



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

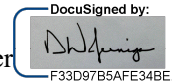
J.R. "JOEY" HOPKINS
SECRETARY

January 22, 2024

MEMORANDUM TO: Mr. Brandon Jones, P.E.
Division 5 Engineer

FROM: Dennis Jernigan, P.E.
NCTA Deputy Chief Engineer

SUBJECT: Triangle Expressway Southeast Extension (Complete 540) from NC 55 Bypass in Apex to US 64/264 (I-87) in Knightdale, Wake and Johnston Counties; Federal Aid No. STP-0540(19), STP-0540(20), and STP-0540(21); WBS Nos. 37673.1.TA1, 35516.1.TA1, and 35517.1.TA1; STIP Project Nos. R-2721, R-2828, and R-2829



Attached are the modified US Army Corps of Engineers (USACE) Phased Section 404 Individual Permit, NC Division of Water Resources (NCDWR) Section 401 Individual Water Quality Certification, Neuse Riparian Buffer Authorization, and Non-404 Jurisdictional Wetlands and Waters Permit for the construction of the Triangle Expressway Southeast Extension (Complete 540) from NC 55 Bypass in Apex to US 64/264 (I-87) in Knightdale, Wake and Johnston Counties. STIP Nos. R- 2721, R-2828, and R-2829. ***This change is based on the January 18, 2024 email requesting modification of the permit regarding Permit Site 14 on the R-2721A section of the project. There are no changes to the mitigation requirements.*** Subject to any requisite permit modifications, all environmental permits have been received for the construction of the final design sections of this project.

A copy of this permit package is posted on the NCDOT website at:
<https://xfer.services.ncdot.gov/pdea/PermIssued>

cc: w/o attachment (see website for attachments)
Mr. Ron Davenport, P.E. Contracts Management
Mr. Clarence Coleman, P.E., FHWA
Mrs. Heather Montague, Division 5
Mr. Mark Craig, P.E., Division 5
Mr. Boyd Tharrington, P.E., Deputy Chief Engineer
Mr. Corey McLamb, P.E., Division 4
Dr. Majed Al-Ghandour, P.E., Programming and TIP
Mr. Mateen Alinaghian, Utilities Unit
Mr. Matt Lauffer, P.E., Hydraulics Unit
Mr. Brian Hanks, P.E., Structures Management Unit
Mr. Mark Staley, Roadside Environmental
Mr. John Jamison, Environmental Policy Unit
Ms. Beth Harmon, NCDMS
Ms. Deanna Riffey, Natural Environment Unit-Environmental Coordination & Permitting

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
TURNPIKE AUTHORITY
1578 MAIL SERVICE CENTER
RALEIGH, NC 27699-1578

Telephone: (919) 707-2700
Fax: (919) 715-5511
Customer Service: 1-877-368-4968

Website: ncdot.gov

Location:
1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601

Harris (HNTB), Jennifer H

From: Alsmeyer, Eric C CIV USARMY CESAW (USA) <Eric.C.Alsmeier@usace.army.mil>
Sent: Monday, January 22, 2024 10:09 AM
To: Thomson (Sage Group), Nicole J
Cc: Riffey, Deanna; Abi Sheffey; Jernigan, Dennis W; Shapiro, Alan W; Harris (HNTB), Jennifer H
Subject: [External] Permit Mod15 RE: R2721A, Middle Creek Temporary Trestle Removal, Permit Site 14; DA# SAW-2009-02240.
Attachments: 240118_Mod15_Permit drawings and phasing_Site 14_R2721A_Complete 540_Wake.pdf

CAUTION: External email. Do not click links or open attachments unless verified. Report suspicious emails with the Report Message button located on your Outlook menu bar on the Home tab.

Nikki: Reference the Department of the Army (DA) permit issued to the North Carolina Department of Transportation, Turnpike Authority (NCDOT-TA) on October 24, 2019, and subsequently modified, last on December 13, 2023. This permit authorized the discharge of fill material into waters of the United States for construction of the Triangle Expressway Southeast Extension (Complete 540) from NC 55 Bypass in Apex to US 64/264 (I-87) in Knightdale, Wake and Johnston Counties. Sections included within this permit are R-2721, R-2828, and R-2829. Currently, only STIPs R-2721A&B and R-2828 are authorized for construction; STIP R-2829 has not yet been through final design, has not completely minimized impacts to waters and wetlands, nor has a final compensatory mitigation plan.

On January 18, 2024, the U.S. Army Corps of Engineers (Corps) received a request from NCDOT-TA to modify the standard permit for the R-2721A project (Mod15), to add impacts at Permit Site 14 for the removal of the temporary work trestle bridges and bank stabilization of Middle Creek. You noted that the steep, nearly sheer banks on Middle Creek have further destabilized under the temporary work trestles.

The temporary work trestles were installed over Middle Creek for the construction of the permanent bridge structure at Permit Site 14. During the intervening years, material has built up under the temporary work structure, both on the fabric and plywood installed on the underside of the bridge which prevent sediment and other materials from being deposited into Middle Creek. The contractor fears that during the removal process, this collected material is at risk of falling into Middle Creek. Therefore, the contractor would like to install a temporary bypass diversion to ensure that nothing is displaced into the active flowline during the removal of the work trestle spans. The proposed temporary impact is 110 LF (0.05 ac) of stream channel. The attached sequencing plan includes the details for the pump around, including the placement of the dikes and silt bag.

In addition, the slopes at the trestle site have continued to slough due to high velocity flows and minimal vegetation, as well as the steepness and deeply incised state of Middle Creek. Therefore, 155 LF (0.04 ac) of permanent bank stabilization is proposed between the drip lines of the temporary work trestle structure. The stabilization will use Class I rip rap which will be keyed into the bank, but not across the thalweg of the channel. While a permanent impact, this is not a permanent loss of function.

The Corps has completed the evaluation of your request and has determined that it is appropriate and reasonable, and that no public notice is required for this modification. Therefore, the permit is modified as requested and as shown on the attached drawings. No additional compensatory mitigation is required.

All conditions of the permit, including the permit expiration date of December 31, 2024, remain in effect as written.

This electronic copy is your official Department of the Army authorization; no paper copy will be mailed.

Please reply or call if you have any questions or if I may serve you in any other way.

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at <https://regulatory.ops.usace.army.mil/customer-service-survey/>.

Eric

Eric Alsmeyer
Project Manager

Regulatory Division Office
US Army Corps of Engineers, Wilmington District
3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587
Office Tel: (919) 554-4884, x23 (I am working out of the office most days of the week, but I try to check my voicemails daily)
Regulatory Homepage: <http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx>

From: Thomson (Sage Group), Nicole J <ext-njthomson2@ncdot.gov>

Sent: Thursday, January 18, 2024 9:42 AM

To: Alsmeyer, Eric C CIV USARMY CESAW (USA) <Eric.C.Alsmeier@usace.army.mil>; Ridings, Rob <rob.ridings@deq.nc.gov>

Cc: Riffey, Deanna <driffey@ncdot.gov>; Abi Sheffey <asheffey@SAGEECOLOGICAL.COM>; Jernigan, Dennis W <dwjernigan@ncdot.gov>; Shapiro, Alan W <awshapiro@ncdot.gov>; Harris (HNTB), Jennifer H <ext-jhharris1@ncdot.gov>

Subject: R2721A, Permit Modification Request 14, Middle Creek Temporary Trestle Removal, Permit Site 14

