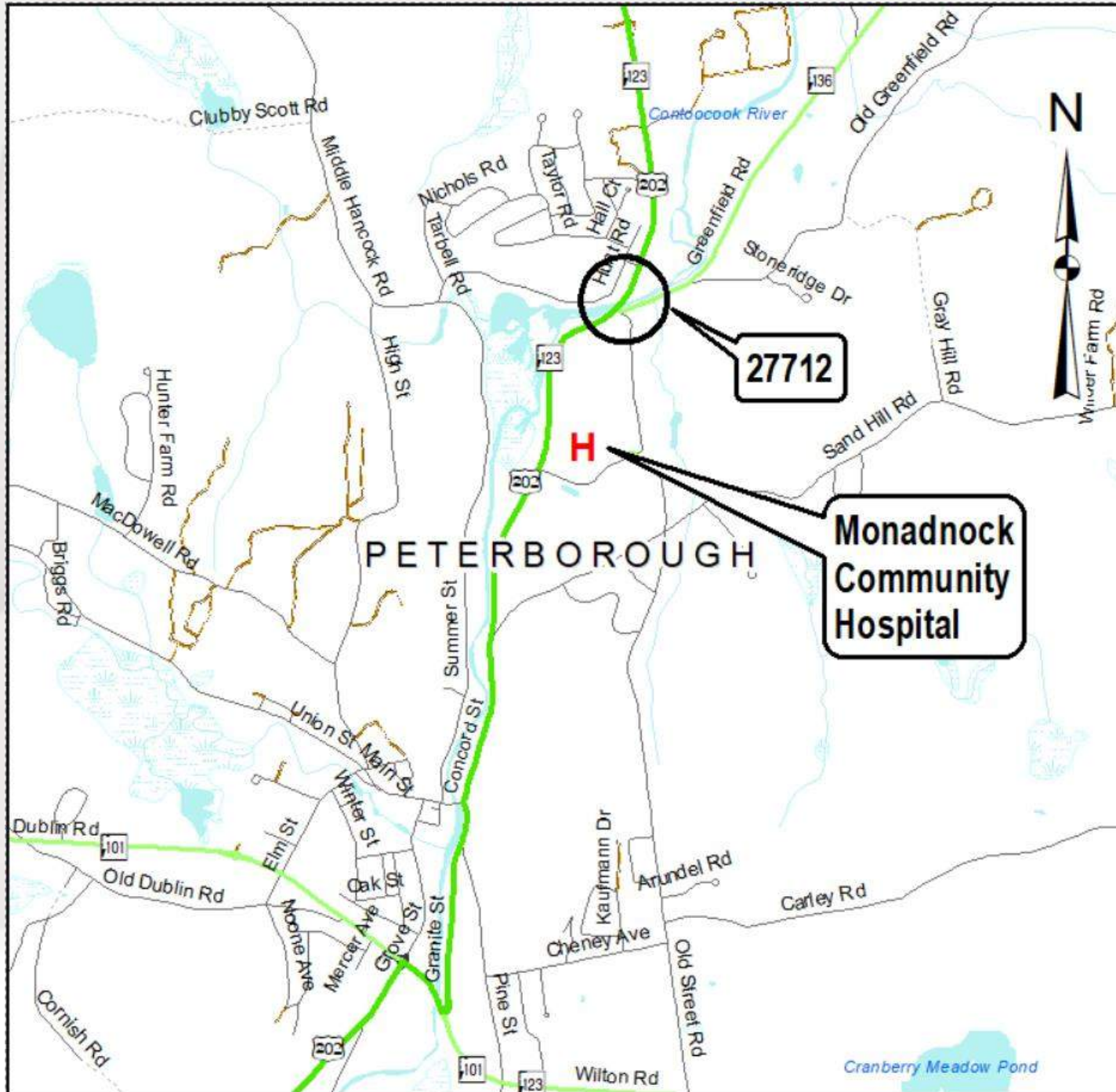
- Introductions
  - NHDOT: Owner
    - Timothy Dunn, PE (NHDOT Project Manager)
  - Hoyle Tanner: Design Consultant
    - Ed Weingartner, PE (HTA Designer)
- Meeting Purpose
  - Follow up to previous Public Officials Meetings (3/16/2021 & 10/3/2023)
  - Present Alternatives
  - Update on project status & schedule
  - Solicit Town, Stakeholder & Public input

# Overview

- Brief Presentation Outline
  - Project purpose and need
  - Existing conditions
  - Design considerations
  - Alternatives evaluated
  - Environmental, historic, cultural resource considerations
  - Schedule & funding
  - Questions



# Project Location



# Purpose and Need

- Purpose
  - The project result is a long term, safe, and sustainable bridge that accommodates multimodal movement of bicycles, pedestrians, and motorized vehicles over the Contoocook River
- Need
  - Address the deteriorating condition of the bridge as demonstrated by the Bridge's overall poor rating and inclusion on the State Red List
  - Address the scour critical nature of the bridge and its inclusion on the State's scour critical bridge list



# Cultural and Historic Resource Consultation (National Historic Preservation Act - Section 106)

- Individuals or organizations with a demonstrated interest in the potential impacts to historic resources may become more involved in an advisory role through meetings and commentary. They may become what are known as Consulting Parties under Section 106 of the National Historic Preservation Act.
- To be more formally involved, you can request to participate in project review as a consulting party under Section 106 of the National Historic Preservation Act. Please contact Jamie Sikora at FHWA to request to become a consulting party:

