STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

July 24, 2023

NC Dept. of Environmental Quality
Division of Coastal Management
400 Commerce Street
Morehead City, NC 28557

ATTN: Mr. Stephen Lane, NCDOT Coordinator

Subject: **Application for CAMA Major Permit** for the proposed replacement of Bridge Numbers 91 and 92 on US 70 over Southwest Prong Slocum Creek in Craven County; TIP No. BR-0074; Debit $400 from WBS No. 67074.1.1

Dear Mr. Lane:

The Department requests authorization for the proposed replacement of Bridge Numbers 91 and 92 on US 70 over Southwest Prong Slocum Creek.

Please see enclosed copies of the Division of Coastal Management Major Permit Forms 1 and 5 along with and permit plans, roadway plans, no archeological survey required form and historic architecture no survey required form for the above referenced project.

A Categorical Exclusion was completed in July 2022 and distributed shortly thereafter. A digital copy is available at the NCDOT website: https://xfer.services.ncdot.gov/pdea/EnvironmentalDocs/Documents/STIP_BR_Projects/BR-0074_Type_I_CE.pdf

NCDOT requests that the proposed work be authorized under a Coastal Area Management Act Major Permit. Adjacent riparian landowner certified mail return receipts will be provided once they are received.

A copy of this permit application will be posted on the NCDOT Website at https://xfer.services.ncdot.gov/pdea/PermApps/. Should you have any questions regarding this application, please contact me at (919) 707-6111 or jldilday@ncdot.gov.

Sincerely,

Jason L Dilday

Jason Dilday, Eastern Regional Team Lead
Environmental Coordination and Permitting Group

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:
CENTURY CENTER, BUILDING A
1000 BIRCH RIDGE DRIVE
RALEIGH NC, 27610

DCM MP-1

APPLICATION for Major Development Permit

(last revised 12/27/06)

North Carolina DIVISION OF COASTAL MANAGEMENT

1. Primary Applicant/ Landowner Information

Business Name North Carolina Department Of Transportation		Project Name (if applicable) BR-0074		
Applicant 1: First Name Deanna	MI	Last Name Riffey		
Applicant 2: First Name N/A	MI N/A	Last Name N/A		
If additional applicants, please attach an additional page(s) with names listed.				
Mailing Address Environmental Analysis Unit, 1598 Mail Service Center		PO Box	City Raleigh	State NC
ZIP 27610	Country USA	Phone No. 919 - 707 - 6151 ext.	FAX No. - -	
Street Address *(if different from above)* EAU - Centery Center A, 1000 Birch Ridge Drvie		City Raleigh	State NC	ZIP 27610-
Email driffey@ncdot.gov				

2. Agent/Contractor Information

Business Name N/A				
Agent/ Contractor 1: First Name	MI	Last Name		
Agent/ Contractor 2: First Name	MI	Last Name		
Mailing Address		PO Box	City	State
ZIP		Phone No. 1 - - ext.	Phone No. 2 - - ext.	
FAX No.		Contractor #		
Street Address *(if different from above)*		City	State	ZIP -
Email				

<Form continues on back>

3. Project Location

County (can be multiple)	Street Address		State Rd. #
Craven County	US 70		
Subdivision Name	**City**	**State**	**Zip**
NA	Havelock	NC	28532 -

Phone No.
- - ext.

Lot No.(s) *(if many, attach additional page with list)*
, , , ,

a. In which NC river basin is the project located?
Neuse River Basin

b. Name of body of water nearest to proposed project
S. Prong Slocum Creek

c. Is the water body identified in (b) above, natural or manmade?
☒Natural ☐Manmade ☐Unknown

d. Name the closest major water body to the proposed project site.
Neuse River

e. Is proposed work within city limits or planning jurisdiction?
☒Yes ☐No

f. If applicable, list the planning jurisdiction or city limit the proposed work falls within.
City of Havelock

4. Site Description

a. Total length of shoreline on the tract (ft.)
286 ft (both banks)

b. Size of entire tract (sq.ft.)
229,317 SF

c. Size of individual lot(s)
N/A, , ,
(If many lot sizes, please attach additional page with a list)

d. Approximate elevation of tract above NHW *(normal high water)* or NWL *(normal water level)*
14.82' ☐NHW or ☒NWL

e. Vegetation on tract
Maintained/Disturbed: Lawns, fields, and roadside shoulders are mostly open with scattered trees such as loblloly and fesuce; Mixed Hardwood/Pine Forest consisting of loblolly pine, sweetgum, amd red maple; Rivereine Swamp Forest: consisting of bald cypress, sweetgum and swarf palmetto; and Tidal Freshwater Marsh: consisting of pcerelweed, broadleaf arrowhead and swamp thistle.

f. Man-made features and uses now on tract
Features are: US70, Bridges #91 amd 92, electric and water utility lines.

Uses are: transportation.

g. Identify and describe the existing land uses adjacent to the proposed project site.
Land use in the project study area is a combination of maintained roadsides, residential, and undeveloped natural areas as well as Marine Corps Air Station- Cherry Point..

h. How does local government zone the tract?
Residential

i. Is the proposed project consistent with the applicable zoning?
(Attach zoning compliance certificate, if applicable)
☒Yes ☐No ☐NA

j. Is the proposed activity part of an urban waterfront redevelopment proposal? ☐Yes ☒No

k. Has a professional archaeological assessment been done for the tract? If yes, attach a copy. ☒Yes ☐No ☐NA

If yes, by whom? NCDOT Archaeology

l. Is the proposed project located in a National Registered Historic District or does it involve a National Register listed or eligible property? ☐Yes ☒No ☐NA

<Form continues on next page>

m. (i) Are there wetlands on the site? ☒Yes ☐No

(ii) Are there coastal wetlands on the site? ☐Yes ☒No

(iii) If yes to either (i) or (ii) above, has a delineation been conducted? ☒Yes ☐No
(Attach documentation, if available)

n. Describe existing wastewater treatment facilities.
N/A

o. Describe existing drinking water supply source.
N/A

p. Describe existing storm water management or treatment systems.
NA - no existing storm water management or treatment systems

5. Activities and Impacts

a. Will the project be for commercial, public, or private use? ☐Commercial ☒Public/Government ☐Private/Community

b. Give a brief description of purpose, use, and daily operations of the project when complete.
The proposed bridge replacements 240091 and 240092 will provide updates to bridges that are structurally deficient. The proposed bridges and roaday improvements are designed to accommodate safety and future traffic projections. This portion of US 70 is a four-lane median divided roadway that serves as the main entrance into the Havelock and Marine Corps Air Station (MCAS) Cherry Point. It is also a freight corridor accessing the Port of Morehead City.

c. Describe the proposed construction methodology, types of construction equipment to be used during construction, the number of each type of equipment and where it is to be stored.
Bridge 240092 and Bridge 240091 will be demolished and constructed using using top down methods and four temporary work bridges to allow access to interior bents. One bridge will be built at a time and one temporary work bridge will be built at a time using a phased approach. The work bridges will be alternated from one side of the bridge to the other and from one bridge to the next bridge in four phases. The temporary work bridges will block less than 50% of the stream channel with the exception of the western work bridge in Phase 1 for Bridge #92. Phase 1 work bridge will have a blockage of 58% due to location of bent #2.

Every attempt will be made to pul out existing piers. If piers cannot be pulled out, they should be cut off a the mudline. Construction equipment expected to be used for this project include bulldozer, skid steer loader, backhoe loader, excavator, asphalt paver, motor grader, drum roller, compactor, and crane.

d. List all development activities you propose.
Four temporary work bridges will be built for demolition and contstruction of both bridges. A phased approach will be used to alternate the work bridges to have only one work bridge in use at a time.

e. Are the proposed activities maintenance of an existing project, new work, or both? Both - bridge replacements, roadway alignment, and future maintenance.

f. What is the approximate total disturbed land area resulting from the proposed project? 2.9 ☐Sq.Ft or ☒Acres

g. Will the proposed project encroach on any public easement, public accessway or other area that the public has established use of? ☒Yes ☐No ☐NA

h. Describe location and type of existing and proposed discharges to waters of the state.
The existing drainage is contained on both sides of the bridge in a median ditch. The median ditch does not get contained in a system but outfalls between Bridges 240091 and 240092. The existing drainage on the outside slopes of the bridges are maintained by standard 'V' ditches The proposed drainage maintains existing drainage patterns. The median drainage is captured in a system and outfalls in a tail ditch between Bridges 240091 and 240092.

i. Will wastewater or stormwater be discharged into a wetland? ☒Yes ☐No ☐NA

If yes, will this discharged water be of the same salinity as the receiving water? ☐Yes ☒No ☐NA

j. Is there any mitigation proposed? ☒Yes ☐No ☐NA
If yes, attach a mitigation proposal.

<Form continues on back>

6. Additional Information

In addition to this completed application form, (MP-1) the following items below, if applicable, must be submitted in order for the application package to be complete. Items (a) – (f) are always applicable to any major development application. Please consult the application instruction booklet on how to properly prepare the required items below.

a. A project narrative.
b. An accurate, dated work plat (including plan view and cross-sectional drawings) drawn to scale. Please give the present status of the proposed project. Is any portion already complete? If previously authorized work, clearly indicate on maps, plats, drawings to distinguish between work completed and proposed.
c. A site or location map that is sufficiently detailed to guide agency personnel unfamiliar with the area to the site.
d. A copy of the deed (with state application only) or other instrument under which the applicant claims title to the affected properties.
e. The appropriate application fee. Check or money order made payable to DENR.
f. A list of the names and complete addresses of the adjacent waterfront (riparian) landowners and signed return receipts as proof that such owners have received a copy of the application and plats by certified mail. Such landowners must be advised that they have 30 days in which to submit comments on the proposed project to the Division of Coastal Management. Name See Attached List Phone No. Address Name Phone No. Address Name Phone No. Address
g. A list of previous state or federal permits issued for work on the project tract. Include permit numbers, permittee, and issuing dates. CAMA General Permit No. 78307 issued 1-10-23 for Utilities.
h. Signed consultant or agent authorization form, if applicable.
i. Wetland delineation, if necessary.
j. A signed AEC hazard notice for projects in oceanfront and inlet areas. *(Must be signed by property owner)*
k. A statement of compliance with the N.C. Environmental Policy Act (N.C.G.S. 113A 1-10), if necessary. If the project involves expenditure of public funds or use of public lands, attach a statement documenting compliance with the North Carolina Environmental Policy Act.

7. Certification and Permission to Enter on Land

I understand that any permit issued in response to this application will allow only the development described in the application. The project will be subject to the conditions and restrictions contained in the permit.

I certify that I am authorized to grant, and do in fact grant permission to representatives of state and federal review agencies to enter on the aforementioned lands in connection with evaluating information related to this permit application and follow-up monitoring of the project.

I further certify that the information provided in this application is truthful to the best of my knowledge.

Date 7/24/2023

Print Name Jason Dilday

Signature Jason L Dilday

Please indicate application attachments pertaining to your proposed project.

☐DCM MP-2 Excavation and Fill Information
☐DCM MP-3 Upland Development
☐DCM MP-4 Structures Information
☒DCM MP-5 Bridges and Culverts

Form DCM MP-5

BRIDGES and CULVERTS

Attach this form to Joint Application for CAMA Major Permit, Form DCM MP-1. Be sure to complete all other sections of the Joint Application that relate to this proposed project. Please include all supplemental information.

1. BRIDGES

☐ *This section not applicable*

a. Is the proposed bridge:
☐Commercial ☒Public/Government ☐Private/Community

b. Water body to be crossed by bridge:
South Prong Slocum Creek

c. Type of bridge (construction material):
2 @ 240'; Type III 45" Prestressed Girder w/4' caps and Steel H Piles

d. Water depth at the proposed crossing at NLW or NWL:
11.5'

e. (i) Will proposed bridge replace an existing bridge? ☒Yes ☐No
If yes,
(ii) Length of existing bridge: #91 = 226' & #92 = 140'
(iii) Width of existing bridge: #91 = 33' & #92 = 30'
(iv) Navigation clearance underneath existing bridge: Bridge #91 = 8.5' & Bridge #92 = 8.25'
(v) Will all, or a part of, the existing bridge be removed? (Explain) All of the existing bridges will be removed

f. (i) Will proposed bridge replace an existing culvert? ☐Yes ☒No
If yes,
(ii) Length of existing culvert: _____
(iii) Width of existing culvert: _____
(iv) Height of the top of the existing culvert above the NHW or NWL: _____
(v) Will all, or a part of, the existing culvert be removed? (Explain)

g. Length of proposed bridge: Both Bridges will be 240' long

h. Width of proposed bridge: #91 = 40' & #92 = 36' wide

i. Will the proposed bridge affect existing water flow? ☐Yes ☒No
If yes, explain:

j. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening? ☐Yes ☒No
If yes, explain:

k. Navigation clearance underneath proposed bridge: Bridge #91 = 9.5' & Bridge #92 = 8.75'

l. Have you contacted the U.S. Coast Guard concerning their approval? ☒Yes ☐No
If yes, explain: NCDOT received an Advance Approval from the Coast Guard.

m. Will the proposed bridge cross wetlands containing no navigable waters? ☐Yes ☒No
If yes, explain:

n. Height of proposed bridge above wetlands: Bridge #91 = 13.78' & Bridge #92 = 14.17'

2. CULVERTS

☒ *This section not applicable*

a. Number of culverts proposed: _____

b. Water body in which the culvert is to be placed:

< Form continues on back>

c. Type of culvert (construction material):

d. (i) Will proposed culvert replace an existing bridge? ☐Yes ☐No

If yes,

(ii) Length of existing bridge: _____

(iii) Width of existing bridge: _____

(iv) Navigation clearance underneath existing bridge: _____

(v) Will all, or a part of, the existing bridge be removed? (Explain)

e. (i) Will proposed culvert replace an existing culvert? ☐Yes ☐No

If yes,

(ii) Length of existing culvert(s): _____

(iii) Width of existing culvert(s): _____

(iv) Height of the top of the existing culvert above the NHW or NWL: _____

(v) Will all, or a part of, the existing culvert be removed? (Explain)

f. Length of proposed culvert: _____

g. Width of proposed culvert: _____

h. Height of the top of the proposed culvert above the NHW or NWL. _____

i. Depth of culvert to be buried below existing bottom contour. _____

j. Will the proposed culvert affect navigation by reducing or increasing the existing navigable opening? ☐Yes ☐No

If yes, explain:

k. Will the proposed culvert affect existing water flow? ☐Yes ☐No

If yes, explain:

3. EXCAVATION and FILL

☐*This section not applicable*

a. (i) Will the placement of the proposed bridge or culvert require any excavation below the NHW or NWL? ☐Yes ☒No

If yes,

(ii) Avg. length of area to be excavated: _____

(iii) Avg. width of area to be excavated: _____

(iv) Avg. depth of area to be excavated: _____

(v) Amount of material to be excavated in cubic yards: _____

b. (i) Will the placement of the proposed bridge or culvert require any excavation within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

☐CW _____ ☐SAV _____ ☐SB _____

☒WL 392.04 sq. ft. ☐None

(ii) Describe the purpose of the excavation in these areas:

Excavation is proposed for a drainage pipe/ditch and roadway fill.

c. (i) Will the placement of the proposed bridge or culvert require any high-ground excavation? ☒Yes ☐No

If yes,

(ii) Avg. length of area to be excavated: 102 LF

(iii) Avg. width of area to be excavated: 126 LF

(iv) Avg. depth of area to be excavated: 6ft

(v) Amount of material to be excavated in cubic yards: 1295 CY

d. If the placement of the bridge or culvert involves any excavation, please complete the following:

(i) Location of the spoil disposal area: To be determined by Contractor

(ii) Dimensions of the spoil disposal area: To be determined by Contractor

(iii) Do you claim title to the disposal area? ☐Yes ☒No (*If no, attach a letter granting permission from the owner.)*

(iv) Will the disposal area be available for future maintenance? ☐Yes ☐No

(v) Does the disposal area include any coastal wetlands/marsh (CW), submerged aquatic vegetation (SAVs), other wetlands (WL), or shell bottom (SB)?

☐CW ☐SAV ☐WL ☐SB ☒None

If any boxes are checked, give dimensions if different from (ii) above.

(vi) Does the disposal area include any area below the NHW or NWL? ? ☐Yes ☒No

If yes, give dimensions if different from (ii) above.

e. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item **d** above) to be placed below NHW or NWL? ☒Yes ☐No

If yes,

(ii) Avg. length of area to be filled: See below

(iii) Avg. width of area to be filled: See below

(iv) Purpose of fill: Four temporary work bridges are proposed to be used to remove and construct bridge piers for bridges #91 and #92. Temporary work bridges will meet the low steel of the existing bridges. Length per Workbridge: #1 - 51ft #2 - 35ft, #3- 31ft, and #4- 33ft. All work bridges have a width of 62 ft.

f. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item **d** above) to be placed within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

☐CW _____ ☐SAV _____ ☐SB _____

☒WL 1306.8 sq. ft. ☐None

(ii) Describe the purpose of the excavation in these areas:

Roadway fill.

g. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item **d** above) to be placed on high-ground? ☒Yes ☐No

If yes,

(ii) Avg. length of area to be filled: 1,445'

(iii) Avg. width of area to be filled: 145'

(iv) Purpose of fill: proposed roadway embankment

4. GENERAL

a. Will the proposed project require the relocation of any existing utility lines? ☒Yes ☐No

If yes, explain: The project includes relocation of power lines and telecommunitcations. There are both above and underground relocations. Utilities for this project have been permitted under CAMA general permit dated 1-10-2023 .

If this portion of the proposed project has already received approval from local authorities, please attach a copy of the approval or certification.

b. Will the proposed project require the construction of any temporary detour structures? ☐Yes ☒No

If yes, explain:

< Form continues on back>

c. Will the proposed project require any work channels? ☐Yes ☒No

If yes, complete Form DCM-MP-2.

d. How will excavated or fill material be kept on site and erosion controlled?

Design Standards in Sensitive Watersheds will be adhered to throughout construction

e. What type of construction equipment will be used (for example, dragline, backhoe, or hydraulic dredge)?

Construction equipment expected to be used for this project inlcude bulldozer, skid steer loader, backhoe loader, excavator, ashphalt paver, mortor grader, drum roller, compacter, and crane.

f. Will wetlands be crossed in transporting equipment to project site? ☐Yes ☒No

If yes, explain steps that will be taken to avoid or minimize environmental impacts.

g. Will the placement of the proposed bridge or culvert require any shoreline stabilization? ☐Yes ☒No

If yes, complete form MP-2, Section 3 for Shoreline Stabilization only.

07/24/2023

Date

BR-0074

Project Name

Jason Dilday

Applicant Name

Jason L Dilday

Applicant Signature

Revised 7/17/2023

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS

(Version 3.00; Released August 2021)

WBS Element: 67074.1.1 **TIP/Proj No:** BR-0074 **County(ies):** Craven

General Project Information

WBS Element:	67074.1.1	**TIP Number:**	BR-0074	**Project Type:**	Bridge Replacement	**Date:**	7/17/2023
NCDOT Contact:	Deanna Riffey			**Contractor / Designer:**	David Hursey		
Address:	Division of Highways 1 South Wilmington Street Raleigh NC 27601			**Address:**	Kimley-Horn 421 Fayetteville Street #600 Raleigh NC 27601		
Phone:	(919) 707-6151			**Phone:**	(919) 653-2933		
Email:	driffey@ncdot.gov			**Email:**	david.hursey@kimley-horn.com		
City/Town:	Havelock			**County(ies):**	Craven		
River Basin(s):	Neuse			**CAMA County?**	Yes		
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	0.27	**Surrounding Land Use:**	Commercial/Residential				
	Proposed Project			**Existing Site**			
Project Built-Upon Area (ac.)	2.9	ac.		2.7	ac.		
Typical Cross Section Description:	Bridge 240092: 2 - 12' Lanes, w/ 8' outside shoulder and 4' median shoulder Bridge 240091: 2 - 12' Lanes, w/ 8' outside and median shoulders Bridge 240091 and 240092 Approaches: 2 - 12' Lanes for each approach, w/ 8' outside shoulders (4' paved) and 6' median shoulders (2' paved) Span Arrangement: 60', 65', 55', & 60'; OAL = 240' for both bridges Type III 45" Prestressed Girder w/ 4' caps			Bridge 240091: 6 spans Span Arrangement: 1@37.75', 4@37.5', 1@37.75' Bridge Length: 226' Bridge 240092: 4 spans Span Arrangement: 4@35' Bridge Length: 140'			
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	33,800	Year: 2045	Existing:	31,100	Year:	2024

General Project Narrative: (Description of Minimization of Water Quality Impacts)

The dual bridge replacements of Structures #240092 and #240091 on US 70 crosses over SW. Prong Slocum Creek. The channel flows from West to East and ultimately drains into the Neuse River. There are two existing bridges, #240092 (OAL = 140') and 240091 (OAL = 226') with a width of 30' that will be replaced with two bridges each having an OAL = 240', with widths = 1@36' & 1@40'. Both proposed bridges are longer than the existing bridges to accommodate the spatial difference between the previous bridge locations to the new locations. Both proposed bridges and roadway improvements minimized the existing overtopping condition and maintain a minimal transition between existing and new roadway.

Runoff from both bridges are captured on the low side of the bridge along their respective shoulder. The SAG in the roadway is located at Sta 25+34.07 -LRT- and Sta 25+87.05 -LLT-. These SAGs are not located on either of the bridges or the approach slabs. Runoff on the project is collected in the ditches at the bottom of the fill slopes and in the median between the two bridges. The drainage network through the project outfalls underneath and between the bridges in tail ditches that will be armored with Class B rip rap. A few proposed ditches have been designed based on swale design guidelines and have been provided on PG 3 of the SMP.

SW Prong Slocum Creek is not a FEMA studied stream but the backwater and the 500-yr storm are shown on Flood Insurance Rate Map (FIRM) panel 3720642200K, dated 07/19/2020. A hydraulic analysis on SW Prong Slocum Creek was performed to assess the potential flood level increases associated with this project. Based on this analysis, the proposed bridge replacement project was shown to have a negligable effect on the base flood elevation.

Temporary Work Bridge Narrative:

Bridge #240092 and #240091 will be demolished and constructed by means of four temporary work bridges. To ensure SW Prong Slocum Creek has adequate passage, the temporary work bridges will be constructed in phases. Every attempt should be made to pull out existing piers. If piers cannot be pulled out, they should be cut off at the mudline. The temporary work bridge phases are outlined below.

Detour: Move east bound traffic onto existing Church Rd. Move west bound traffic onto existing bridge #240091.

Phase 1: Demolish existing bridge #240092 using top-down methods from existing roadway footprint. Construct temporary work bridge on western SW Prong Slocum Creek bank in location of existing/proposed bridge #240092. Deconstruct western existing bridge #240092 piers. Construct proposed bridge piers and deconstruct temporary work bridge.

Phase 2: Demolish existing bridge #240092 top-down methods from existing roadway footprint. Construct temporary work bridge on eastern SW Prong Slocum Creek bank in location of existing/proposed bridge #240092. Deconstruct eastern existing bridge #240092 piers. Construct proposed bridge piers and deconstruct temporary work bridge.

Following construction of proposed bridge #240092, west bound traffic will be moved onto bridge #240092.

Phase 3: Demolish existing bridge #240091 top-down methods from existing roadway footprint. Construct temporary work bridge on western SW Prong Slocum Creek bank in location of existing/proposed bridge #240091. Deconstruct western existing bridge #240091 piers. Construct proposed bridge piers and deconstruct temporary work bridge.

Phase 4: Demolish existing bridge #240091 top-down methods from existing roadway footprint. Construct temporary work bridge on eastern SW Prong Slocum Creek bank in location of existing/proposed bridge #240091. Deconstruct eastern existing bridge #240091 piers. Construct proposed bridge piers and deconstruct temporary work bridge.

Complete construction of proposed bridge #240091.

