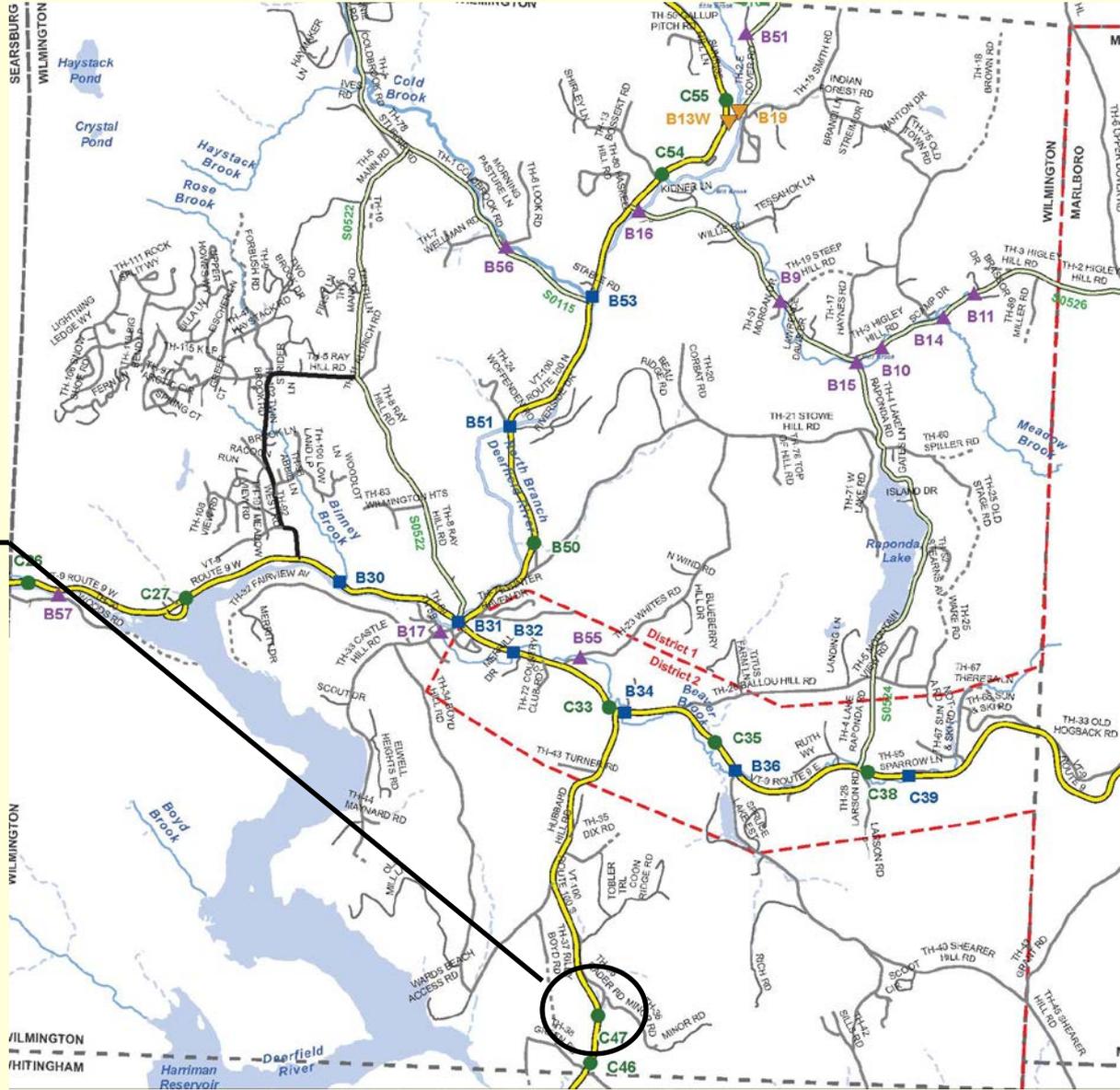


**Wilmington STP 013-1(14)  
Bridge 47 on VT 100 Over Unnamed Brook  
Regional Concerns Meeting**



# PROJECT LOCATION

VT 100 BR 47



# Meeting Outline

- Purpose of the Meeting
- Structures Section re-organization
- Existing bridge deficiencies
- Alternatives considered
- Summary and recommendation-

# Purpose of Meeting

- Present the alternatives that we have considered
- Explain the constraints to the project
- Help you understand our approach to the project
- Provide you with the chance to ask questions.
- Provide you with the chance to voice concerns
- Build consensus for the recommended alternative -

# Accelerated Bridge Program

- Began in January 2012
- Bridges are deteriorating faster than we can fix them
- Accelerated Bridge Construction (ABC) is key
- Impacts to property and resources is minimized
- Standard details repeated on many projects
- Shift from individual projects to programmatic approach
- Accelerated Project Delivery (ABP)
- Goal of 2 year design phase for ABP (5 years conventional)
- Goal of 25% of projects into Accelerated Bridge Program-

# Project Initiation & Innovation Team

- Part of re-organization in January 2012
- Currently team of 5
- All projects will begin in the PIIT
- Very efficient process
- Look for innovative solutions whenever possible
- Involved until Project Scope is defined
- Hand off to PM to continue Project Design phase -

# Phases of Development

Project  
Funded

Project  
Defined

Contract  
Award

Project Definition

Project Design

Construction

Identify resources &  
constraints

Evaluate alternatives

Public Participation

- Quantify areas of  
impact

- Environmental  
permits

- Develop plans,  
estimate and  
specifications

# Project Background

- Project is in the State Bridge Program
- Considered short structure since < 20' long
- The structure is owned and maintained by the State (no local funds)
- VT 100 has a functional classification of **Rural Minor Arterial**.
- Existing bridge is a metal plate pipe arch built in **1949**
- Bridge is structurally deficient and has a Federal sufficiency rating of **33 (out of 100)** -