Eric and Rob –

As you are aware, the North Carolina Department of Transportation (NCDOT) applied for a phased Section 404 Individual Permit, Section 401 Individual Water Quality Certification (WQC), Neuse River Riparian Buffer Authorization, Non-404 Jurisdictional Wetlands and Waters Permit for the subject project in September 2018. The project, also known as Complete 540, encompasses three NCDOT Transportation Improvement Plan (TIP) projects: R-2721 (NC-55 Bypass to US-401), R-2828 (east of US-401 to I-40 Interchange) and R-2829 (east of I-40 to US 64/264). Revised permit applications were submitted in February 2019 and the NCDWR 401 and USACE 404 Permits were issued in February and October of 2019. Additionally, NCDOT received a modified 401 WQC for the Complete 540 Project on January 30, 2020, April 23, 2020, June 1, 2020, December 29, 2020, March 9, 2021, April 8, 2021, November 1, 2021, May 18, 2022, July 22, 2022, February 15, 2023, June 19, 2023, July 19, 2023, August 4, 2023, and December 12, 2023 from the NC Division of Water Resources (NCDWR) and a modified Department of the Army authorization #SAW-2009-02240 on February 4, 2020 (revision issued on February 7, 2020), April 29, 2020, January 7, 2021, March 19, 2021, March 3, 2022, July 1, 2022, September 13, 2022, February 17, 2023, June 21, 2023, July 19, 2023, August 4, 2023, and December 13, 2023.

This email is a request for a modification to the R2721A section of the Complete 540 project which will add impacts at Site 14 for the removal of the temporary work trestle bridges and bank stabilization of Middle Creek. The steep, nearly sheer banks on Middle Creek have further destabilized under the temporary work trestles.

The temporary work trestles were installed over Middle Creek for the construction of the permanent bridge structure at Permit Site 14. During the intervening years, material has built up under the temporary work structure, both on the fabric and plywood installed on the underside of the bridge which prevent sediment and other materials from being deposited into Middle Creek. The contractor fears that during the removal process, this collected material is at risk of falling into Middle Creek. Therefore, the contractor would like to install a temporary bypass diversion to ensure that nothing is displaced into the active flowline during the removal of the work trestle spans. The proposed temporary impact is 110 LF (0.05 ac) of stream channel. The attached sequencing plan includes the details for the pump around, including the placement of the dikes and silt bag.

During a recent field reconnaissance, we reviewed the need for some additional bank stabilization, which has been discussed with you both in previous agency compliance visits. The slopes have continued to slough due to high velocity flows and minimal vegetation, as well as the steepness and deeply incised state of Middle Creek. Therefore, 155 LF (0.04 ac) of permanent bank stabilization is proposed between the drip lines of the temporary work trestle structure. The contractor intends to use Class I rip rap which will be keyed into the bank, but not across the thalweg of the channel. While a permanent impact, this is not a permanent loss of function.

Per our previous discussions, you both stated you'd be willing to address this modification request via email.

Please let me know if there is any additional information you need from us to process this field change.

Thank you so much for your time and attention.

Nikki

Nicole Thomson, PWS

North Carolina Turnpike Authority
North Carolina Department of Transportation

919-754-7806

1 South Wilmington Street
Raleigh, NC 27601
1578 Mail Service Center
Raleigh, NC 27699-1578



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ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

RICHARD E. ROGERS, JR.
Director



**North Carolina Division of Water Resources
Transportation Permitting Branch
In-Field Minor 401 Water Quality Certification Modification**

Project Name/ TIP Project No.: **R-2721A**; NC Hwy 540_ Date: January 22, 2024

DOT Division: 5 County: Wake DWR Project No. **20181249 ver 17** Permit Type: **WQC#4179**
DOT Field Staff: Nicole Thomson DWR Field Staff: Rob Ridings

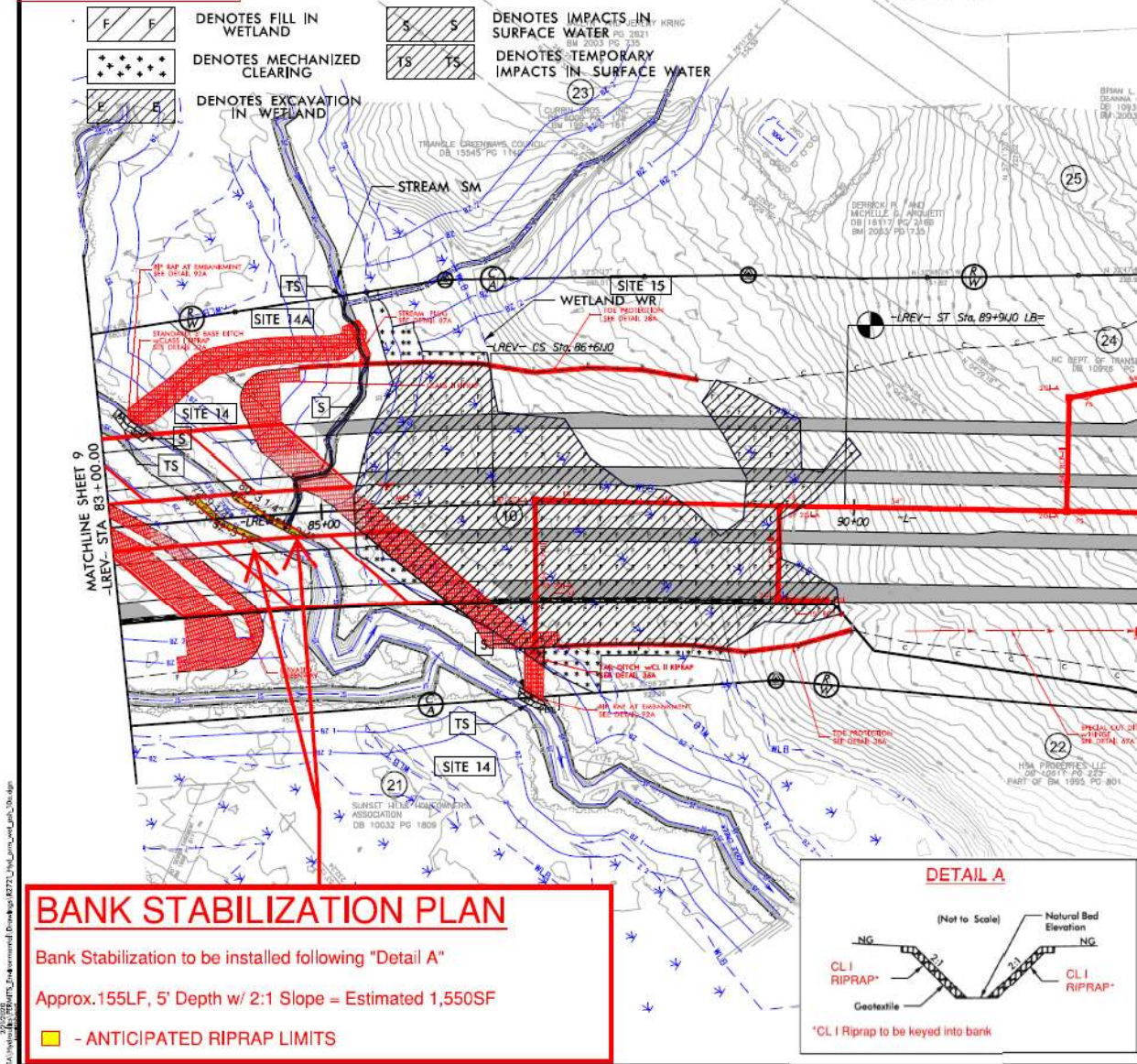
Modification Description

Site 14: The temporary work trestles were installed over Middle Creek for the construction of the permanent bridge structure at R-2721A Permit Site 14. During the intervening years, material has built up under the temporary work structure, both on the fabric and plywood installed on the underside of the bridge which prevent sediment and other materials from being deposited into Middle Creek. The contractor fears that during the removal process, this collected material is at risk of falling into Middle Creek. Therefore, the contractor would like to install a temporary bypass diversion to ensure that nothing is displaced into the active flowline during the removal of the work trestle spans. The proposed temporary impact is 110 LF (0.05 ac) of stream channel. The sequencing plan (*attached to the modification request*) includes the details for the pump around, including the placement of the dikes and silt bag.

