Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits

(along with corresponding Water Quality Certifications)

April 13, 2022 Ver 4.3

*Please note: fields marked with a red asterisk * below are required. You will not be able to submit the form until all mandatory questions are answered.*

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

https://edocs.deq.nc.gov/WaterResources/0/edoc/624704/PCN%20Help%20File%202018-1-30.pdf

A. Processing Information

Pre-Filing Meeting Date Request was submitted on: *

4/20/2022

If this is a courtesy copy, please fill in this with the submission date.

County (or Counties) where the project is located: *

Tyrrell

Dare

Is this a NCDMS Project *

Yes No

Click Yes, only if NCDMS is the applicant or co-applicant.

Is this project a public transportation project? *

Yes No

This is any publicly funded by municipal,state or federal funds road, rail, airport transportation project.

Is this a NCDOT Project? *

Yes No

(NCDOT only) T.I.P. or state project number:

HB-0001

WBS # *

49475.1.1

(for NCDOT use only)

1a. Type(s) of approval sought from the Corps: *

- [x] Section 404 Permit (wetlands, streams and waters, Clean Water Act)
- [x] Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

Has this PCN previously been submitted? *

- (•) Yes
- ( ) No

Please provide the date of the previous submission. *

7/15/2021

1b. What type(s) of permit(s) do you wish to seek authorization? *

- [x] Nationwide Permit (NWP)
- [ ] Regional General Permit (RGP)
- [ ] Standard (IP)

1c. Has the NWP or GP number been verified by the Corps? *

Yes No

Nationwide Permit (NWP) Number: 6 - Survey Activities

NWP Numbers (for multiple NWPS):

List all NW numbers you are applying for not on the drop down list.

1d. Type(s) of approval sought from the DWR: *

check all that apply

- [ ] 401 Water Quality Certification - Regular
- [ ] 401 Water Quality Certification - Express
- [ ] Non-404 Jurisdictional General Permit
- [ ] Riparian Buffer Authorization
- [x] Individual 401 Water Quality Certification

1e. Is this notification solely for the record because written approval is not required?

*

For the record only for DWR 401 Certification: ○ Yes ◉ No

For the record only for Corps Permit: ◉ Yes ○ No

1f. Is this an after-the-fact permit application? *

◉ Yes ○ No

1g. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts?

If so, attach the acceptance letter from mitigation bank or in-lieu fee program.

◉ Yes ○ No

Acceptance Letter Attachment

Click the upload button or drag and drop files here to attach document

Accept_HB-0001.pdf 277.4KB

FILE TYPE MUST BE PDF

1h. Is the project located in any of NC's twenty coastal counties? *

◉ Yes ○ No

1i. Is the project located within a NC DCM Area of Environmental Concern (AEC)? *

◉ Yes ○ No ○ Unknown

1j. Is the project located in a designated trout watershed? *

○ Yes ◉ No

Link to trout information: http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx

B. Applicant Information

1a. Who is the Primary Contact? *

Jason Dilday

1b. Primary Contact Email: *

jldilday1@ncdot.gov

1c. Primary Contact Phone: *

(xxx)xxx-xxxx

(919)707-6111

1d. Who is applying for the permit? *

- [ ] Owner
- [x] Applicant (other than owner)

(Check all that apply)

1e. Is there an Agent/Consultant for this project? *

○ Yes ◉ No

2. Owner Information

2a. Name(s) on recorded deed: *

n/a

2b. Deed book and page no.:

2c. Contact Person:

(for Corporations)

2d. Address *

Street Address

n/a

Address Line 2

City

n/a

State / Province / Region

n/a

Postal / Zip Code

n/a

Country

n/a

2e. Telephone Number: *

(xxx)xxx-xxxx

(919)707-6000

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address: *

maturchy@ncdot.gov

3. Applicant Information (if different from owner)

3a. Name: *

NCDOT

3b. Business Name:

(if applicable)

3c. Address *

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

State / Province / Region

NC

Postal / Zip Code

27699-1598

Country

US

3d. Telephone Number: *

(919)707-6000

(xxx)xxx-xxxx

3e. Fax Number:

(xxx)xxx-xxxx

3f. Email Address: *

maturchy@ncdot.gov

C. Project Information and Prior Project History

1. Project Information

1a. Name of project: *

Bridge 7 over Alligator River on US 64 (HB-0001-Central)

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town: *

East Lake

2. Project Identification

2a. Property Identification Number:

(tax PIN or parcel ID)

2b. Property size:

(in acres)

2c. Project Address

Street Address

Address Line 2

City

State / Province / Region

Postal / Zip Code

Country

2d. Site coordinates in decimal degrees

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

Latitude: *

35.899417

ex: 34.208504

Longitude: *

-76.003591

-77.796371

3. Surface Waters

3a. Name of the nearest body of water to proposed project: *

Alligator River

3b. Water Resources Classification of nearest receiving water: *

SC;Sw

Surface Water Lookup

3c. What river basin(s) is your project located in? *

Pasquotank

3d. Please provide the 12-digit HUC in which the project is located. *

030102050902

River Basin Lookup

4. Project Description and History

4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: *

Existing land use in the vicinity is rural, with one gas station/marina located at the western end of the existing bridge.

4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? *

(•) Yes ( ) No ( ) Unknown

If yes, please give the DWR Certification number or the Corps Action ID (exp. SAW-0000-00000).

USACE SAW-2021-01091
DWR 20211126

4f. List the total estimated acreage of all existing wetlands on the property:

88.08

4g. List the total estimated linear feet of all existing streams on the property:

(intermittent and perennial)

1,091

4h. Explain the purpose of the proposed project: *

Replace the existing bridge over the Alligator River. Geotechnical borings are required to facilitate design of the new bridge's foundations.

4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: *

Borings in a portion of the river have already occurred. Borings in wetlands have been completed and though originally thought to be possible without impacts, unpermitted impacts occurred resulting in Notice of Violations issued by the NCDWR and the USACE. Please see the attachments for additional details.

5. Jurisdictional Determinations

5a. Have the wetlands or streams been delineated on the property or proposed impact areas? *

(•) Yes ( ) No ( ) Unknown

Comments:

5b. If the Corps made a jurisdictional determination, what type of determination was made? *

(•) Preliminary ( ) Approved ( ) Not Verified ( ) Unknown ( ) N/A

Corps AID Number:

Example: SAW-2017-99999

5c. If 5a is yes, who delineated the jurisdictional areas?

Name (if known): Rob Crowther

Agency/Consultant Company: Carolina Ecosystems, Inc.

Other:

5d. List the dates of the Corp jurisdiction determination or State determination if a determination was made by the Corps or DWR.

The USACE, NCDWR, and NC Division of Coastal Management visited the project on March 31, 2021.

6. Future Project Plans

6a. Is this a phased project? *

( ) Yes (•) No

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

This proposed work is for geotechnical investigations to faciltate bridge design. US Army Corps of Engineers
(USACE) Action ID SAW-2021-01091 for NW 6 was issued on August 11, 2022. A detailed permit application for the actual bridge replacement will be submitted in the future.

D. Proposed Impacts Inventory

1. Impacts Summary

1a. Where are the impacts associated with your project? (check all that apply):

[x] Wetlands
[x] Open Waters
[ ] Streams-tributaries
[ ] Pond Construction
[ ] Buffers

2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

"W." will be used in the table below to represent the word "wetland".

2a. Site # * (?)	2a1 Reason * (?)	2b. Impact type * (?)	2c. Type of W. *	2d. W. name *	2e. Forested *	2f. Type of Jurisdicition * (?)	2g. Impact area *
1	Borings	T	Salt/Brackish Marsh	marsh	No	Both	0.021 (acres)
2	Mech. Clearing	P	Riverine Swamp Forest	WA	Yes	Both	0.353 (acres)

2g. Total Temporary Wetland Impact

0.021

2g. Total Permanent Wetland Impact

0.353

2g. Total Wetland Impact

0.374

2i. Comments:

Assuming a 2 foot radius of impact around each boring.
An additional 0.576 ac. of handclearing has occurred for access of drill rig to the project site.

4. Open Water Impacts

If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.

4a. Site # * (?)	4a1. Impact Reason	4b. Impact type * (?)	4c. Name of waterbody (?)	4d. Activity type *	4e. Waterbody type *	4f. Impact area *
1	Borings	T	Alligator River	Excavation	Tributary	0.04 (acres)

4g. Total temporary open water Impacts:

0.04

4g. Total permanent open water impacts:

0.00

4g. Total open water impacts:

0.04

4h. Comments:

E. Impact Justification and Mitigation

1. Avoidance and Minimization

1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project: *

The majority of the borings have occurred or will occur within the footprint of the proposed bridge replacement project.

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques: *

The drilling and sampling of the borings will be completed within the steel casing utilizing mud-rotary drilling methods. Drill fluids consisting of a water/bentonite slurry will be circulated from a mud tub on the barge platform through the drill tools and drilling bit and recirculated to the mud tub on the barge platform through the outer steel casing. Drilling cuttings (spoils) will be captured in the mud tub, removed as necessary to facilitate drilling and sampling operations, and temporarily stored in metal drums on the barge platform until boring termination is achieved. Please see the attached narrative for additional information.

2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?

(•) Yes ( ) No

2c. If yes, mitigation is required by (check all that apply):

[x] DWR [x] Corps

2d. If yes, which mitigation option(s) will be used for this project?

[ ] Mitigation bank [x] Payment to in-lieu fee program [x] Permittee Responsible Mitigation

4. Complete if Making a Payment to In-lieu Fee Program

4a. Approval letter from in-lieu fee program is attached.

(•) Yes ( ) No

4b. Stream mitigation requested:

(linear feet)

4c. If using stream mitigation, what is the stream temperature:

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's RIBITS website.

4d. Buffer mitigation requested (DWR only):

(square feet)

4e. Riparian wetland mitigation requested:

(acres)

0.343

4f. Non-riparian wetland mitigation requested:

(acres)

4g. Coastal (tidal) wetland mitigation requested:

(acres)

4h. Comments

5. Complete if Using a Permittee Responsible Mitigation Plan

5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan including mitigation credits generated.

See attached restoration plan for impacts associated with the mechanized clearing of wetlands. NCDOT proposes to restore 0.010 ac of impacted area that occurred outside the footprint of the future bridge project.

6. Buffer mitigation (State Regulated Riparian Buffer Rules) - required by DWR

6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation? If yes, you must fill out this entire form - please contact DWR for more information.

○ Yes ◉ No

F. Stormwater Management and Diffuse Flow Plan (required by DWR)

*** Recent changes to the stormwater rules have required updates to this section .***

1. Diffuse Flow Plan

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

○ Yes ◉ No

For a list of options to meet the diffuse flow requirements, click here.

If no, explain why:

The Pasquotank River Basin does not include protected riparian buffers.

2. Stormwater Management Plan

2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250? *

○ Yes ◉ No

2b. Does this project meet the requirements for low density projects as defined in 15A NCAC 02H .1003(2)? *

○ Yes ◉ No

To look up low density requirement click here 15A NCAC 02H .1003(2).

2c. Does this project have a stormwater management plan (SMP) reviewed and approved under a state stormwater program or state-approved local government stormwater program? *

○ Yes ○ No

◉ N/A - project disturbs < 1 acre

Hint: projects that have vested rights, exemptions, or grandfathering from state or locally implemented stormwater programs or projects that satisfy state or locally-implemented stormwater programs through use of community in-lieu programs should answer no to this question.

Comments:

G. Supplementary Information

1. Environmental Documentation

1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? *

◉ Yes ○ No

1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? *

◉ Yes ○ No

1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) *

◉ Yes ○ No

2. Violations (DWR Requirement)

2a. Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)? *

◉ Yes ○ No

2b. If you answered "yes" to the above question, provide an explanation of the violation(s):

This application is required in response to the NC Division of Water Resources Notice of Violation (2022-PC-0389) issued on July 26, 2022, due to failure to secure a written 401 Water Quality Certification (WQC) as well as 401 WQC condition violation; and the United States Army Corps of Engineers Notice of Violation (SAW-2021-01091), issued on August 11, 2022, violation of General Condition #11 of the Nationwide Permit #6.

3. Cumulative Impacts (DWR Requirement)

3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? *

○ Yes ◉ No

3b. If you answered "no," provide a short narrative description.

The borings are needed to assist with the design for the future bridge replacement.

4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? *

○ Yes ○ No ◉ N/A

5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? *

◉ Yes ○ No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? *

◉ Yes ○ No

5c. If yes, indicate the USFWS Field Office you have contacted.

Raleigh

5d. Is another Federal agency involved? *

◉ Yes ○ No ○ Unknown

What Federal Agency is involved?

NMFS

5e. Is this a DOT project located within Division's 1-8? *

◉ Yes ○ No

5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? *

NC Natural Heritage databases, USFWS IPaC, and field surveys

6. Essential Fish Habitat (Corps Requirement)

6a. Will this project occur in or near an area designated as an Essential Fish Habitat? *

○ Yes ◉ No

6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? *

NOAA Essential fish habitat mapping tool

7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: http://gis.ncdcr.gov/hpoweb/

7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? *

◉ Yes ○ No

7b. What data sources did you use to determine whether your site would impact historic or archeological resources? *

NCDOT coordination with SHPO

8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: https://msc.fema.gov/portal/search

8a. Will this project occur in a FEMA-designated 100-year floodplain? *

◉ Yes ○ No

8b. If yes, explain how project meets FEMA requirements:

8c. What source(s) did you use to make the floodplain determination? *

FRIS

Miscellaneous

Comments

Please use the space below to attach all required documentation or any additional information you feel is helpful for application review. Documents should be combined into one file when possible, with a Cover Letter, Table of Contents, and a Cover Sheet for each Section preferred.

