

## Supplemental Supporting Information for a Finding of Effect

### PUBLIC COMMENT DRAFT

**Project:** Perry 26630.07

**Scope:** Bridge Replacement

**Finding of Effect:** No Adverse Effect

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*This report describes the Maine Department of Transportation's compliance with Section 106 of the National Historic Preservation Act (36 CFR Part 800). It details the finding of effect to historic properties listed in or eligible for listing in the National Register of Historic Places (NRHP) that are located in the subject project's Area of Potential Effect (APE). This report also assesses how the proposed project may directly or indirectly affect and/or diminish those characteristics and aspects of integrity that qualify a historic property for inclusion in the NRHP. This report is specific to the Section 106 assessment of effects, as opposed to general environmental impacts. Consultation with coordinating agencies and the public is ongoing.*

#### **Project Scope**

The proposed project consists of the replacement of Smelt Brook Bridge (#2774) that carries U.S. Route 1 over Smelt Brook, located 0.10 of a mile west of Thompson Store Road in Perry.

#### **Purpose and Need**

The purpose of this project is to address the structural deficiencies of Smelt Brook Bridge, improve stream flow, and to provide for tidal transparency and structural resiliency. The proposed solution will also contribute to a greater effort to create a corridor with consistent lane and shoulders widths to better accommodate pedestrians and cyclists along this portion of Coastal U.S. Route 1.

The need for this project is due to the deteriorating condition of Smelt Brook Bridge and its inability to sufficiently convey stream flow.

#### **Project Background**

Smelt Brook Bridge is a 9' buried, cast-in-place, concrete slab bridge that is seated on ashlar masonry abutments and wingwalls. The waterway opening is approximately 9'-0" wide and 13'-6" high, with a total opening of 133 SF. The bridge was built in 1936 in conjunction with a highway reconstruction project. It is located on Coastal US Route 1, a vital connection between small coastal communities and larger service centers where residents work, shop, and receive medical and other essential services. It is the main emergency corridor for the coastal communities along the route and is supported by regional EMS. The proposed project is a part of the Downeast Coastal U.S. Route 1 Improvement Project, which aims to rehabilitate U.S. Route 1 from Machias to Calais, and State Route 190 from Eastport to U.S. Route 1 to create a consistent corridor, achieve a state of good repair, and prepare for a changing climate. Multiple culverts and bridges within the project limits, including Smelt Brook Bridge, do not meet current hydraulic standards and are at risk for flooding from increased rainfall due to a changing climate.

This coastal section of U.S. Route 1 could be subject to up to 8.8 feet (under certain emissions scenarios) of sea level rise by 2100. This section also has several locations that could be subject to increased flooding on higher tides by 2100. At this time, the areas along this stretch are not likely to be flooded under normal tidal exchange until after 2050, therefore the proposed action will not address raising the roadway to aid in resiliency. However, MaineDOT anticipates the possibility of doing this at a later time.

MaineDOT's 2023 inspection report indicated the Smelt Brook Bridge has a condition rating of 5, noting moderate to major deterioration. The existing slab has widespread cracking and spalling along its underside and at the facias. The southwest wingwall shows signs of movement and the roadway shoulder behind the wingwall has widespread erosion. The bridge has an inadequate water opening and is constricted, causing high velocities and a scour hole at the outlet. As such, tidal water can back up behind the bridge and the existing structure is not reliable or resilient for future storm events.

**Proposed Action**

The proposed action would replace the Smelt Brook Bridge on its current alignment with a single-span NEBT girder bridge on integral abutments with H-Piles. The bridge would have a composite concrete deck and a 3" hot mix asphalt wearing surface on ¼" membrane waterproofing. The approach section would be superelevated and consist of two 11' lanes with 5' shoulders for a curb-to-curb width of 32'. The proposed horizontal and vertical alignment would match the existing as close as possible. The bridge deck would have a safety curb with 3-bar steeling railing. The opening of the bridge would increase from 133 SF to 1,505 SF. The proposed hydraulic opening would provide 6.1' of freeboard and would meet the tidal transparency guidance of 0.25' allowable head difference between upstream and downstream at mean-higher-high-water as outlined in the General Design Criteria for Tidal Drainage Structures. Traffic would be maintained on a one-lane temporary bridge on the upstream side with alternating one-way traffic.