During a recent field reconnaissance, we reviewed the need for some additional bank stabilization, which has been discussed in previous agency compliance visits. The slopes have continued to slough due to high velocity flows and minimal vegetation, as well as the steepness and deeply incised state of Middle Creek. Therefore, 155 LF (0.04 ac) of permanent Bank Stabilization is proposed between the drip lines of the temporary work trestle structure. The contractor intends to use Class I rip rap which will be keyed into the bank, but not across the thalweg of the channel. While a permanent impact, this is not a permanent loss of function.



Modification Sketch:



This in-field modification is required for the following reason(s):

- The information contained in the application or presented in support thereof is incorrect in the following manner:

n/a

- Conditions under which the original certification was issued have changed in the following manner:

NCTA and Agencies have concerns at Permit Site 14 regarding consistent destabilizing of the stream as well as the need to dewater for removal of temporary crossing



This in-field modification is valid only if issued by an authorized agent of the Division of Water Resources, Transportation Permitting Unit ¹.

This in-field modification authorizes the NCDOT to

Temporary Dewatering of 110 linear feet of perennial stream. Add additional 155 linear feet of bank stabilization (class I riprap). Change is at R-2721A, Site 14. NO additional mitigation is required.

In **WAKE** County. The project shall be constructed 18/as described in the Modification Description and Sketch on Page 1 of this document dated **01/22/2024** to improve/construct the section of **NC 540** that extends from **NC 55** to **I-40**. The approved design is that described in the Modification Description and Modification Sketch on Page 1 of this document dated **8/11/2023**. Any further changes to the original Water Quality Certification dated **February 15, 2019, modified January 30, 2020, April 20, 2020, June 1, 2020, December 29, 2020, March 9, 2021, April 8, 2021, November 1, 2021, May 18, 2022, July 22, 2022, February 15, 2023, June 21, 2023, July 19, 2023, August 4, 2023, August 11, 2023, and December 12, 2023** may require a formal written modification request.

The description of the proposed action provides adequate assurance that the proposed action in the **Neuse** River Basin in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Section 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth. Should your project change, you are required to notify the DWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all conditions. For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state, or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Modification Approval shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit. .

Conditions(s) of Modification Approval:

- 1. As-built drawings of the proposed action shall be submitted to the NC DWR Transportation Permitting Unit within 30 days of completion of the action.**
- 2. All the authorized action activities and conditions of the certification associated with the original Water Quality Certification dated 02/15/2019 and all other corresponding modification still apply except where superseded by this certification.**
- 3. Modified Site (#14, section R-2721A) shall be constructed in manner requested by NCTA in accordance with the request dated January 18, 2024 and in manner with the referenced Agency field reviews. Any variation will require an additional modification.**

Failure to construct the proposed action as described in the Modification Description and Sketch on this document and/or violations of any condition herein set forth may result in revocation of this modification approval and may result in criminal and/or civil penalties. This modification approval shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. If the Corps of Engineers requires a formal written modification to the 404 permit for the proposed action, the NC DWR must require a formal written modification to the 401 WQC, and therefore, this in-field modification is invalid. If additional (wetland, stream, buffer) impacts for



this project (now or in the future) exceed (one acre, 150 linear feet, or one-third of an acre/150 linear feet, respectively), or if mitigation is required above and beyond the current mitigation requirement for this project, this in-field modification is invalid and a formal written modification is required.

This in-field modification is effective upon the date the last party signs this document. This in-field modification is made upon mutual agreement between DOT and DWR as indicated by the signatures below and is, therefore, not subject to appeal by either party. Appeals by third parties must be made within sixty (60) days of notification pursuant to the contested case provisions of the Administrative Procedure Act, NC Gen. Stat. §150B-23 et seq.

DWR Field Staff Signature: _____
Date: 1/22/2024

DocuSigned by:
Robert Ridings
80ECA32C7C38490...

DocuSigned by:
nicole thomson
768FCFF5084D43B...

