Turchy, Michael A

From: Turchy, Michael A
Sent: Monday, July 7, 2025 10:05 AM
To: Annino, Amy; Jamison, John
Cc: Amschler, Crystal C CIV USARMY CESAW (US); McHenry, David G; Wojoski, Paul A; Pjetraj, Michael; Bukowy (HNTB), Kat A
Subject: RE: Request for Additional Information: DWR 20250109 V3 - Hurricane Helene I-40 Pigeon River Gorge Emergency Relief Project

Hi Amy,
Please see NCDOT's responses to DWR's questions in the table below. Due to the size of the attachments, they are located in one response package at the following link:
https://xfer.services.ncdot.gov/pdea/Temp/I-40/DWR%20Additional%20Information.pdf

DWR Question: 1. Please provide a more detailed justification as to why a haul road adjacent to S1-SAA would result in more impacts to water resources and stream S1-SAA and S1-SAB than the proposed option of the haul road on top of stream S1-SAA and S1-SAB. If the preferred alternative of placing the haul road on the stream is the selected alternative, DWR will require mitigation for stream loss as provided in the application. [15A NCAC 02H .0506(b)(1)]
NCDOT Response: Although this method of temporary impact to a stream is atypical, NCDOT believes in this situation, it provides the least overall impact and provides for the best opportunity for a successful restoration. Justification for this method includes the following: -Minimization to National Forest resources using this corridor: By using this valley to access the borrow site, this path would provide the most direct path to the borrow site and the project. The alternative to using this valley, would be to improve miles of existing US Forest Service roads. This alternative would have significantly higher impacts to water resources as well as significant and undesirable impacts to the National Forest. -The valley carrying this stream is quite steep. If NCDOT used traditional methods of cutting a road adjacent to the stream, this impact would result in significant vertical cuts (measured in 100's of feet) and would have a disturbance width of near 1,000 linear feet in the valley. Additionally, steep rock cuts will continue to be an erosion and sedimentation control issue throughout the life of the project for this method. By avoiding the need to introduce these unstable cuts, the haul road corridor will be easier to maintain from a sedimentation and erosion control standpoint. By temporarily piping and covering the stream, then placing the road on top of this facility, this reduces the horizontal disturbance width to this valley to approximately 110 linear feet.

DWR Question: 2. Will the mining operation generate wastewater or stormwater that will be discharged to surface waters?
NCDOT Response: The borrow site will have stormwater that will eventually be discharged into surface waters after treatment.
DWR Question (sub-divided): Please provide a plan sheet that indicates the location of proposed stormwater measures for the borrow pit area. [15A NCAC 02H .0506(b)(1) and 15A NCAC 02H .0502(a)(9)].

NCDOT Response:
Please find attached "**Erosion Control at Borrow Site**".

DWR Question:
3. Please show the footprint of the proposed retaining wall through the project area

NCDOT Response:
The proposed wall is located on the submitted set of drawings, and attached is a marked up set of drawings highlighting the wall for clarity, titled "**Drawings with Wall Highlighted."**
The wall is highlighted in yellow. Wall impacts are highlighted in red.

Additionally, the impact summary table has been excerpted on each page to clarify the quantify the wall impact.

As previously noted, impacts are shown using the "scour zone limits" of the Pigeon River, as locating the ordinary high water mark post-Helene is not possible. Therefore, these drawings display a "worst case scenario" and are likely much lower than indicated.

The total proposed wall impacts to the Pigeon River are 12,116 linear feet.

DWR Question (sub-divided):
and provide a detail of the proposed retaining wall where the wall will be constructed below the ordinary high water mark, resulting in stream or wetland impacts, on your plan sheet.

NCDOT Response:
Please find attached "**Wall- River Impact Detail**"

DWR Question (sub-divided):
Please also include information as to how tributaries to the Pigeon River will flow to and through the proposed retaining wall. [15A NCAC 02H .0506(b)(1) and 15A NCAC 02H .0502(a)(9)]

NCDOT Response:
Tributaries that flow from I-40 through various structures will discharge into the Pigeon River in a similar manner as the Pre-Helene Condition.

Pipes will be extended or modified so they flow through the proposed wall.

NCDOT will ensure discharge does not cause erosion or destabilization of the streambank, if appropriate.

DWR Question:
4. Mitigation is required for losses of equal to or greater than 300 linear feet of perennial stream and (equal to or greater than 1/10 acre of wetlands). Stream S1-SAD is a perennial stream, which NCDOT has proposed a total of 414 linear feet of permanent fill in two locations – Site 34 (244 LF) and Site 37 (170 LF). Please provide a mitigation plan that conforms to the requirements of 15A NCAC 02H.

NCDOT Response:
The final impact table from the permit application cover letter has been updated and included as an attachment titled, "**Revised Cover Letter Impact Summary for DWR Mitigation**."
Updated values are depicted in red for clarity.

Note, this does not change the requested mitigation for the project.

Michael Turchy
Environmental Coordination and Permitting [ECAP] Group Leader
Environmental Analysis Unit
North Carolina Department of Transportation

919 707 6157 office
919 818 7427 mobile
maturchy@ncdot.gov

1598 Mail Service Center (Mail)
Raleigh, NC 27699-1598

1000 Birch Ridge Drive (Delivery)
Raleigh, NC 27610

From: Annino, Amy <amy.annino@deq.nc.gov>
Sent: Friday, June 27, 2025 3:38 PM
To: Turchy, Michael A <maturchy@ncdot.gov>; Jamison, John <johnjamison@ncdot.gov>
Cc: Amschler, Crystal C CIV USARMY CESAW (US) <crystal.c.amschler@usace.army.mil>; McHenry, David G <david.mchenry@ncwildlife.gov>; Wojoski, Paul A <Paul.Wojoski@deq.nc.gov>; Pjetraj, Michael <michael.pjetraj@deq.nc.gov>
Subject: Request for Additional Information: DWR 20250109 V3 - Hurricane Helene I-40 Pigeon River Gorge Emergency Relief Project

Dear Mr. Turchy,

On June 5, 2025, the Division of Water Resources (Division) received your application requesting an Individual Water Quality Certification from the Division for the subject project. The Division has determined that your application is incomplete and cannot be processed. The application is on-hold until all of the following information is received:

1. Please provide a more detailed justification as to why a haul road adjacent to S1-SAA would result in more impacts to water resources and stream S1-SAA and S1-SAB than the proposed option of the haul road on top of stream S1-SAA and S1-SAB. If the preferred alternative of placing the haul road on the stream is the selected alternative, DWR will require mitigation for stream loss as provided in the application. [15A NCAC 02H .0506(b)(1)]

2. Will the mining operation generate wastewater or stormwater that will be discharged to surface waters? Please provide a plan sheet that indicates the location of proposed stormwater measures for the borrow pit area. [15A NCAC 02H .0506(b)(1) and 15A NCAC 02H .0502(a)(9)]

3. Please show the footprint of the proposed retaining wall through the project area and provide a detail of the proposed retaining wall where the wall will be constructed below the ordinary high water mark, resulting in stream or wetland impacts, on your plan sheet. Please also include information as to how tributaries to the Pigeon River will flow to and through the proposed retaining wall. [15A NCAC 02H .0506(b)(1) and 15A NCAC 02H .0502(a)(9)]

4. Mitigation is required for losses of equal to or greater than 300 linear feet of perennial stream and (equal to or greater than 1/10 acre of wetlands). Stream S1-SAD is a perennial stream, which NCDOT has proposed a total of 414 linear feet of permanent fill in two locations – Site 34 (244 LF) and Site 37 (170 LF). Please provide a mitigation plan that conforms to the requirements of 15A NCAC 02H.

Pursuant to Title 15A NCAC 02H .0502(e), the applicant shall furnish all of the above requested information for the proper consideration of the application. Please respond in writing within 30 calendar days of receipt of this letter by sending one (1) copy of all of the above requested information to the 401 & Buffer Permitting Branch, 1617 Mail Service Center, Raleigh, NC 27699-1617 OR by submitting all of the above requested information through this link: https://edocs.deq.nc.gov/Forms/Supplemental-Information-Form (note the DWR# requested on the link is referenced above).

If all of the requested information is not received within 30 calendar days of receipt of this letter, the Division will be unable to approve the application and it will be denied as incomplete. The denial of this project will necessitate reapplication to the Division for approval, including a complete application package and the appropriate fee.

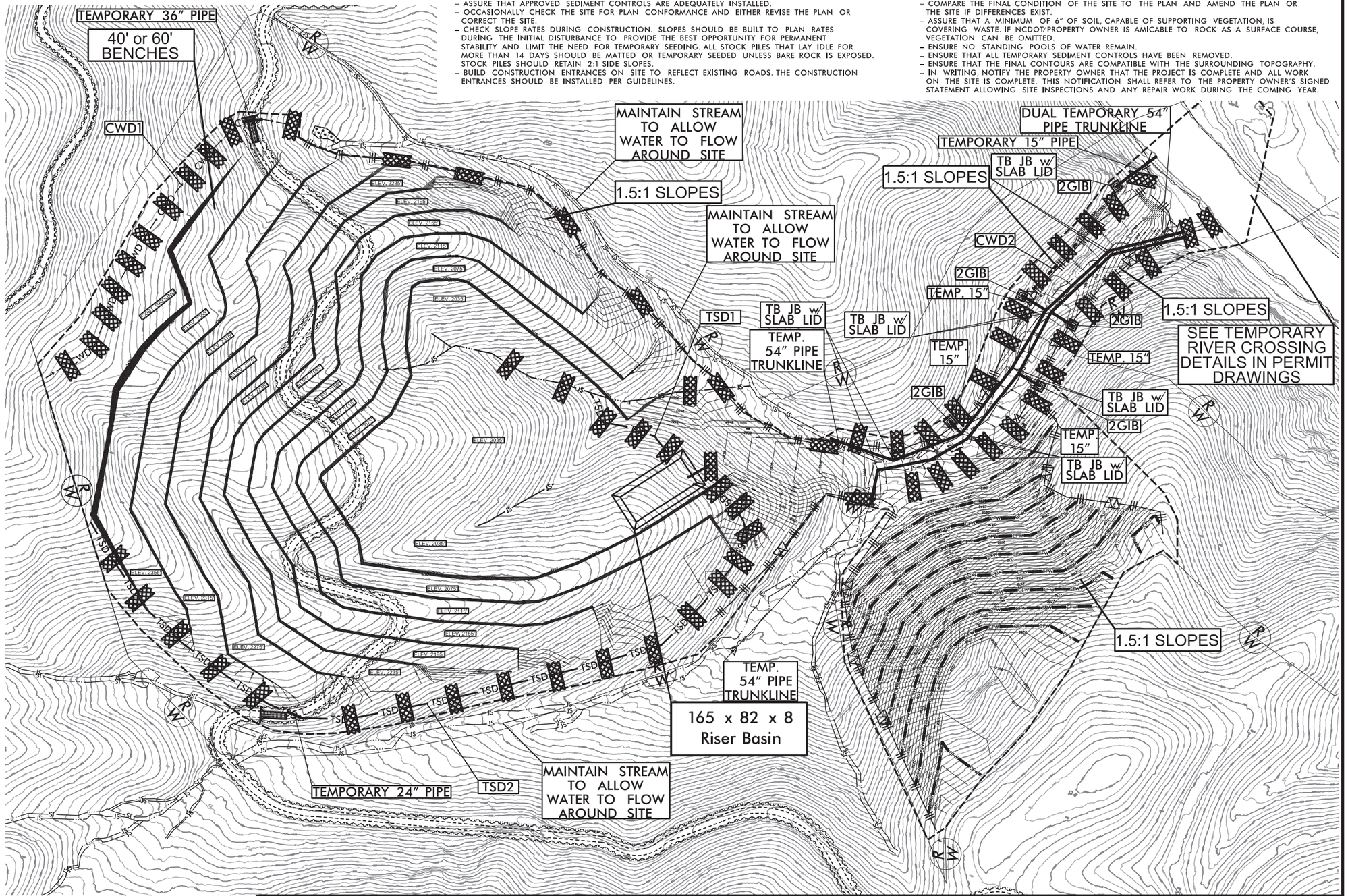
Please be aware that you have no authorization under the Section 401 of the Clean Water Act/ Isolated Wetlands and Isolated Waters Rules/Buffer Rules for this activity and any work done within waters of the state may be a violation of North Carolina General Statutes and Administrative Code.

Please contact me if you have any questions or concerns.

Sincerely,

Amy Annino
Environmental Specialist II
401 and Buffer Transportation Permitting Branch
North Carolina Department of Environmental Quality
Office: (828) 296-4668
amy.annino@deq.nc.gov

Erosion and Sedimentation Control Plans



NOTES:
- MINIMUM 10′ SETBACK FROM ALL PROPERTY LINES.
- SKAGGS METHOD HAS BEEN USED FOR THIS BORROW PIT AND IT WAS DETERMINED THAT EXCAVATION OF THE BORROW PIT IS OUTSIDE THE LATERAL OFFSET OF THE WETLAND.
- NO ACTIVITIES WITHIN HIGH QUALITY WATER ZONES.
- THE CONSTRUCTION OF THE HAUL ROAD WILL ALWAYS BE IN A MANNER THAT DOES NOT TRAP DRAINAGE BEHIND IT.

THIS CAN BE ACHIEVED BY:
1) NOT USING CUT DITCHES ALONG THE ROAD;
2) USING THE NORMAL CROWN TYPICAL CROSS SECTION PROVIDED.

CALCULATIONS:
- RISER BASIN
Q = Q10peak = CIA = 0.2*3.97in/hr* 39.1 ac = 31.1 cfs
Adisturb = 25.8 ac
AREA REQUIRED = A = 435*Q = 435*31.1 = 13,529 ft^2
AREA PROVIDED = 13,530 ft^2
VOLUME REQUIRED = V = 1,800*Adisturb.
= 1,800*25.8ac = 46,440 FT^3
VOLUME PROVIDED = 68,490 FT^3
DEPTH (D) = 8′
H = 1′, T = 6′, E = 6.0′, F = 1.0′, B = 8′
X = 5.5′, Y = 1.0′, X1 = 5.0′, Y1 = 1.0′
ORIFFICE DIAMETER = 3.875″
SKIMMER SIZE = 4″
OUTLET PIPE = 24″

DITCH SHEAR STRESS = 62.4*SLOPE*DEPTH

CWD1: 62.4*0.36*0.22 = 4.93 lb/ft^2
V = 5.56 ft/s, USE EC MATTING LINER

CWD2: 62.4*0.06*0.37 = 1.40 lb/ft^2
V = 5.56 ft/s, USE EC MATTING LINER

TSD1: 62.4*0.015*0.70 = 0.64 lb/ft^2
V = 4.0 ft/s, EC MATTING LINER

TSD2: 62.4*0.262*0.34 = 5.6 lb/ft^2
V = 11.4 ft/s, EC MATTING LINER

DURING CONSTRUCTION:
- ASSURE THAT APPROVED SEDIMENT CONTROLS ARE ADEQUATELY INSTALLED.
- OCCASIONALLY CHECK THE SITE FOR PLAN CONFORMANCE AND EITHER REVISE THE PLAN OR CORRECT THE SITE.
- CHECK SLOPE RATES DURING CONSTRUCTION. SLOPES SHOULD BE BUILT TO PLAN RATES DURING THE INITIAL DISTURBANCE TO PROVIDE THE BEST OPPORTUNITY FOR PERMANENT STABILITY AND LIMIT THE NEED FOR TEMPORARY SEEDING. ALL STOCK PILES THAT LAY IDLE FOR MORE THAN 14 DAYS SHOULD BE MATTED OR TEMPORARY SEEDED UNLESS BARE ROCK IS EXPOSED. STOCK PILES SHOULD RETAIN 2:1 SIDE SLOPES.
- BUILD CONSTRUCTION ENTRANCES ON SITE TO REFLECT EXISTING ROADS. THE CONSTRUCTION ENTRANCES SHOULD BE INSTALLED PER GUIDELINES.