# Project Background (Cont)

- Traffic Data

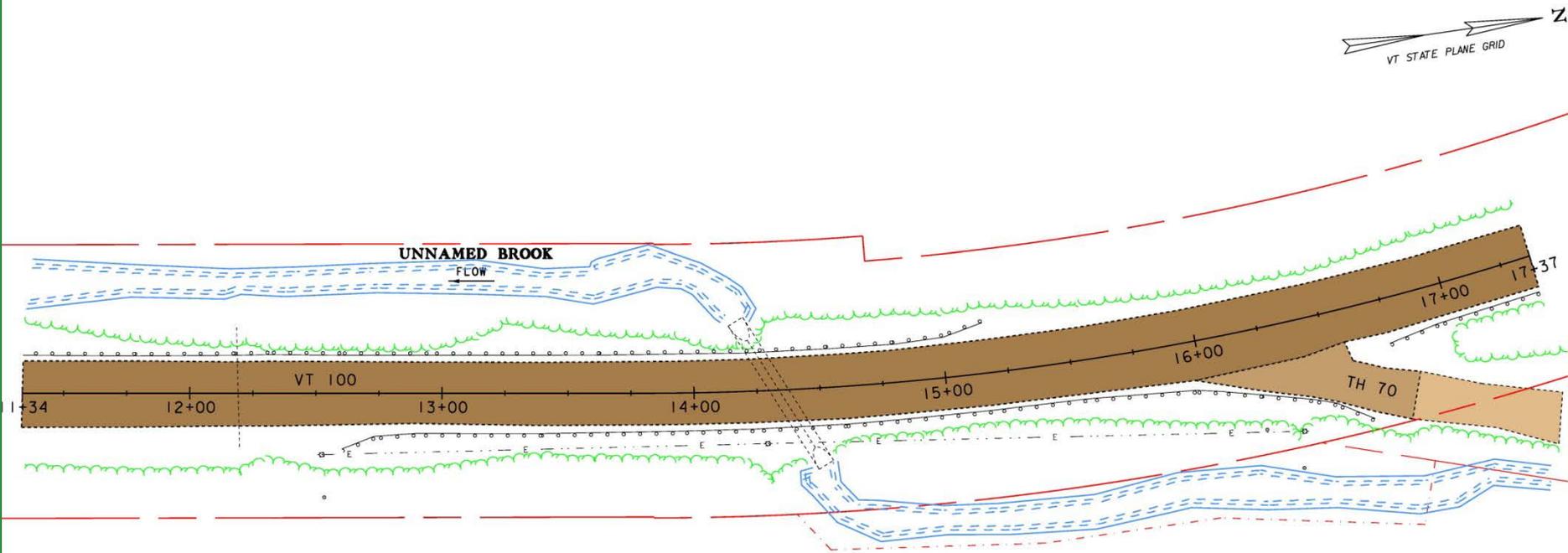
<b>TRAFFIC DATA</b>	<b>2015</b>	<b>2035</b>
<b>AADT</b>	<b>2,600</b>	<b>2,800</b>
<b>DHV</b>	<b>290</b>	<b>320</b>
<b>ADTT</b>	<b>210</b>	<b>370</b>
<b>%T</b>	<b>8.3</b>	<b>13.9</b>



## Existing Site Conditions

- 10'-8" x 6'-11" x 68' long Pipe Arch built in 1949
- Roadway Width (Face-Face Rail) = 30'-0"
- Posted Speed Limit = 50 mph
- No Postings for Weight Restriction
- Overhead Utilities present on east side of road -

