

Local Concerns Meeting - December 7, 2022

Tucker Mill Rd Bridge over Mid Branch Piscataquog River
NHDOT Bridge # 087/150
&
Gregg Mill Rd Bridge over South Branch Piscataquog River
NHDOT Bridge # 132/138



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Presentation Outline



- Hoyle, Tanner
- Program Funding Requirements
- Project Area
- Proposed Projects
- Schedule
- Feedback/Comments



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Hoyle, Tanner & Associates, Inc.



- NH Based Engineering Firm
- Established in 1973
- Experienced Staff of Transportation Personnel
- All Types of Structures
- Past New Boston Projects
 - Riverdale Rd Bridge & Lyndeborough Rd Bridge
- Project Partner
 - NE Boring Contractors & Doucet Survey



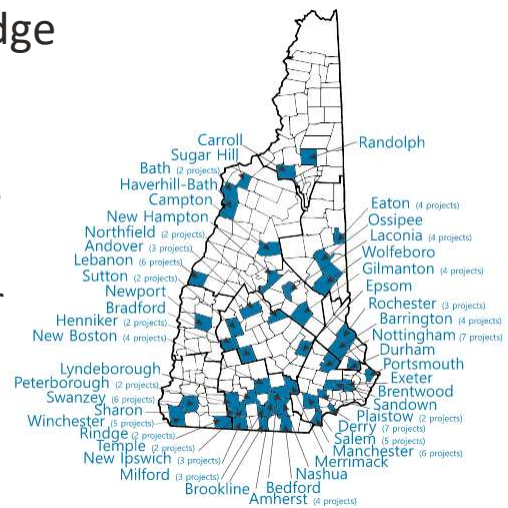
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Bridge Experience/Project Team



- Over 120 Municipally Managed Bridge Projects
- Project Team:
 - Sean James, PE – Principal-in-Charge
 - Josif Bicja, PE – Project Manager
 - Katelyn Welch, PE – Project Engineer



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Overview of Program Funding Requirements



- NHDOT Local Public Agency (LPA) Program
- Preliminary Engineering
 - 80% State Funds (State Bridge Aid)
 - 20% Local Funds
- Construction
 - 100% Federal Funds (Federal Aid Municipally Owned Bipartisan Infrastructure Law Program)
 - No Local Match



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Overview of Program Funding Requirements



- Preliminary Engineering
 - **Engineering Study** ←
 - Preliminary Design
 - Permitting
 - Final Design
 - Bid Phase
- Construction
 - Construction
 - Construction Engineering



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Overview of Program Funding Requirements



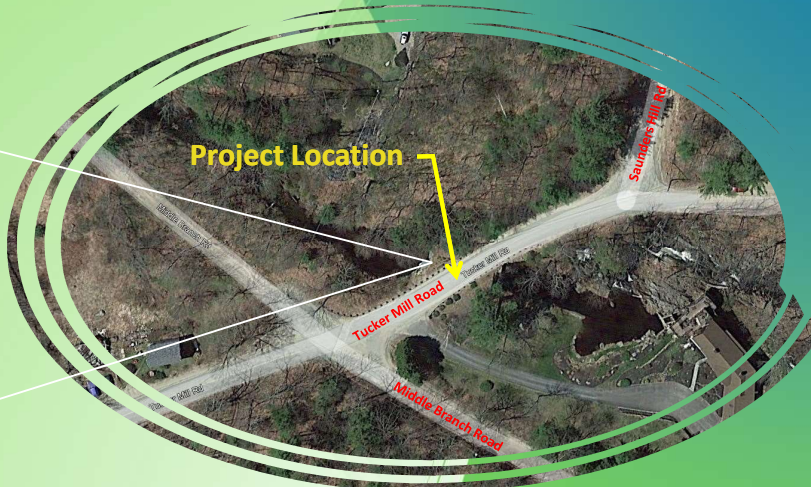
- Main Requirements
 - Meet LPA Manual Requirements
 - 24 Foot Wide Roadway
 - HL-93 Design Load (36 tons)
 - 75-Year Design Life
 - 1 Foot Freeboard over 50-Year Flood



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Project Area– Tucker Mill Rd



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Proposed Project – Tucker Mill Rd



- Built in 1991
- Invert Lined w/Concrete in 2008
- Twin Corrugated Metal Arches 12' Span x 7' Rise
- Undermining/Erosion
- Heavy Rusting and Corrosion
- 81 Vehicles/Day



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Proposed Project – Tucker Mill Rd



- Services Completed to Date
 - Engineering Study
 - Topographic Survey
 - Subsurface Investigation
 - Hydrologic & Hydraulic Analysis
 - Bridge Inspection



