

Supplemental Supporting Information for a Finding of Effect

Project: Mapleton 23456.00

Scope: Railroad Bridge Rehabilitation

Finding of Effect: **No Adverse Effect**

Purpose and Need

The purpose of the proposed action is to improve safety for railroad shipping and connectivity along the Presque Isle Subdivision of the Northern Maine Railway.

The need for this project is to address deficiencies in Bridge #7804 that result in potentially unsafe conditions, which include significant substructure deterioration.

Project Background

Bridge #7804 is a 40'-long, single-span deck plate girder bridge with an open timber deck built in 1909. It carries the Presque Isle Subdivision of the Maine Northern Railway over the North Branch Presque Isle Stream in Mapleton. The girders are supported on built-up, concrete encased, steel rail grillages atop two unreinforced concrete abutments.

The focus of the undertaking is substructure rehabilitation. The deck and substructure of Bridge #7804 are in poor condition, respectively. The channel and superstructure are in good condition. The 18' abutments were previously covered with a superficial layer of shotcrete. The shotcrete layer now exhibits hairline cracks, rust staining, efflorescence, and large areas of delamination, as well as spalling on both abutments. The coping at the bridge seats is in poor condition.

Proposed Action

The proposed action (Alternative 1) includes efforts to repair the substructure of Bridge #7804. Rehabilitation would include the replacement of backwalls at the abutments and behind the bridge seats. The replacement effort would be precast concrete that ties into the abutment and wing walls with cast in place concrete. The bridge seats would be rehabilitated. Three of four are disintegrated to a point that the reinforcement is visible. The failing material would be removed, and steel support bolsters would be placed under each girder. The bolsters would then be encased in concrete to restore the original shape and massing of the bridge seat. A hole in the northeast wingwall would be repaired by removing unsound concrete and re-casting in kind. The timber ballast retainers would be removed at all wingwalls and replaced in kind. Eight bridge timbers on the deck will be replaced in kind.

Federal Action

Federal permit

Definition of Area of Potential Effect (APE)

The proposed project is located in Presque Isle. A map is attached below that shows the APE.

MAPLETON 23456.00

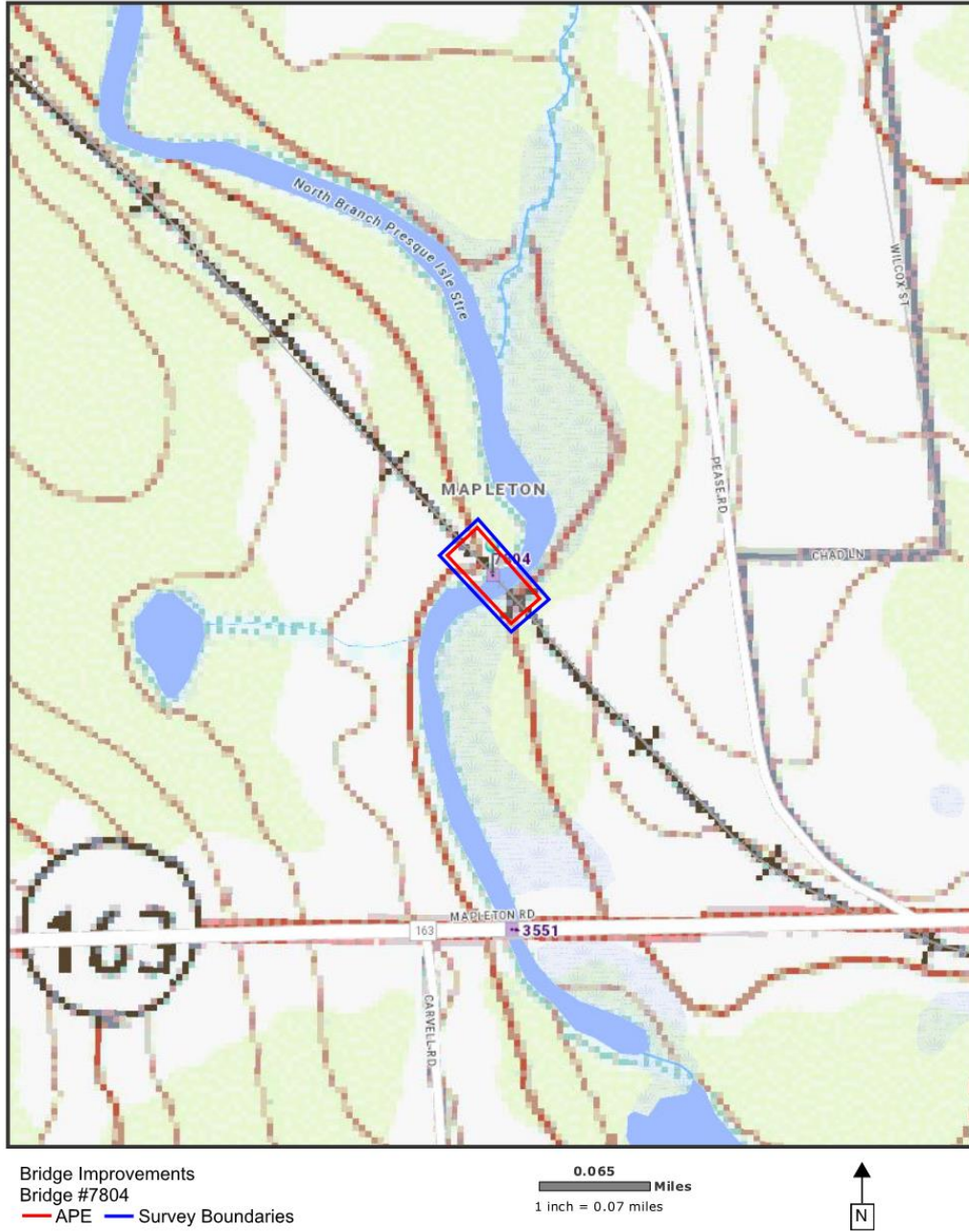
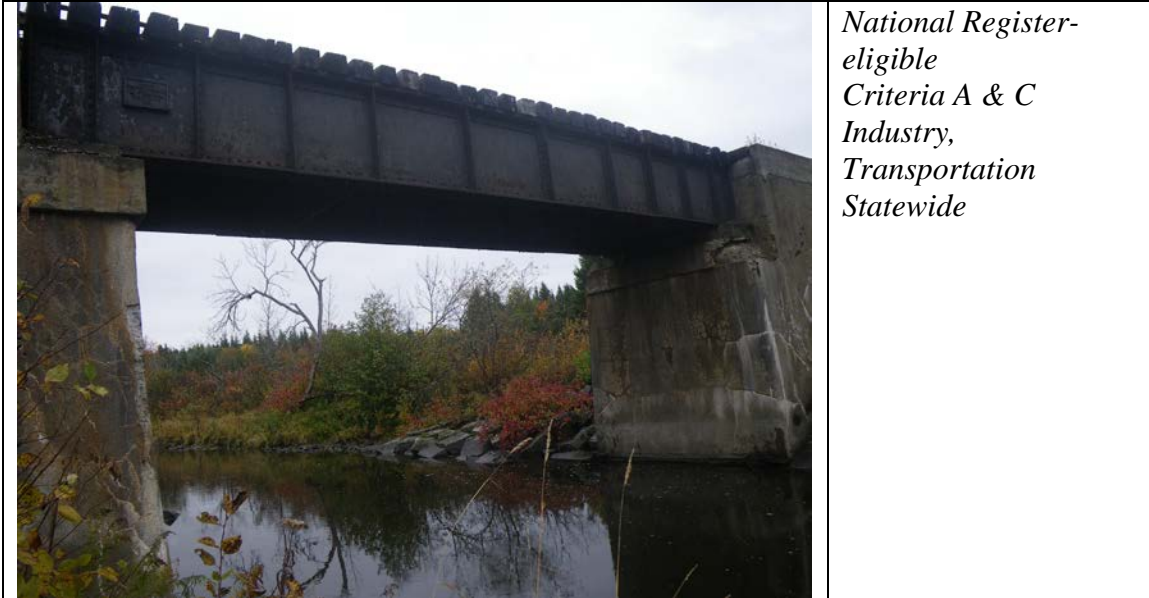