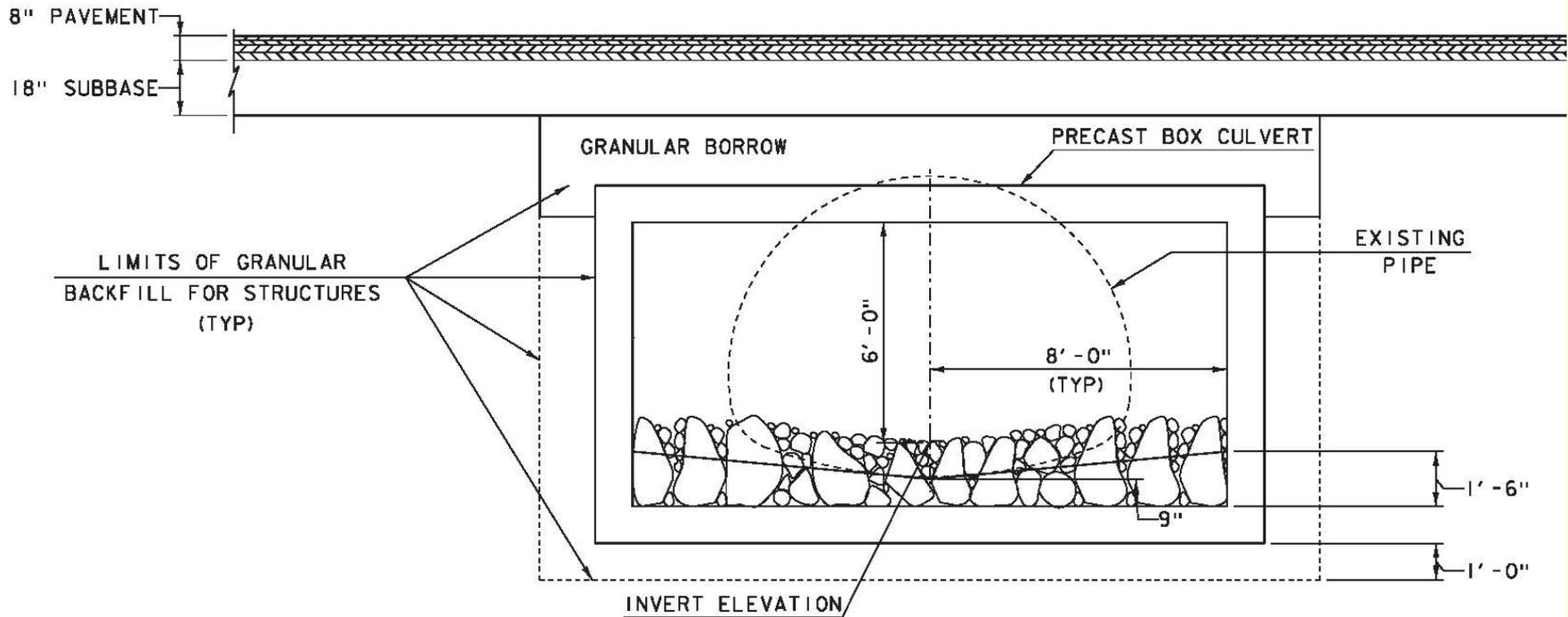
# Layout Showing Constraints



# Proposed Project

- Replacement w/ 16' x 6' concrete box culvert
- Maintain current roadway width (30' rail-rail width)
- Maintain existing centerline and grade -

# Proposed Culvert Typical



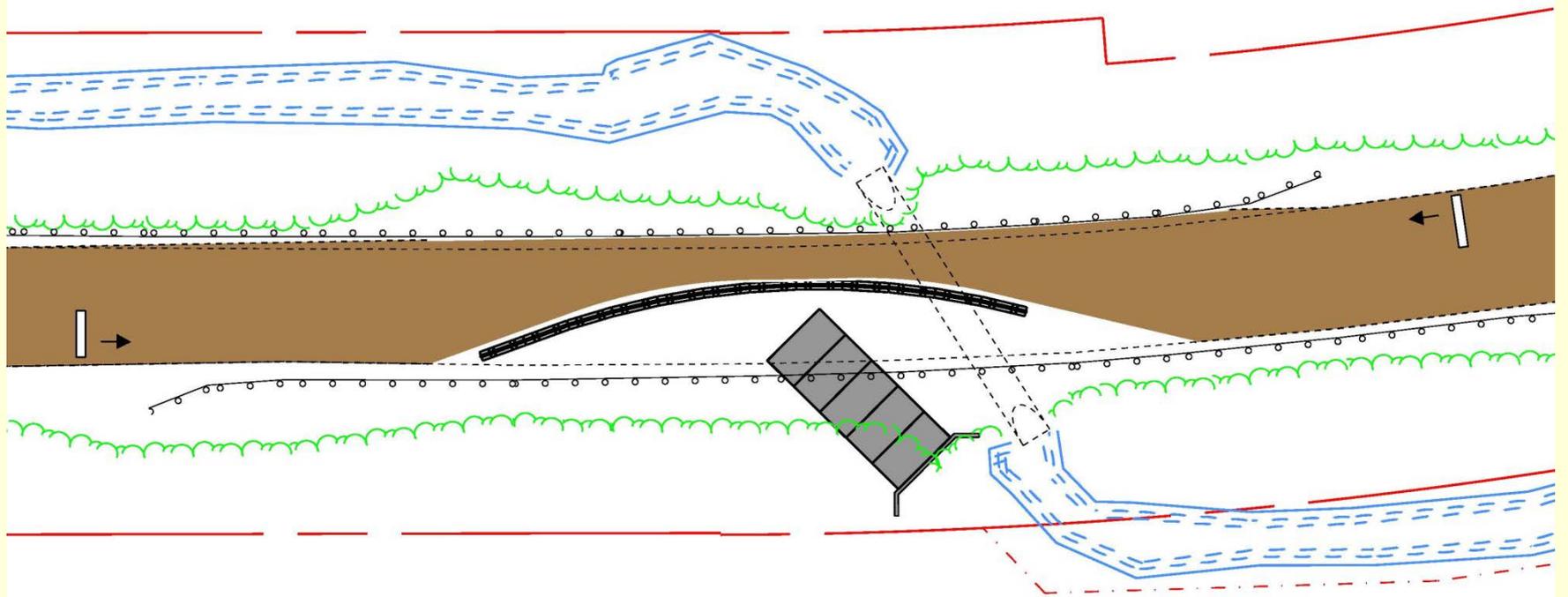
TYPICAL PRECAST BOX CULVERT

SCALE  $\frac{3}{8}$ " = 1' - 0"

