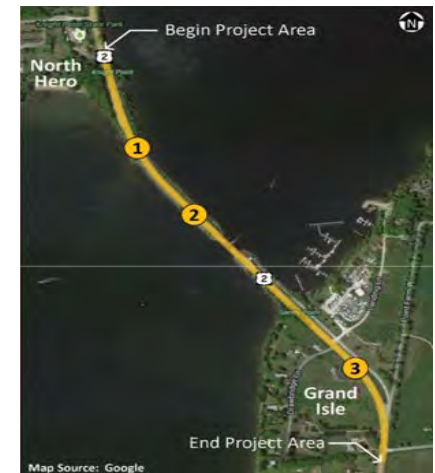


No. Hero-Grand Isle Bridge BHF 028-1(26)



Project Concerns

- Maintenance of Traffic
 - Vehicular Traffic – 90 Mile Detour
 - Marine Traffic – Only height unrestricted passage into the “Gut of lake Champlain”
- Schedule
 - Condition of Existing Structure
 - Budget Concerns
- Technical Complexity
- Unknowns




North Hero-Grand Isle
DRAW BRIDGE





North Hero-Grand Isle DRAW BRIDGE



PROJECT APPROACH

No. Hero – Grand Isle Bridge

June 3, 2015





Presentation Summary

Project Goals

Project Constraints

Design Approach

Discussion

PROJECT GOALS

- Reliable structure to serve the local needs for the long term
- Minimize impacts to the local community as much as possible during construction
 - Maintain vehicular traffic during construction (single lane)
 - Perform temporary repairs to maintain operational reliability
- Provide for future community needs
- Meet current code requirements (VTRANS, AASHTO, NEC, OSHA, etc.)
- Construction starts 2017

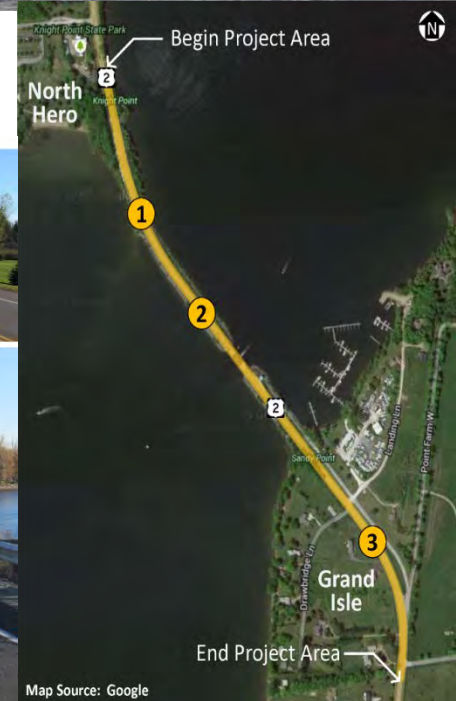
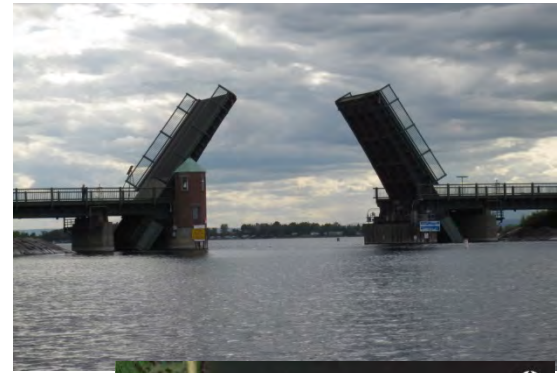
02



PROJECT CONSTRAINTS

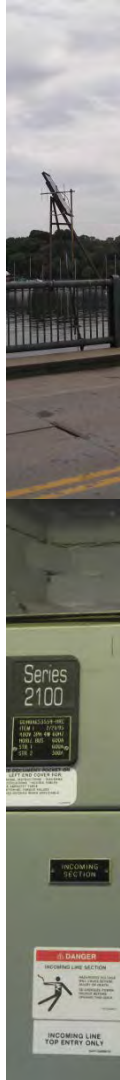
PROJECT LOCATION

- Approximately 3000 AADT
- 50 mph Rural Minor Arterial
- Users
 - Roadway
 - Navigation
- Underground utilities –North
- Stay within the right of way