[Jamie.Sikora@fhwa.dot.gov](mailto:Jamie.Sikora@fhwa.dot.gov)

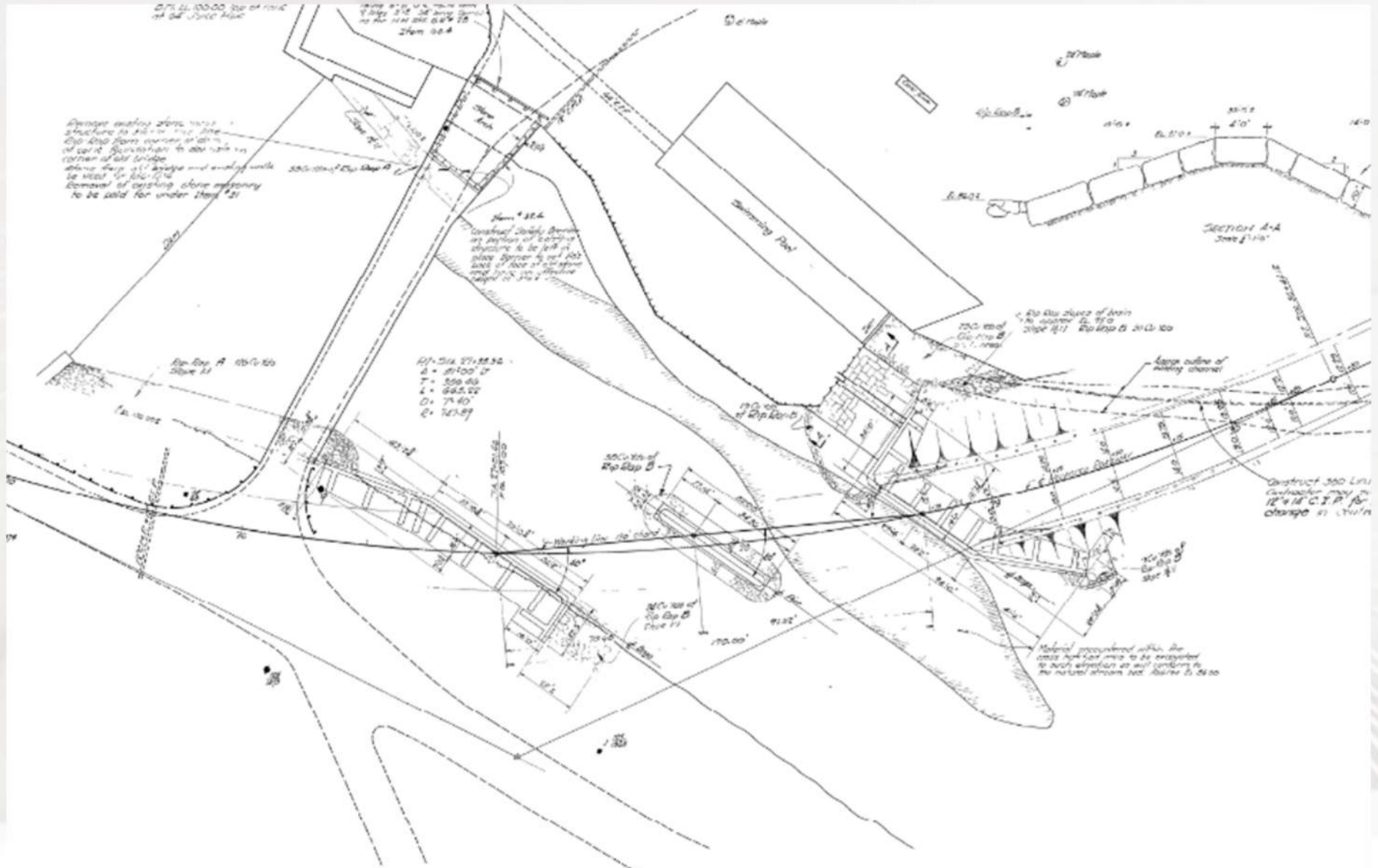
<https://mm.nh.gov/files/uploads/dot/remote-docs/2011-section-106-consulting-party-process-in-nh.pdf>

## Existing Bridge Details

- Constructed in 1942, widened in 1974
- Scour mitigation completed in 2019
- 176' long, curved two span bridge
- Steel girders
- Roadway width: 44'-0"
  - (12' lanes, 10' shoulders)
- And 5' Sidewalk on upstream (W) side
- 6,810 vehicles per day, approx 7% trucks (2021)
- Overall bridge condition is rated Poor (4 out of 10)
- Added to Red List in 2012, ranked #17 on 2022 list