FINAL INSPECTION:
- COMPARE THE FINAL CONDITION OF THE SITE TO THE PLAN AND AMEND THE PLAN OR THE SITE IF DIFFERENCES EXIST.
- ASSURE THAT A MINIMUM OF 6″ OF SOIL, CAPABLE OF SUPPORTING VEGETATION, IS COVERING WASTE. IF NCDOT/PROPERTY OWNER IS AMICABLE TO ROCK AS A SURFACE COURSE, VEGETATION CAN BE OMITTED.
- ENSURE NO STANDING POOLS OF WATER REMAIN.
- ENSURE THAT ALL TEMPORARY SEDIMENT CONTROLS HAVE BEEN REMOVED.
- ENSURE THAT THE FINAL CONTOURS ARE COMPATIBLE WITH THE SURROUNDING TOPOGRAPHY.
- IN WRITING, NOTIFY THE PROPERTY OWNER THAT THE PROJECT IS COMPLETE AND ALL WORK ON THE SITE IS COMPLETE. THIS NOTIFICATION SHALL REFER TO THE PROPERTY OWNER'S SIGNED STATEMENT ALLOWING SITE INSPECTIONS AND ANY REPAIR WORK DURING THE COMING YEAR.

WASTE PILE CROSS SECTION

N.T.S.

TYPICAL CROSS SECTION OF BORROW PIT

N.T.S.

HAUL ROAD

A–A N.T.S.

VICINITY MAP (NTS)

JURISDICTIONAL FEATURES LEGEND

---WLB---	WETLAND BOUNDARY
---JS---	JURISDICTIONAL STREAM

EROSION CONTROL LEGEND

—‖‖—‖‖—	SILT FENCE
▨	CONSTRUCTION ENTRANCE
— TSD —	TEMPORARY SILT DITCH
▣	TEMPORARY ROCK INLET SEDIMENT TRAP
W	SPECIAL SEDIMENT CONTROL FENCE /SILT FENCE BREAKS
- - - - - -	LIMITS OF DISTURBANCE
→ CWD →→	CLEAN WATER DIVERSION
▩	TEMPORARY ROCK SILT CHECK TYPE A

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Matthew Bailey, P.E. — *4295*
NAME — *LEVEL III CERTIFICATION NO.*

RECLAMATION PLAN
PIGEON RIVER SITE 1 BORROW PIT AND SITE 3 WASTE PIT FOR I–40 PIGEON RIVER PROJECT

PROPERTY OWNER:
U.S. FORESTRY SERVICE

COUNTY: HAYWOOD

STATE PROJECT NO.:
18314.1044057.PR01

TIP NO: I–40 PIGEON RIVER

DATE PREPARED: 05/01/2025

CONTRACTOR:
Ames Construction

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

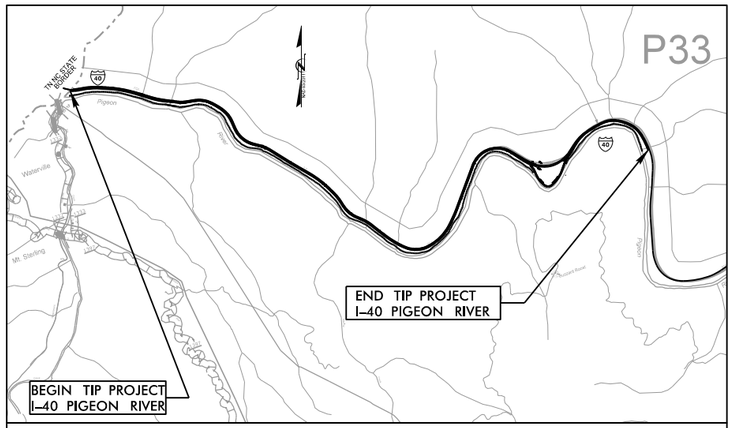
Permit Drawings with Wall Highlighted

09/08/59

TIP PROJECT: I-40 PIGEON RIVER

CONTRACT: C#

See Sheet 1B for Symbology Sheet



VICINITY MAP (NTS)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HAYWOOD COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-40 PIGEON RIVER	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
18314.1044057.PR01			

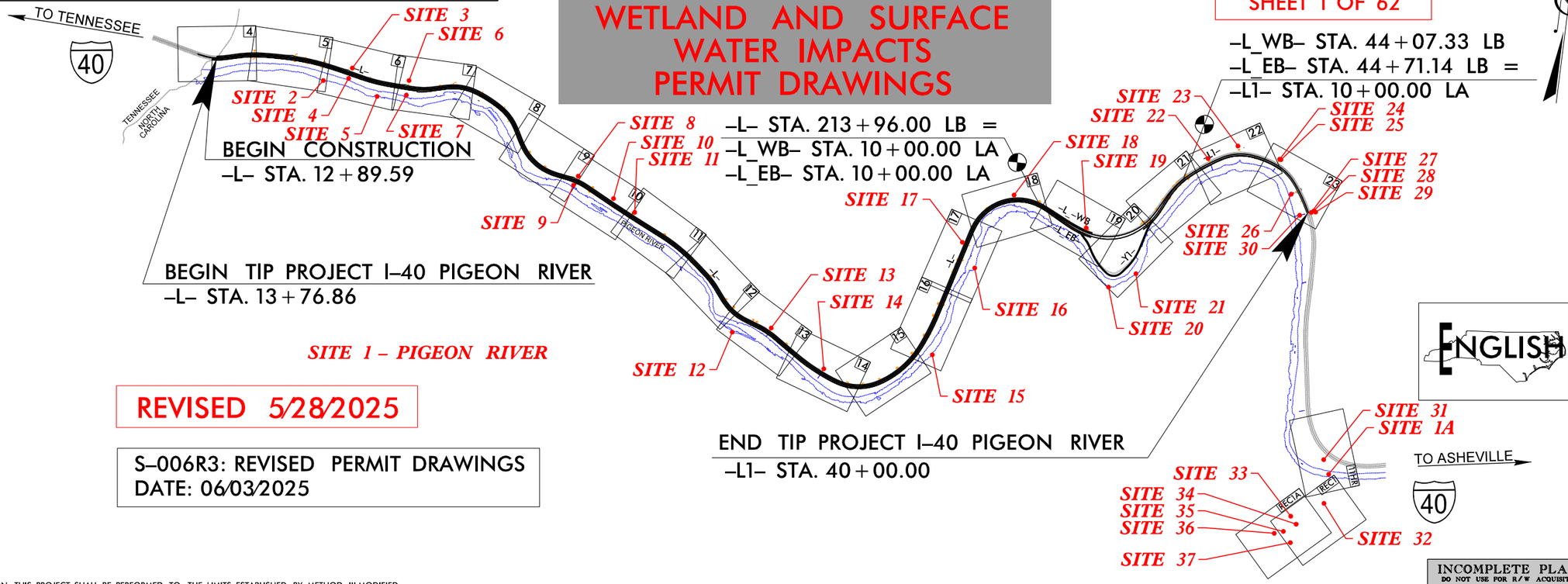
LOCATION: I-40 PIGEON RIVER GORGE EMERGENCY REPAIRS FROM THE TENNESSEE STATE LINE TO JUST WEST OF MILE MARKER 5

TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING, & RETAINING WALLS

PERMIT DRAWING
SHEET 1 OF 62

NAD 83/NA 2011

WETLAND AND SURFACE WATER IMPACTS PERMIT DRAWINGS



REVISED 5/28/2025

S–006R3: REVISED PERMIT DRAWINGS
DATE: 06/03/2025

NOTES:
1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III MODIFIED.
2. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
3. THIS PROJECT IS NOT WITHIN MUNICIPAL LIMITS.
4. DESIGN EXCEPTION FOR SHOULDER WIDTH, MINIMAL HORIZONTAL CURVE RADIUS, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

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

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2025 = 26,500
V = 55 MPH

FUNC CLASS: INTERSTATE

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-40 PIGEON RIVER.....4.810 MILES
LENGTH STRUCTURE TIP PROJECT I-40 PIGEON RIVER.....0.000 MILES
TOTAL LENGTH TIP PROJECT I-40 PIGEON RIVER.....4.810 MILES

NCDOT CONTACT

JOSH B. DEYTON, P.E.
DIVISION CONSTRUCTION ENGINEER

PLANS PREPARED BY:

RK&K — RUMMEL, KLEPPER & KAHL, LLP, 8601 SIX FORKS ROAD, FORUM 1, SUITE 700, RALEIGH, NORTH CAROLINA 27615-3960, NC LICENSE NO. F-0112

WSP — *1001 Morehead Square Dr., Suite 610, Charlotte, NC 28203, NC LIC NO. F-0165*

2024 STANDARD SPECIFICATIONS

LETTING DATE:
MARCH XX, 2025

GREG GOINS, P.E.
PROJECT ENGINEER

CATHY HOUSER, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

6/3/2025
c:\pwworking\rkk\production\dms73276\I-40 Pigeon River_hyd_prm_tsh.dgn
wgregory

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 (PSH 4)	-L- Sta. 10+00 to 21+00	PR; Causeway						0.067	0.357	542	458	
1 (PSH 4)	-L- Sta. 10+00 to 21+00	PR; Non-Causeway							2.773			

* DESIGN EXCEPTION

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	4

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
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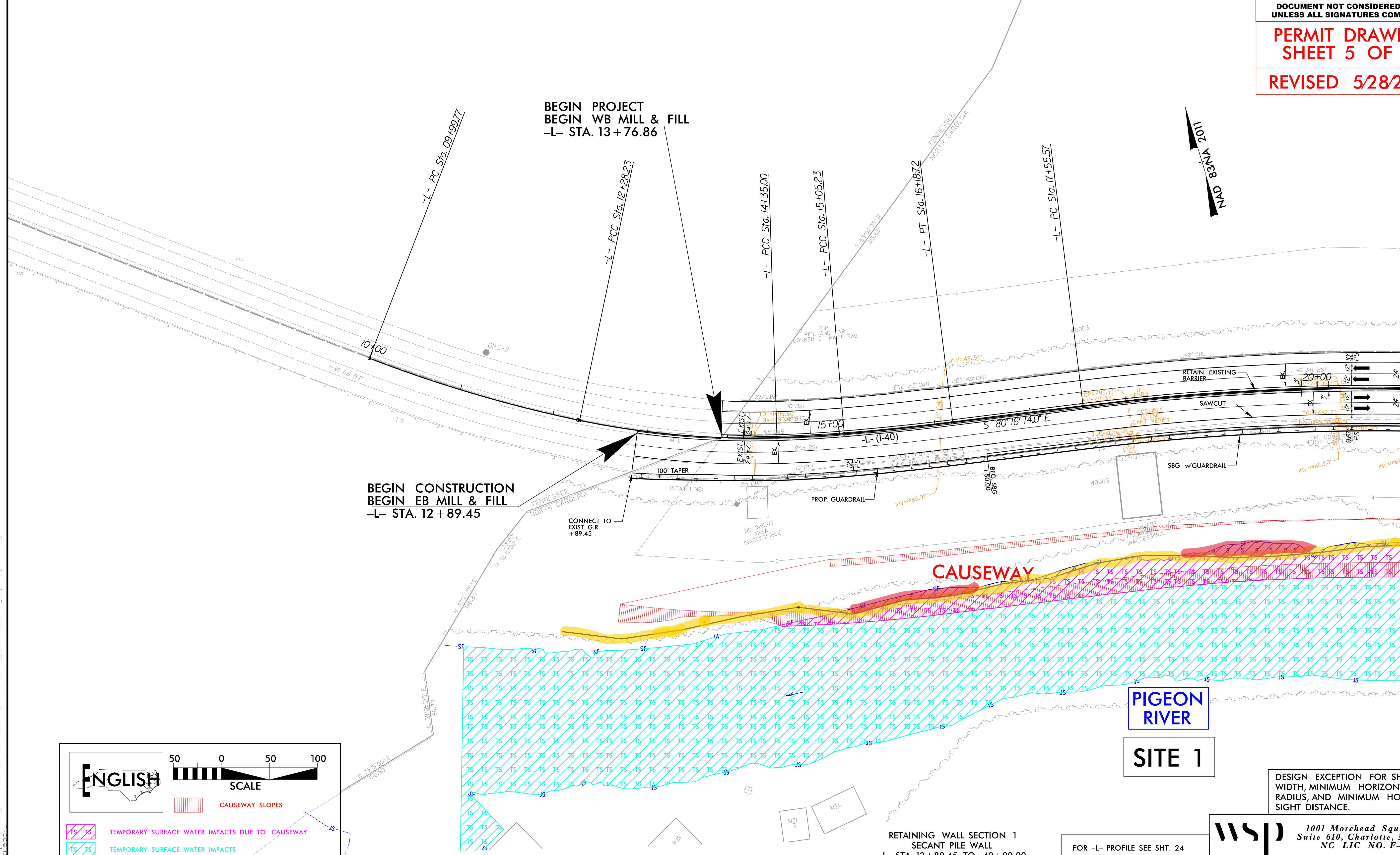
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 5 OF 62

REVISED 5/28/2025



DESIGN EXCEPTION FOR SHOULDER WIDTH, MINIMUM HORIZONTAL CURVE RADIUS, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

RETAINING WALL SECTION 1
SECANT PILE WALL
-L- STA. 12+89.45 TO 49+00.00

FOR -L- PROFILE SEE SHT. 24

WSP
1001 Morehead Square Dr., Suite 610, Charlotte, NC 28203
NC LIC NO. F-0165

8/17/99

6/3/2025
c:\pwworking\rkk\production\dms73276\I-40 Pigeon River_Hyd_prm_psh_4.dgn

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 5)	-L- Sta. 21+00 to 35+00	PR; Causeway						0.125	1.587	916	430	
1 (PSH 5)	-L- Sta. 21+00 to 35+00	PR; Non-Causeway							2.183			