EXISTING BRIDGE CONDITION ISSUES

- Structural
 - Live load shoe/Span lock condition
 - Miscellaneous steel repairs – gusset plates, inboard bascule girder deterioration, cross bracing
 - Substructure cracks
 - Counterweight cover repairs
 - Poor access – Difficult to maintain
- Mechanical
 - Lock bar operation and clearances in receiver
 - Clean and Lube Machinery
- Electrical
 - Navigation Lights
 - Gate repairs
 - Open conduits
 - Replace limit switches
 - Drive motor redundancy – low meggar readings for north motor



The background image shows a waterfront scene under a cloudy sky. On the left, a brick building with a green copper roof is partially visible, with a sign that reads 'D ISLE BRIDGE'. A dark metal railing runs across the middle ground, separating a paved walkway from a body of water. In the water, several sailboats are visible, and a tall, thin structure, possibly a crane or lighthouse, stands in the distance. The overall tone is overcast and somewhat somber.

03

DESIGN APPROACH

CONSIDERATIONS

- Construction impacts on local community
 - Detour route length
 - Emergency service access
 - Navigation traffic impacts
- Project Duration
 - Existing bridge condition
 - Permitting duration
- Life Cycles Costs
 - Construction Cost
 - Operations and long term maintenance costs
- Environmental Impacts



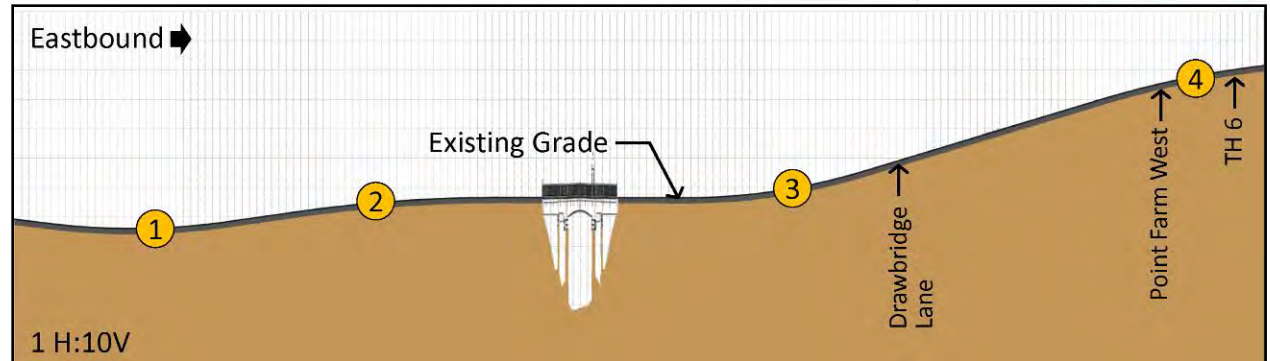
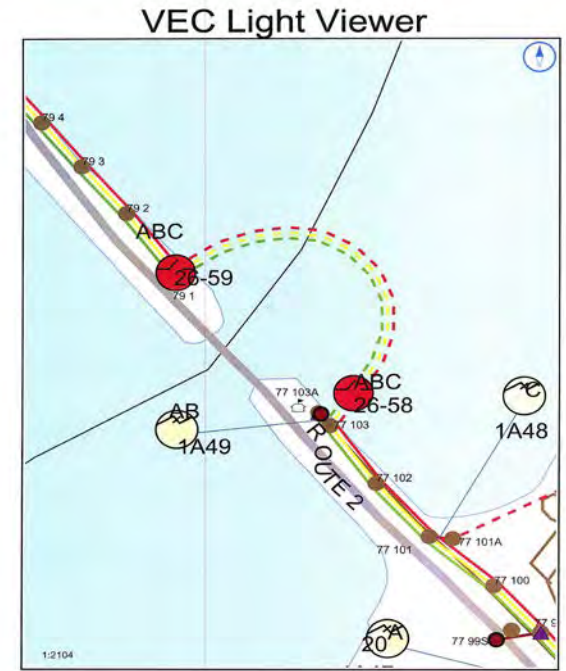
MITIGATION APPROACH

- Local Community Impacts
 - Staged construction – single lane
 - Water way work during November – April timeframe
- Project Duration
 - On alignment replacement –permitting durations
 - Double leaf – due to SHPO concerns
- Operation and Maintenance costs
 - Hydraulic drive system –VTrans preference
 - Relay control – long term reliability
 - Closed deck



