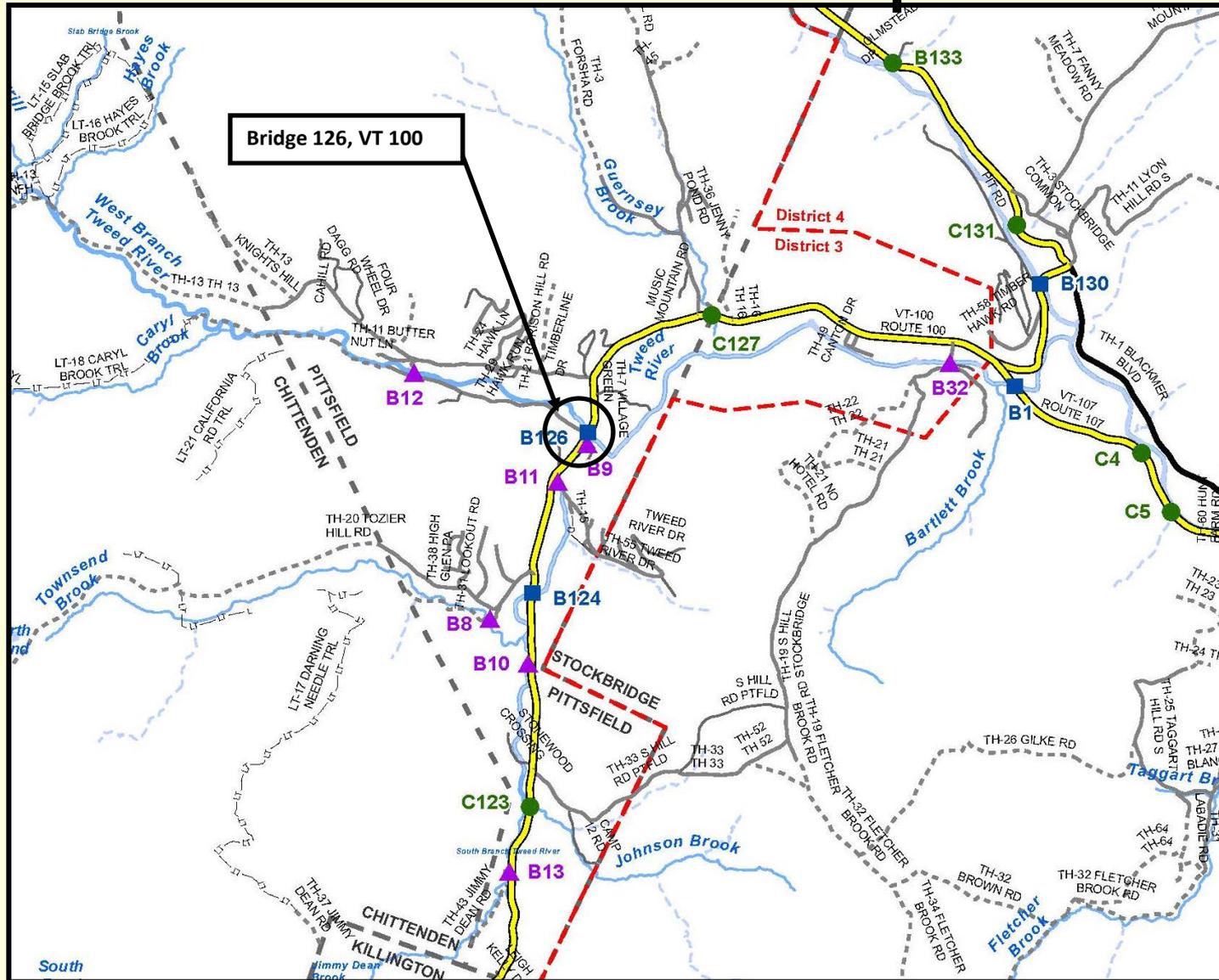


Pittsfield BHF 022-1(24)
Bridge 126 on VT 100
Over the W. Branch of the Tweed River
Regional Concerns Meeting



Location Map



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) with short-term closures used when appropriate
- Impacts to property and resources is minimized
- Results in project being delivered faster
- 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 Design Project Manager to continue Project Design phase -

