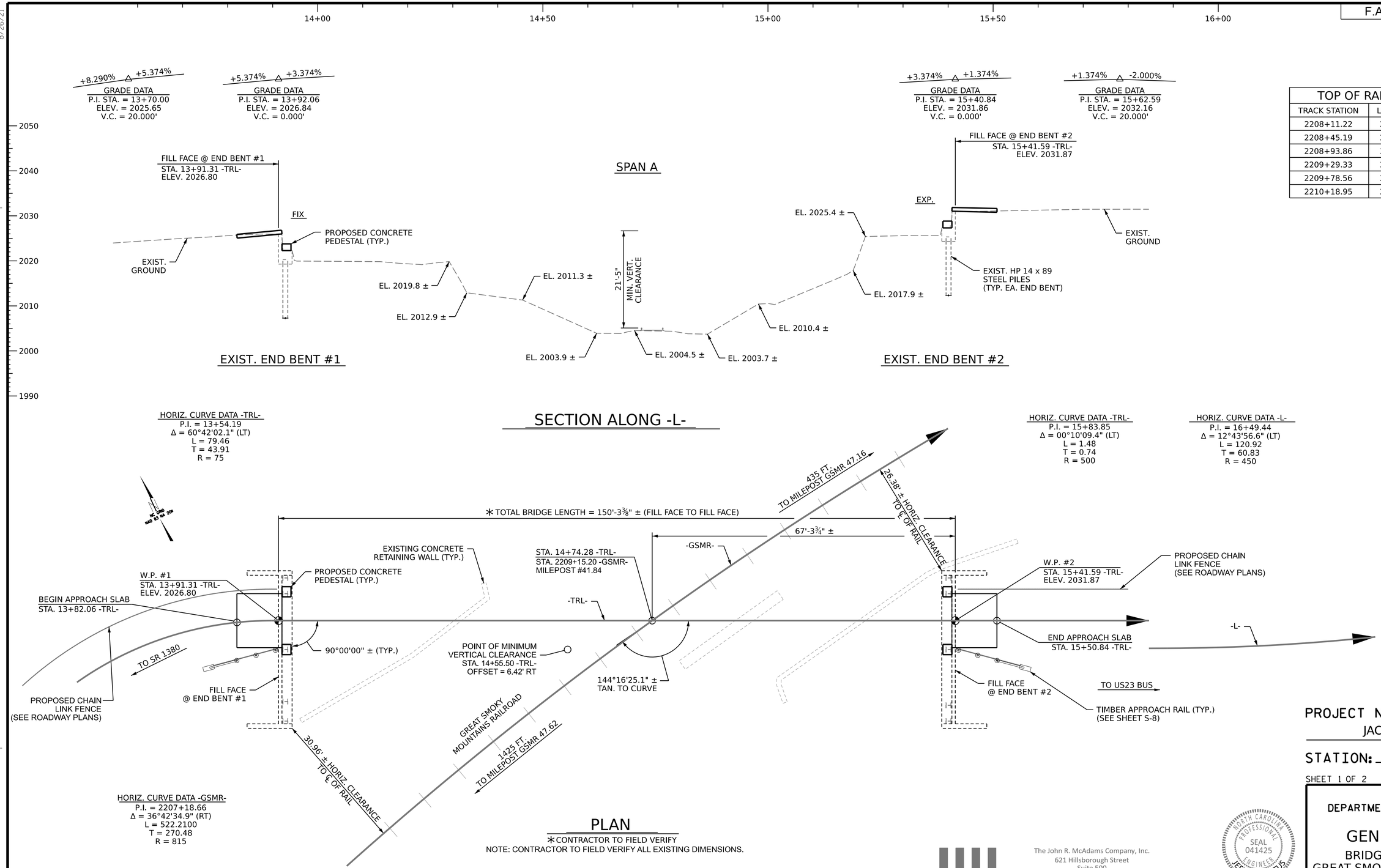
This electronic collection of documents is provided for the convenience of the user and is Not a Certified Document –

The documents contained herein were originally issued and sealed by the individuals whose names and license numbers appear on each page, on the dates appearing with their signature on that page.
This file or an individual page shall not be considered a certified document.

F.A. PROJECT No. 5114301

8/26/21



TOP OF RAIL ELEVATIONS		
TRACK STATION	LEFT RAIL	RIGHT RAIL
2208+11.22	2004.74	2004.60
2208+45.19	2004.68	2004.55
2208+93.86	2004.61	2004.48
2209+29.33	2004.43	2004.32
2209+78.56	2004.19	2004.09
2210+18.95	2003.88	2004.84

HORIZ. CURVE DATA -TRL-
P.I. = 13+54.19
Δ = 60°42'02.1" (LT)
L = 79.46
T = 43.91
R = 75

HORIZ. CURVE DATA -TRL-
P.I. = 15+83.85
Δ = 00°10'09.4" (LT)
L = 1.48
T = 0.74
R = 500

HORIZ. CURVE DATA -L-
P.I. = 16+49.44
Δ = 12°43'56.6" (LT)
L = 120.92
T = 60.83
R = 450

HORIZ. CURVE DATA -GSMR-
P.I. = 2207+18.66
Δ = 36°42'34.9" (RT)
L = 522.2100
T = 270.48
R = 815

PLAN

∗CONTRACTOR TO FIELD VERIFY

NOTE: CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS.

PROJECT NO. BN-0003

JACKSON COUNTY

STATION: 14+74.28 -TRL-

SHEET 1 OF 2 MILEPOST #41.78

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

BRIDGE ON SR 1381 OVER
GREAT SMOKY MOUNTAINS RAILROAD
BETWEEN SR 1380 AND US 23 BUS

The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

NORTH CAROLINA PROFESSIONAL SEAL 041425 ENGINEER JEFFREY LOFTUS

Signed by: Jeff Loftus 7C22480A37E6490... 6/8/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

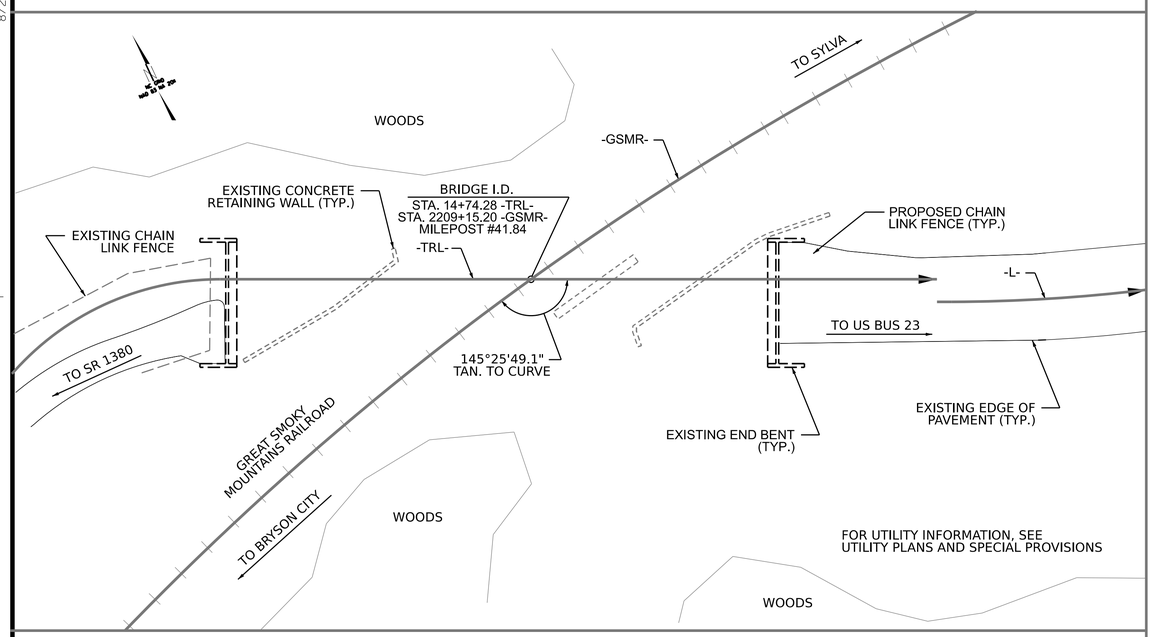
REVISIONS						
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