Revised 7/17/2023

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS

(Version 3.00; Released August 2021)

General Project Information

Waterbody Information

Surface Water Body (1):	Southwest Prong Slocum Creek		**NCDWR Stream Index No.:**	27-112-1		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Class C			
		Supplemental Classification:	Swamp Waters (Sw)	(NSW)		
Other Stream Classification:						
Impairments:						
Aquatic T&E Species?		Comments:				
NRTR Stream ID:	Southwwest Prong Slocum Creek			**Buffer Rules in Effect:**	Neuse	
Project Includes Bridge Spanning Water Body?	Yes	**Deck Drains Discharge Over Buffer?**	No	**Dissipator Pads Provided in Buffer?**	No	
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)		
(If yes, provide justification in the General Project Narrative)						

Revised 7/17/2023

(Version 3.00; Released August 2021)

North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS

WBS Element: 67074.1.1 **TIP/Proj No.:** BR-0074 **County(ies):** Craven

Swale

Sheet No.	Line	Station	Location (LT,RT,CL)	Latitude	Longitude	Surface Water Body	Base Width (ft)	Front Slope (H:1)	Back Slope (H:1)	Drainage Area (ac)	Recommended Treatm't Length (ft)	Actual Length (ft)	Longitudinal Slope (%)	Q2 (cfs)	V2 (fps)	Q10 (cfs)	V10 (fps)	Rock Checks Used	BMP Associated w/ Buffer Rules?
4	L	19+00	RT	34.89159	-79.92335	(1)Southwest Prong Slocum Creek	0.0	4.0	3.0	0.04	4	50	1.20%	0.06	0.79	0.07	0.83	No	Yes
5	L	27+50	RT	34.88991	-76.92155	(1)Southwest Prong Slocum Creek	0.0	3.0	4.0	0.20	20	50	0.80%	0.41	1.14	0.54	1.23	No	Yes

Additional Comments

09/08/99

TIP PROJECT: BR-0074

Revised 7/17/2023

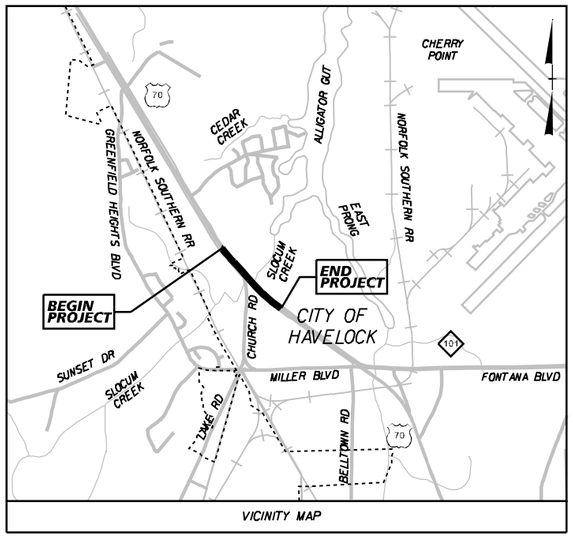
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CRAVEN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0074	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
67074.1.1		P.E.
67074.2.1		RIGHT-OF-WAY
67074.2.1		UTILITIES

PERMIT DRAWING
SHEET 1 OF 17



------ HAVELOCK CITY LIMIT

RIGHT-OF-WAY PLANS COMPLETE

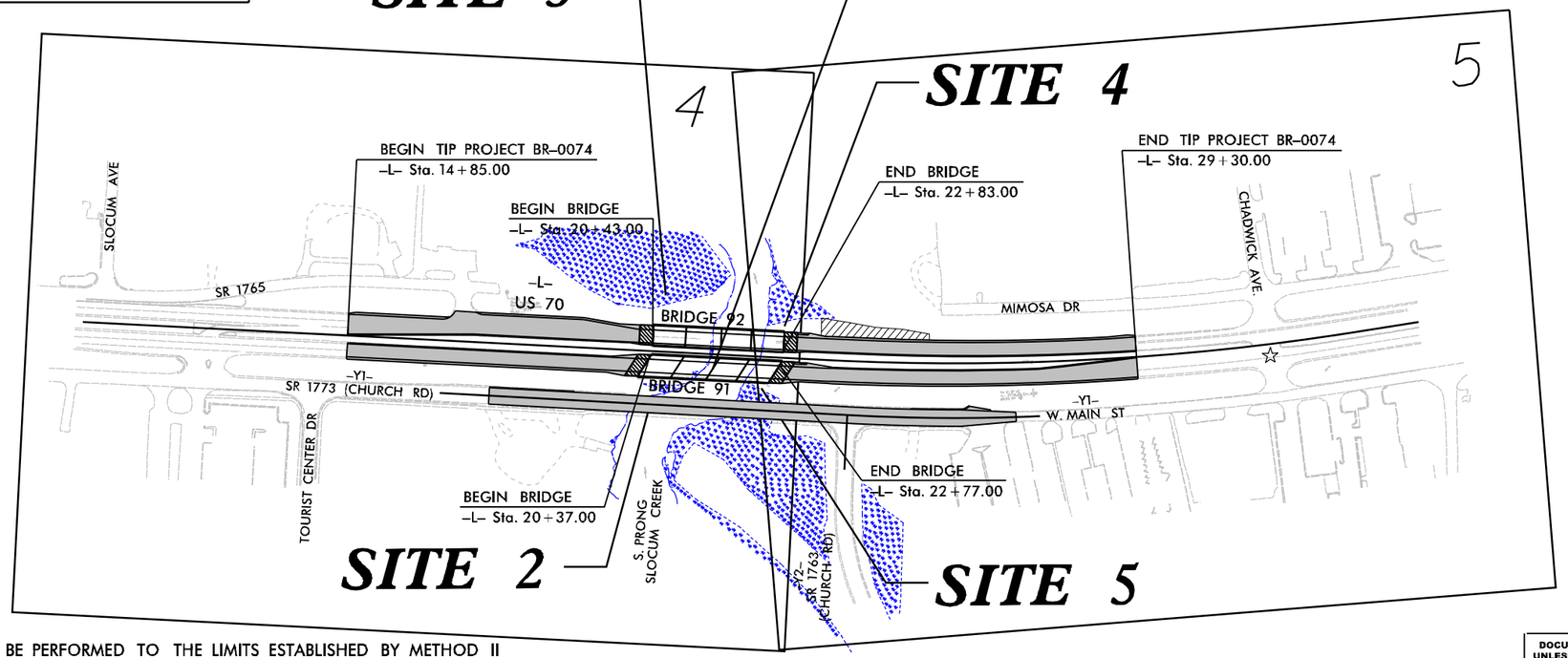
LOCATION: BRIDGES 240091 AND 240092 ON US 70 OVER S. PRONG SLOCUM CREEK

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

WETLAND AND SURFACE WATER IMPACTS PERMIT

JULY 2023

NAD 83/NA 2011



☆ *EXIST TRAFFIC SIGNAL*

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF HAVELOCK

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT:

$FILE$

$DATE$

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

AADT 2024	=	31,100
AADT 2044	=	33,700
D	=	55%
K	=	9%
T	=	4%*
V	=	45/55 MPH

* (TTST 2% + DUAL 2%)

FUNCTIONAL CLASSIFICATION: PRINCIPAL ARTERIAL

STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BR-0074	=	0.229 MILES
LENGTH STRUCTURES TIP PROJECT BR-0074	=	0.045 MILES
TOTAL LENGTH TIP PROJECT BR-0074	=	0.274 MILES

PLANS PREPARED FOR THE NCDOT BY:

Kimley»Horn ©2022

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FEBRUARY 7, 2023

LETTING DATE:
JANUARY 16, 2024

JEFFREY W. MOORE, P.E.
PROJECT ENGINEER

TYLER G. SPRING, P.E.
PROJECT DESIGN ENGINEER

KIM L. GILLESPIE, P.E.
PROJECT MANAGER
NCDOT PROJECT MANAGEMENT UNIT

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: *P.E.*

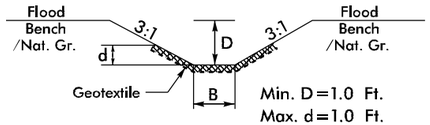
STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

5/14/99

REVISIONS

Revised 7/17/2023

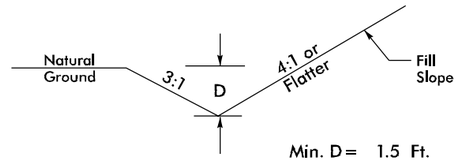
DETAIL 1
STANDARD BASE DITCH
(Not to Scale)



Type of Liner= CL–B Rip–Rap (Granite)

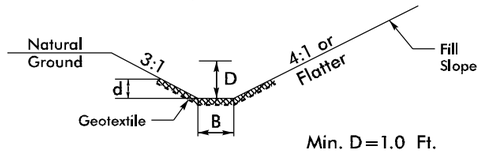
FROM STA. 20+64 TO STA. 21+48 –L– MEDIAN
FROM STA. 16+32 TO STA. 16+73 –DETWB– RT.

DETAIL 2
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM STA. 17+25 TO STA. 18+50 –L– LT.

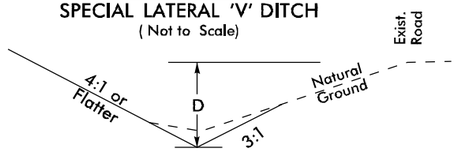
DETAIL 3
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CL–B Rip–Rap (Granite)

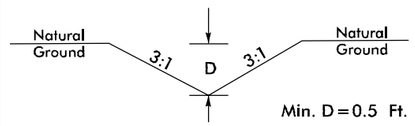
FROM STA. 18+50 TO STA. 19+12 –L– LT.

DETAIL 4
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



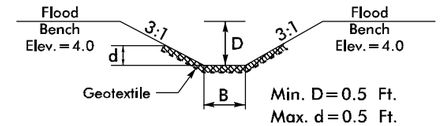
FROM STA. 18+50 TO STA. 19+00 –L– RT.
FROM STA. 27+50 TO STA. 28+00 –L– RT.

DETAIL 5
STANDARD 'V' DITCH
(Not to Scale)



AT STA. 23+22 –L– LT

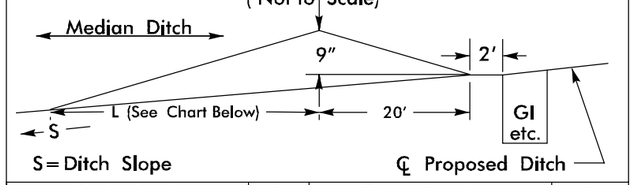
DETAIL 6
STANDARD BASE DITCH
(Not to Scale)



Type of Liner= CL–B Rip–Rap (Granite)

FROM STA. 22+45 TO STA. 22+70 –L–

DETAIL 7
FALSE SUMP
(Not to Scale)

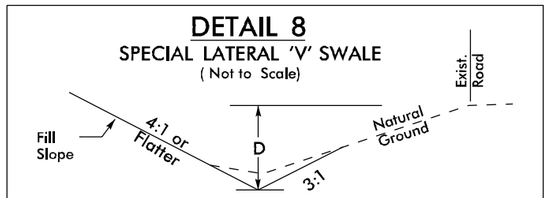


S= Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

FROM STA. 18+83 TO STA. 19+23 –DETWB– LT. (S=1.0%)
FROM STA. 20+13 TO STA. 20+53 –DETWB– LT. (S=1.0%)
FROM STA. 15+07 TO STA. 15+47 –DETEB– LT. (S=2.0%)
FROM STA. 16+30 TO STA. 16+70 –L– MEDIAN (S=1.5%)
FROM STA. 16+30 TO STA. 16+70 –L– RT. (S=1.8%)
FROM STA. 27+05 TO STA. 27+45 –L– MEDIAN (S=0.5%)

DETAIL 8
SPECIAL LATERAL 'V' SWALE
(Not to Scale)



FROM STA. 19+00 TO STA. 19+50 –L– RT.
FROM STA. 27+00 TO STA. 27+50 –L– RT.

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421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601
RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	2D-1
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 2 OF 17

$DATE$

Revised 7/17/2023

SEE SHEET 4A-4D FOR SITE 1

LEGEND

F F	FILL IN WETLAND
HC HC	HAND CLEARING (NON-GRUBBING)
E E	WETLAND EXCAVATION

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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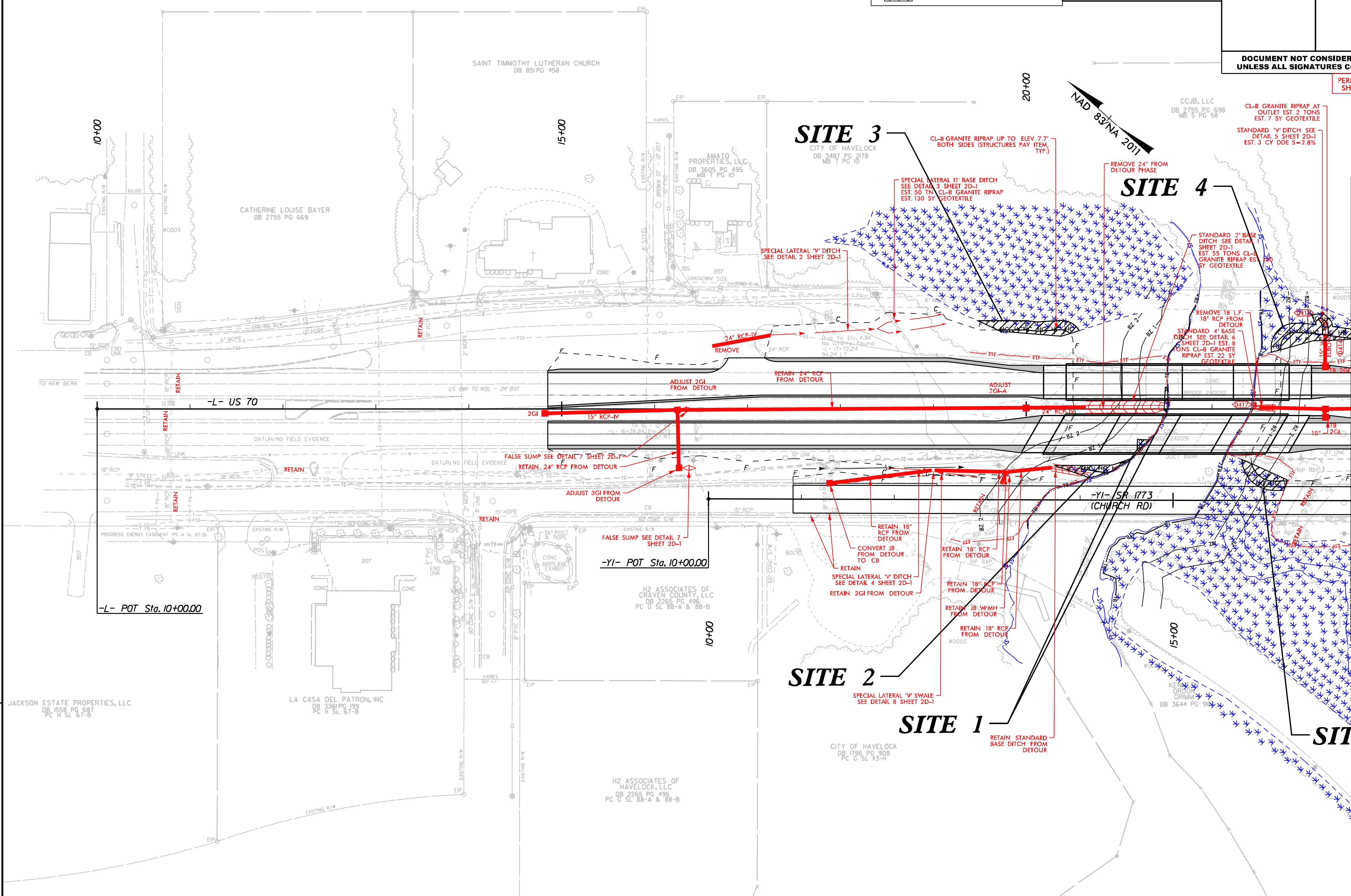
PERMIT DRAWING SHEET 3 OF 17

REVISIONS

5/14/99

$DATE$



SITE 1
SITE 2
SITE 3
SITE 4
SITE 5
NAD 83/NA 2011
-L- US 70
-L- POT Sta. 10+00.00
-Y1- POT Sta. 10+00.00
-Y1- SR 1773 (CHURCH RD)
MATCHLINE -L- STA 23+50 (SEE SHEET 5)
10+00
15+00
20+00
SAINT TIMMOTHY LUTHERAN CHURCH DB 851 PG 458
CATHERINE LOUISE BAYER DB 2755 PG 669
AMATO PROPERTIES, LLC DB 3605 PG 495 MB 7 PG 10
CITY OF HAVELOCK DB 3487 PG 178 MB 7 PG 10
CCJB, LLC DB 2755 PG 698 MB 5 PG 58
JACKSON ESTATE PROPERTIES, LLC DB 1558 PG 687 PC H SL 67-B
LA CASA DEL PATRON, INC DB 3361 PG 199 PC H SL 67-B
H2 ASSOCIATES OF CRAVEN COUNTY, LLC DB 2265 PG 496 PC G SL 88-A & 88-B
H2 ASSOCIATES OF HAVELOCK, LLC DB 2265 PG 496 PC G SL 88-A & 88-B
CITY OF HAVELOCK DB 1796 PG 908 PC G SL 113-H
CL-II GRANITE RIPRAP UP TO ELEV. 7.7' BOTH SIDES (STRUCTURES PAY ITEM, TYP.)
SPECIAL LATERAL 11' BASE DITCH SEE DETAIL 3 SHEET 2D-1 EST. 50 TN CL-B GRANITE RIPRAP EST. 130 SY GEOTEXTILE
SPECIAL LATERAL 'V' DITCH SEE DETAIL 2 SHEET 2D-1
REMOVE 24" FROM DETOUR PHASE
CL-B GRANITE RIPRAP AT OUTLET EST. 2 TONS EST. 7 SY GEOTEXTILE
STANDARD 'V' DITCH SEE DETAIL 5 SHEET 2D-1 EST. 3 CY DDE S=2.8%
REMOVE 18 L.F. 18" RCP FROM DETOUR
STANDARD 4' BASE DITCH SEE DETAIL 6 SHEET 2D-1 EST. 8 TONS CL-B GRANITE RIPRAP EST. 22 SY GEOTEXTILE
24" RCP-IV
REMOVE
RETAIN 24" RCP FROM DETOUR
ADJUST 2GI FROM DETOUR
ADJUST 2GI-A
15" RCP-IV
FALSE SUMP SEE DETAIL 7 SHEET 2D-1
RETAIN 24" RCP FROM DETOUR
ADJUST 3GI FROM DETOUR
FALSE SUMP SEE DETAIL 7 SHEET 2D-1
RETAIN 18" RCP FROM DETOUR
CONVERT JB FROM DETOUR TO CB
RETAIN
SPECIAL LATERAL 'V' DITCH SEE DETAIL 4 SHEET 2D-1
RETAIN 2GI FROM DETOUR
RETAIN 18" RCP FROM DETOUR
RETAIN JB W/MH FROM DETOUR
SPECIAL LATERAL 'V' SWALE SEE DETAIL 8 SHEET 2D-1
RETAIN STANDARD BASE DITCH FROM DETOUR

Revised 7/17/2023

SEE SHEET 4A-4D FOR SITE 1

LEGEND

F F	FILL IN WETLAND
HC HC	HAND CLEARING (NON-GRUBBING)
E E	WETLAND EXCAVATION

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

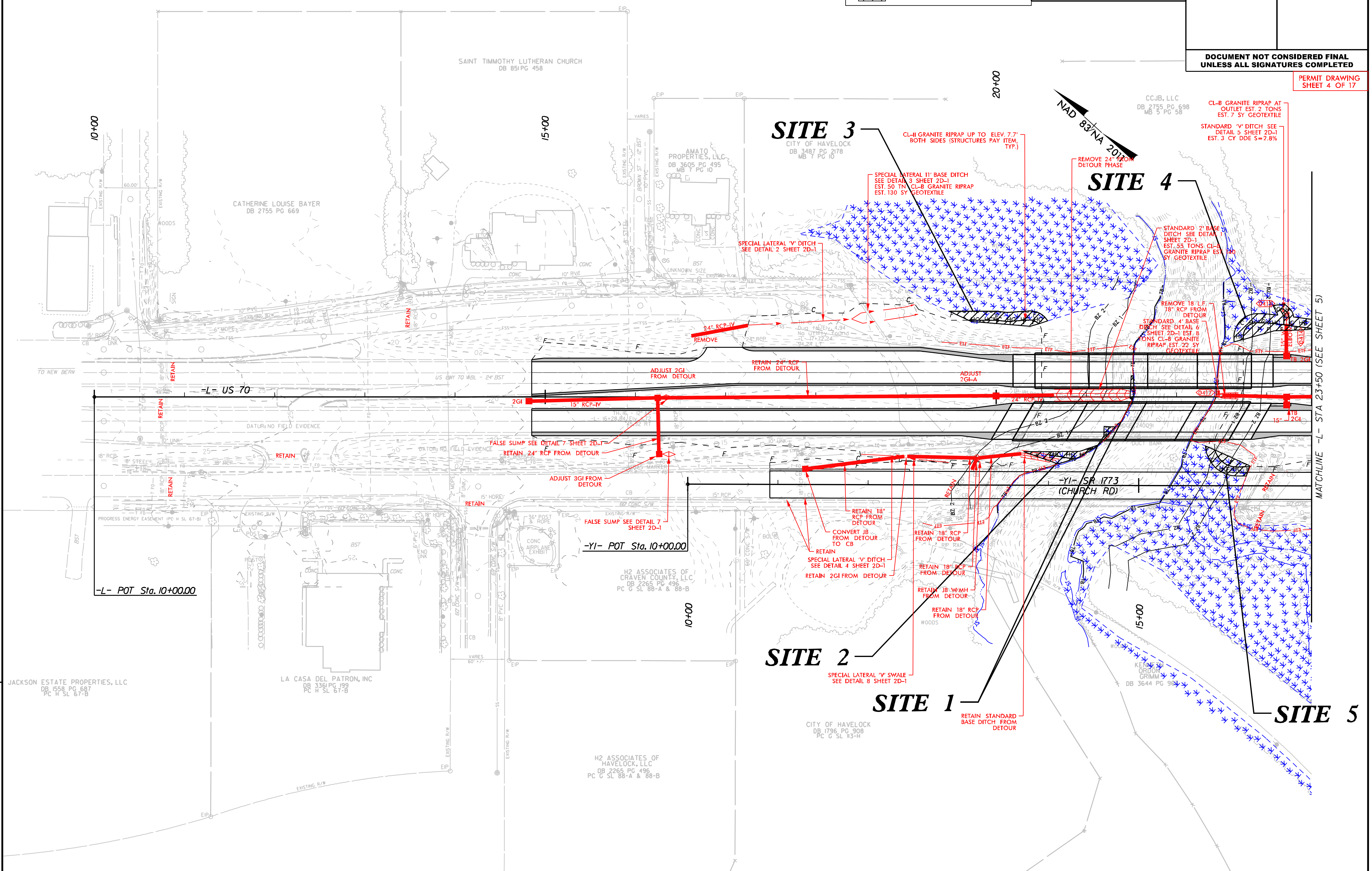
PROJECT REFERENCE NO.	SHEET NO.
BR-0074	4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 4 OF 17

REVISIONS

5/14/99



$DATE$

Revised 7/17/2023

PHASE 1:
CONSTRUCT TEMPORARY WORK BRIDGE IN LOCATION SHOWN. DECONSTRUCT WESTERN EXISTING BRIDGE #240092. PIERS. CONSTRUCT PROPOSED BRIDGE PIERS AND DECONSTRUCT TEMPORARY WORK BRIDGE.