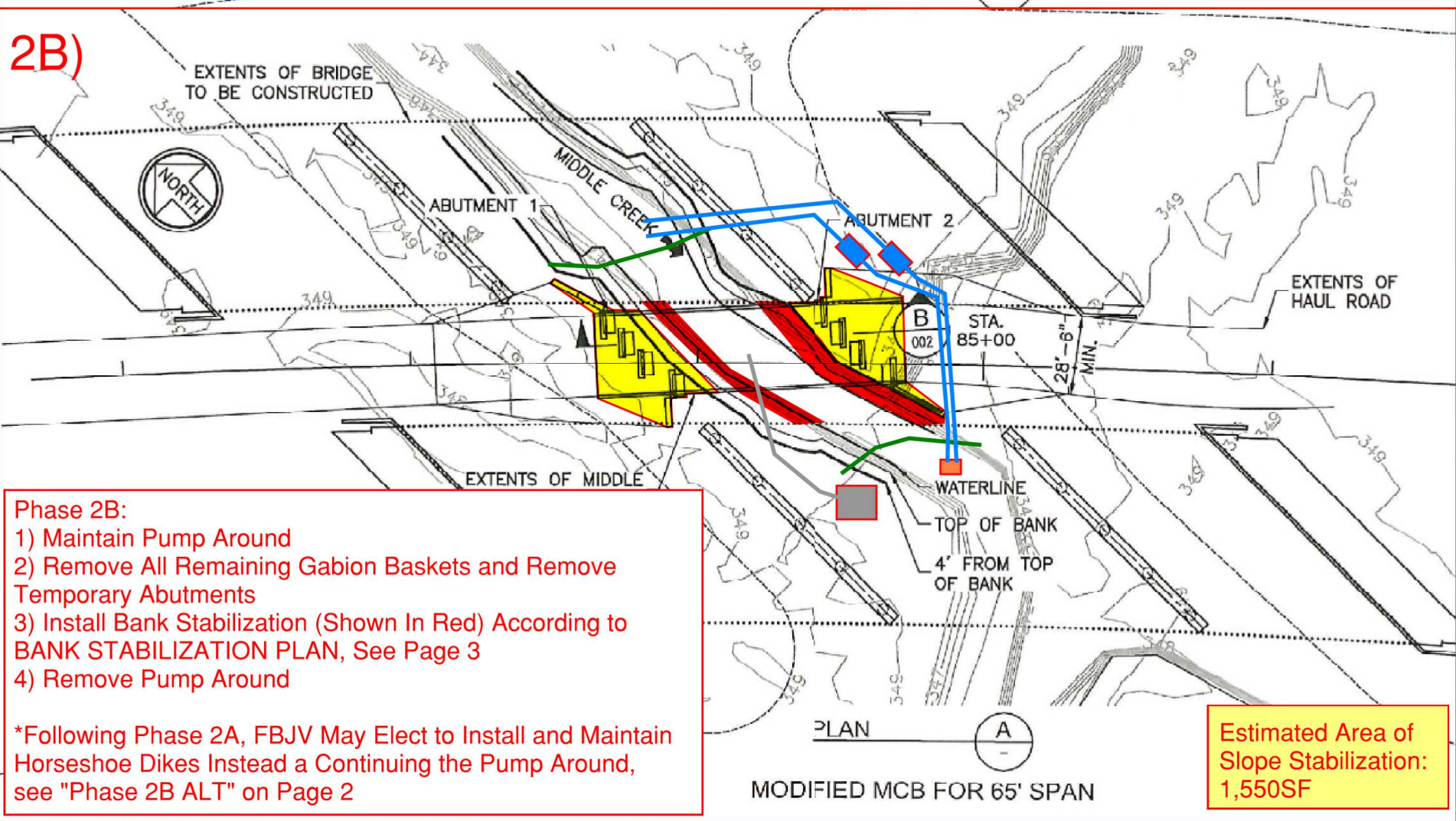
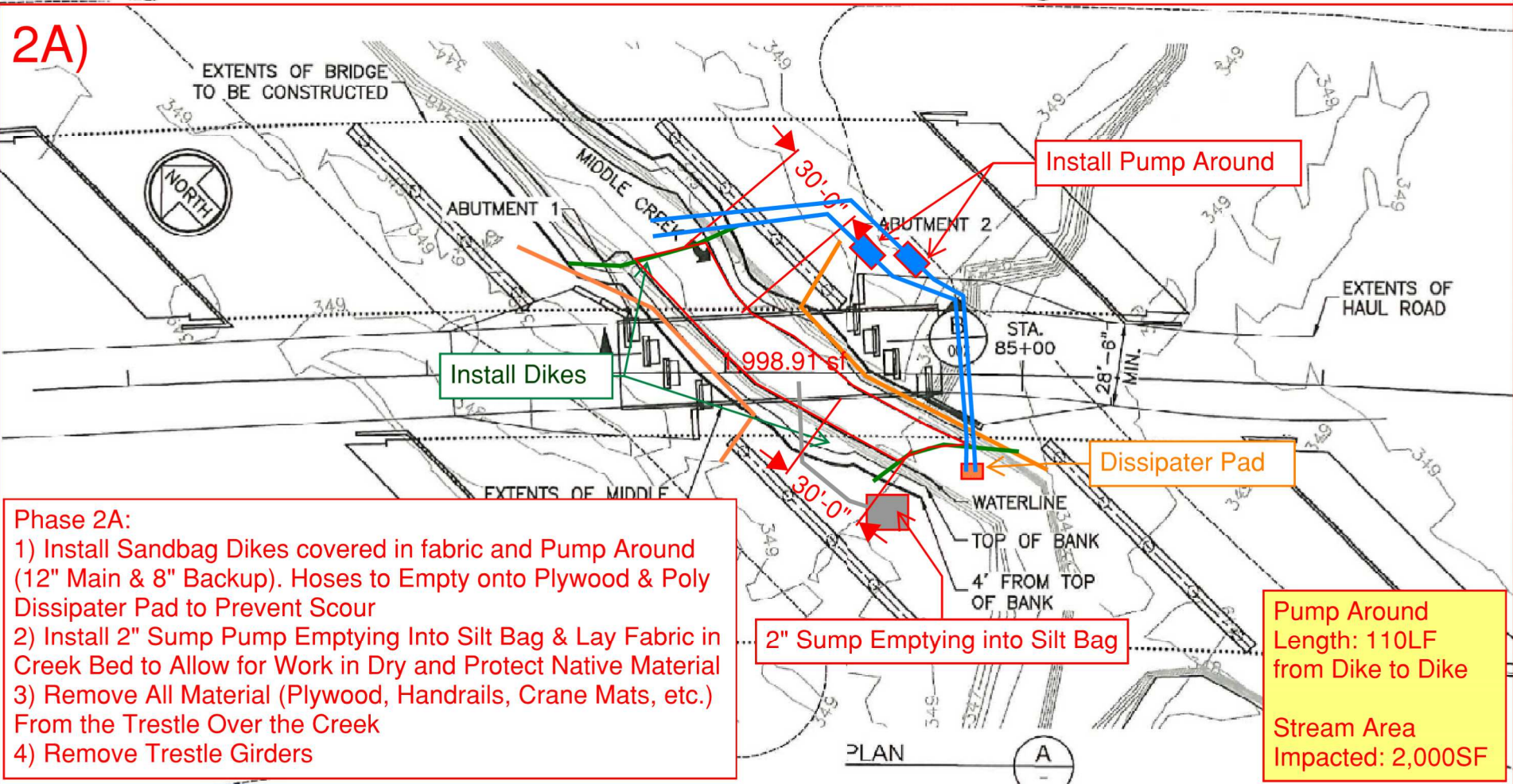
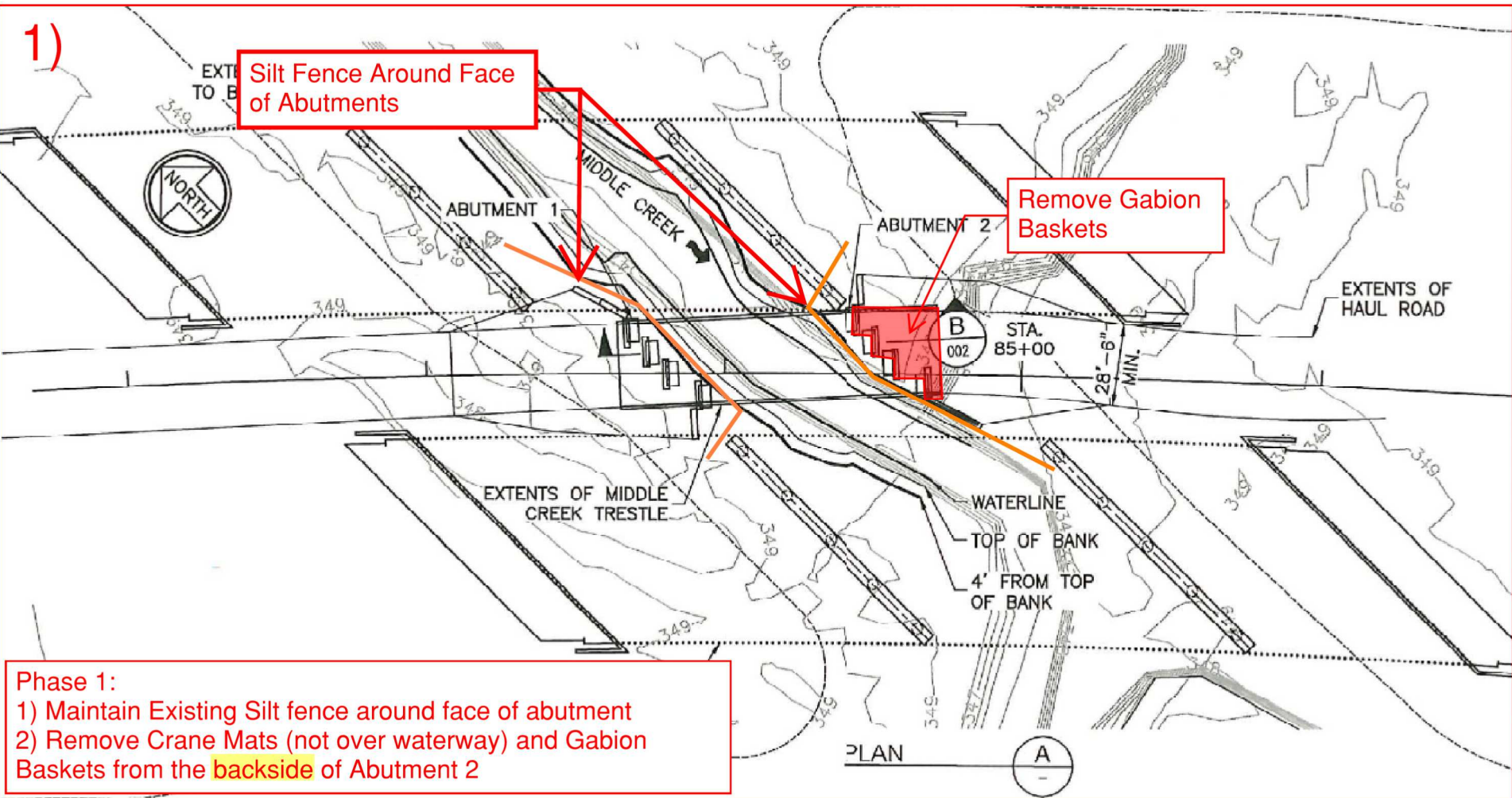
DOT Field Staff Signature: _____
Date: 1/22/2024

¹ – An authorized agent of the Transportation Permitting Unit is defined as DWR staff that are DOT-funded and review and issue 401 Water Quality Certification for DOT projects. These staff include Central Office and Regional Office personnel.

