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PALMER ENGINEERING
2817 ERICA PLACE
NASHVILLE, TN 37204
J. BRIAN LEE, P.E. 107296

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE OF TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS	1A
ESTIMATED ROADWAY QUANTITIES	2
FOOTNOTES	2-1

YEAR	PROJECT NO.	SHEET NO.
2025	BR-STP-70(24)	ROADWAY-SIGN2

REV. 07/10/25: ADDED SHEET.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

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PALMER ENGINEERING
2817 ERICA PLACE
NASHVILLE, TN 37204
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SHEET NAME	SHEET NO.
SIGNATURE SHEET	ROADWAY-SIGN1
TITLE SHEET	1
ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS	1A
STANDARD ROADWAY DRAWINGS	1A1
STANDARD TRAFFIC DESIGN AND STRUCTURE DRAWINGS	1A2
PROJECT COMMITMENTS	1B
ESTIMATED ROADWAY QUANTITIES	2
FOOTNOTES	2-1
TYPICAL SECTIONS	2B, 2B1 - 2B2
TYPICAL SECTIONS AND PAVEMENT SCHEDULE	2B3
GENERAL NOTES	2C, 2C1
SPECIAL NOTES	2D
ENVIRONMENTAL NOTES	2E
TABULATED QUANTITIES	2F, 2F1, 2F2
DETAIL SHEET	2G
GEOMETRIC LAYOUT	2G1
RIGHT-OF-WAY NOTES, UTILITY NOTES, AND UTILITY OWNERS	3
RIGHT-OF-WAY ACQUISITION TABLE	3A
PROPERTY MAP	3B
PRESENT LAYOUTS	4 - 5
RIGHT OF WAY DETAILS	4A - 5A
PROPOSED LAYOUTS	4B - 5B
PROPOSED PROFILES	4C - 5C
RIGHT-OF-WAY DETAILS – BRIDGE #1	4D - 4E
SIDE ROADS PROFILES	6
HAUL ROAD PROFILES	7 - 8
PRIVATE DRIVE AND BUSINESS ENTRANCE PROFILES	9
DRAINAGE MAP	10
CULVERT SECTIONS	11 - 12
RAILROAD PROFILE	13
EROSION PREVENTION & SEDIMENT CONTROL (EPSC) SPECIAL NOTES, LEGEND, & TABULATION	14
EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) PLANS	15 - 17A
SIGNING AND PAVEMENT MARKING PLANS	18 - 19
SIGN SCHEDULE	20
ROADWAY CROSS SECTIONS	21 - 34
SIDE ROAD CROSS SECTIONS	35 - 40
HAUL ROAD CROSS SECTIONS	41 - 55
TRAFFIC CONTROL PLANS	T1 - T5

YEAR	PROJECT NO.	SHEET NO.
2025	BR-STP-70(24)	ROADWAY-SIGN1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

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Index Of Sheets
SEE SHT. NO. 1A FOR INDEX

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

DOES THIS PROJECT QUALIFY FOR UTILITY CHAPTER 86	YES X	NO
WORK ZONE SIGNIFICANCE DETERMINATION	SIGNIFICANT	
PER FHWA (FORM A)	YES	NO X
PER TDOT (FORM B)	YES	NO X

TENN.	YEAR	SHEET NO.
	2025	1
FED. AID PROJ. NO.	BR-STP-70(24)	
STATE PROJ. NO.	37011-3237-94	

HAWKINS COUNTY

SR-70;
BRIDGE OVER NORFOLK SOUTHERN RAILROAD
L.M. 6.19 (IA)

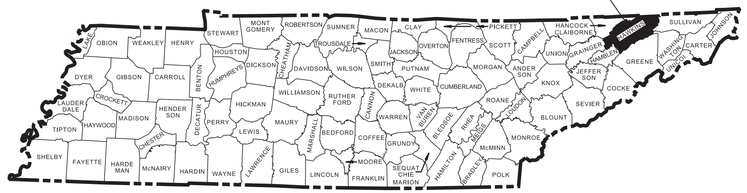
PS&E

GRADE, DRAIN, BRIDGE, PAVE, AND SIGN

STATE HIGHWAY NO. 70 F.A.H.S. NO. N/A

PROJECT LOCATION

S.R. 70 BRIDGE ID. # 37SR0700009
S.R. 70 BRIDGE ID. # 37SR0700011



SCALE: 1"= 1/2 MILE
0 0.5 1.0 1.5

N

NO EXCLUSIONS

ROAD TO BE CLOSED DURING CONSTRUCTION

37011-2237-94
BEGIN PROJECT NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178 E 2849102.7649

37011-3237-94
BEGIN PROJECT NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327 E 2849172.2221

37011-2237-94
END PROJECT NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660 E 2848244.1958

37011-3237-94
END PROJECT NO. BR-STP-70(24) CONST.
STA. 129+50.00
N 748175.6013 E 2847527.9139

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2021 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT PROJECT MANAGER 1: ERIC WILSON, P.E.
DESIGNED BY : PALMER ENGINEERING COMPANY
DESIGNER : BRIAN LEE, P.E. CHECKED BY TODD KEMP, P.E.
P.E. NO. 37011-1237-94 (DESIGN)
PIN NO. 124383.00