TEMPORARY WORK BRIDGE

LEGEND
- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS

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421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	4A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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PERMIT DRAWING SHEET 5 OF 17

5/14/99
REVISIONS
$DATE$

10+00
15+00
20+00
NAD 83/NA 2011

SAINT TIMMOTHY LUTHERAN CHURCH
DB 851PG 458
CATHERINE LOUISE BAYER
DB 2755 PG 669
AMATO PROPERTIES, LLC
DB 3605 PG 495
MB 1 PG 10
CITY OF HAVELOCK
DB 3487 PG 2178
MB 7 PG 10
CCJB, LLC
DB 2755 PG 698
MB 5 PG 58
JACKSON ESTATE PROPERTIES, LLC
DB 1558 PG 687
PC H SL 67-B
LA CASA DEL PATRON, INC
DB 3361PG 199
PC H SL 67-B
H2 ASSOCIATES OF CRAVEN COUNTY, LLC
DB 2265 PG 496
PC G SL 88-A & 88-B
H2 ASSOCIATES OF HAVELOCK, LLC
DB 2265 PG 496
PC G SL 88-A & 88-B
CITY OF HAVELOCK
DB 1796 PG 908
PC G SL 113-H
KENNETH ORDON GRIMM
DB 3644 PG 90

-L- US 70
TO NEW BERN
-L- POT Sta. 10+00.00
-Y1- POT Sta. 10+00.00
-Y1- SR 1773 (CHURCH RD)
-L- STA 23+50 (SEE SHEET 5)
MATCHLINE -L- STA 23+50 (SEE SHEET 5)

SPECIAL LATERAL 'V' DITCH SEE DETAIL 2 SHEET 2D-1
SPECIAL LATERAL 11' BASE DITCH SEE DETAIL 3 SHEET 2D-1 EST. 50 TN CL-B GRANITE RIPRAP EST. 130 SY GEOTEXTILE
CL-II GRANITE RIPRAP UP TO ELEV. 7.7' BOTH SIDES (STRUCTURES PAY ITEM, TYP.)
REMOVE 24" FROM DETOUR PHASE
CL-B GRANITE RIPRAP AT OUTLET EST. 2 TONS EST. 7 SY GEOTEXTILE
STANDARD 'V' DITCH SEE DETAIL 5 SHEET 2D-1 EST. 3 CY DDE S=2.8%
STANDARD 2' BASE DITCH SEE DETAIL 1 SHEET 2D-1 EST. 55 TONS CL-B GRANITE RIPRAP EST. 30 SY GEOTEXTILE
REMOVE 18 L.F. 18" RCP FROM DETOUR
STANDARD 4' BASE DITCH SEE DETAIL 6 SHEET 2D-1 EST. 8 TONS CL-B GRANITE RIPRAP EST. 22 SY TS GEOTEXTILE
24" RCP-IV REMOVE
ADJUST 2GI FROM DETOUR
RETAIN 24" RCP FROM DETOUR
ADJUST 2GI-A
2GI
15" RCP-IV
FALSE SUMP SEE DETAIL 7 SHEET 2D-1
RETAIN 24" RCP FROM DETOUR
ADJUST 3GI FROM DETOUR
FALSE SUMP SEE DETAIL 7 SHEET 2D-1
RETAIN 18" RCP FROM DETOUR
CONVERT JB FROM DETOUR TO CB
RETAIN
SPECIAL LATERAL 'V' DITCH SEE DETAIL 4 SHEET 2D-1
RETAIN 2GI FROM DETOUR
RETAIN 18" RCP FROM DETOUR
RETAIN JB W/MH FROM DETOUR
RETAIN 18" RCP FROM DETOUR
SPECIAL LATERAL 'V' SWALE SEE DETAIL 8 SHEET 2D-1
RETAIN STANDARD BASE DITCH FROM DETOUR
RETAIN

SITE 1
PHASE 1
(TEMPORARY WORK BRIDGE 1)

5/28/99

Revised 7/17/2023

PERMIT DRAWING
SHEET 6 OF 17

PHASE 1:
CONSTRUCT TEMPORARY WORK BRIDGE IN LOCATION SHOWN. DECONSTRUCT WESTERN EXISTING BRIDGE #240092 PIERS. CONSTRUCT PROPOSED BRIDGE PIERS AND DECONSTRUCT TEMPORARY WORK BRIDGE.

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RALEIGH, NC 27601

RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	6A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SITE 1
PHASE 1
(TEMPORARY WORK BRIDGE 1)

LEGEND
SPECIAL DITCH
MEDIAN DITCH

EXCAVATION

BEGIN GRADE
-LLT- STA 14+85.00
ELEV= 19.82'
MILL NOTCH TO KEY-IN
TIE TO EXISTING PAVEMENT

PI = 15+45.00
EL = 19.02'
VC = 120'
K = 1218

PI = 17+65.00
EL = 15.87'
VC = 170'
K = 150

(-)1.3333%
(-)1.4318%
(-)1.4318%
(-)0.3005%
(-)2.14%
(-)14.12%

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	1800 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	6.7 FT
BASE DISCHARGE	=	2200 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	8.0 FT
OVERTOPPING DISCHARGE	=	5800 CFS
OVERTOPPING FREQUENCY	=	500+ YR
OVERTOPPING ELEVATION	=	14.9 FT
DATE OF SURVEY	=	03/05/2019
W.S.ELEVATION AT DATE OF SURVEY	=	0.5 FT

BEGIN SPECIAL DITCH GRADE LT
-L- STA 17+25
ELEV = 10.00'

-L- STA 18+50 LT
ELEV = 7.32'

END SPECIAL DITCH GRADE LT
-L- STA 19+12
ELEV = 4.75'

EXIST GROUND ALONG GRADE POINT (INSIDE EOT)

TEMPORARY WORK BRIDGE TO MATCH EXISTING LOW CHORD

PROPOSED GRADE

BEGIN BRIDGE
-L- STA 20+43 LT
ELEV = 15.03'

EXISTING BRIDGE TO BE REMOVED

-L- STA 21+63.00 LT
1 @ 60',1 @ 65',1 @ 55',1 @ 60'
TYPE III 45" PRESTRESSED CONCRETE GIRDER
CL ELEV = 14.67'
SKEW = 90°

END BRIDGE
-L- STA 22+83 LT
ELEV = 14.31'

(-)1.20%
(+)6.00%
3.5' TYP.

BEGIN SPECIAL DITCH GRADE MEDIAN
-L- STA 20+64
ELEV = 2.50'

END SPECIAL DITCH GRADE MEDIAN
-L- STA 21+48
ELEV = 1.50'

NORMAL W.S.E. = 0.5'
(03/05/2019)

BEGIN SPECIAL DITCH GRADE MEDIAN
-L- STA 22+45
ELEV = 2.00'

CLASS II RIPRAP (TYP) (STR PAY ITE

END SPECIAL DITCH GRADE MED
-L- STA 22+70
ELEV = 3.50'

BM1 ELEVATION = 3.45
N 422147 E 2622838
-L- STATION 19+21.07 175.58' LEFT
BENCHTIE SET IN 18" CYPRESS

-LLT- US 70

SEE SHEET NO.4 FOR -L- PLAN

BEGIN GRADE
-LRT- STA 14+85.00
ELEV= 19.65'
MILL NOTCH TO KEY-IN
TIE TO EXISTING PAVEMENT

PI = 17+37.00
EL = 16.08'
VC = 170'
K = 152

(-)1.4167%
(-)0.3011%
(-)1.96%
(+)1.20%

EXIST GROUND ALONG GRADE POINT (INSIDE EOT)

BEGIN BRIDGE
-L- STA 20+37 RT
ELEV = 15.17'

PROPOSED GRADE

EXISTING BRIDGE TO BE REMOVED

-L- STA 21+57.00 RT
1 @ 60',1 @ 65',1 @ 55',1 @ 60'
TYPE III 45" PRESTRESSED CONCRETE GIRDER
CL ELEV = 14.82'
SKEW = 60°

END BRIDGE
-L- STA 22+77 RT
ELEV = 14.45

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	1800 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	6.7 FT
BASE DISCHARGE	=	2200 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	8.0 FT
OVERTOPPING DISCHARGE	=	5800 CFS
OVERTOPPING FREQUENCY	=	500+ YR
OVERTOPPING ELEVATION	=	14.9 FT
DATE OF SURVEY	=	03/05/2019
W.S.ELEVATION AT DATE OF SURVEY	=	0.5 FT

BEGIN SPECIAL DITCH GRADE RT
-L- STA 18+50
ELEV = 10.76'

END SPECIAL DITCH GRADE RT
-L- STA 19+50
ELEV = 10.38'

-L- STA 19+00 RT
ELEV = 9.78'

3.5' TYP.

NORMAL W.S.E. = 0.5'
(03/05/2019)

CLASS II RIPRAP (TYP) (STR PAY ITEM)

BM1 ELEVATION = 3.45
N 422147 E 2622838
-L- STATION 19+21.07 175.58' LEFT
BENCHTIE SET IN 18" CYPRESS

-LRT- US 70

SEE SHEET NO.4 FOR -L- PLAN

$FILE$
$DATE$

Revised 7/17/2023

PHASE 2:
CONSTRUCT TEMPORARY WORK BRIDGE IN LOCATION SHOWN. DECONSTRUCT EASTERN EXISTING BRIDGE #240092 PIERS. CONSTRUCT PROPOSED BRIDGE PIERS AND DECONSTRUCT TEMPORARY WORK BRIDGE.

TEMPORARY WORK BRIDGE

LEGEND
- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS

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421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601
RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	4B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 7 OF 17

REVISIONS 5/14/99

$DATE$

MATCHLINE -L- STA 23+50 (SEE SHEET 5)

10+00 15+00 20+00 NAD 83/NA 2011

SAINT TIMMOTHY LUTHERAN CHURCH DB 851PG 458
CATHERINE LOUISE BAYER DB 2755 PG 669
AMATO PROPERTIES, LLC DB 3605 PG 495 MB 1 PG 10
CITY OF HAVELOCK DB 3487 PG 2178 MB 7 PG 10
CCJB, LLC DB 2755 PG 698 MB 5 PG 58
JACKSON ESTATE PROPERTIES, LLC DB 1558 PG 687 PC H SL 67-B
LA CASA DEL PATRON, INC DB 3361PG 199 PC H SL 67-B
H2 ASSOCIATES OF CRAVEN COUNTY, LLC DB 2265 PG 496 PC G SL 88-A & 88-B
H2 ASSOCIATES OF HAVELOCK, LLC DB 2265 PG 496 PC G SL 88-A & 88-B
CITY OF HAVELOCK DB 1796 PG 908 PC G SL 113-H
KENNETH GRIMM ORDOR DB 3644 PG 90

-L- US 70
-L- POT Sta. 10+00.00
-Y1- POT Sta. 10+00.00
-Y1- SR 1773 (CHURCH RD)
TO NEW BERN
US HWY 70 WBL - 24" BST
DATUM: NO FIELD EVIDENCE

SPECIAL LATERAL 'V' DITCH SEE DETAIL 2 SHEET 2D-1
SPECIAL LATERAL 11' BASE DITCH SEE DETAIL 3 SHEET 2D-1 EST. 50 TN CL-B GRANITE RIPRAP EST. 130 SY GEOTEXTILE
CL-II GRANITE RIPRAP UP TO ELEV. 7.7' BOTH SIDES (STRUCTURES PAY ITEM, TYP.)
REMOVE 24" FROM DETOUR PHASE
CL-B GRANITE RIPRAP AT OUTLET EST. 2 TONS EST. 7 SY GEOTEXTILE
STANDARD 'V' DITCH SEE DETAIL 5 SHEET 2D-1 EST. 3 CY DDE S=2.8%
STANDARD 2' BASE DITCH SEE DETAIL 1 SHEET 2D-1 EST. 55 TONS CL-B GRANITE RIPRAP EST. 240 SY GEOTEXTILE
REMOVE 18 L.F. 18" RCP FROM DETOUR
STANDARD 4' BASE DITCH SEE DETAIL 6 SHEET 2D-1 EST. 8 TONS CL-B GRANITE RIPRAP EST. 22 SY GEOTEXTILE
24" RCP-IV REMOVE
ADJUST 2GI FROM DETOUR
RETAIN 24" RCP FROM DETOUR
ADJUST 2GI-A
FALSE SUMP SEE DETAIL 7 SHEET 2D-1
RETAIN 24" RCP FROM DETOUR
ADJUST 3GI FROM DETOUR
FALSE SUMP SEE DETAIL 7 SHEET 2D-1
RETAIN 18" RCP FROM DETOUR
CONVERT JB FROM DETOUR TO CB
RETAIN SPECIAL LATERAL 'V' DITCH SEE DETAIL 4 SHEET 2D-1
RETAIN 2GI FROM DETOUR
RETAIN 18" RCP FROM DETOUR
RETAIN JB W/MH FROM DETOUR
RETAIN 18" RCP FROM DETOUR
SPECIAL LATERAL 'V' SWALE SEE DETAIL 8 SHEET 2D-1
RETAIN STANDARD BASE DITCH FROM DETOUR
RETAIN

SITE 1
PHASE 2
(TEMPORARY WORK BRIDGE 2)

5/28/99

Revised 7/17/2023

PERMIT DRAWING
SHEET 8 OF 17

PHASE 2:
CONSTRUCT TEMPORARY WORK BRIDGE IN LOCATION SHOWN. DECONSTRUCT EASTERN EXISTING BRIDGE #240092 PIERS. CONSTRUCT PROPOSED BRIDGE PIERS AND DECONSTRUCT TEMPORARY WORK BRIDGE.

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421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601
RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	6B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LEGEND
SPECIAL DITCH
MEDIAN DITCH

SITE 1
PHASE 2
(TEMPORARY WORK BRIDGE 2)

BEGIN GRADE
-LLT- STA 14+85.00
ELEV= 19.82'
MILL NOTCH TO KEY-IN
TIE TO EXISTING PAVEMENT

PI = 15+45.00
EL = 19.02'
VC = 120'
K = 1218

PI = 17+65.00
EL = 15.87'
VC = 170'
K = 150

(-)1.3333%
(-)1.4318%
(-)1.4318%
(-)0.3005%
(-)2.14%
(-)14.12%

PROPOSED GRADE
BEGIN BRIDGE
-L- STA 20+43 LT
ELEV = 15.03'

EXISTING BRIDGE TO BE REMOVED

-L- STA 21+63.00 LT
1 @ 60',1 @ 65',1 @ 55',1 @ 60'
TYPE III 45" PRESTRESSED CONCRETE GIRDER
CL ELEV = 14.67'
SKEW = 90°

END BRIDGE
-L- STA 22+83 LT
ELEV = 14.31'

EXCAVATION

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	1800 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	6.7 FT
BASE DISCHARGE	=	2200 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	8.0 FT
OVERTOPPING DISCHARGE	=	5800 CFS
OVERTOPPING FREQUENCY	=	500+ YR
OVERTOPPING ELEVATION	=	14.9 FT
DATE OF SURVEY	=	03/05/2019
W.S.ELEVATION AT DATE OF SURVEY	=	0.5 FT

BEGIN SPECIAL DITCH GRADE LT
-L- STA 17+25
ELEV = 10.00'

-L- STA 18+50 LT
ELEV = 7.32'

EXIST GROUND ALONG GRADE POINT (INSIDE EOT)

END SPECIAL DITCH GRADE LT
-L- STA 19+12
ELEV = 4.75'

BEGIN SPECIAL DITCH GRADE MEDIAN
-L- STA 20+64
ELEV = 2.50'

END SPECIAL DITCH GRADE MEDIAN
-L- STA 21+48
ELEV = 1.50'

NORMAL W.S.E. = 0.5'
(03/05/2019)

BEGIN SPECIAL DITCH GRADE MEDIAN
-L- STA 22+45
ELEV = 2.00'

3.5' TYP.

(-)1.20%
(-)16.00%

CLASS II RIPRAP (TYP) (STR PAY ITE

END SPECIAL DITCH GRADE MED
-L- STA 22+70
ELEV = 3.50'

TEMPORARY WORK BRIDGE TO MATCH EXISTING LOW CHORD

BM1 ELEVATION = 3.45
N 422147 E 2622838
-L- STATION 19+21.07 175.58' LEFT
BENCHTIE SET IN 18" CYPRESS

-LLT- US 70

SEE SHEET NO.4 FOR -L- PLAN

BEGIN GRADE
-LRT- STA 14+85.00
ELEV= 19.65'
MILL NOTCH TO KEY-IN
TIE TO EXISTING PAVEMENT

PI = 17+37.00
EL = 16.08'
VC = 170'
K = 152

(-)1.4167%
(-)0.3011%

EXIST GROUND ALONG GRADE POINT (INSIDE EOT)

BEGIN BRIDGE
-L- STA 20+37 RT
ELEV = 15.17'

PROPOSED GRADE

-L- STA 21+57.00 RT
1 @ 60',1 @ 65',1 @ 55',1 @ 60'
TYPE III 45" PRESTRESSED CONCRETE GIRDER
CL ELEV = 14.82'
SKEW = 60°

EXISTING BRIDGE TO BE REMOVED

END BRIDGE
-L- STA 22+77 RT
ELEV = 14.45

(-)1.96%
(+)1.20%

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	1800 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	6.7 FT
BASE DISCHARGE	=	2200 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	8.0 FT
OVERTOPPING DISCHARGE	=	5800 CFS
OVERTOPPING FREQUENCY	=	500+ YR
OVERTOPPING ELEVATION	=	14.9 FT
DATE OF SURVEY	=	03/05/2019
W.S.ELEVATION AT DATE OF SURVEY	=	0.5 FT

BEGIN SPECIAL DITCH GRADE RT
-L- STA 18+50
ELEV = 10.76'

END SPECIAL DITCH GRADE RT
-L- STA 19+50
ELEV = 10.38'

-L- STA 19+00 RT
ELEV = 9.78'

3.5' TYP.

NORMAL W.S.E. = 0.5'
(03/05/2019)

CLASS II RIPRAP (TYP) (STR PAY ITEM)

BM1 ELEVATION = 3.45
N 422147 E 2622838
-L- STATION 19+21.07 175.58' LEFT
BENCHTIE SET IN 18" CYPRESS

-LRT- US 70

SEE SHEET NO.4 FOR -L- PLAN

$FILE$

$DATE$

Revised 7/17/2023

PHASE 3:
CONSTRUCT TEMPORARY WORK BRIDGE IN LOCATION SHOWN. DECONSTRUCT WESTERN EXISTING BRIDGE #240091 PIERS. CONSTRUCT PROPOSED BRIDGE PIERS AND DECONSTRUCT TEMPORARY WORK BRIDGE.

TEMPORARY WORK BRIDGE

LEGEND
- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS

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RALEIGH, NC 27601
RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	4C
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 9 OF 17

REVISIONS 5/14/99

$DATE$

MATCHLINE -L- STA 23+50 (SEE SHEET 5)

10+00 15+00 20+00

NAD 83/NA 2011

SAINT TIMMOTHY LUTHERAN CHURCH DB 851PG 458

CATHERINE LOUISE BAYER DB 2755 PG 669

AMATO PROPERTIES, LLC DB 3605 PG 495 MB 1 PG 10

CITY OF HAVELOCK DB 3487 PG 2178 MB 7 PG 10

CCJB, LLC DB 2755 PG 698 MB 5 PG 58

JACKSON ESTATE PROPERTIES, LLC DB 1558 PG 687 PC H SL 67-B

LA CASA DEL PATRON, INC DB 3361PG 199 PC H SL 67-B

H2 ASSOCIATES OF CRAVEN COUNTY, LLC DB 2265 PG 496 PC G SL 88-A & 88-B

H2 ASSOCIATES OF HAVELOCK, LLC DB 2265 PG 496 PC G SL 88-A & 88-B

CITY OF HAVELOCK DB 1796 PG 908 PC G SL 113-H

KENNETH GROOM DB 3644 PG 90

-L- US 70

-Y1- SR 1773 (CHURCH RD)

-L- POT Sta. 10+00.00

-Y1- POT Sta. 10+00.00

CL-II GRANITE RIPRAP UP TO ELEV. 7.7' BOTH SIDES (STRUCTURES PAY ITEM, TYP.)

CL-B GRANITE RIPRAP AT OUTLET EST. 2 TONS EST. 7 SY GEOTEXTILE

STANDARD 'V' DITCH SEE DETAIL 5 SHEET 2D-1 EST. 3 CY DDE S=2.8%

REMOVE 24" FROM DETOUR PHASE

SPECIAL LATERAL 11' BASE DITCH SEE DETAIL 3 SHEET 2D-1 EST. 50 TN CL-B GRANITE RIPRAP EST. 130 SY GEOTEXTILE

SPECIAL LATERAL 'V' DITCH SEE DETAIL 2 SHEET 2D-1

STANDARD 2' BASE DITCH SEE DETAIL 1 SHEET 2D-1 EST. 55 TONS CL-B GRANITE RIPRAP EST. 30 SY GEOTEXTILE

REMOVE 18 L.F. 18" RCP FROM DETOUR

STANDARD 4' BASE DITCH SEE DETAIL 6 SHEET 2D-1 EST. 8 TONS CL-B GRANITE RIPRAP EST. 22 SY GEOTEXTILE

24" RCP-IV REMOVE

ADJUST 2GI FROM DETOUR

RETAIN 24" RCP FROM DETOUR

ADJUST 2GI-A

FALSE SUMP SEE DETAIL 7 SHEET 2D-1

RETAIN 24" RCP FROM DETOUR

ADJUST 3GI FROM DETOUR

FALSE SUMP SEE DETAIL 7 SHEET 2D-1

RETAIN 18" RCP FROM DETOUR

CONVERT JB FROM DETOUR TO CB

RETAIN SPECIAL LATERAL 'V' DITCH SEE DETAIL 4 SHEET 2D-1

RETAIN 2GI FROM DETOUR

RETAIN 18" RCP FROM DETOUR

RETAIN JB W/MH FROM DETOUR

RETAIN 18" RCP FROM DETOUR

SPECIAL LATERAL 'V' SWALE SEE DETAIL 8 SHEET 2D-1

RETAIN STANDARD BASE DITCH FROM DETOUR

RETAIN

SITE 1
PHASE 3
(TEMPORARY WORK BRIDGE 3)

5/28/99

Revised 7/17/2023

PERMIT DRAWING
SHEET 10 OF 17

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CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	6C
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LEGEND
SPECIAL DITCH
MEDIAN DITCH

EXCAVATION

BEGIN GRADE
-LLT- STA 14+85.00
ELEV= 19.82'
MILL NOTCH TO KEY-IN
TIE TO EXISTING PAVEMENT

PI = 15+45.00
EL = 19.02'
VC = 120'
K = 1218

PI = 17+65.00
EL = 15.87'
VC = 170'
K = 150

(-)1.3333%
(-)1.4318%
(-)1.4318%
(-)0.3005%
(-)12.4%
(-)14.12%
(-)1.20%
(+)6.00%

PROPOSED GRADE
BEGIN BRIDGE
-L- STA 20+43 LT
ELEV = 15.03'

EXISTING BRIDGE TO BE REMOVED

-L- STA 21+63.00 LT
1 @ 60', 1 @ 65', 1 @ 55', 1 @ 60'
TYPE III 45" PRESTRESSED CONCRETE GIRDER
CL ELEV = 14.67'
SKEW = 90°

END BRIDGE
-L- STA 22+83 LT
ELEV = 14.31'

EXIST GROUND ALONG GRADE POINT (INSIDE EOT)

BEGIN SPECIAL DITCH GRADE LT
-L- STA 17+25
ELEV = 10.00'

-L- STA 18+50 LT
ELEV = 7.32'

END SPECIAL DITCH GRADE LT
-L- STA 19+12
ELEV = 4.75'

BEGIN SPECIAL DITCH GRADE MEDIAN
-L- STA 20+64
ELEV = 2.50'

END SPECIAL DITCH GRADE MEDIAN
-L- STA 21+48
ELEV = 1.50'

NORMAL W.S.E. = 0.5'
(03/05/2019)

BEGIN SPECIAL DITCH GRADE MEDIAN
-L- STA 22+45
ELEV = 2.00'

END SPECIAL DITCH GRADE MED
-L- STA 22+70
ELEV = 3.50'

3.5' TYP.

CLASS II RIPRAP (TYP.) (STR PAY ITE

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	1800 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	6.7 FT
BASE DISCHARGE	=	2200 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	8.0 FT
OVERTOPPING DISCHARGE	=	5800 CFS
OVERTOPPING FREQUENCY	=	500+ YR
OVERTOPPING ELEVATION	=	14.9 FT
DATE OF SURVEY	=	03/05/2019
W.S.ELEVATION AT DATE OF SURVEY	=	0.5 FT

BM1 ELEVATION = 3.45
N 422147 E 2622838
-L- STATION 19+21.07 175.58' LEFT
BENCHTIE SET IN 18" CYPRESS

-LLT- US 70

SEE SHEET NO.4 FOR -L- PLAN

SITE 1
PHASE 3
(TEMPORARY WORK BRIDGE 3)

PHASE 3:
CONSTRUCT TEMPORARY WORK BRIDGE IN LOCATION SHOWN. DECONSTRUCT WESTERN EXISTING BRIDGE #240091 PIERS. CONSTRUCT PROPOSED BRIDGE PIERS AND DECONSTRUCT TEMPORARY WORK BRIDGE.