Figure 1. Presque Isle 23454.00 Area of Potential Effect

Historic Properties

The proposed project is located in Mapleton on the former Bangor and Aroostook Railroad. The following descriptions of historic properties found within the project area are based on Maine Historic Preservation Commission (MHPC) survey forms.

Bangor & Aroostook Railroad Historic District (MaineDOT)



The Bangor and Aroostook Railroad Historic District at this location consists of Presque Isle #21.26 Bridge #7804, a 1909 deck plate girder bridge with open timber deck, and the railroad tracks. The bridge is three-spans sitting on concrete abutments. Survey for the line was completed in 1891 and 1892. In 1893, Albert Burleigh and his investors leased the Bangor and Piscataquis with service to Greenville, Old Town, Bangor, and Katahdin Iron Works. Burleigh soon looked to connect the extant Brownville Junction to Houlton and points north. The main line of the Bangor and Aroostook Railroad reached Van Buren in 1899. The railroad’s success is attributed to the need for reliable infrastructure for shipping lumber, paper, and agricultural goods from Aroostook County south. Its period of significance is from 1893 to circa 1960.

Archeological 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.

Bangor & Aroostook Railroad Historic District (MaineDOT)

*National Register-eligible
Criteria A & C, Industry, Transportation*

The proposed action would result in **No Adverse Effect** to the Bangor & Aroostook Railroad Historic District. The proposed action would rehabilitate Bridge #7804 using in-

kind replacement timbers and existing materials, such as concrete. This use of in-kind materials for replacement would not diminish the historic district's aspects of integrity.

Archaeological Resources

No archaeological properties would be affected by the proposed undertaking.

Avoidance and Minimization Efforts

The proposed action avoids significant impacts to historic resources within the project area. As minimization efforts, the project would utilize in-kind replacements and the use of existing materials, such as concrete, to rehabilitate Bridge #7805.

Dismissed Alternatives

The following alternatives were evaluated for Mapleton 23456.00 railroad bridge rehabilitation project.

No Build

The No Build Alternative would take no action and would not meet the purpose and need of the project and was therefore removed from further consideration.

Proposed Materials

Concrete, steel, and timber.

Public Involvement

MaineDOT contacted the four federally recognized Native American tribes in Maine. The Penobscot Nation, Passamaquoddy Tribe, and Houlton Band of Maliseets replied with no concern about the undertaking.

The Aroostook County Office was notified of the project initiation and asked to provide comments and information regarding historic resources in the project area.

The public involvement process is ongoing.

Plans

Maine Railroad Bridge Rehabilitation Projects Presque Isle-Houlton Sub. Aroostook, WIN 023456.00, Maine Department of Transportation, February 8, 2021.

Attachments

Art Spiess, MHPC, to Julie Senk, MaineDOT, March 2, 2020

Kirk F. Mohny, MHPC, to Julie Senk, MaineDOT, January 23, 2020

VHB, Preliminary Design Memorandum, Bridge 7804 (MP P21.26) Rehabilitation

Maine Northern Railway – Presque Isle Subdivision, MaineDOT WIN 23456.00



MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JANET T. MILLS
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

August 15, 2019

To: Ms. Julie Senk, MDOT/ESD

From: Arthur Spiess, Senior Archaeologist 

Subject: WIN 23456.00, railroad bridge #7804, superstructure rehab or bridge replacement, Mapleton, (MHPC 1136 -19)

After reviewing our archaeological survey records and maps, including historic maps and surficial geology maps, and comparing this information with a predictive model of archaeological site locations, we find that no archaeological fieldwork is necessary for this project, based on the project location and general project description information received with your memo of August 9, 2019. It is extremely unlikely that an archaeological site would be affected by this project, in our opinion **anywhere within 50 yards of the existing bridge.**