The proposed construction cost is \$6.14 million.

**Federal Action**

Federal funding.

**Definition of Area of Potential Effect (APE)**

The proposed project is located in Perry, Washington County, Maine. The map below shows the APE.



Figure 1. Perry 26630.07 Area of Potential Effect



### Historic Properties

The proposed project is located in Perry. The descriptions of historic properties are based on Maine Historic Preservation Commission (MHPC) forms.

#### **U.S. Route 1 and Smelt Brook Bridge #2774 (Maine Department of Transportation; Sta. 16+00 to Sta. 23+00 Right and Left)**

##### ***National Register-Eligible***

##### ***Criterion A, Transportation***

U.S. Route 1 is eligible for listing in the National Register under Criterion A, Transportation. From MaineDOT's *U.S. Route 1 in Maine: A Historic Context* (draft):

U.S. Route 1 was designated in 1926 by the United States federal government's Joint Board on Interstate Highways. Stretching from Key West, Florida, to Fort Kent, Maine, it was the first federally designated highway that connected the entire East Coast. It largely followed the routes of earlier roads, in particular the Atlantic Highway. It is still heavily used by local residents and tourists and is the primary highway in more remote areas of the state such as the Down East region and northern Aroostook County.

This segment of U.S. Route 1 was constructed in 1937 to bypass the former route (located upstream) as part of the Maine State Highway Commission's effort to improve the alignment at the East Bay location. At that time, the former route was too narrow and presented vertical constraints. The realigned route provided a safer thoroughfare through the construction of a wider and superelevated roadway. The roadway was constructed with a surface width totaling 26', including 3' shoulders. The wearing surface consisted of bituminous-treated gravel. Smelt Brook Bridge is also considered eligible for listing in the National Register under Criterion A, Transportation, for its association with the realigned U.S. Route 1. The bridge was built in 1937 and coincided with the construction of the new U.S. Route 1 segment that took place at the project location in the same year. Although the roadway has been widened over the years (and original materials like cable guardrail and gravel shoulders have been replaced), the resource retains sufficient integrity to convey its significance.



*Figure 2. U.S. Route 1 at the project location*





Figure 3. Smelt Brook Bridge (#2774)

### Archaeological Resources

There are no archaeological resources in the project area.

### Impacts to Property

The following addresses potential impacts to properties as a result of the proposed action.

#### **U.S. Route 1 and Smelt Brook Bridge #2774 (Maine Department of Transportation; Sta. 16+00 to Sta. 23+00 Right and Left)**

*National Register-Eligible*

*Criterion A, Transportation*

The proposed action would result in **No Adverse Effect** to U.S. Route 1 and Smelt Brook Bridge. The proposed action minimizes adverse effects to U.S. Route 1 by matching the proposed horizontal and vertical alignment to the existing as closely as possible. The approach sections and superstructure would closely match the existing design, with two 11' lanes with 5' shoulders. The addition of 3-bar steel bridge railing presents a nominal change, as steel guardrail is found within the project area. Riprap would be installed to protect the coastal side slopes, but it would not represent a significant change to the setting, as riprap is already present at the bridge site. Additionally, the DOT would implement a reseeding plan before the completion of construction to revegetate the area. The proposed action avoids adverse effects and maintains the integrity of setting and location by building a new structure at the same location as the existing crossing.