BEGIN GRADE
-LRT- STA 14+85.00
ELEV= 19.65'
MILL NOTCH TO KEY-IN
TIE TO EXISTING PAVEMENT

PI = 17+37.00
EL = 16.08'
VC = 170'
K = 152

(-)1.4167%
(-)0.3011%
(-)1.96%
(+)1.20%

EXIST GROUND ALONG GRADE POINT (INSIDE EOT)

BEGIN BRIDGE
-L- STA 20+37 RT
ELEV = 15.17'

PROPOSED GRADE

-L- STA 21+57.00 RT
1 @ 60', 1 @ 65', 1 @ 55', 1 @ 60'
TYPE III 45" PRESTRESSED CONCRETE GIRDER
CL ELEV = 14.82'
SKEW = 60°

END BRIDGE
-L- STA 22+77 RT
ELEV = 14.45

EXISTING BRIDGE TO BE REMOVED

BEGIN SPECIAL DITCH GRADE RT
-L- STA 18+50
ELEV = 10.76'

END SPECIAL DITCH GRADE RT
-L- STA 19+50
ELEV = 10.38'

-L- STA 19+00 RT
ELEV = 9.78'

3.5' TYP.

TEMPORARY WORK BRIDGE TO MATCH EXISTING LOW CHORD

NORMAL W.S.E. = 0.5'
(03/05/2019)

CLASS II RIPRAP (TYP) (STR PAY ITEM)

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	1800 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	6.7 FT
BASE DISCHARGE	=	2200 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	8.0 FT
OVERTOPPING DISCHARGE	=	5800 CFS
OVERTOPPING FREQUENCY	=	500+ YR
OVERTOPPING ELEVATION	=	14.9 FT
DATE OF SURVEY	=	03/05/2019
W.S.ELEVATION AT DATE OF SURVEY	=	0.5 FT

BM1 ELEVATION = 3.45
N 422147 E 2622838
-L- STATION 19+21.07 175.58' LEFT
BENCHTIE SET IN 18" CYPRESS

-LRT- US 70

SEE SHEET NO.4 FOR -L- PLAN

$FILE$
$DATE$

Revised 7/17/2023

PHASE 4:
CONSTRUCT TEMPORARY WORK BRIDGE IN LOCATION SHOWN. DECONSTRUCT EASTERN EXISTING BRIDGE #240091 PIERS. CONSTRUCT PROPOSED BRIDGE PIERS AND DECONSTRUCT TEMPORARY WORK BRIDGE.

TEMPORARY WORK BRIDGE

LEGEND
- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS

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421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601
RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	4D
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 11 OF 17

REVISIONS 5/14/99

$DATE$

NAD 83/NA 2011

10+00 15+00 20+00

SAINT TIMMOTHY LUTHERAN CHURCH DB 851PG 458

CATHERINE LOUISE BAYER DB 2755 PG 669

AMATO PROPERTIES, LLC DB 3605 PG 495 MB 1 PG 10

CITY OF HAVELOCK DB 3487 PG 2178 MB 7 PG 10

CCJB, LLC DB 2755 PG 698 MB 5 PG 58

JACKSON ESTATE PROPERTIES, LLC DB 1558 PG 687 PC H SL 67-B

LA CASA DEL PATRON, INC DB 3361PG 199 PC H SL 67-B

H2 ASSOCIATES OF CRAVEN COUNTY, LLC DB 2265 PG 496 PC G SL 88-A & 88-B

H2 ASSOCIATES OF HAVELOCK, LLC DB 2265 PG 496 PC G SL 88-A & 88-B

CITY OF HAVELOCK DB 1796 PG 908 PC G SL 113-H

KENNETH GROOM DB 3644 PG 90

-L- US 70

-Y1- SR 1773 (CHURCH RD)

-L- POT Sta. 10+00.00

-Y1- POT Sta. 10+00.00

MATCHLINE -L- STA 23+50 (SEE SHEET 5)

SPECIAL LATERAL 'V' DITCH SEE DETAIL 2 SHEET 2D-1

SPECIAL LATERAL 11' BASE DITCH SEE DETAIL 3 SHEET 2D-1 EST. 50 TN CL-B GRANITE RIPRAP EST. 130 SY GEOTEXTILE

CL-II GRANITE RIPRAP UP TO ELEV. 7.7' BOTH SIDES (STRUCTURES PAY ITEM, TYP.)

REMOVE 24" FROM DETOUR PHASE

CL-B GRANITE RIPRAP AT OUTLET EST. 2 TONS EST. 7 SY GEOTEXTILE

STANDARD 'V' DITCH SEE DETAIL 5 SHEET 2D-1 EST. 3 CY DDE S=2.8%

STANDARD 2' BASE DITCH SEE DETAIL 1 SHEET 2D-1 EST. 55 TONS CL-B GRANITE RIPRAP EST. 30 SY GEOTEXTILE

REMOVE 18 L.F. 18" RCP FROM DETOUR

STANDARD 4' BASE DITCH SEE DETAIL 6 SHEET 2D-1 EST. 8 TONS CL-B GRANITE RIPRAP EST. 22 SY GEOTEXTILE

24" RCP-IV REMOVE

ADJUST 2GI FROM DETOUR

RETAIN 24" RCP FROM DETOUR

ADJUST 2GI-A

FALSE SUMP SEE DETAIL 7 SHEET 2D-1

RETAIN 24" RCP FROM DETOUR

ADJUST 3GI FROM DETOUR

FALSE SUMP SEE DETAIL 7 SHEET 2D-1

RETAIN 18" RCP FROM DETOUR

CONVERT JB FROM DETOUR TO CB

RETAIN SPECIAL LATERAL 'V' DITCH SEE DETAIL 4 SHEET 2D-1

RETAIN 2GI FROM DETOUR

RETAIN 18" RCP FROM DETOUR

RETAIN JB W/MH FROM DETOUR

RETAIN 18" RCP FROM DETOUR

SPECIAL LATERAL 'V' SWALE SEE DETAIL 8 SHEET 2D-1

RETAIN STANDARD BASE DITCH FROM DETOUR

RETAIN

SITE 1
PHASE 4
(TEMPORARY WORK BRIDGE 4)

5/28/99

Revised 7/17/2023

PERMIT DRAWING
SHEET 12 OF 17

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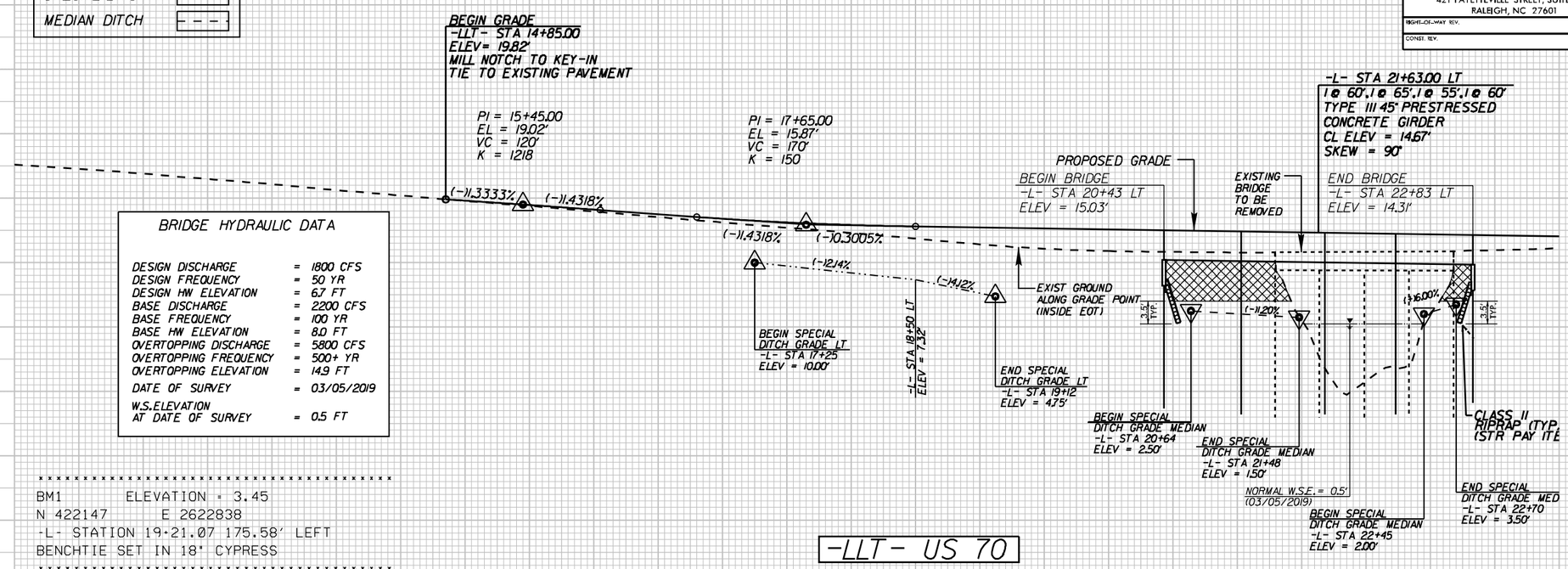
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	6D
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LEGEND
SPECIAL DITCH
MEDIAN DITCH

EXCAVATION



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	1800 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	6.7 FT
BASE DISCHARGE	=	2200 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	8.0 FT
OVERTOPPING DISCHARGE	=	5800 CFS
OVERTOPPING FREQUENCY	=	500+ YR
OVERTOPPING ELEVATION	=	14.9 FT
DATE OF SURVEY	=	03/05/2019
W.S.ELEVATION AT DATE OF SURVEY	=	0.5 FT

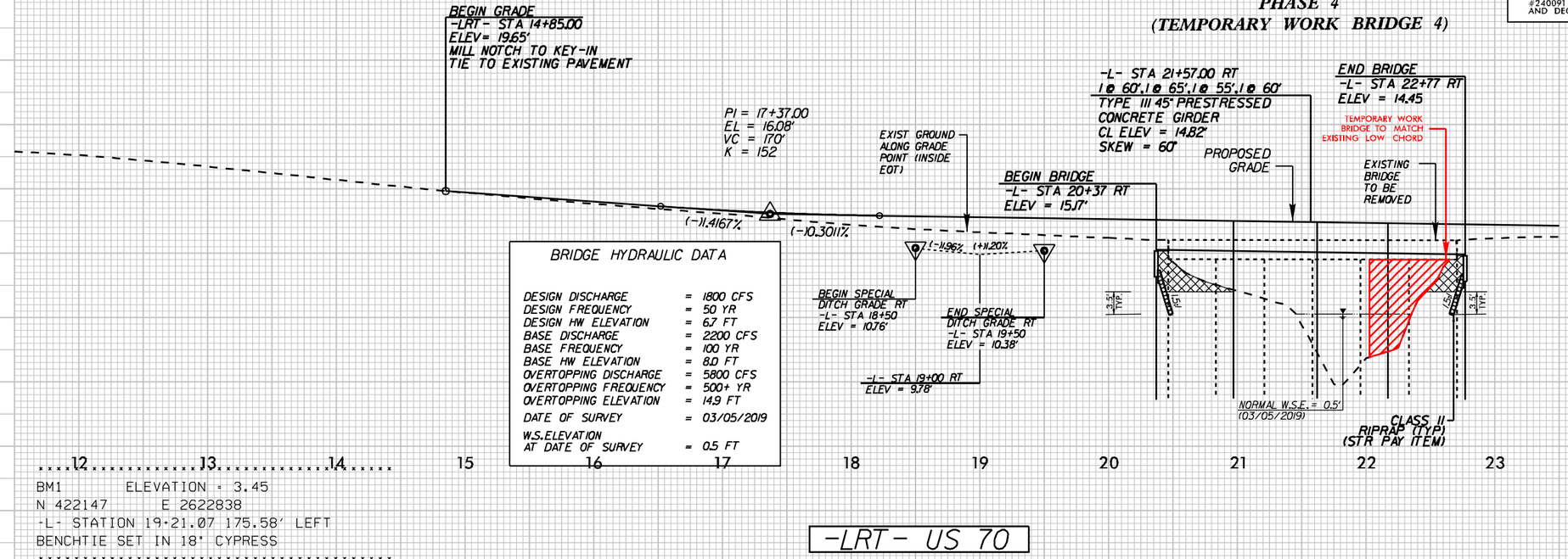
BM1 ELEVATION = 3.45
N 422147 E 2622838
-L- STATION 19+21.07 175.58' LEFT
BENCHTIE SET IN 18" CYPRESS

-LLT- US 70

SEE SHEET NO.4 FOR -L- PLAN

SITE 1
PHASE 4
(TEMPORARY WORK BRIDGE 4)

PHASE 4:
CONSTRUCT TEMPORARY WORK BRIDGE IN LOCATION SHOWN. DECONSTRUCT EASTERN EXISTING BRIDGE #240091 PIERS. CONSTRUCT PROPOSED BRIDGE PIERS AND DECONSTRUCT TEMPORARY WORK BRIDGE.



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	1800 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	6.7 FT
BASE DISCHARGE	=	2200 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	8.0 FT
OVERTOPPING DISCHARGE	=	5800 CFS
OVERTOPPING FREQUENCY	=	500+ YR
OVERTOPPING ELEVATION	=	14.9 FT
DATE OF SURVEY	=	03/05/2019
W.S.ELEVATION AT DATE OF SURVEY	=	0.5 FT

BM1 ELEVATION = 3.45
N 422147 E 2622838
-L- STATION 19+21.07 175.58' LEFT
BENCHTIE SET IN 18" CYPRESS

-LRT- US 70

SEE SHEET NO.4 FOR -L- PLAN

$FILE$

$DATE$

Revised 7/17/2023

LEGEND

HC HC HAND CLEARING (NON-GRUBBING)

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421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	5

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 13 OF 17

5/14/99

REVISIONS

$DATE$

NAD 83/NA 2011

SITE 4

25+00

30+00

-L- PC Sta. 23+65.09

-L- PT Sta. 33+26.97

-L- POT Sta. 34+50.00

-L- US 70

TO NEWPORT

-Y1- W. MAIN ST

-Y2- SR 1763 (CHURCH RD) S 48° 00' 32.4" W

MATCHLINE -L- STA 23+50 (SEE SHEET 4)

-Y1- PC Sta. 17+52.44

-Y1- POT Sta. 17+47.21 =
-Y2- POT Sta. 10+00.00
= 89° 43' 49.8" E

-Y2- POT Sta. 11+00.00

-Y1- PT Sta. 21+00.00

CCJB, LLC
DB 2755 PG 698
MB 5 PG 58

CITY OF HAVELOCK
DB 725 PG 513
MB 5 PG 58

AMERICAN EAGLE RENTALS, LLC
DB 2916 PG 375

WILLIAM L. LUZADDER
DB 3515 PG 1825

FRIENDLY PAWN, LLC
DB 2120 PG 872
DB 2120 PG 866
MB 5 PG 58

FAMILY DOLLAR STORES OF NORTH CAROLINA, INC
DB 3238 PG 287
PC 1 SL 306

MARCUS KNEALE INNIS
DB 2262 PG 470

DEREK GRANT WALKER
DB 3613 PG 2100

RAYMOND WILLIAMS BURNS
DB 2990 PG 889

KOSI INVESTMENTS, LLC
DB 3272 PG 690

CATHERINE BAYER
93-E-212
DB 505 PG 249
PC A SL 151B

JACKSON ESTATE PROPERTIES, LLC
DB 2490 PG 383
PC A SL 151B

HAVELOCK DEVELOPMENT CORPORATION
DB 883 PG 641
DB 900 PG 667
PC A SL 151B

SAG -LRT- STA. 25+87.02

SAG -LRT- STA. 25+34.07

0.30% 0.30%

RETAIN 18" RCP FROM DETOUR

ADJUST 2GI FROM DETOUR 15" RCP-JV

2GI

FALSE SUMP SEE DETAIL 7 SHEET 2D-1

2GI-D

PUE

SPECIAL LATERAL 'V' DITCH SEE DETAIL 3 SHEET 2D-1

REMOVE TEMP JB & CONVERT TO OEP

SPECIAL LATERAL 'V' SWALE SEE DETAIL 8 SHEET 2D-1

CULVERT #1
ONE BARREL

	NORTH	EAST	ELEV.
CUL1	421495.16	2622795.08	-2.48
CUL2	421487.89	2622787.42	-2.55
CE1	421491.70	2622792.09	3.54
HW1	421491.28	2622792.09	5.20
CUL3	421426.79	2622820.82	-2.28
CUL4	421418.46	2622813.61	-2.26
CE2	421422.47	2622816.87	3.76
HW2	421422.44	2622816.64	5.41

Revised 7/17/2023

LEGEND

HC HC HAND CLEARING (NON-GRUBBING)

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421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 14 OF 17

5/14/99

REVISIONS

$DATE$

NAD 83/NA 2011

SITE 4

25+00

30+00

-L- PC Sta. 23+65.09

-L- PT Sta. 33+26.97

-L- POT Sta. 34+50.00

-L- US 70

-Y1- W. MAIN ST

-Y2- SR 1763 (CHURCH RD)
S 48° 00' 32.4" W

MATCHLINE -L- STA 23+50 (SEE SHEET 4)

-Y1- PC Sta. 17+52.44

-Y1- POT Sta. 17+47.21 =
-Y2- POT Sta.10+00.00
= S 89° 43' 49.8" E

-Y2- POT Sta. 11+00.00

-Y1- PT Sta. 21+00.00

CCJB, LLC
DB 2755 PG 698
MB 5 PG 58

CITY OF HAVELOCK
DB 725 PG 513
MB 5 PG 58

AMERICAN EAGLE RENTALS, LLC
DB 2916 PG 375

WILLIAM L. LUZADDER
DB 3515 PG 1825

FRIENDLY PAWN, LLC
DB 2120 PG 872
DB 2120 PG 866
MB 5 PG 58

FAMILY DOLLAR STORES OF NORTH CAROLINA, INC
DB 3238 PG 287
PC 1SL 306

MARCUS KNEALE INNIS
DB 2262 PG 470

DEREK GRANT WALKER
DB 3613 PG 2100

RAYMOND WILLIAMS BURNS
DB 2990 PG 889

KOSI INVESTMENTS, LLC
DB 3272 PG 690

CATHERINE BAYER
93-E-212
DB 909 PG 249
PC A SL 151B

JACKSON ESTATE PROPERTIES, LLC
DB 2490 PG 383
PC A SL 151B

HAVELOCK DEVELOPMENT CORPORATION
DB 883 PG 641
DB 900 PG 667
PC A SL 151B

RETAIN 18" RCP FROM DETOUR

ADJUST 2GI FROM DETOUR 15" RCP IV

2GI

FALSE SUMP SEE DETAIL 7 SHEET 2D-1

RETAIN 18" RCP FROM DETOUR

2GI-D

REMOVE 18" RCP FROM DETOUR

SPECIAL LATERAL 'V' DITCH SEE DETAIL 3 SHEET 2D-1

REMOVE TEMP. JB & CONVERT TO OEP

SPECIAL LATERAL 'V' SWALE SEE DETAIL 8 SHEET 2D-1

SAG -LRT- STA 25+87.07 0.30% 0.30%

SAG -LRT- STA 25+34.07 0.30% 0.30%

CULVERT #1
ONE BARREL

	NORTH	EAST	ELEV.
CUL1	421495.16	2622795.08	-2.48
CUL2	421487.89	2622787.42	-2.55
CE1	421491.70	2622792.09	3.54
HW1	421491.28	2622792.09	5.20
CUL3	421426.79	2622820.82	-2.28
CUL4	421418.46	2622813.61	-2.26
CE2	421422.47	2622816.87	3.76
HW2	421422.44	2622816.64	5.41

8/23/99

Revised 7/17/2023

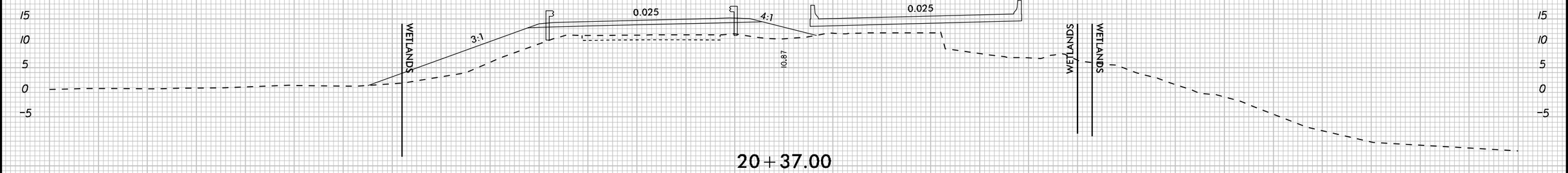
0 5 10

PROJ. REFERENCE NO.	SHEET NO.
BR-0074	X-4

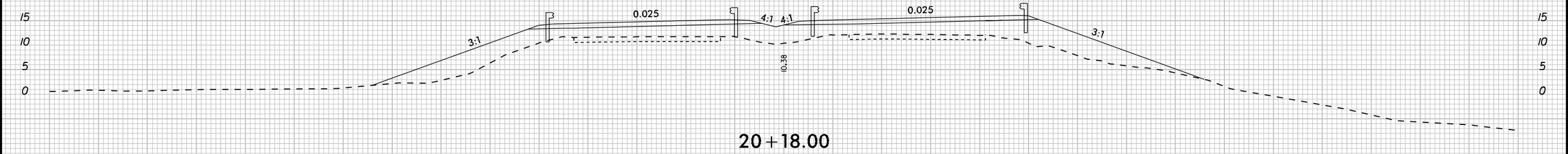
PERMIT DRAWING
SHEET 15 OF 17

SITE 3

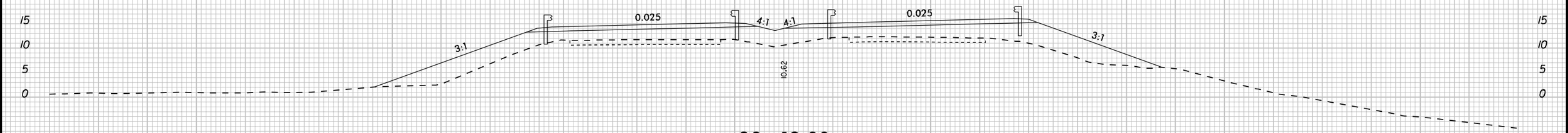
SITE 2



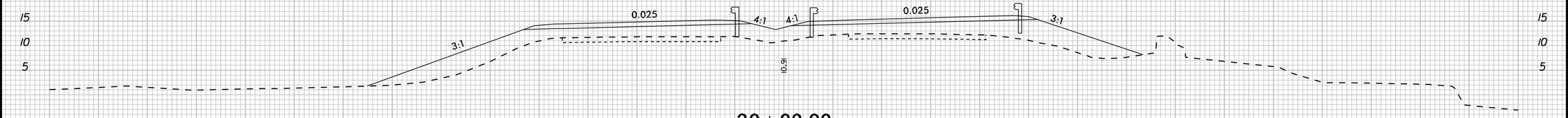
20+37.00



20+18.00



20+12.00



20+00.00

-L- US 70

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

$FILE$

$DATE$

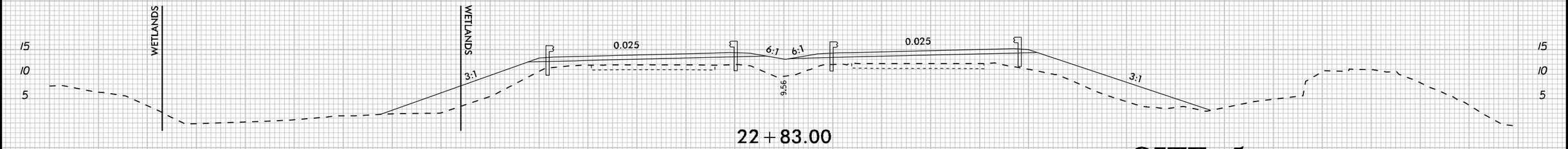
8/23/99

Revised 7/17/2023

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	BR-0074	X-6

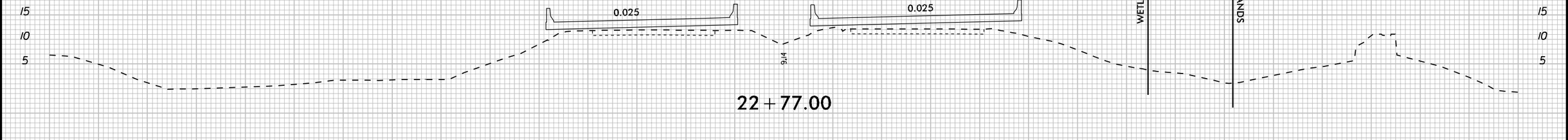
PERMIT DRAWING
SHEET 16 OF 17

SITE 4

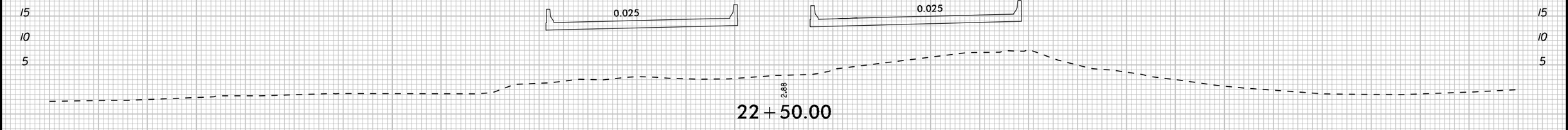


22 + 83.00

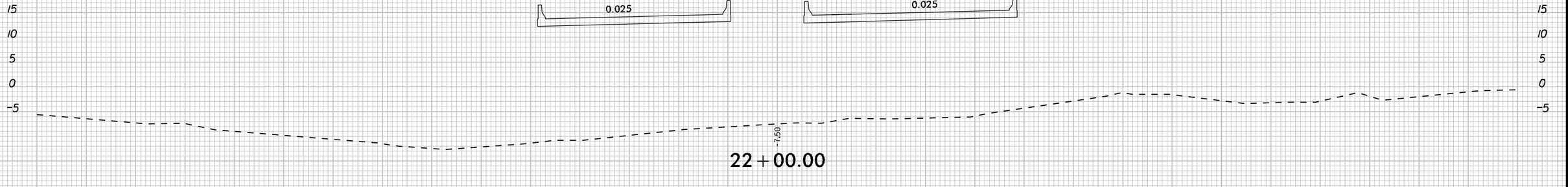
SITE 5



22 + 77.00



22 + 50.00



22 + 00.00

-L- US 70

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

$FILE$

$DATE$

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-L-21+06 / -L- 22+45	TWO 240' BRIDGES										
		PROPOSED BRIDGES (END BENTS)						0.04		88		
		TEMPORARY WORK BRIDGES					< 0.01		0.20		129	
2	-L- 20+26 / -L- 21+45 (RT)	PROPOSED 18" RCP			< 0.01		< 0.01					
3	-L- 19+70 / -L-20+50 (LT)	ROADWAY FILL	< 0.01				0.02					
4	-L- 22+66 / -L- 23+04 (LT)	ROADWAY FILL	0.01		< 0.01		0.03					
5	-L- 22+34 / -L- 22+76 (RT)	ROADWAY FILL	< 0.01				0.01					
TOTALS*:			0.03		< 0.01		0.07	0.04	0.20	88	129	0