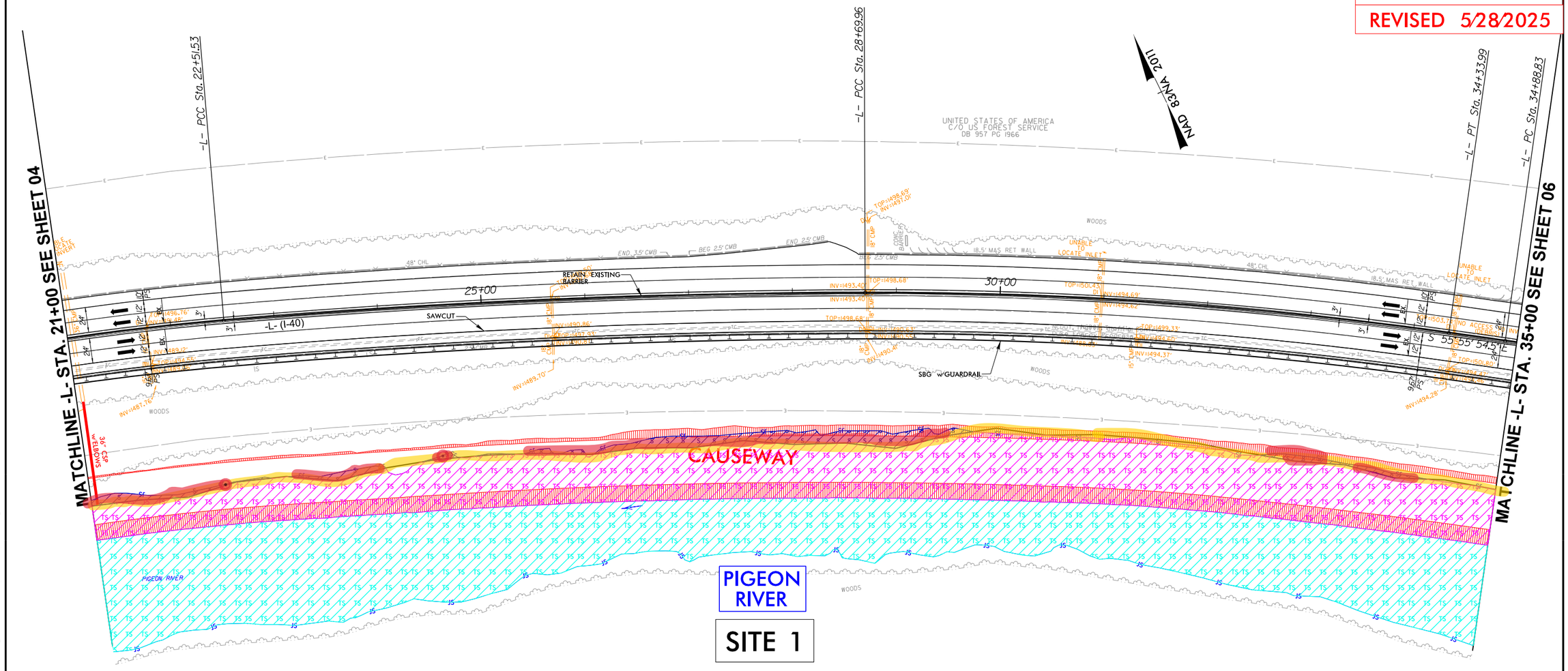
PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 7 OF 62

REVISED 5/28/2025



ENGLISH

50 0 50 100
SCALE

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

RETAINING WALL SECTION 1
SECANT PILE WALL
-L- STA. 12+89.45 TO 49+00.00

DESIGN EXCEPTION FOR SHOULDER WIDTH, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR -L- PROFILE SEE SHT. 25

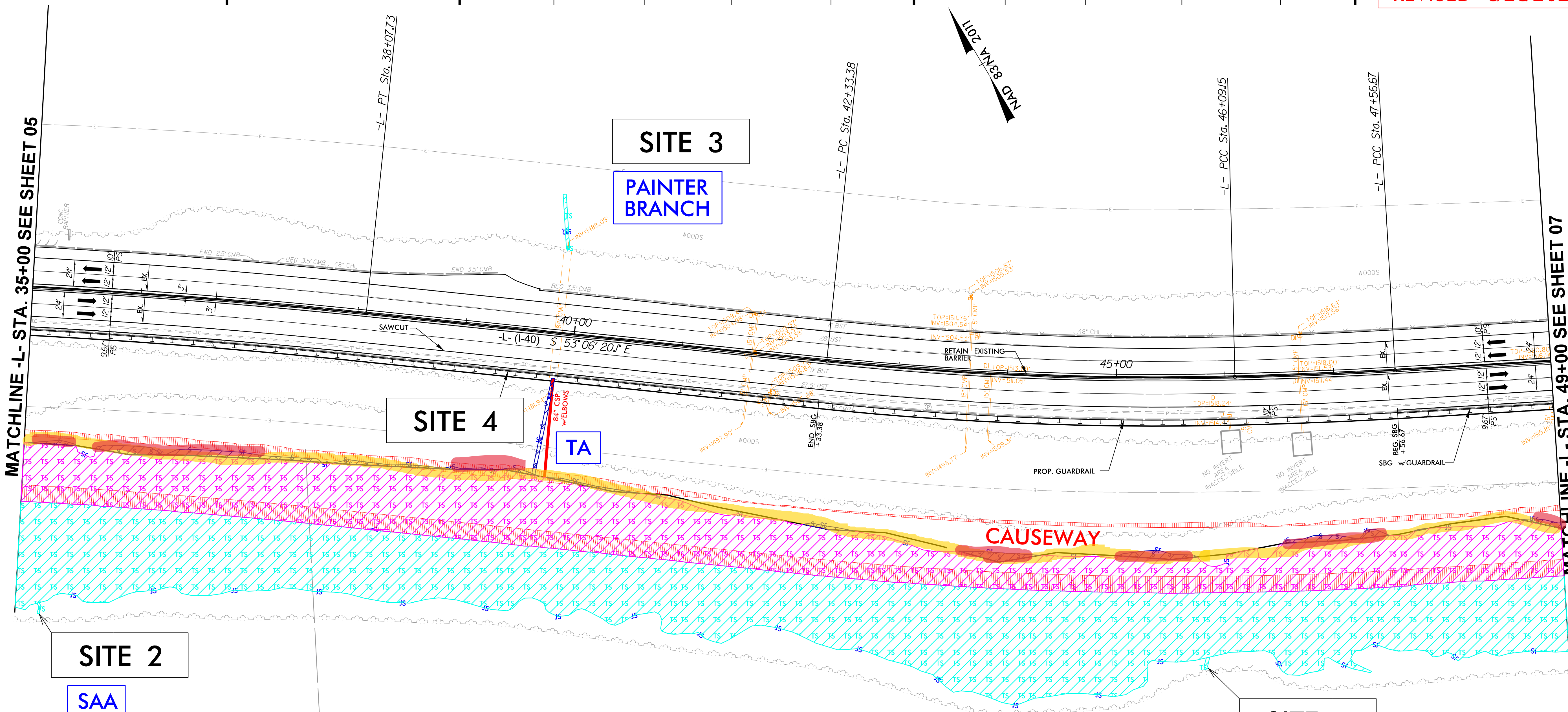
wsp
1001 Morehead Square Dr., Suite 610, Charlotte, NC 28203
NC LIC NO. F-0165

6/3/2025
c:\pwworking\rkk\production\dms73276\I-40 Pigeon River_Hyd_prm_psh_5.dgn
wgregory

8/17/99

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation in Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing in Wetlands (ac)	WETLAND IMPACTS: Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	SURFACE WATER IMPACTS: Temp. SW impacts (ac)	SURFACE WATER IMPACTS: Existing Channel Impacts Permanent (ft)	SURFACE WATER IMPACTS: Existing Channel Impacts Temp. (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
1 (PSH 6)	-L- Sta. 35+00 to 49+00	PR; Causeway						0.064	1.554	856	578	
1 (PSH 6)	-L- Sta. 35+00 to 49+00	PR; Non-Causeway							2.286			



ENGLISH

50 0 50 100
SCALE

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS

RETAINING WALL SECTION 1
SECANT PILE WALL
-L- STA. 12+89.45 TO 49+00.00

FOR -L- PROFILE SEE SHT. 26

DESIGN EXCEPTION FOR SHOULDER WIDTH, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

WSP
1001 Morehead Square Dr., Suite 610, Charlotte, NC 28203
NC LIC NO. F-0165

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

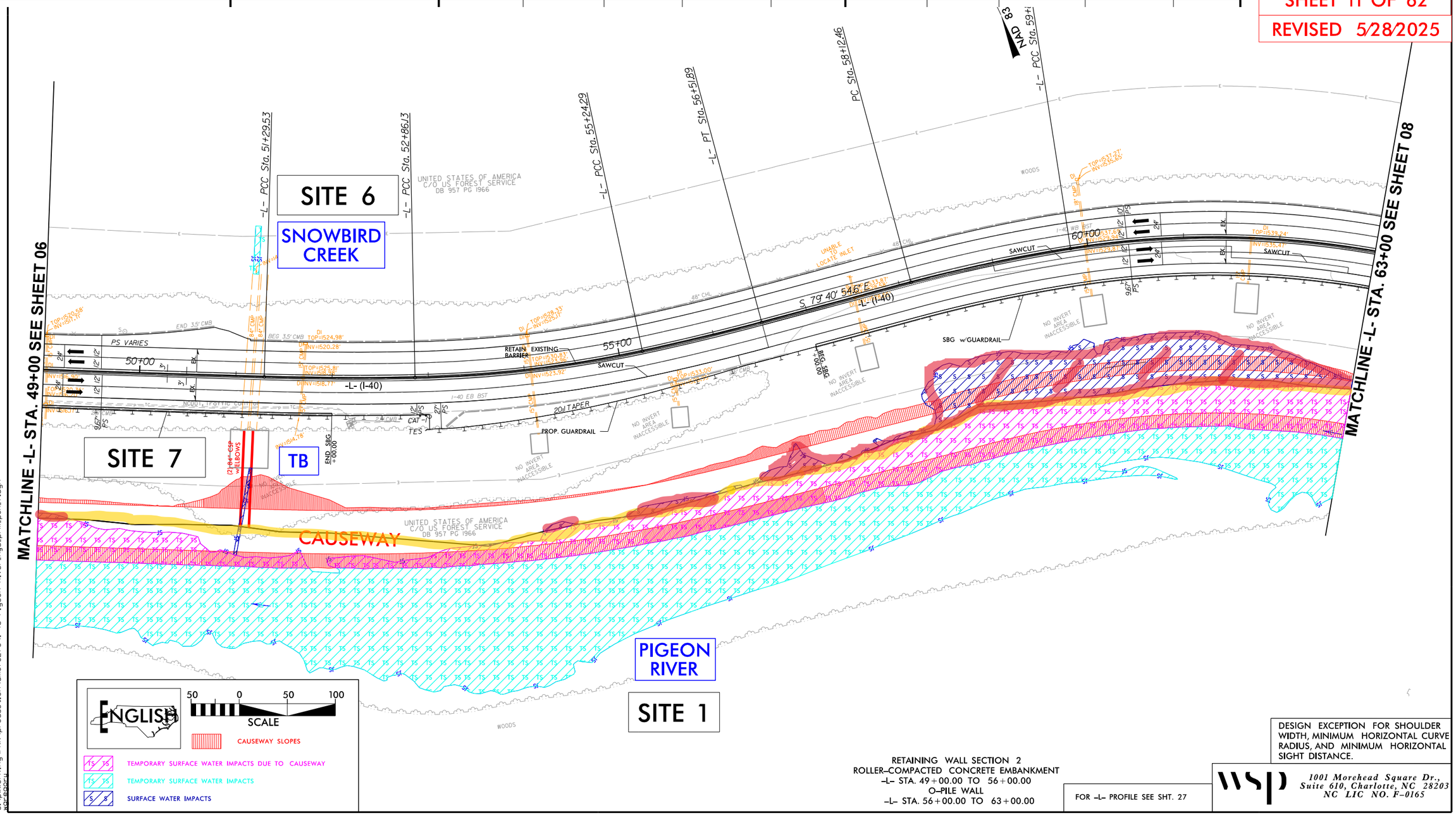
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 11 OF 62

REVISED 5/28/2025

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 7)	-L- Sta. 49+00 to 63+00	PR; Causeway; Wall						0.509	1.064	854	551	
1 (PSH 7)	-L- Sta. 49+00 to 63+00	PR; Non-Causeway							2.367			



RETAINING WALL SECTION 2
ROLLER-COMPACTED CONCRETE EMBANKMENT
-L- STA. 49+00.00 TO 56+00.00
O-PILE WALL
-L- STA. 56+00.00 TO 63+00.00

FOR -L- PROFILE SEE SHT. 27

DESIGN EXCEPTION FOR SHOULDER WIDTH, MINIMUM HORIZONTAL CURVE RADIUS, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

wsp
1001 Morehead Square Dr., Suite 610, Charlotte, NC 28203
NC LIC NO. F-0165

6/3/2025
c:\pwworking\rkk\production\dms73276\I-40 Pigeon River_Hyd_prm_psh_7.dgn
kgarg

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 8)	-L- Sta. 63+00 to 76+50	PR; Causeway; Wall						0.301	0.556	639	544	
1 (PSH 8)	-L- Sta. 63+00 to 76+50	PR; Non-Causeway							2.633			