SHEET NO. S-1

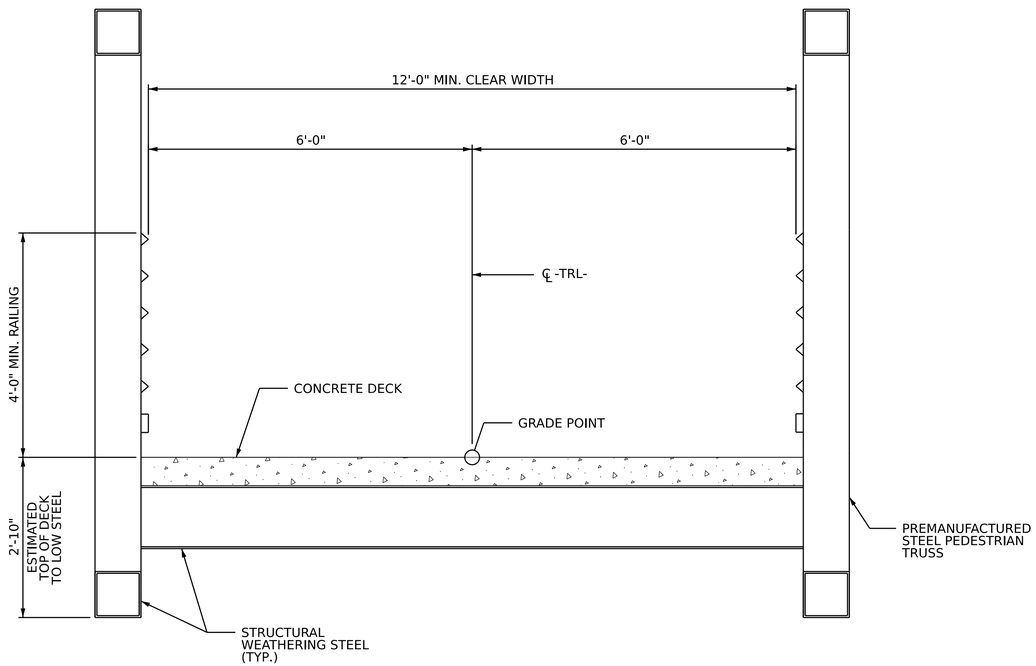
TOTAL SHEETS 8

DRAWN BY :	J. WEIGER	DATE :	7/2025
CHECKED BY :	J. LOFTUS	DATE :	8/2025
DESIGN ENGINEER OF RECORD:	J. LOFTUS	DATE :	2/2026

6/1/2026
X:\Projects\TPD\TPDNCC0005 - 2021 Western Divisions PDSC and GESC LSC\WO 02 Hometown Place\CADD (NCDOT)2023\NC ORD\Structures\BN-0003\03 - CADD\02 - FinalDrawings\401_001_BN0003_SMU_GD01_001_49XXXX.dgn
weiger



LOCATION SKETCH



TYPICAL SECTION

SINGLE SPAN PREMANUFACTURED STEEL PEDESTRIAN TRUSS

NOTES

1. ASSUMED PEDESTRIAN LIVE LOAD = 90 PSF.
2. ASSUMED DESIGN VEHICLE LIVE LOAD = H10.
3. THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE LRFD DESIGN SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES AND REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
4. THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.
5. TOTAL BRIDGE LENGTH SHOWN ON PLANS IS APPROXIMATED. CONTRACTOR AND/OR TRUSS MANUFACTURER SHALL FIELD VERIFY DISTANCES BETWEEN EXISTING END BENT BACKWALLS TO SIZE PREMANUFACTURED STEEL PEDESTRIAN TRUSS AND ITS ANTICIPATED EXPANSION.
6. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH 2024 NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES UNLESS OTHERWISE SPECIFIED IN THE PLANS.
7. THE SUPERSTRUCTURE OF THE BRIDGE SHALL BE A PREMANUFACTURED PEDESTRIAN BRIDGE.
8. FABRICATOR OF PREMANUFACTURED PEDESTRIAN BRIDGE SUPERSTRUCTURE SHALL INDICATE THE LOCATION OF DRAINAGE HOLES FOR THE BRIDGE TUBULAR MEMBERS IN THE SHOP DRAWINGS.
9. ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE HPS 50W.
10. ANCHOR BOLTS FOR PREMANUFACTURED PEDESTRIAN BRIDGE SHALL BE ASTM F1554 GRADE 105.
11. CONCRETE DECK SHALL BE CLASS AA CONCRETE AND ADHERE TO NCDOT SPECIFICATIONS.
12. REINFORCED CONCRETE PEDESTALS SHALL BE CLASS AA CONCRETE AND ADHERE TO NCDOT SPECIFICATIONS.
13. AT THE CONTRACTOR'S DISCRETION AND AT NO ADDITIONAL COST TO THE OWNER, THE CONCRETE PEDESTALS OR BEARING LEG EXTENSIONS MAY BE SUBSTITUTED FOR STEEL PEDESTALS DESIGNED BY THE STEEL TRUSS MANUFACTURER.
14. ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 AND ADHERE TO NCDOT SPECIFICATIONS.
15. ALL BOLTS, NUTS, WASHERS, ETC. SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153 UNLESS OTHERWISE NOTED.
16. ALL WORK SHALL BE ACCOMPLISHED AS DIRECTED BY THE ENGINEER. ANY DISCREPANCIES FOUND ON THIS DRAWING SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING.
17. FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
18. FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
19. FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
20. FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
21. FOR CONCRETE APPROACH SLAB, SEE SPECIAL PROVISIONS.
22. FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
23. FOR REINFORCED CONCRETE PEDESTALS, SEE SPECIAL PROVISIONS.
24. FOR MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE, SEE SPECIAL PROVISIONS.
25. FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
26. FOR PREMANUFACTURED PEDESTRIAN BRIDGE SUPERSTRUCTURE, SEE SPECIAL PROVISIONS.
27. BRIDGE LOADINGS ARE ESTIMATED. AFTER SHOP DRAWINGS FOR THE PREMANUFACTURED PEDESTRIAN BRIDGE ARE SUBMITTED, IT IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO CHECK THE END BENTS AND PEDESTALS FOR ACTUAL BRIDGE LOADINGS. SHOP DRAWINGS SHALL BE FORWARDED TO ENGINEER OF RECORD UPON RECEIPT. A FINAL SET OF BRIDGE REACTIONS SHALL BE PROVIDED TO THE ENGINEER AT THE TIME OF SHOP DRAWING SUBMITTAL. BRIDGE REACTIONS SHOULD BE SUPPLIED FOR THE FOLLOWING LOAD CASES: DEAD (DC), DEAD (DW), LIVE (PEDESTRIAN), LIVE (H10 TRUCK), WIND (WS), WIND (OVERTURNING), THERMAL (TU), AND SEISMIC (EQ). THE ORIENTATION AND APPLICATION OF THE LOADINGS SHALL BE CLEARLY MARKED. THE PEDESTALS/SUBSTRUCTURE HAVE BEEN DESIGNED FOR THE FOLLOWING ESTIMATED LOADS. ALL LOADS ARE PER BEARING. NEGATIVE SIGN INDICATES UPLIFT IN THE VERTICAL DIRECTION:

    VERTICAL DEAD LOAD DC: 47,800 LB
    VERTICAL DEAD LOAD DW: 0 LB
    VERTICAL LIVE LOAD PEDESTRIAN: 40,500 LB
    VERTICAL LIVE LOAD VEHICLE: 11,500 LB
    TRANSVERSE WIND LOAD: 23,200 LB
    VERTICAL WIND LOAD: +/- 19,500 LB
    OVERTURNING WIND LOAD: -13,300 LB (WINDWARD LEG)
    OVERTURNING WIND LOAD: -4,800 LB (LEEWARD LEG)
    LONGITUDINAL FORCE DUE TO THERMAL AFFECTS: 6,700 LB

TOTAL BILL OF MATERIAL

	REINFORCED CONCRETE APPROACH SLABS	APPROACH RAIL	REINFORCED CONCRETE PEDESTALS	PREMANUFACTURED PEDESTRIAN BRIDGE SUPERSTRUCTURE @ STA. 14+74.28 -TRL-	BRIDGE ERECTION @ STA. 14+74.28 -TRL-	REINFORCED CONCRETE DECK @ STA. 14+74.28 -TRL-
	EACH	EACH	LUMP SUM	LUMP SUM	LUMP SUM	SF
SUPERSTRUCTURE	2	2		LUMP SUM	LUMP SUM	1,875
END BENT NO. 1			LUMP SUM			
END BENT NO. 2			LUMP SUM			
TOTAL	2	2	LUMP SUM	LUMP SUM	LUMP SUM	1,875

PROJECT NO. BN-0003

JACKSON COUNTY

STATION: 14+74.28 -TRL-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

BRIDGE ON SR 1381 OVER
GREAT SMOKY MOUNTAINS RAILROAD
BETWEEN SR 1380 AND US 23 BUS

The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

NORTH CAROLINA PROFESSIONAL SEAL 041425 ENGINEER JEFFREY LOFTUS

Signed by: Jeff Loftus 6/8/2026
7C22480A37E6490...