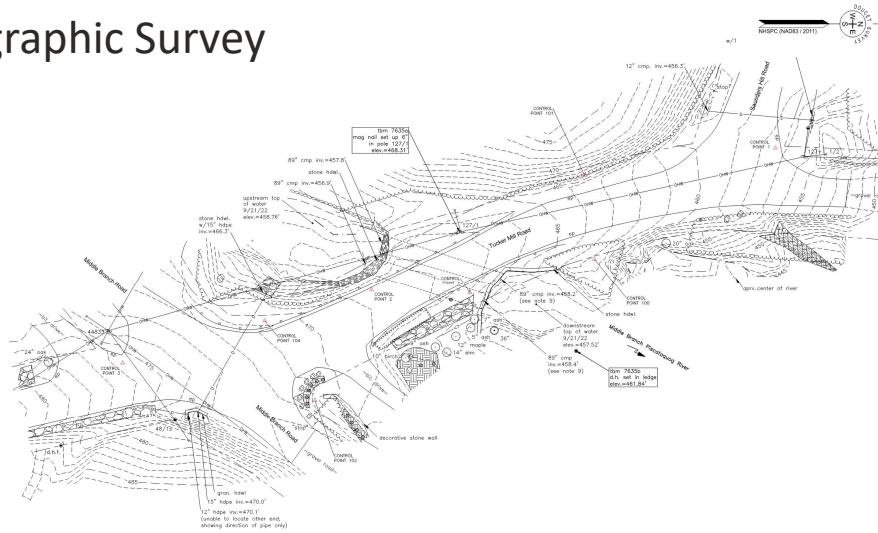
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Proposed Project – Tucker Mill Rd



• Topographic Survey



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Proposed Project – Tucker Mill Rd



• Subsurface Investigation

- Drilled 3 locations
- Gravel & Sand below Pavement
- Bedrock Encountered 7.5' to 14' Below Pavement



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Proposed Project – Tucker Mill Rd



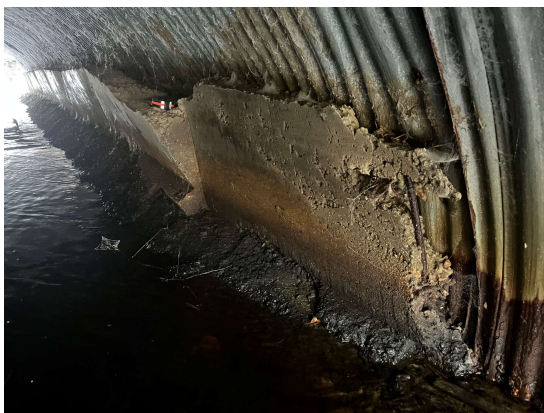
- Hydrologic & Hydraulic Analysis
 - 17 Square Mile Drainage Area
 - 50-Year Flood – 1,520 cubic feet per second
 - 100-Flood – 1,810 cubic feet per second
 - Existing Culverts Do Not have Adequate Waterway Opening



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Proposed Project – Tucker Mill Rd



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Proposed Project – Tucker Mill Rd



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Proposed Project – Tucker Mill Rd



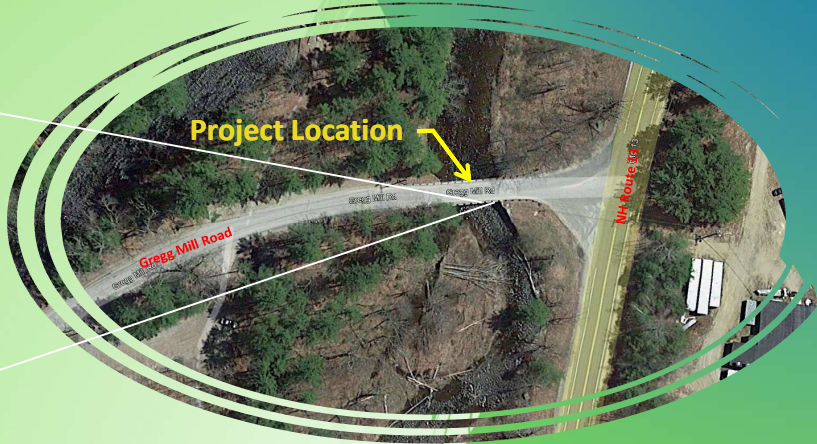
- Traffic Control Options
 - Temporary Bridge
 - Phased Construction
 - Closed w/Offsite Detour on Dougherty Ln (2023 Completion)
- Recommending Closure w/Offsite Detour