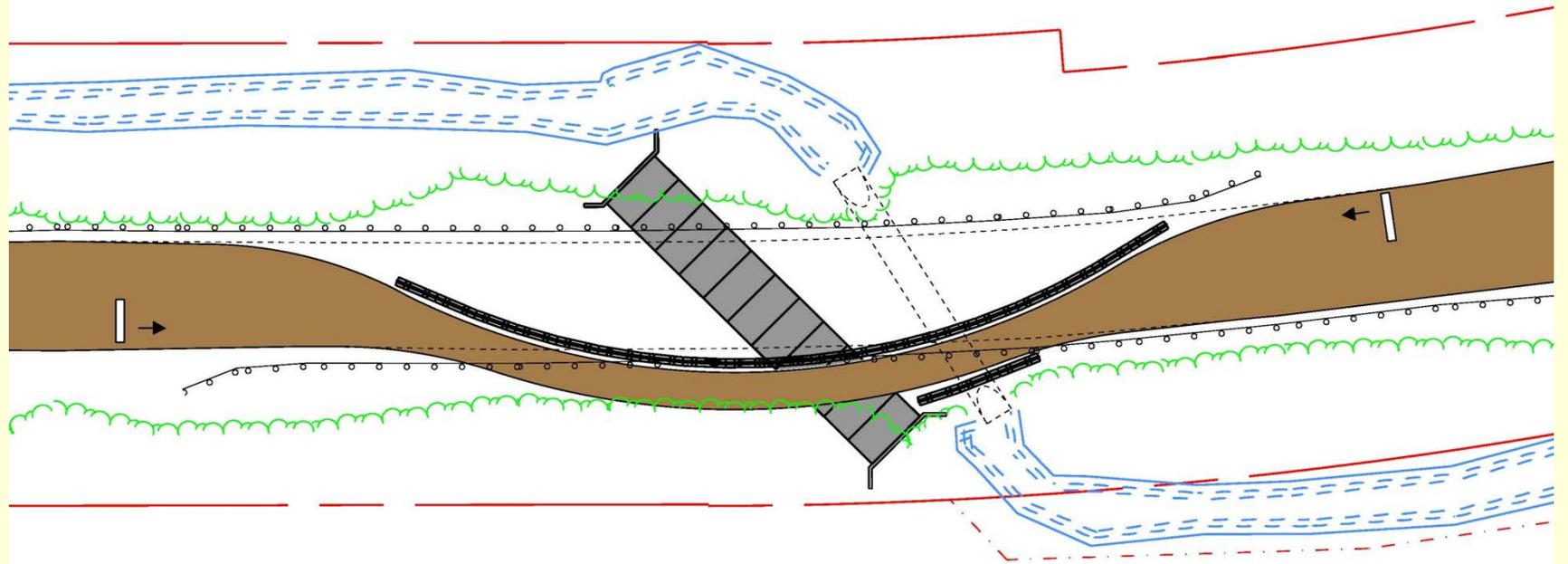
# Options to Maintain Traffic

- Phased Construction
- Temporary Bridge
- Short-term road closure w/ ABC -

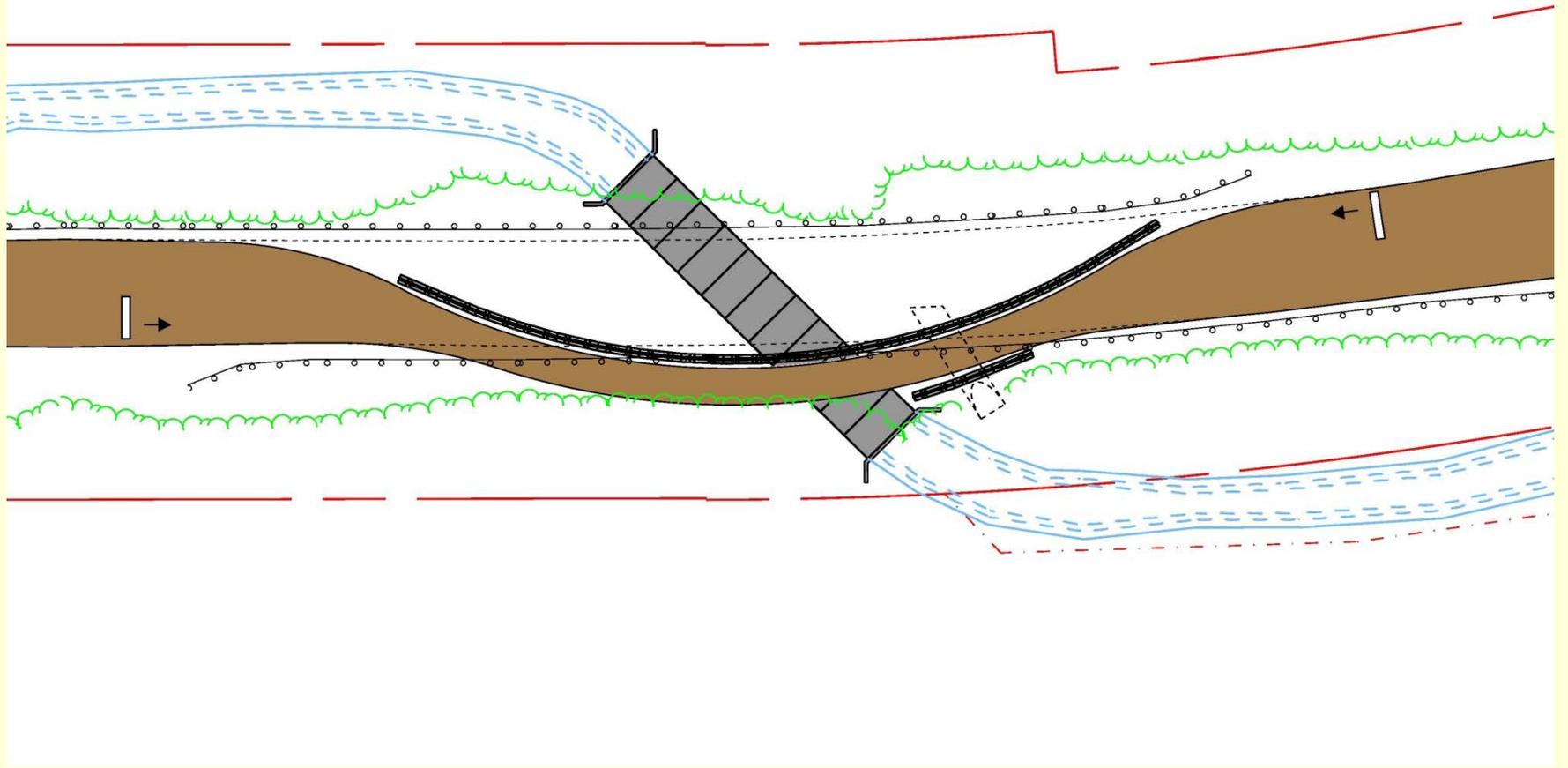
# Phased Construction – Phase 1



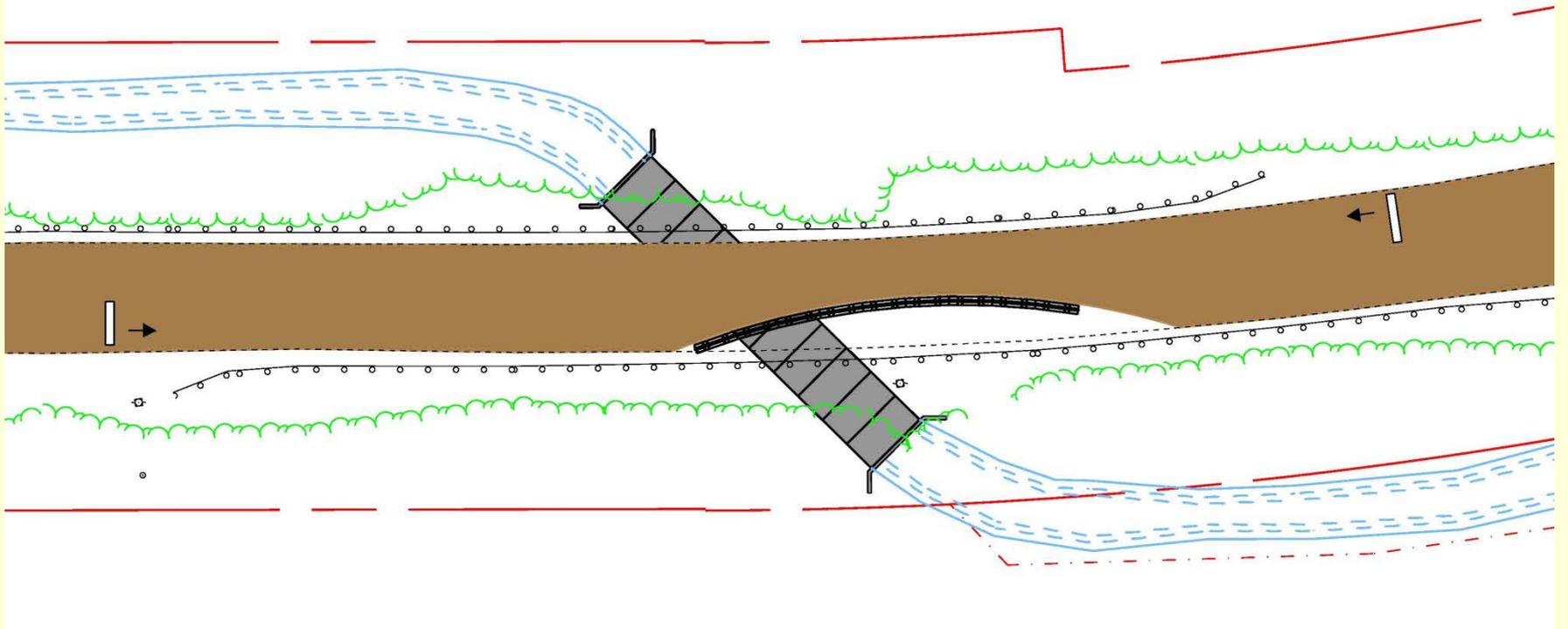
# Phased Construction – Phase 2a



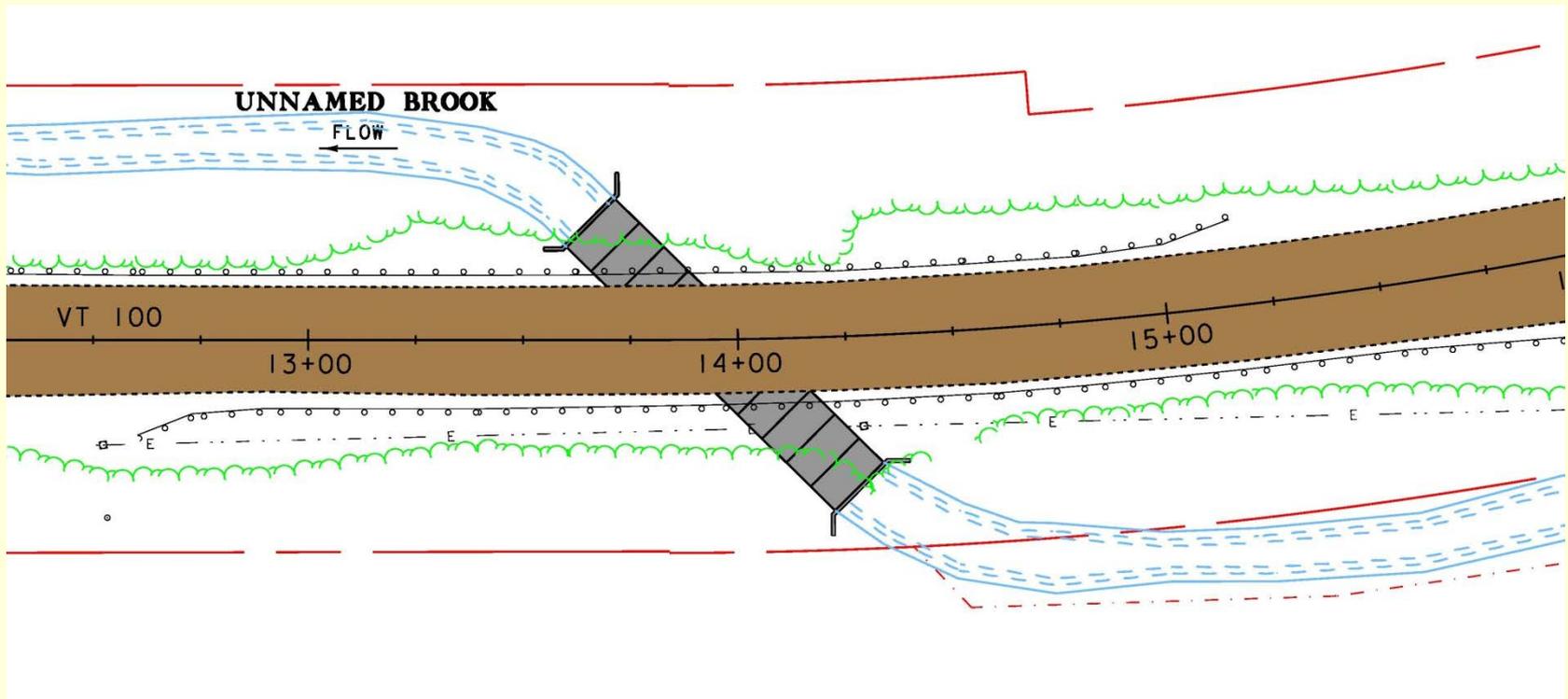
# Phased Construction – Phase 2b



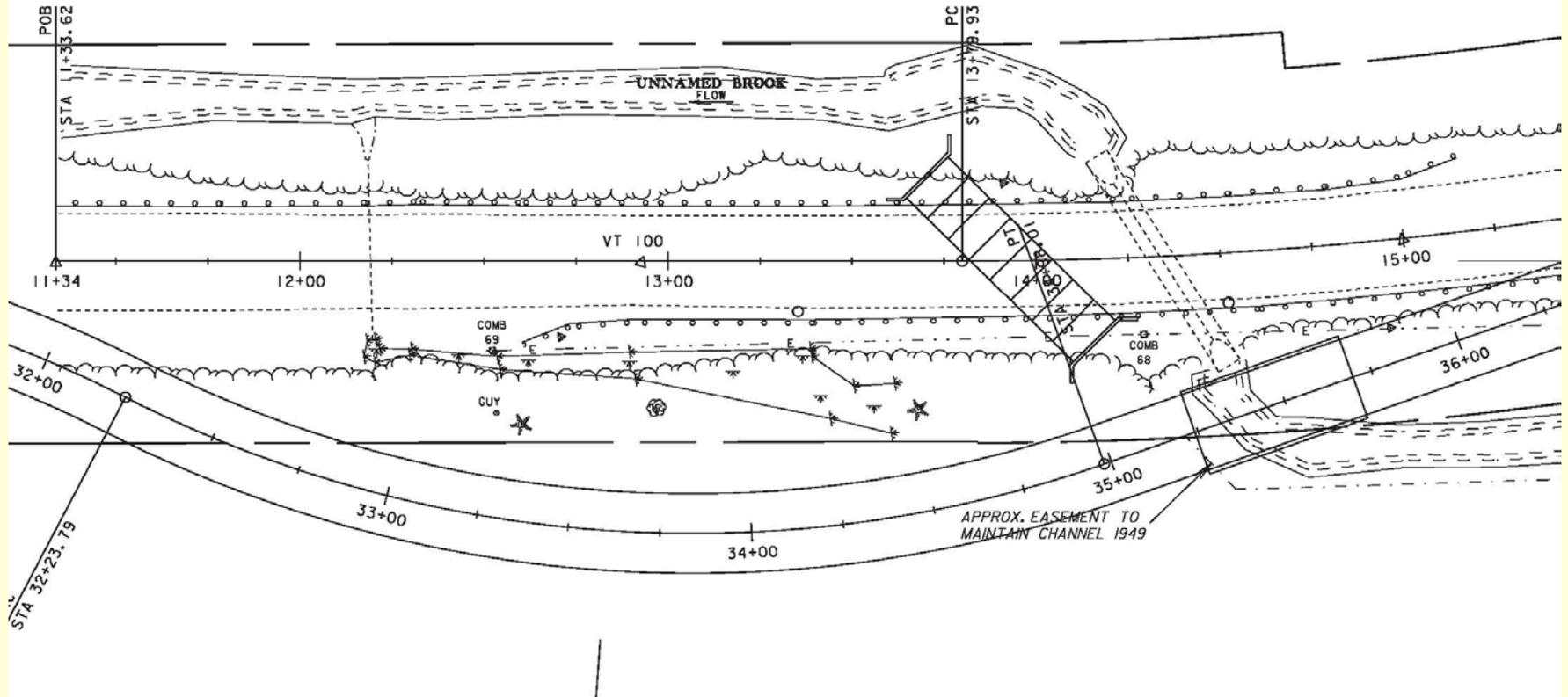