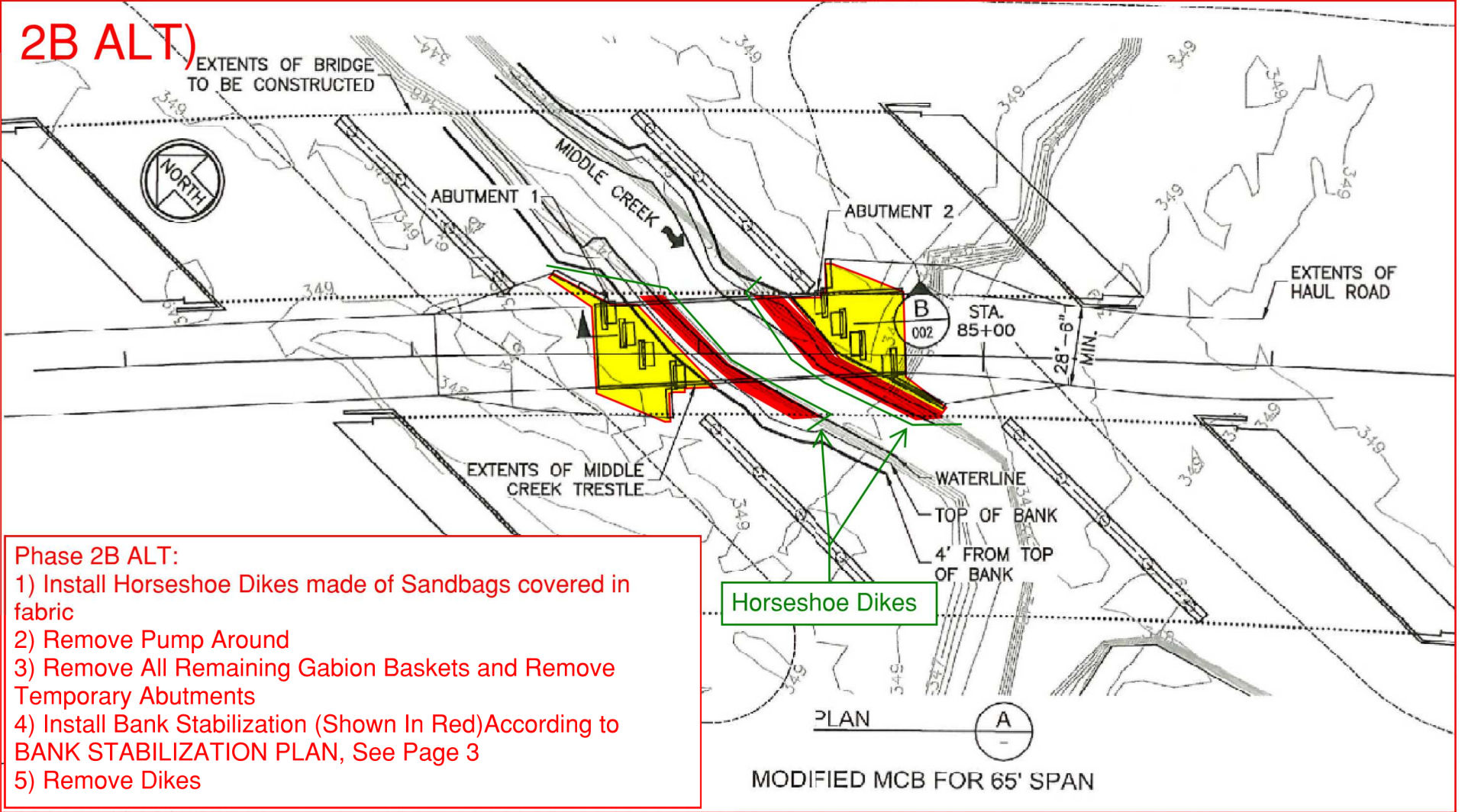
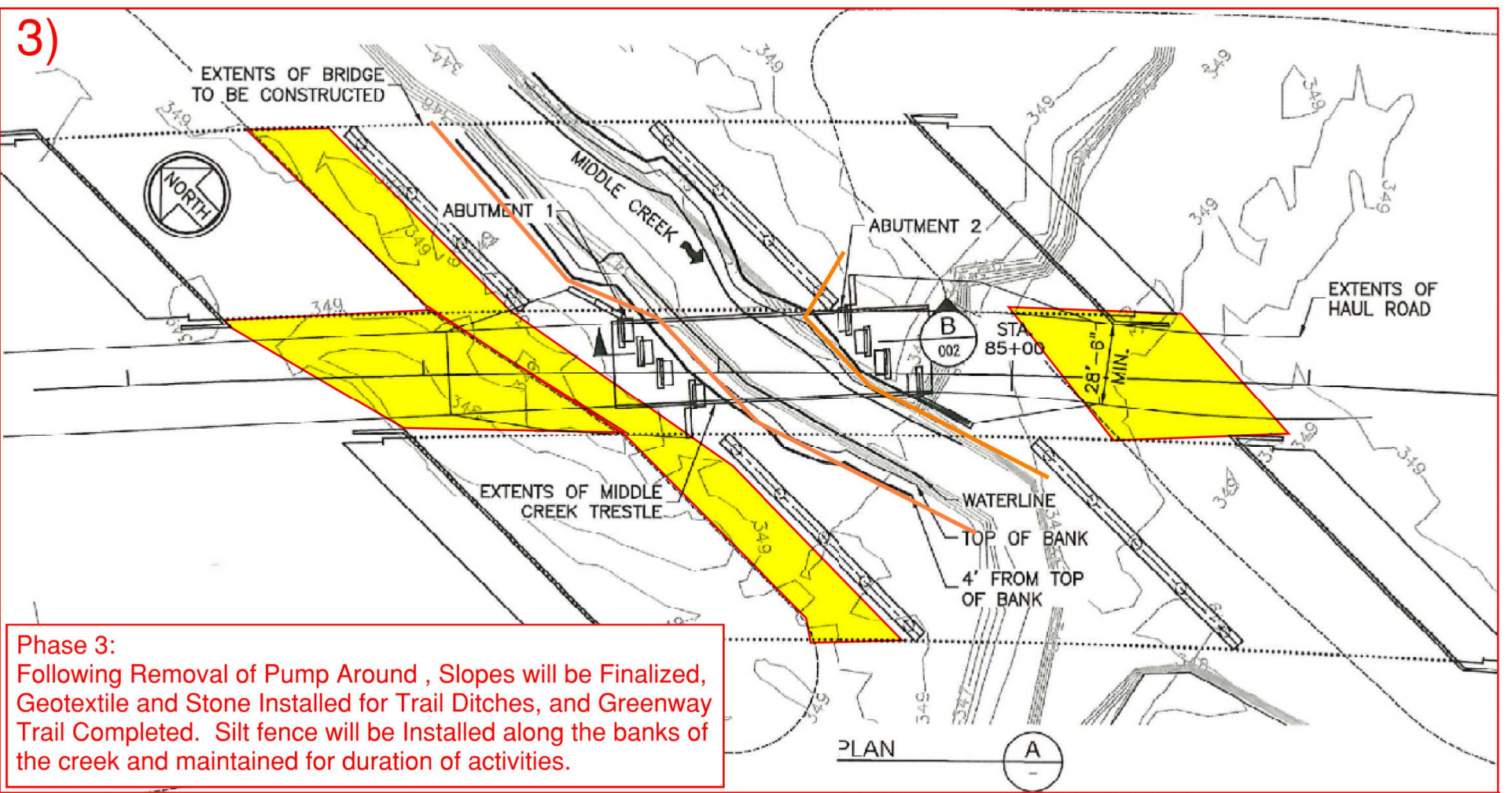