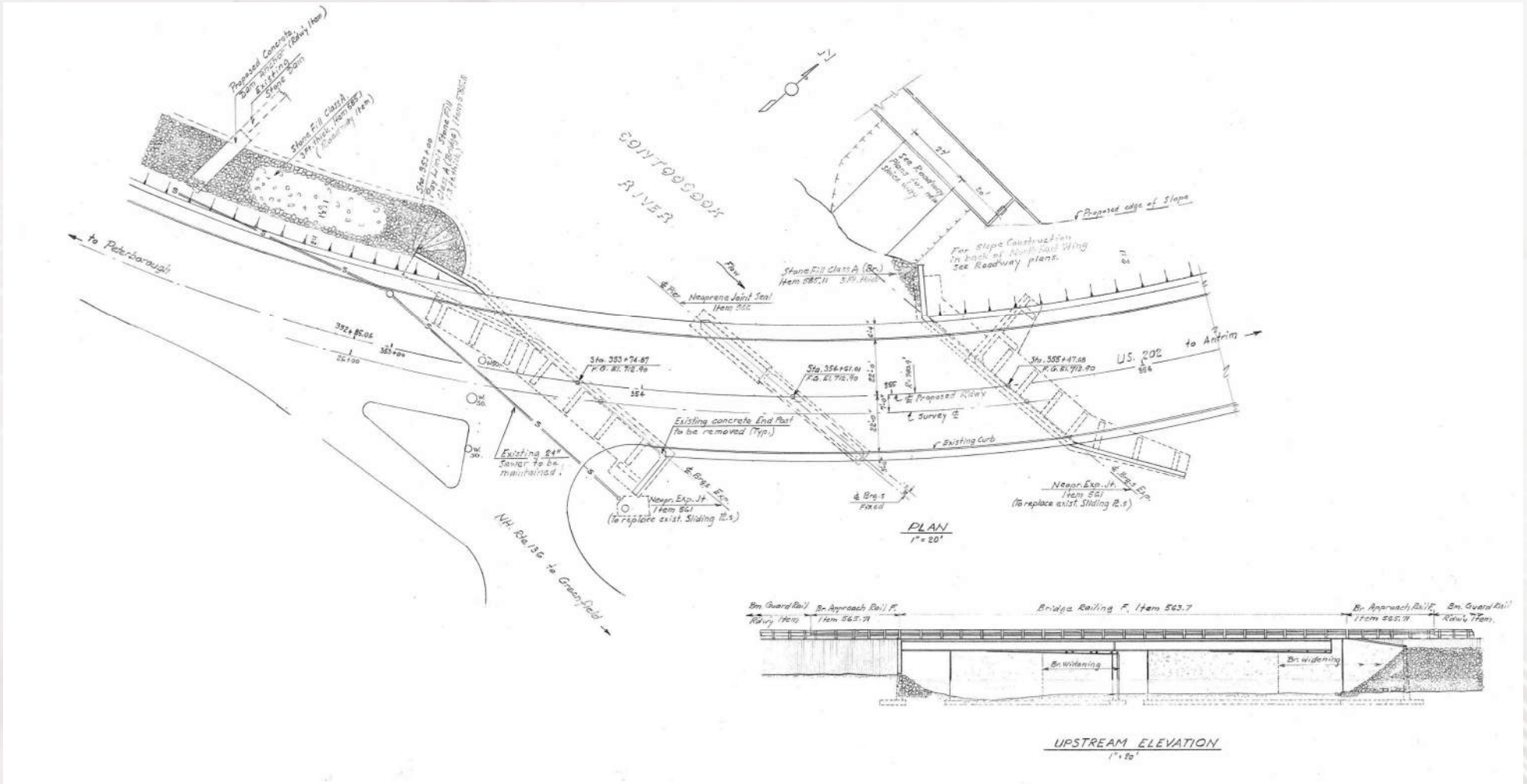


# 1942 Bridge Alignment

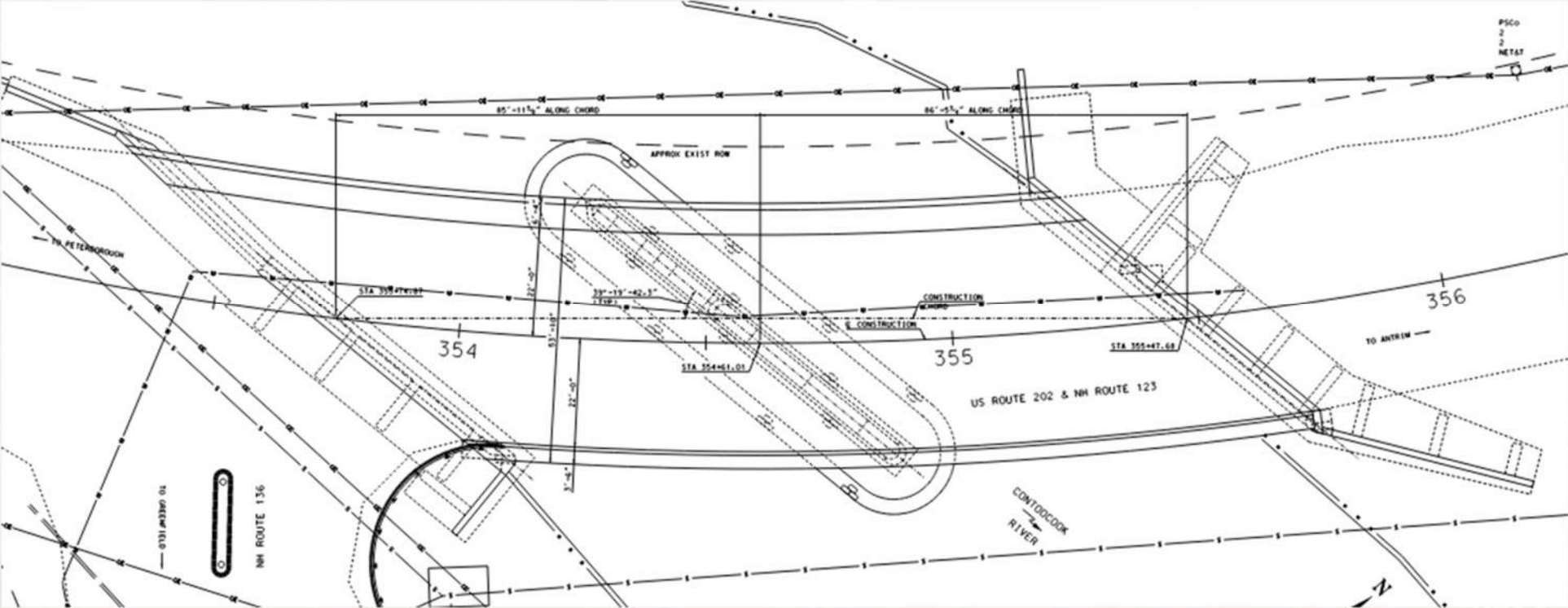