The proposed action would also replace the Smelt Brook Bridge on its current alignment with a single-span NEBT girder bridge on integral abutments with H-Piles. Although the introduction of a new crossing presents a change in design and workmanship at the project location, the existing bridge is not significant for its design type, materials, or workmanship; rather, it holds significance for its association with U.S. Route 1. Although the proposed action would replace the existing structure, the replacement bridge would continue to convey significance as a contributing feature on the historic

roadway. The replacement bridge would maintain the passage of vehicles at the crossing and the overall historic function of the crossing. Furthermore, the action would not significantly diminish the integrity of setting and location, as the proposed bridge would be built at the same location as the existing.

#### Archaeological Resources

There are no archaeological resources in the project area.

#### **Avoidance and Minimization Efforts**

In order to avoid adverse impacts to the historic properties, MaineDOT opted to build a replacement structure on alignment that is as close as possible to the existing. The installation of riprap has been reduced to the greatest extent possible, and the DOT would implement a reseeding plan before the completion of construction to revegetate the area.

#### **Dismissed Alternatives**

Two additional alternatives were analyzed as part of the preliminary engineering of this project:

##### No Build

The No Build Alternative does not address the deteriorating structural condition of Smelt Brook Bridge. Additionally, the bridge has an inadequate water opening and is constricted, causing high velocities and a scour hole at the outlet. The No Build Alternative would not meet current standards for tidal transparency. For these reasons, this alternative does not meet the purpose and need and was dismissed from further consideration.

##### Bridge Rehabilitation

The Rehabilitation Alternative would rehabilitate the existing Smelt Brook Bridge by replacing the case-in-place concrete slab on the existing masonry abutments. However, the hydraulic analysis indicated the existing opening is constricting flow, creating high velocities, and contributing to the scour hole at the outlet of the existing bridge. The Rehabilitation Alternative would not meet current standards for tidal transparency. For these reasons, this alternative does not meet the purpose and need and was dismissed from further consideration.

#### **Public Involvement**

MaineDOT contacted the four federally recognized tribes in Maine. The Passamaquoddy Tribe, Houlton Band of Maliseet Indians, and the Penobscot Nation replied with no concerns about the undertaking. The Mi'kmaq Nation did not respond. MaineDOT also notified the Wampanoag Tribe of Gay Head (Aquinnah) and the Narragansett Tribe, per the U.S. Army Corps of Engineers' request.

The Perry town office and Maine Preservation were contacted via email and asked to comment on knowledge of, or concerns with, historic properties in the area, and any issues with the undertaking's effect on historic properties. Maine Preservation requested and received consulting party status. MaineDOT has consulted with Maine Preservation on the National Register review process, as well as project alternatives.

The public involvement process is ongoing.

#### **Proposed Materials**

Hot mix asphalt, concrete, steel, steel bridge rail and guardrail, loam and seed.

**Plans**

Perry, Washington County, Smelt Brook Bridge over Smelt Brook, U.S. Route 1, Project No. 026630.07

**Attachments**

J. N. Leith Smith, MHPC, to Julie Senk, MaineDOT, August 20, 2024

Kirk Mohney, MHPC, to Julie Senk, MaineDOT, September 4, 2024.



**STATE OF MAINE**  
**Memorandum**

Date: October 23, 2024

To: Julie Senk, Historic Preservation Coordinator, Maine DOT/ENV

From: J. N. Leith Smith, MHPC

Subject: Continued Consultation, Review of PDR Plans

Project: MHPC #1285-24, WIN 26630.07; Perry

Replacement of Smelt Brook Bridge #2774 that carries Route 1 over Smelt Brook, located 0.10 of a mile west of Thompson Store Road.