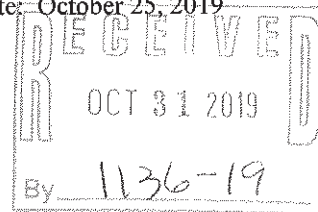
In following the procedures specified in the Federal Highway/MHPC/MDOT programmatic agreement, we **recommend a finding “that there will be no archaeological properties affected by the proposed undertaking.”**

STATE OF MAINE

Memorandum

Date: October 25, 2019

To: Kirk F. Mohney, MHPC
From: Julie Senk, Maine DOT/ENV
Subject: Section 106 request for concurrence
Project: Mapleton 23456.00, MHPC #1136-19
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 is improvements to Presque Isle #21.26 Bridge #7804 carrying the Bangor and Aroostook Railroad over the North Branch of the Presque Isle Stream in Mapleton.

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

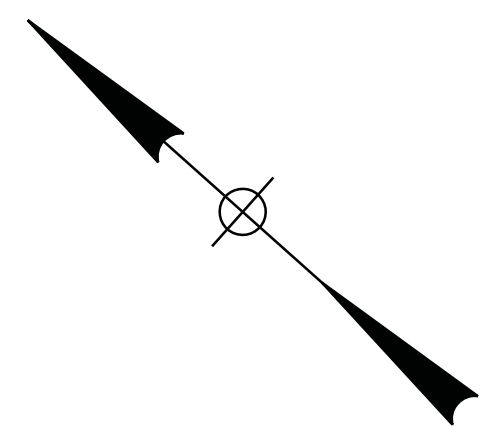
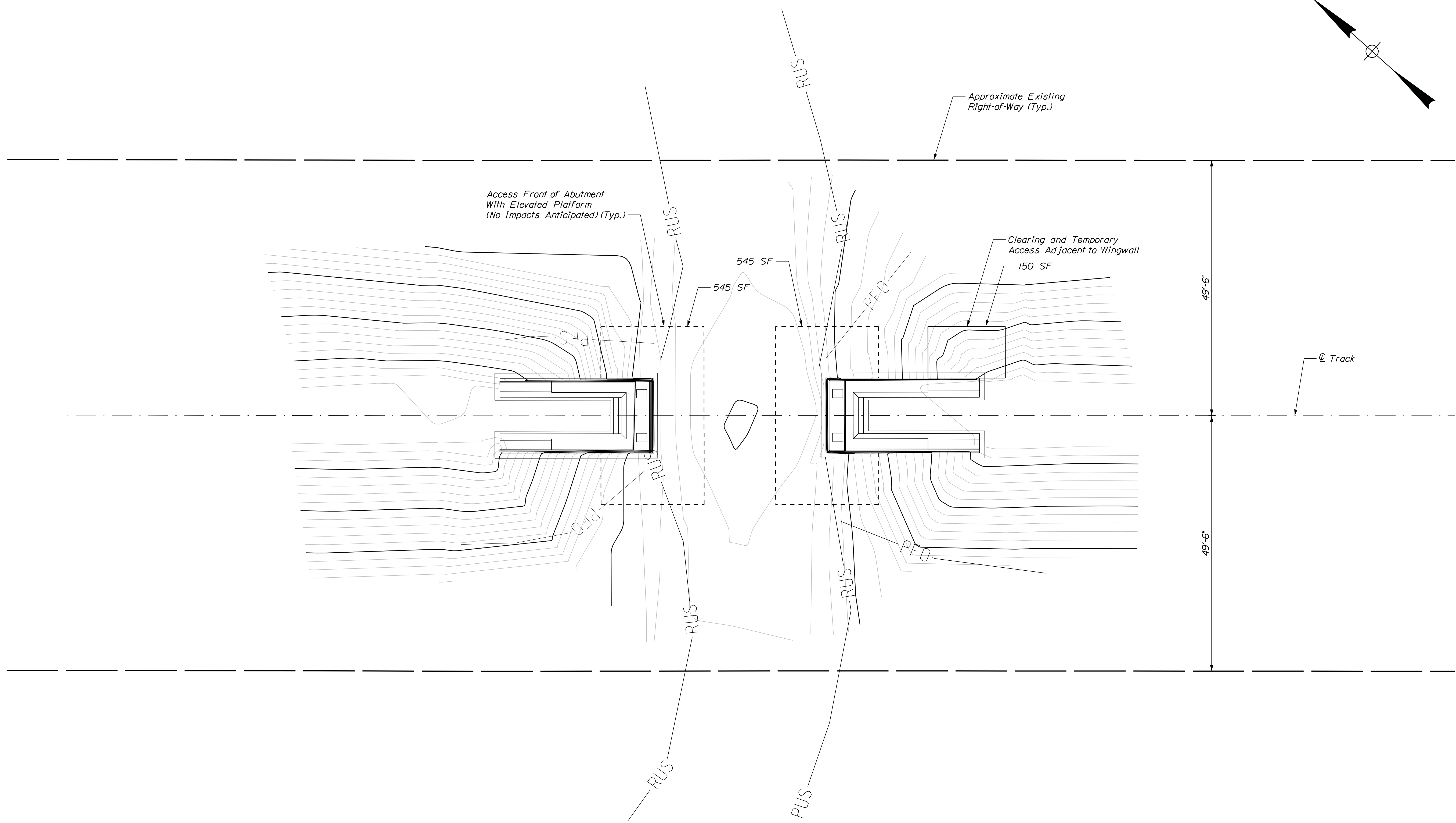
- 800.4(a) (1) – The Area of Potential Effect (APE) includes properties/structures adjacent to the bridge and within the project limits. The project limits are defined by the structure and the immediately adjacent area. Properties/structures adjacent to this project limit are considered to be within 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 has reviewed this undertaking.
- 800.4(a) (3) – The Town of Mapleton and applicable historical societies were contacted via letter 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) – Letters outlining project location and scope were sent to the 4 federally recognized Tribes in Maine. The Passamaquoddy Tribe, Penobscot Tribe, and Houlton Band of Maliseets replied with no concerns.
- 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 has reviewed this undertaking and recommended a conditional finding of "no archaeological properties affected" with the understanding that work will not exceed "50 yards of the existing bridge." **The MaineDOT has determined that two properties are eligible for listing in the National Register of Historic Places as part of an eligible historic district.**

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.