Click the upload button or drag and drop files here to attach document

HB-0001 Nationwide Tyrrell_Dare August 31, 2022.pdf 11.02MB

File must be PDF or KMZ

Signature

*

By checking the box and signing below, I certify that:

- The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief'; and
- The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.
- I have given true, accurate, and complete information on this form;
- I agree that submission of this PCN form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the PCN form.

Full Name: *

Mack Christopher Rivenbark, III

Signature *

Mack C. Rivenbark, III

Date

8/31/2022

Alligator River Bridge Project Geotechnical Borings

A private engineering firm will be selected to conduct the geotechnical subsurface investigation for the project with approximately 222 Standard Penetration Test (SPT) borings to be performed. These 222 borings will be performed in the corridor shown on the attached site map. We anticipate 149 bridge borings will be located within the Alligator River to the north of the existing Alligator River Bridge and be accessed using barge mounted drilling equipment. Approximately 40 roadway and 3 bridge borings will be performed along the western bridge approach and 27 roadway and 3 bridge borings will be performed along the eastern bridge approach and accessed using ATV mounted drilling equipment.

The bridge borings in the Alligator River will be advanced utilizing geotechnical drilling rigs mounted to self-propelled floating barge or jack-up barge platforms. The floating barge platforms will be used closer to the eastern and western shores of the river, or in shallow water as needed, and will be stabilized at the boring locations using aluminum or steel spuds dropped into the river bottom to hold the barge in place during drilling. Additional spud casing can be added or removed depending on the water depth and will be extended well above the working platform to allow the barge to float up or down with changing water levels (tidal changes). The jack-up barges will mechanically lower stabilizing spuds to the river bottom at the boring locations and will then be used to raise the barge platform completely out of the water and provide a stable working platform during drilling operations unaffected by changing water levels. Each boring will advance 3-inch or 4-inch diameter steel outer casing from the barge platform to the mudline and into the subsurface by rotation or driving creating minimal disturbance to the river bottom. This temporary casing will be advanced as needed into the subsurface to provide borehole stability. The drilling and sampling of the borings will be completed within the steel casing utilizing mud-rotary drilling methods. Drill fluids consisting of a water-bentonite slurry will be circulated from a mud tub on the barge platform through the drill tools and drilling bit and recirculated to the mud tub on the barge platform through the outer steel casing. Drilling cuttings (spoils) will be captured in the mud tub, removed as necessary to facilitate drilling and sampling operations, and temporarily stored in metal drums on the barge platform until boring termination is achieved. Upon boring termination, any stored drill cuttings will be shoveled back down the steel outer casing and into the subsurface and the temporary casing will be removed. Stored drill cuttings unable to be returned to the subsurface will be brought to shore and deposited on land outside of wetland areas. The barge drilling platforms will be launched and recovered from the marina/boat ramp shown on the attached site map. It is expected that each bridge boring will be advanced to a depth of approximately 150 feet and will take two days to complete. We anticipate having up to three barge mounted drilling rigs in operation and estimate approximately 6 months to complete these borings.

The roadway and bridge borings located on land along the bridge approaches will be advanced utilizing geotechnical drilling rigs mounted to rubber-tired, tracked, or marsh-buggy ATV platforms as needed based on actual ground conditions. Drilling and sampling operations will be performed as described above using mud-rotary drilling methods and tools. Movement of the ATV drilling rigs will be confined to the proposed alignment corridor as much as possible to minimize ground disturbance accessing these locations. Access to the alignment corridor will be from existing access points, roads, or right-of-way. If a proposed boring location is inaccessible to ATV drilling equipment, hand tools consisting of hand augers and/or muck probes will be utilized to characterize the subsurface conditions

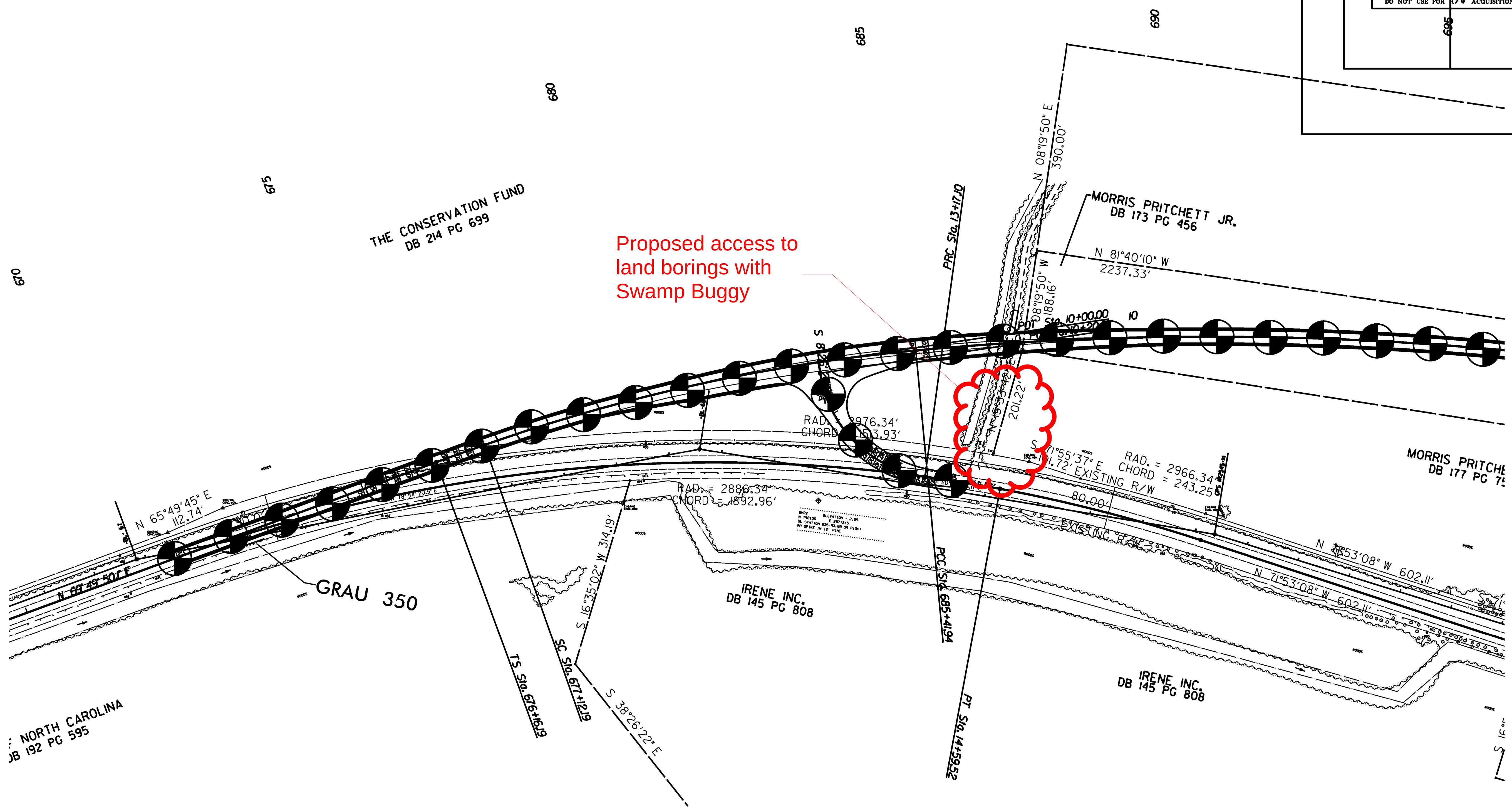
at those locations. It is expected the roadway borings will be advanced to depths ranging from 10 to 50 feet below existing ground surface and will be performed concurrently with the barge drilling operations.

PROJECT REFERENCE NO.	SHEET NO.
	1

RW SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



REVISIONS

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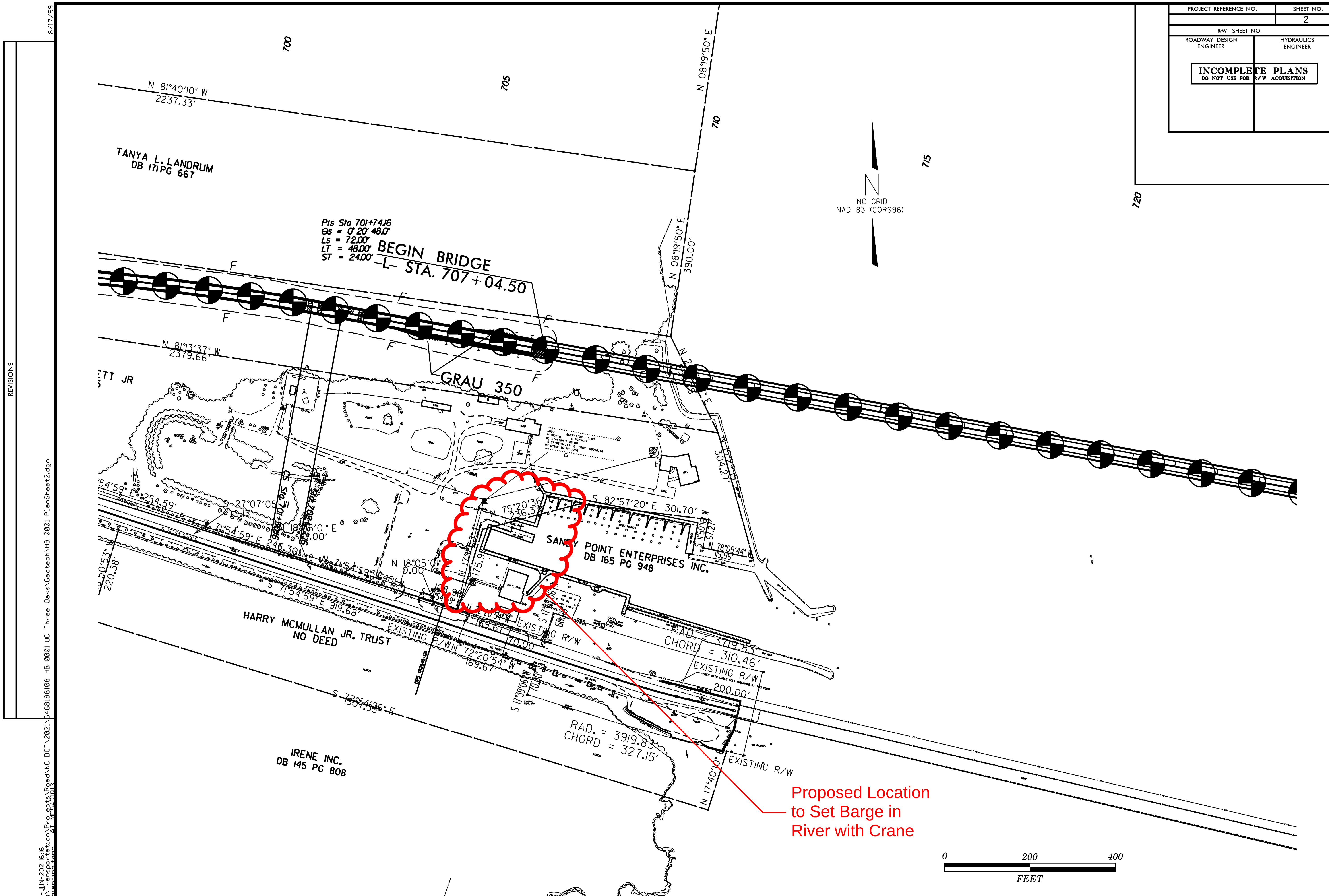

PROJECT REFERENCE NO.
SHEET NO.
2
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
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NC GRID
NAD 83 (CORS96)
700
705
710
715
720
N 81°40'10" W
2237.33'
N 08°19'50" E
TANYA L. LANDRUM
DB 171 PG 667
PIs Sta 701+74.16
Θs = 0°20' 48.0"
Ls = 72.00'
LT = 48.00'
ST = 24.00'
BEGIN BRIDGE
-L- STA. 707+04.50
N 08°19'50" E
390.00'
N 81°13'37" W
2379.66'
GRAU 350
ETT JR
S 82°57'20" E 301.70'
N 75°20'38"
SANDY POINT ENTERPRISES INC.
DB 165 PG 948
N 78°09'44" W
119.96'
304.21'
27°07'05" W
254.59'
71°54'59" E 246.30'
18°15'01" E
N 18°05'01"
10.00'
S 71°54'59" E 919.68'
HARRY McMULLAN JR. TRUST
NO DEED
EXISTING R/W
72°20'54" W
169.67'
EXISTING R/W
RAD. = 3919.83'
CHORD = 310.46'
EXISTING R/W
200.00'
S 72°54'36" E
1301.35'
RAD. = 3919.83'
CHORD = 327.15'
EXISTING R/W
N 17°40'10"
IRENE INC.
DB 145 PG 808
Proposed Location
to Set Barge in
River with Crane
0
200
400
FEET

PROJECT REFERENCE NO.	SHEET NO.
	3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

730

735

740

745

NC GRID
NAD 83 (CORS96)

0 200 400
FEET

REVISIONS

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driggins
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PROJECT REFERENCE NO.	SHEET NO.
	4