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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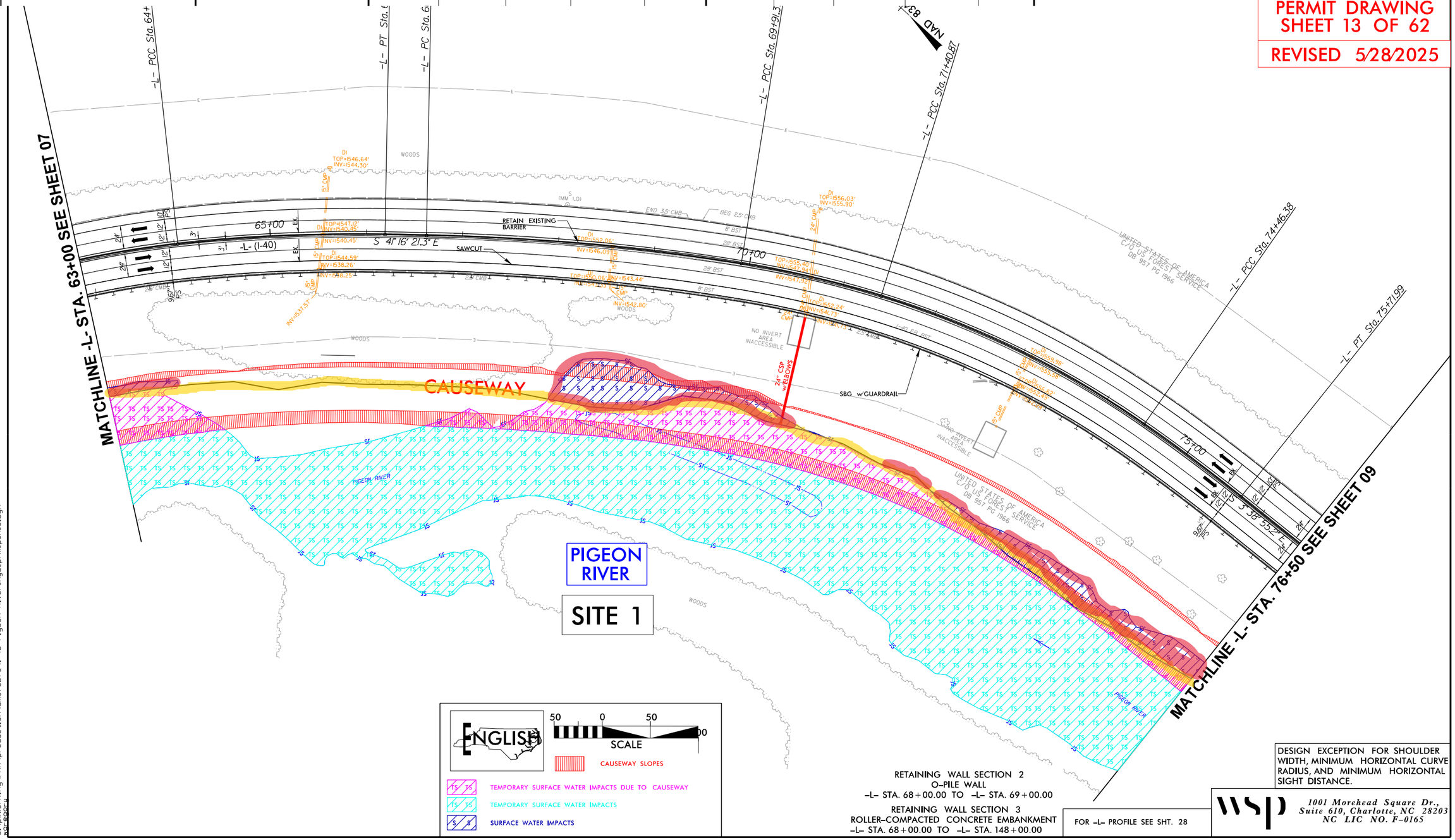
PERMIT DRAWING
SHEET 13 OF 62

REVISED 5/28/2025



RETAINING WALL SECTION 2
O-PILE WALL
-L- STA. 68+00.00 TO -L- STA. 69+00.00

RETAINING WALL SECTION 3
ROLLER-COMPACTED CONCRETE EMBANKMENT
-L- STA. 68+00.00 TO -L- STA. 148+00.00

DESIGN EXCEPTION FOR SHOULDER WIDTH, MINIMUM HORIZONTAL CURVE RADIUS, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR -L- PROFILE SEE SHT. 28

wsp
1001 Morehead Square Dr., Suite 610, Charlotte, NC 28203
NC LIC NO. F-0165

6/3/2025
c:\pwworking\rkk\production\dms73276\I-40 Pigeon River_Hyd_prm_psh_8.dgn
morgan

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

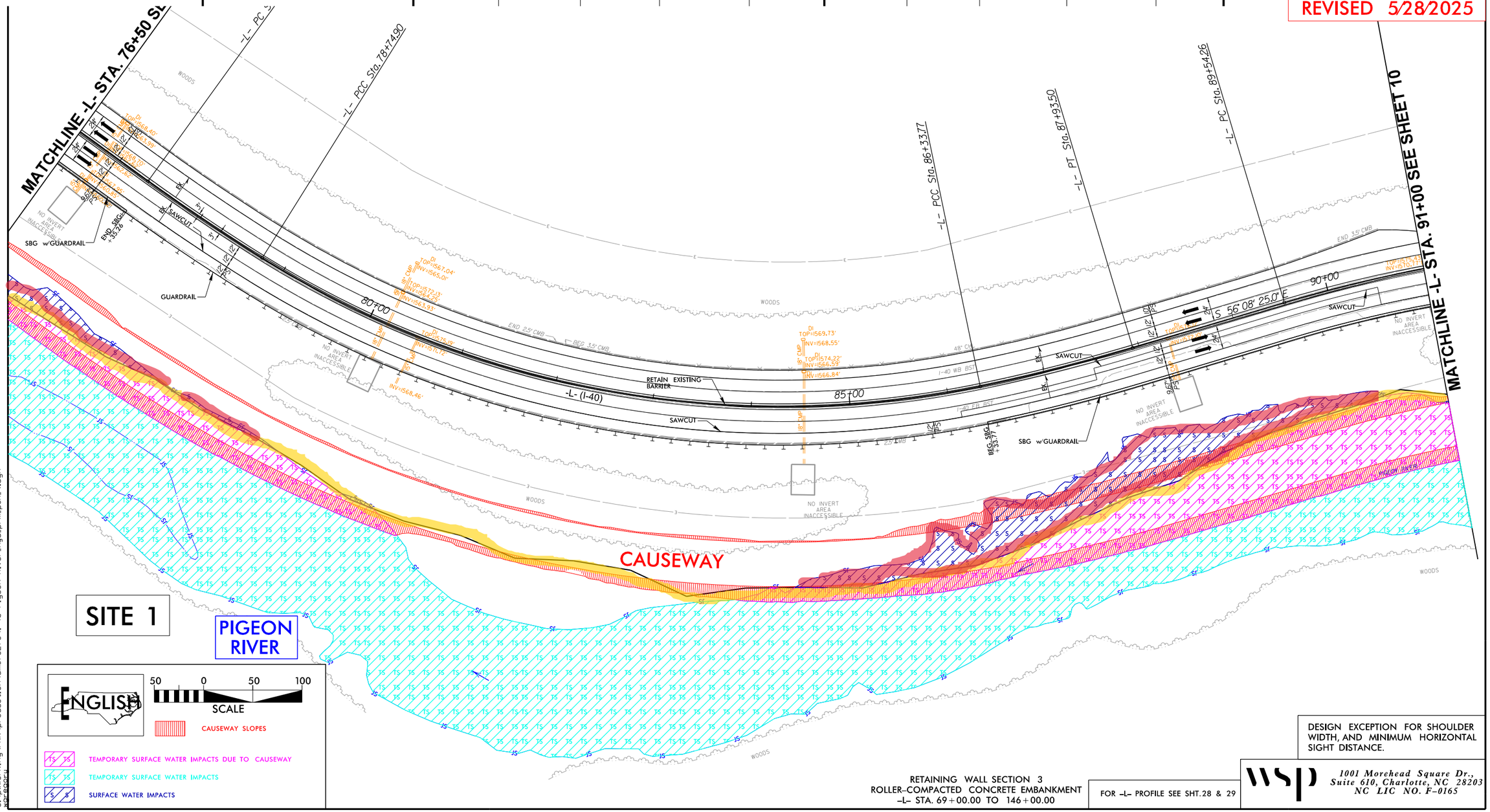
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 15 OF 62

REVISED 5/28/2025

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 9)	-L- Sta. 76+50 to 91+00	PR; Causeway; Wall						0.531	1.061	1050	646	
1 (PSH 9)	-L- Sta. 76+50 to 91+00	PR; Non-Causeway							3.725			



RETAINING WALL SECTION 3
ROLLER-COMPACTED CONCRETE EMBANKMENT
-L- STA. 69+00.00 TO 146+00.00

DESIGN EXCEPTION FOR SHOULDER WIDTH, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR -L- PROFILE SEE SHT.28 & 29

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NC LIC NO. F-0165

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c:\pwworking\rkk\production\dms73276\I-40 Pigeon River_Hyd_prm_psh_9.dgn
kgroom

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	10

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

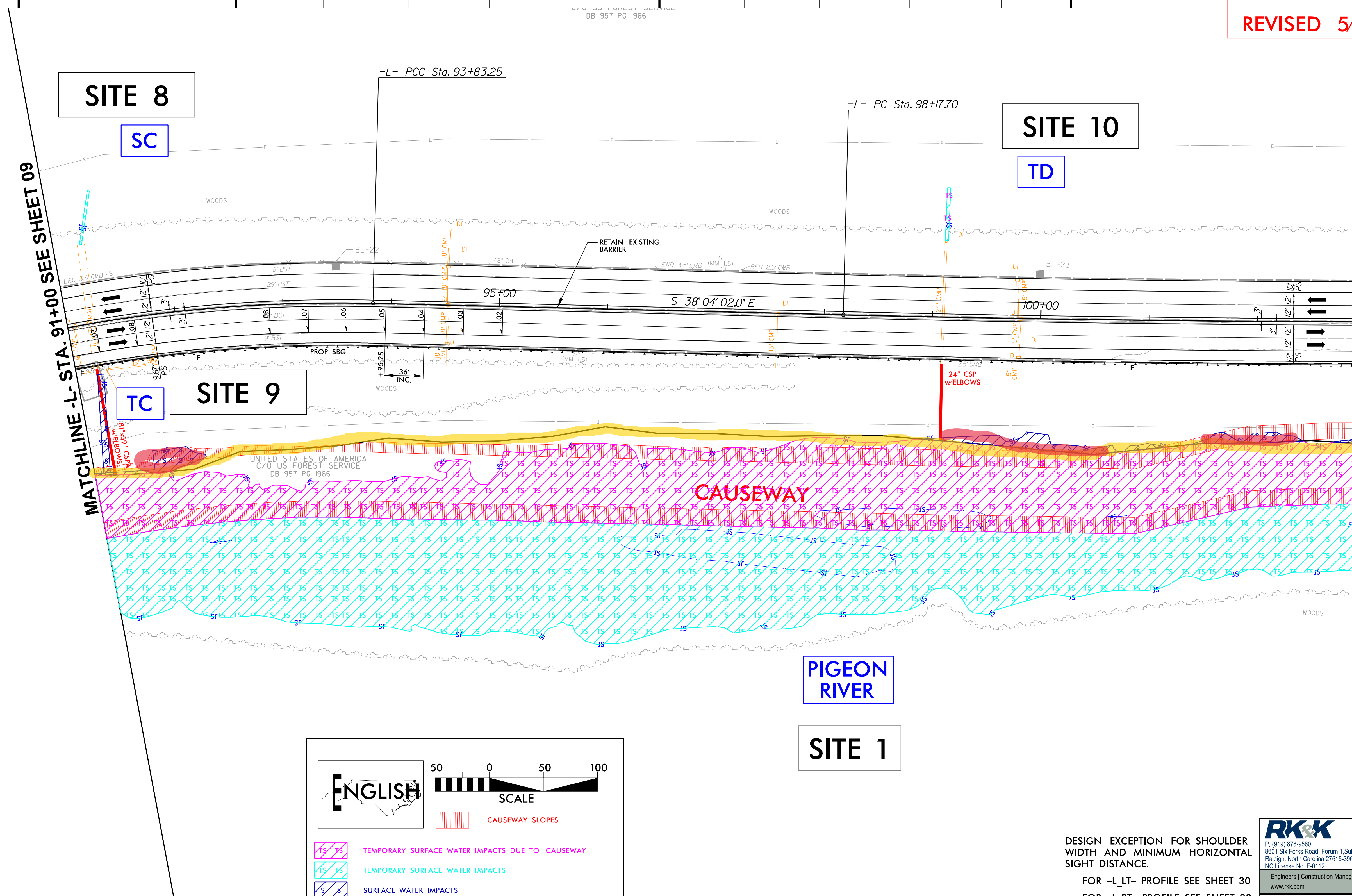
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 17 OF 62

REVISED 5/28/2025

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 10)	-L- Sta. 91+00 to 103+00	PR; Causeway; Wall						0.068	1.665	444	717	
1 (PSH 10)	-L- Sta. 91+00 to 103+00	PR; Non-Causeway							2.156			



DESIGN EXCEPTION FOR SHOULDER WIDTH AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR -L_LT- PROFILE SEE SHEET 30

FOR -L_RT- PROFILE SEE SHEET 30

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PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	11

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 19 OF 62

REVISED 5/28/2025

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation in Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing in Wetlands (ac)	WETLAND IMPACTS: Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	SURFACE WATER IMPACTS: Temp. SW impacts (ac)	SURFACE WATER IMPACTS: Existing Channel Impacts Permanent (ft)	SURFACE WATER IMPACTS: Existing Channel Impacts Temp. (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
1 (PSH 11)	-L- Sta. 103+00 to 117+00	PR; Causeway; Wall						0.434	1.860	891	481	
1 (PSH 11)	-L- Sta. 103+00 to 117+00	PR, Non-Causeway							1.915			

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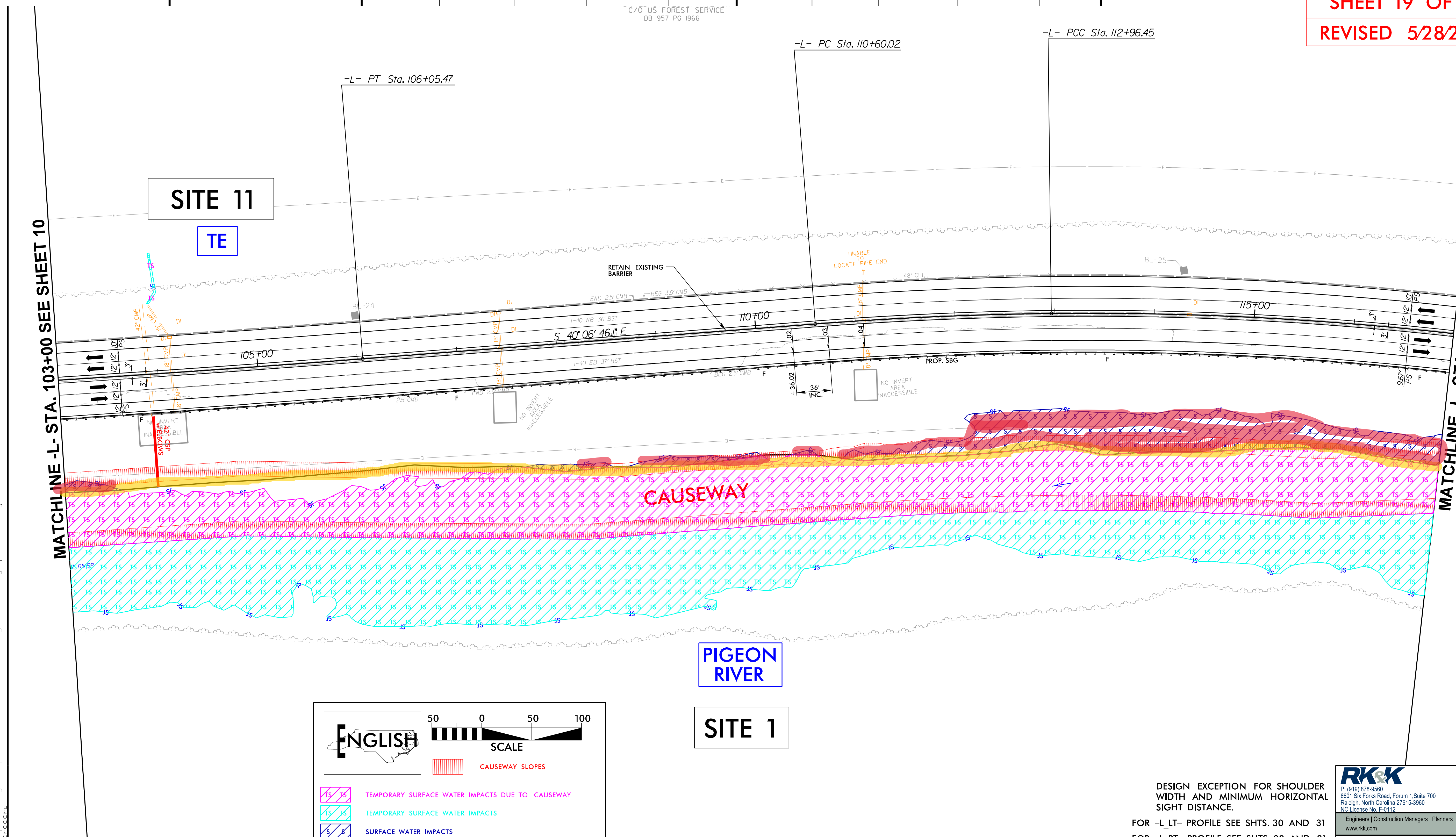