Phases of Development

Project
Funded

Project
Defined

Contract
Award

Project Definition

Project Design

Construction

Identify resources &
constraints

Evaluate alternatives

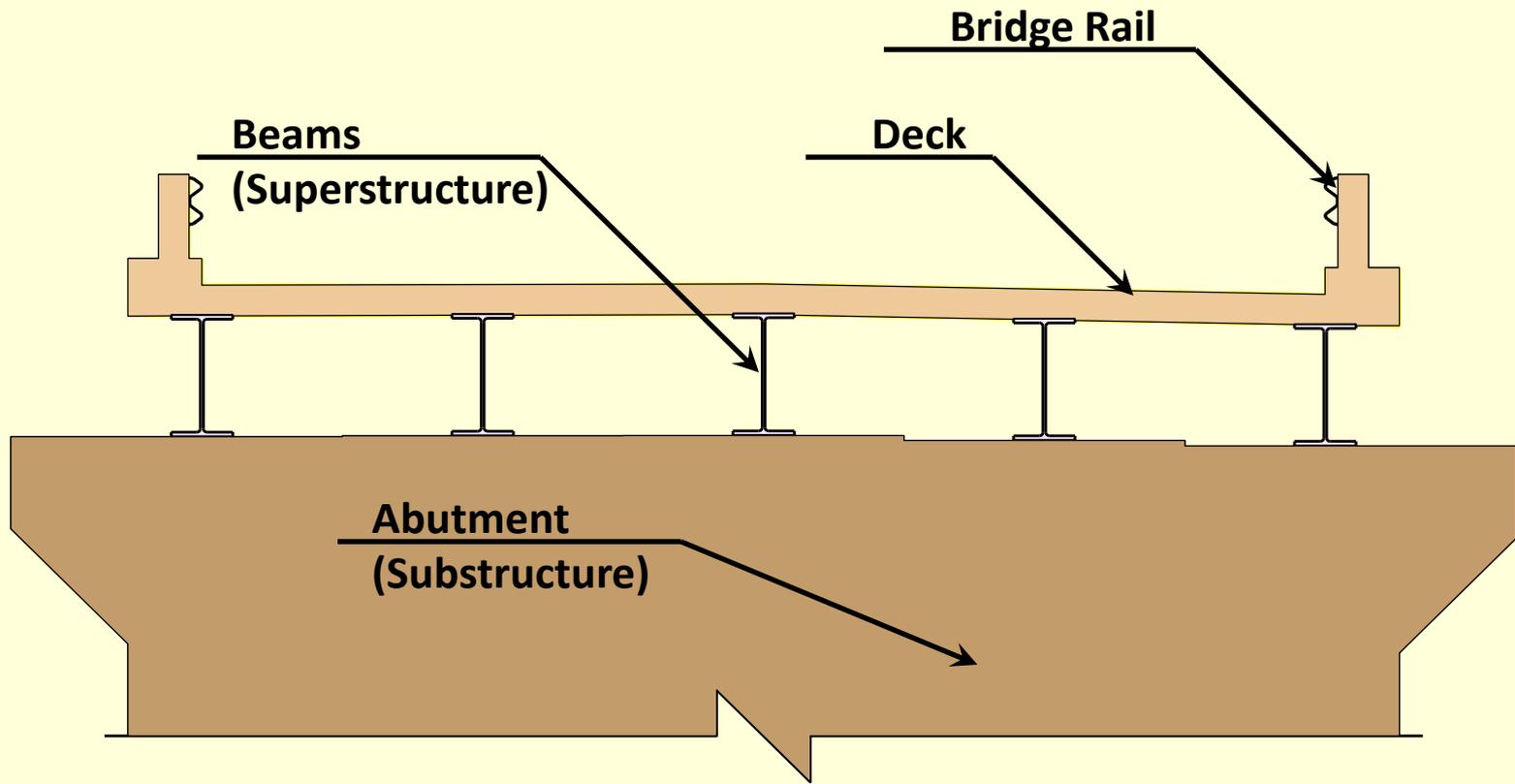
Public Participation

- Quantify areas of impact

- Environmental permits

- Develop plans, estimate and specifications

Description of Terms Used



Project Background

- **Priority 20** in the State Bridge Program
- The structure is owned and maintained by the State (no local funds)
- VT 30 has a functional classification of **Rural Minor Arterial**.
- Existing bridge is a 2 span concrete T-beam bridge
- Span lengths are 28'-28' (56' overall)
- Bridge width = 30.4' curb-curb w/ 5' sidewalk
- Built in **1932 (80 years old) – widened in 1970**
- Bridge is structurally deficient and has a Federal sufficiency rating of **52.9 (out of 100) -**