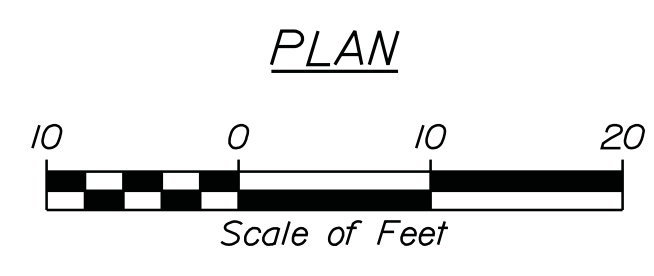
Please contact me at Julie.Senk@maine.gov or 592-3486 if you have any questions. Thank you.

cc: CPD e-file
enc: Architectural survey package

CONCUR	
	11/5/19
Kirk F. Mohney, State Historic Preservation Officer	Date



BRIDGE NO. 7804
 MILE POINT 21.26
 OVER NORTH BRANCH PRESQUE ISLE STREAM



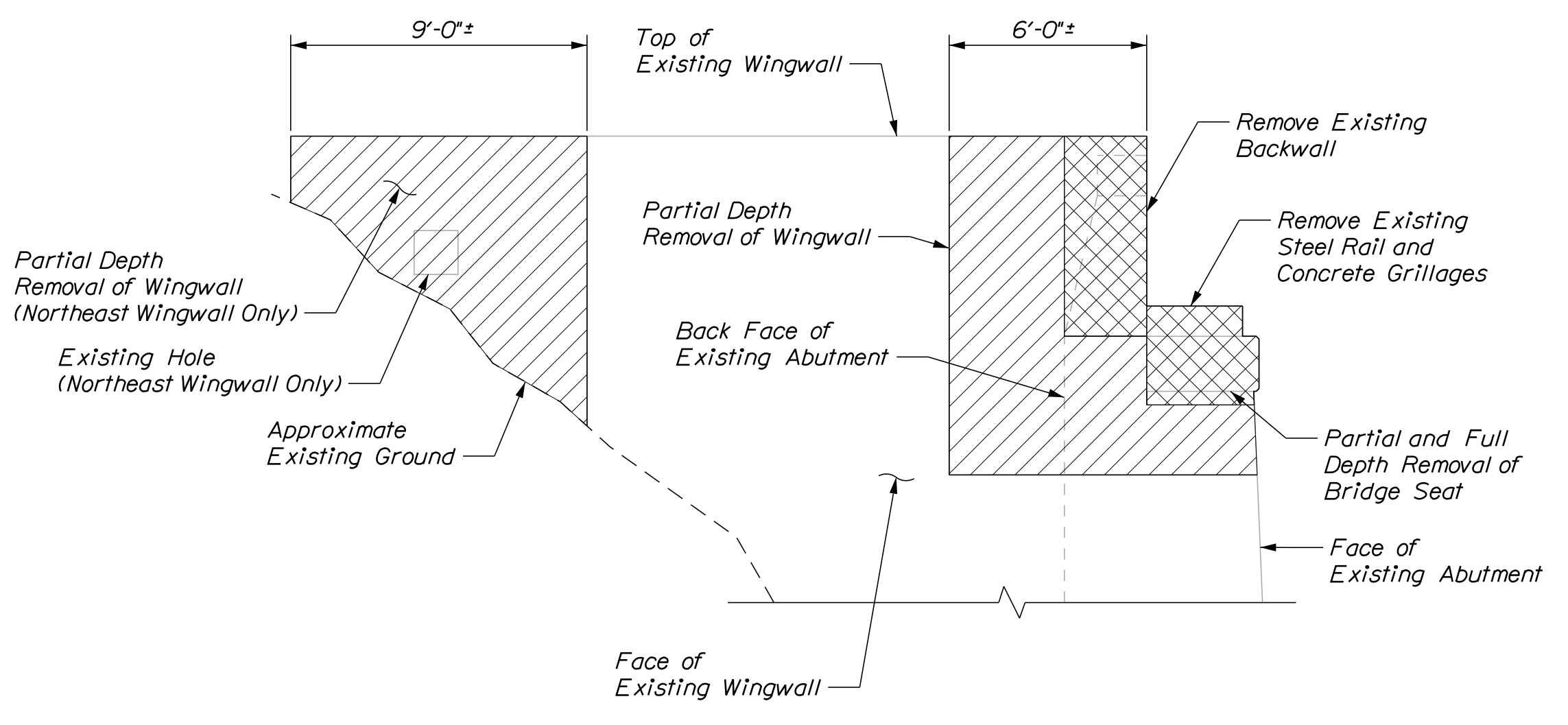
PROJ. MANAGER	DATE	BY	DATE
DESIGN-DETAILED JCM	2/7/2021	BJM	2/7/2021
CHECKED-REVIEWED JCM		CSG	
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

MAINE RAILROAD BRIDGE
 REHABILITATION PROJECTS
 PRESQUE ISLE-HOULTON SUB. AROOSTOOK
 BRIDGE NO. 7804 (M.P. 21.26) OVER
 NORTH BRANCH PRESQUE ISLE STREAM