DESIGN EXCEPTION FOR SHOULDER WIDTH AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR -L_LT- PROFILE SEE SHTS. 30 AND 31

FOR -L_RT- PROFILE SEE SHTS. 30 AND 31

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WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 12)	-L- Sta. 117+00 to 131+00	PR; Causeway; Wall						0.519	0.449	838	653	
1 (PSH 12)	-L- Sta. 117+00 to 131+00	PR; Non-Causeway							2.030			

NAD 83/NA 2011

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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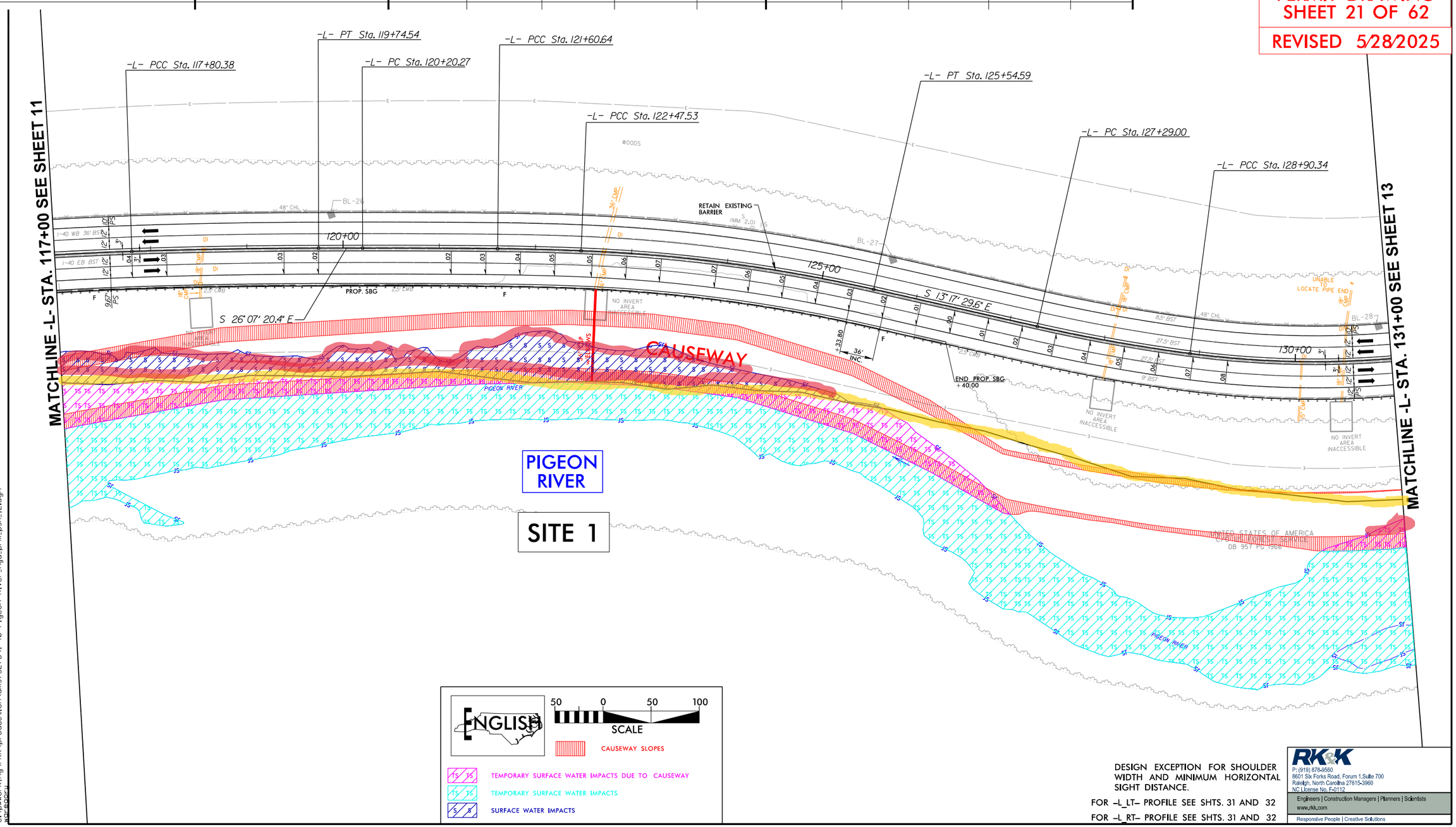
PERMIT DRAWING SHEET 21 OF 62

REVISED 5/28/2025



DESIGN EXCEPTION FOR SHOULDER WIDTH AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR –L_LT– PROFILE SEE SHTS. 31 AND 32

FOR –L_RT– PROFILE SEE SHTS. 31 AND 32

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jorogers

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

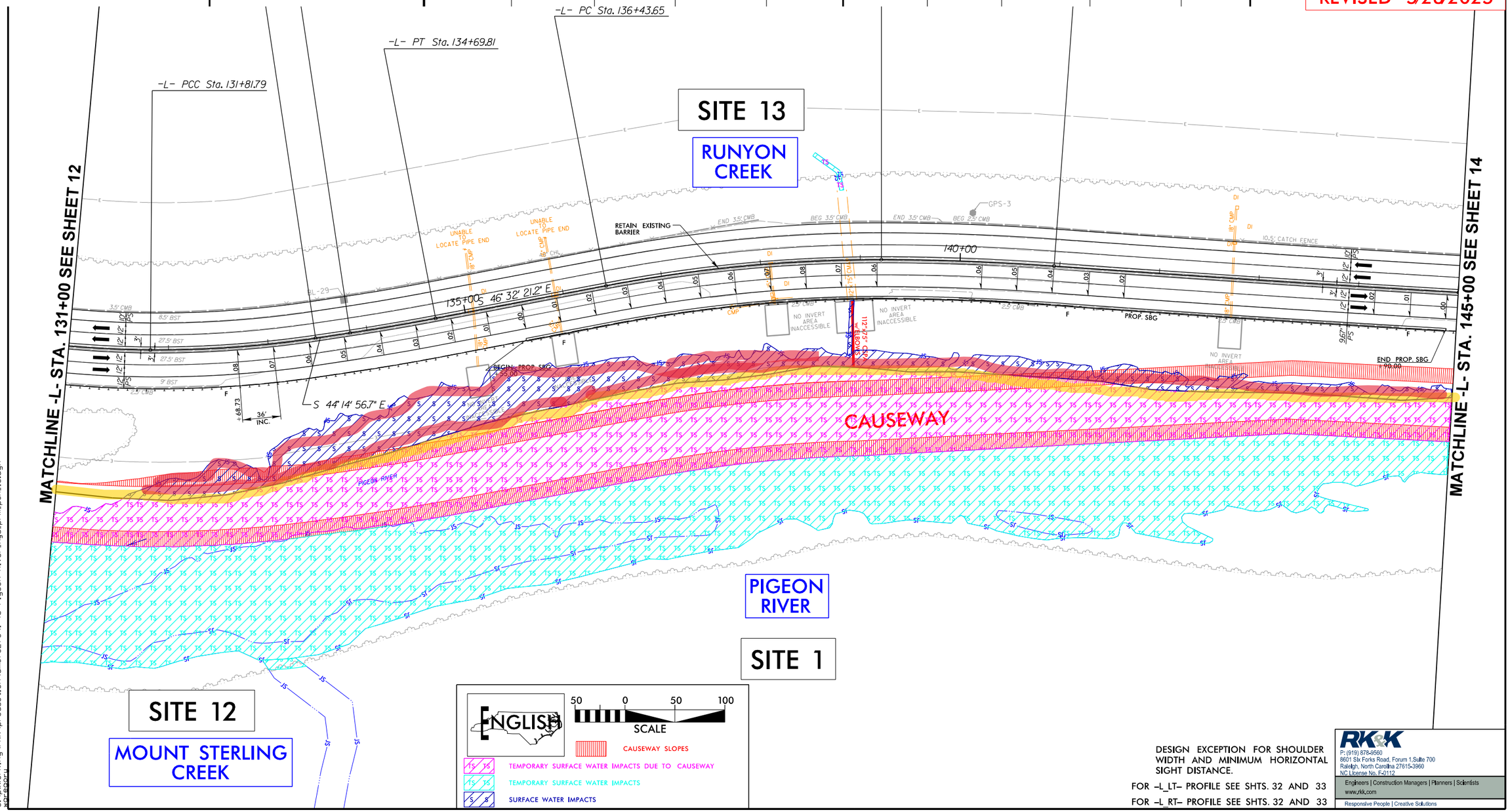
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 23 OF 62

REVISED 5/28/2025

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 13)	-L- Sta. 131+00 to 145+00	PR; Causeway; Wall						0.733	2.113	1322	97	
1 (PSH 13)	-L- Sta. 131+00 to 145+00	PR; Non-Causeway							2.772			



DESIGN EXCEPTION FOR SHOULDER WIDTH AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR –L_LT– PROFILE SEE SHTS. 32 AND 33

FOR –L_RT– PROFILE SEE SHTS. 32 AND 33

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mrogers

8/17/99

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 14)	-L- Sta. 145+00 to 158+50	PR; Causeway; Wall						0.038	0.714	275	1229	
1 (PSH 14)	-L- Sta. 145+00 to 158+50	PR; Non-Causeway							3.085			

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 25 OF 62

REVISED 5/28/2025

-L- PT Sta. 145+00.22

-L- PC Sta. 145+85.03

S 32° 23' 00.2" E

-L- PCC Sta. 153+92.10

-L- PCC Sta. 155+74.23

MATCHLINE -L- STA. 145+00 SEE SHEET 13

MATCHLINE -L- STA. 158+50 SEE SHEET 15

SITE 14

COUNTERFEIT BRANCH

SITE 1

PIGEON RIVER

CAUSEWAY

RETAIN EXISTING BARRIER

150+00

155+00

NO INVERT AREA INACCESSIBLE

WOODS

UNITED STATES OF AMERICA
US FOREST SERVICE
DB 957 PG 1966

INSET A

NAD 83/NA 2011

SEE INSET A

ENGLISH

SCALE 50 0 50 100

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS

DESIGN EXCEPTION FOR SHOULDER WIDTH AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR –L_LT– PROFILE SEE SHTS. 33 AND 34

FOR –L_RT– PROFILE SEE SHTS. 33 AND 34

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wrgeary

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

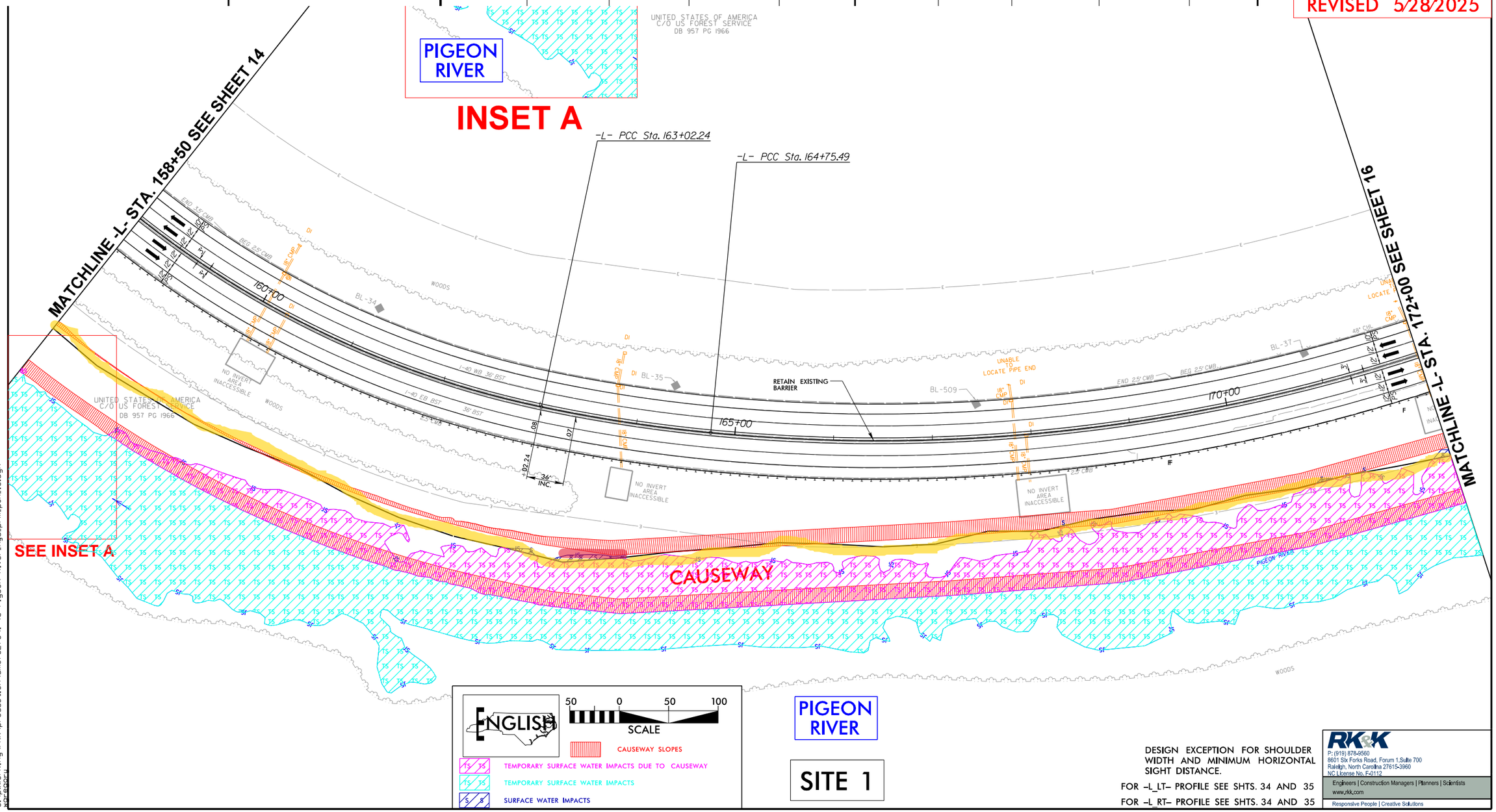
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 27 OF 62