Project Background (Cont)

- Traffic Data

TRAFFIC DATA	2014	2034
AADT	3,300	3,500
DHV	370	390
ADTT	360	550
%T	8.3	11.9

EXISTING BRIDGE DEFICIENCIES

Deficiencies

Structural Capacity/Condition of the Bridge Deck

Hydraulically inadequate and considered scour critical

Inspection Report Information (Based on a scale of 9)

Bridge Deck Rating 4 Poor

Superstructure Rating 5 Fair

Substructure Rating 5 Fair

Bridge Looking North



Deck Surface



Underside of Deck



Upstream Fascia



South Abutment

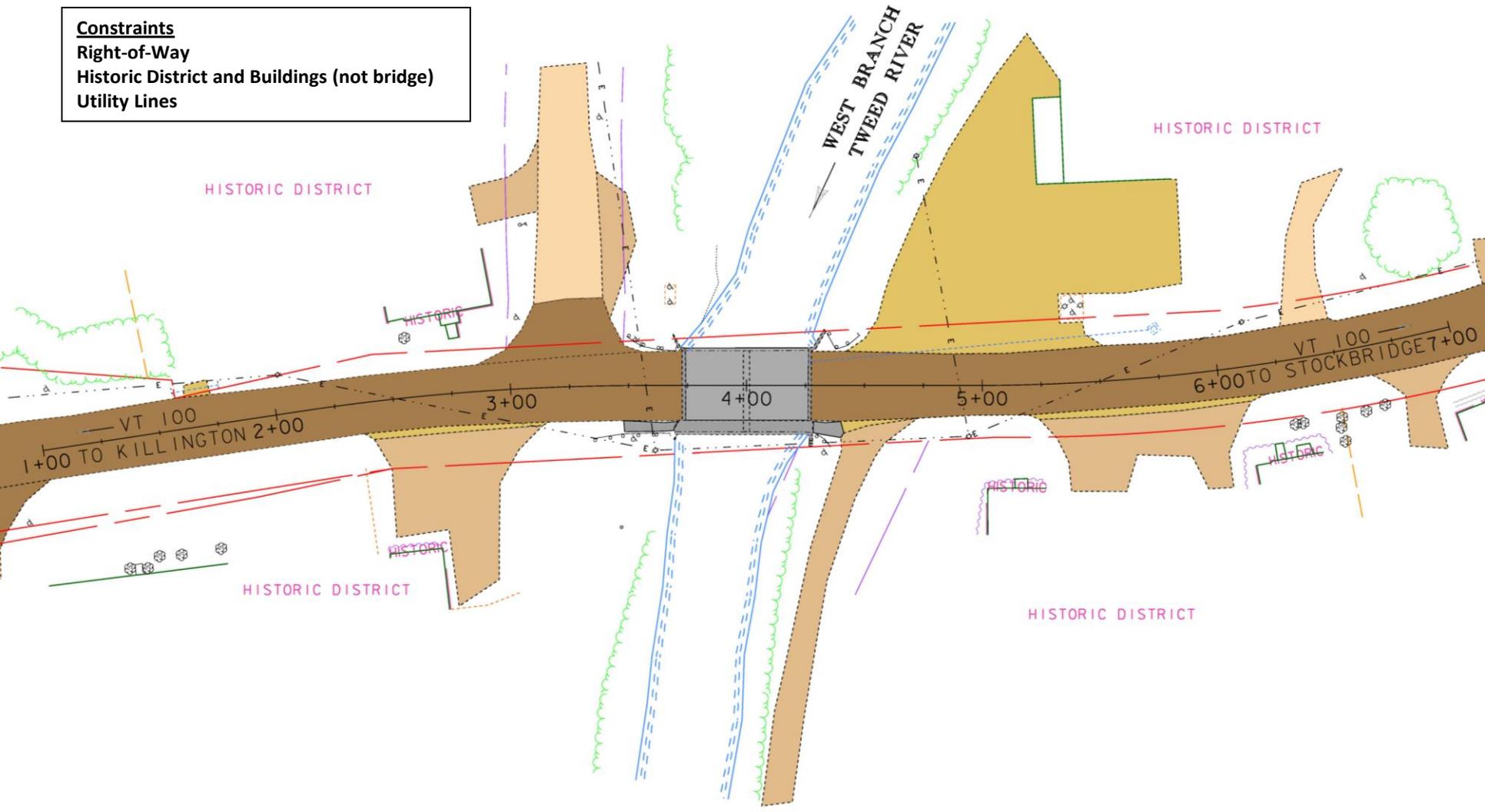


Existing Site Conditions

- Bridge Width (curb-curb) = 30.4' w/ 5' sidewalk
- Posted Speed Limit = 35 mph
- No Postings for Weight Restriction
- Overhead Utilities present along east side-

Layout Showing Constraints

- Constraints**
- Right-of-Way