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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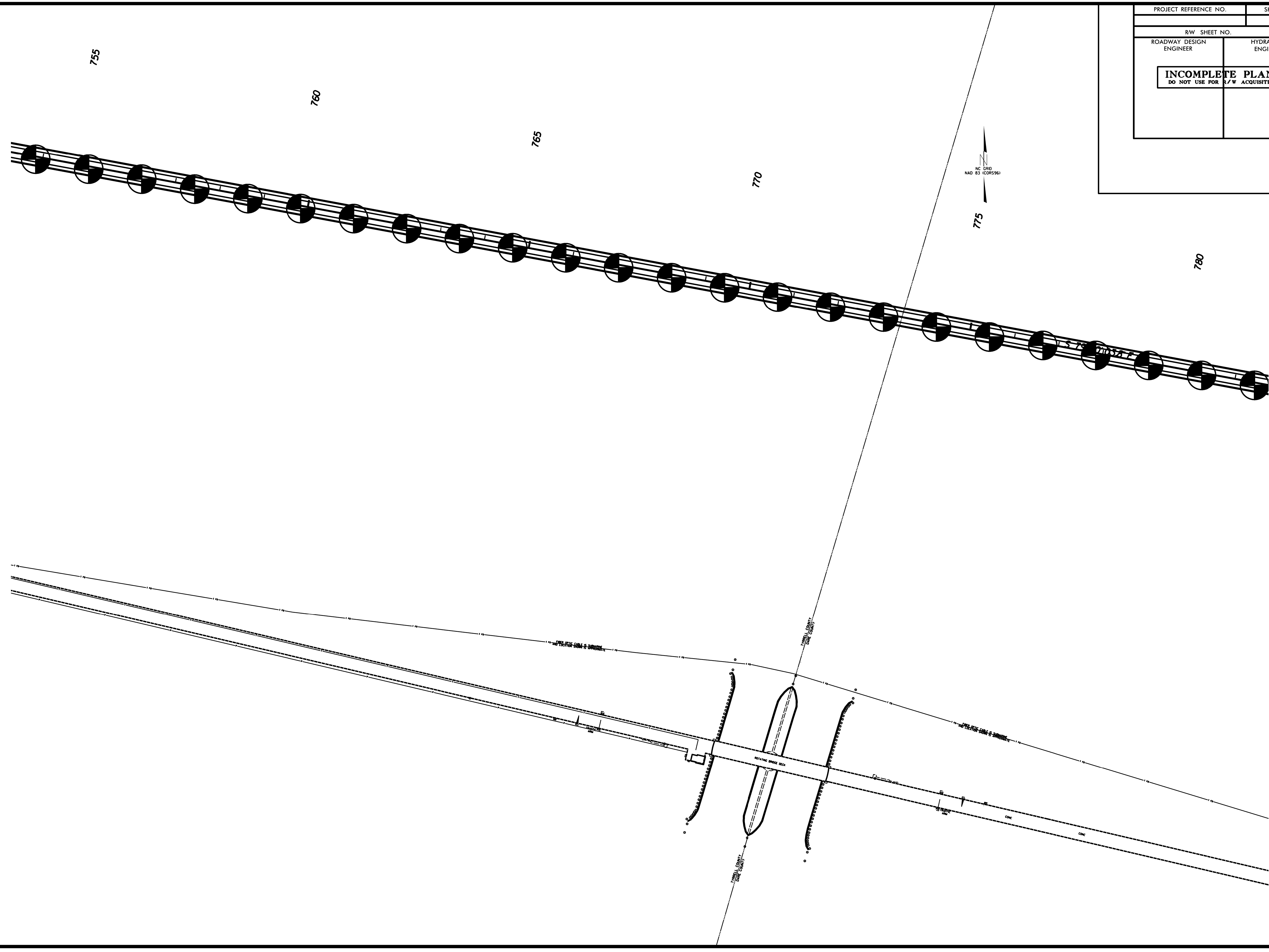
DO NOT USE FOR R/W ACQUISITION



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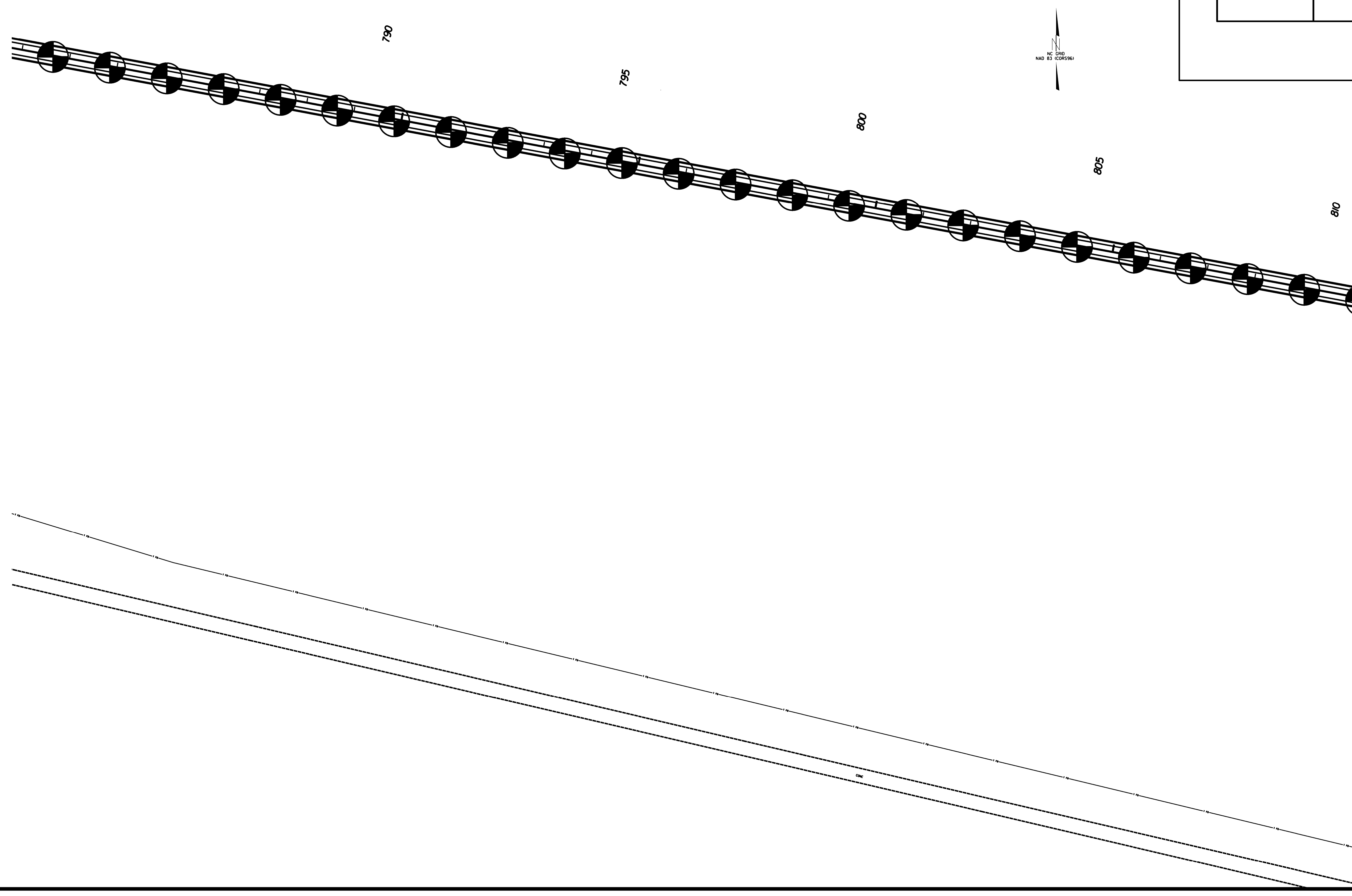
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



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PROJECT REFERENCE NO.	SHEET NO.
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R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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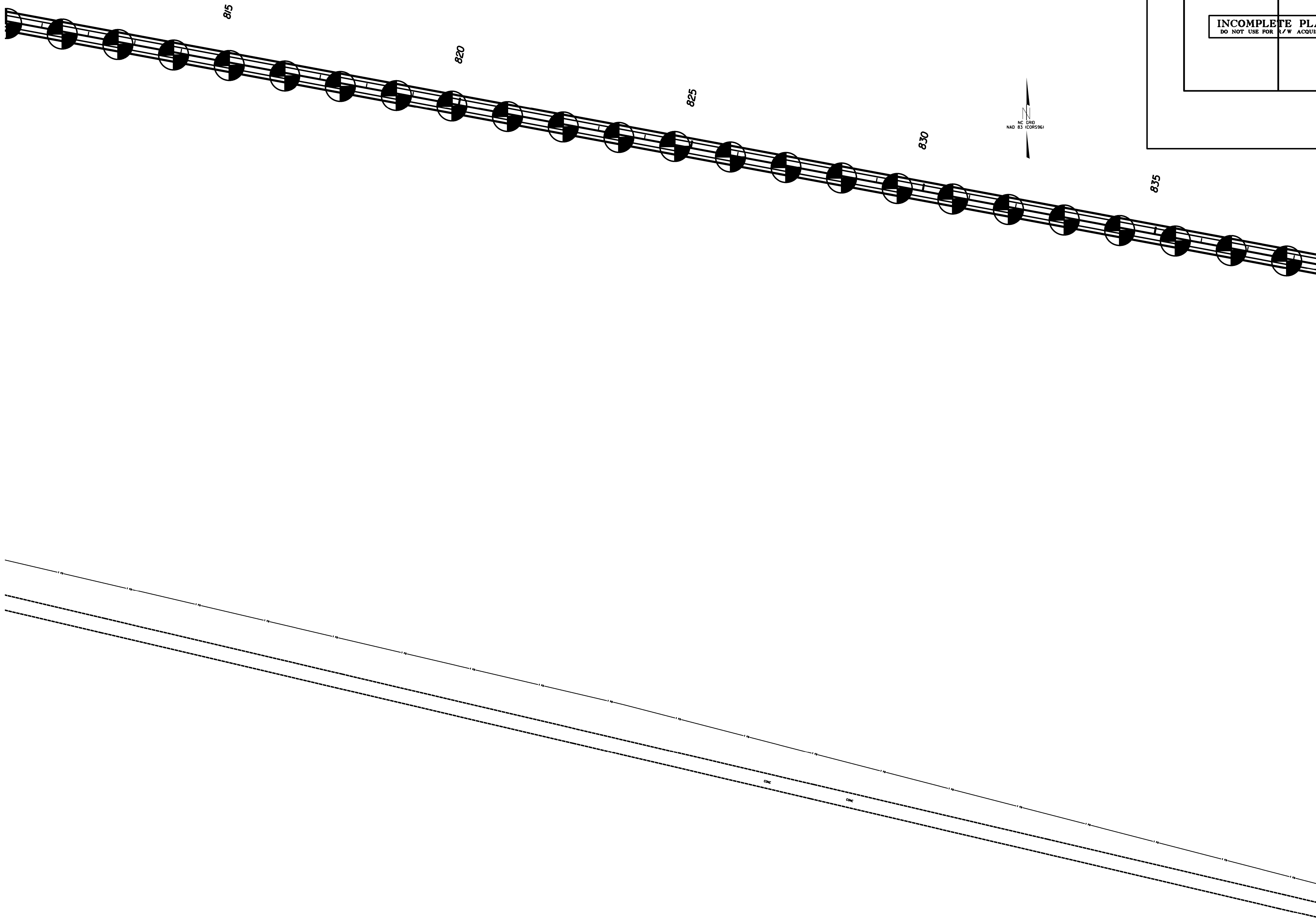

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PROJECT REFERENCE NO.	SHEET NO.
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R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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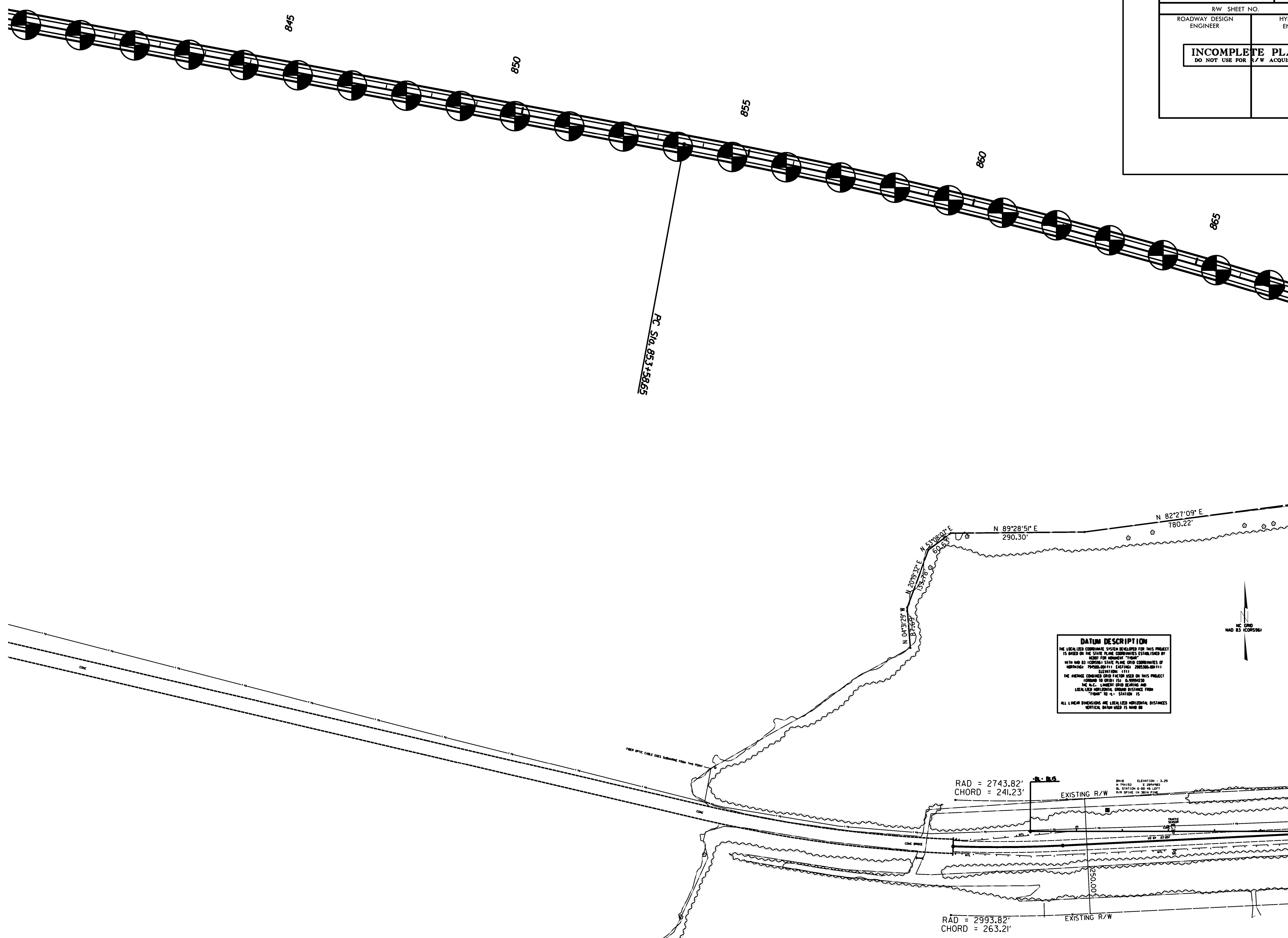

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PROJECT REFERENCE NO.	SHEET NO.
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R/W SHEET NO.