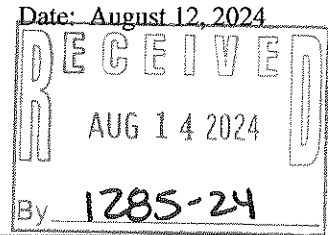
Dear Julie,

Thank you for submitting PDR plans for the above referenced proposed project on July 25, 2024. The historic property that was of potential concern will not be impacted by the proposed project. In following the procedures specified in the Federal Highway/MHPC/MDOT programmatic agreement, we **recommend a finding that there will be no archaeological properties affected by the proposed undertaking.**

# STATE OF MAINE

## Memorandum

To: Kirk F. Mohney, MHPC  
From: Julie Senk, Maine DOT/ENV  
Subject: Section 106 request for concurrence  
Project: Perry 26630.07, MHPC #1285-24  
Scope: Bridge Improvements



The Maine DOT has reviewed this project pursuant to the Maine Programmatic Agreement (PA) and Section 106 of the National Historic Preservation Act of 1966, as amended.

The proposed project consists of improvements to Smelt Brook Bridge #2774 that carries Route 1 over Smelt Brook, located 0.10 of a mile west of Thompson Store Road.

In accordance with 36 CFR Part 800.4, the following identification efforts of historic properties were made:

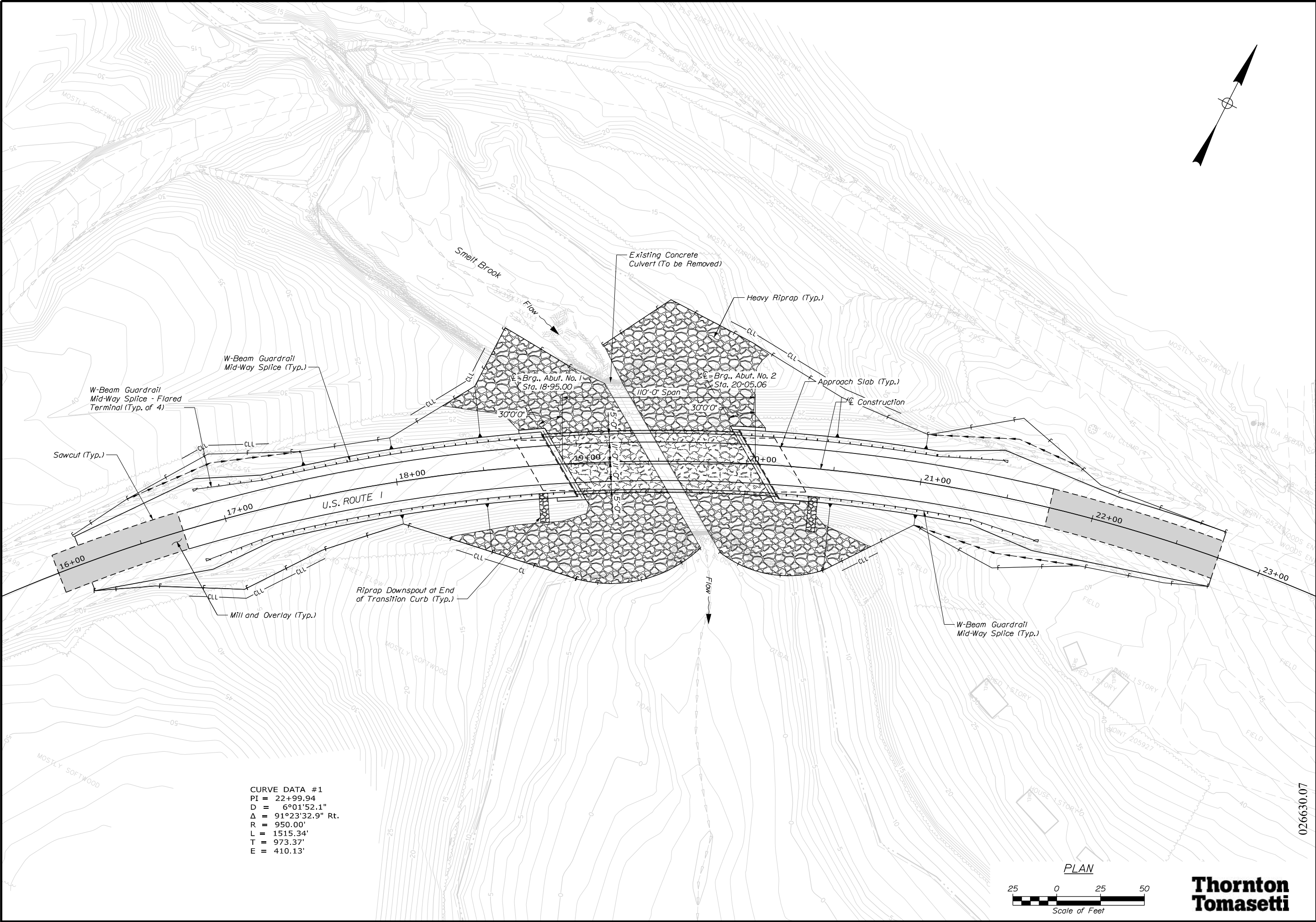
- 800.4(a) (1) - The Area of Potential Effect (APE) includes properties/structures adjacent to the bridge and within the project limits. The project limits are defined by the bridge and the immediately adjacent area, as well as potential approach roadway and intersection improvements nearby. Properties/structures adjacent to this project limit are considered to be within the APE. The APE is shown as a red polygon on the attached map.
- 800.4(a) (2) - Review of existing information consisted of researching the National Register and MHPC survey databases. The Maine Historic Preservation Commission Archaeological staff is currently reviewing this undertaking.
- 800.4(a) (3) - The Town of Perry, along with applicable historical societies, were contacted via email and asked to comment on knowledge of, or concerns with, historic properties in the area, and any issues with the undertaking's effect on historic properties. The Town was also requested to provide information regarding local historic societies or groups. No replies have been received to date.
- 800.4(a) (4) - Emails outlining project location and scope were sent to the 4 federally recognized Tribes in Maine. No replies have been received to date.
- 800.4(c) - The Maine DOT conducted historic architectural surveys within the APE to determine if properties met National Register criteria. Maine Historic Preservation Commission Archaeological staff is currently reviewing this undertaking. **The Maine DOT has determined that two architectural properties are eligible for listing in the National Register of Historic Places.**