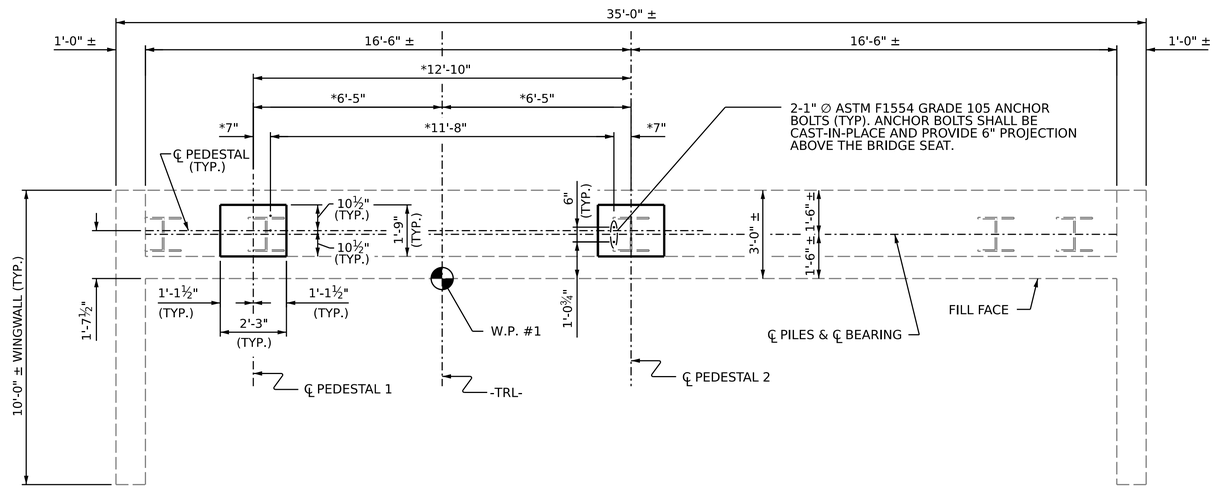
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS								SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:			S-2
1			3					TOTAL SHEETS
2			4					8

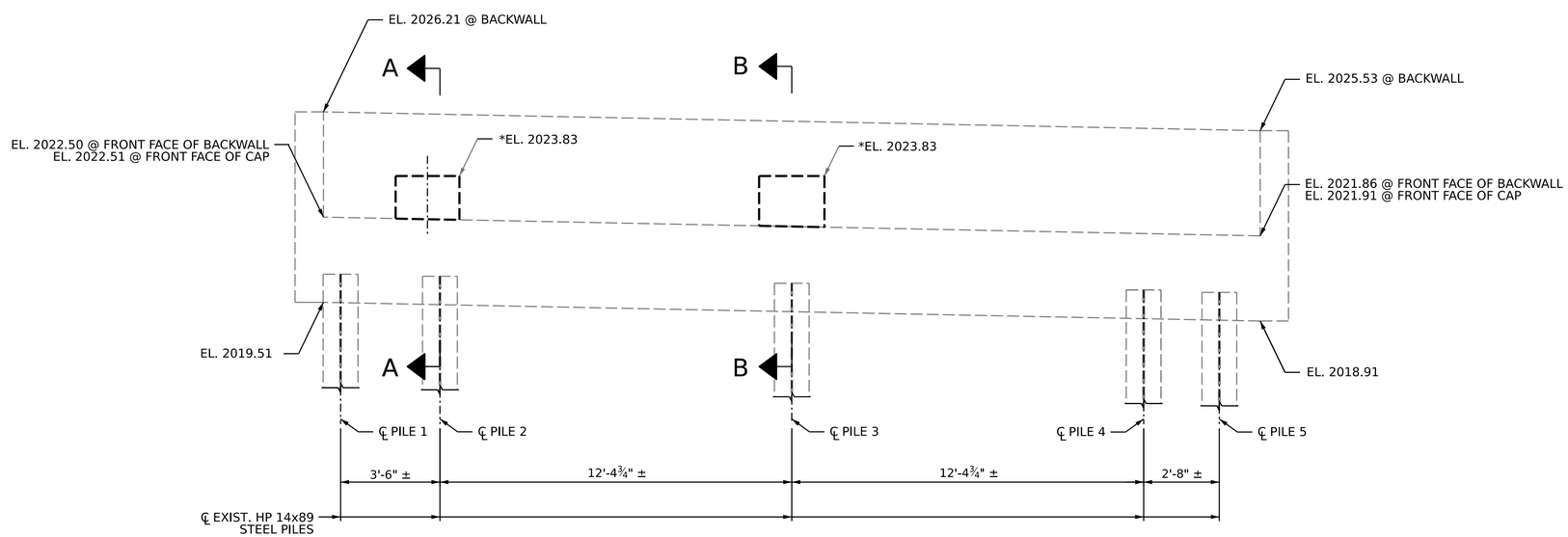
DRAWN BY : J. WEIGER DATE : 7/2025
CHECKED BY : J. LOFTUS DATE : 8/2025
DESIGN ENGINEER OF RECORD: J. LOFTUS DATE : 2/2026

6/8/2026
X:\Projects\TPD\TPDNCC0005 - 2021 Western Divisions PDSC and GESC LSC\WO 02 Hometown Place\CADD (NCDOT)2023\NC ORD\Structures\BN-0003\03 - CADD\02 - FinalDrawings\401_003_BN0003_SMU_GD02_002_49XXXX.dgn
loftus

8/26/21



PLAN



ELEVATION

FOR CROSS SECTIONS A-A & B-B, SEE SHEET S-4

NOTES

1. AT THE CONTRACTOR'S DISCRETION AND AT NO ADDITIONAL COST TO THE OWNER, THE CONCRETE PEDESTALS MAY BE SUBSTITUTED FOR STEEL PEDESTALS OR BEARING LEG EXTENSIONS DESIGNED BY THE STEEL TRUSS MANUFACTURER.
2. DIMENSIONS MARKED WITH AN ASTERISK ARE TO BE ADJUSTED BY MCADAMS AFTER PREMANUFACTURED BRIDGE IS DESIGNED.
3. PEDESTAL ELEVATIONS SHOWN ARE MAXIMUM VALUES. IF CONCRETE PEDESTALS ARE USED, THE STEEL BRIDGE MANUFACTURER SHALL LIMIT THE TRUSS DEPTH TO BEAR AT THESE MAXIMUM ELEVATIONS OR LOWER.
4. FOR ADDITIONAL PEDESTAL DETAILS AND NOTES, SEE SHEET 2 OF 2.
5. DIMENSIONS, CONCRETE, AND REINFORCING STEEL QUANTITIES ARE SUBJECT TO CHANGE UNTIL AFTER SHOP DRAWINGS FOR PREMANUFACTURED PEDESTRIAN TRUSS ARE APPROVED. NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY ADJUSTMENTS TO QUANTITIES.
6. UPON RECEIPT OF BRIDGE SHOP DRAWINGS, CONSTRUCTION ADMINISTRATOR SHALL FORWARD DRAWINGS TO MCADAMS AFTER WHICH MCADAMS WILL ISSUE UPDATED BRIDGE PLANS.

PROJECT NO. BN-0003
JACKSON COUNTY
STATION: 14+74.28 -TRL-

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 1

McADAMS
The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187
www.mcadamsco.com

NORTH CAROLINA PROFESSIONAL SEAL 041425 ENGINEER JEFFREY LOFTUS

Signed by: Jeff Loftus 7C22480A37E6490... 6/8/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