ROADWAY DESIGN ENGINEER — HYDRAULICS ENGINEER

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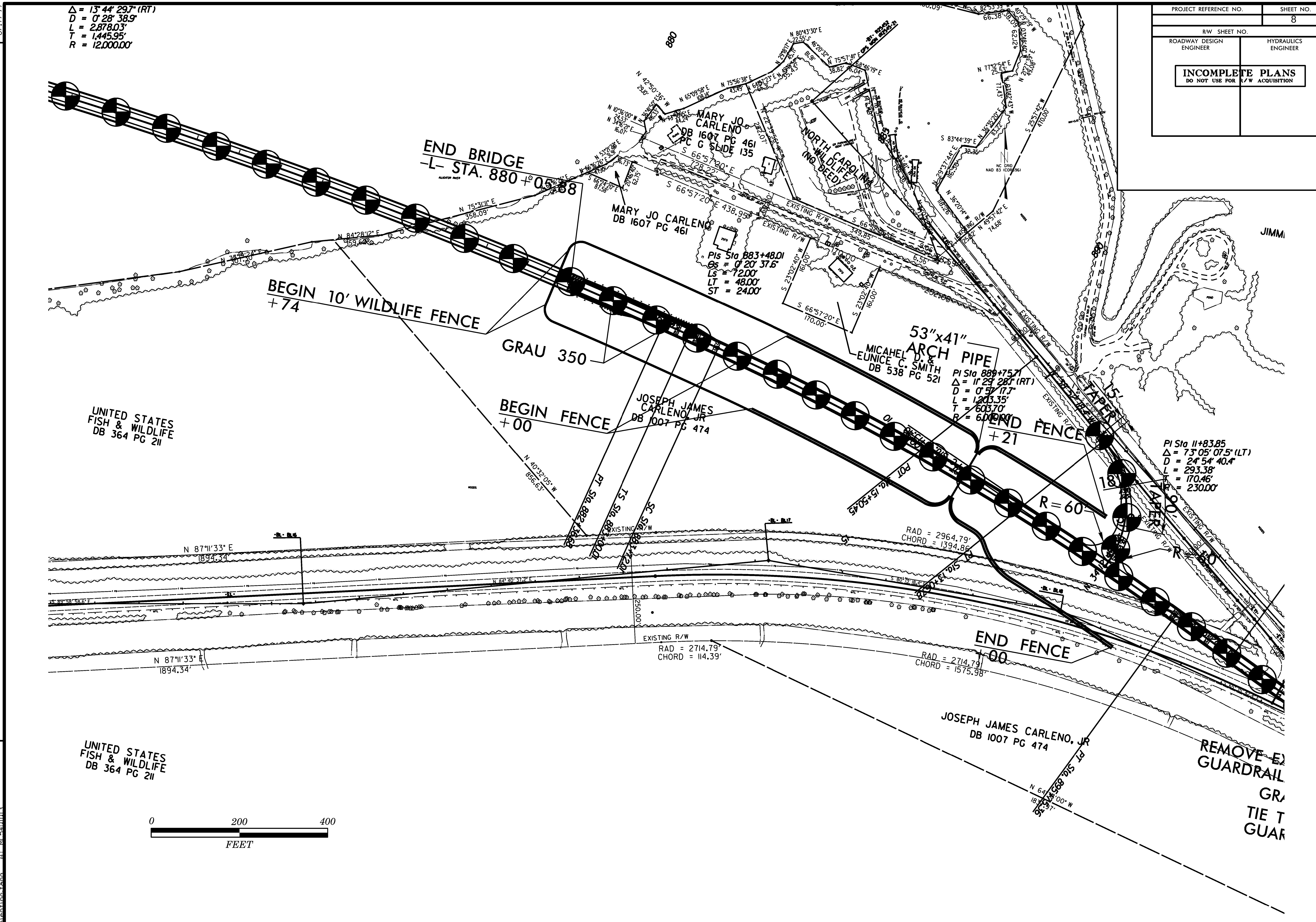

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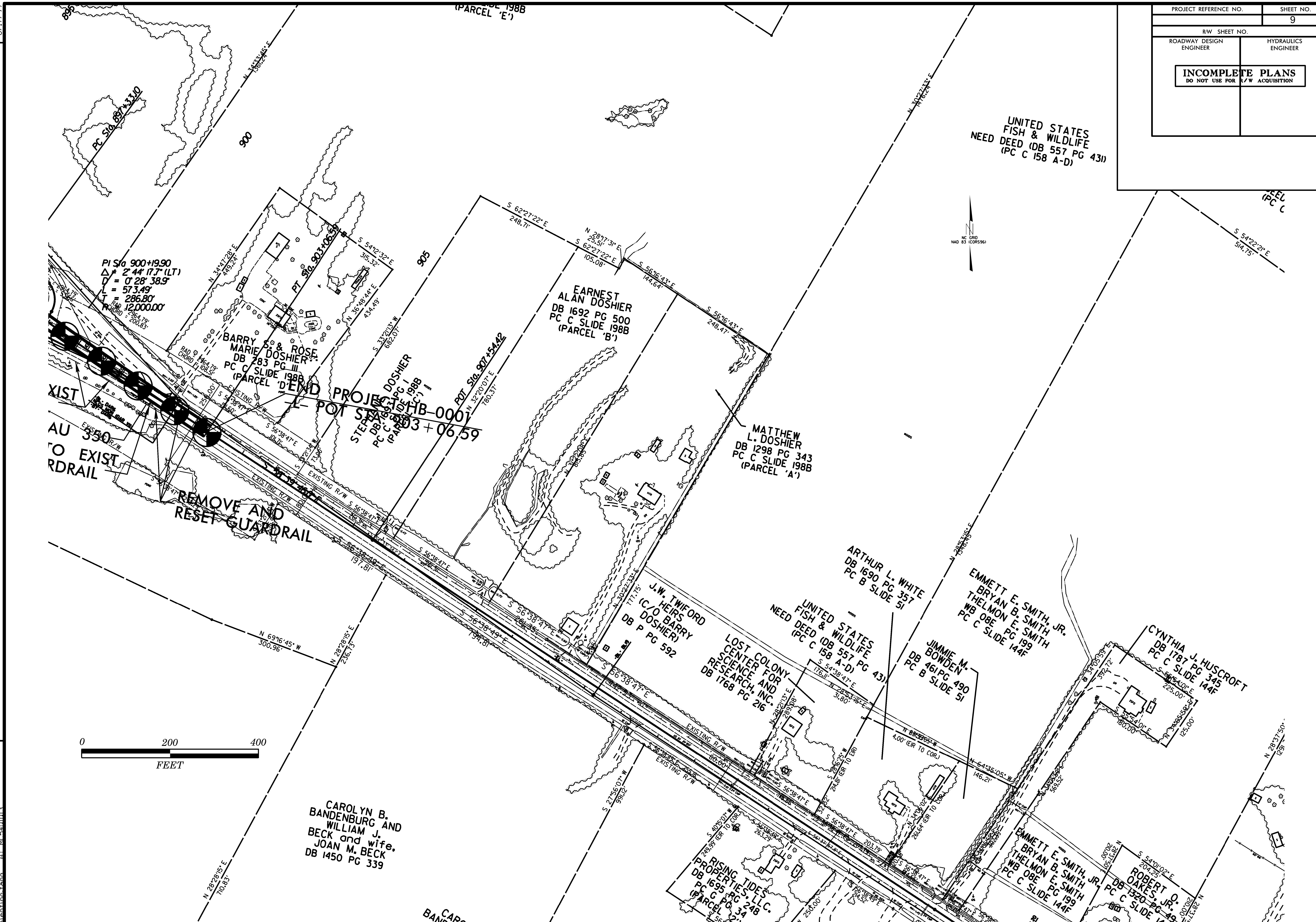

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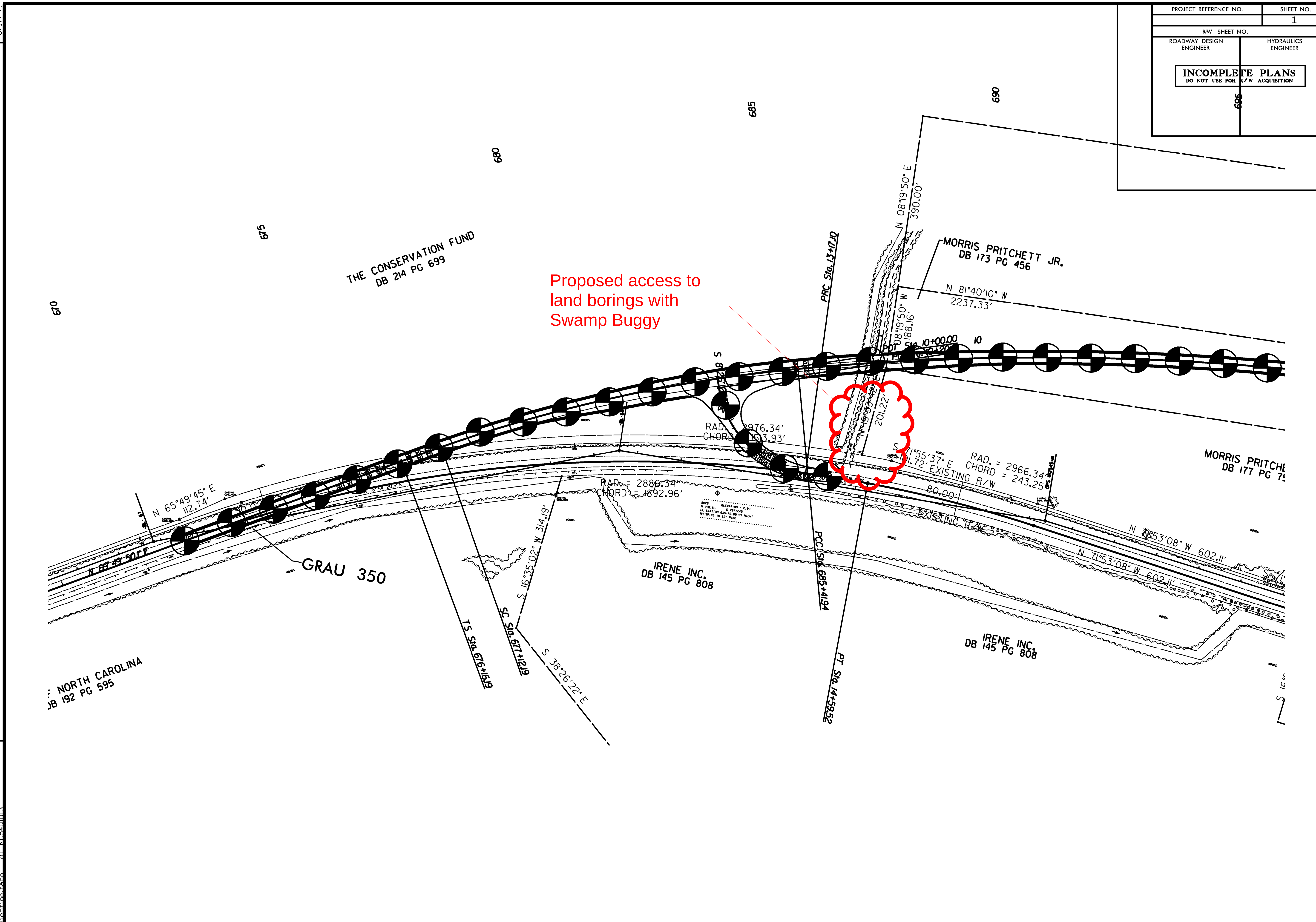