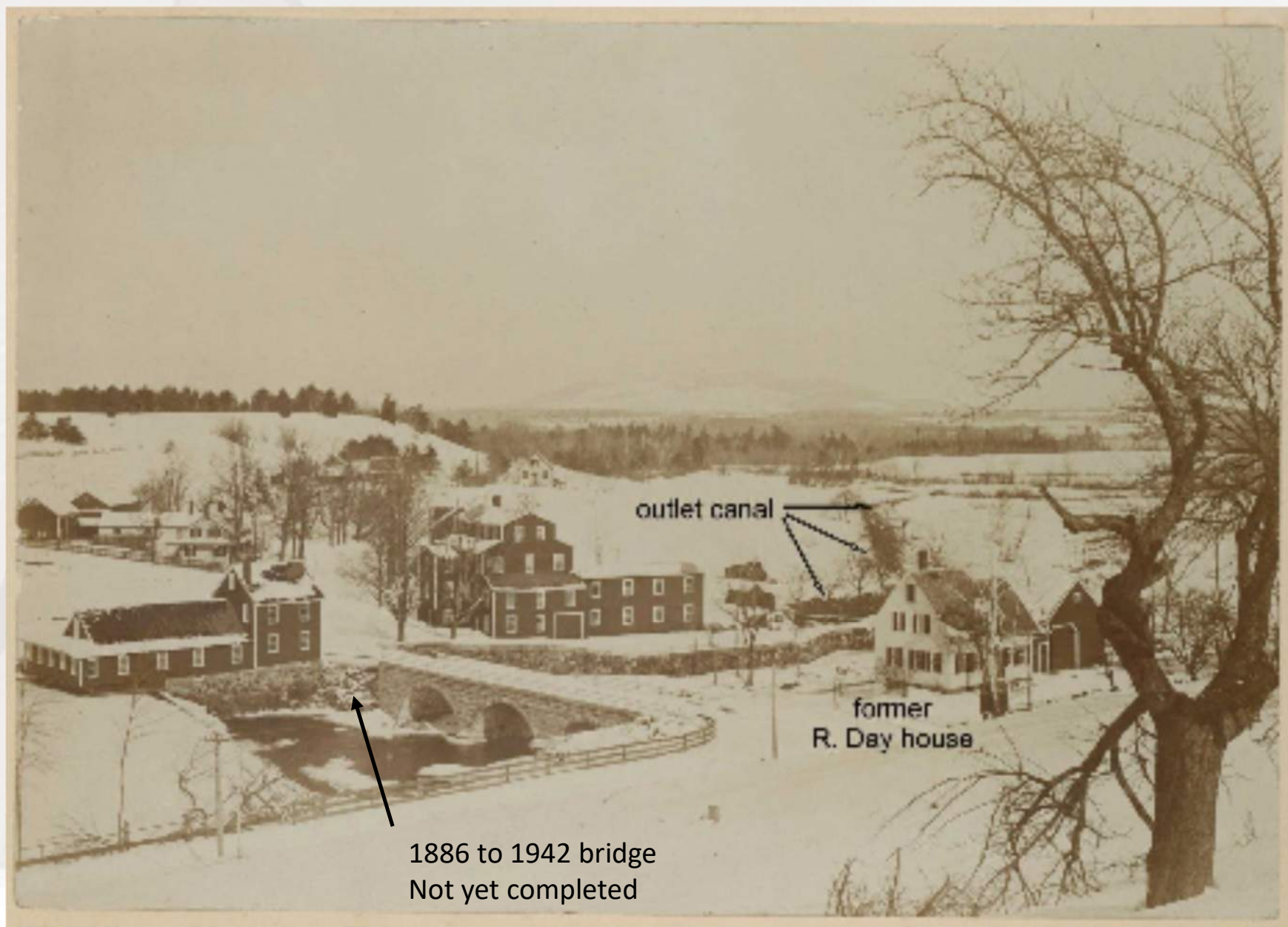
# 1974 Bridge Widening Plan and Elevation View