REVISED 5/28/2025

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 15)	-L- Sta. 158+50 to 172+00	PR; Causeway; Wall						0.013	1.310	126	1419	
1 (PSH 15)	-L- Sta. 158+50 to 172+00	PR; Non-Causeway							2.220			



PIGEON RIVER

SITE 1

DESIGN EXCEPTION FOR SHOULDER WIDTH AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR –L_LT– PROFILE SEE SHTS. 34 AND 35

FOR –L_RT– PROFILE SEE SHTS. 34 AND 35

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xgreen

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 16)	-L- Sta. 172+00 to 186+00	PR; Causeway; Wall						0.195	1.180	418	1044	
1 (PSH 16)	-L- Sta. 172+00 to 186+00	PR; Non-Causeway							2.461			

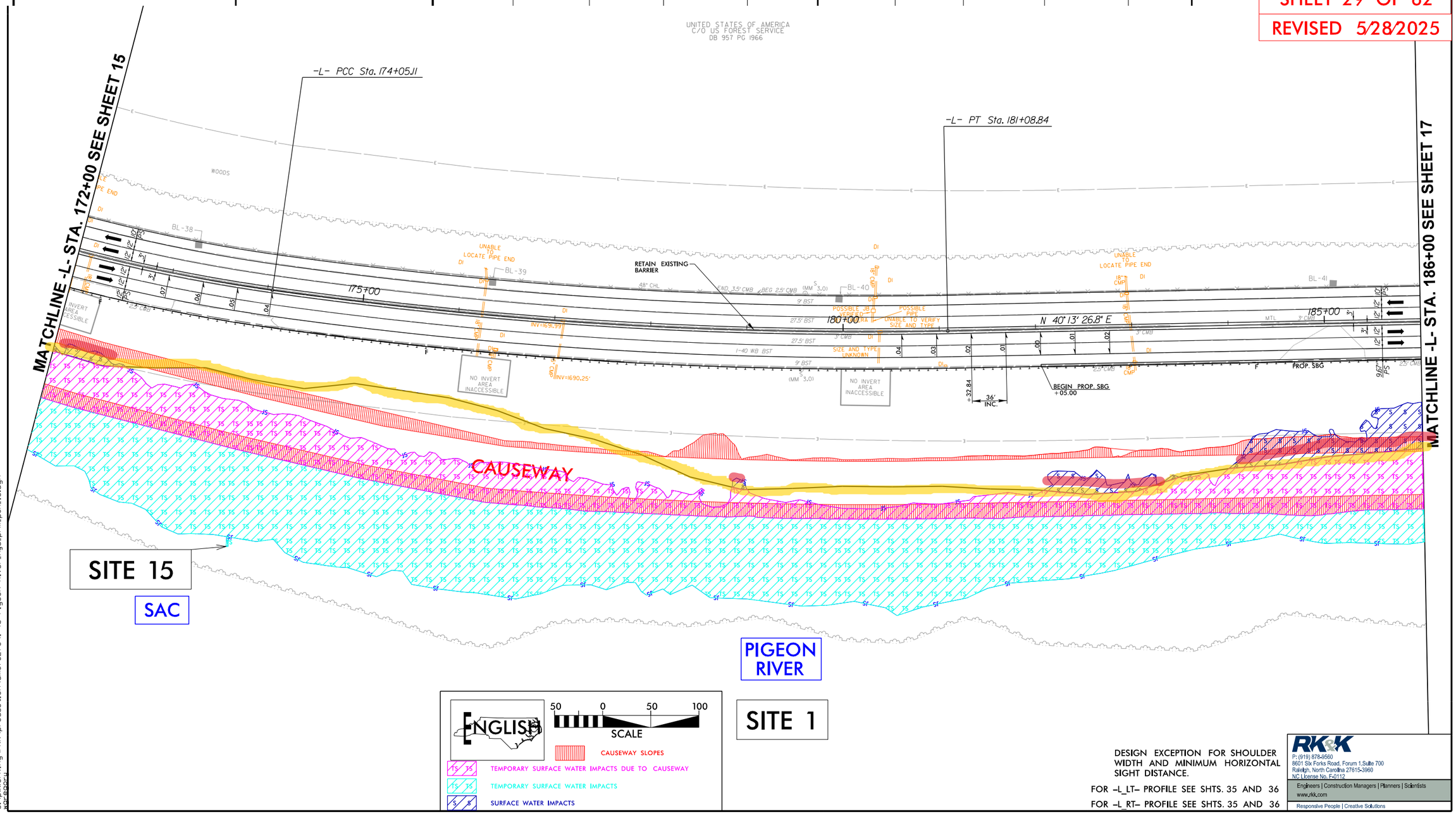
PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 29 OF 62

REVISED 5/28/2025



DESIGN EXCEPTION FOR SHOULDER WIDTH AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR -L_LT- PROFILE SEE SHTS. 35 AND 36

FOR -L_RT- PROFILE SEE SHTS. 35 AND 36

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PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	17

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

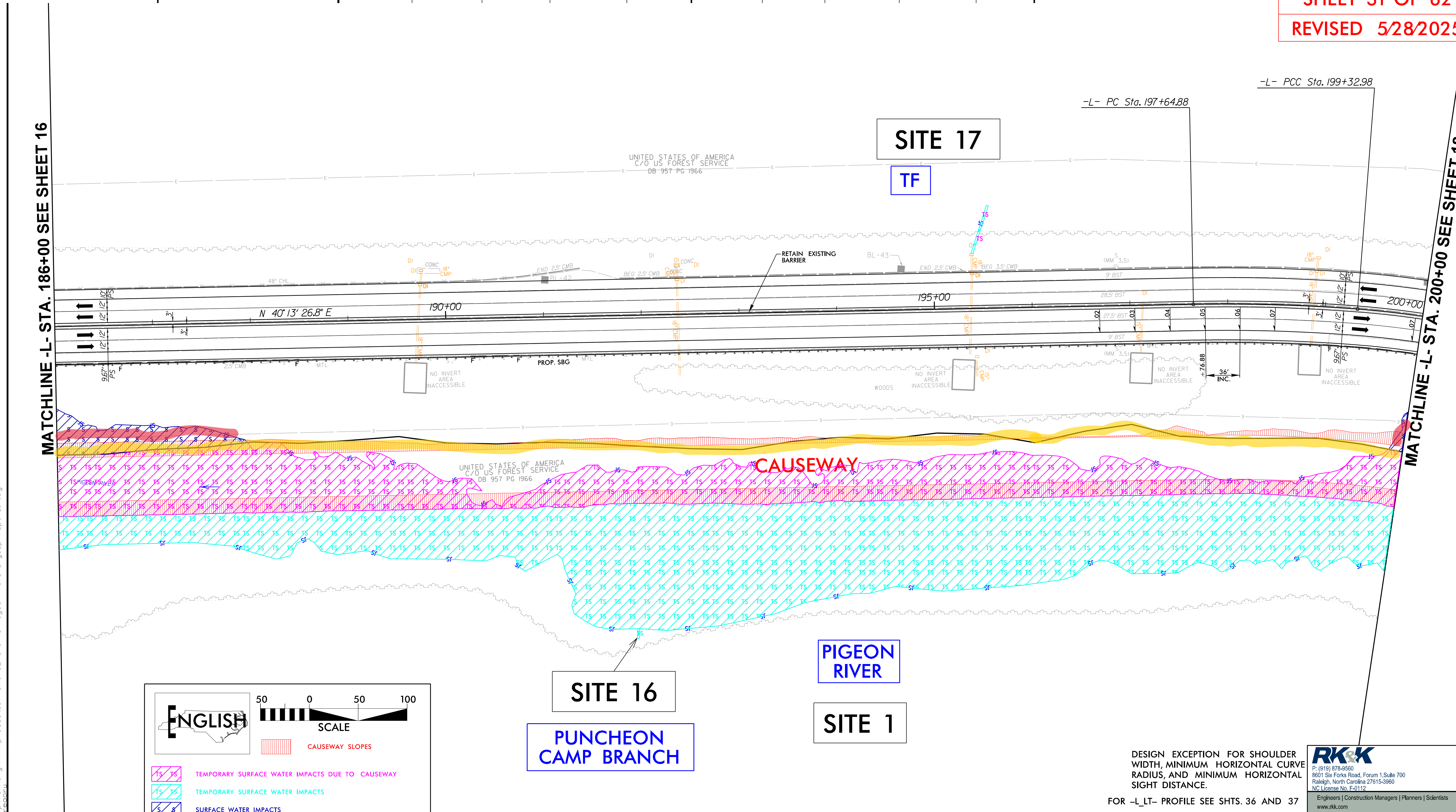
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 31 OF 62

REVISED 5/28/2025

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 17)	-L- Sta. 186+00 to 200+00	PR; Causeway; Wall						0.113	1.278	193	1176	
1 (PSH 17)	-L- Sta. 186+00 to 200+00	PR; Non-Causeway							2.277			



DESIGN EXCEPTION FOR SHOULDER WIDTH, MINIMUM HORIZONTAL CURVE RADIUS, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR -L_LT- PROFILE SEE SHTS. 36 AND 37

FOR -L_RT- PROFILE SEE SHTS. 36 AND 37

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WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 18)	-L- Sta. 200+00 to -L_EB- 11+00	PR; Causeway; Wall						0.853	1.668	723	491	
1 (PSH 18)	-L- Sta. 200+00 to -L_EB- 11+00	PR; Non-Causeway							1.572			

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 33 OF 62

REVISED 5/28/2025

NAD 83/NA 2011

SITE 18

SG

-L- PCC Sta. 204+10.12

BEGIN MEDIAN CONC. BARRIER -L- STA. 204+00.00

END MEDIAN CONC. BARRIER -L- STA. 205+00.00

RETAIN EXISTING BARRIER

-L- PCC Sta. 211+70.22

-L- Sta. 213+96.00 LB = -L_WB- Sta. 10+00.00 LA (3' LT) -L_EB- Sta. 10+00.00 LA (3' RT)

CAUSEWAY

PIGEON RIVER

SITE 1

MATCHLINE -L- STA. 200+00 SEE SHEET 17

MATCHLINE -L_EB- STA. 11+00 SEE SHEET 19

ENGLISH

SCALE 50 0 50 100

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS

DESIGN EXCEPTION FOR SHOULDER WIDTH, MINIMUM HORIZONTAL CURVE RADIUS, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR –L_WB– PROFILE SEE SHEET 39

FOR –L_EB– PROFILE SEE SHEET 39

FOR –L_LT– PROFILE SEE SHTS. 37 AND 38

FOR –L_RT– PROFILE SEE SHTS. 37 AND 38

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kgordon

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	19

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

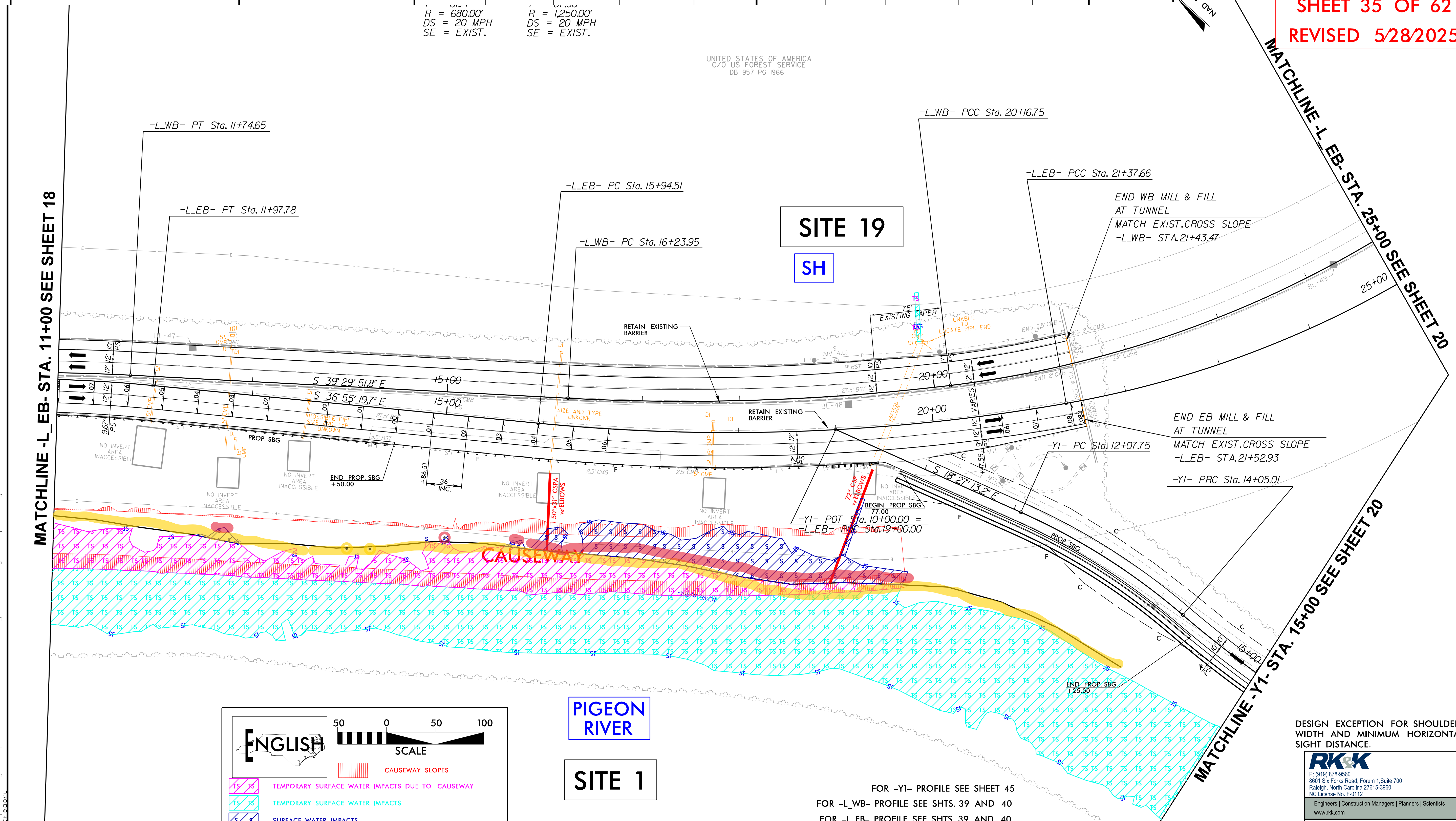
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 35 OF 62

REVISED 5/28/2025

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation in Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing in Wetlands (ac)	WETLAND IMPACTS: Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	SURFACE WATER IMPACTS: Temp. SW impacts (ac)	SURFACE WATER IMPACTS: Existing Channel Impacts Permanent (ft)	SURFACE WATER IMPACTS: Existing Channel Impacts Temp. (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
1 (PSH 19)	-L_EB- Sta. 11+00 to 21+57.61	PR; Causeway; Wall						0.271	0.581	448	756	
1 (PSH 19)	-L_EB- Sta. 11+00 to 21+57.61	PR; Non-Causeway							2.088			



50 0 50 100	SCALE

ENGLISH

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS

FOR -Y1- PROFILE SEE SHEET 45
FOR -L_WB- PROFILE SEE SHTS. 39 AND 40
FOR -L_EB- PROFILE SEE SHTS. 39 AND 40

DESIGN EXCEPTION FOR SHOULDER WIDTH AND MINIMUM HORIZONTAL SIGHT DISTANCE.