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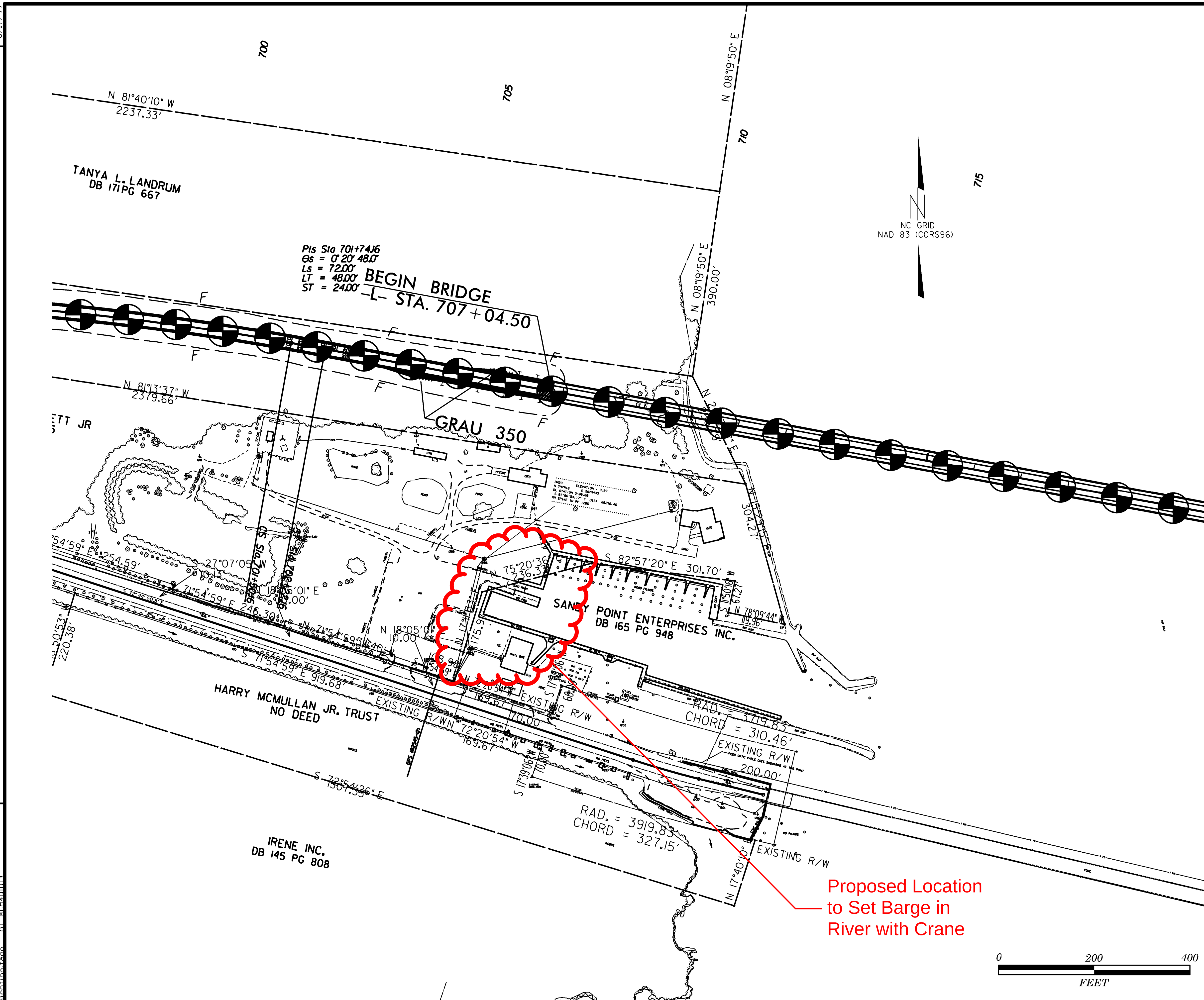

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PROJECT REFERENCE NO.	SHEET NO.
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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730

735

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NC GRID
NAD 83 (CORS96)

0 200 400
FEET

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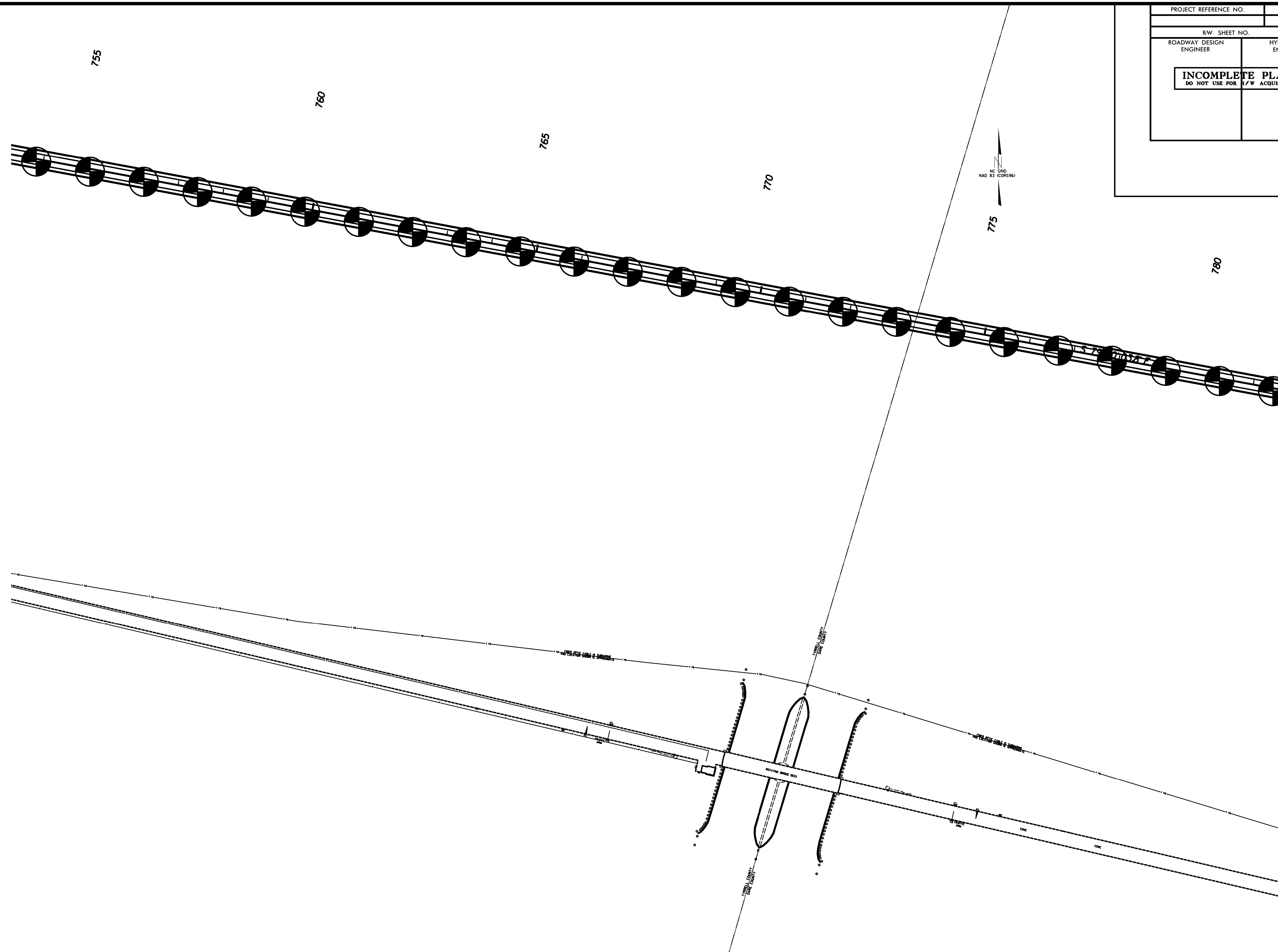

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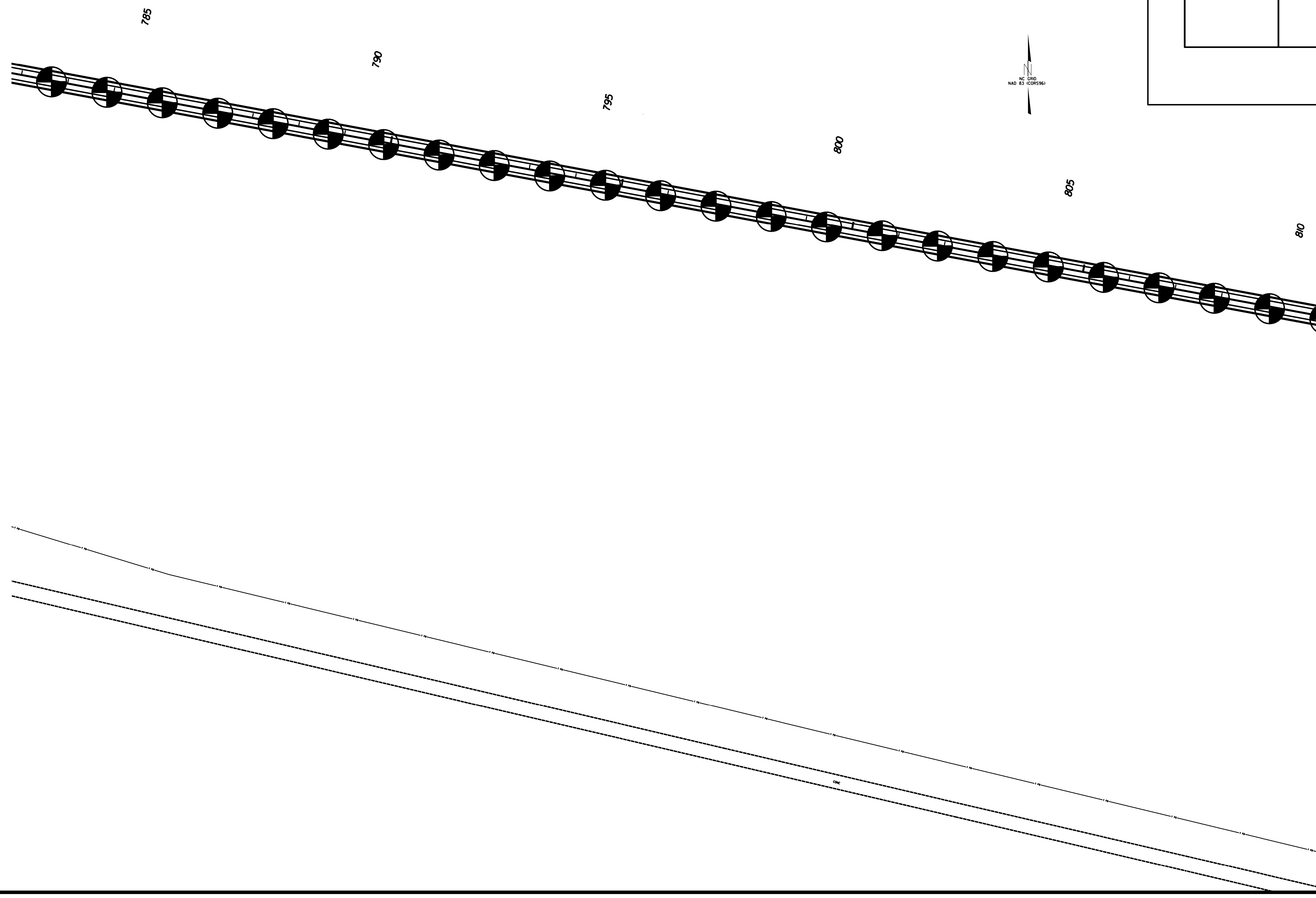

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HYDRAULICS ENGINEER

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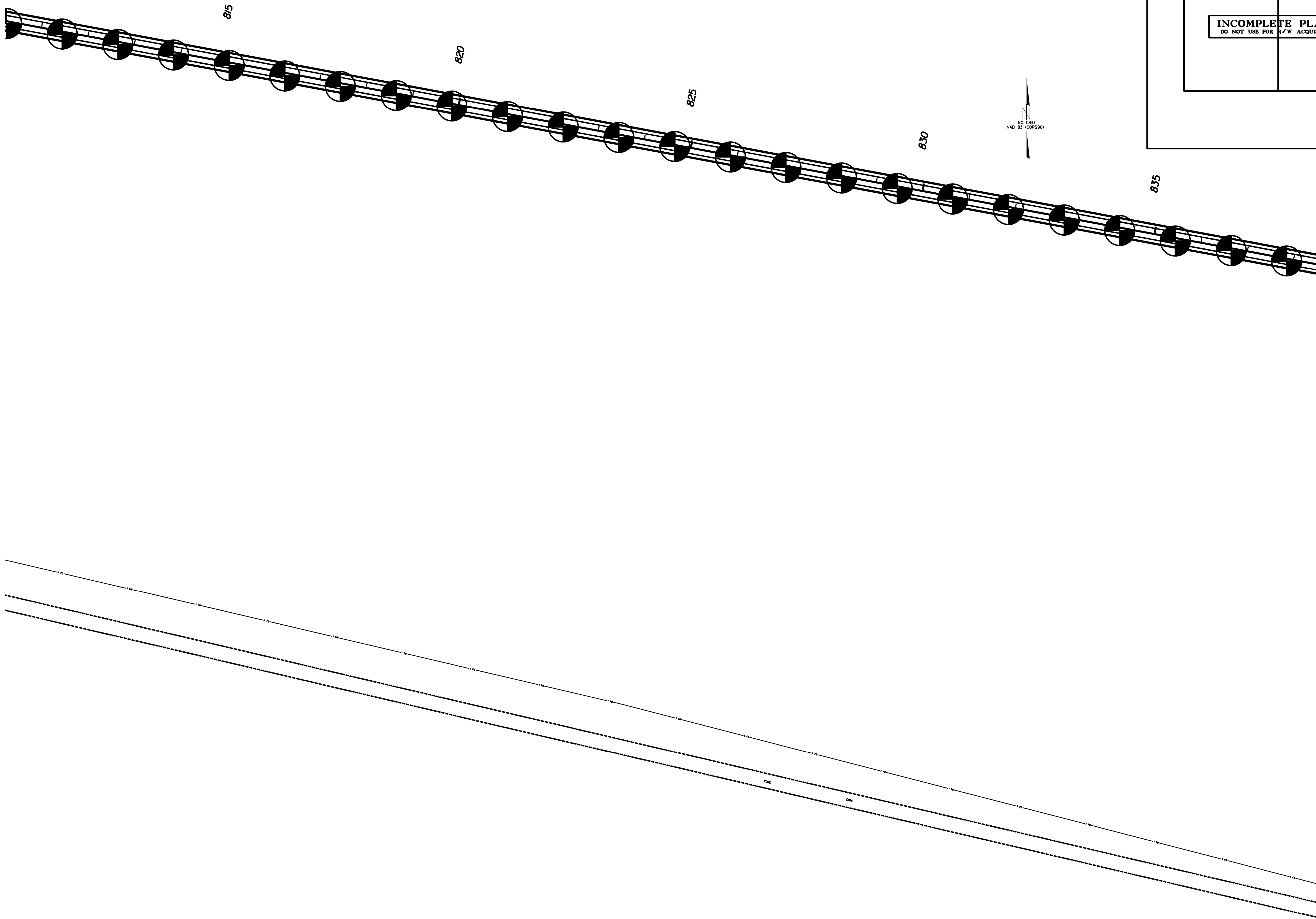

