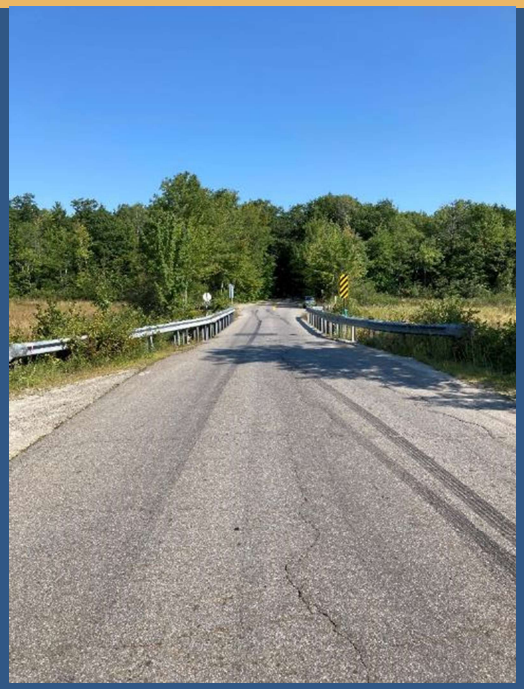

WAGGON BRIDGE REPLACEMENT PROJECT

Final Public Meeting
WIN 026234.00
September 2024

MaineDOT HNTB

PROJECT LOCATION

Waggon Bridge:

- Monmouth, Maine
- Waugan Road over Wilson Stream

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PROJECT LOCATION

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EXISTING CONDITIONS

Roadway and Traffic:

- Single lane two-way bridge
- Roadway width: 16 ft
- Average annual daily traffic:
  - 1,250 (2022)
- Posted speed limit: 40 MPH
- Advisory speed limit: 15 MPH
- Stop conditions at bridge

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EXISTING CONDITIONS

Roadway:

- Multi layer wearing surface, multiple patches
- Currently restricted boat access from NE and SW quadrants

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EXISTING CONDITIONS

Structure:

- Single span steel girder
- Clear span: 39 ft
- Steel corrugated deck
- Stone and concrete abutments
- Constructed: 1980

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EXISTING CONDITIONS

Structure:

- Minor to moderate rust at web & bottom flanges
- Moderate rust at beam ends & bearings