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
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6/3/2025
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REVISED 5/28/2025

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

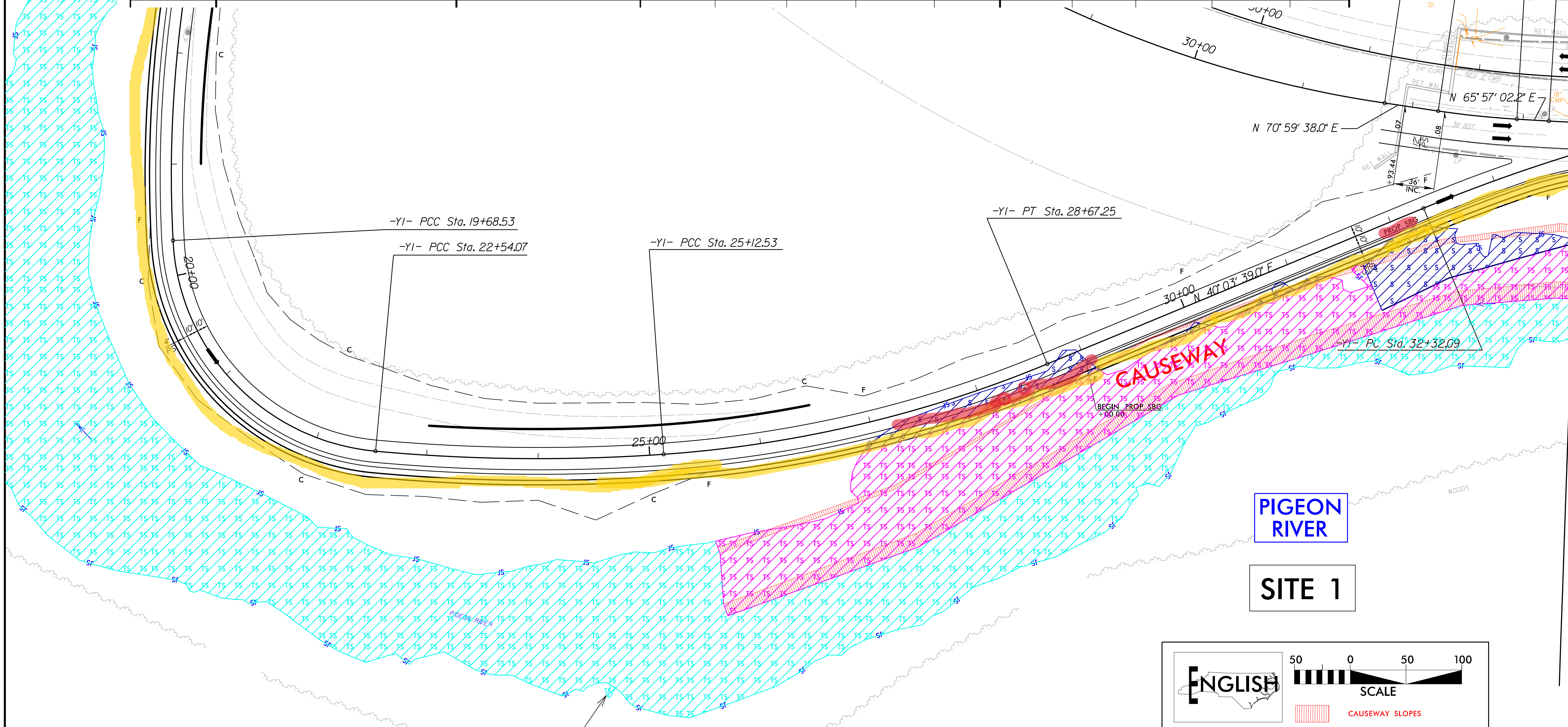
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 37 OF 62

SEE SHEET 20_INSET
(PERMIT DRAWING SHEET 37 OF 44)

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 20)	-L_EB- Sta. 32+35.77 to 33+50	PR; Causeway; Wall						0.242	1.043	484	1648	
1 (PSH 20)	-L_EB- Sta. 32+35.77 to 33+50	PR; Non-Causeway							4.157			



FOR UNOBSTRUCTED RIVER AND IMPACTS
SEE SHEET 20_INSET
(PERMIT DRAWING SHEET 37 OF 44)

FOR -Y1- PROFILE SEE SHEET 45
FOR -L_WB- PROFILE SEE SHEET 40
FOR -L_EB- PROFILE SEE SHEET 40

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WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 21)	-L_EB- Sta. 33+50 to -L1- Sta. 13+50	PR; Causeway; Wall						0.040	0.821	208	1142	
1 (PSH 21)	-L_EB- Sta. 33+50 to -L1- Sta. 13+50	PR; Non-Causeway							2.484			

NAD 83/NA 2011

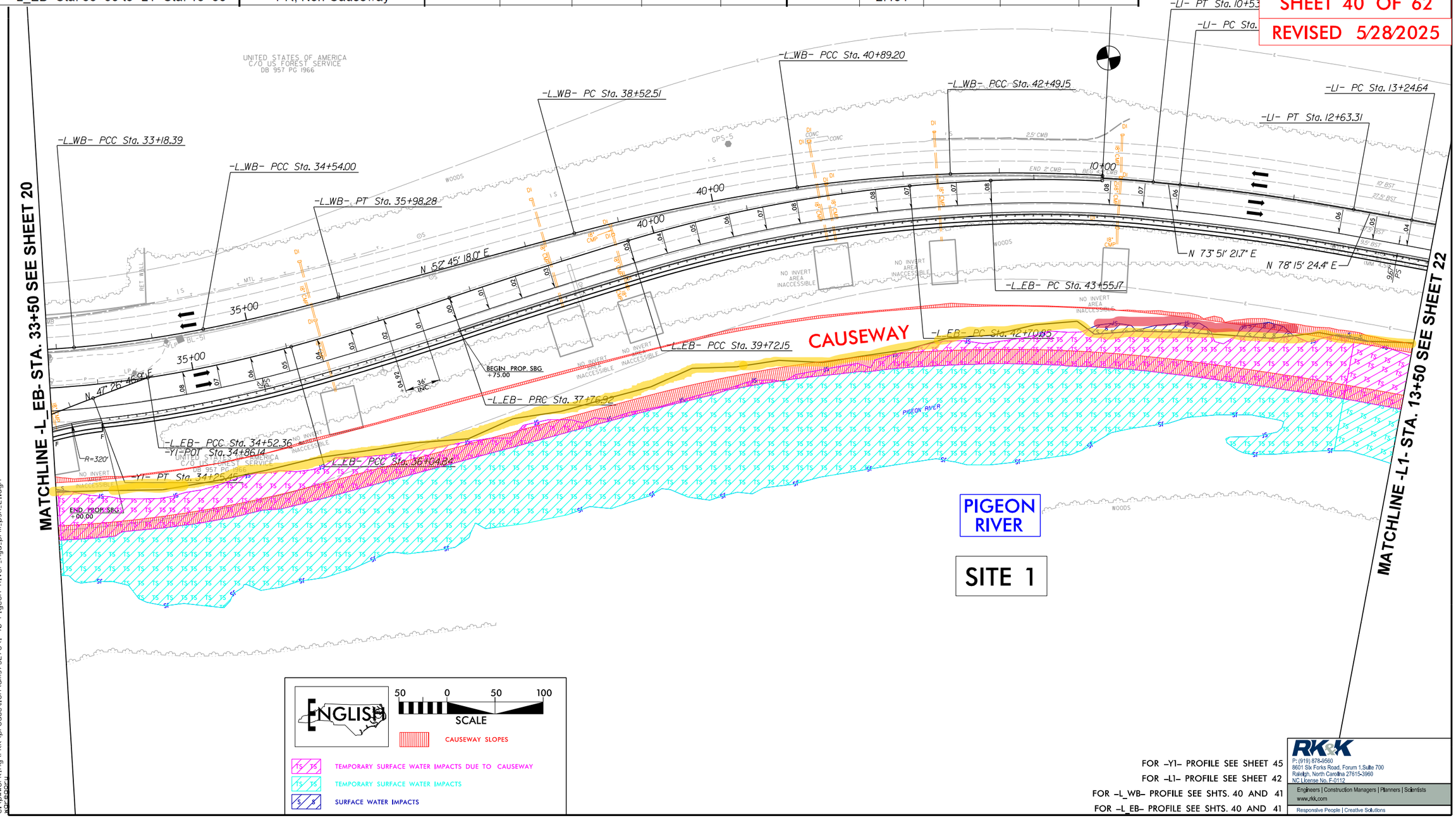
PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 40 OF 62

REVISED 5/28/2025



ENGLISH

50 0 50 100
SCALE

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS

FOR –Y1– PROFILE SEE SHEET 45
FOR –L1– PROFILE SEE SHEET 42
FOR –L_WB– PROFILE SEE SHTS. 40 AND 41
FOR –L_EB– PROFILE SEE SHTS. 40 AND 41

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6/3/2025
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kgreen

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 42 OF 62

REVISED 5/28/2025

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 22)	-L1- Sta. 13+50 to 27+00	PR; Causeway; Wall						0.081	1.047	353	849	
1 (PSH 22)	-L1- Sta. 13+50 to 27+00	PR; Non-Causeway							2.523			

SITE 22

SKIFFLEY CREEK

SITE 23

GROUNDHOG CREEK

PIGEON RIVER

SITE 1

MATCHLINE -L1- STA. 13+50 SEE SHEET 21

MATCHLINE -L1- STA. 27+00 SEE SHEET 23

-L1- PT Sta. 14+98.34

-L1- PC Sta. 15+60.96

-L1- PCC Sta. 18+02.60

-L1- PC Sta. 23+26.28

-L1- PC Sta. 26+26.27

-L1- PT Sta. 25+73.46

15+00

20+00

25+00

N 80° 29' 17.5" E

S 51° 37' 37.3" E

CAUSEWAY

(3) COLLAR

UNITED STATES OF AMERICA
C/O US FOREST SERVICE
DB 957 PG 1966

WOODS

MTL

I-40 WB 38.5° BST

I-40 EB 36° BST

GPS-6

NO INVERT AREA INACCESSIBLE

36" INC.

NAD 83/NA 2011

ENGLISH

50 0 50 100
SCALE

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS

FOR -L1- PROFILE SEE SHEET 41

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6/3/2025
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morgan

8/17/99

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 23)	-L1- Sta. 27+00 to 29+71	PR; Causeway: Wall						0.022	0.231	134	1117	
1 (PSH 23)	-L1- Sta. 27+00 to 29+71	PR; Non-Causeway							3.491			

PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 44 OF 62

REVISED 5/28/2025

SITE 24

RUBE ROCK BRANCH

SITE 25

SKA

SITE 26

TG

SITE 27

TOM HALL BRANCH

SITE 28

SLB

SITE 29

SLC

SITE 30

TH

SITE 1

PIGEON RIVER

MATCHLINE -L1- STA. 27+00 SEE SHEET 22

-L1- PCC Sta. 30+63.24

-L1- PCC Sta. 32+62.22

-L1- PT Sta. 34+75.64

-L1- PC Sta. 35+14.73

-L1- POC Sta. 40+65.03

END PROP. SBG +00.00

30+00

35+00

40+00

CAUSEWAY

84" CMP

84" CSP w/ELBOWS

24" CSP w/ELBOWS

72" CSP w/ELBOWS

72" DMP

I-40 WB 36" BST

I-40 EB 42" BST

WOODS

BL-54

BL-55

GPS-56

MATCHLINE THIS SHEET

INSET A

END TIP PROJECT I-40 PIGEON RIVER

-L1- POC STA. 40+00.00

ENGLISH

50 0 50 100

SCALE

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS

MATCHLINE – SEE INSET A

FOR -L1- PROFILE SEE SHEET 41

NAD 83/NA 2011

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6/3/2025
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wgreen

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 (PSH 4)	-L- Sta. 10+00 to 21+00	PR; Causeway						0.067	0.357	542	458	
1 (PSH 4)	-L- Sta. 10+00 to 21+00	PR; Non-Causeway							2.773			
1 (PSH 5)	-L- Sta. 21+00 to 35+00	PR; Causeway						0.125	1.587	916	430	
1 (PSH 5)	-L- Sta. 21+00 to 35+00	PR; Non-Causeway							2.183			
1 (PSH 6)	-L- Sta. 35+00 to 49+00	PR; Causeway						0.064	1.554	856	578	
1 (PSH 6)	-L- Sta. 35+00 to 49+00	PR; Non-Causeway							2.286			
2	-L- Sta. 35+24 RT	SAA; Non-Causeway							0.001		11	
3	-L- Sta. 39+82 LT	Painter Branch; 84" CMP							0.004		51	
4	-L- Sta. 39+83 RT	TA; 84" CMP; Wall						0.006				
5	-L- Sta. 45+79 RT	TAA; Non-Causeway							0.001			
1 (PSH 7)	-L- Sta. 49+00 to 63+00	PR; Causeway; Wall						0.509	1.064	854	551	
1 (PSH 7)	-L- Sta. 49+00 to 63+00	PR; Non-Causeway							2.367			
6	-L- Sta. 51+19 LT	Snowbird Creek; (2) 84" CMP							0.007		50	
7	-L- Sta. 51+11 RT	TB; (2) 84" CMP						0.006				
SHEET TOTALS:			**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.777**	**14.184**	**3168**	**2129**	**0**

REVIS 3,168

NOTES:
PR: Pigeon River

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DECEMBER 17, 2024
HAYWOOD COUNTY
I-40 PIGEON RIVER

