

# Durham Point Road Over Crommet Creek Durham, NH



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*Prepared by:*

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& Associates, Inc.

# Presentation Outline

- Introduction
- Project Purpose and Need
- Inspection Findings
- Alternatives
- Preferred Alternative
- Summary



# Introduction

- Durham Point Road Bridge
  - Spans Crommet Creek
  - Built in 1930; Rebuilt in 1970
  - Bridge Rail Repaired in 1992
  - 19'-6" Span, 21'-3" Wide Roadway on Bridge
  - Steel I-Beam Bridge with Concrete Deck
  - Stone Abutments with Cast-In-Place Caps
  - Posted for 15 Tons or 80% of Legal Loads
  - Currently Listed on the NHDOT Red List Due to Substructure
- Traffic Volume is 310 AADT





# Introduction



# Project Purpose and Need

## ➤ Purpose

- Perform Bridge and Roadway Maintenance Work

## ➤ Project Need

- Bridge Deficiencies
- Roadway Drainage and Guardrail Deficiencies





# Inspection Findings

- Hoyle, Tanner Performed Detailed Inspection
- Roadway Findings
  - Drainage Issues / Ponding



# Inspection Findings

- Roadway Findings
  - Poor Condition of Guardrail





# Inspection Findings

## ➤ Bridge Findings

- Poor Drainage Detail On Bridge
- Coating Failure of Beams
- Some Spalling of Concrete Deck





# Inspection Findings

## ➤ Bridge Findings

- Heavy Rusting of Bearings
- Spall in Concrete Cap



# Inspection Findings

- Bridge Findings
  - Bulging of Stone Abutments
  - Loss of Stones



# Alternatives

- Alt. No.1 – “No-Build”
  - Does Not Meet Project Purpose and Need
- Alt. No.2 – Rehabilitation
  - Meets Project Purpose and Need
  - Least Cost
- Alt. No.3 – Replacement
  - Meets Project Purpose and Need
  - Highest Cost Option
  - Not Considered Further



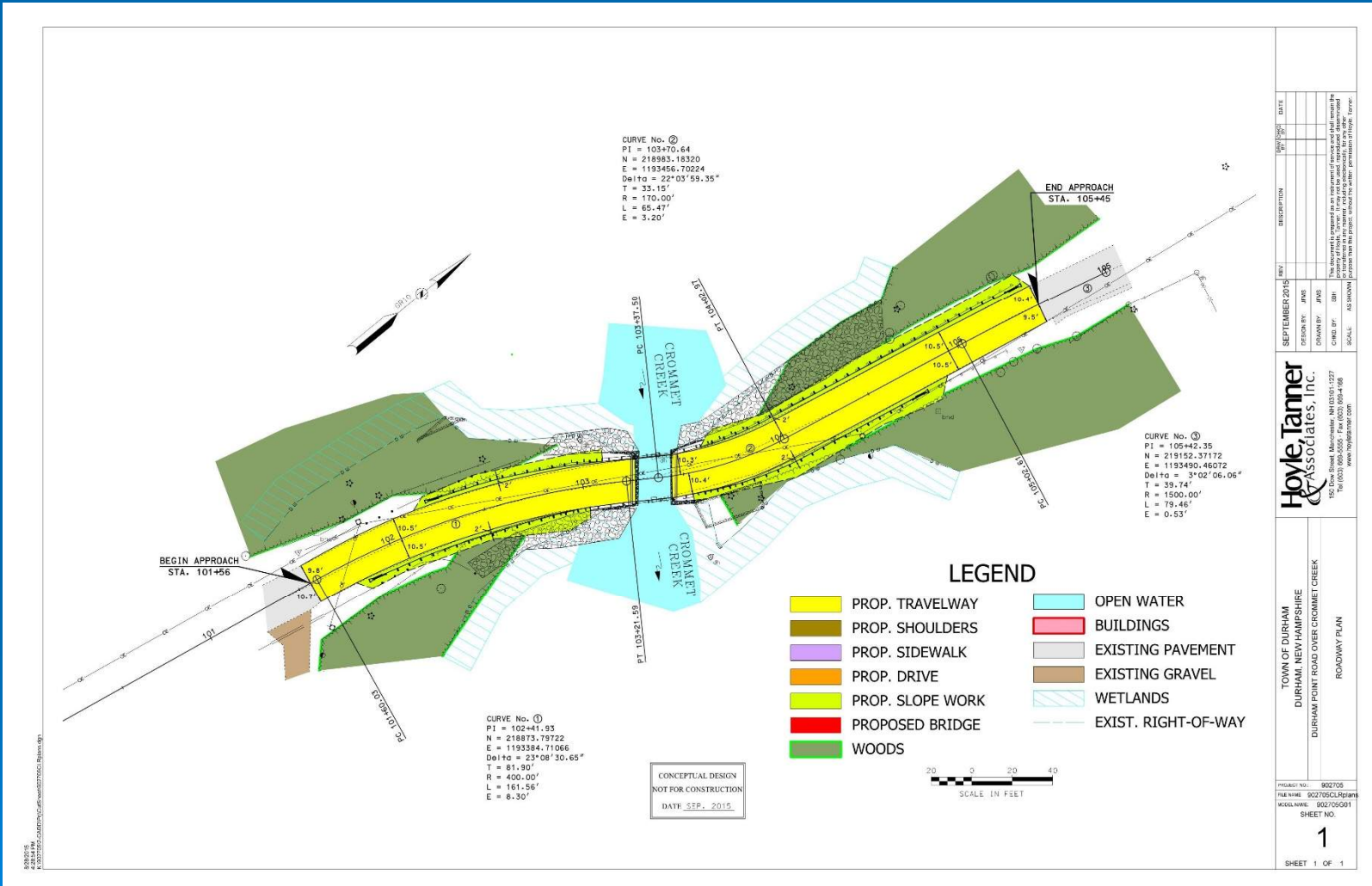


# Preferred Alternative

- Rehabilitation Will Include the Following:
  - Roadway
    - Double Nest Existing Guardrail on Bridge
    - Replace Approach Railing with New Railing
    - Pave Approach Roadway and Regrade for Better Drainage
  - Superstructure
    - Clean and Paint a Portion of Steel Beams
    - Install Drainage Pipe within Existing Scuppers
  - Substructure
    - Long-Term Monitoring of Abutments
    - Replace Missing Stones in Face of Abutments
    - Reconstruct the Northwest Concrete Cap
  - Short Roadway Closure May be Required for Bridge Work



# Preferred Alternative



# Preferred Alternative

- Guardrail Options – Meets Crash Testing Requirements
  - W-Beam - \$25/FT





# Preferred Alternative

- Guardrail Options – Meets Crash Testing Requirements
  - Steel-Backed Timber Guardrail - \$175/FT



# Preferred Alternative

- Guardrail Options – Does Not Meet Crash Testing Requirements
  - Alternative Wood Beam Guardrail - \$90/LF



# Summary

- Roadway and Bridge Require Maintenance Repairs
- Will Address Safety, Drainage and Bridge Deficiencies
- Will Not Remove Bridge from NHDOT Red List
- Alternatives Presented for Guardrail
- Road Closure Options Presented
- Construction Scheduled for 2016