- Historic District and Buildings (not bridge)
- Utility Lines



Alternatives Considered

Note that several alternatives were considered in the Scoping Report that did not warrant future consideration so are not included in this presentation

- Bridge Replacement w/ Off-site Detour
- Bridge Replacement w/ Phased Construction
- Bridge Replacement w/ Two-way Temporary Bridge

Note the proposed bridge will be the same for all options

Proposed Project

- Complete bridge replacement warranted
- Use 11' lanes and 4' shoulders (30' rail-rail width)
- Eliminate sidewalk and use shared use shoulders
- Use approx. 65' single span bridge
- Maintain existing centerline of road
- Maintain vertical grade of road-

Issues worth mentioning

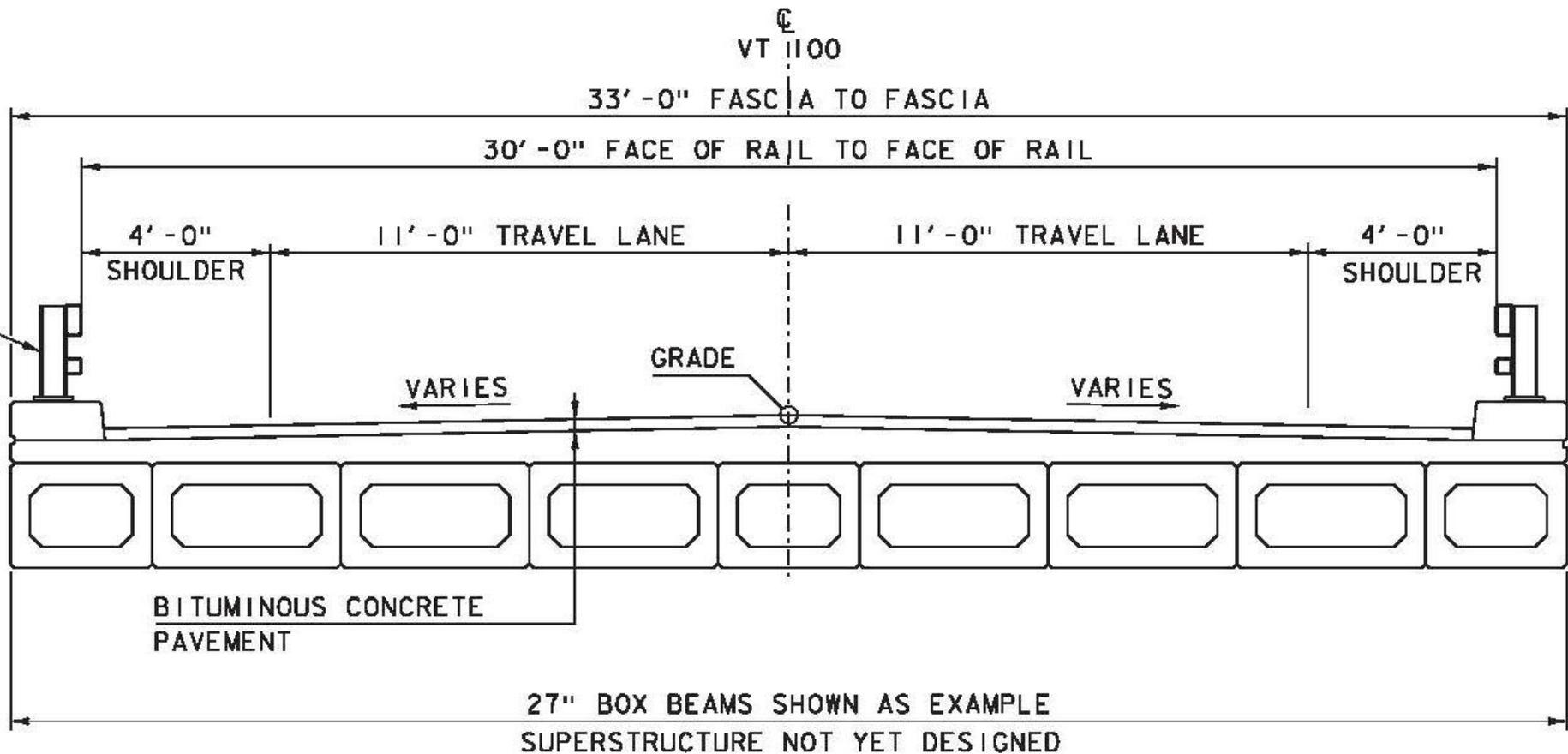
Rationale for elimination of Bridge Sidewalk