*Rounded totals are sum of actual impacts

NOTES:
Site 1: Phase 1 Temporary Work Bridge - Temporary SW Impacts (0.068 AC), Existing Channel Impacts Temporary (62 FT)
Site 1: Phase 2 Temporary Work Bridge - Temporary SW Impacts (0.051 AC), Existing Channel Impacts Temporary (63 FT)
Site 1: Phase 3 Temporary Work Bridge - Temporary SW Impacts (0.049 AC), Existing Channel Impacts Temporary (78 FT)
Site 1: Phase 4 Temporary Work Bridge - Temporary SW Impacts (0.046 AC), Existing Channel Impacts Temporary (69 FT)

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
7/17/2023
CRAVEN COUNTY
BR-0074

09/08/99

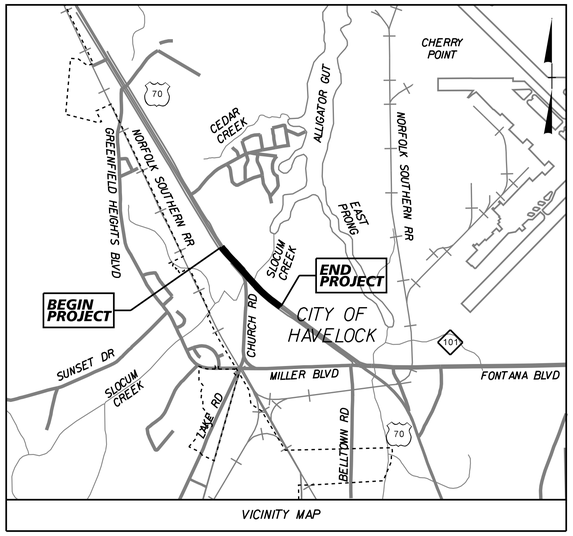
TIP PROJECT: BR–0074

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR–0074	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
67074.1.1		P.E.
67074.2.1		RIGHT–OF–WAY
67074.3.1		CONSTRUCTION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CRAVEN COUNTY



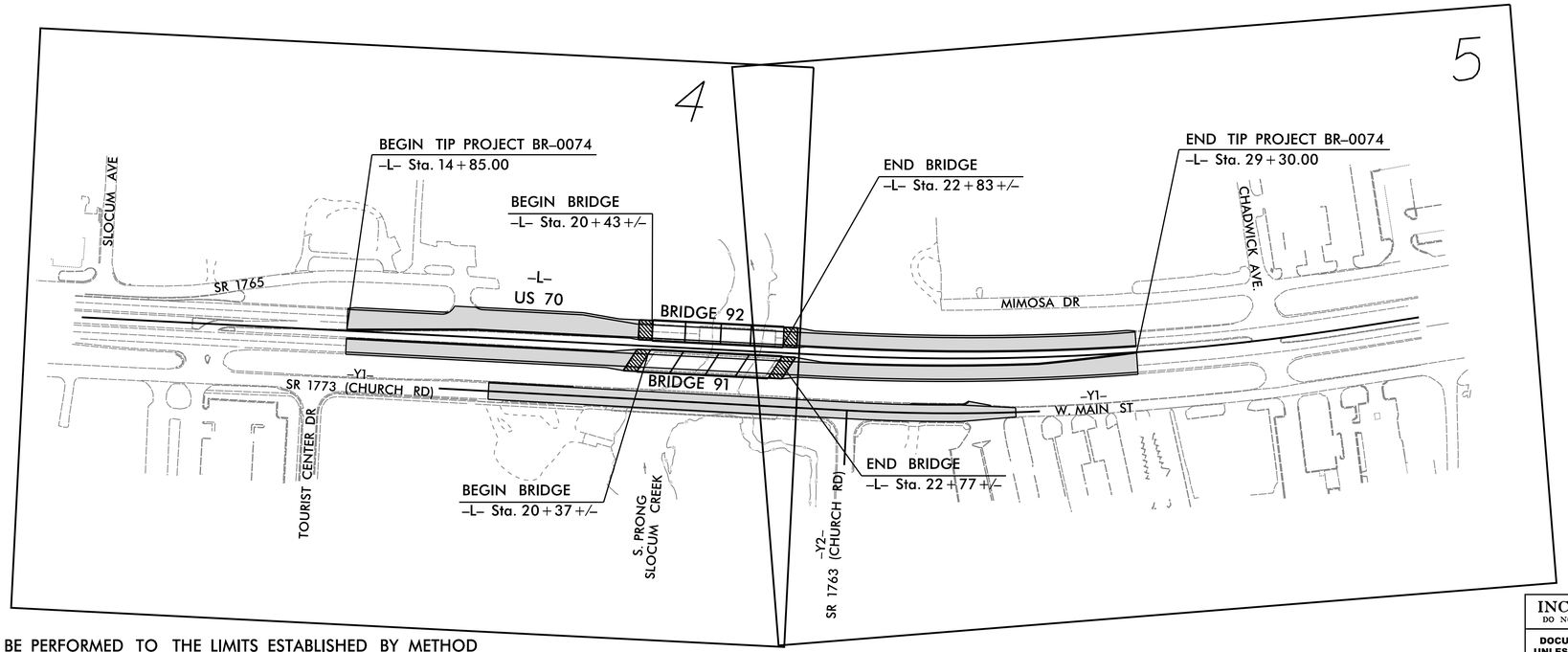
------ HAVELOCK CITY LIMIT

DESIGN RECOMMENDATION PLAN SET

LOCATION: BRIDGES 240091 AND 240092 ON US 70 OVER S. PRONG SLOCUM CREEK

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

NAD 83/NA 2011



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD _
THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF HAVELOCK

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT:

GRAPHIC SCALES

PLANS: 50 25 0 50 100

PROFILE (HORIZONTAL): 50 25 0 50 100

PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

AADT 2024 = 31,100
AADT 2045 = 33,800
D = 55%
K = 9%
T = 4%*
V = 45/55 MPH
* (TTST 2% + DUAL 2%)
FUNCTIONAL CLASSIFICATION: PRINCIPAL ARTERIAL
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BR–0074	=	0.229 MILES
LENGTH STRUCTURES TIP PROJECT BR–0074	=	0.045 MILES
TOTAL LENGTH TIP PROJECT BR–0074	=	0.274 MILES

PLANS PREPARED FOR THE NCDOT BY:

Kimley»Horn ©2022
NC LICENSE #P-0102
PAYETTEVILLE STREET, SUITE 600
RALEIGH, NORTH CAROLINA 27601
PHONE: (919) 677-2000

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JANUARY 21, 2023

LETTING DATE:
JANUARY 16, 2024

JEFFREY W. MOORE, P.E.
PROJECT ENGINEER

TYLER G. SPRING, P.E.
PROJECT DESIGN ENGINEER

CLAUDIA W. LEE, P.E.
PROJECT MANAGER
NCDOT PROJECT MANAGEMENT UNIT

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

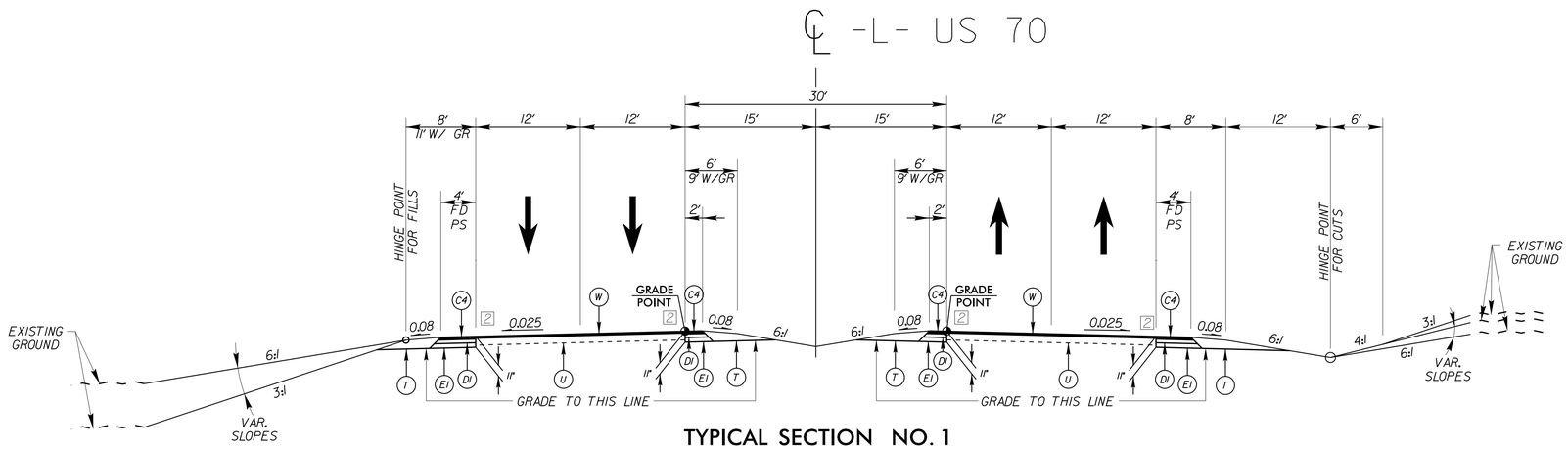
SIGNATURE: *P.E.*

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION ·

K:\RAL_Roadway\OII0365\0 - BR-0074 US 70\Roadway\Proj\BR0074_rdy_1sh.dgn

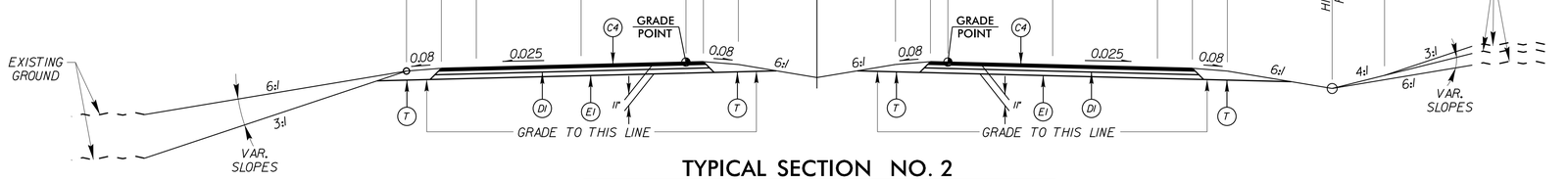
8/12/2022

5/14/99



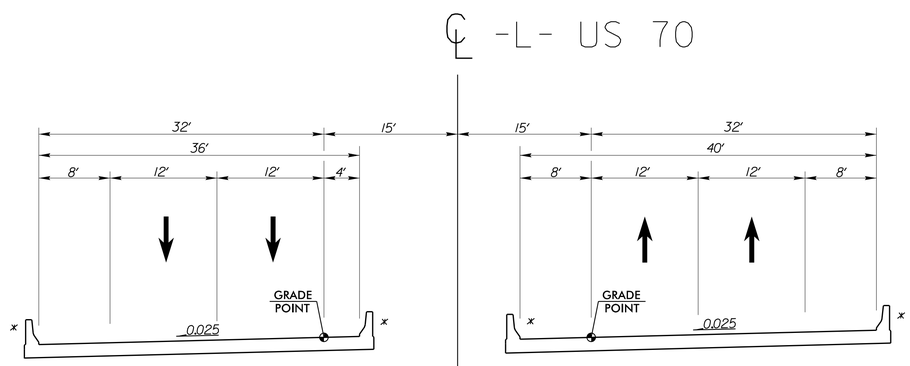
TYPICAL SECTION NO. 1

-L- STA 14+85.00 TO 18+50.00
-L- STA 24+00.00 TO 29+30.00



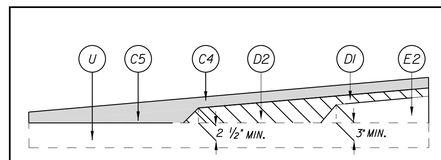
TYPICAL SECTION NO. 2

-L- STA 18+50.00 TO (BEGIN BRIDGE) RT
-L- STA 18+50.00 TO (BEGIN BRIDGE) LT
-L- (END BRIDGE) TO STA 24+00.00 RT
-L- (END BRIDGE) TO STA 24+00.00 LT

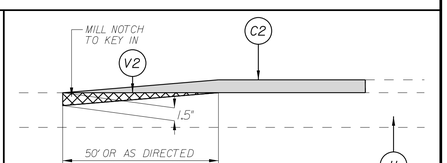


BRIDGE TYPICAL SECTION

* 42" F-SHAPE CONC. BARRIER RAIL (SEE STRUCTURE PLANS)



WEDGING DETAIL (W) FOR RESURFACING



INCIDENTAL MILLING DETAIL

8/12/2022

Kimley»Horn © 2022
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	2A-1

ROADWAY DESIGN ENGINEER

PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PAVEMENT SCHEDULE

C1	PROPOSED APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN.
C2	PROPOSED APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN.
C3	PROPOSED APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. IN. IN EACH OF TWO LAYERS.
C4	PROPOSED APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. IN. IN EACH OF TWO LAYERS.
C5	PROPOSED VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROPOSED APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROPOSED VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4" IN DEPTH
E1	PROPOSED APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROPOSED VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" OR GREATER THAN 5.5" IN DEPTH.
J1	PROPOSED 6" AGGREGATE BASE COURSE
J2	PROPOSED 10" AGGREGATE BASE COURSE
P	PRIME COAT AT THE RATE OF 0.35 GAL. PER SQ. YD.
R	PROPOSED 2'-6" CONCRETE CURB & GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	PROPOSED 1.5" MILLING
V2	INCIDENTAL MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT

NOTES:
[1] PAVEMENT EDGE SLOPES 1:1 UNLESS OTHERWISE INDICATED
[2] SEE DETAIL SHOWING METHOD OF SAWCUT, SHEET 2A-2

5/14/99

Kimley»Horn ©2022
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	2A-2

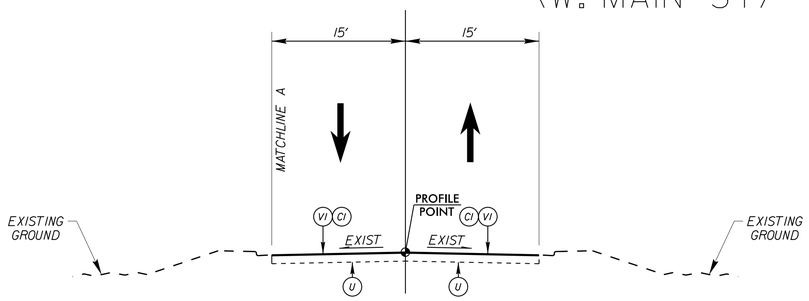
ROADWAY DESIGN ENGINEER

PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

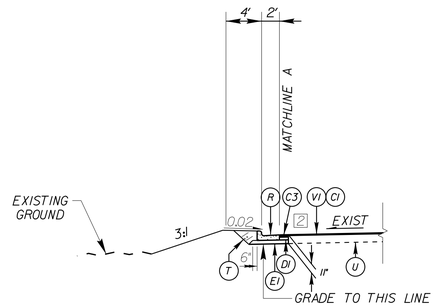
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

℄ -Y1- SR 1773 (CHURCH RD)/ (W. MAIN ST)



TYPICAL SECTION NO. 3

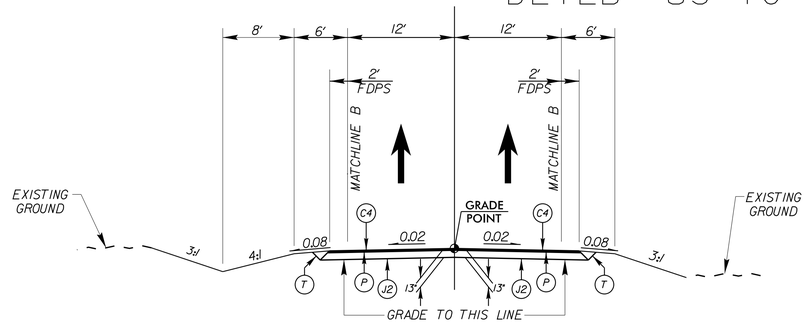
-Y1- STA 10+91.00 TO 20+56.00



TYPICAL SECTION NO. 3A

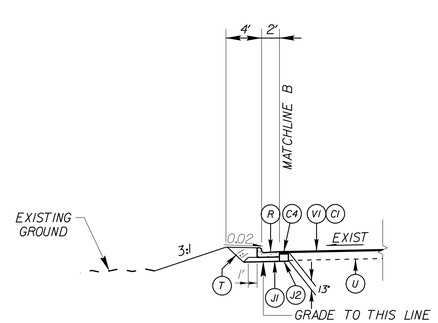
-Y1- STA 10+91.00 TO 12+46.00 LT
-Y1- STA 18+63.00 TO 19+56.00 LT

℄ -DETWB- US 70 DETOUR
-DETEB- US 70 DETOUR



TYPICAL SECTION NO. 4

-DETWB- STA 12+49.34 TO 13+43.85 RT
-DETWB- STA 13+45.60 TO 14+74.21 LT
-DETWB- STA 20+51.04 TO 22+20.40 LT
-DETWB- STA 22+13.08 TO 23+55.51 RT
-DETEB- STA 11+92.55 TO 13+76.66 RT
-DETEB- STA 13+20.40 TO 15+04.93 LT
-DETEB- STA 21+40.28 TO 23+52.36 LT
-DETEB- STA 22+74.49 TO 24+71.15 RT

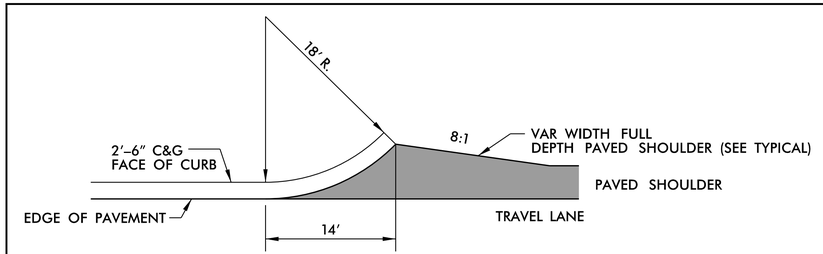


TYPICAL SECTION NO. 4A

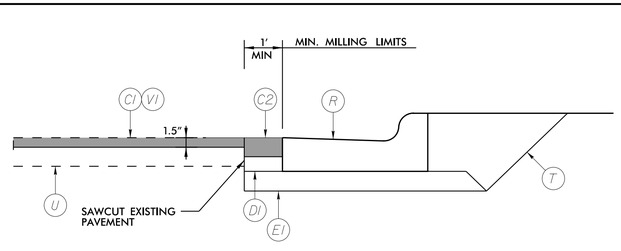
-DETEB- STA 14+94.93 TO 15+04.93 LT
-DETEB- STA 21+40.28 TO 21+50.28 LT

PAVEMENT SCHEDULE	
C1	1.5" S9.5B
C2	1.5" S9.5C
C3	3" S9.5B
C4	3" S9.5C
C5	VARIABLE S9.5C
D1	4"/19.0C
D2	VARIABLE 19.0C
E1	4" B25.0C
E2	VARIABLE B25.0C
J1	6" AGGREGATE BASE COURSE
J2	10" AGGREGATE BASE COURSE
P	PRIME COAT
R	2'-6" CONCRETE CURB & GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	PROPOSED 1.5" MILLING
V2	INCIDENTAL MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT

NOTES:
1 PAVEMENT EDGE SLOPES 1:1 UNLESS OTHERWISE INDICATED
2 SEE DETAIL SHOWING METHOD OF SAWCUT, SHEET 2A-2



STANDARD CURB & GUTTER FLARE



DETAIL SHOWING METHOD OF SAWCUT

8/12/2022

5/14/99

REVISIONS

8/11/2022

BM1 ELEVATION = 3.45
N 422147 E 2622838
-L- STATION 19+21.07 175.58' LEFT
BENCHTIE SET IN 18" CYPRESS

NAD 83/NA 2011

Kimley»Horn © 2022
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SAINT TIMMOTHY LUTHERAN CHURCH
DB 851 PG 458

CATHERINE LOUISE BAYER
DB 2755 PG 669

AMATO PROPERTIES, LLC
DB 3605 PG 495
MB 7 PG 10

CITY OF HAVELOCK
DB 3487 PG 2178
MB 7 PG 10

CCJB, LLC
DB 2755 PG 698
MB 5 PG 58

JACKSON ESTATE PROPERTIES, LLC
DB 1558 PG 687
PC H SL 67-B

LA CASA DEL PATRON, INC
DB 3361 PG 199
PC H SL 67-B

H2 ASSOCIATES OF CRAVEN COUNTY, LLC
DB 2265 PG 496
PC G SL 88-A & 88-B

H2 ASSOCIATES OF HAVELOCK, LLC
DB 2265 PG 496
PC G SL 88-A & 88-B

CITY OF HAVELOCK
DB 1796 PG 908
PC G SL 113-H

KENNETH ORDON GRIMM
DB 3644 PG 963

BEGIN TIP PROJECT - BR-0074
BEGIN CONSTRUCTION
-L- POT Sta. 14+85.00

-L- POT Sta. 10+00.00

-Y1- POT Sta. 10+00.00

BEGIN CONSTRUCTION
-Y1- POT Sta. 10+91.00
BEGIN 2'-6" C&G LT

END 2'-6" C&G
-Y1- STA. 12+46.00 LT

-L- US 70
S 41° 53' 41.9" E

-Y1- SR 1773
(CHURCH RD)
S 41° 43' 17.4" E

MATCHLINE -L- STA 23+50 (SEE SHEET 5)