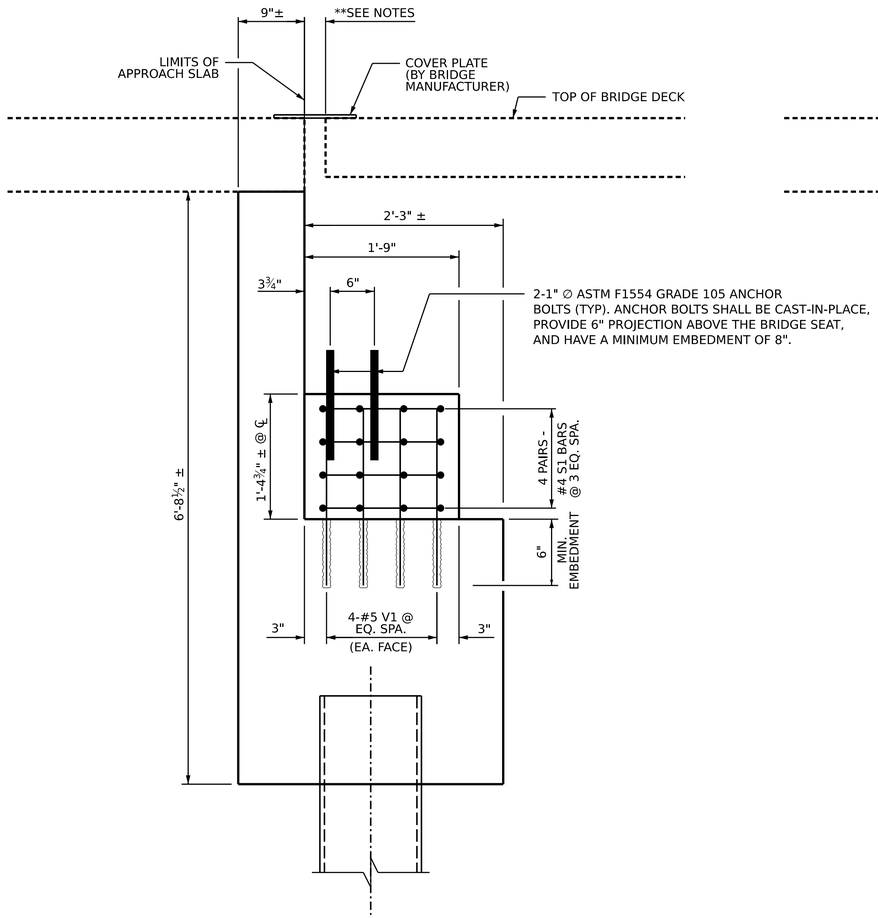
REVISIONS						
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

SHEET NO. S-3
TOTAL SHEETS 8

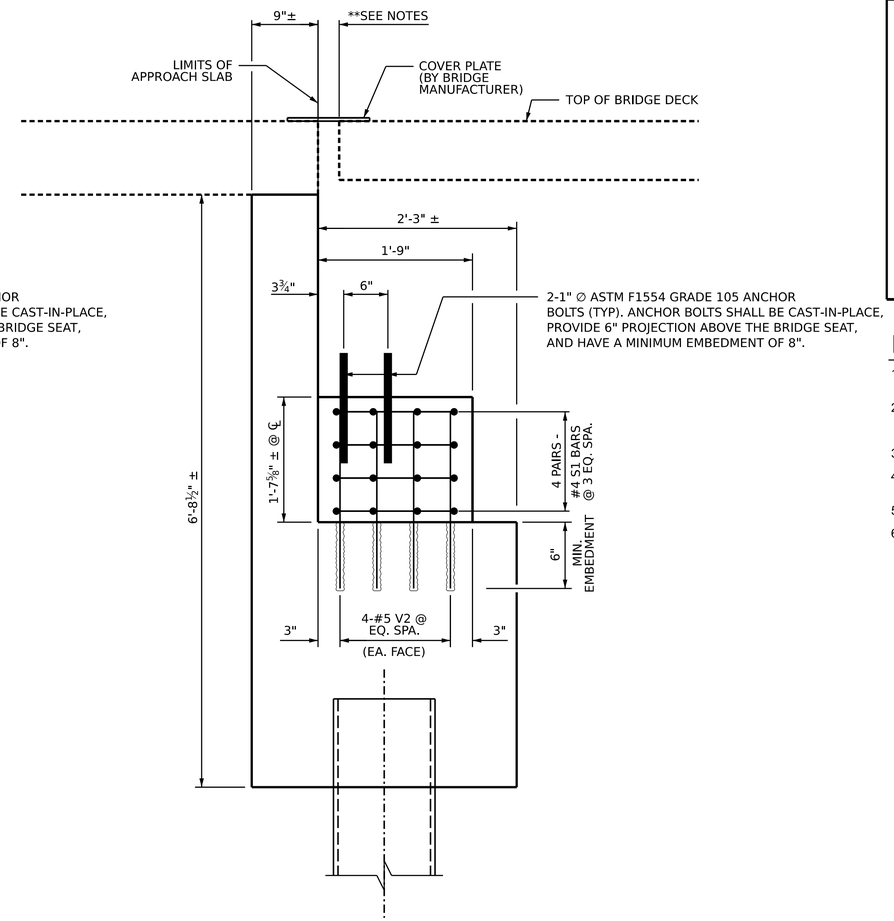
DRAWN BY : J. WEIGER DATE : 7/2025
CHECKED BY : J. LOFTUS DATE : 12/2025
DESIGN ENGINEER OF RECORD: J. LOFTUS DATE : 2/2026

5/28/2026
X:\Projects\TPD\TPDNCC0005 - 2021 Western Divisions PDSC and GESC LSC\WO 02 Hometown Place\CADD (NCDOT)2023\NC ORD\Structures\BN-0003\03 - CADD\02 - FinalDrawings\401_005_BN0003_SMU_EB01_003_49XXXX.dgn
weiger

8/26/21

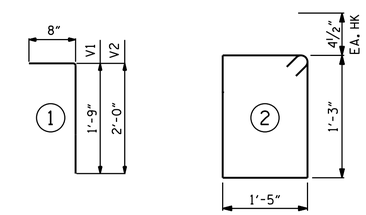


SECTION A-A - PEDESTAL 1



SECTION B-B - PEDESTAL 2

BAR TYPES



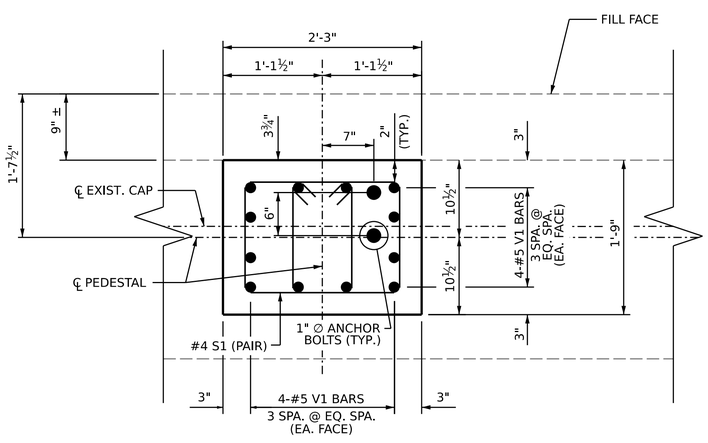
ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL FOR ONE END BENT

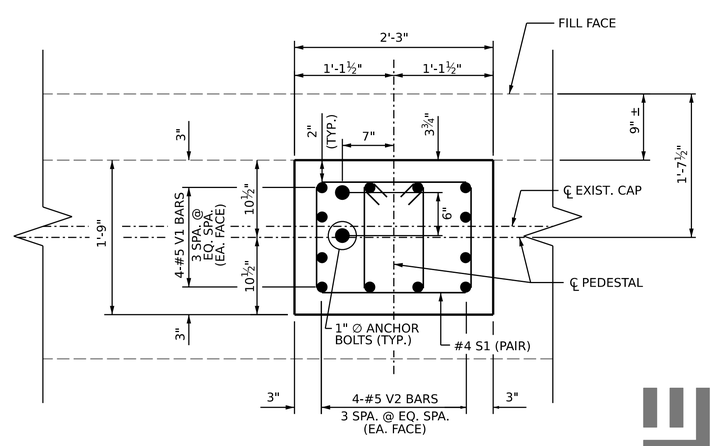
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
V1	12	#5	1	2'-5"	30
V2	12	#5	1	2'-8"	33
S1	16	#4	2	6'-1"	65
REINFORCING STEEL					128 LBS.
TOTAL CLASS AA CONCRETE					0.5 CY

NOTES

1. DRILL AND EPOXY #5 "V" BARS INTO THE EXISTING CAP. #5 "V" BARS MAY BE SHIFTED TO CLEAR EXISTING REINFORCEMENT IN CAP.
2. LEVEL TWO FIELD TESTING IS REQUIRED, AND THE YIELD LOAD FOR EACH #5 "V" BAR IS 8 KIPS. FOR ADHESIVELY ANCHORED DOWELS, SEE THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR REINFORCED CONCRETE PEDESTALS.
3. "V" BARS IN PEDESTAL MAY BE ROTATED AS NECESSARY TO CLEAR ANCHOR BOLTS.
4. EMBEDMENT DEPTH OF CAST-IN-PLACE ANCHORS SHALL BE AT LEAST 8 INCHES. VERIFY EXACT PLACEMENT OF ANCHORS WITH BRIDGE MANUFACTURER BEFORE POURING CONCRETE.
5. FOR DIMENSIONS MARKED WITH AN ASTERISK, SEE NOTE 2 ON SHEET S-3.
6. **TRUSS MANUFACTURER TO PROVIDE REQUIRED OPENING BETWEEN BRIDGE DECK/TRUSS AND BACKWALL TO ALLOW FOR THERMAL EXPANSION OF THE BRIDGE.