- Proposed 4' shoulders are appropriate for shared use
- Bridge sidewalks not maintained by State and would require Maintenance agreement w/ Town
- No sidewalks leading to and from bridge

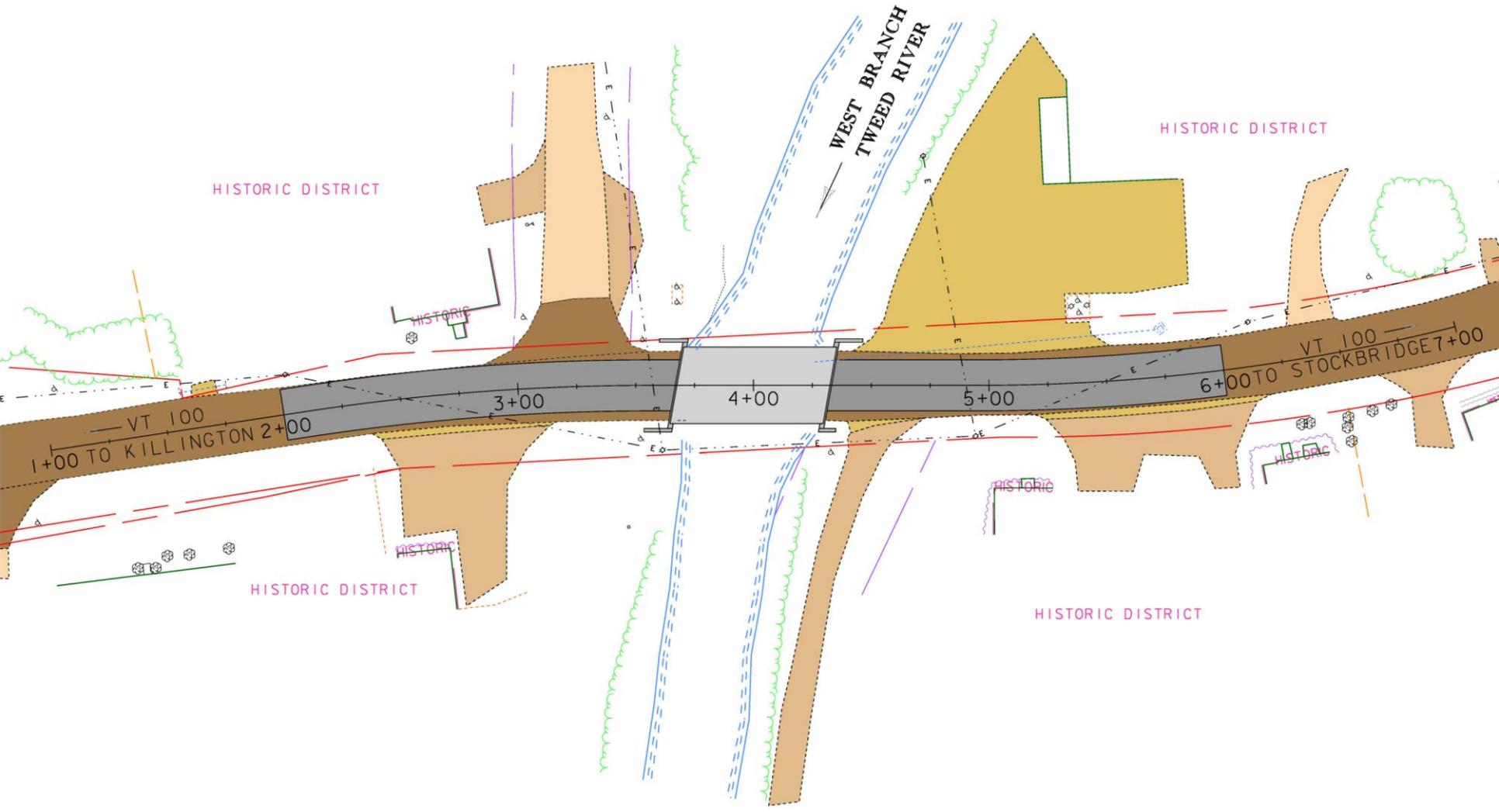
Proposed Hydraulic Opening

- Meeting standard would require raising roadway by 4.5' and would create "dam" in road
- Meeting standard would severely impact Historic District
- Minimal raising of grade produces only minimal increase in hydraulic capacity
- Proposed bridge improves hydraulics and balances issues