North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1611 Mail Service Center | Raleigh, North Carolina 27699-1611
919.707.9000

Middle Creek Trestle Removal Creek Protection Phasing



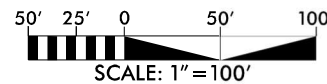
Middle Creek Trestle Removal Creek Protection Phasing Continued



PERMIT DRAWING
SHEET 24 OF 119

SAFETY FENCE EXTENDS TO LIMITS OF THE
LESSER OF THE ORIGINALLY PERMITTED
AREAS AND THE PROPOSED MODIFIED
PERMITTED AREAS.

— SAFETY FENCE
○ RED TOP STAKES



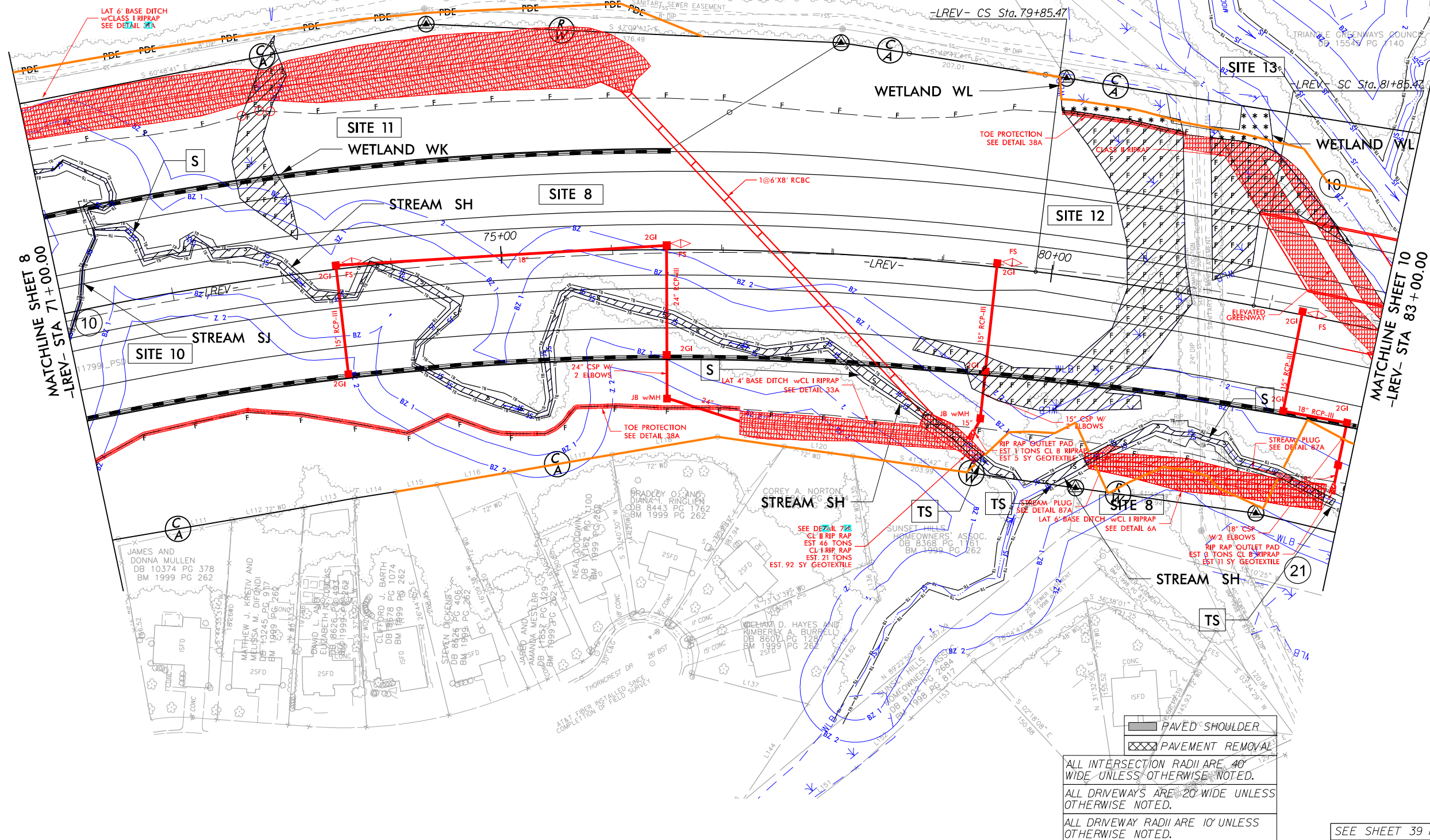
FLATIRON
PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised

BRANCH CIVIL
One Glenwood Avenue
Suite 900
Raleigh, NC 27603
(919) 420-7660
NC Lic. No. F-0270

PROJECT REFERENCE NO.	SHEET NO.
R-2721A	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

- E E
F F
* * * * *
S S
TS TS
- DENOTES EXCAVATION
IN WETLAND
- DENOTES FILL IN
WETLAND
- DENOTES MECHANIZED
CLEARING
- DENOTES IMPACTS IN
SURFACE WATER
- DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

(18)
HSA PROPERTIES LLC
DB 10611 PG 223
PART OF BM 1995 PG 801



ALL INTERSECTION RADII ARE 40'
WIDE UNLESS OTHERWISE NOTED.