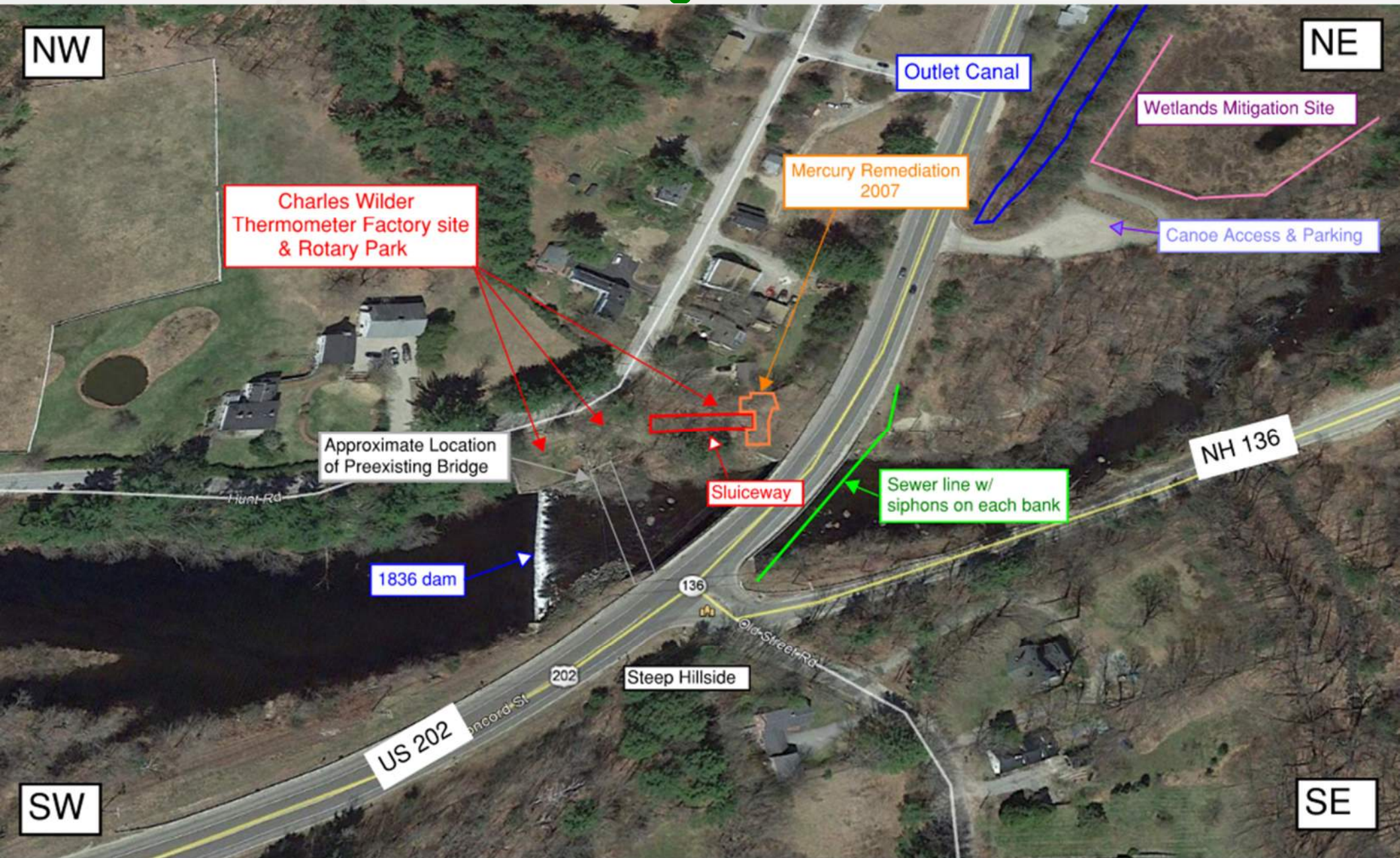
# 2019 Bridge Scour Protection Project



## Mill, Canal & R. Day house ca. 1890s



# Bridge Site



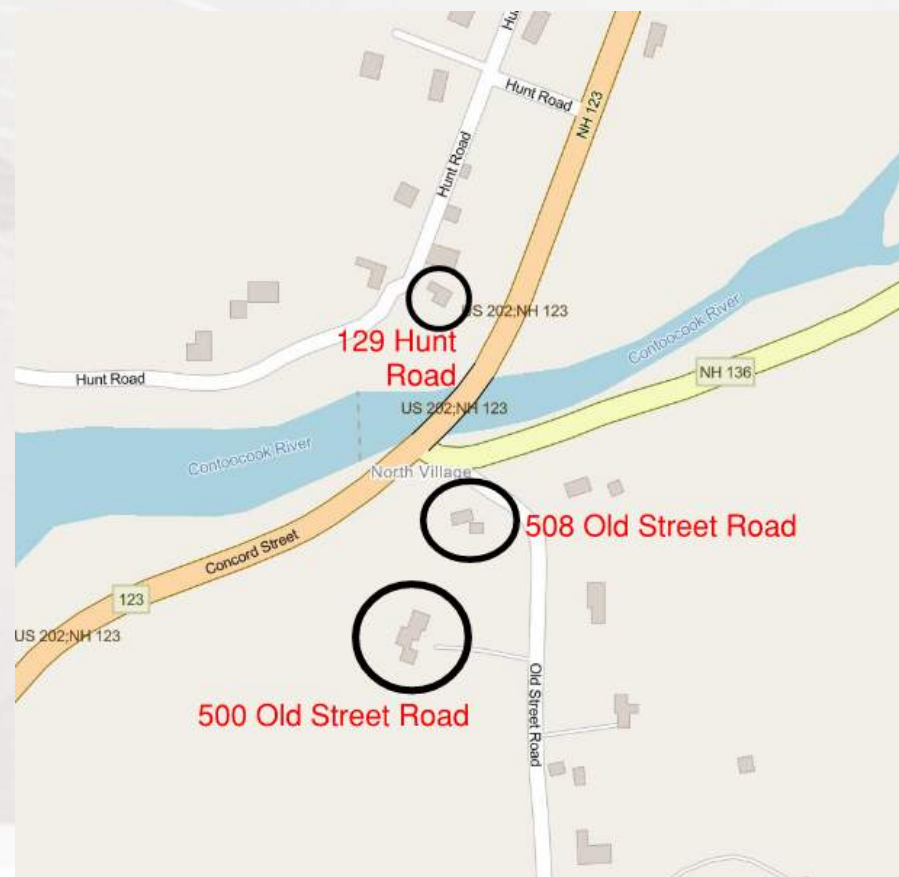
## Cultural & Historic Resource Considerations