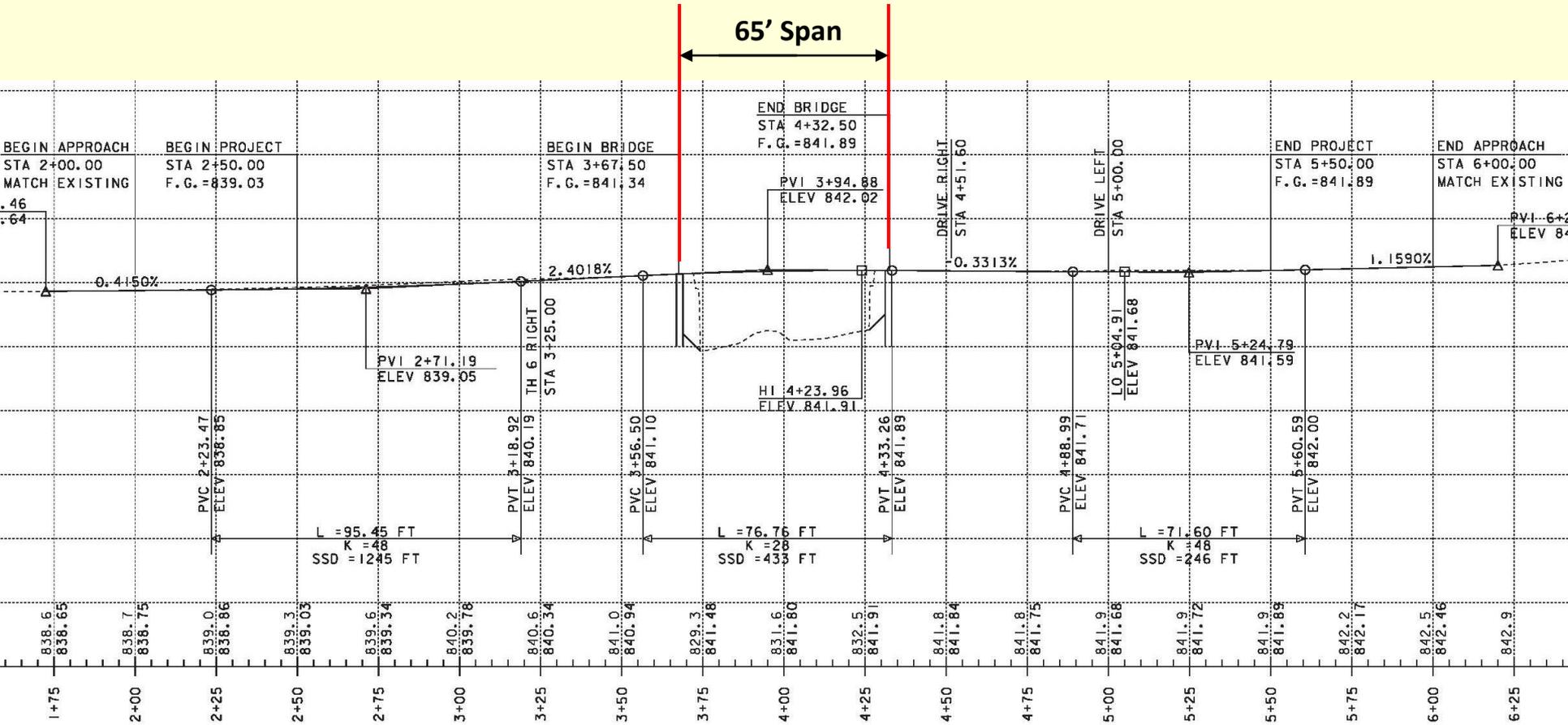
Proposed Bridge Typical



Layout of Proposed Bridge



Profile of Proposed Bridge



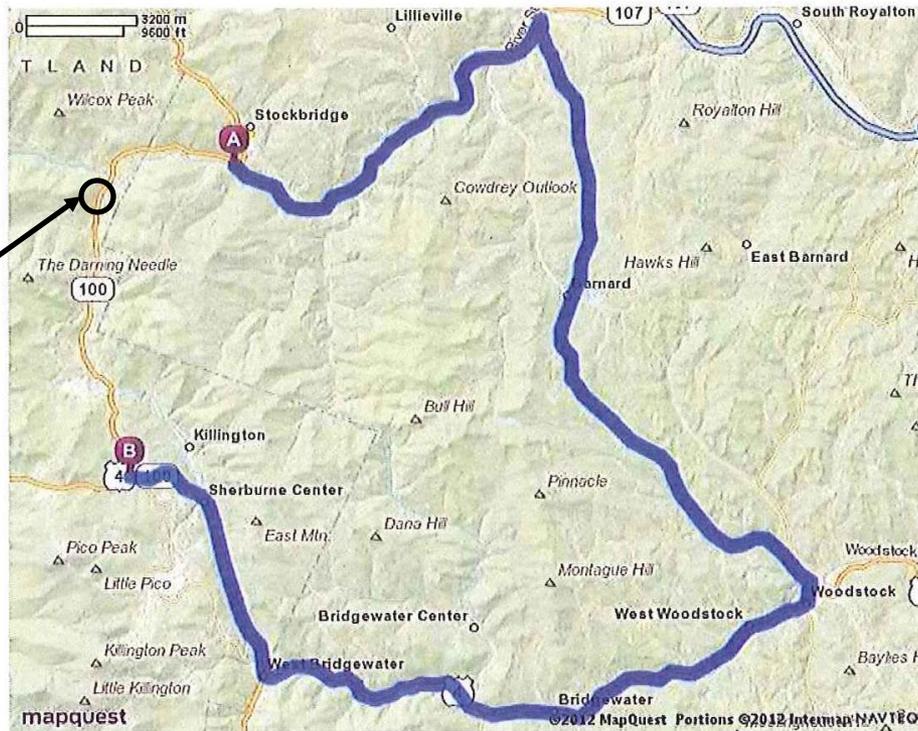
PROFILE ALONG VT 100

HORIZONTAL SCALE: 1" = 20'-0"

Methods to Maintain Traffic

- Off-site Detour
- Phased Construction
- Temporary Bridge on east side of VT 100