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Project Area– Gregg Mill Rd



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Proposed Project – Gregg Mill Rd



- Built in 1938
- Concrete T-Beam Superstructure (56' Long)
- Stone Abutments (Concrete Faced)
- 18' Wide Travelway
- Scour Downstream Wingwalls
- Spalling/Cracking Concrete Beams
- 605 Vehicles/Day



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Proposed Project – Gregg Mill Rd



- Services Completed to Date
 - Engineering Study
 - Topographic Survey
 - Subsurface Investigation
 - Hydrologic & Hydraulic Analysis
 - Bridge Inspection

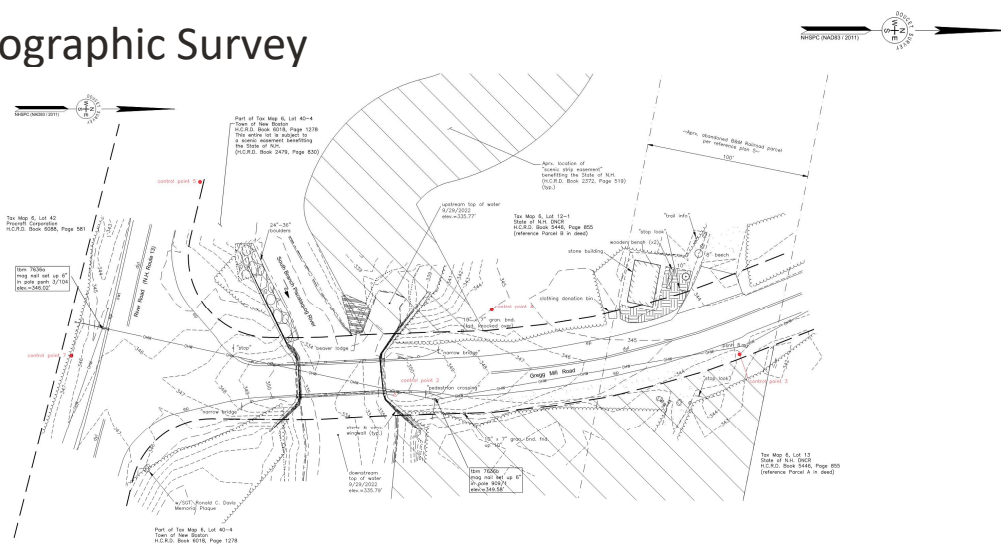


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Proposed Project – Gregg Mill Rd



- Topographic Survey

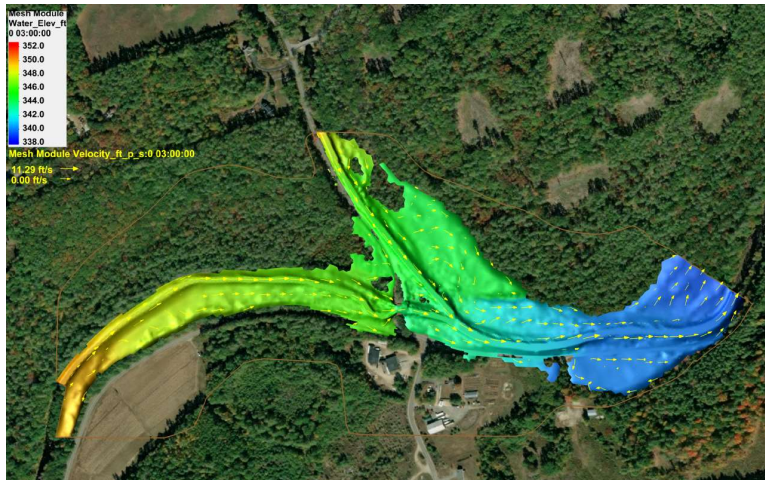


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Proposed Project – Gregg Mill Rd



- 100-Year Flood Extents



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Proposed Project – Gregg Mill Rd



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Proposed Project – Gregg Mill Rd



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Proposed Project – Gregg Mill Rd



- Traffic Control Options
 - Temporary Bridge
 - Phased Construction
 - Closed w/Offsite Detour on Howe Bridge
- Recommending Closure w/Offsite Detour



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Project Schedule



- Engineering Study – March 2023
- Preliminary Design/Permitting/ROW – April 2023 to April 2024
- Final Design – May to November 2024
- Bid Phase – December 2024 (Tucker Mill) & December 2025 (Gregg Mill)
- Construction 2025 (Tucker Mill) & 2026 (Gregg Mill)



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FEEDBACK/COMMENTS?



THANK YOU

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