# Phased Construction – Phase 3



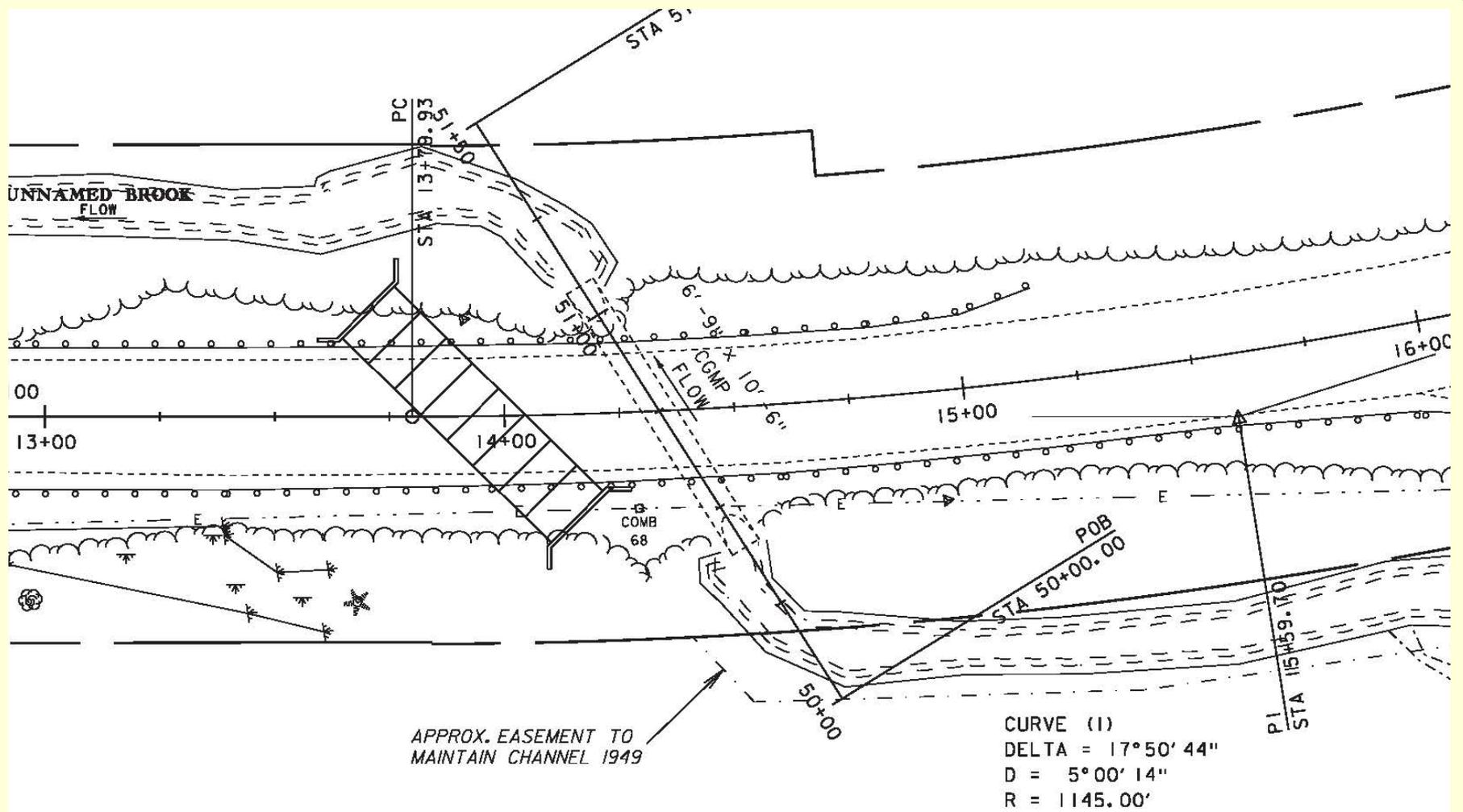
# Phased Construction – Final



# One-Way Temporary Bridge



# Bridge Closure w/ ABC

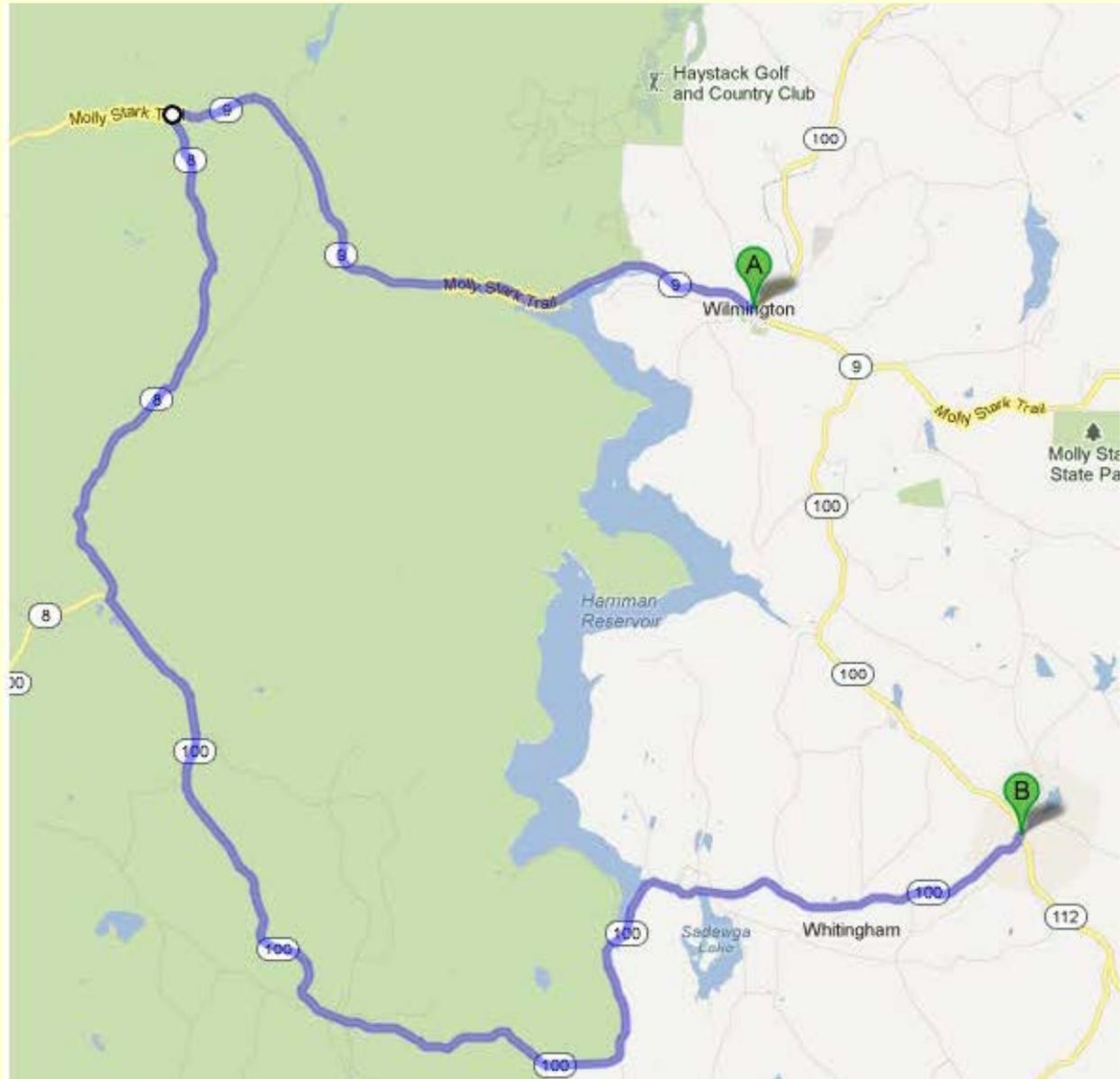


# Bridge Closure Details

- Bridge 47 to be closed for 14 days (maximum)
- Allow 24/7 construction during bridge closure