*In accordance with the PA and 36 CFR Part 800, please reply with your concurrence or objection to the determination of eligibility for listing in the National Register of Historic Places within 30 days. If more information is deemed necessary, please supply a list of the specific resources in question.*

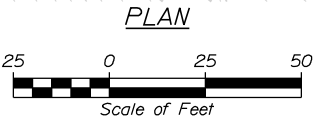
Please contact me at Julie.Senk@maine.gov if you have any questions. Thank you.

cc: CPD e-file  
enc: Architectural survey

CONCUR	
	8/28/24
Kirk F. Mohney, State Historic Preservation Officer	Date



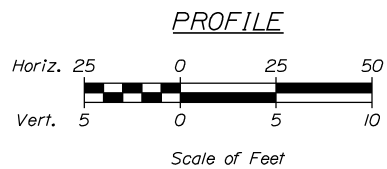
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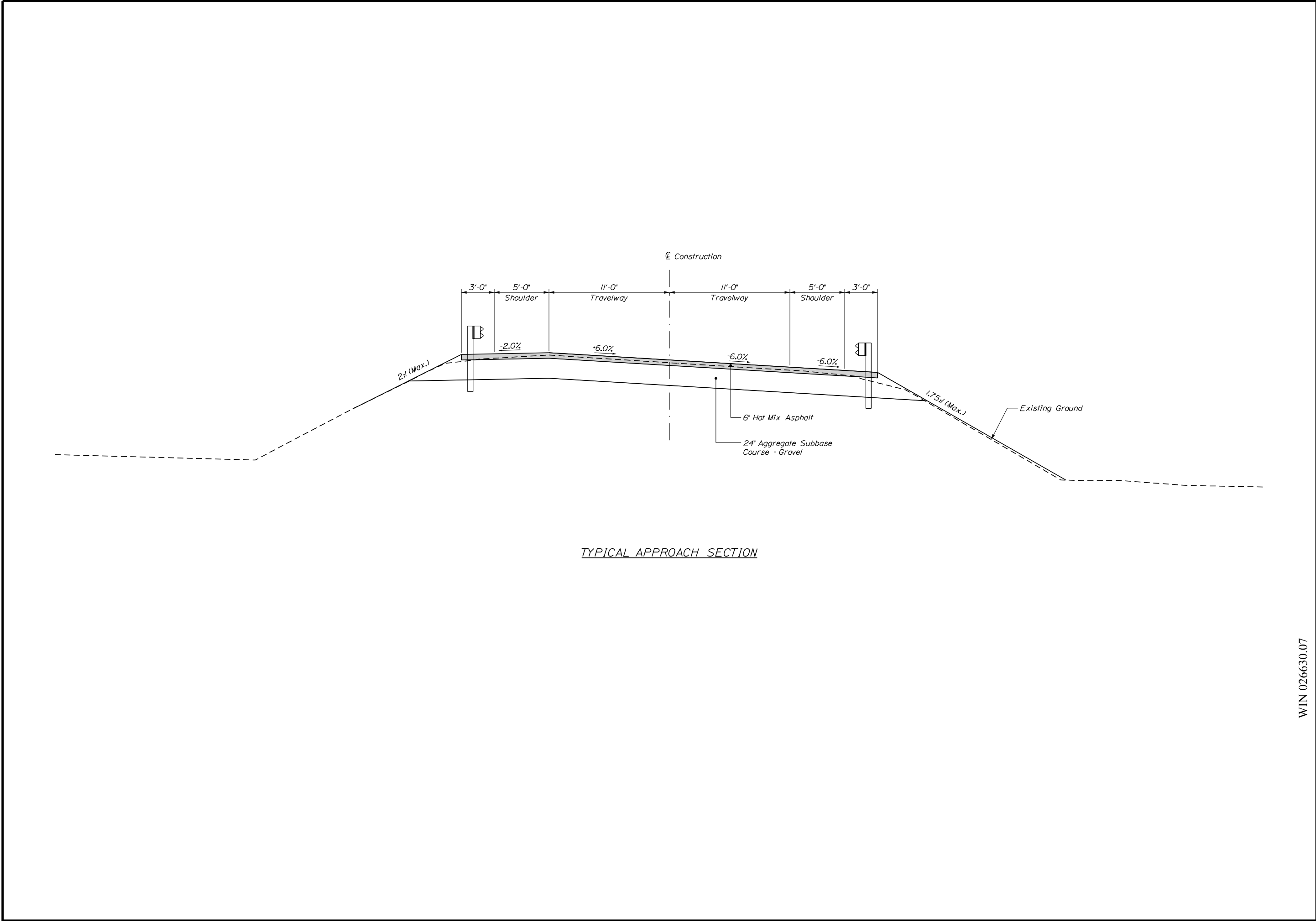


**Thornton  
Tomasetti**

026630.07	SHEET NUMBER	2	OF 7	PERRY		PROJ. MANAGER	M. PARLIN		BY	DATE	STATE OF MAINE	
				SMELT BROOK BRIDGE			DEPARTMENT OF TRANSPORTATION					
				PRELIMINARY			SIGNATURE					
				GENERAL PLAN				026603.07				
		DESIGN-DETAILED	E.BIRNELL	D.BURGESS	8/22/24	P.E. NUMBER						
		CHECKED-REVIEWED	B. MONROE	J.BURGESS	8/22/24		DATE					
		DESIGN-DETAILED02	-	-	-							
		DESIGN-DETAILED03	-	-	-							
		REVISIONS 1	-	-	-							
		REVISIONS 2	-	-	-							
		REVISIONS 3	-	-	-							
		REVISIONS 4	-	-	-							
		FIELD CHANGES	-	-	-							