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 (PSH 8)	-L- Sta. 63+00 to 76+50	PR; Causeway; Wall						0.301	0.556	639	544	
1 (PSH 8)	-L- Sta. 63+00 to 76+50	PR; Non-Causeway							2.633			
1 (PSH 9)	-L- Sta. 76+50 to 91+00	PR; Causeway; Wall						0.531	1.061	1050	646	
1 (PSH 9)	-L- Sta. 76+50 to 91+00	PR; Non-Causeway							3.725			
1 (PSH 10)	-L- Sta. 91+00 to 103+00	PR; Causeway; Wall						0.068	1.665	444	717	
1 (PSH 10)	-L- Sta. 91+00 to 103+00	PR; Non-Causeway							2.156			
8	-L- Sta. 91+32 LT	SC; 81"x59" CMAP							0.002		50	
9	-L- Sta. 91+19 RT	TC; 81"x59" CMAP; Wall						0.013				
10	-L- Sta. 99+12 LT	TD; 24" CMP							0.003			
1 (PSH 11)	-L- Sta. 103+00 to 117+00	PR; Causeway; Wall						0.434	1.860	891	481	
1 (PSH 11)	-L- Sta. 103+00 to 117+00	PR, Non-Causeway							1.915			
11	-L- 104+00 LT	TE; 42" CMP							0.002			
1 (PSH 12)	-L- Sta. 117+00 to 131+00	PR; Causeway; Wall						0.519	0.449	838	653	
1 (PSH 12)	-L- Sta. 117+00 to 131+00	PR; Non-Causeway							2.030			
SHEET TOTALS:			**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1.866**	**18.057**	**3862**	**3091**	**0**

NOTES:
PR: Pigeon River

REVISE 3,862

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DECEMBER 17, 2024
HAYWOOD COUNTY
I-40 PIGEON RIVER

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 (PSH 13)	-L- Sta. 131+00 to 145+00	PR; Causeway; Wall						0.733	2.113	1322	97	
1 (PSH 13)	-L- Sta. 131+00 to 145+00	PR; Non-Causeway							2.772			
12	-L- Sta. 132+85 RT	Mount Sterling Creek; Non-Causeway							0.008		13	
13	-L- Sta. 138+88	Runyon Creek; 112"x75" CMAP; Wall						0.005	0.005	55	49	
1 (PSH 14)	-L- Sta. 145+00 to 158+50	PR; Causeway; Wall						0.038	0.714	275	1229	
1 (PSH 14)	-L- Sta. 145+00 to 158+50	PR; Non-Causeway							3.085			
14	-L- 151+56	Counterfeit Branch; 84"x61" CMAP; Wall						0.007	0.005	79	50	
1 (PSH 15)	-L- Sta. 158+50 to 172+00	PR; Causeway; Wall						0.013	1.310	126	1419	
1 (PSH 15)	-L- Sta. 158+50 to 172+00	PR; Non-Causeway							2.220			
1 (PSH 16)	-L- Sta. 172+00 to 186+00	PR; Causeway; Wall						0.195	1.180	418	1044	
1 (PSH 16)	-L- Sta. 172+00 to 186+00	PR; Non-Causeway							2.461			
15	-L- Sta. 173+96 RT	SAC; Non-Causeway							0.001		10	
1 (PSH 17)	-L- Sta. 186+00 to 200+00	PR; Causeway; Wall						0.113	1.278	193	1176	
1 (PSH 17)	-L- Sta. 186+00 to 200+00	PR; Non-Causeway							2.277			
16	-L- 191+91 RT	Puncheon Camp Branch; Non-Causeway							0.001		10	
SHEET TOTALS:			**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1.104**	**19.430**	**2468**	**5097**	**0**

NOTES:
PR: Pigeon River

REVIS 2,468

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DECEMBER 17, 2024
HAYWOOD COUNTY
I-40 PIGEON RIVER

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation in Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing in Wetlands (ac)	WETLAND IMPACTS: Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	SURFACE WATER IMPACTS: Temp. SW impacts (ac)	SURFACE WATER IMPACTS: Existing Channel Impacts Permanent (ft)	SURFACE WATER IMPACTS: Existing Channel Impacts Temp. (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
17	-L- Sta. 195+45 LT	TF; 18" CMP							0.002			
1 (PSH 18)	-L- Sta. 200+00 to -L_EB- 11+00	PR; Causeway; Wall						0.853	1.668	723	491	
1 (PSH 18)	-L- Sta. 200+00 to -L_EB- 11+00	PR; Non-Causeway							1.572			
18	-L- Sta. 208+73	SG; 72"x44" CMAP; Wall						0.007	0.013	30	55	
1 (PSH 19)	-L_EB- Sta. 11+00 to 21+57.61	PR; Causeway; Wall						0.271	0.581	448	756	
1 (PSH 19)	-L_EB- Sta. 11+00 to 21+57.61	PR; Non-Causeway							2.088			
19	-L_EB- Sta. 19+61	SH; 72" CMP; Wall						0.006	0.005	62	50	
1 (PSH 20)	-L_EB- Sta. 32+35.77 to 33+50	PR; Causeway; Wall						0.242	1.043	484	1648	
1 (PSH 20)	-L_EB- Sta. 32+35.77 to 33+50	PR; Non-Causeway							4.157			
20	-Y1- 20+69 RT	SAE; Non-Causeway							0.002		11	
21	-Y1- 24+57 RT	SAF; Non-Causeway							0.001		10	
1 (PSH 21)	-L_EB- Sta. 33+50 to -L1- Sta. 13+50	PR; Causeway; Wall						0.040	0.821	208	1142	
1 (PSH 21)	-L_EB- Sta. 33+50 to -L1- Sta. 13+50	PR; Non-Causeway							2.484			
1 (PSH 22)	-L1- Sta. 13+50 to 27+00	PR; Causeway; Wall						0.081	1.047	353	849	
1 (PSH 22)	-L1- Sta. 13+50 to 27+00	PR; Non-Causeway							2.523			
SHEET TOTALS:			**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1.500**	**18.007**	**2308**	**5012**	**0**

REVISE 2,308

NOTES:
PR: Pigeon River

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DECEMBER 17, 2024
HAYWOOD COUNTY
I-40 PIGEON RIVER

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)
22	-L1- Sta. 15+40	Skiffley Creek; 96" CMP; Wall						0.020	0.009	109	51	
23	-L1- Sta. 21+31 LT	Groundhog Creek; (3) 84" CMP							0.050		67	
1 (PSH 23)	-L1- Sta. 27+00 to 29+71	PR; Causeway: Wall						0.022	0.231	134	1117	
1 (PSH 23)	-L1- Sta. 27+00 to 29+71	PR; Non-Causeway							3.491			
24	-L1- Sta. 28+80	Rube Rock Branch; 84" CMP; Wall						0.009	0.016	67	67	
25	-L1- Sta. 29+00 LT	SKA; 84" CMP							0.009		66	
26	-L1- Sta. 35+32 RT	TG; 24" CMP						0.005				
27	-L1- Sta. 40+08 LT	Tom Hall Branch; 72" CMP							0.007		38	
28	-L1- Sta. 40+11 LT	SLB; 72" CMP							0.007		45	
29	-L1- Sta. 40+32 LT	SLC; 72" CMP							0.009		63	
30	-L1- Sta. 36+96 RT	TH; 72" CMP; Wall							0.014			
1A	-HAULRD- Sta. 100+66 to 102+39	PR; Temp. Access Road Crossing							0.607		268	
31	Cotton Patch	WA; Staging Area	0.038									
SHEET TOTALS:			**0.038**	**0.000**	**0.000**	**0.000**	**0.000**	**0.056**	**4.450**	**310**	**1782**	**0**

NOTES:
PR: Pigeon River

REVISE 310

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DECEMBER 17, 2024
HAYWOOD COUNTY
I-40 PIGEON RIVER

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
32	Borrow Site #1	S1-SAA, S1-WA2; Temp. Access Road	0.007						0.326		960	
33	Borrow Site #1	SAB; Temp. Access Road							0.021		121	
34	Borrow Site #1	S1-SAD; Borrow Pit						0.006		244		
35	Borrow Site #1	S1-SAE/S1-SAE-INT; Borrow Pit						0.012		517		
36	Borrow Site #1	S1-SAE12 INT; Borrow Pit						0.001		48		
37	Borrow Site #1	S1-SAD; Borrow Pit						0.004		170		
SHEET TOTALS:			**0.007**	**0.000**	**0.000**	**0.000**	**0.000**	**0.023**	**0.347**	**979**	**1081**	**0**
PROJECT TOTALS:			**0.045**	**0.000**	**0.000**	**0.000**	**0.000**	**5.326**	**74.475**	**13095**	**18192**	**0**

no wall on this page.

3,168
3,862
2,468
2,308
310
=12,116

REVISED MAY 28, 2025

NOTES:
PR: Pigeon River

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DECEMBER 17, 2024
HAYWOOD COUNTY
I-40 PIGEON RIVER

Wall-River Impact Detail

8/17/99

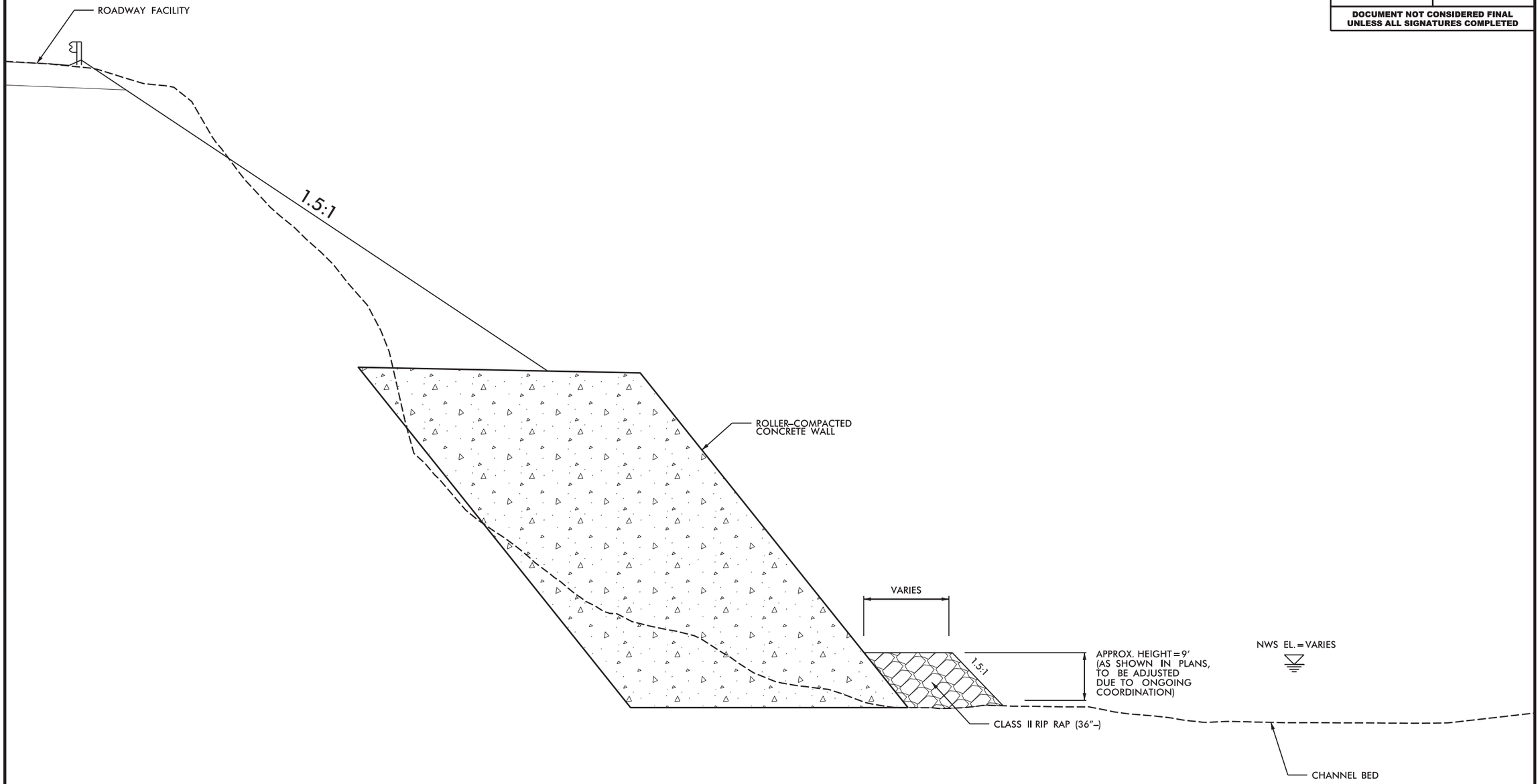
PROJECT REFERENCE NO.	SHEET NO.
I-40 PIGEON RIVER	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TEMPORARY CAUSEWAY TO BE RETAINED DETAIL

NOT TO SCALE



7/2/2025
c:\pwworking\rkk\production\dms63944\I-40 Pigeon River_Wall Causeway_Exhibit.dgn
mgeogeri

Revised Cover Letter Impact Summary

Permit Site / Plan sheet Page	Stream Name/Status	Status/Class	Perm Fill	Bank Stabilization	Temporary Impact	ACOE Mitigation Required	DWR Mitigation Required	Impact Description/ Avoidance and Minimization
32	S1-SAA	Perennial	--	--	960 (0.326)	960 (1:1)	960 (1:1)	This impact is for the temporary haul road from the Cotton Patch construction yard to the borrow site. NCDOT Proposes 1:1 mitigation for this activity for the temporal loss of stream function during the construction period, potentially lasting 4 years. NCDOT commits to pre-impact stream data collection, including photographs and cross-sections, for reference for stream restoration, and for use to assist in the determination of a successful restoration.
33	SAB	Perennial	--	--	121 (0.021)	121 (1:1)	0	
34	S1-SAD	Perennial	244 (0.006)	--	--	244 (2:1)	~~0~~ **244 (1:1)**	This stream is located inside the borrow pit. It is considered a total loss of waters.
35	S-SAE/S1-SAE-INT	Perennial/ Intermittent	517 (0.012)	--	--	517 (2:1)	517 (1:1)	This stream is located inside the borrow pit. It is considered a total loss of waters.
36	S1-SAE2 INT	Intermittent	48 (0.001)	--	--	48 (2:1)	0	This stream is located inside the borrow pit. It is considered a total loss of waters.
37	S1-SAD	Perennial	170 (0.004)	--	--	170 (2:1)	~~0~~ **170 (1:1)**	This stream is located inside the borrow pit. It is considered a total loss of waters.
Sheet Totals:			**979 (0.23)**	--	**1,081 lf 0.347 ac**	**1,081 (1:1) 979 (2:1)**	~~**1,477 (1:1)**~~ **1,891 (1:1)**	*Tables/ Pages Break with Impact Summary Tables in Permit Drawings*
			979 lf 0.23 ac					