PLAN VIEW - PEDESTAL 1



PLAN VIEW - PEDESTAL 2

PROJECT NO. BN-0003

JACKSON COUNTY

STATION: 14+74.28 -TRL-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

END BENT 1

McADAMS

The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

NORTH CAROLINA PROFESSIONAL SEAL 041425 ENGINEER JEFFREY LOFTUS

Signed by: Jeff Loftus 7C22480A37E6490... 6/8/2026

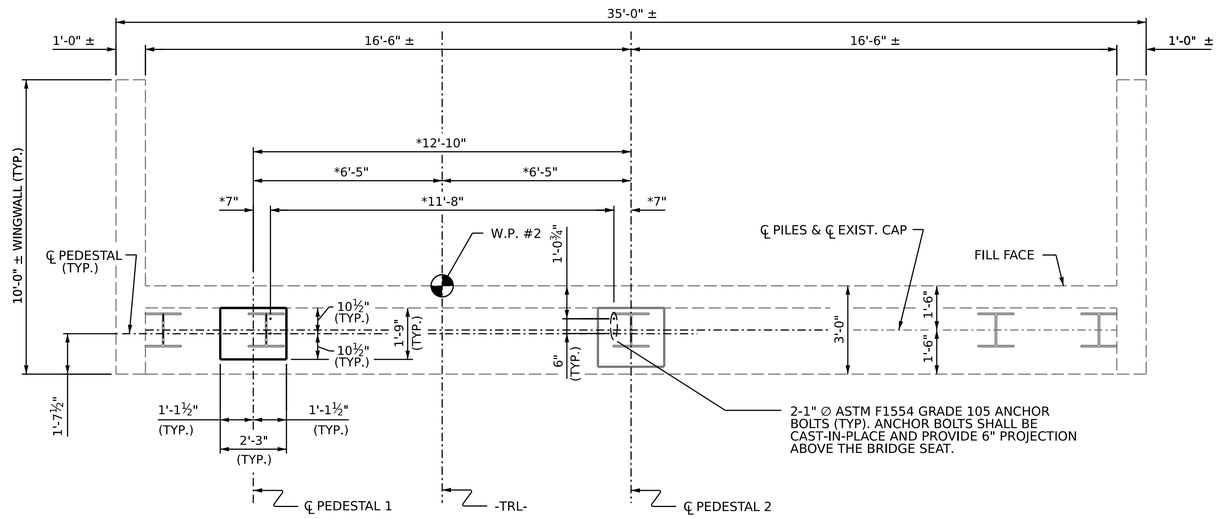
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS							SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:		S-4
1			3				TOTAL SHEETS
2			4				8

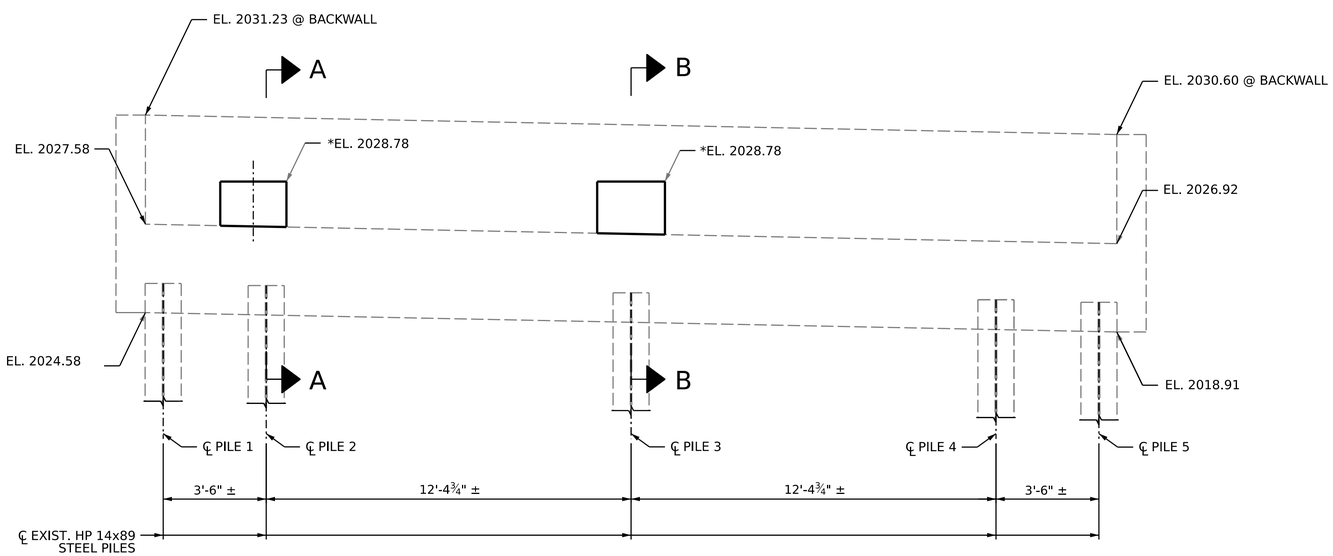
DRAWN BY : J. WEIGER DATE : 7/2025
CHECKED BY : J. LOFTUS DATE : 12/2025
DESIGN ENGINEER OF RECORD: J. LOFTUS DATE : 2/2026

5/28/2026
X:\Projects\TPD\TPDNCC0005 - 2021 Western Divisions PDSC and GESC LSC\WO 02 Hometown Place\CADD (NCDOT)2023\NC ORD\Structures\BN-0003\03 - CADD\02 - FinalDrawings\401_007_BN0003_SMU_EB02_004_49XXXX.dgn
weiger

8/26/21



PLAN



ELEVATION

FOR CROSS SECTIONS A-A & B-B, SEE SHEET S-6

NOTES

1. AT THE CONTRACTOR'S DISCRETION AND AT NO ADDITIONAL COST TO THE OWNER, THE CONCRETE PEDESTALS MAY BE SUBSTITUTED FOR STEEL PEDESTALS OR BEARING LEG EXTENSIONS DESIGNED BY THE STEEL TRUSS MANUFACTURER.
2. DIMENSIONS MARKED WITH AN ASTERISK ARE TO BE ADJUSTED BY MCADAMS AFTER PREMANUFACTURED BRIDGE IS DESIGNED.
3. PEDESTAL ELEVATIONS SHOWN ARE MAXIMUM VALUES. IF CONCRETE PEDESTALS ARE USED, THE STEEL BRIDGE MANUFACTURER SHALL LIMIT THE TRUSS DEPTH TO BEAR AT THESE MAXIMUM ELEVATIONS OR LOWER.
4. FOR ADDITIONAL PEDESTAL DETAILS AND NOTES, SEE SHEET 2 OF 2.
5. DIMENSIONS, CONCRETE, AND REINFORCING STEEL QUANTITIES ARE SUBJECT TO CHANGE UNTIL AFTER SHOP DRAWINGS FOR PREMANUFACTURED PEDESTRIAN TRUSS ARE APPROVED. NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY ADJUSTMENTS TO QUANTITIES.
6. UPON RECEIPT OF BRIDGE SHOP DRAWINGS, CONSTRUCTION ADMINISTRATOR SHALL FORWARD DRAWINGS TO MCADAMS AFTER WHICH MCADAMS WILL ISSUE UPDATED BRIDGE PLANS.