### Bridge

- North Village area is historic, but not a Historic District.
- Bridge is not eligible for listing on the National Register.

### Project Area

- NW - Surface features from Wilder Thermometer Factory (c. 1860 to 1903) and residential property meeting criteria for individual listing on the National Register (“Eligible”)
- NE - A portion of the former mill’s outlet canal remains
- SE - Former 19<sup>th</sup> century structures. 2 remaining are Eligible. Archaeological monitoring during construction recommended.
- SW - North Village Dam (c. 1836)



# 1836 - North Village Dam



Southern Bridge Abutment



Looking west



Looking south

SW quadrant

# Sluice Way – Wilder Mill Complex – Rotary Park



NW quadrant

# Canoe launch

- Northeast quadrant





# Sewer Siphon and NH Route 136

## SE quadrant



## NE quadrant



# Design Considerations

- Site Features / Constraints
  - North Village Dam
  - Wilder Thermometer Factory / Rotary Park
  - Cartop Boat Launch
  - Utilities
  - Route 136 Intersection
- Traffic Control
- Environmental & Cultural Resources
- Hydraulics
- Right-of-Way
- Construction Access



# Rehabilitation Alternatives

- Bridge Rehabilitation
  - Bridge will remain on the State Red List.
    - Substructure cannot be addressed
  - Bridge will remain scour critical.
  - Service life is significantly less than bridge replacement.
  - Lower initial cost vs. replacement, but still major investment.
  - Higher long-term maintenance costs.

**Conclusion: Does not meet purpose and need**



# Replacement Alternatives

- Bridge Replacement Alternatives
  - Three ‘big picture’ alternatives:
    - Upstream shift
    - Downstream shift
    - Replacement in existing location
  - Traffic control & site impacts are major considerations in evaluation
    - Old Street Rd to be closed in all Alternatives
  - Pedestrian connectivity must be maintained during construction



# Upstream Alternatives

- Upstream Shift
  - **Maintain traffic on existing bridge**
    - Possibly 2 lane traffic
  - **May avoid relocation of sewer siphon**



# Upstream Alternatives

- Upstream Shift (minimal)



# Upstream Alternatives

- Upstream Shift (major)



Phase 1A

28' Traffic, 5' Sidewalk Downstream

Build 28' Traffic, 6' Sidewalk Upstream

# Upstream Alternatives

- Upstream Shift Impacts
  - North Village Dam
    - Impacts vary with magnitude of shift.
    - Significant dam upgrades are outside scope of this project.
    - Minor upgrades **could** potentially be incorporated into project.
  - Wilder Thermometer Site/Rotary Park
    - Would impact an archeological and recreational resource
    - Possible mercury contamination complicates construction
  - Could impact 129 Hunt Rd, a historic resource
  - ROW Impacts
    - ROW impacts required
      - Very little ROW to the west
    - ROW was not expanded with the 1974 bridge widening
  - Would require river access from both sides of the bridge

## Conclusion:

**Major upstream shift does not meet the Purpose and Need**

**Minor upstream shift may meet Purpose and Need**



# Downstream Alternatives

- Downstream Shift
  - Maintain traffic on the existing Bridge
    - Possibly two lanes of traffic
  - Avoid the North Village Dam
  - Avoid Wilder Site/Rotary Park
  - Large ROW on the downstream side



# Downstream Alternatives

- Downstream Shift
  - Require modifications to the NH 136 and Old Street Rd intersection
  - Likely could not accommodate two lanes of traffic during construction due to the impacts to the intersection
  - Would make a sharper curve on US 202
  - Relocation of sewer siphon required
  - Would require river access from both sides of the bridge