SEE SHEET NO.6 FOR -L- PROFILES
SEE SHEET NO.8 FOR -Y1- PROFILE

5/14/99

REVISIONS

-L-	-Y1-
PI Sta 28+47.74	PI Sta 19+26.36
△ = 11° 48' 04.7" (LT)	△ = 5° 41' 23.0" (LT)
D = 1° 13' 36.8"	D = 1° 38' 13.3"
L = 961.89'	L = 347.56'
T = 482.65'	T = 173.93'
R = 4,670.00'	R = 3,500.00'
SE = 0.025	SE = SEE PLANS
RO = SEE PLANS	RO = SEE PLANS

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421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	5

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

CITY OF HAVELOCK
DB 725 PG 513
MB 5 PG 58

CCJB, LLC
DB 2765 PG 698
MB 5 PG 58

AMERICAN EAGLE RENTALS, LLC
DB 2916 PG 375

WILLIAM L. LUZADDER
DB 3515 PG 1825

FRIENDLY PAWN, LLC
DB 2120 PG 872
DB 2120 PG 866
MB 5 PG 58

FAMILY DOLLAR STORES OF NORTH CAROLINA, INC
DB 3238 PG 287
PC 1SL 30C

-L- PC Sta. 23+65.09

-L- PT Sta. 33+26.97

-L- POT Sta. 34+50.00

END TIP PROJECT BR-0074
END CONSTRUCTION
-L- POC Sta. 29+30.00

500' LANE SHIFT

50' TAPER

555' LANE SHIFT

180' TAPER

100' TAPER

C&G FLARE
SEE DETAIL
SHEET 2A-2

-Y1- W. MAIN ST

-L- US 70
S 53° 41' 46.6" E

TO NEWPORT

-Y2- SR 1763
(CHURCH RD)
S 48° 00' 32.4" W
(SR 1763) CHURCH RD - 28' BST

MATCHLINE -L- STA 23+50 (SEE SHEET 4)

BEGIN 2'-6" C&G
-Y1- STA 18+63.00

-Y1- PC Sta. 17+52.44

-Y1- POT Sta. 17+47.21 =
-Y2- POT Sta. 10+00.00
△ = 89° 43' 49.8" E

-Y2- POT Sta. 11+00.00

-Y1- PT Sta. 21+00.00

END CONSTRUCTION
-Y1- POC Sta. 20+56.00

MARCUS KNEALE INNIS
DB 2262 PG 470

DEREK GRANT WALKER
DB 3613 PG 2100

RAYMOND WILLIAMS BURNS
DB 2990 PG 889

KOSI INVESWTMENTS, LLC
DB 3272 PG 690

CATHERINE BAYER
93-E-212
DB 909 PG 249
PC A SL 151B

JACKSON ESTATE PROPERTIES, LLC
DB 2490 PG 383
PC A SL 151B

HAVELOCK DEVELOPMENT CORPORATION
DB 883 PG 641
DB 900 PG 667
PC A SL 151B

GPS2
(BR-0074 GPS2)

SEE SHEET NO.7 FOR -L- PROFILES
SEE SHEET NO.8 FOR -Y1- PROFILE

8/11/2022

5/14/99

REVISIONS

-DETEB-
PI Sta 12+37.06
Δ = 18° 08' 11.3" (RT)
D = 8° 03' 30.5"
L = 225.06'
T = 113.48'
R = 711.00'
SE = SEE PLANS
RO = SEE PLANS
DS = 45 MPH

PI Sta 14+61.02
Δ = 17° 57' 46.7" (LT)
D = 8° 03' 30.5"
L = 222.91'
T = 112.38'
R = 711.00'
SE = SEE PLANS
RO = SEE PLANS
DS = 45 MPH

-DETWB-
PI Sta 12+46.86
Δ = 15° 50' 25.8" (RT)
D = 8° 03' 30.5"
L = 196.57'
T = 98.92'
R = 711.00'
SE = SEE PLANS
RO = SEE PLANS
DS = 45 MPH

PI Sta 14+43.43
Δ = 15° 50' 25.8" (LT)
D = 8° 03' 30.5"
L = 196.57'
T = 98.92'
R = 711.00'
SE = SEE PLANS
RO = SEE PLANS
DS = 45 MPH

BM1 ELEVATION = 3.45
N 422147 E 2622838
-L- STATION 19+21.07 175.58' LEFT
BENCHTIE SET IN 18" CYPRESS

NAD 83/NA 2011

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421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601
RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	2B-1
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SAINT TIMMOTHY LUTHERAN CHURCH
DB 851 PG 458

CATHERINE LOUISE BAYER
DB 2755 PG 669

AMATO PROPERTIES, LLC
DB 3605 PG 495
MB 7 PG 10

CITY OF HAVELOCK
DB 3487 PG 2178
MB 7 PG 10

CCJB, LLC
DB 2755 PG 698
MB 5 PG 58

JACKSON ESTATE PROPERTIES, LLC
DB 1558 PG 687
PC H SL 67-B

LA CASA DEL PATRON, INC
DB 3361 PG 199
PC H SL 67-B

H2 ASSOCIATES OF CRAVEN COUNTY, LLC
DB 2265 PG 496
PC G SL 88-A & 88-B

H2 ASSOCIATES OF HAVELOCK, LLC
DB 2265 PG 496
PC G SL 88-A & 88-B

CITY OF HAVELOCK
DB 1796 PG 908
PC G SL 113-H

KENNETH ORDON GRIMM
DB 3644 PG 963

10+00
15+00 (L)
10+00 (DETWB)
15+00 (DETWB)
20+00 (L)
10+00 (DETEB)
15+00 (DETEB)

-DETWB- POT Sta.10+00.00 =
-L- POT Sta.14+00.00 (27' LT)

-DETWB- PC Sta. 11+47.94

BEGIN CONSTRUCTION
-DETWB- POC Sta. 12+49.34 =
-L- POT Sta. 16+48.99 (19.78' LT)
ASSUMPTION BASED ON FIELD IDENTIFICATION AND UTILITY OWNER RECORDS

-DETWB- PRC Sta.13+44.51

-DETWB- PT Sta. 15+41.08

-DETWB- STA.14+42.1 LT

STA.13+45.60 LT

-DETWB-
US 70
S 41° 53' 41.9" E

-L- US 70
S 41° 53' 41.9" E

-DETEB-
US 70
S 41° 53' 41.9" E

S 41° 53' 41.9" E

S 41° 43' 17.4" E

STA.13+43.85 RT

STA.13+20.40 LT

STA.13+76.66 RT

-DETEB- POT Sta.10+00.00 =
-L- POT Sta.14+00.00 (27' RT)

-L- POT Sta.10+00.00

-DETEB- PC Sta. 11+23.58

BEGIN CONSTRUCTION
-DETEB- POC Sta. 11+92.55 =
-L- POT Sta. 15+92.45 (30.34' RT)

-DETEB- PRC Sta.13+48.64

-DETEB- PT Sta. 15+71.55

-DETEB- STA.15+04.93 LT

C&G FLARE SEE DETAIL SHEET 2A-2

90' TAPER

END 2'-6" C&G

MATCHLINE -L- STA 23+50 (SEE SHEET 2B-2)

SEE SHEET NO.8 FOR -DETWB- PROFILE
SEE SHEET NO.9 FOR -DETEB- PROFILE

8/12/2022

-DETEB-		
PI Sta 21+96.45	PI Sta 24+38.40	PI Sta 26+06.26
△ = 2° 3' 21.0" (LT)	△ = 16° 08' 50.3" (RT)	△ = 1° 40' 05.1" (LT)
D = 8° 03' 30.5"	D = 8° 03' 30.5"	D = 1° 13' 13.8"
L = 286.11'	L = 200.38'	L = 136.67'
T = 145.02'	T = 100.86'	T = 68.34'
R = 711.00'	R = 711.00'	R = 4,694.50'
SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS
RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS
DS = 45 MPH	DS = 45 MPH	

-DETWB-		
PI Sta 21+14.40	PI Sta 23+10.65	PI Sta 25+25.74
△ = 18° 25' 39.2" (LT)	△ = 13° 18' 09.2" (RT)	△ = 3° 16' 41.3" (LT)
D = 8° 03' 30.5"	D = 8° 03' 30.5"	D = 1° 14' 00.1"
L = 228.67'	L = 165.08'	L = 265.79'
T = 115.33'	T = 82.91'	T = 132.93'
R = 711.00'	R = 711.00'	R = 4,645.50'
SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS
RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS
DS = 45 MPH	DS = 45 MPH	

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RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	2B-2

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

CITY OF HAVELOCK
DB 725 PG 513
MB 5 PG 58

CCJB, LLC
DB 2765 PG 698
MB 5 PG 58

AMERICAN EAGLE RENTALS, LLC
DB 2916 PG 375

WILLIAM L. LUZADDER
DB 3515 PG 1825

FRIENDLY PAWN, LLC
DB 2120 PG 872
DB 2120 PG 866
MB 5 PG 58

FAMILY DOLLAR STORES OF NORTH CAROLINA, INC
DB 3238 PG 287
PC 1 SL 30C

MARCUS KNEALE INNIS
DB 2262 PG 470

DEREK GRANT WALKER
DB 3613 PG 2100

RAYMOND WILLIAMS BURNS
DB 2990 PG 889

KOSI INVESWTMENTS, LLC
DB 3272 PG 690

CATHERINE BAYER
91-E-212
DB 309 PG 249
PC A SL 151B

JACKSON ESTATE PROPERTIES, LLC
DB 2490 PG 383
PC A SL 151B

HAVELOCK DEVELOPMENT CORPORATION
DB 883 PG 641
DB 900 PG 667
PC A SL 151B

-L- PC Sta. 23+65.09

-DETWB- PC Sta. 19+99.06

-DETEB- PC Sta. 20+51.43

-DETWB- PRC Sta. 22+27.74

-DETWB- PRC Sta. 23+92.81

-DETEB- PRC Sta. 23+37.54

-DETEB- PRC Sta. 25+37.91

-DETWB- PT Sta. 26+58.60 =
-L- POC Sta. 30+50.00 (24.50' LT)

-DETEB- PT Sta. 26+74.59 =
-L- POC Sta. 30+50.00 (24.50' RT)

END CONSTRUCTION
-DETWB- POC Sta. 23+55.51 =
-L- POC Sta. 27+45.34 (23.37' RT)

END CONSTRUCTION
-DETEB- POC Sta. 24+71.15 =
-L- POC Sta. 27+99.94 (26.44' RT)

-L- PT Sta. 33+26.97

-L- POT Sta. 34+50.00

-L- US 70
S 53° 41' 46.6" E

-DETWB- US 70

-DETEB- US 70

MATCHLINE -L- STA 23+50 (SEE SHEET 2B-1)

S 41° 43' 17.4" E

20+00 (DETEB)

20+00 (DETWB)

25+00 (DETWB)

25+00 (DETEB)

30+00 (L)

SR 1763 (CHURCH RD)

ISR 1763/ CHURCH RD - 28' BST

MIMOSA DR - 20' BST

US HWY 70 WBL - 24' BST

US HWY 70 EBL - 24' BST

W MAIN ST - 19' BST

CHADWICK AVE - 24' BST

TILTON ST - 20' BST

TO NEWPORT

GPS2
(BR-0074 GPS2)

BEGIN 2'-6" C&G
-DETEB- STA. 21+40.28 LT

C&G FLARE
SEE DETAIL
SHEET 2A-2

75' TAPER

30' TAPER

100' TAPER

STA. 20+51.04 LT

STA. 22+20.40 LT

STA. 23+52.36 LT

STA. 22+13.08 RT

STA. 22+74.49 RT

DATUM: NO FIELD EVIDENCE

INV=INACCESSABLE BOT OF BOX=2.5'+/-

SEE SHEET NO.8 FOR -DETWB- PROFILE
SEE SHEET NO.9 FOR -DETEB- PROFILE

REVISIONS

5/14/99

8/12/2022

Kimley»Horn
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

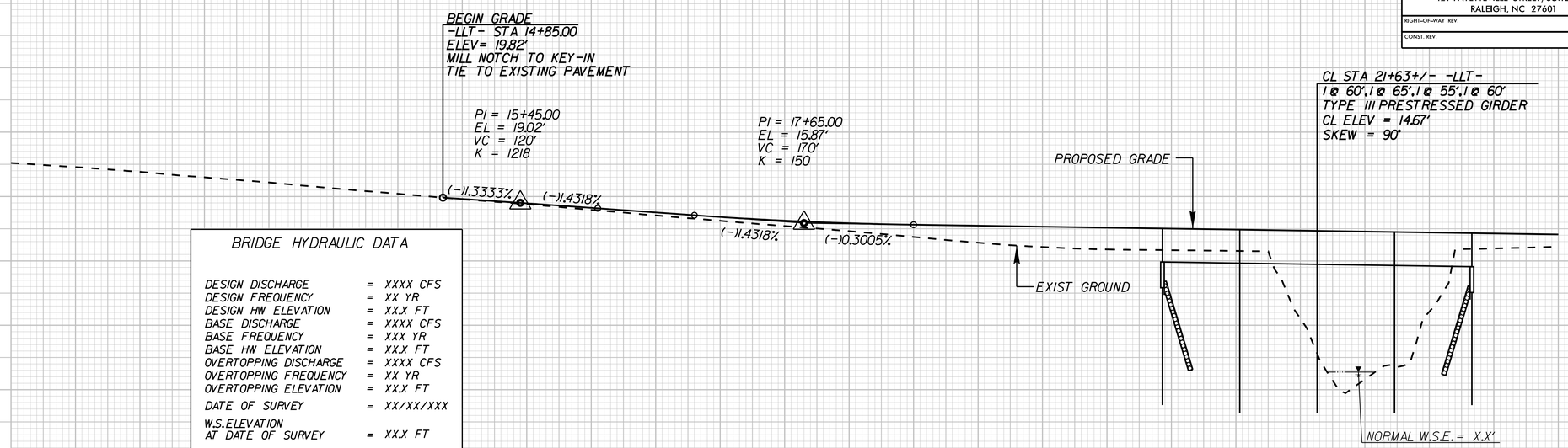
RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
BR-0074	6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



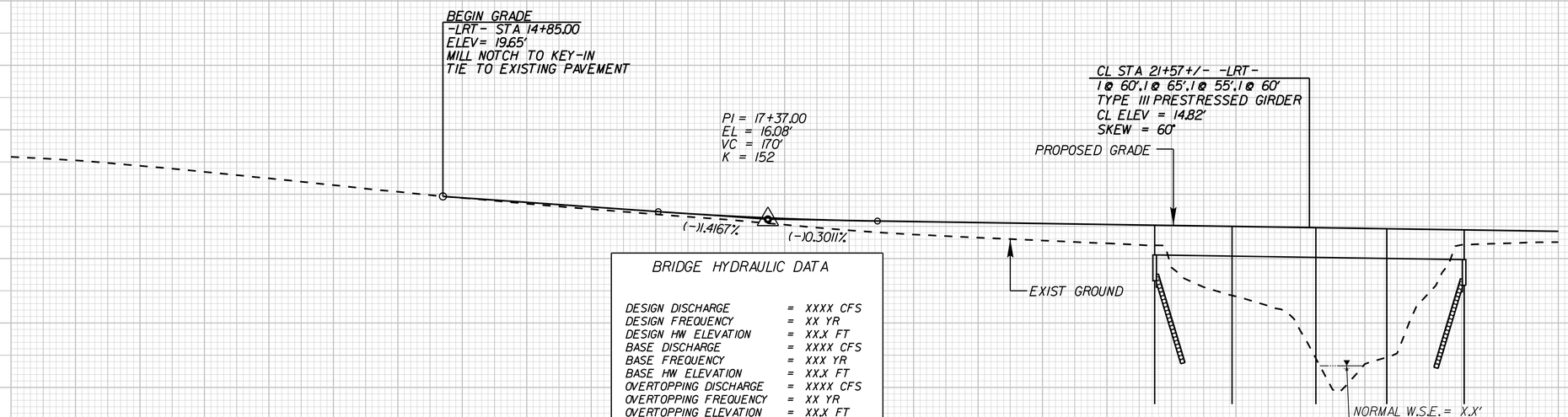
BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	XXXX CFS
DESIGN FREQUENCY	=	XX YR
DESIGN HW ELEVATION	=	XX.X FT
BASE DISCHARGE	=	XXXX CFS
BASE FREQUENCY	=	XXX YR
BASE HW ELEVATION	=	XX.X FT
OVERTOPPING DISCHARGE	=	XXXX CFS
OVERTOPPING FREQUENCY	=	XX YR
OVERTOPPING ELEVATION	=	XX.X FT
DATE OF SURVEY	=	XX/XX/XXX
W.S.ELEVATION AT DATE OF SURVEY	=	XX.X FT

****
BM1 ELEVATION = 3.45
N 422147 E 2622838
-L- STATION 19+21.07 175.58' LEFT
BENCHTIE SET IN 18" CYPRESS
****

-LLT- US 70

SEE SHEET NO.4 FOR -L- PLAN



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	XXXX CFS
DESIGN FREQUENCY	=	XX YR
DESIGN HW ELEVATION	=	XX.X FT
BASE DISCHARGE	=	XXXX CFS
BASE FREQUENCY	=	XXX YR
BASE HW ELEVATION	=	XX.X FT
OVERTOPPING DISCHARGE	=	XXXX CFS
OVERTOPPING FREQUENCY	=	XX YR
OVERTOPPING ELEVATION	=	XX.X FT
DATE OF SURVEY	=	XX/XX/XXX
W.S.ELEVATION AT DATE OF SURVEY	=	XX.X FT

****
BM1 ELEVATION = 3.45
N 422147 E 2622838
-L- STATION 19+21.07 175.58' LEFT
BENCHTIE SET IN 18" CYPRESS
****

-LRT- US 70

SEE SHEET NO.4 FOR -L- PLAN

5/28/99

K:\RAL_Roadway\011036510 - BR-0074 US 70\Roadway\Pro\BR0074_rdy_pf1.dgn

8/11/2022

5/28/99

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RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

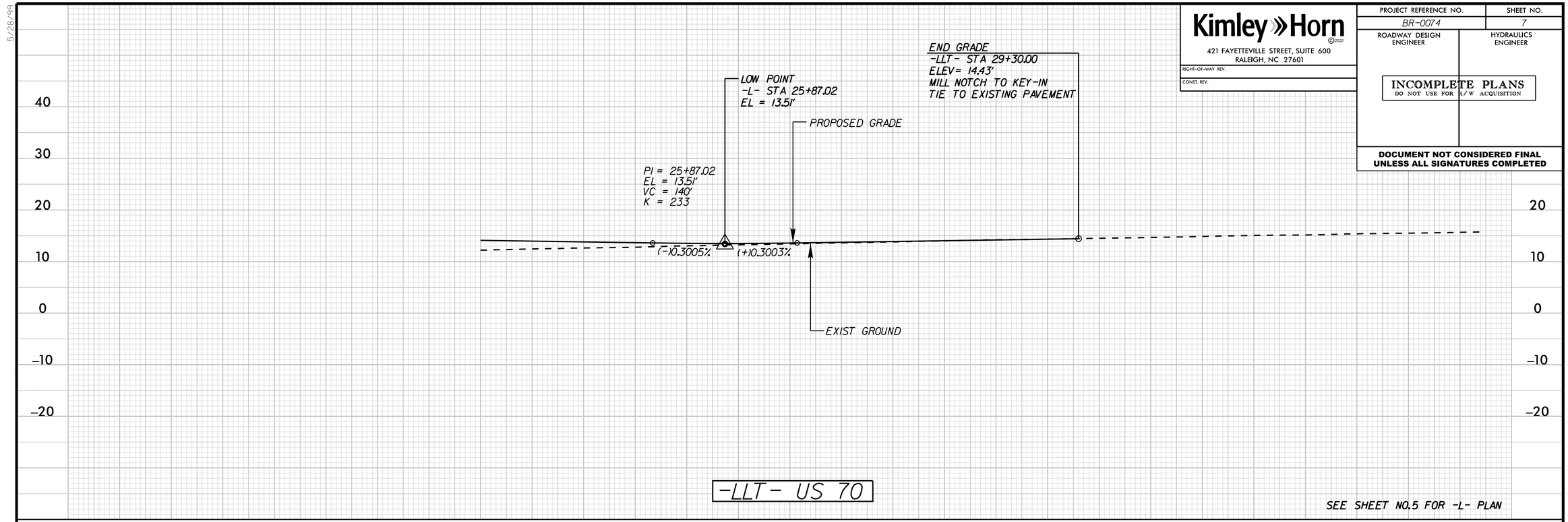
PROJECT REFERENCE NO.	SHEET NO.
BR-0074	7

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

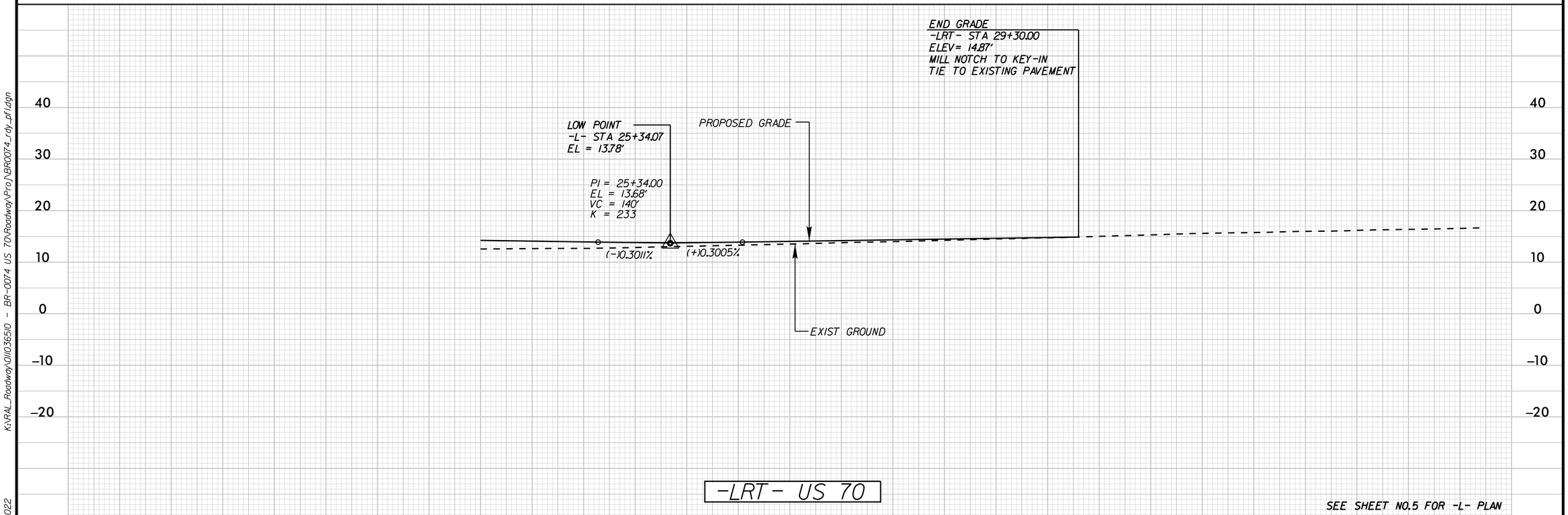
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



-LLT- US 70

SEE SHEET NO.5 FOR -L- PLAN



-LRT- US 70

SEE SHEET NO.5 FOR -L- PLAN

K:\RAL_Roadway\011036510 - BR-0074 US 70\Roadway\Pro\BR0074_rdy_pf1.dgn
8/11/2022