PROJECT NO. BN-0003
JACKSON COUNTY
STATION: 14+74.28 -TRL-

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 2

McADAMS
The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187
www.mcadamsco.com

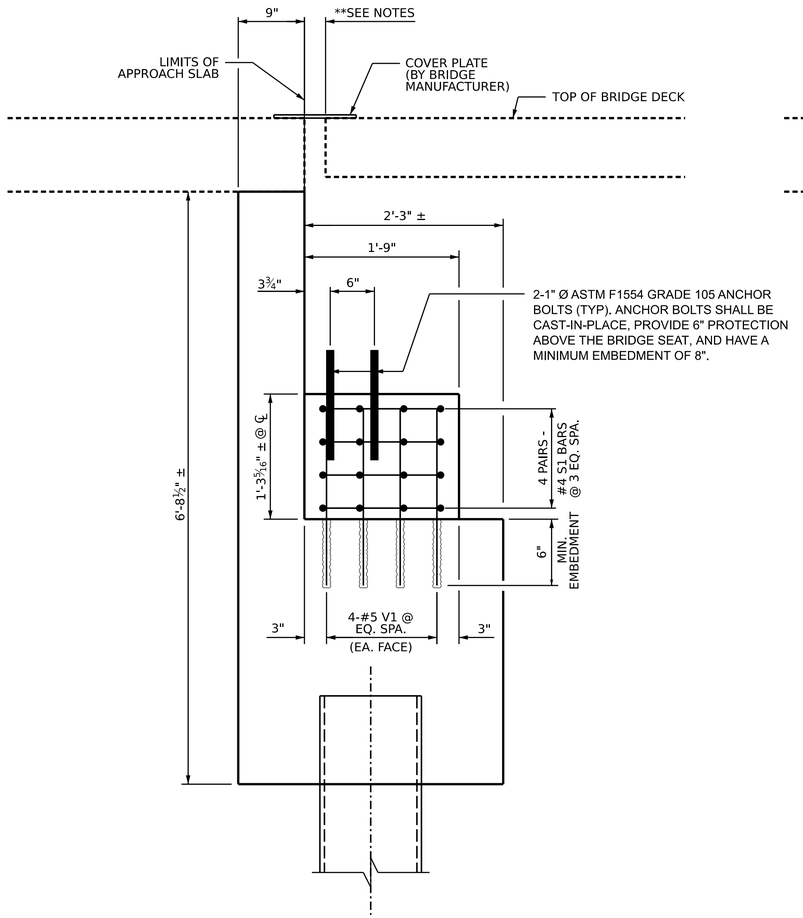
NORTH CAROLINA PROFESSIONAL SEAL 041425 ENGINEER JEFFREY LOFTUS
Signed by: Jeff Loftus 7C22480A37E6490... 6/8/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

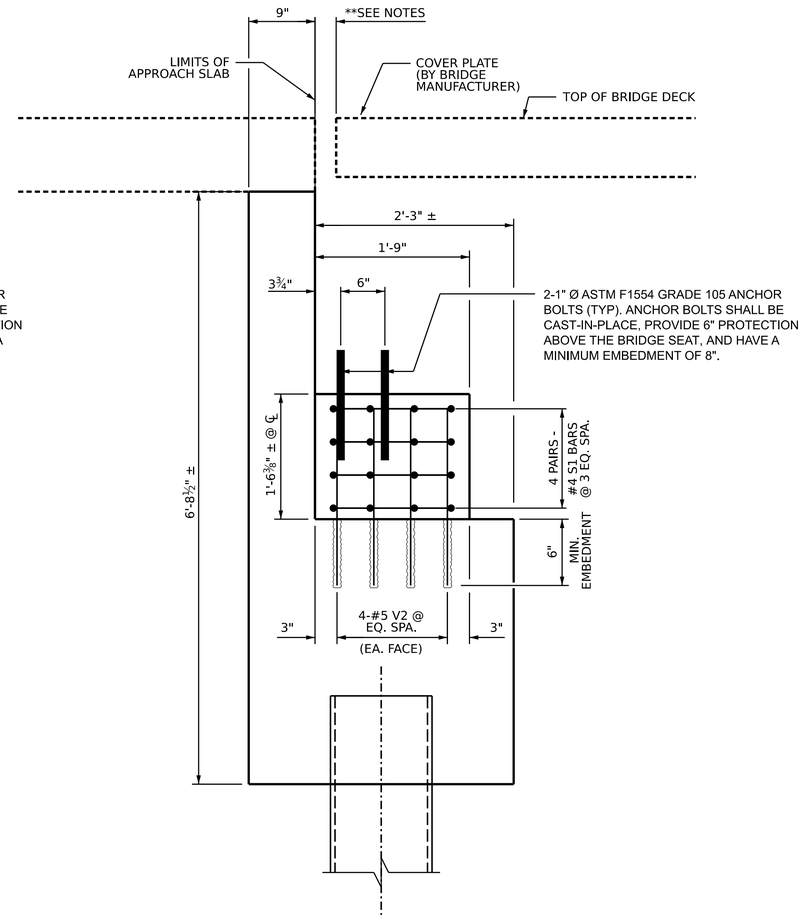
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			8

DRAWN BY : J. WEIGER DATE : 7/2025
CHECKED BY : J. LOFTUS DATE : 12/2025
DESIGN ENGINEER OF RECORD: J. LOFTUS DATE : 2/2026

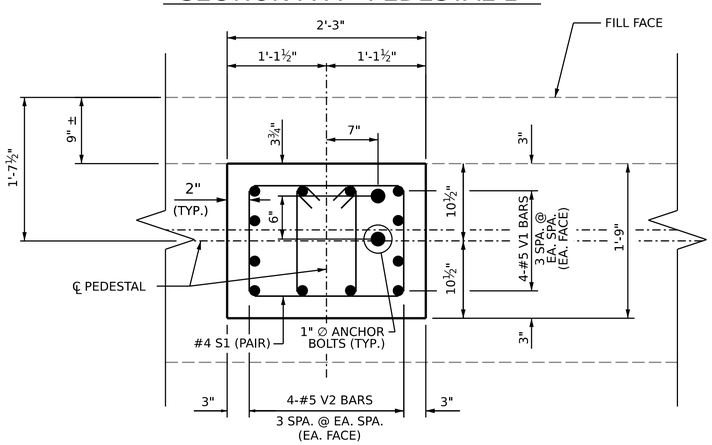
5/28/2026
X:\Projects\TPD\TPDNCC0005 - 2021 Western Divisions PDSC and GESC LSC\WO 02 Hometown Place\CADD (NCDOT)2023\NC ORD\Structures\BN-0003\03 - CADD\02 - FinalDrawings\401_009_BN0003_SMU_EB03_005_49XXXX.dgn
weiger



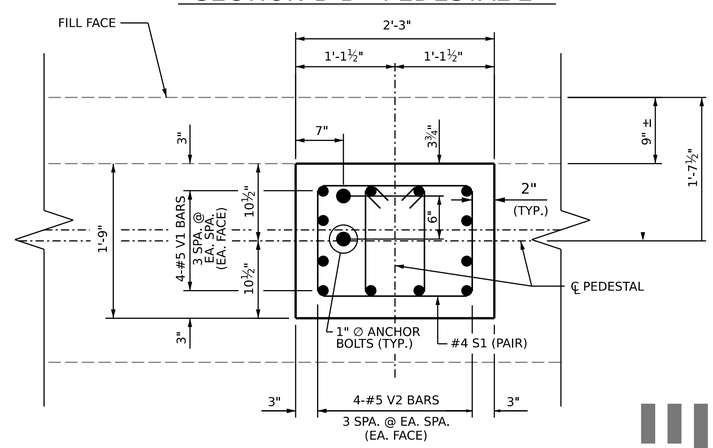
SECTION A-A - PEDESTAL 1



SECTION B-B - PEDESTAL 2

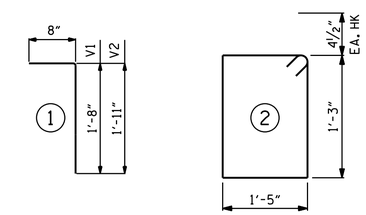


PLAN VIEW - PEDESTAL 1



PLAN VIEW - PEDESTAL 2

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL
FOR ONE END BENT

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
V1	12	#5	1	2'-4"	29
V2	12	#5	1	2'-7"	32
S1	16	#4	2	6'-1"	65
REINFORCING STEEL					126 LBS.
TOTAL CLASS AA CONCRETE					0.5 CY

NOTES

1. DRILL AND EPOXY #5 "V" BARS INTO THE EXISTING CAP. #5 "V" BARS MAY BE SHIFTED TO CLEAR EXISTING REINFORCEMENT IN CAP.
2. LEVEL TWO FIELD TESTING IS REQUIRED, AND THE YIELD LOAD FOR EACH #5 "V" BAR IS 8 KIPS. FOR ADHESIVELY ANCHORED DOWELS, SEE THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR REINFORCED CONCRETE PEDESTALS.
3. "V" BARS IN PEDESTAL MAY BE ROTATED AS NECESSARY TO CLEAR ANCHOR BOLTS.
4. EMBEDMENT DEPTH OF CAST-IN-PLACE ANCHORS SHALL BE AT LEAST 8 INCHES. VERIFY EXACT PLACEMENT OF ANCHORS WITH BRIDGE MANUFACTURER BEFORE POURING CONCRETE.
5. FOR DIMENSIONS MARKED WITH AN ASTERISK, SEE NOTE 2 ON SHEET S-5.
6. **TRUSS MANUFACTURER TO PROVIDE REQUIRED OPENING BETWEEN BRIDGE DECK/TRUSS AND BACKWALL TO ALLOW FOR THERMAL EXPANSION OF THE BRIDGE.