R.O.W. LENGTH	0.163 MILES
ROADWAY LENGTH	0.281 MILES
BRIDGE LENGTH	0.032 MILES
PROJECT LENGTH	0.312 MILES

SEALED BY

APPROVED:
WILL REID, DEPUTY COMMISSIONER / CHIEF ENGINEER
DATE:

APPROVED:
HOWARD H. ELEY, DEPUTY GOVERNOR & COMMISSIONER

S.R. 70

SURVEY 4/16/2019	TRAFFIC DATA	
UPDATED 1/21/2020	ADT (2025)	3586
	ADT (2045)	4159
	DHV (2045)	416
	D	65 - 35
	T (ADT)	2 %
	T (DHV)	1 %
	V	50 MPH

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B MODEL.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:
DIVISION ADMINISTRATOR DATE

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ROADWAY INDEX

SHEET NAME	SHEET NO.
SIGNATURE SHEET	ROADWAY-SIGN2
SIGNATURE SHEET	ROADWAY-SIGN1
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STANDARD TRAFFIC DESIGN AND STRUCUTRE DRAWINGS	1A2
PROJECT COMMITMENTS	1B
ESTIMATED ROADWAY QUANTITIES	2
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HAUL ROAD CROSS SECTIONS	41 - 55
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BRIDGE PLANS	B-1
GEOTECHNICAL PLANS	G-1
RETAINING WALL PLANS	R-1
STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PLANS	S-1
UTILITY PLANS	U1-1
**HAUL ROAD GATE DETAILS	N/A

NOTE: THE ALPHABETICAL LETTERS “I”, “O” & “Q” ARE NOT USED IN THE NUMBERING OF SHEETS.

** DETAILS PROVIDED BY NORFOLK SOUTHERN RAILROAD

STANDARD ROADWAY DRAWINGS

DWG.	REV.	DESCRIPTION
10-100.00 STANDARD ROADWAY TITLE SHEET, ABBREVIATIONS, AND LEGENDS		
RD-TP-1	10-01-24	STANDARD ROADWAY DRAWINGS TITLE SHEET
RD-A-1	02-20-20	STANDARD ABBREVIATIONS A THROUGH L
RD-A-2		STANDARD ABBREVIATIONS M THROUGH Z
RD-L-1	02-20-20	STANDARD LEGEND
RD-L-1A		STANDARD LEGEND
RD-L-2	02-20-20	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-5	07-30-24	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-6	02-20-20	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-7	02-20-20	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
10-101.00 ROADWAY DESIGN STANDARDS		
RD11-SE-1		TRANSITION AND CROSS SLOPE DETAILS
RD11-SE-2		SUPERELEVATION TRANSITION DETAILS FOR UNDIVIDED ROADWAYS
RD11-SE-2A		SUPERELEVATION TRANSITION SECTIONS FOR UNDIVIDED ROADWAYS
RD11-TS-1A	06-28-19	DESIGN STANDARDS FOR LOCAL ROADS AND STREETS
RD11-TS-3		DESIGN STANDARD FOR ARTERIAL HIGHWAYS (2-LANE)
RD11-LR-2		MINIMUM RUNOFF LENGTHS (LR) FOR RURAL HIGHWAYS
RD11-S-11		DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD11-S-11A		ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
RD11-SD-1		INTERSECTION SIGHT DISTANCE DESIGN AND GENERAL NOTES
RD11-SD-2		INTERSECTION SIGHT DISTANCE LANDSCAPE AND OBSTRUCTION
RD11-SD-3		INTERSECTION SIGHT DISTANCE 2-LANE ROADWAYS
RD-UD-3	01-09-24	UNDERDRAIN DETAILS
RD-UD-4	06-28-19	UNDERDRAIN LATERAL DETAILS
RD-UD-6	06-28-19	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 1:1 & 2:1 SLOPES
RD-UD-7	06-28-19	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 3:1 & 4:1 SLOPES
RD-UD-9	06-28-19	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 6:1 SLOPES
10-102.00 PIPE CULVERTS AND ENDWALLS		
D-PB-1	03-01-23	STANDARD DETAILS FOR CONCRETE PIPE INSTALLATION
D-PB-3	11-30-20	INDUCED TRENCH SOIL EMBANKMENT FOR PIPE CULVERT INSTALLATION
D-PB-4	01-09-24	PIPE COLLAR DETAILS
D-SEW-1A	07-07-23	TYPE "SAFETY" SIDE ENDWALL WITH STEEL PIPE GRATE, FOR 15" THRU 48" PIPES, 6:1 SLOPE
D-PE-4	06-28-19	STRAIGHT CONCRETE ENDWALLS (PIPE SIZES 18" TO 30")
D-PE-18A	06-28-19	TYPE “U” CROSS DRAIN ENDWALL FOR 18” PIPE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-18B	06-28-19	TYPE “U” CROSS DRAIN ENDWALL FOR 18” PIPE, BILL OF STEEL AND PRECAST NOTES
D-PE-99	03-04-21	TYPE “U” CROSS DRAIN ENDWALL DETAILS, PIPE GRATE & SKEWED CONNECTION
D-PEW-1		PROTECTED ENDWALLS FOR ROUND & OVAL PIPES (PIPE SIZES 18” TO 72”, ALL SKEWS, 2:1 & 3:1 SLOPES)
D-PEW-2		PROTECTED ENDWALLS FOR ROUND PIPES DETAILS & QUANTITIES (PIPE SIZES 18” TO 72”, ALL SKEWS, 2:1 & 3:1 SLOPES)
10-103.00 CATCH BASINS AND MANHOLES		
D-CB-51SC	02-20-20	STANDARD 5' 2" X 5' 2" SQUARE CONCRETE NO. 51 CATCH BASIN (FOR USE IN FRONT OF CONCRETE RETAINING WALL)
D-CB-52SE	02-20-20	STANDARD 9' x 9' SQUARE CONCRETE NO. 52 CATCH BASIN
D-CB-99	02-20-20	MISCELLANEOUS DETAILS FOR RECTANGULAR STRUCTURES
D-CBB-31	02-20-20	TYPE “B” CAST IRON FRAME, GRATE & INLET DETAILS FOR NOS. 31, 41, 45, 46, & 51 TYPE CATCH BASINS
10-104.00 ROADWAY, PAVEMENT APPURTENANCES, AND FENCES		
RP-I-5	05-01-20	EXAMPLES OF STREET & ALLEY INTERSECTIONS
RP-R-1	04-01-25	STANDARD RAMP DETAILS FOR ROADWAYS AND DRIVEWAYS
W-MSE-1	05-01-20	ROADWAY FEATURES FOR MSE SEGMENTAL PRECAST FACING RETAINING WALL
W-MSE-2	05-01-20	ROADWAY FEATURES FOR MSE MODULAR BLOCK FACING RETAINING WALL
W-SP-1	05-01-20	ROADWAY FEATURES AT SOLDIER PILE AND SOIL ANCHORED RETAINING WALLS
S-F-1	03-01-23	HIGH VISIBILITY FENCE
S-RP-2	06-28-19	STANDARD CONCRETE RIGHT-OF-WAY MARKERS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	1A
PS&E	2025	BR-STP-70(24)	1A