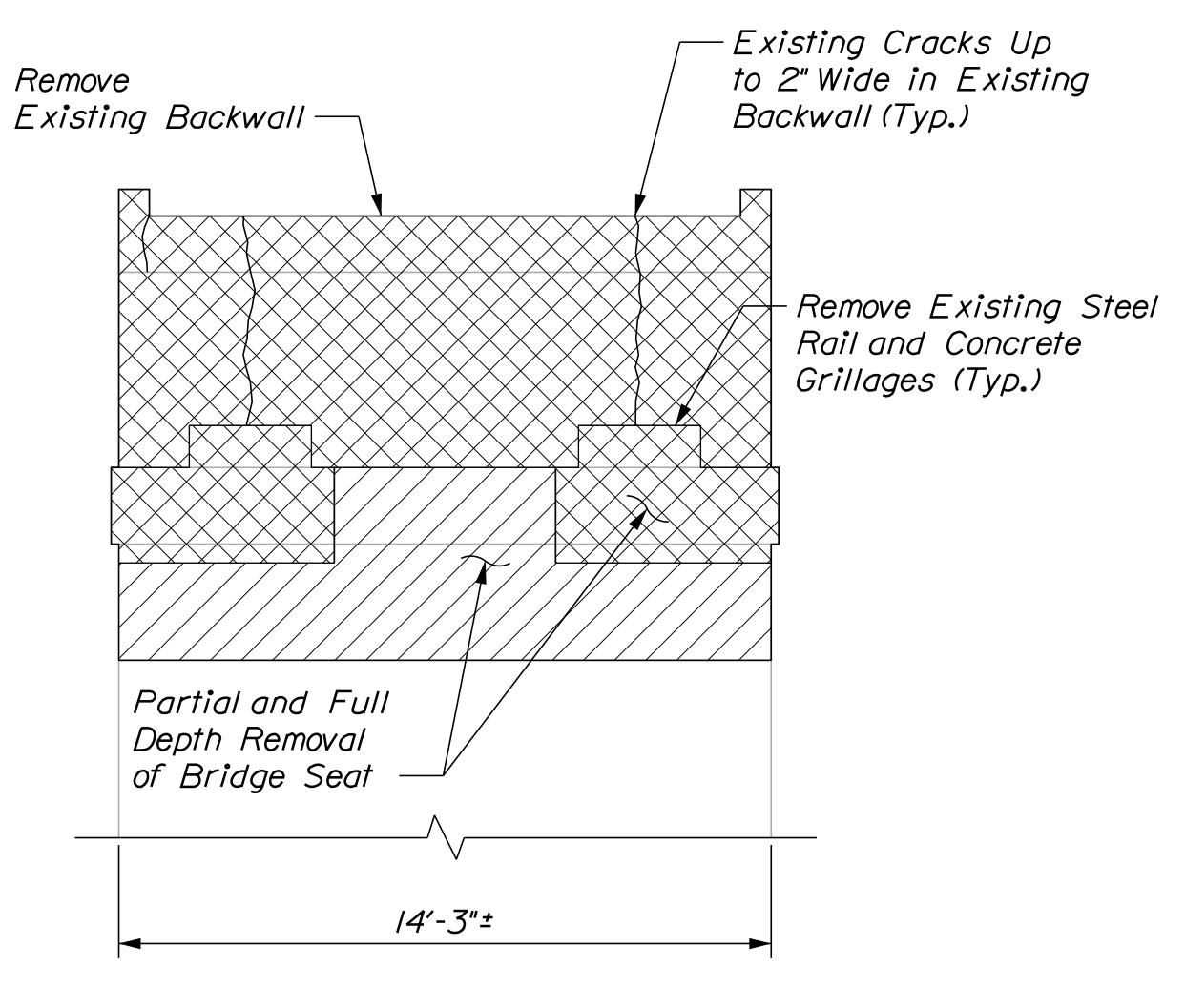
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Username: BMasse