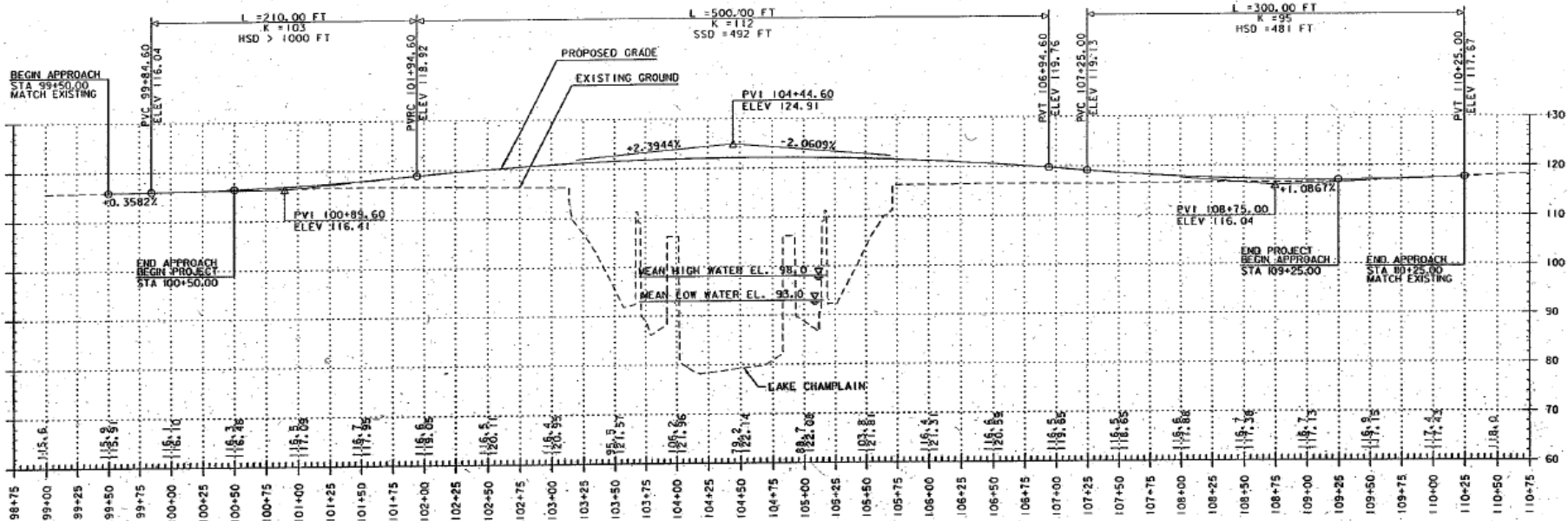
ALIGNMENT CONSIDERATIONS

- Encroachment into the waterway increases costs and schedule
- Utility cable(s) on North
 - Power
 - Fiber Optic
- Environmental Impacts
- Impact to local traffic



ROADWAY ALIGNMENT – PROFILE

Proposed

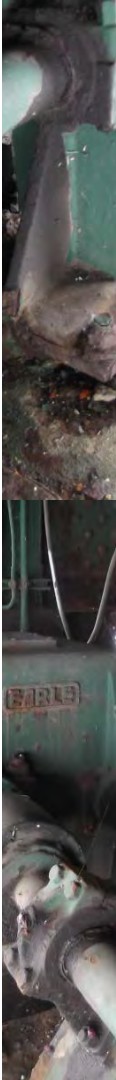
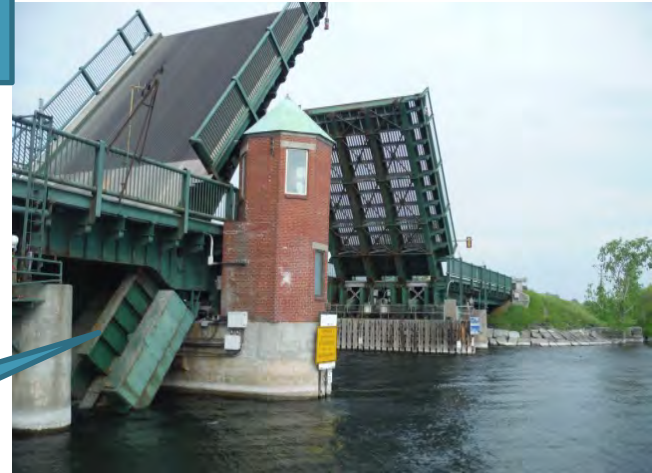


TWIN LEAF BASCULE BRIDGE

- On Alignment – replacement
 - Split the bridge longitudinally for single traffic lane
 - Modify span drive for temporary operation
 - Raise roadway profile 4.5 ft.
 - Maintain existing navigation channel
- Enclosed Bascule Piers
- Solid Deck
- Hydraulic Operation
- New Control House
- Preservation of Historic Elements