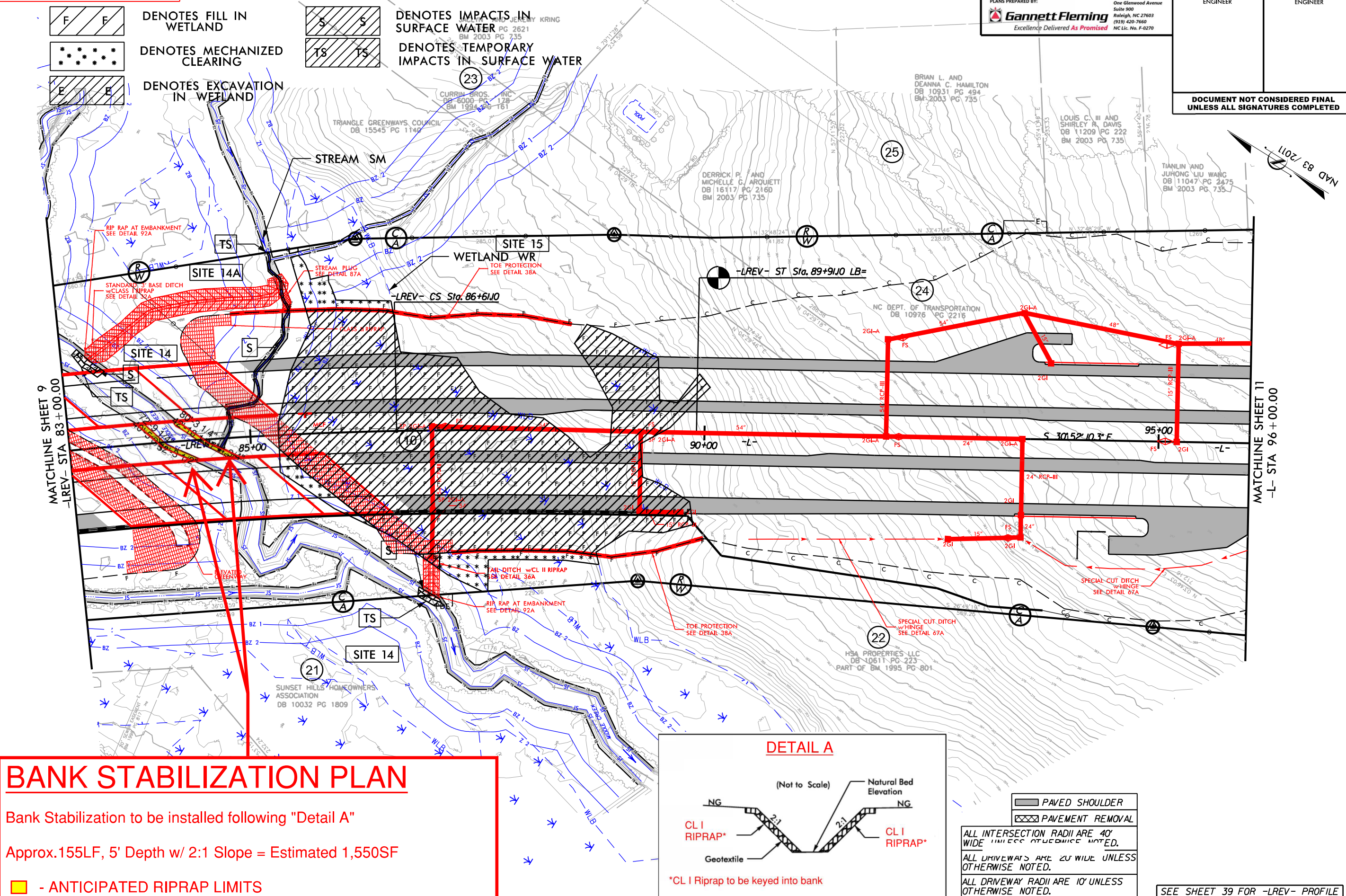
ALL DRIVEWAYS ARE 20' WIDE UNLESS
OTHERWISE NOTED.

ALL DRIVEWAY RADII ARE 10' UNLESS
OTHERWISE NOTED.

SEE SHEET 39 FOR -LREV- PROFILE

511699

3/17/2020
3:17:20 PM
C:\Users\jflawler\OneDrive\Documents\Projects\2721\2721_Hyd_perm_wet_perm_09.dgn
JFLAWLER



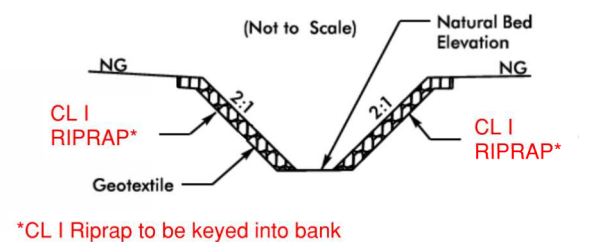
BANK STABILIZATION PLAN

Bank Stabilization to be installed following "Detail A"

Approx. 155LF, 5' Depth w/ 2:1 Slope = Estimated 1,550SF

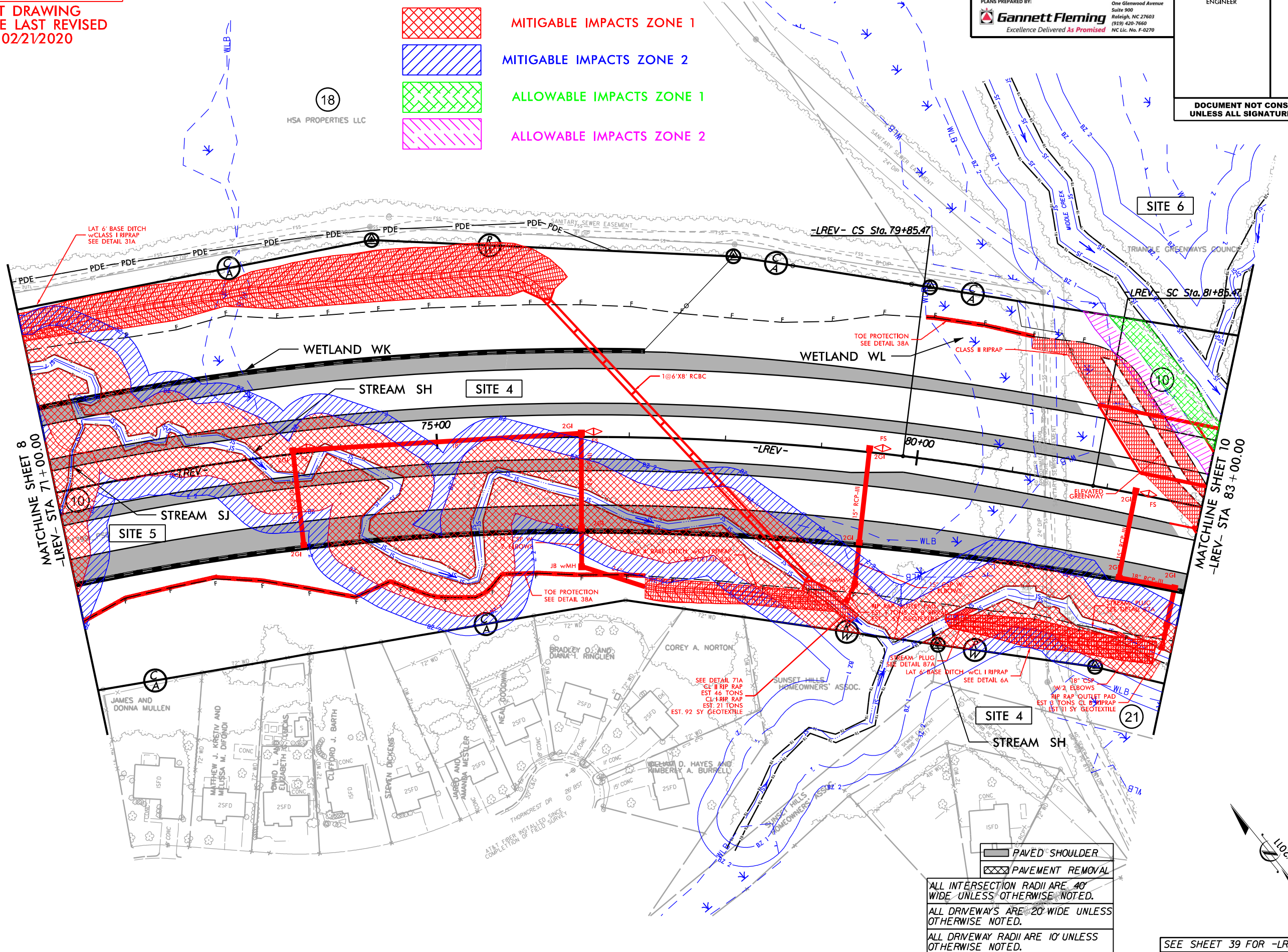
- ANTICIPATED RIPRAP LIMITS

DETAIL A



PAVED SHOULDER
 PAVEMENT REMOVAL
ALL INTERSECTION RADII ARE 40' WIDE UNLESS OTHERWISE NOTED.
ALL DRIVEWAYS ARE 20' WIDE UNLESS OTHERWISE NOTED.
ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.