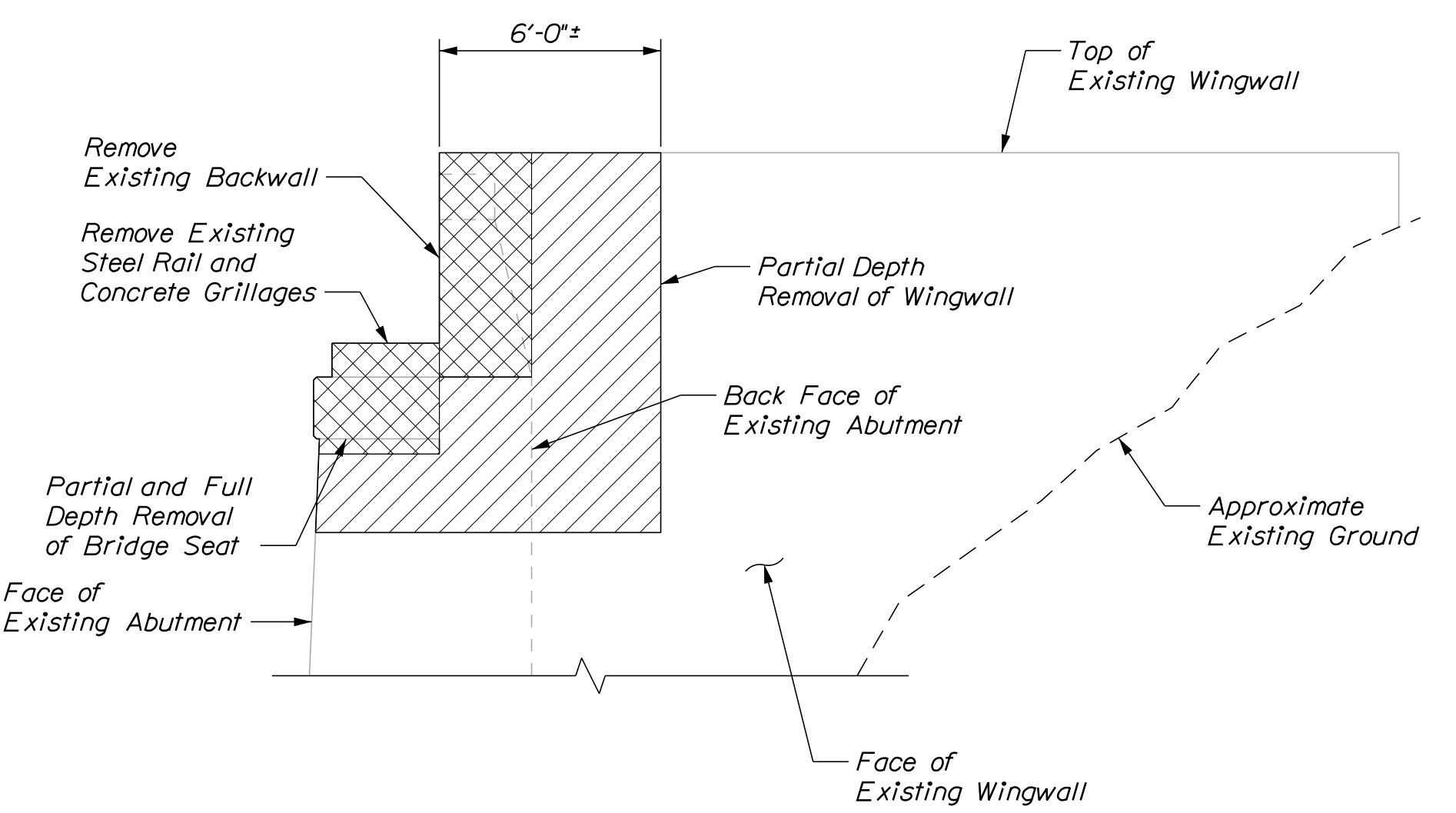
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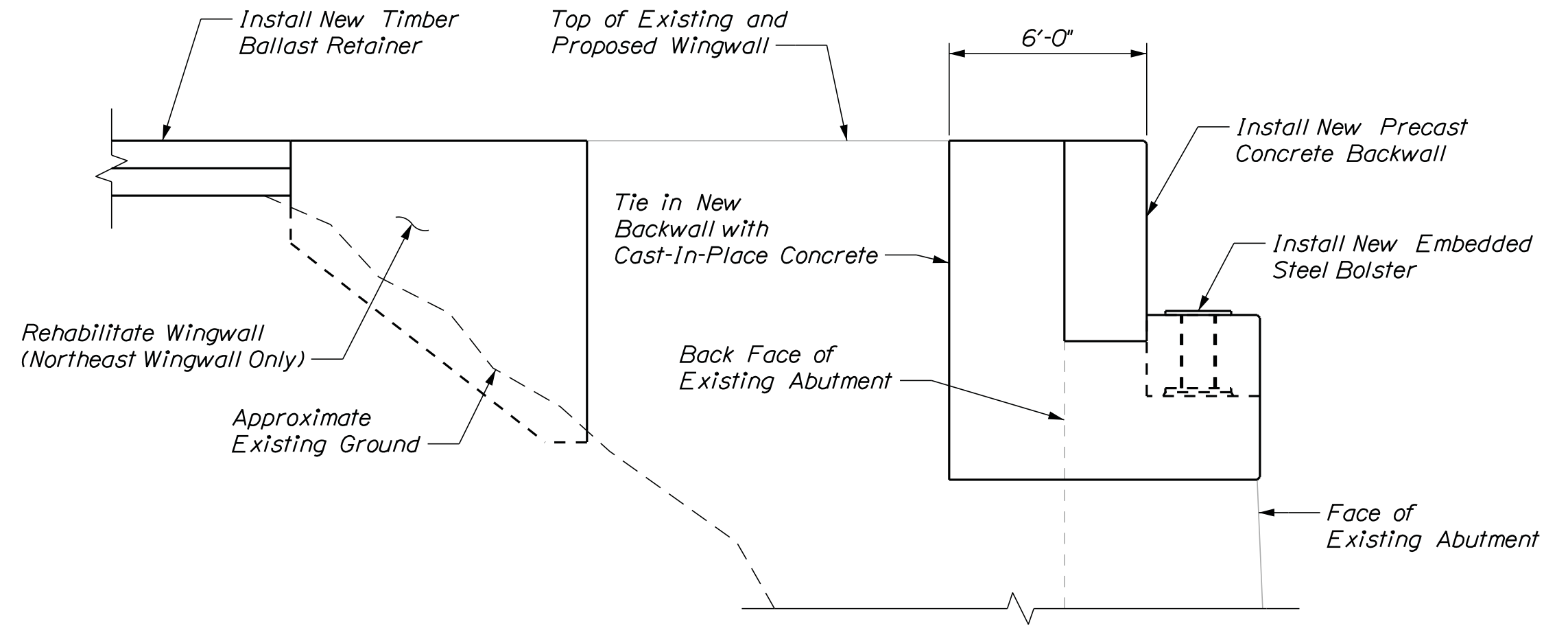
EXISTING WINGWALL ELEVATION - REMOVAL
 (Northeast Wingwall Shown, Others Similar Except as Noted)
 Scale: 1/4" = 1'-0"