**Conclusion: Downstream Shift Alternatives *could* meet the Purpose and Need**



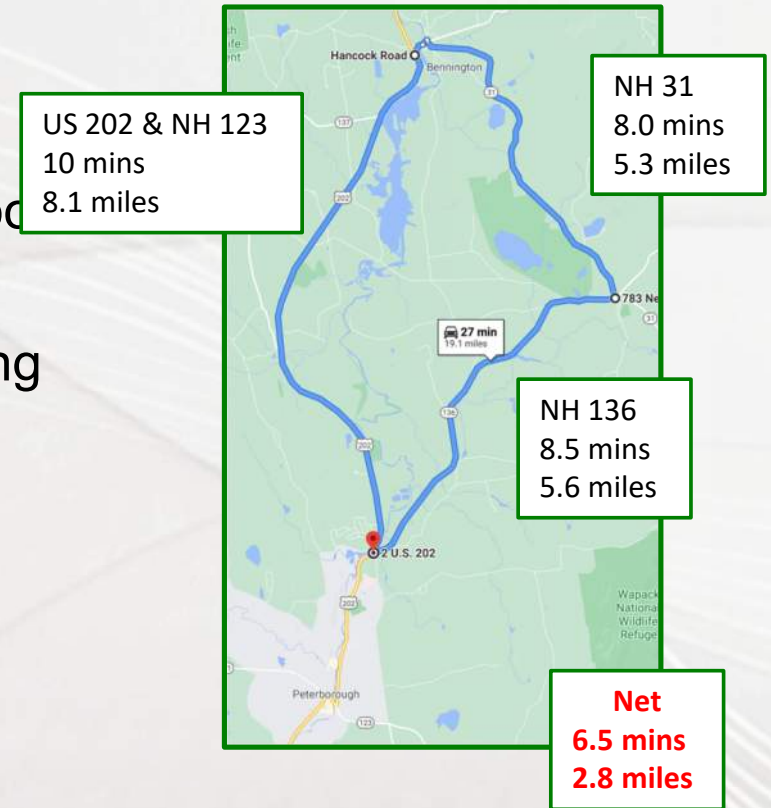


## In Place Alternatives

- Close the bridge and detour traffic
  - Using NH 136 (Greenfield) and NH 31 (Bennington)
  - More trucks through Greenfield and Bennington
  - Would be a burden to the Hospital and school
  - Additional drive time
  - Would require a separate pedestrian crossing during construction

### Conclusion:

**Does meet the Purpose and Need**



## State Route Detour

## In Place Alternatives

- Use Phased Construction
  - Phased construction in existing location would reduce traffic to single lane
    - Multiple seasons of alternating single lane traffic



Creator: Alex Driehaus | Credit: Valley News

# Alternatives Evaluated

- Use phased construction
  - Large delay for alternating one-way traffic

## Traffic Control Delay Comparison

27712 NHDOT Peterborough

	One-Lane Two-Way Traffic				Detour Bridge with Traffic Signal			
	2023 AM		2023 PM		2023 AM		2023 PM	
	LOS	Delay (S)	LOS	Delay (S)	LOS	Delay (S)	LOS	Delay (S)
NB Thru (US 202)*	F	120.8	F	236.4	B	12.1	B	14.9
SB Thru (US 202)*	F	130.9	F	244.4	B	17.6	C	23.8
WB (NH 136)	F	102.7	F	111.2	A	7	A	5.9

\* NB Thru becomes EB Left & SB Thru becomes SB Right with Detour Bridge. Corresponding LOS & Delay for this lane group have been shown.