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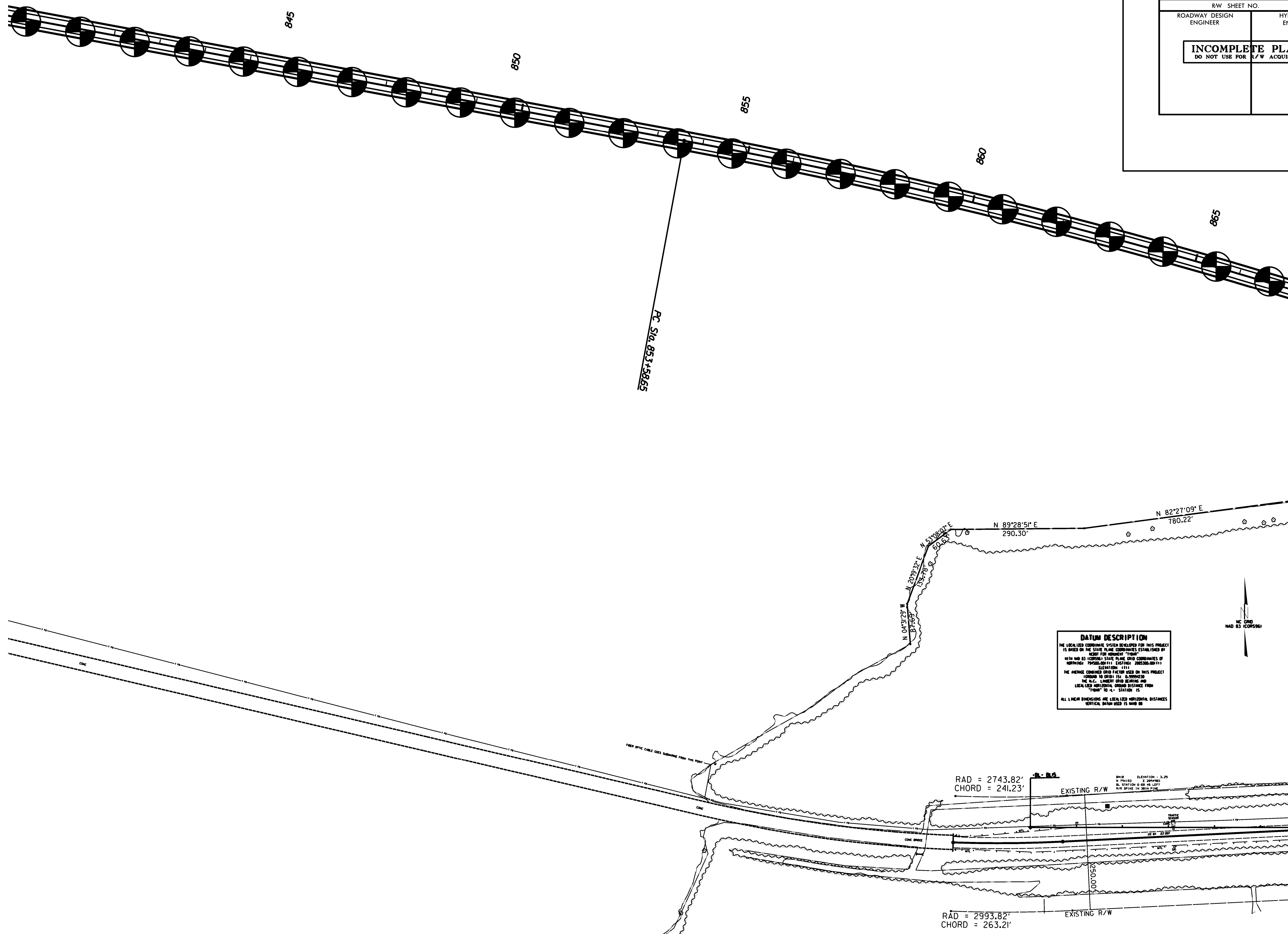

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "TYDAR"
WITH NAD 83 (CORS96) STATE PLANE GRID COORDINATES OF NORTHING: 794500.00(ft) EASTING: 2885300.00(ft)
ELEVATION: (ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99994230
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "TYDAR" TO -L- STATION IS

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

REVISIONS

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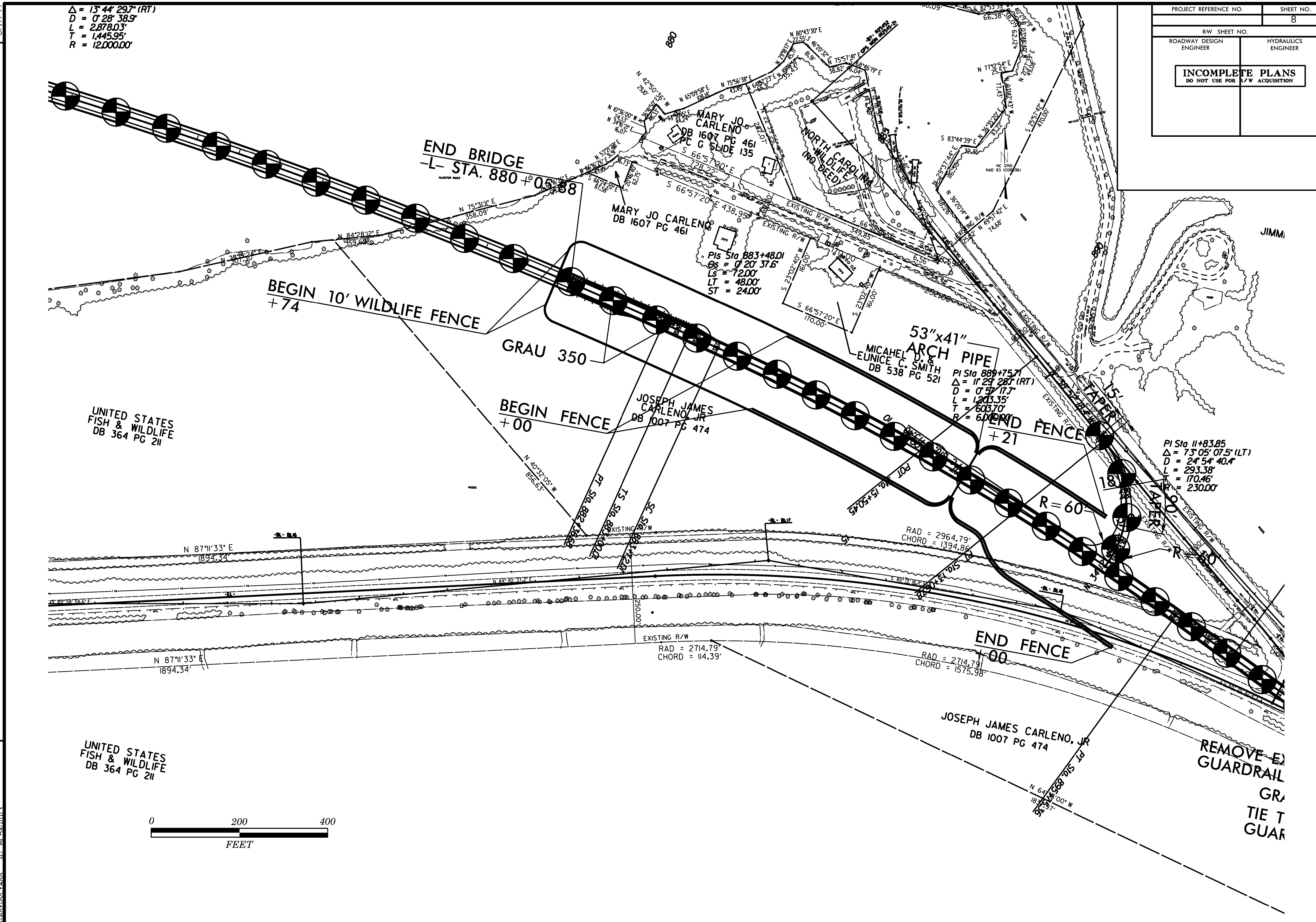

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PROJECT REFERENCE NO.	SHEET NO.
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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engineer1 AT MFEIDING

PI Sta 900+19.90
Δ = 2°44'17.7" (LT)
D = 0°28'38.9"
L = 573.49'
T = 286.80'
R = 12,000.00'
RAD CHORD E = 964.79'
CHORD = 200.83'

PC Sta 897+33.10

PT Sta 903+06.59

POT Sta 907+54.42

END PROJECT HB-0001
POT Sta 903+06.59

EXISTING R/W

REMOVE AND RESET GUARDRAIL

EXIST GUARDRAIL

0 200 400
FEET

UNITED STATES FISH & WILDLIFE
NEED DEED (DB 557 PG 431)
(PC C 158 A-D)

EARNEST ALAN DOSHIER
DB 1692 PG 500
PC C SLIDE 198B
(PARCEL 'B')

BARRY S. & ROSE MARIE DOSHIER, III
DB 1283 PG 111
PC C SLIDE 198B
(PARCEL 'D')

STEPHEN DOSHIER
DB 1692 PG 1
PC C SLIDE 198B
(PARCEL 'C')

MATTHEW L. DOSHIER
DB 1298 PG 343
PC C SLIDE 198B
(PARCEL 'A')

J.W. TWIFORD HEIRS (C/O BARRY DOSHIER)
DB P PG 592

LOST COLONY CENTER FOR SCIENCE AND RESEARCH, INC.
DB 1768 PG 216

ARTHUR L. WHITE
DB 1690 PG 357
PC B SLIDE 51

UNITED STATES FISH & WILDLIFE
NEED DEED (DB 557 PG 431)
(PC C 158 A-D)

JIMMIE M. BOWDEN
DB 461 PG 490
PC B SLIDE 51

EMMETT E. SMITH, JR.
BRYAN B. SMITH
THELMON E. SMITH
WB 08E PG 199
PC C SLIDE 144F

CYNTHIA J. HUSCROFT
DB 1787 PG 345
PC C SLIDE 144F

CAROLYN B. BANDENBURG AND WILLIAM J. BECK and wife, JOAN M. BECK
DB 1450 PG 339

RISING TIDES PROPERTIES, LLC
DB 1695 PG 248
PC C PG 34
(PARCEL 2)

ROBERT O. OAKES, JR.
DB 1320 PG 49
PC C SLIDE 144F

N 34°43'45" E 1867.44'
N 34°43'28" E 4493.44'
N 30°27'33" E 1976.24'
S 62°27'22" E 248.71'
N 28°17'31" E 25.51'
S 62°27'22" E 105.08'
S 56°16'43" E 144.64'
S 56°16'43" E 248.47'
S 54°22'32" E 315.32'
S 54°22'21" E 514.75'
N 36°48'44" E 434.49'
S 33°21'17" W 682.07'
N 32°20'07" E 780.37'
S 56°38'47" E 101.27'
S 56°38'47" E 197.81'
S 56°38'47" E 197.81'
S 56°38'47" E 203.79'
N 69°16'45" W 300.96'
N 28°28'15" E 236.73'
N 28°28'15" E 710.83'
S 27°56'07" W 99.12'
S 54°38'47" E 176.11'
N 28°53'59" E 31.80'
N 64°36'05" W 4.00' (ER TO COR.)
N 64°36'05" W 146.21'
S 40°15'07" W 245.99' (ER TO COR.)
S 54°38'47" E 263.29'
S 54°38'47" E 25.00'
N 28°53'59" E 264.68' (ER TO COR.)
N 34°03'39" E 35.72'
S 54°40'41" E 225.00'
N 34°03'39" E 180.00'
N 24°05'59" W 125.00'
N 34°03'39" E 569.52'
N 28°17'50" E 125.00'
S 54°40'41" E 180.00'
S 54°01'02" E 204.25'
N 28°53'59" E 210.00'
S 34°03'39" E 569.52'
N 28°53'59" E 210.00'
N 28°53'59" E 264.68'
N 28°53'59" E 264.68'

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MARC RECKTENWALD
Director

NORTH CAROLINA
Environmental Quality

August 29, 2022

Mr. Philip S. Harris, III, P.E.
Environmental Analysis Unit
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

Subject: Mitigation Acceptance Letter:

HB-0001, Replace Bridge 7 over the Alligator River on US 64, Dare County

The purpose of this letter is to notify you that the North Carolina Department of Environmental Quality – Division of Mitigation Services (NCDEQ-DMS) will provide the mitigation for the subject project. Based on the information received from you on August 29, 2022, the impacts are located in CU 03020105 of the Pasquotank River basin in the Northern Outer Coastal Plain (NOCP) Eco-Region, and are as follows:

Pasquotank 03010205	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres/square feet)	0	0	0	0.343	0	0	0	0

The impacts and associated mitigation needs were not projected by the NCDOT in the 2022 impact data. NCDEQ – DMS commits to implementing sufficient compensatory mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from NCDEQ-DMS.