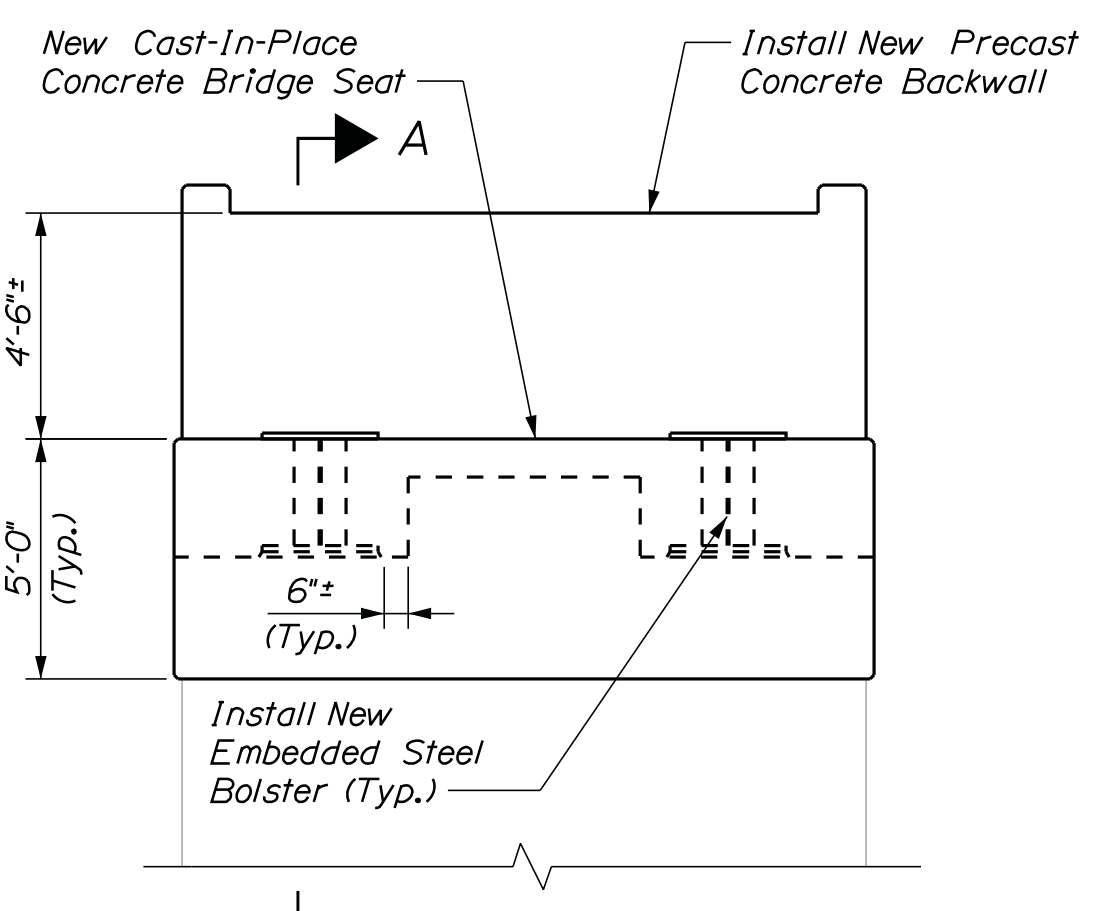
EXISTING ABUTMENT ELEVATION - REMOVAL
 (East Abutment Shown, West Abutment Similar)
 Scale: 1/4" = 1'-0"



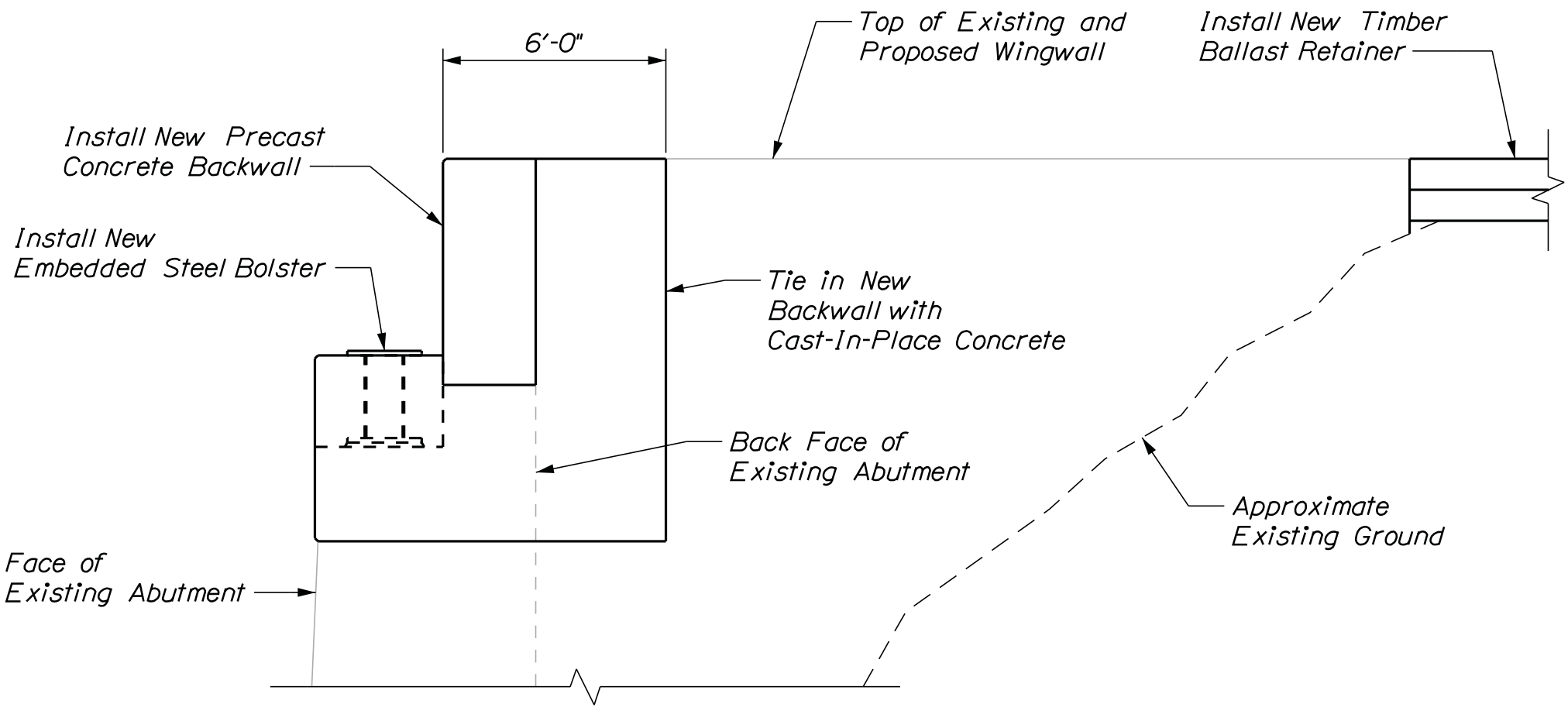
EXISTING WINGWALL ELEVATION - REMOVAL
 (Southeast Wingwall Shown, Others Similar Except as Noted)
 Scale: 1/4" = 1'-0"