5/28/99

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RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

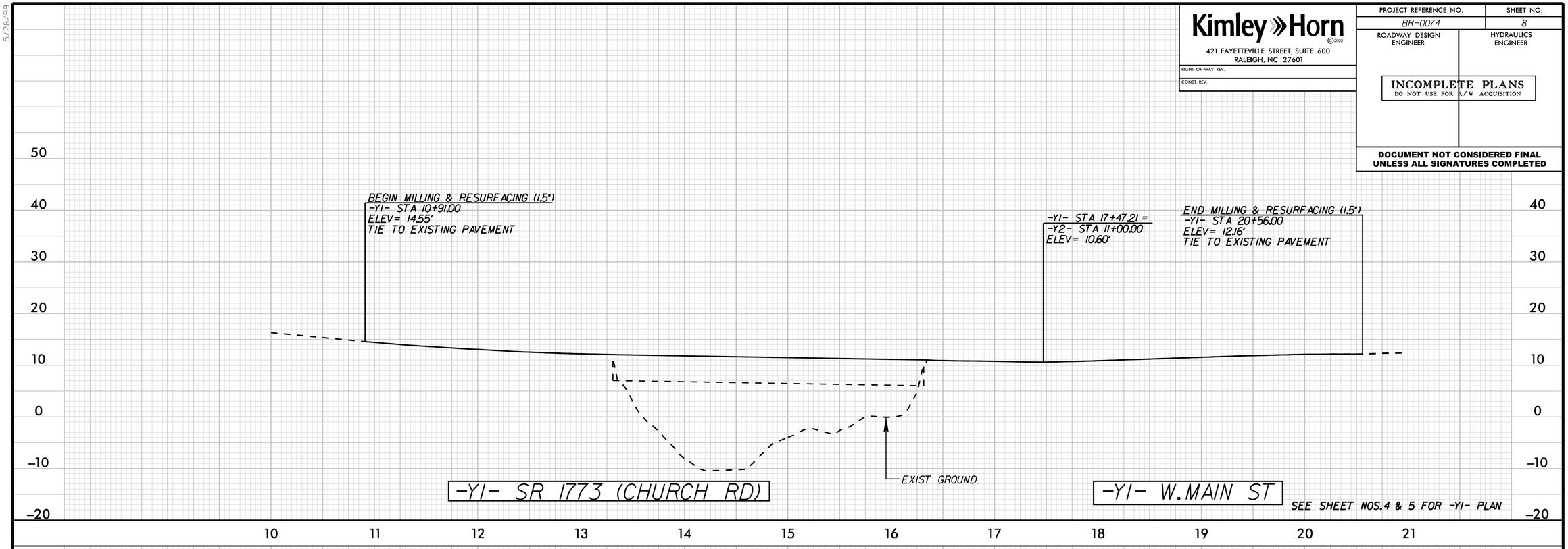
PROJECT REFERENCE NO.	SHEET NO.
BR-0074	8

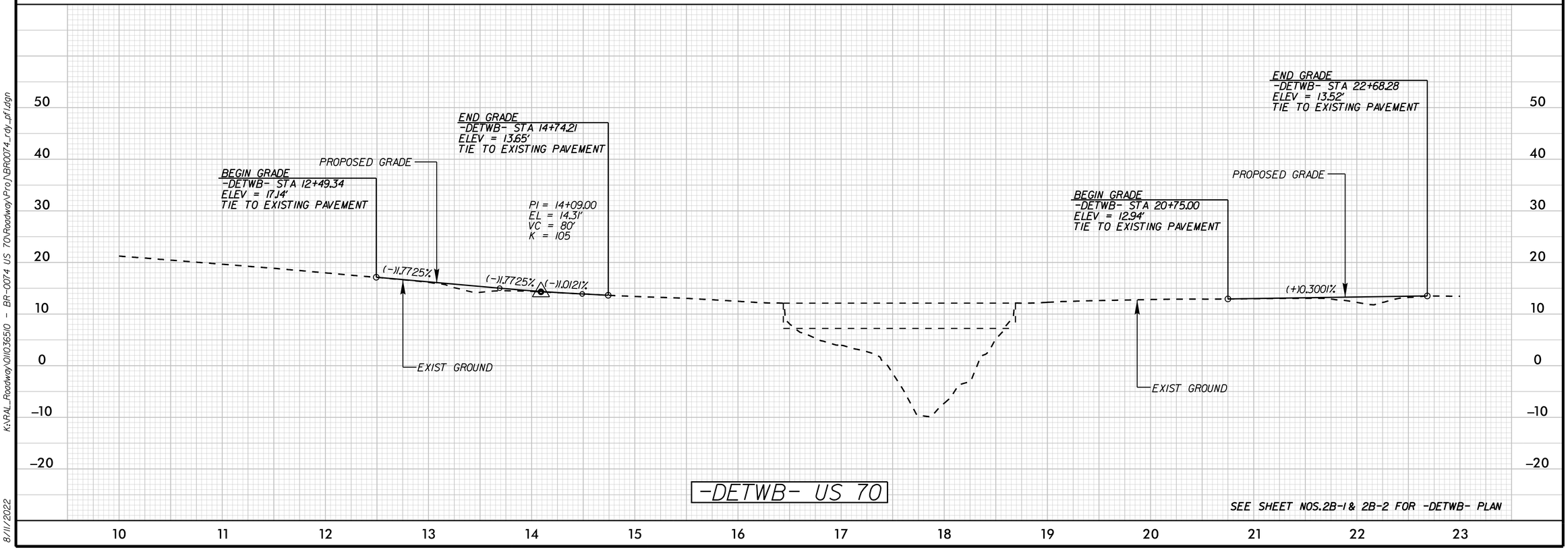
ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED





K:\RAL_Roadway\011036510 - BR-0074 US 70\Roadway\Pro\BR0074_rdy_pf1.dgn

8/11/2022

5/28/99

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RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

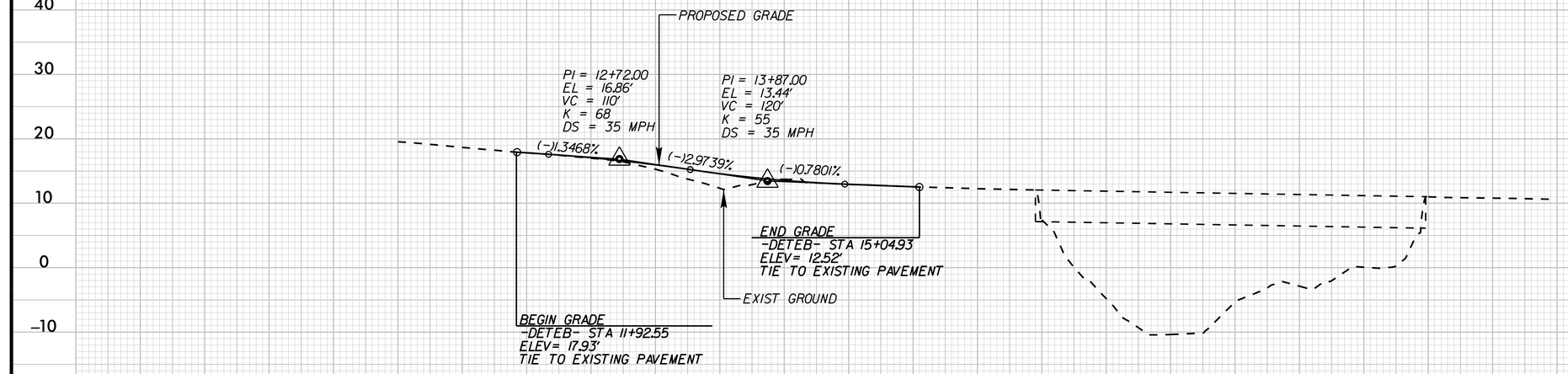
PROJECT REFERENCE NO.	SHEET NO.
BR-0074	9

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

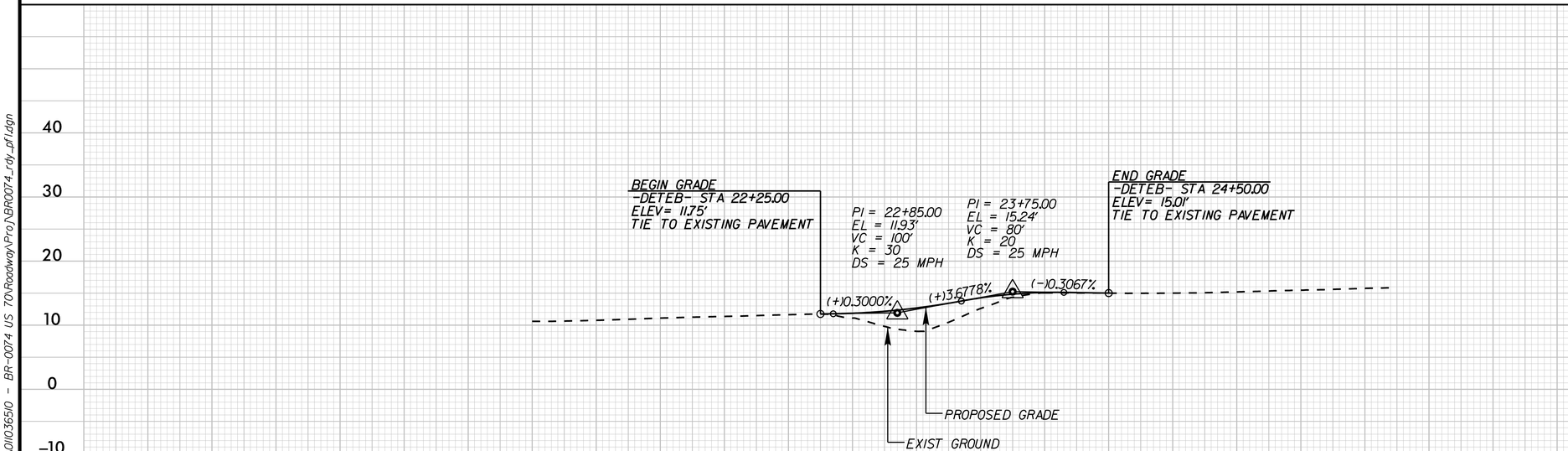
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



-DETEB- US 70

SEE SHEET NOS.2B-1 & 2B-2 FOR -DETEB- PLAN



-DETEB- US 70

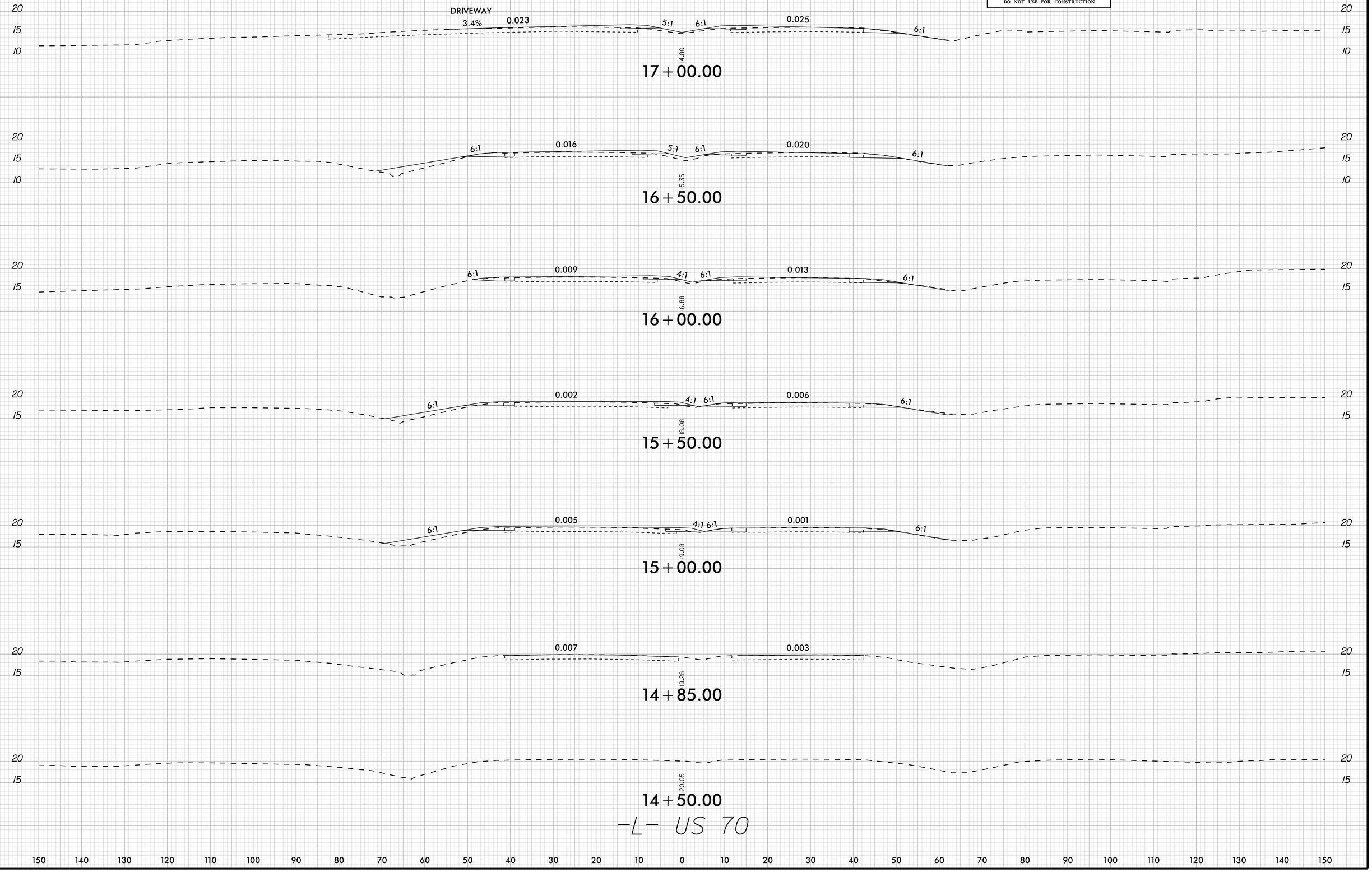
SEE SHEET NOS.2B-1 & 2B-2 FOR -DETEB- PLAN

K:\RAL_Roadway\011036510 - BR-0074 US 70\Roadway\Pro\BR0074_rdy_pf1.dgn

8/11/2022

8/23/99

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	0 5 10	PROJ. REFERENCE NO.	SHEET NO.
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		BR-0074	X-2



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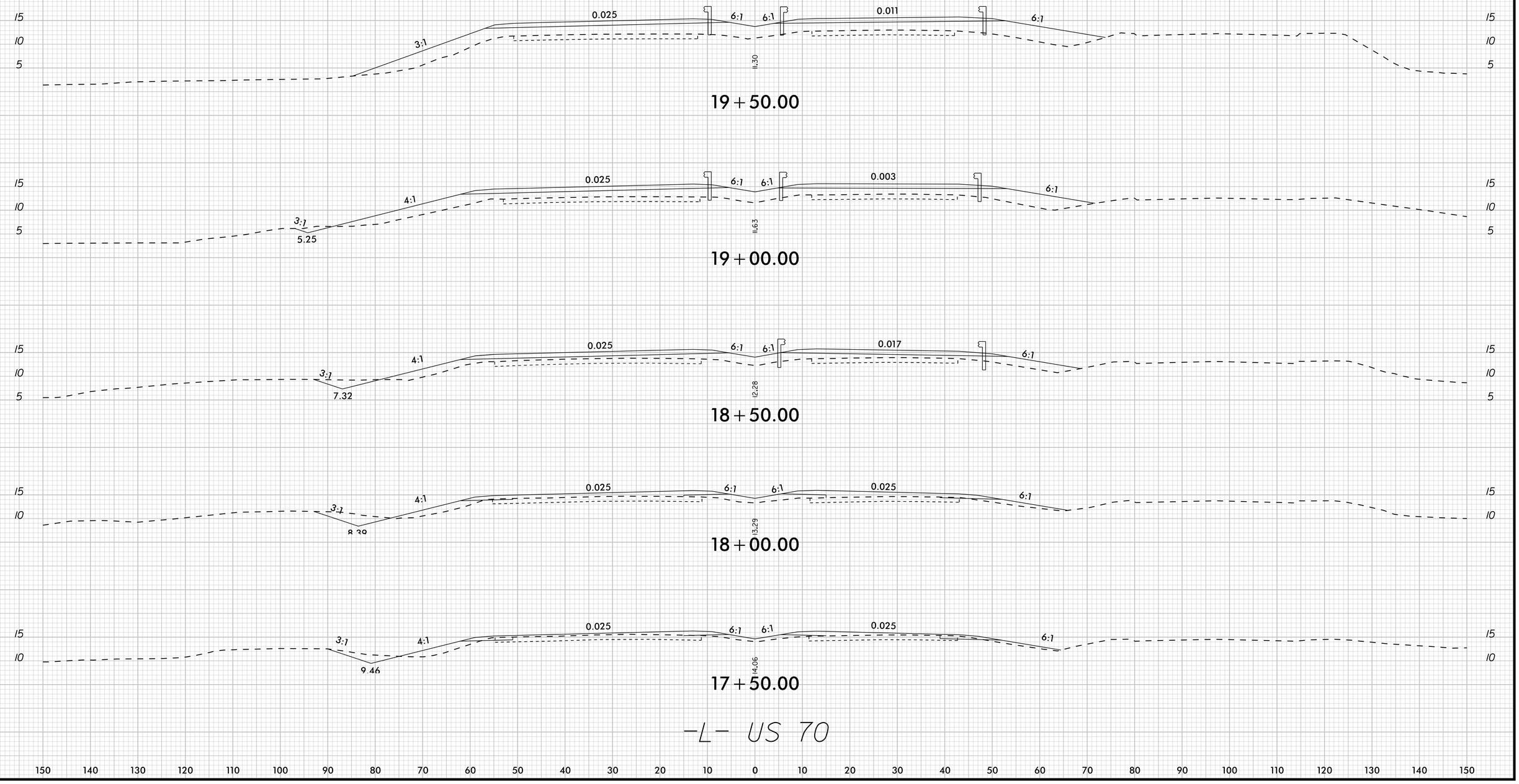
8/11/2022

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	BR-0074	X-3



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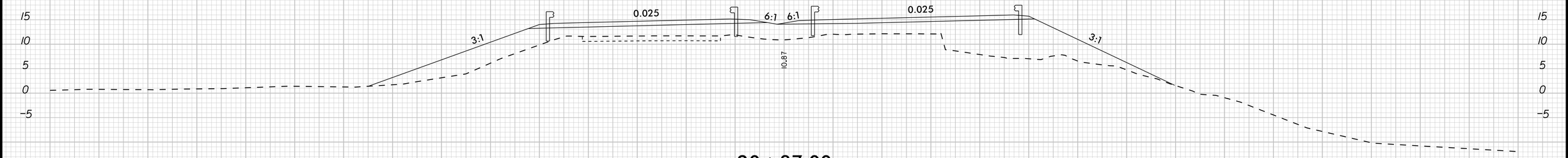
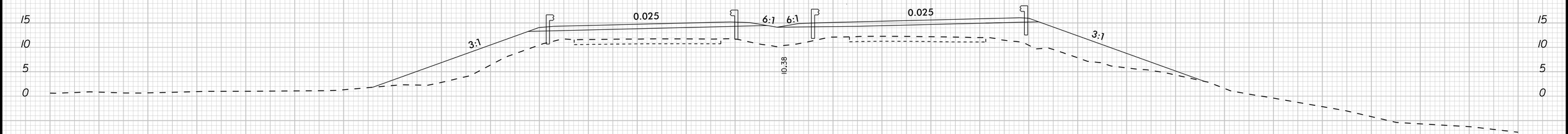
8/11/2022

8/23/99

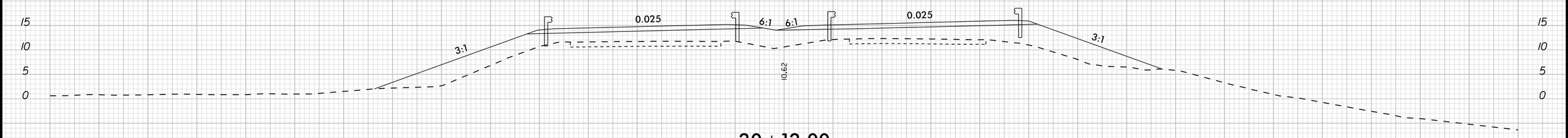
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	BR-0074	X-4



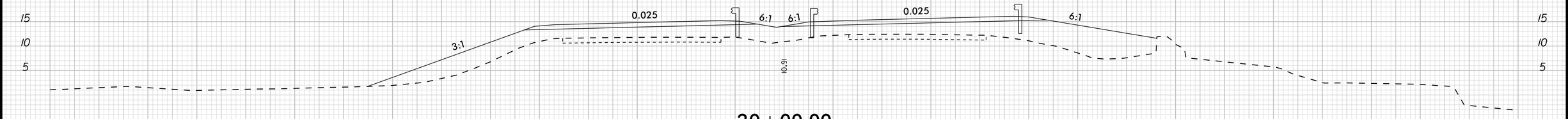
20+37.00



20+18.00



20+12.00



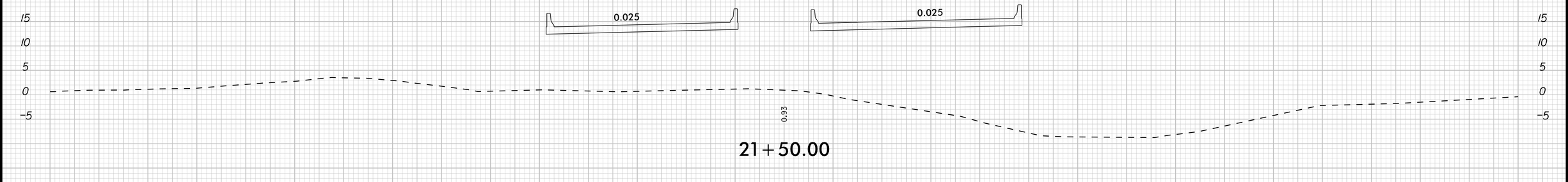
20+00.00

-L- US 70

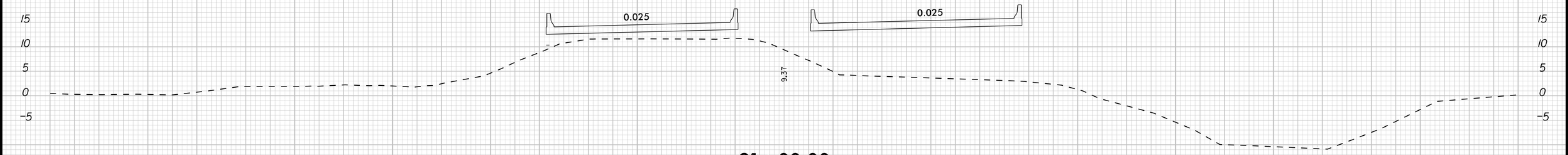
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