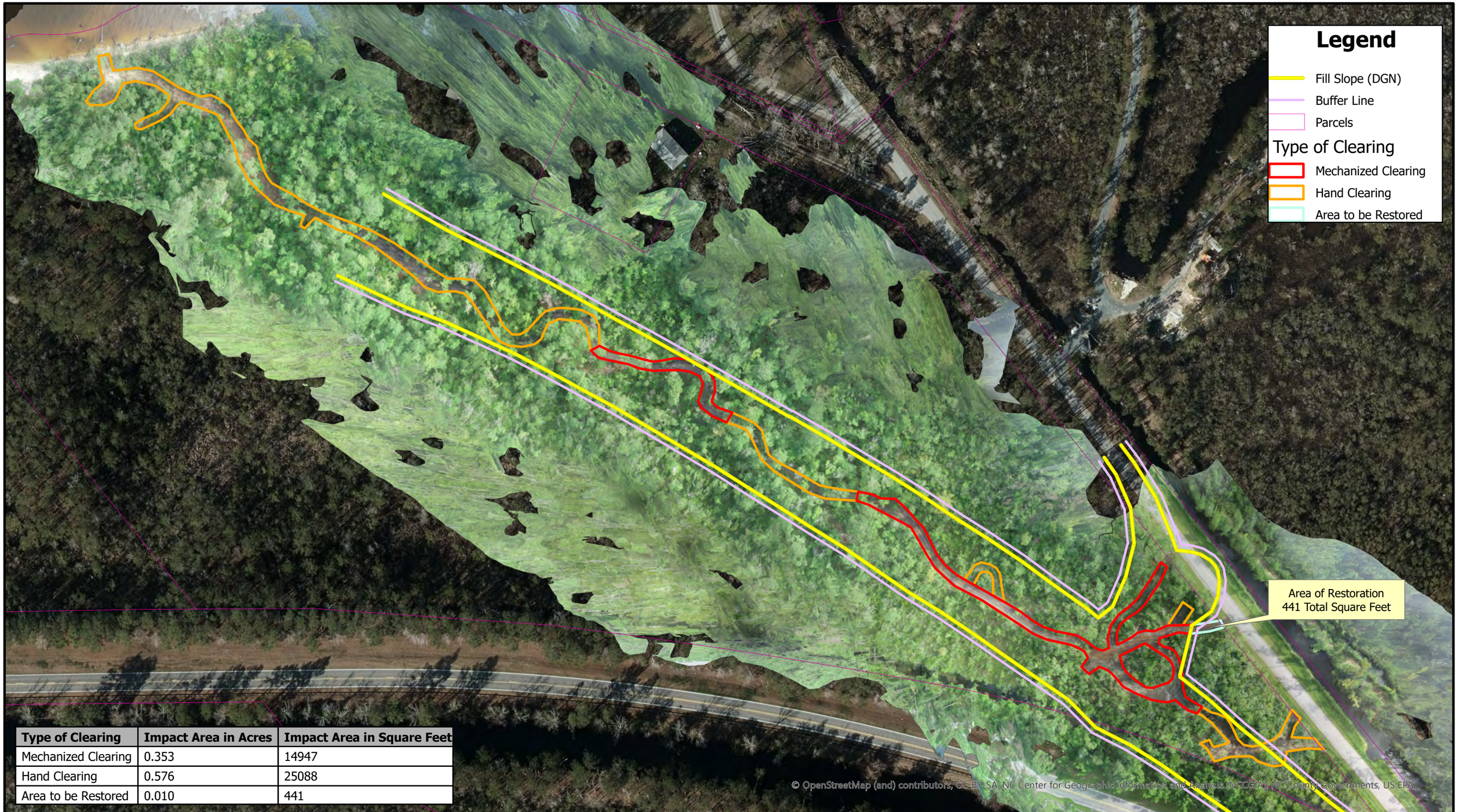
If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

Sincerely,

Elizabeth Harmon

for James B. Stanfill
DMS Deputy Director

cc: Mr. Monte Matthews, USACE – Raleigh
Ms. Amy Chapman, NCDWR
Mr. Brad Chilton, NCDOT – EAU
File: HB-0001



Type of Clearing	Impact Area in Acres	Impact Area in Square Feet
Mechanized Clearing	0.353	14947
Hand Clearing	0.576	25088
Area to be Restored	0.010	441

N

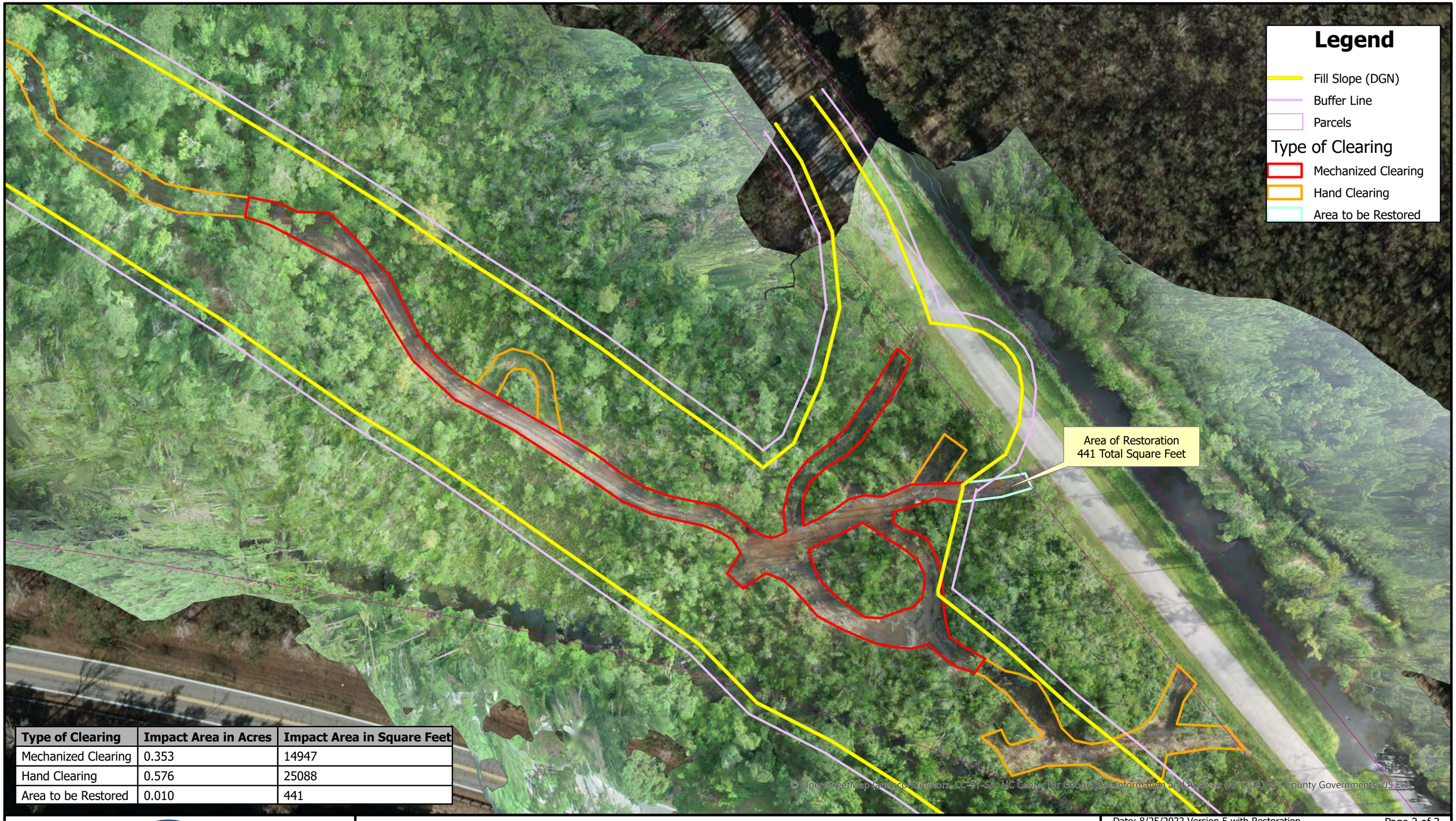
HB-0001 Alligator River, Dare County
GeoTech Wetland Impact Map

0 180 360 720 Feet

Date: 8/25/2022 Version 5 with Restoration
Area Author: Robert C. Castello III

Sources:
Orthoimagery: NCDOT, NC OneMap, ESRI
Aerial Imagery: Taken via Drone (DJI Phantom 4 Pro) acquired on 7/12/2022 by Walter K. White and Robert C. Castello III

Impact estimates were calculated using Aerial Imagery and ESRI Products.



Type of Clearing	Impact Area in Acres	Impact Area in Square Feet
Mechanized Clearing	0.353	14947
Hand Clearing	0.576	25088
Area to be Restored	0.010	441

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

N

HB-0001 Alligator River, Dare County
GeoTech Wetland Impact Map

0 80 160 320 Feet

Date: 8/25/2022 Version 5 with Restoration
Area Author: Robert C. Castello III

Sources:
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Aerial Imagery: Taken via Drone (DJI Phantom 4 Pro) acquired on 7/12/2022 by Walter K. White and Robert C. Castello III

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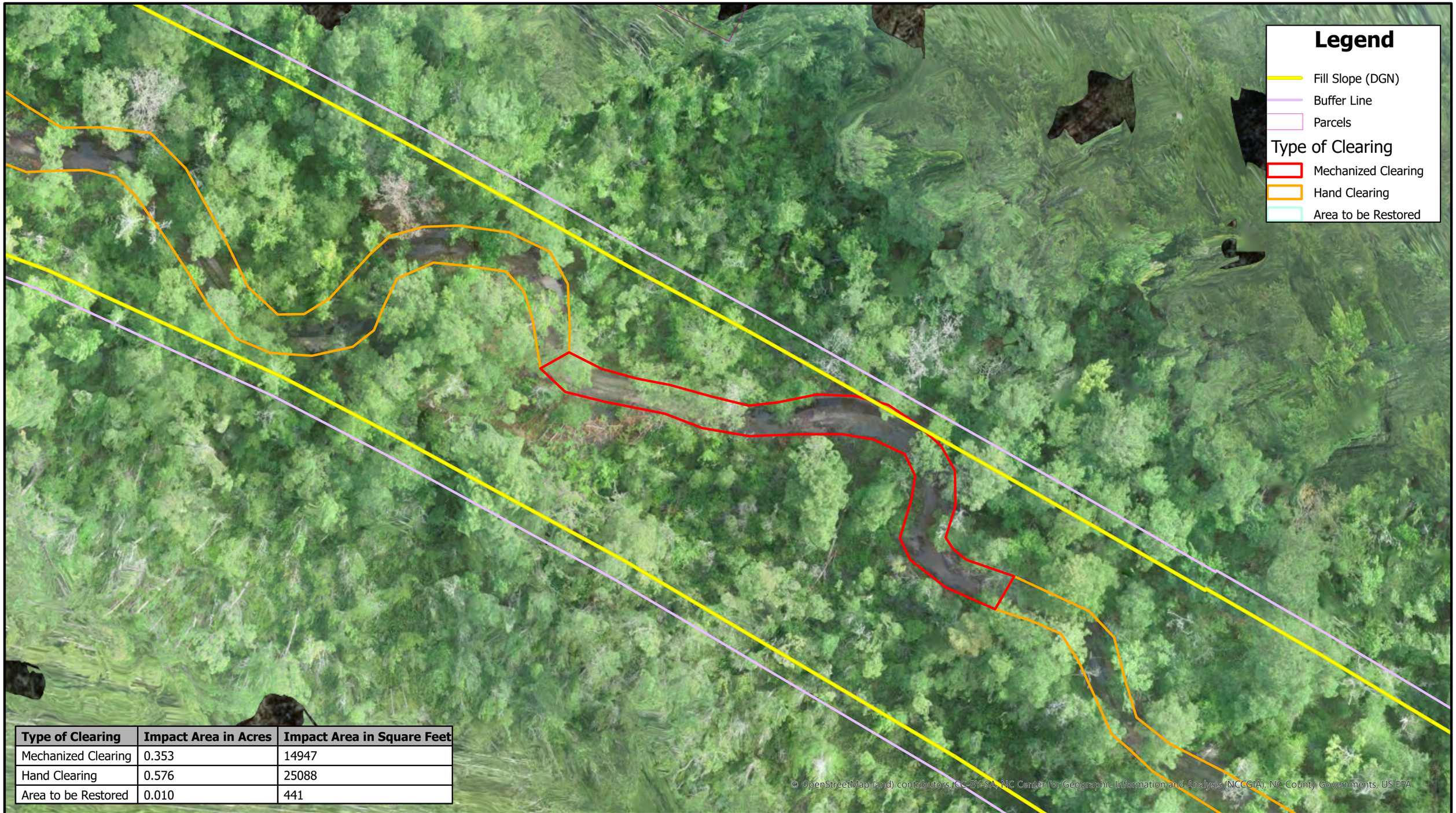

Type of Clearing	Impact Area in Acres	Impact Area in Square Feet
Mechanized Clearing	0.353	14947
Hand Clearing	0.576	25088
Area to be Restored	0.010	441

N

HB-0001 Alligator River, Dare County
GeoTech Wetland Impact Map

0 50 100 200 Feet

Date: 8/25/2022 Version 5 with Restoration
Area Author: Robert C. Castello III

Sources:
Orthoimagery: NCDOT, NC OneMap, ESRI
Aerial Imagery: Taken via Drone (DJI Phantom 4 Pro) acquired on 7/12/2022 by Walter K. White and Robert C. Castello III

Impact estimates were calculated using Aerial Imagery and ESRI Products.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

August 25, 2022

NC Division of Water Resources
Transportation Permitting Branch
1617 Mail Service Center
Raleigh NC 27699-1617

US Army Corps of Engineers-Wilmington District
Washington Field Office
2407 West Fifth Street
Washington, NC 27889

ATTN: Ms. Amy Chapman, Supervisor
Transportation Permitting Branch

Mr. Kyle Barnes,
NCDOT Project Manager

Subject: **NCDOT Response to Notice of Violations** STIP HB-0001, Bridge 7 on US 64 over the Alligator River, Tyrrell and Dare Counties.
NCDWR Project No. 20211126
USACE Action ID SAW-2021-01091

References: **NCDWR NOV-2022-PC-0389 Dated July 26, 2022**
USACE NOV Dated August 11, 2022

Dear Madam and Sir:

This letter is in response to the Notice of Violation (NOV) letters received from the NC Division of Water Resources (NCDWR) (2022-PC-0389) issued on July 26, 2022 and the US Army Corps of Engineers (USACE) Action ID SAW-2021-01091 issued on August 11, 2022. Included with this letter are responses addressing items from each of the agencies' letters, mapping showing the impacted areas, as well as a letter from the geotechnical subcontractor.