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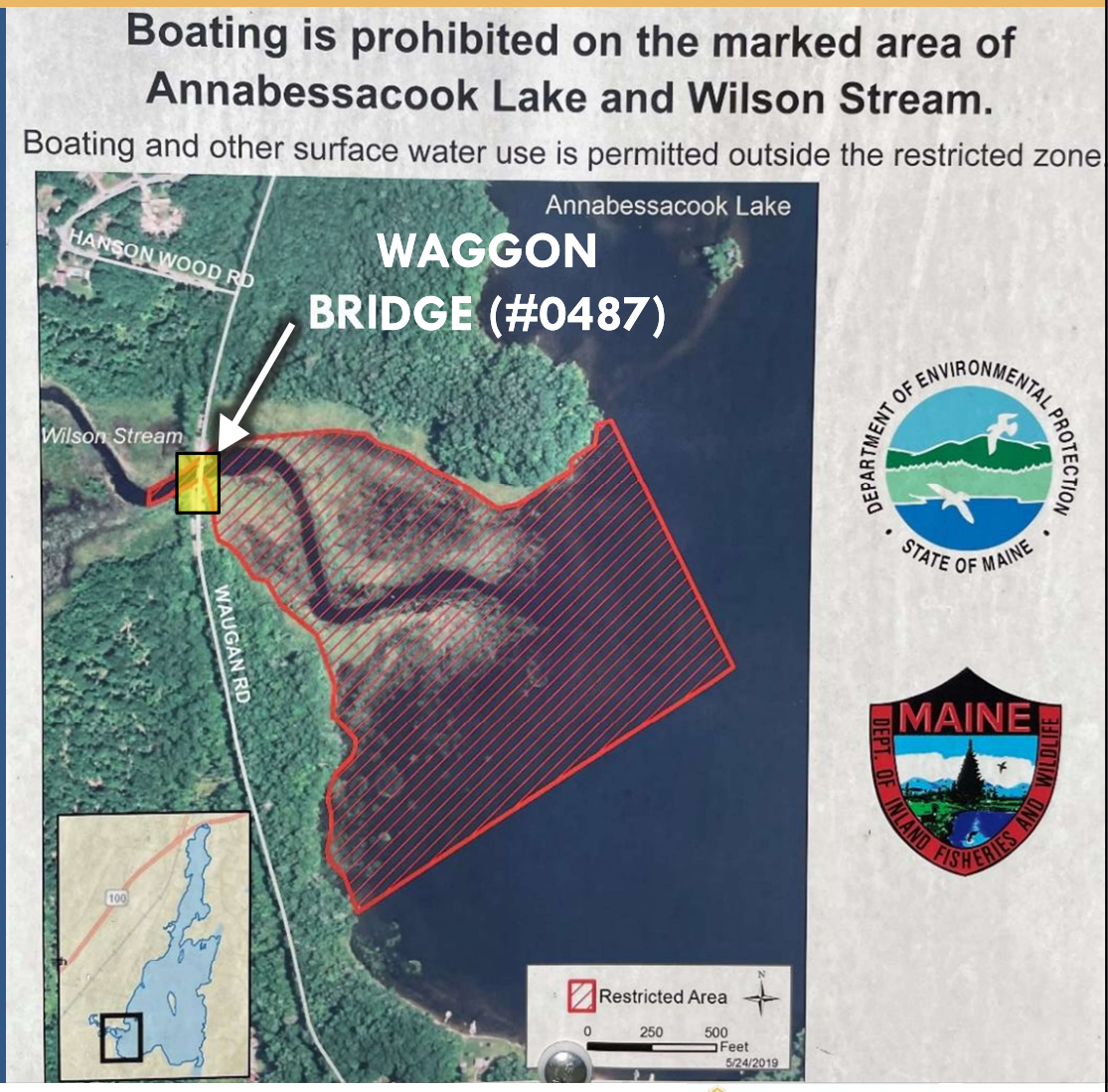
ENVIROMENTAL

Environmental Considerations:

- Restricted boat access in Wilson Stream adjacent to project site.



PROJECT GOALS

Improve Existing Conditions:

- Replace the crossing
- Widen the bridge from one lane to two lanes
- Improve hydraulic clearance

Minimize Impacts to:

- Traveling public
- Adjacent properties
- Environmental resources

Identify a Cost-Effective Solution

ALTERNATIVES CONSIDERED

Alternative 1: Rehabilitation and Widening

Alternative 2: Replacement with Buried Structure

Alternative 3: Replacement with Span Structure

ALTERNATIVE 1: REHABILITATION AND WIDENING

- Rehabilitate existing girders and abutments
- Widen bridge to allow for two lanes of traffic
- Retrofit abutments to accommodate new girders
- Conclusions:
  - Minimal increase in service life due to existing condition of the current structure
  - Retrofitting the abutments would be difficult and expensive
  - Hydraulic opening not improved

ALTERNATIVE 2: REPLACEMENT WITH BURIED STRUCTURE

- Replace existing bridge with a 3-sided arch structure
- New structure would be wide enough to accommodate two lanes of traffic
- Conclusions:
  - Expensive foundation required due to poor in-situ soils present at the site
  - No improvement in hydraulic clearance over existing condition

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ALTERNATIVE 3: REPLACEMENT WITH SPAN STRUCTURE

- Replace existing with a single span concrete or steel girder bridge with integral abutments
- New structure would be wide enough to accommodate two lanes of traffic
- Conclusions:
  - Improves hydraulic clearance
  - Durable design solution