K:\RAL_Roadway\0110365\0 - BR-0074 US 70\Roadway\XSC\BR0074_rdy_xpl_Ldgn

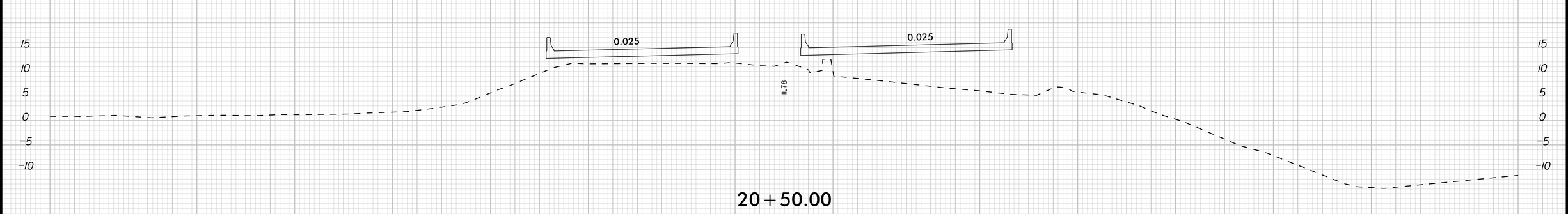
8/11/2022



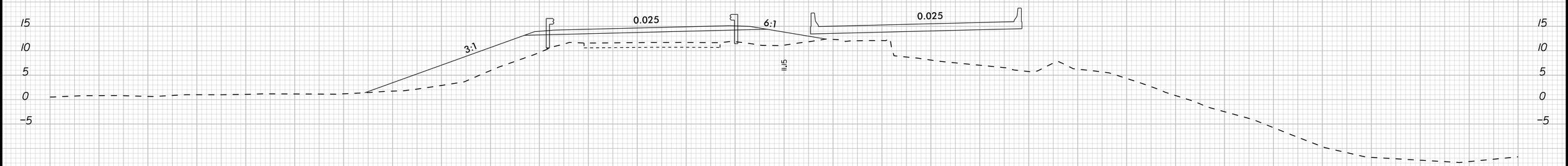
21+50.00



21+00.00



20+50.00



20+43.00

-L- US 70

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

8/23/99

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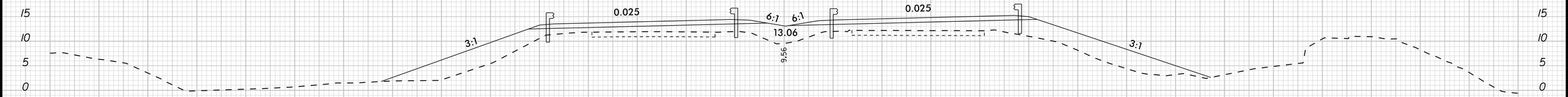
	BR-0074	X-6



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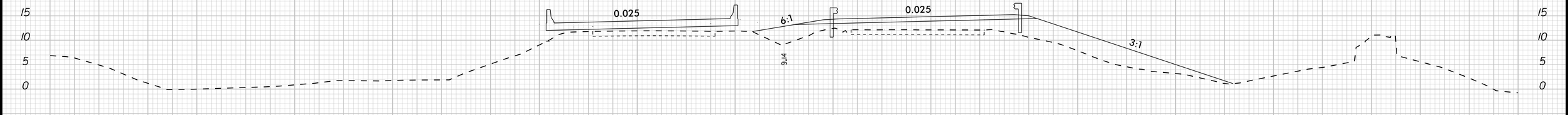

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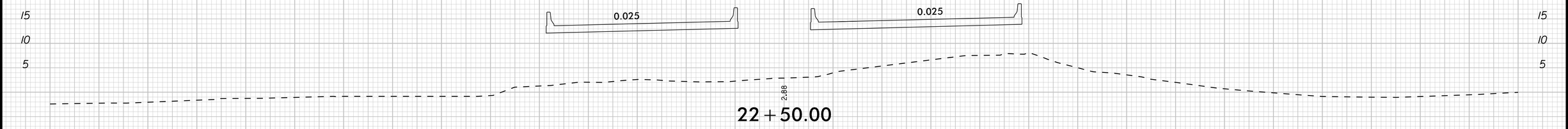

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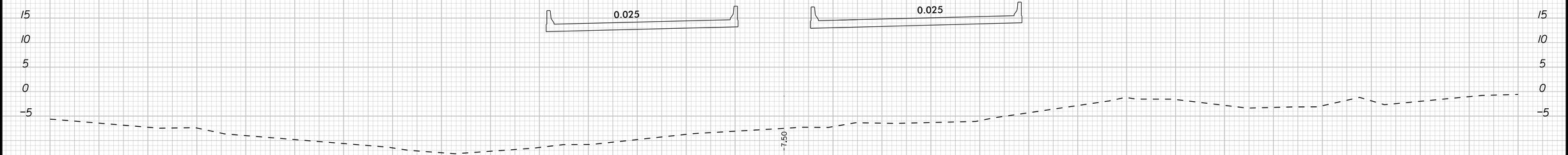

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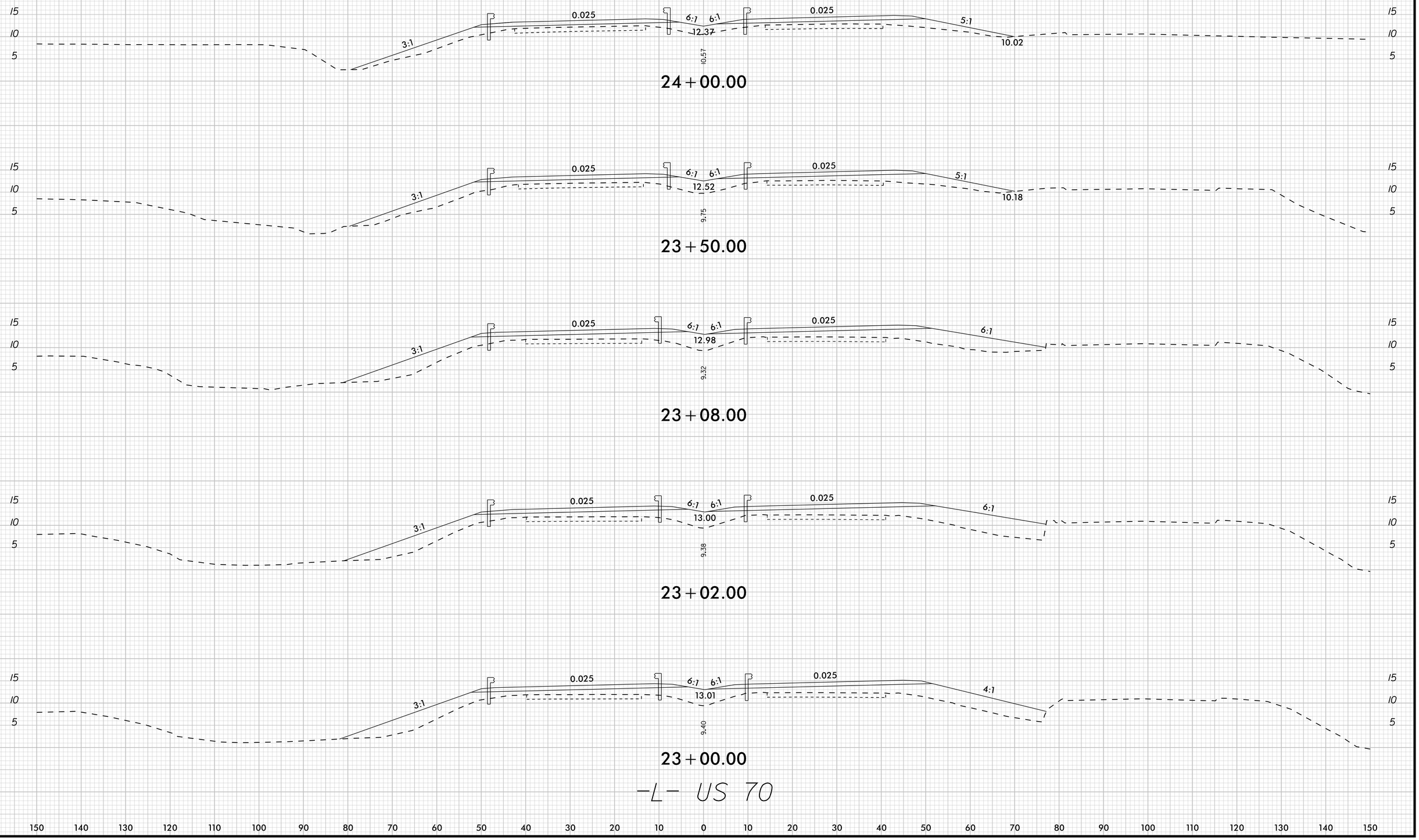

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8/II/2022

Project Tracking No.:

18-09-0094
Resubmit

NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.

PROJECT INFORMATION

Project No:	**BR-0074**	*County:*	**Craven**
WBS No:	**67074.1.1**	*Document:*	**MCC**
F.A. No:		*Funding:*	☒ State ☐ Federal

Federal Permit Required? ☒ Yes ☐ No *Permit Type:* **USACE**

Project Description: Replacement of Bridges 91 and 92 on US 70 over Southwest Prong Slocum Creek in Craven County, North Carolina. The archaeological Area of Potential Effects (APE) encompasses all areas of potential ground disturbing activity as depicted on the attached GIS mapping. The project has been resubmitted as the APE has altered slightly. The northern and southern limits have elongated but the overall project corridor width has become smaller (see attached mapping).

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

Permitting and funding information was reviewed for determining the level of archaeological input required by state and federal laws. Based on the submitted "request for cultural resources review" form, the project is state-funded with federal permit interaction. As such, Section 106 of the National Historic Preservation Act will apply and the United States Army Corps of Engineers (USACE) will serve as the lead federal agency. Next, construction design and other data was examined (when applicable) to define the character and extent of potential impacts to the ground surfaces embracing the project locale. The APE was designed to capture any federal permit areas.

Once an APE was outlined, a map review and site file search was conducted at the Office of State Archaeology (OSA) on Thursday, September 27, 2018. No previously documented archaeological sites are located in the APE or directly adjacent.

Examination of National Register of Historic Places (NRHP), State Study Listed (SL), Locally Designated (LD), Determined Eligible (DE), and Surveyed Site (SS) properties employing resources available on the NCSHPO website is important in establishing the location of noteworthy historic occupations related to a perspective construction impact area. A cross-check of these mapped resources concluded that no meaningful historic properties with possible contributing archaeological elements were located inward of the archaeological APE margins. In addition, historic maps of Craven County were appraised to identify former structure locations, land use patterns, or other confirmation of historic occupation in the project vicinity. Archaeological/historical reference materials were inspected as well. In general, the cultural background review established that no NRHP listed properties, previously recorded archaeological sites, or cemeteries are located within the APE. Based on cultural-historical factors, the APE is considered to have a low potential for the documentation of archaeological resources.

Further, topographic, geologic, flood boundary, and NRCS soil survey maps were referenced to evaluate pedeological, geomorphological, hydrological, and other environmental determinants that may have resulted in past occupation at this location. Aerial and on-ground photographs (NCDOT Spatial Data Viewer) and the Google Street View map application (when amenable) were also examined/utilized for additional assessment of disturbances, both natural and human induced, which compromise the integrity of archaeological sites. Environmental/impact factors suggest a heightened potential for archaeological resource recovery.

Project Tracking No.:

18-09-0094
Resubmit

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

No documented cultural resources are contained within the current APE limits for this bridge replacement project in Craven County, North Carolina. The proposed bridge replacement is to occur in areas largely impacted from commercial development and highway & road construction. Some portions of the APE contain wetland soils with no potential for archaeological resource recovery. The project's resubmittal on the basis of an APE alteration will not affect the original no survey required recommendation. The majority of the APE has shrunken while the only expanded portions located at the northern and southern terminus are highly disturbed from development. Intact NRHP archaeological sites are unlikely to be present or preserved within the currently defined APE. No further consultation is advocated. A finding of "no archaeological survey required" is considered appropriate.

SUPPORT DOCUMENTATION

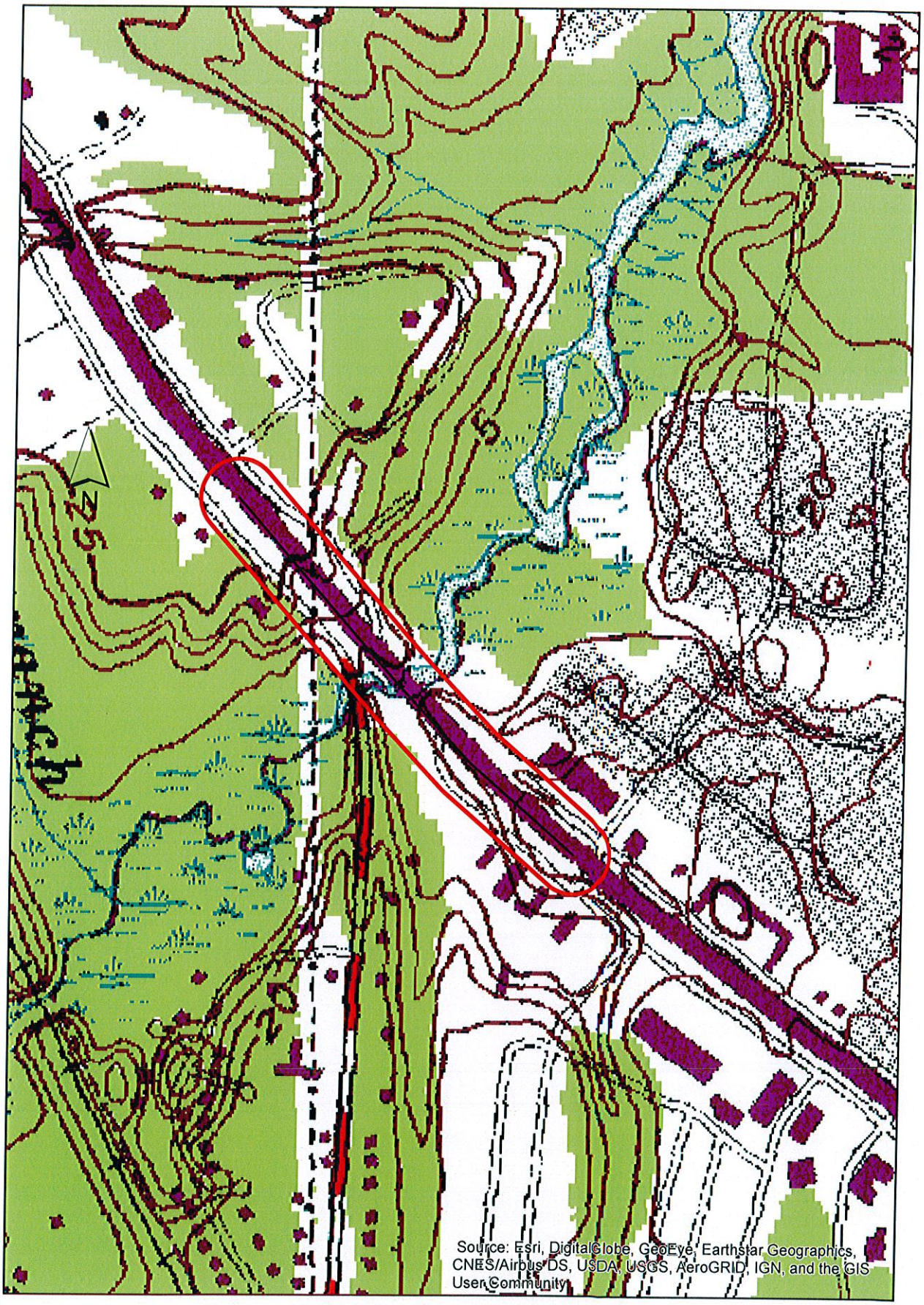
See attached: ☒ Map(s) ☒ Previous Survey Info ☐ Photos ☐ Correspondence
☐ Photocopy of County Survey Notes Other:

FINDING BY NCDOT ARCHAEOLOGIST

NO ARCHAEOLOGY SURVEY REQUIRED

Matt Eric Helvarg 5-9-2019
NCDOT

ARC-GIS aerial shape file map relating the location and boundaries of the archaeological APE in Craven County, North Carolina.



Portion of the Havelock topographic map illustrating the location and boundaries of the archaeological APE in Craven County, North Carolina.

18-09-0094
UPDATE

HISTORIC ARCHITECTURE AND LANDSCAPES NO SURVEY REQUIRED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	BR-0074	***County***:	Craven
WBS No.:	67074.1.1	***Document Type***:	MCC
Fed. Aid No:		***Funding***:	☒ State ☐ Federal
Federal Permit(s):	☒ Yes ☐ No	***Permit Type(s)***:	USACE

Project Description:
Replace Bridge Nos. 91 and 92 on US 70 over the southwest prong of Slocum Creek north of Havelock. Project study area mapping and shapefiles were provided with the request. The project area is approximately a 0.5 mile corridor, 1,000 feet wide. Project area was extended on both termini and indicated on the attached map.

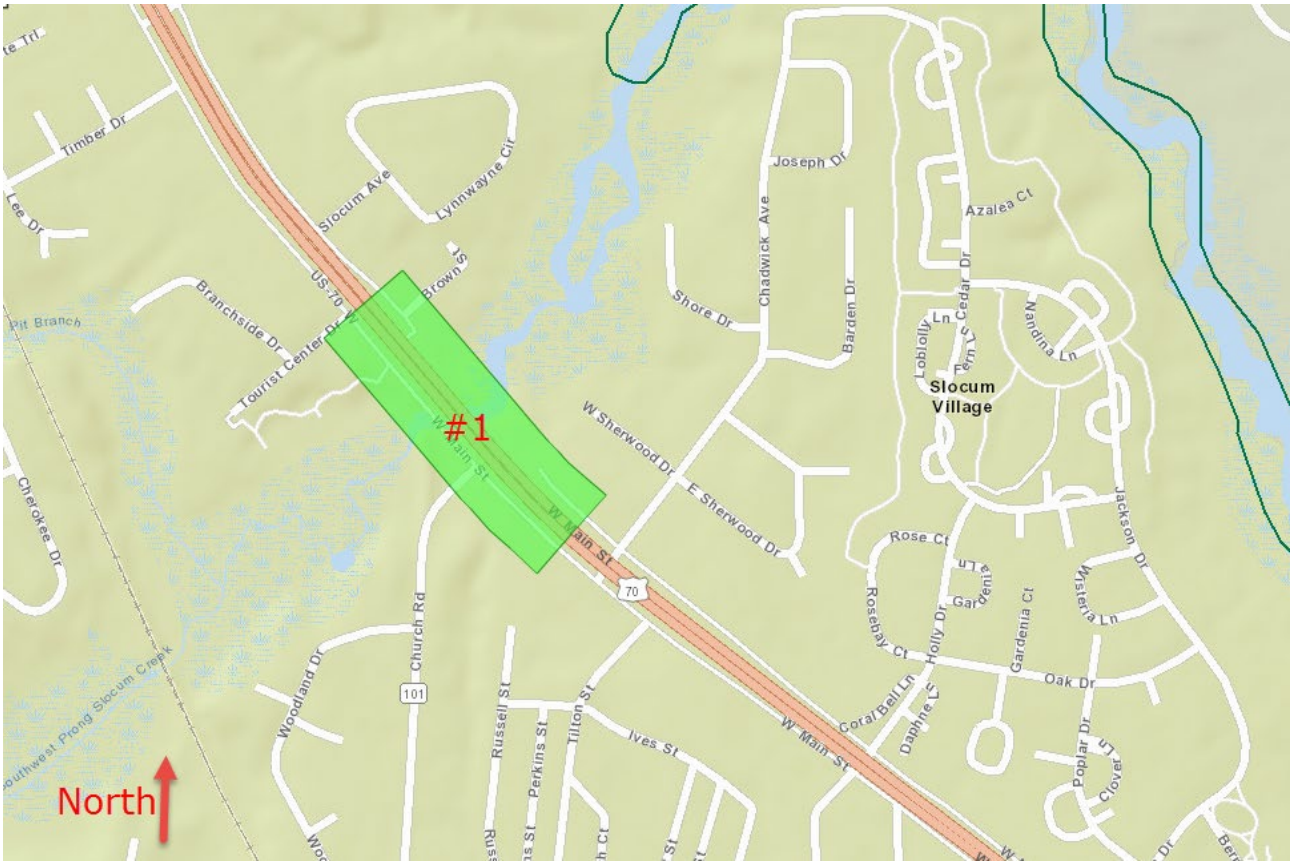
SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:
Review of project area on HPOWeb GIS was conducted in November 2018. There are no existing NR, SL, DE, LD or SS properties in the project area. Constructed in 1944, Bridges 91 and 92 are Tee Beams that were determined not eligible for the National Register in the Historic Bridge Inventory of 2005. Tax records and Google Street view show late 20th century commercial properties including several restaurants and large hotels dominate the project area. There do not appear to be any significant historic architectural resources within the project area, therefore no further survey is required. There are no additional architectural resources of historic significance in the extended project area.

Why the available information provides a reliable basis for reasonably predicting that there are no unidentified significant historic architectural or landscape resources in the project area:
HPO GIS data, Google StreetView and Craven County property records are considered valid tools for the purposes of determining the likelihood of historic resources.

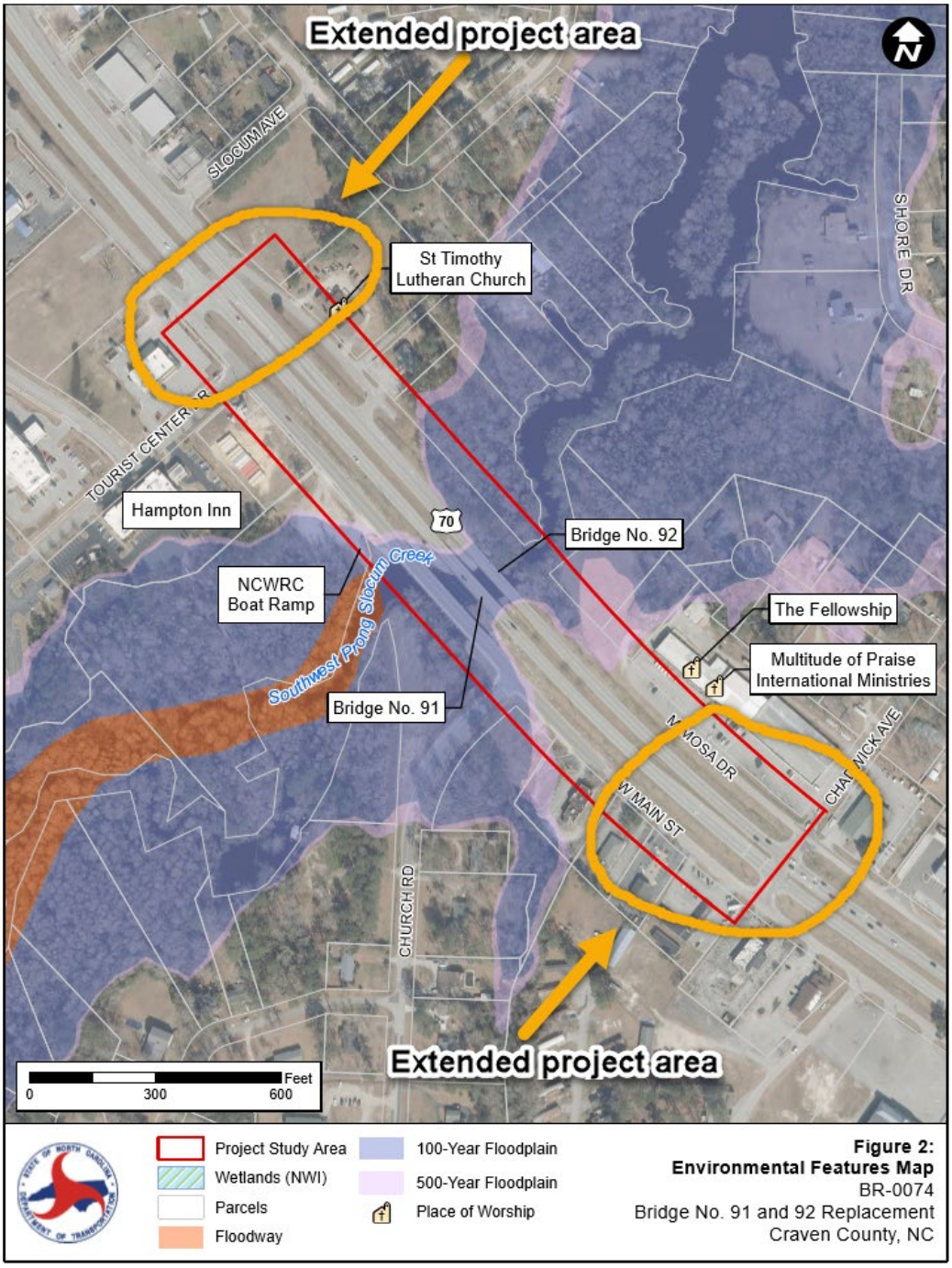
SUPPORT DOCUMENTATION

☒Map(s) ☐Previous Survey Info. ☒Photos ☐Correspondence ☐Design Plans



APE Map (Source: HPOWeb, November 2018)

#1 Bridges 91 and 92: Google StreetView



Extended project areas as of May 2019

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- NO SURVEY REQUIRED

Mary Pope Furr **5/9/2019**

NCDOT Architectural Historian Date