SEE SHEET 39 FOR -LREV- PROFILE



**BUFFER DRAWING
SHEET 5 OF 22**

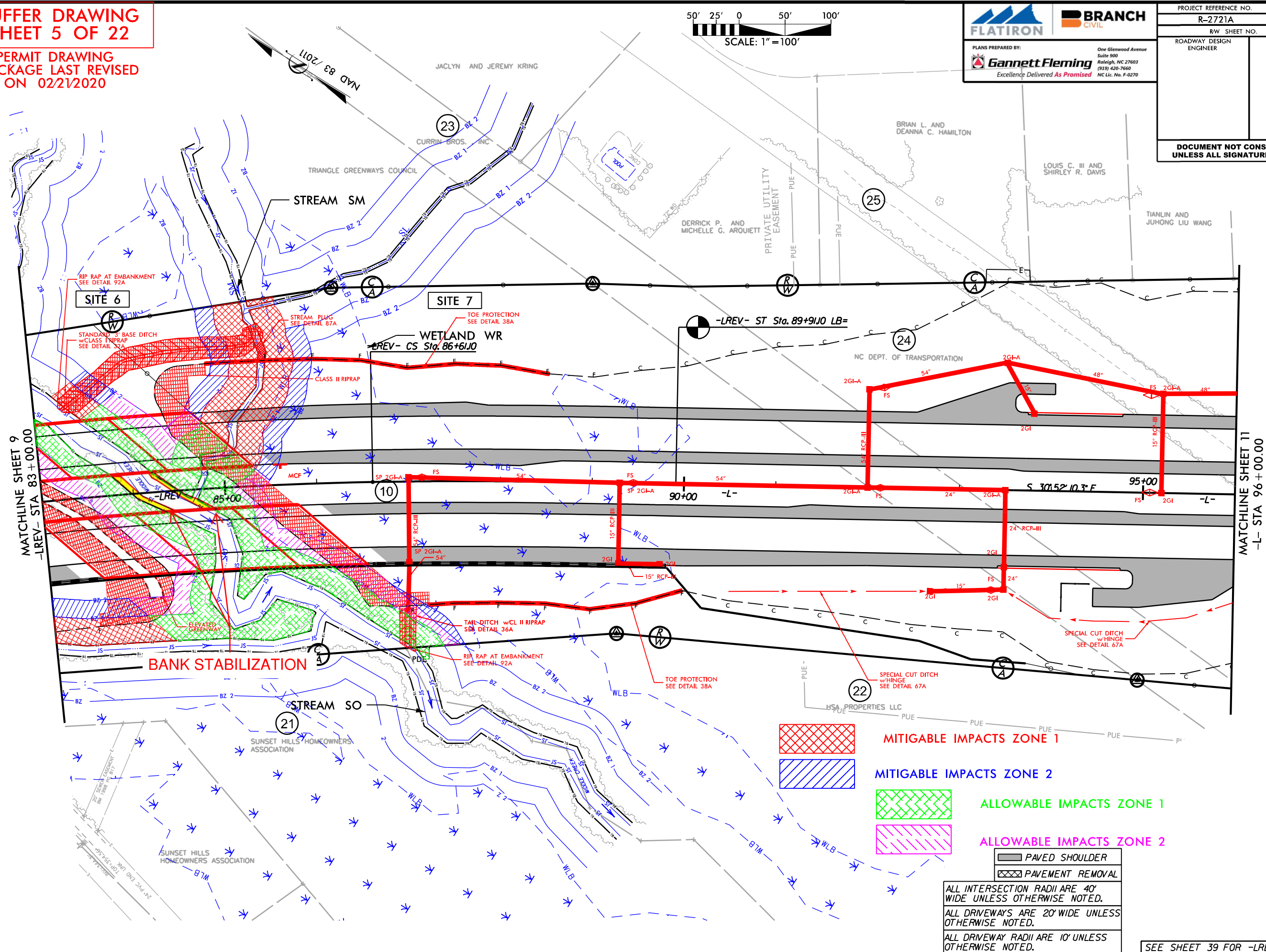
**PERMIT DRAWING
PACKAGE LAST REVISED
ON 02/21/2020**



FLATIRON **BRANCH CIVIL**

PLANS PREPARED BY:
Gannett Fleming
One Glenwood Avenue
Suite 900
Raleigh, NC 27603
(919) 420-7660
NC Lic. No. F-0270

PROJECT REFERENCE NO.		SHEET NO.
R-2721A		10
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



2020 Trestle Installation Pictures

04/28/2020 Aerials
(2721A)

Description

Taken Date
04/28/2020 at 12:36 pm

Upload Date
05/04/2020 at 09:51 am

Uploaded By
Mark Peebles

File Name
[Stan Bass Photog \(37\).JPG](#)

Location
Project Wide



Photos From Daily Log

Description

Taken Date
04/22/2020 at 03:45 pm

Upload Date
04/23/2020 at 03:32 pm

Uploaded By
Craig Chute

File Name
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Photos From Daily Log

Description

Taken Date
04/17/2020 at 08:27 am

Upload Date
04/17/2020 at 08:31 am

Uploaded By
Craig Chute

File Name
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Photos From Daily Log

Description

Taken Date
04/17/2020 at 08:27 am

Upload Date
04/17/2020 at 08:31 am

Uploaded By
Craig Chute

File Name
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Photos From Daily Log

Description

Taken Date
04/16/2020 at 07:22 am

Upload Date
04/16/2020 at 07:23 am

Uploaded By
Rebecca King

File Name
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Photos From Daily Log

Description

Taken Date
04/14/2020 at 09:52 am

Upload Date
04/14/2020 at 09:53 am

Uploaded By
Craig Chute

File Name
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Photos From Daily Log

Description

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Upload Date
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Uploaded By
Craig Chute

File Name
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Photos From Daily Log

Description

Taken Date
04/03/2020 at 11:52 am

Upload Date
04/03/2020 at 11:53 am

Uploaded By
Jason Kiser

File Name
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Unclassified

Description

Taken Date
04/03/2020 at 09:35 am

Upload Date
04/04/2020 at 04:21 pm

Uploaded By
Vicente Moscardo

File Name
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Location
Area 4 (MC to Y3)



Unclassified

Description

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04/03/2020 at 09:35 am

Upload Date
04/04/2020 at 04:21 pm

Uploaded By
Vicente Moscardo

File Name
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Location
Area 4 (MC to Y3)



Unclassified

Description

Taken Date
04/03/2020 at 09:34 am

Upload Date
04/04/2020 at 04:21 pm

Uploaded By
Vicente Moscardo

File Name
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Location
Area 4 (MC to Y3)



2024 Bank Condition Pictures

Photos From Daily Log

Description

Taken Date
01/03/2024 at 09:47 am

Upload Date
01/03/2024 at 10:20 am

Uploaded By
John Costello

File Name
[20240103_094746.jpg](#)



End Bent 1, from up and left of station

Photos From Daily Log

Description

Taken Date
01/03/2024 at 09:44 am

Upload Date
01/03/2024 at 10:20 am

Uploaded By
John Costello

File Name
[20240103_094436.jpg](#)



End Bent 1 from End Bent 2

Photos From Daily Log

Description

Taken Date
01/03/2024 at 09:37 am

Upload Date
01/03/2024 at 10:20 am

Uploaded By
John Costello

File Name
[20240103_093747.jpg](#)



End Bent 2 from End Bent 1

Photos From Daily Log

Description

Taken Date
01/03/2024 at 08:42 am

Upload Date
01/03/2024 at 10:20 am

Uploaded By
John Costello

File Name
[20240103_084213.jpg](#)



Trestle from End Bent 1