NCDWR NOV-2022-PC-0389

The NCDWR NOV was issued due to failure to secure a written 401 Water Quality Certification (WQC) as well as 401 WQC condition violation for NCDOT STIP HB-0001, the replacement of Bridge No. 7 on US 64 over the Alligator River in Tyrrell and Dare Counties.

As requested, responses to the questions from the NCDWR NOV are provided below:

- *What led to the observed wetland violations*

While collecting geotechnical data, the subcontractor Wood PLC cleared trees in the wetlands though original intent was no clearing would be necessary and that if an area was inaccessible, a smaller low ground pressure personnel carrier would be used in combination with muck probes or hand augers to drill shallow holes that do not require clearing. Additionally, mats were not utilized to prevent rutting that occurred throughout much of the footprint.

- During the Monthly Project Status Meeting on 6/27/2022, NCDOT was notified by the subcontractor that the LGP boring equipment had been stuck.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL ANALYSIS UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

Telephone: (919) 707-6000
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610

- Paul Williams emailed Garcy Ward with NCDWR and Kyle Barnes with USACE on 6/27/22 informing them of the stuck equipment.
- Paul Williams met Garcy Ward at the site on 6/28/22.
- NCDOT staff from; Division 1, Geotechnical Engineering Unit, Environmental Analysis Unit, Garcy Ward, Kyle Barnes, and Wood PLC met on 7/11/22.
- Kyle Barnes visited the site on 7/12/22.
- Paul Williams and Randy Midgett provided Kyle Barnes and Garcy Ward an update on 7/14/22.

- *List any actions necessary to remediate the violation and prevent it from happening again*

Compensatory mitigation was discussed during a call on August 19, 2022 between staff from NCDOT, NCDWR, and USACE. As a result of the meeting, NCDOT's current proposal is to provide compensatory mitigation for 0.343 ac of impacted wetlands considered as mechanized clearing at a 1:1 ratio via the NC Division of Mitigation Services (NCDMS). Additionally, a 0.010 ac area outside the potential future footprint of the project would be restored via limited earthwork to fill in ruts and replanting. This 0.010 ac restoration would not commence until the parcel is acquired or permission is granted from the current property owner. Additionally, annual monitoring would not be required by the agencies for the 0.010 ac restored area.

NCDOT and the geotechnical subcontractor, Wood PLC, regret this incident occurred. We have met with the contractor, subcontractor, and NCDOT personnel involved with the project and discussed measures to prevent such impacts from happening on future projects. This will include but not be limited to better scoping on future projects for the expected and potential impacts to perform geotechnical borings; better training of drilling firms for the conditions/requirements listed in the Nationwide 6 by making periodic site visits while the work is being performed and other issued permits; better oversite by NCDOT personnel that field activities conform to the permit requirements and reiterating the importance of adhering to the work proposed to the regulatory agencies as well as all conditions accompanying the permits.

USACE NOV Action ID SAW-2021-01091

During the USACE's site visit they found that General Condition #11 of the Nationwide Permit 6 was not adhered to. This condition states *Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.* As a result, NCDOT must propose either a restoration plan for the site or provide a compensatory mitigation plan to replace the functional loss to wetlands.

As stated above in the response for NCDWR's second item, NCDOT's current proposal for compensatory mitigation for the impacted areas considered as mechanized clearing includes obtaining credits from NCDMS as well a small area of restoration at the impacted site.

NCDOT will submit an Individual WQC application as well as coordinate with the USACE to determine if a permit modification request of the previously issued permit verification for Nationwide Permit 6. Additionally, NCDOT has initiated advanced right-of-way acquisition for the property on which the impacts occurred. This process is in the early stages and could take a minimum of nine months to be finalized. There is also a possibility that the acquisition process may not be successful and if so, NCDOT will coordinate the NCDWR and USACE to determine what other action would be necessary.

Please know that we take these actions very seriously and efforts will be made to ensure such deficiencies do not occur again. If you have questions or would like to discuss further, please contact Chris Rivenbark at crivenbark@ncdot.gov or (919) 707-6152.

DocuSigned by:
Mack C. Rivenbark III
AAAD1248B309416...

for Philip S. Harris III, P.E., C.P.M.
Environmental Analysis Unit Head

ec:
Garcy Ward, NC Division of Water Resources
Monte Matthews, US Army Corps of Engineers
John Conforti, REM, NCDOT Project Management Unit
Jennifer Evans, PE, NCDOT Project Management Unit
Paul Williams, NCDOT Division 1
David Herring, LG, PE, NCDOT Geotechnical Unit
Jason Dilday, NCDOT Environmental Analysis Unit

August 18, 2022

Three Oaks Engineering, Inc.
324 Blackwell Street
Suite 1200
Durham, North Carolina 27701

Attention: Mr. Craig Young, PE

Subject: **Wood response to Notice of Violations**
STIP No.: HB-0001
Tyrrell and Dare Counties
Wood E&IS Project Number: 6234-21-0242

References: **NCDWR NOV-2022-PC-0389 Dated July 26, 2022**
USACE NOV-SAW-2021-01091 Dated August 11, 2022

Dear Sir:

This letter is in response to the NC Division of Water Resources Notice of Violation (2022-PC-0389) issued on July 26, 2022, due to failure to secure written 401 Water Quality Certification (WQC) as well as 401 WQC condition violation; and the United States Army Corps of Engineers Notice of Violation (SAW-2021-01091), issued on August 11, 2022, violation of General Condition #11 of the Nationwide Permit #6 for NCDOT STIP HB-0001, Replacement of Bridge No. 7 on US 64 over the Alligator River in Tyrrell and Dare Counties.

As requested by the NCDOT and in support of the NCDOT response to the above Notice of Violations (NOVs), a timeline of the work performed, activities that led to the NOVs, and planned changes to future work processes are provided below.

Timeline of Site Activities:

- **5/23 to 5/26:** The geotechnical drilling rig mounted to a Marsh Buggy ATV carrier and a smaller Marsh Master personnel carrier mobilized to the Dare County side of the project site and moved into the woods/marsh to begin the planned geotechnical roadway and land-based bridge borings on this end of the project. The first boring was completed near station -L- 234+00. While moving to the next boring location at -L- 232+00 the Marsh Buggy became stuck in very soft ground. It was determined that a second Marsh Buggy would need to be brought to the site to extract the stuck drill rig and continue the geotechnical boring work.

- **5/31 to 6/3:** Second Marsh Buggy rig arrives onsite 5/31 and work begins to extract the stuck rig. A second entry path was made into the site to facilitate removal of stuck rig.

Correspondence:
Wood Environment & Infrastructure, Inc.
4021 Stirrup Creek Drive, Suite 100
Durham, North Carolina 27703
Tel (919) 381-9900
Fax (919) 381-9901

Some hand clearing was performed with a chain saw to create a second entry point into site and facilitate removal of the stuck rig. The stuck Marsh Buggy was freed and removed to the staging area for demobilization from site.

- **6/6 to 6/9:** Boring work continued with the second Marsh Buggy and the team completed the boring near -L- 232+00. While moving to the next boring location at -L- 230+00, the marsh master support vehicle broke down (engine failure). The boring was drilled at -L- 230+00, then the Marsh Buggy was used to tow the marsh master out of woods/marsh and a third entry path was made into site to facilitate removal of broken-down marsh master. Some hand clearing with a chain saw was performed to create third entry point and to facilitate the tow and removal of marsh master from site. The marsh master was demobilized from site to get repaired.

- **6/13 to 6/17:** Mobilized replacement marsh master support vehicle to site and continued boring work. Borings at -L- 228+00 and -L- 226+00 were completed. Some hand clearing with chain saw was required to access these locations in areas of thick brush and woods (trees too closely spaced to move between them or too close together to push through). The team encountered very dense areas of small trees with some larger trees while moving to boring at -L- 224+00, and hand clearing with a chain saw was required to create path for marsh buggy and marsh master to access boring location (unable to “push through” with Marsh Buggy/marsh master). Hand clearing and chain saw use was limited as much as possible to trees with diameters of 5” inches or less at chest height, though a few trees of diameters up to 10” were cut due to the density of trees and to avoid the larger trees at the site. On 6/15 we had a call from property owner regarding the multiple entry points to the site and chainsaw clearing. We discussed issues of the rig getting stuck and equipment breakdown and the unanticipated clearing required to get unstuck, remove the broken-down equipment, and access the boring locations. Property owner requested we limit access to site from third entry point for remainder of work and limit hand clearing/chain saw use as much as possible. Work continued and completed borings at -L- 224+00 and -L- 222+00, with hand clearing of trees as described above performed as needed to access these locations. Extra effort by the field drilling crew was made to find the “path of least resistance” while staying within the proposed right-of-way limits of the project and limit the amount hand clearing required to continue accessing the site and proposed boring locations.

- **6/20 to 6/24:** Work continued as above, with hand clearing as needed to access the proposed bridge boring locations. Completed bridge boring EB-2.

- **6/27 to 7/1:** Work continued as above, with hand clearing as needed to access boring locations. Completed bridge boring B-133. During the HB-0001 monthly status meeting on 6/27 the above events were conveyed to the project team. We provided a timeline for the completing the remaining geotechnical boring work to the team. NCDOT personnel visited the site on 6/28 to evaluate the site conditions of the drilling operation. Due to the difficult conditions experienced up to that point, it was considered unfeasible and would cause additional damage to the site to create alternative access paths to access the remaining deep borings for the proposed bridge.

- **7/5 to 7/8:** Work continued as above, with hand clearing as needed to access boring locations. Completed bridge boring B-131, returned to EB-2 location to collect Shelby tube

samples at offset boring location adjacent to EB-2, and started moving Marsh Buggy and marsh master out of woods/marsh.

- **7/11:** Marsh Buggy and marsh master equipment moved out of woods/marsh to staging area and prepared for demobilization from site. GoToMeeting held with USACE, NCDWR, and NCDOT to discuss the wetland impacts.

Activities Leading to the NOVs:

- The consequences of getting the initial Marsh Buggy drilling equipment stuck, breakdown of the marsh master support vehicle, and the subsequent actions required to safely extract and remove this equipment from the woods/marsh, along with the density of the woods we encountered accessing much of the site resulted in the use of hand clearing with chain saws to access many of the boring locations on this side of the of the project site.

- The thickness or closely spaced nature of the immature woods along with groves of larger trees was unanticipated, interspersed with areas of soft ground, marsh, and wetland prevented the equipment from pushing through the brush and small trees as we had anticipated and experienced on the west end of the project (Tyrrell County side).

- At the request of the landowner, our access to the Dare County side of the project site was limited to one path in and out of the site, which was utilized multiple times per day by the marsh master support vehicle during drilling operations. The soft ground combined with the repeated/overuse by the support vehicle resulted in rutting of the ground (areas characterized as “mechanical clearing”) in portions of the site, in the area where the Marsh Buggy got stuck, where the broken marsh master had to be towed out of the woods/marsh, and portions of the site that had surficial/standing water.

Planned Changes to Future Work Processes:

- Future work processes will include a more thorough evaluation of site conditions during the scoping phase of the project and will include more input from subcontractors to better assess the capabilities of the drilling platforms to access the proposed sites and boring locations. These evaluations will provide better understanding of the potential site environmental impacts and will include consideration of worst-case scenarios or unintended consequences from geotechnical boring operations.

- On future projects, the NCDOT will be immediately notified if difficulties arise in the performance of the scope of work that could lead to unpermitted impacts to jurisdictional resources.

- Better collaboration with those involved in the environmental permitting for these types of projects so that those involved with securing the permit and those performing the work have a clear and mutual understanding of the conditions/limitations contained within the permit, what the thresholds are for a changed condition, and to temper best-case or overly optimistic evaluations of site conditions with operational experience.

If we can be of further assistance to the NCDOT in responding to these NOVs or if you would like to discuss further, please do not hesitate to contact us.

Sincerely,

Wood Environment & Infrastructure Solutions, **Inc.**

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