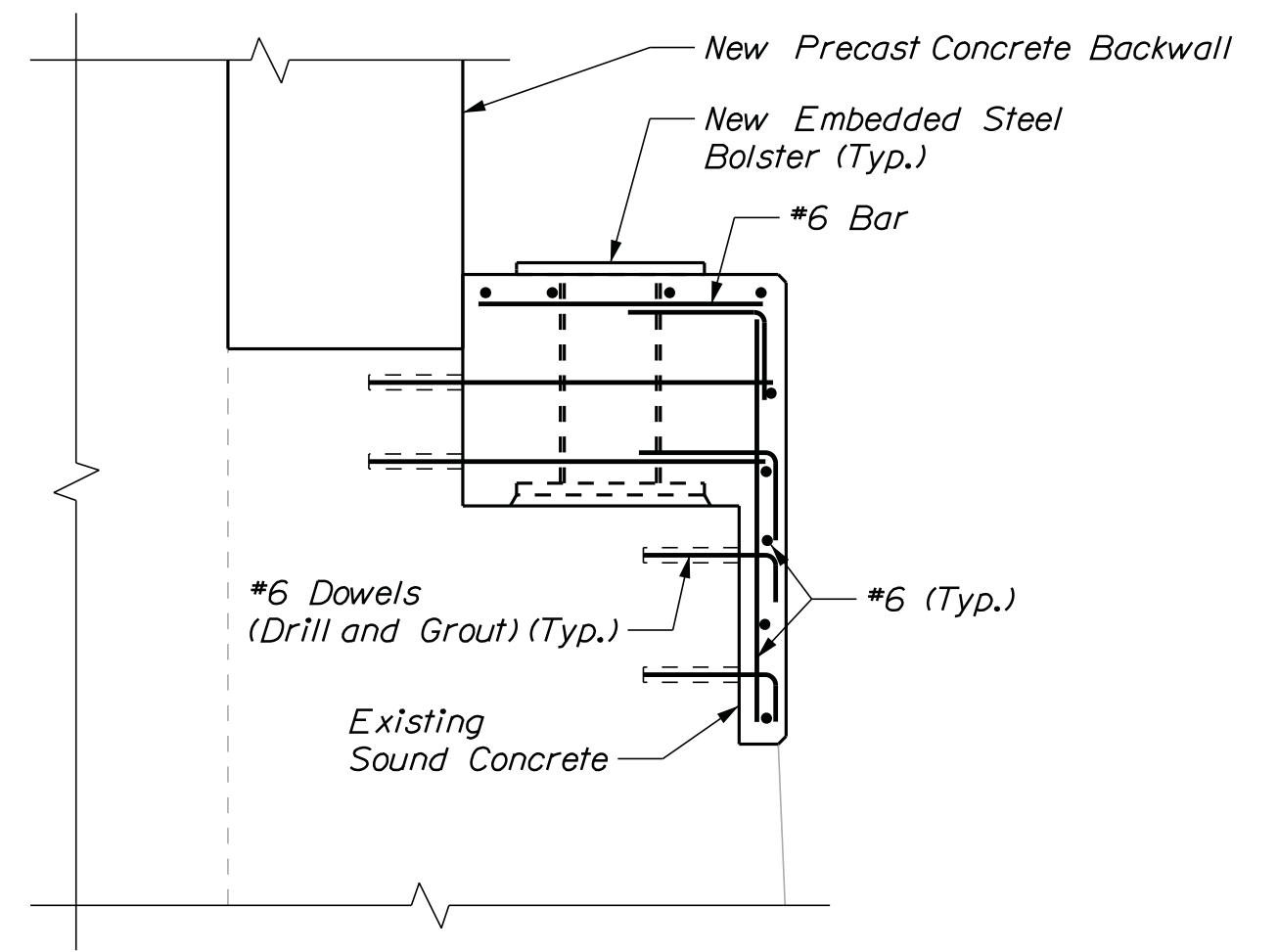
PROPOSED WINGWALL ELEVATION
 (Northeast Wingwall Shown, Others Similar Except as Noted)
 Scale: 1/4" = 1'-0"



PROPOSED ABUTMENT ELEVATION
 (East Abutment Shown, West Abutment Similar)
 Scale: 1/4" = 1'-0"



PROPOSED WINGWALL ELEVATION
 (Southeast Wingwall Shown, Others Similar Except as Noted)
 Scale: 1/4" = 1'-0"



**SECTION A-A
 REINFORCING AT BRIDGE SEAT**
 Scale: 1/2" = 1'-0"

**BRIDGE NO. 7804 (M.P. P21.26)
 OVER NORTH BRANCH PRESQUE ISLE STREAM**

LEGEND

- Approximate Limits of Full Depth Removal/Repair
- Approximate Limits of Partial Depth Removal/Repair

PROPOSED WORK

1. Remove and Replace Both Abutment Backwalls.
2. Rehabilitate Both Abutment Bridge Seats and Install New Masonry Plates and Anchor Bolts.
3. Rehabilitate Wingwall (Northeast Wingwall Only).
4. Remove and Replace Timber Ballast Retainers (All Four Corners).
5. Replace Selected Bridge Timbers.



PROJ. MANAGER	DATE	BY	REVISIONS
DATE	2/7/2021	BAM	DESIGN DETAILED
DATE	2/7/2021	CSG	CHECKED/REVIEWED
DATE			DESIGN DETAILED
DATE			REVISIONS 1
DATE			REVISIONS 2
DATE			REVISIONS 3
DATE			REVISIONS 4
DATE			FIELD CHANGES

MAINE RAILROAD BRIDGE
 REHABILITATION PROJECTS
 PRESQUE ISLE-HOULTON SUB. AROOSTOOK
PRELIMINARY REPAIR CONCEPTS