PROJECT NO. BN-0003
JACKSON COUNTY
STATION: 14+74.28 -TRL-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 2

The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

NORTH CAROLINA PROFESSIONAL SEAL 041425 ENGINEER JEFFREY LOFTUS

Signed by: Jeff Loftus 7C22480A37E6490... 6/8/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS							SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:		S-6
1			3				TOTAL SHEETS
2			4				8

DRAWN BY :	J. WEIGER	DATE :	7/2025
CHECKED BY :	J. LOFTUS	DATE :	12/2025
DESIGN ENGINEER OF RECORD:	J. LOFTUS	DATE :	2/2026

5/28/2026
X:\Projects\TPD\TPDNCC0005 - 2021 Western Divisions PDSC and GESC LSC\WO 02 Hometown Place\CADD (NCDOT)2023\NC ORD\Structures\BN-0003\03 - CADD\02 - FinalDrawings\401_011_BN0003_SMU_EB04_006_49XXXX.dgn
weiger

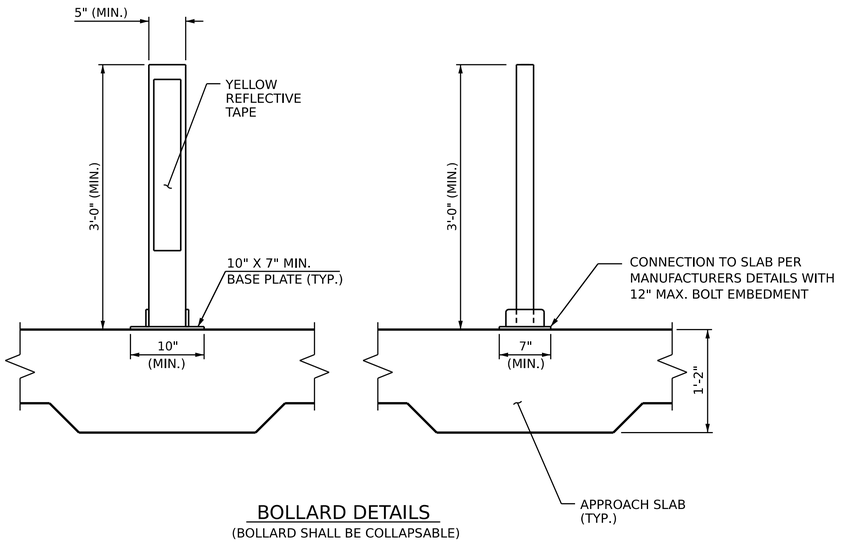
8/26/21

NOTES:

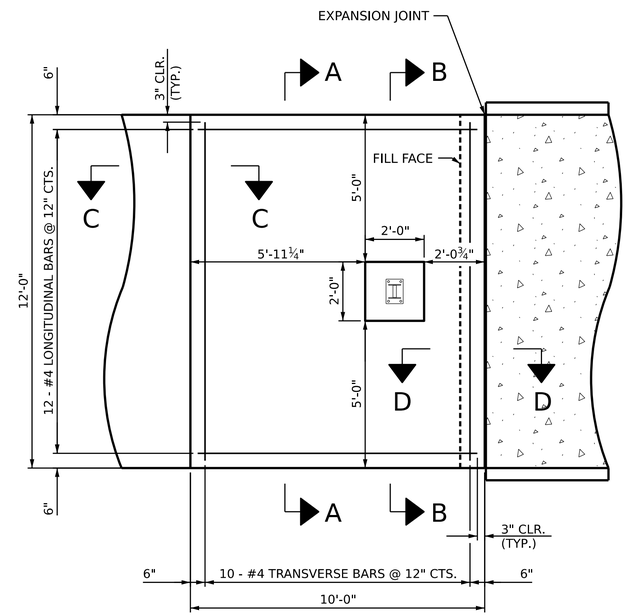
FOR CONCRETE APPROACH SLAB, SEE SPECIAL PROVISIONS.

CROSS SLOPE OF APPROACH SLAB SHALL TRANSITION FROM TRAIL TO MATCH CROSS SLOPE OF PREMANUFACTURED PEDESTRIAN BRIDGE.

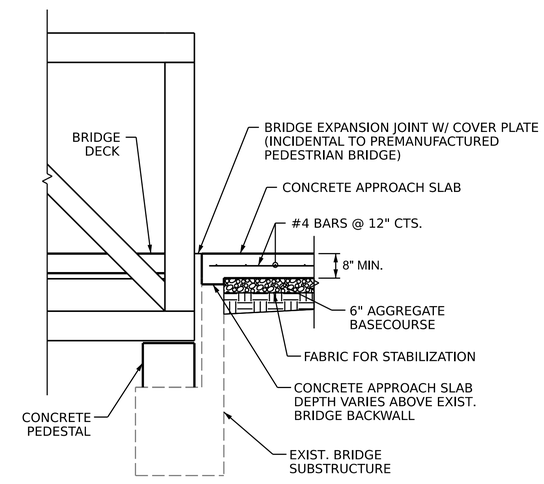
CONCRETE APPROACH SLABS ARE REQUIRED AT BEGIN AND END OF STRUCTURE.



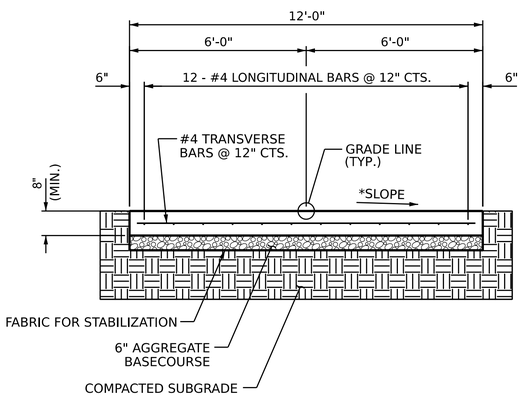
BOLLARD DETAILS
(BOLLARD SHALL BE COLLAPSABLE)



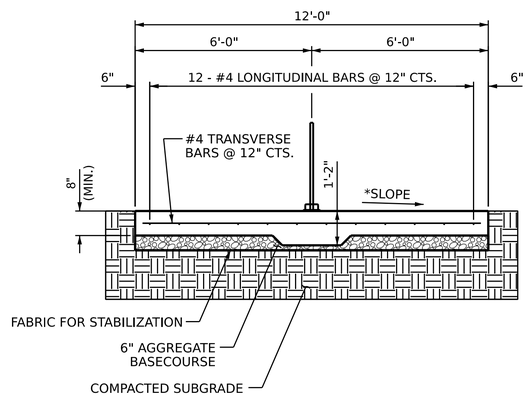
PLAN VIEW
(BEGIN APPROACH SHOWN, END APPROACH SIMILAR BUT MIRRORED)



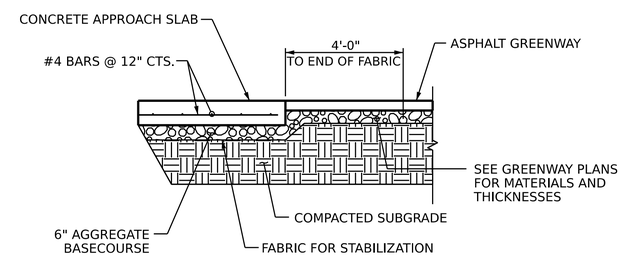
SECTION D-D
CONCRETE APPROACH TO BRIDGE CONNECTION



SECTION A-A
TYPICAL SECTION
*SEE NOTES



SECTION B-B
TYPICAL SECTION
*SEE NOTES



SECTION C-C
APPROACH SLAB TO GREENWAY CONNECTION
FOR ASPHALT TRAIL DETAILS, SEE GREENWAY PLANS

PROJECT NO. BN-0003

JACKSON COUNTY

STATION: 14+74.28 -TRL-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

APPROACH SLAB DETAILS

APPROACH SLAB DETAILS

The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

NORTH CAROLINA PROFESSIONAL SEAL 041425 ENGINEER JEFFREY LOFTUS

Signed by: Jeff Loftus 7C22480A37E6490... 6/8/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.	S-7
1			3			TOTAL SHEETS	8
2			4				

DRAWN BY : J. WEIGER DATE : 7/2025
CHECKED BY : J. LOFTUS DATE : 12/2025
DESIGN ENGINEER OF RECORD: J. LOFTUS DATE : 2//2026