**Thornton  
Tomasetti**



WIN 026630.07

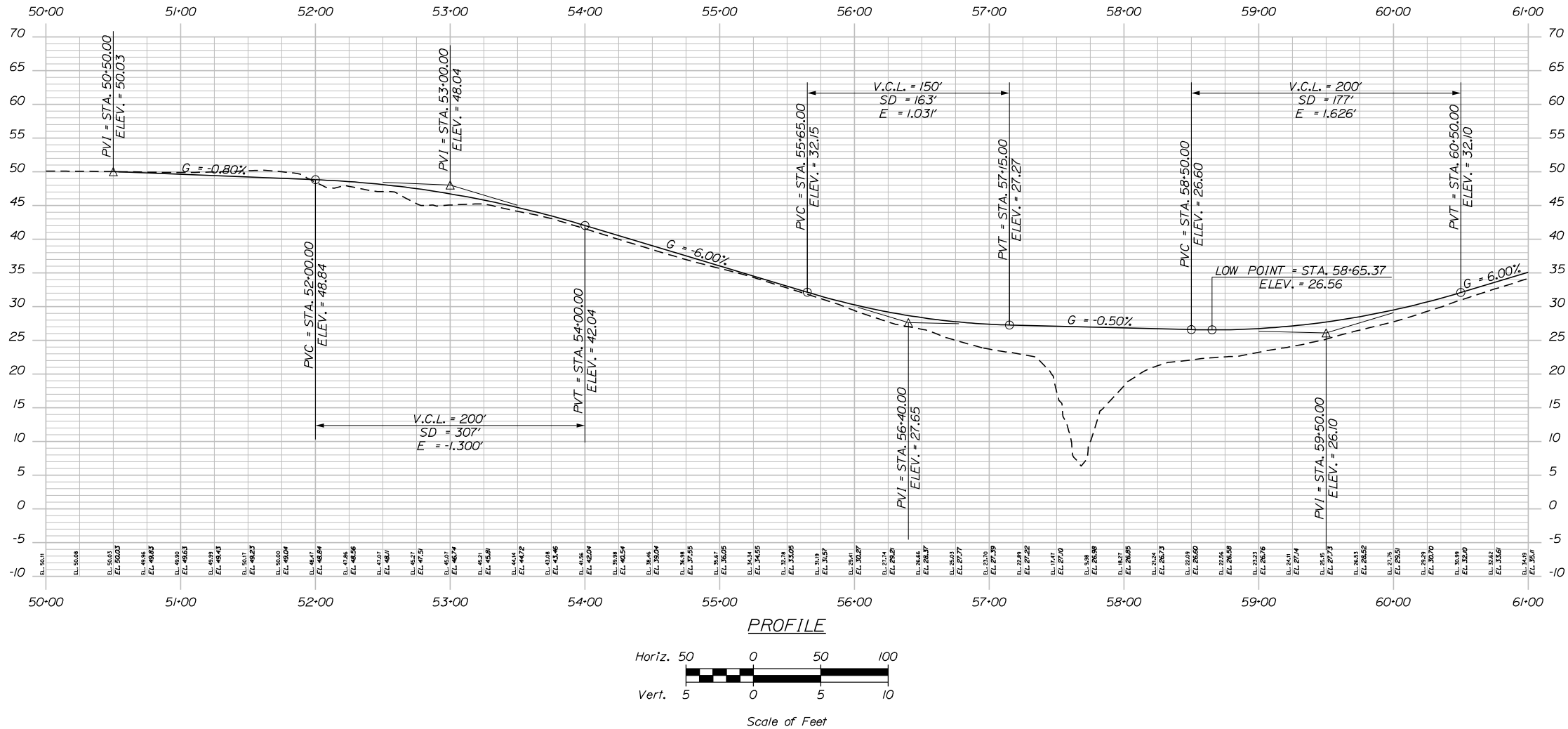
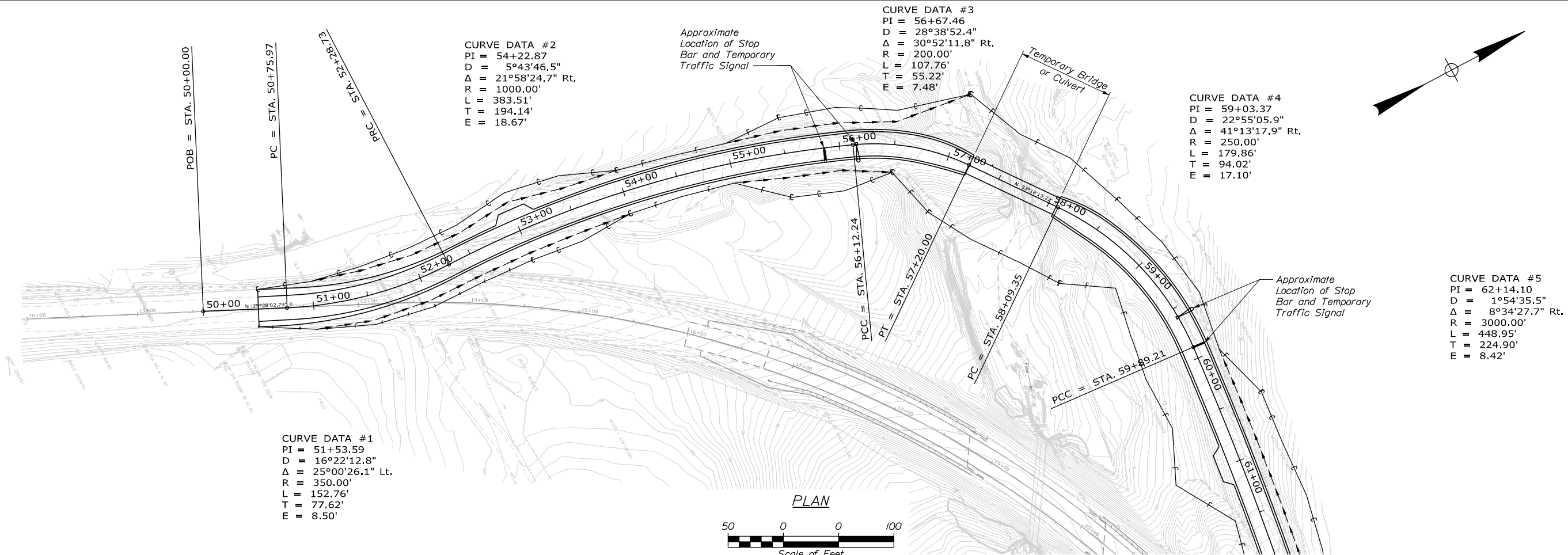
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	PRELIMINARY TYPICAL SECTION		026603.07	
	4 OF 7		BRIDGE NO. 2774      WIN      026630.07      BRIDGE PLANS	



5  
OF 7

SHEET NUMBER  
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026630.07

STATE OF MAINE	026603.07	WIN	026630.07
DEPARTMENT OF TRANSPORTATION		BRIDGE NO.: 2774	BRIDGE PLANS

PROJ. MANAGER	DESIGN-DETAILED	CHECKED/REVIEWED	DATE
M. PARLIN	E. BROWNELL	D. BURGESS	8/2/24
DESIGN-DETAILED	B. POMEROY	J. BURGESS	8/2/24
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

PERRY SMELT BROOK BRIDGE	TEMPORARY DETOUR PLAN - 1
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SHEET NUMBER	6
	OF 7

Thornton  
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