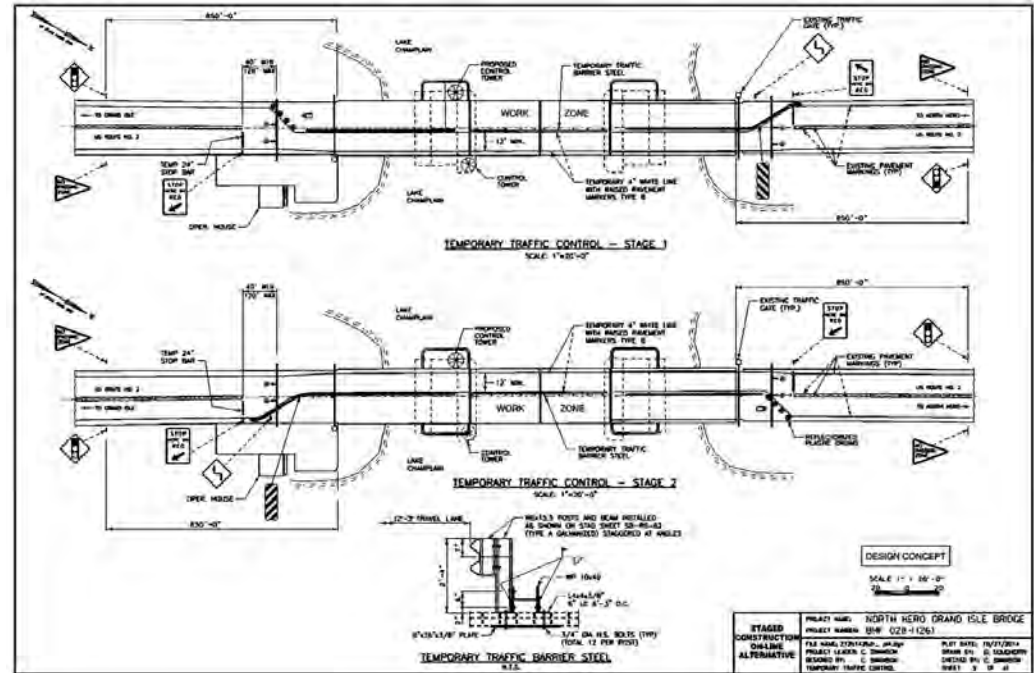
Longitudinal
Split

Enclosed bascule
Piers



STAGED CONSTRUCTION

- Single lane operation with traffic control
- Remove east side first
 - Construct enclosed bascule pier
 - Grade approaches for new profile
 - Install new leaves and drive equipment
 - Operational
- Single lane east side
 - Complete bascule pier
 - Complete profile grading
 - Install new leaves and drive equipment
 - Tie east and west leaves together
- Commission



M&E SYSTEMS

- Hydraulic drive system
- Relay based controls with PLC operator interface



FACILITIES

- Existing operator house to be retained for historical reasons
- Tender house to remain
- Foundation



Operator
House

1892
Foundation



Tender House



04 DISCUSSION

North Hero-Grand Isle BHF 028-1(26)

- Molly Perrigo – Point of Contact

Construction Manager/General Contractor

- Contractor Involved with Design and Construction
 - Phase 1 - Pre-Construction Services
 - Phase 2 - Construction Services
- Two Contracts
 1. Owner Pre-Construction Contract with CMGC
 - Assist with Design
 2. Owner Construction Contract with CMGC
 - Build Project

The Procurement Process

- Advertisement & RFP Release
- Technical Proposal Evaluations
- Select Shortlisted Firms
- Conduct Interviews
- Final Evaluations, Scoring, CMGC Selection

Interview Requirements

- CMGC Team Presentation – 30 Min.
 - All Key Personnel Required
- Questions and Answers – 60 Min.
 - Pre-Defined Questions
 - Team Challenge
 - Open Q&A

1.9 Procurement Schedule

- RFP Release – May 14, 2015
- Pre-Proposal Site Visits – June 2, 2015
- Questions Due – June 8, 2015
- Proposals Due – June 25, 2015
- Notification of the Short-List – July 30, 2015
- Anticipated Interviews – August 6, 2015
- Anticipated Award Date – September 11, 2015

Important Links

- <http://vtranscontracts.vermont.gov/alternative-delivery/cmgc/north-hero-grand-isle>

Questions?