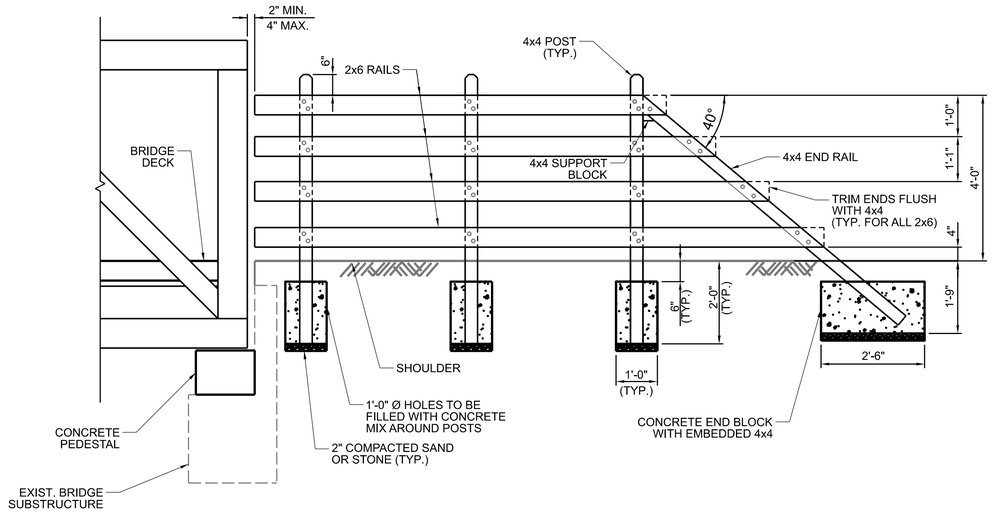
5/28/2026
X:\Projects\TPD\TPDNCC0005 - 2021 Western Divisions PDSC and GESC LSC\WO 02 Hometown Place\CADD (NCDOT)2023\NC ORD\Structures\BN-0003\03 - CADD\02 - FinalDrawings\401_013_BN0003_SMU_AS01_007_49XXXX.dgn
weiger

8/26/21

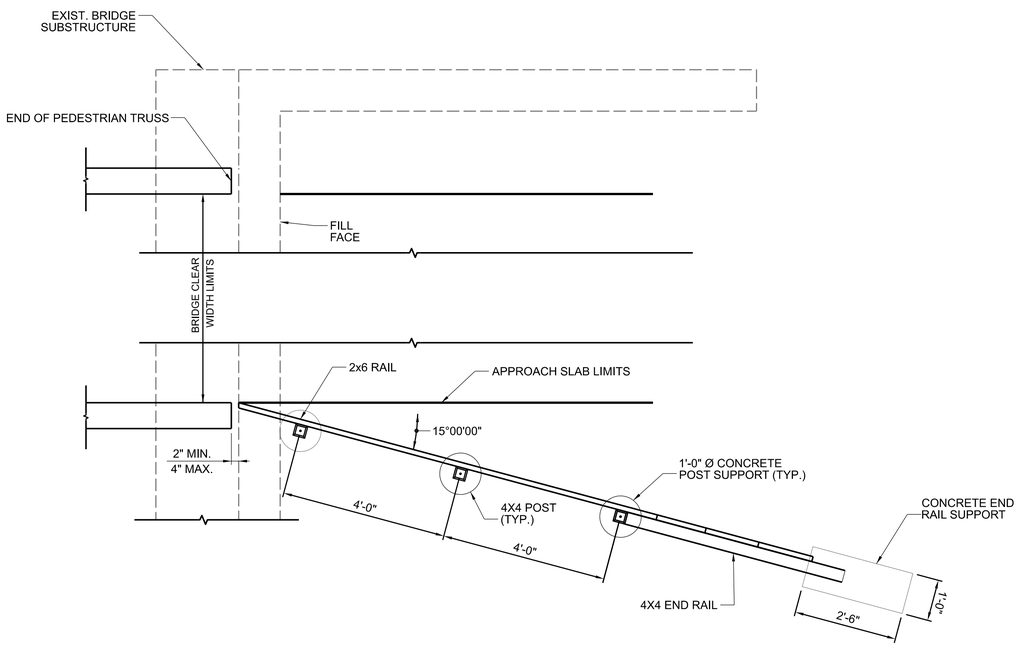
8/26/21

NOTES:

1. ALL TREATED LUMBER FOR THE SAFETY RAIL SHALL MEET THE REQUIREMENTS OF SECTION 1082 OF THE 2024 NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
2. ALL SCREWS, BOLTS, NUTS AND WASHERS ARE TO BE HOT DIPPED GALVANIZED.
3. SEE SHEET S-1 FOR NUMBER AND LOCATION OF APPROACH RAILS.

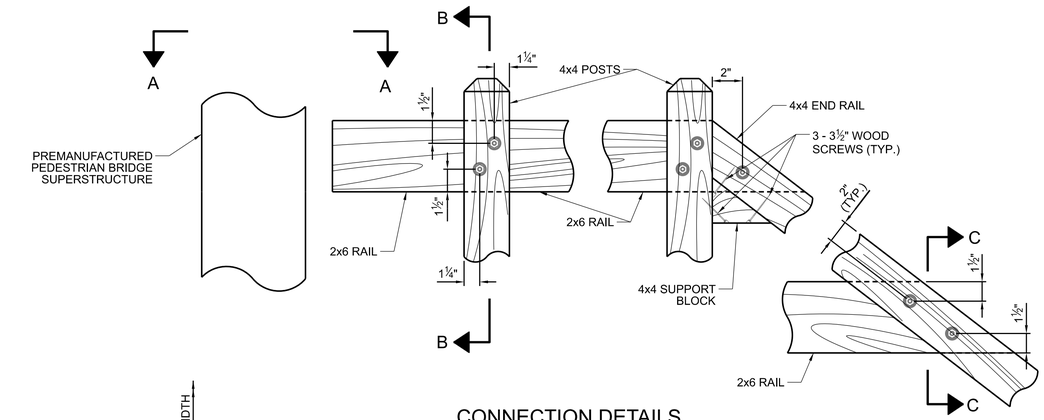


TYPICAL APPROACH RAIL ELEVATION



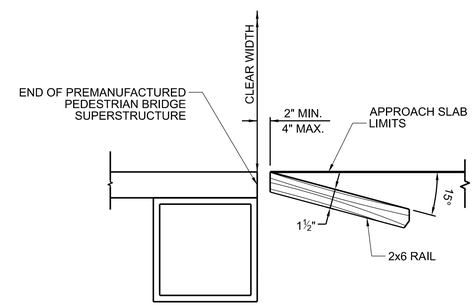
TYPICAL APPROACH RAIL PLAN

ABUTMENT 2 SAFETY RAIL SHOWN,
ABUTMENT 1 SAFETY RAIL SIMILAR, MIRR0RED

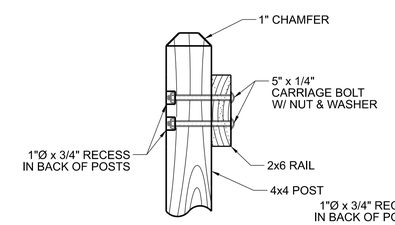


CONNECTION DETAILS

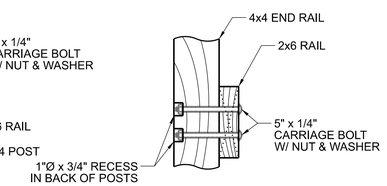
(OUTSIDE VIEW)



SECTION A-A



SECTION B-B



SECTION C-C

PROJECT NO. BN-0003

JACKSON COUNTY

STATION: 14+74.28 -TRL-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

APPROACH RAIL DETAILS

The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

NORTH CAROLINA PROFESSIONAL SEAL 041425 ENGINEER JEFFREY LOFTUS

Signed by: Jeff Loftus 7C22480A37E6490... 6/8/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
1			3			TOTAL SHEETS
2			4			8

DRAWN BY :	J. WEIGER	DATE :	12/2025
CHECKED BY :	J. JOFTUS	DATE :	12/2025
DESIGN ENGINEER OF RECORD:	J. LOFTUS	DATE :	2/2026

5/28/2026
X:\Projects\TPD\TPDNCC0005 - 2021 Western Divisions PDSC and GESC LSC\WO 02 Hometown Place\CADD (NCDOT)2023\NC ORD\Structures\BN-0003\03 - CADD\02 - FinalDrawings\401_015_BN0003_SMU_SR01_008_49XXXX.dgn
weiger

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	AASHTO (CURRENT)
LIVE LOAD	SEE PLANS
IMPACT ALLOWANCE	SEE AASHTO
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	SEE AASHTO
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2024 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED ¾" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1½" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A ¼" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A ¼" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE ⅞" ∅ SHEAR STUDS FOR THE ¾" ∅ STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - ⅞" ∅ STUDS FOR 4 - ¾" ∅ STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF ⅞" ∅ STUDS ALONG THE BEAM AS SHOWN FOR ¾" ∅ STUDS BASED ON THE RATIO OF 3 - ⅞"∅ STUDS FOR 4 - ¾" ∅ STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16" OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.