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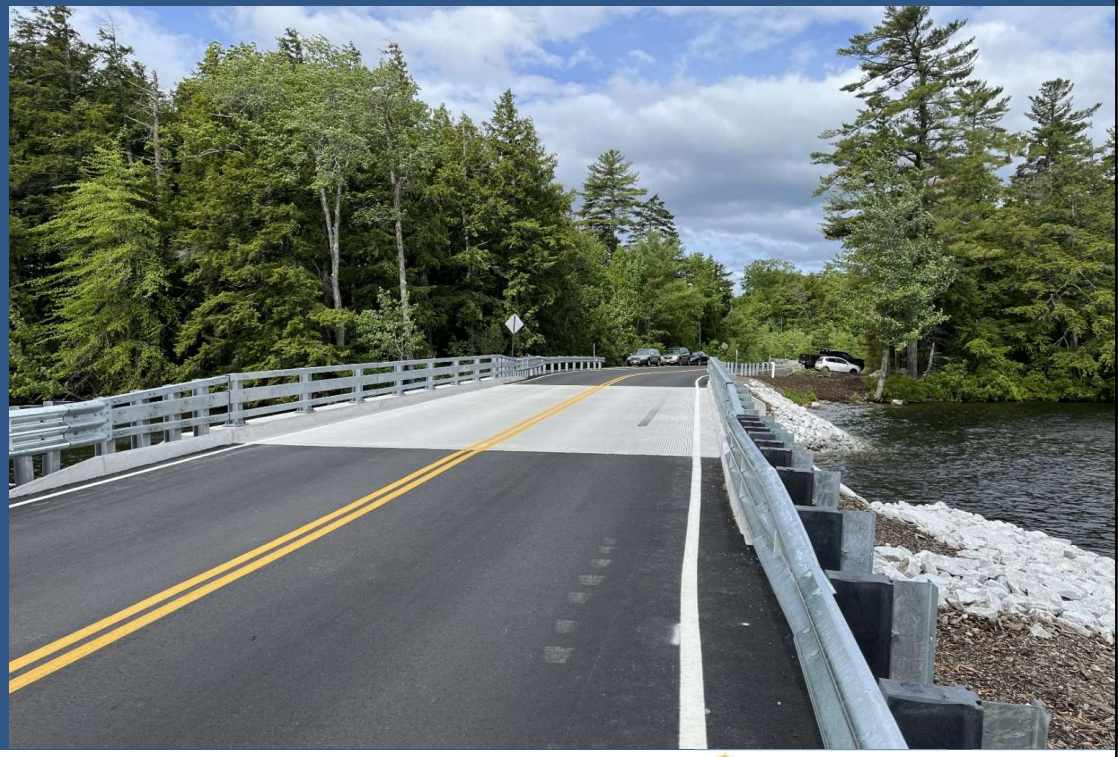
PROPOSED BRIDGE ALTERNATIVE

Alternative 3 – Replacement with Span Structure

- 64’ long single span bridge with prestressed concrete beams and integral abutments
- Provides two 11’-0” lanes and 3’-4” shoulders
- Alternative that best balanced initial construction costs with long-term maintenance needs



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TRAFFIC MANAGEMENT OPTIONS

Temporary Bridge:

- A single lane of alternating traffic maintained through the construction zone with a temporary bridge adjacent to the existing roadway.

Phased Construction:

- A single lane of alternating traffic maintained on the existing bridge while construction of the new bridge occurs to the west. In phase two, traffic switches to the new portion of the bridge, while the remainder is constructed to the east.

Off-Site Detour:

- Roadway closed to traffic at bridge location and traffic is detoured onto adjacent local roads.

TRAFFIC MANAGEMENT RECOMMENDATION

Off-Site Detour

- Shortest construction schedule
- Most cost effective
- Least impactful to on-site resources

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ANTICIPATED SCHEDULE

Project Advertise: Fall of 2025

Construction: Spring/Summer of 2026

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