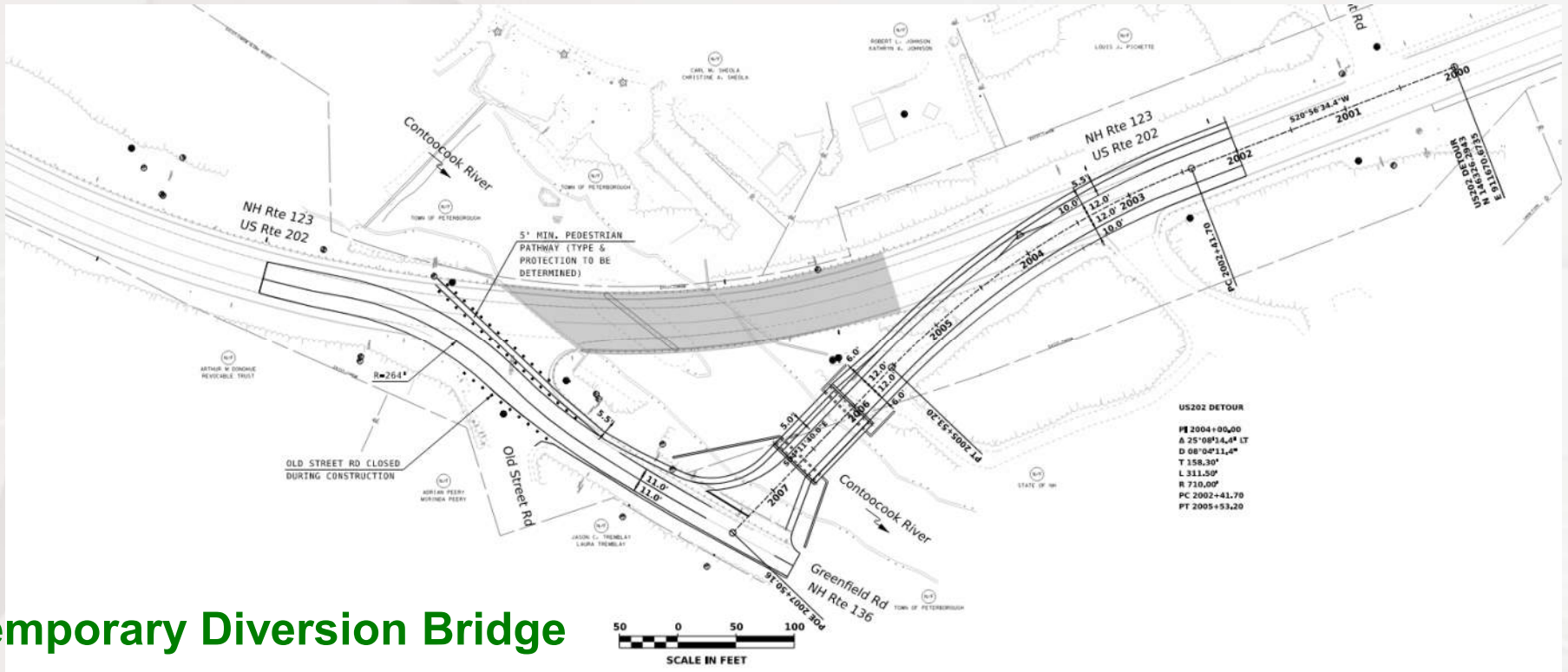
## In Place Alternatives

- Use Phased Construction
  - Would require some widening upstream impacting the park and ROW
  - Would be a burden to the Hospital and schools
  - Delay for drivers
  - Would require access to the river on both sides of the bridge increasing natural resource impacts
  - Leaves very little room for staging and construction

**Conclusion:  
Meets the Purpose and Need**

# In Place Alternatives

- Use temporary diversion bridge



Temporary Diversion Bridge



# Temporary Diversion Bridge

- Benefits
  - Significantly less driver delay (vs. phased const.)

## Traffic Control Delay Comparison

27712 NHDOT Peterborough

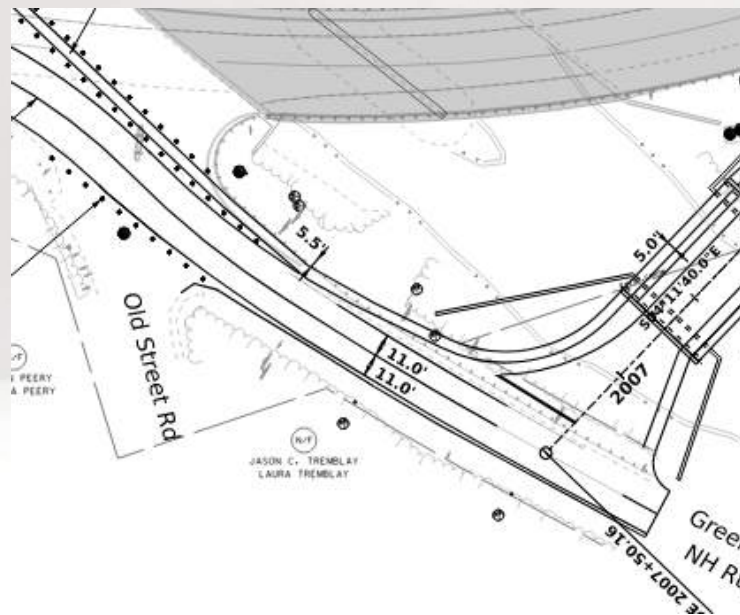
ALO

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# Temporary Diversion Bridge

- Challenges
  - Large environmental impacts
  - Temp. impacts to canoe launch / wetland mitigation parcel
    - Will maintain access during construction
  - Truck turning movements
    - Wider bridge = better accommodation of trucks
      - Results in greater environmental and/or cost impacts
    - Truck exclusion feasible but not preferred



# Natural Resources Considerations

- Environmental Permitting
  - NHDES Wetlands & Shoreland Permits (for temp. & perm. impacts)
- Threatened & Endangered Species
  - Coordination with NH Fish and Game & US Fish and Wildlife Service
- Hydraulic / Floodplain
  - Floodplain wetland impacts
  - 100-year flood elevations
- Stormwater Treatment

## Additional Design Considerations

- Trucks – Are truck turning movements restrictions acceptable?
- Dam - What are the scale of the impacts, if any?  
ALO
- Sewer siphon – what are the scale of the impacts and is complete avoidance possible?

# Project Status

- Draft Alternatives Analysis Report under review
- Agency coordination and review ongoing:
  - NEPA, Cultural & Natural Resources, etc.
- Soliciting & evaluating Town & stakeholder input
- Next milestone will be selecting the preferred alternative

# Project Funding

ALO

- Anticipated project cost \$10M - \$20M
  - To be refined as project progresses
- Sewer and water line relocations costs  
(RSA 228:22 - Cost of Trenching for Relocation of [Municipal] Underground Utilities)
  - NHDOT
    - Trenching and backfill
    - Reimbursement for the book value of the facility  
(Original cost minus depreciation)
  - Town
    - Engineering and materials

## Current Project Schedule

- Public Informational Meeting #2: Spring 2024
  - Present Preferred Alternative
- Public Hearing: Fall 2024
  - If ROW acquisitions are required
- NEPA Approval: Fall 2024
- Final Design: 2025 – 2026
- Construction: 2027 – 2028

## Your Input is Needed

- Emergency Response Routes
- Mutual Aid
- School Bus Routes
- Historic Concerns
- Past Flooding Concerns
- Bicycle and Pedestrian Concerns
- Local events
- Town Utilities upgrades/work (Sewer, Water, Dam)
- Other Concerns



## Questions / Comments?



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