- Contract incentives/dis-incentives to encourage contractor
- Community would have input in time of closure
- Detour would be on State highways
- Public Outreach to provide advance notice for planning
- Local bypass routes would not be considered detour route -

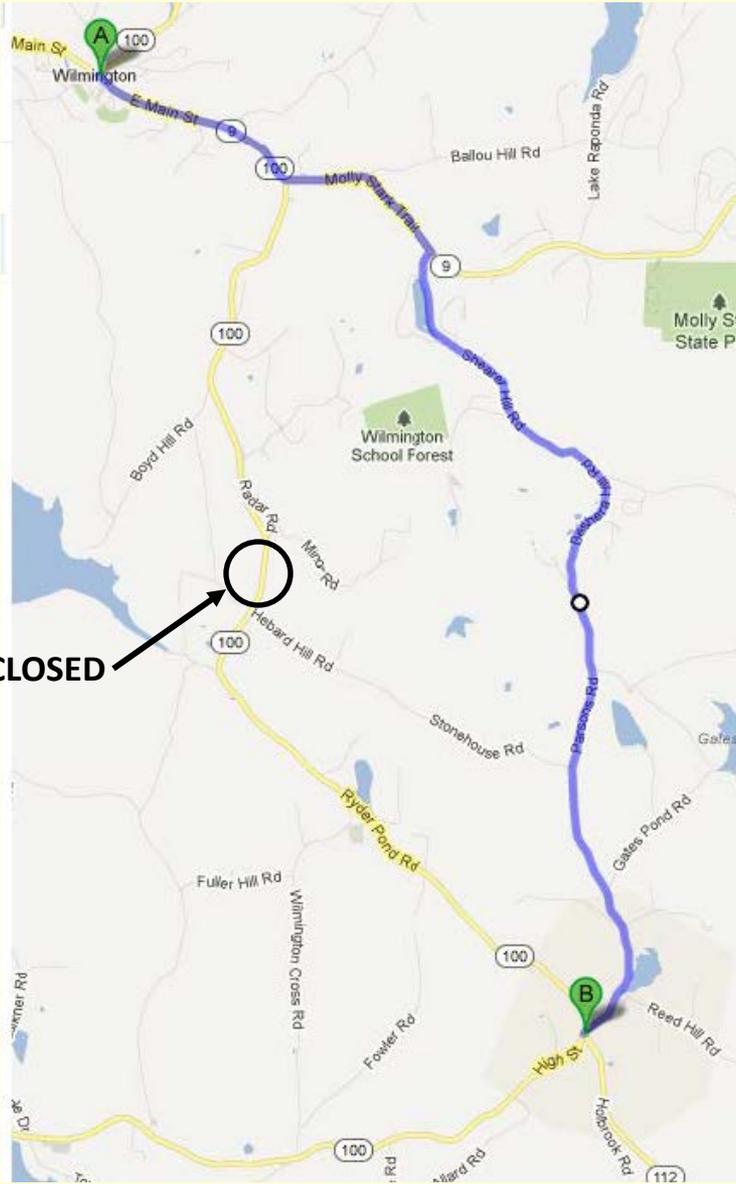
# Proposed Detour

- Thru = 7 miles
- Detour = 25 miles
- Added = 18 miles



# Local Bypass Route

- Thru = 7 miles
- Detour = 7 miles
- Added = 0 miles



BRIDGE CLOSED

# Local Bypass Details

- Local bypass route would not be considered detour route
- State would not add signing on local roads
- Working on policy to mitigate Town for impacts due to increased traffic on bypass route-

# Alternatives Matrix

	Phased Construction	One-lane Temporary Bridge	ABC w/ short term closure
Temporary Bridge	\$0	\$150,000	\$0
Construction w/ Eng'ring + Conting	\$478,850	\$671,014	\$377,555
Preliminary Engineering	\$110,504	\$129,041	\$101,649
Right of Way	\$0	\$56,778	\$0
<b>Total Cost</b>	<b>\$589,354</b>	<b>\$856,833</b>	<b>\$479,205</b>
Project Development Duration	2 years	3 years	2 years
Construction Duration	7 months	18 months	3 months
Closure	None	None	2 weeks

# Questions