Off Site Detour Option



Closed Bridge

Factors
Traffic Volume = 3,300
Added Miles = 36.2 miles
Duration = 4 weeks

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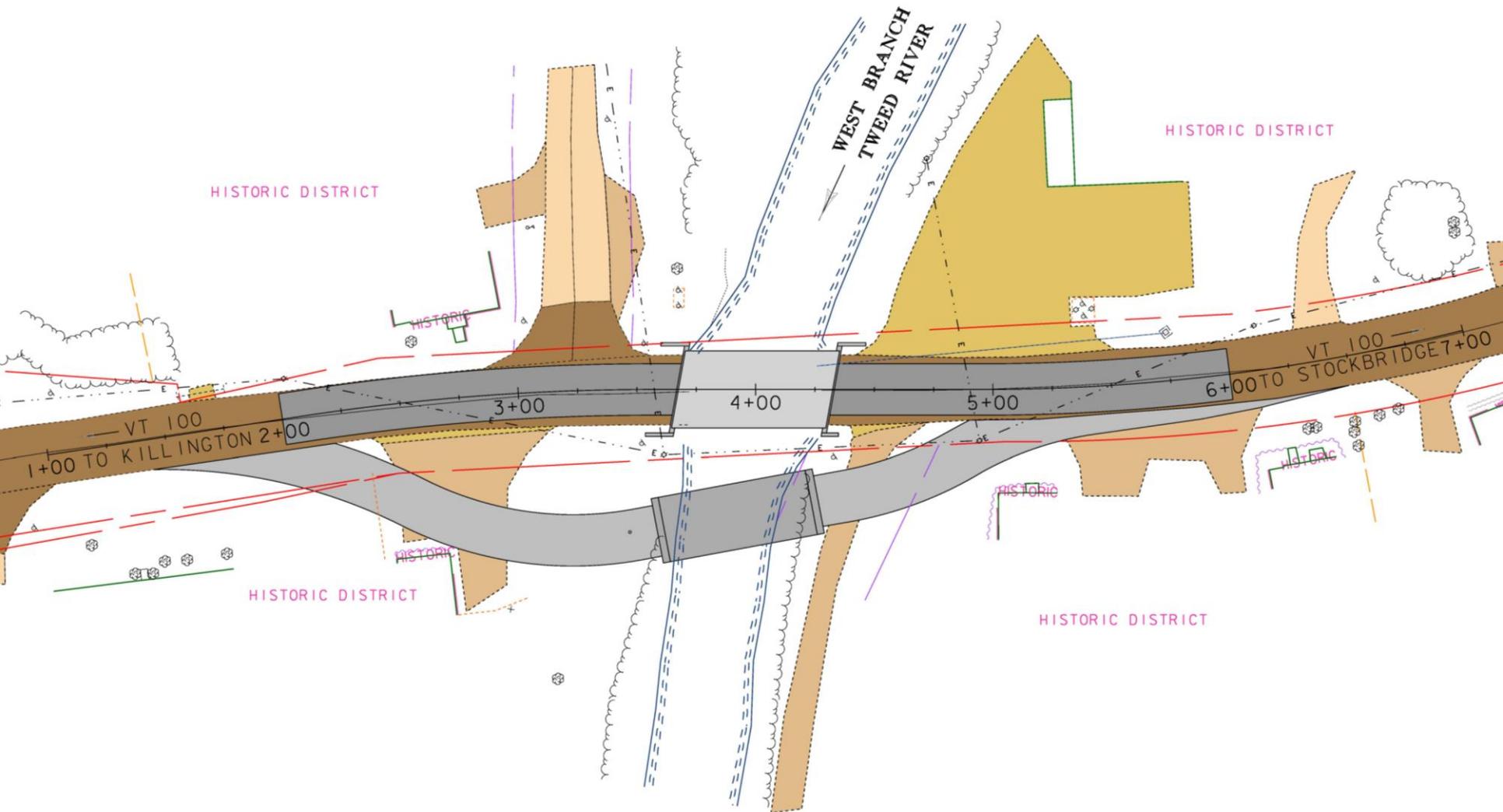
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Regional Detour:
Through Distance: 10.6 miles
Detour Distance: 46.8 miles
Additional Distance: 36.2 miles
End to End Distance: 57.4 miles

Phased Construction Option

- One-Way alternating traffic with lights would:
 - Have long queue lengths and queue times
 - Make access to side drives/buildings difficult
 - Prohibit wide loads through phased work
 - Create increased safety concerns for workers & drivers

Two-Way Temporary Bridge Option



Alternatives Matrix

	Replacement w/ off-site detour	Replacement w/ Phased Construction	Replacement w/ Temporary Bridge
Temporary Bridge	\$0	\$0	\$150,000
Construction w/ CE + Contingencies	\$1,286,600	\$1,442,800	\$1,482,700
Preliminary Engineering	\$229,400	\$257,200	\$263,900
Right of Way	\$40,000	\$40,000	\$150,000
Total Cost	\$1,556,200	\$1,740,000	\$1,896,600
		12%	22%
Project Development Duration	3 years	3 years	4 years
Construction Duration	3 months	1 year	1.5 years
Closure Duration	1 month	One-way alternating	None

Conclusion and Recommendation

Full bridge replacement while maintaining traffic on a two-way temporary bridge

The primary reasons for this recommendation are:

- Improves the hydraulic capacity while balancing the constraints on the project
- Long term (80 year) solution
- Short-term bridge closure not appropriate for the volume of traffic, detour distance and duration
- Phased construction not appropriate due to queue lengths, and access to adjacent properties-

Questions