REV. 07/10/25: ADDED ROADWAY-SIGN2 TO INDEX OF SHEETS.

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07/10/2025

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 2003 MODEL.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	1A1
PS&E	2025	BR-STP-70(24)	1A1

STANDARD ROADWAY DRAWINGS CONTINUED

10-106.00 SAFETY DESIGN AND GUARDRAILS

S-CZ-1	06-28-19	CLEAR ZONE CRITERIA
S-PL-1	03-01-23	SAFETY PLAN FOR BARRIER LENGTH OF NEED
S-PL-1A	03-01-23	SAFETY PLAN FOR BARRIER LENGTH OF NEED (FOR RIGID OBJECTS)
S-PL-1B	03-01-23	SAFETY PLAN FOR BARRIER LENGTH OF NEED ON CURVED ROADWAYS
S-PL-3	03-01-23	SAFETY PLAN MINIMUM INSTALLATION AT BRIDGE ENDS
S-PL-6	03-13-25	SAFETY PLAN SAFETY HARDWARE PLACEMENT ON OUTSIDE EDGE
S-GR31-1	06-15-21	GUARDRAIL DETAILS
S-GR31-1A	06-28-19	GUARDRAIL AND BLOCK-OUT DETAILS
S-GR31-1B		GUARDRAIL FASTENING HARDWARE
S-GR31-1C	07-07-23	GUARDRAIL GENERAL NOTES AND POST DETAILS
S-GRC-4	01-30-25	GUARDRAIL CONNECTION TO BRIDGE RAILING CONCRETE PARAPET
S-GRT-2	06-28-19	TYPE 38 GUARDRAIL END TERMINAL
S-GRT-2P	10-16-20	EARTH PAD FOR TYPE 38 AND TYPE 21 TERMINAL
S-GRT-2R	06-28-19	EARTH PAD FOR TYPE 38 AND TYPE 21 TERMINAL (RETROFIT)
S-GTR-3	06-28-19	TYPE 21 GUARDRAIL END TERMINAL
S-GRA-4	01-30-25	IN-LINE GUARDRAIL ANCHOR TO PRIVATE DRIVE

10-107.00 EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-3B	06-15-21	SILT FENCE
EC-STR-3C	03-01-23	SILT FENCE WITH WIRE BACKING
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-6	11-30-20	ROCK CHECK DAM
EC-STR-6A	05-06-16	ENHANCED ROCK CHECK DAM
EC-STR-8	06-10-14	FILTER SOCK
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-27	08-01-12	TEMPORARY SLOPE DRAIN AND BERM
EC-STR-32	08-01-12	TEMPORARY DIVERSION CULVERTS
EC-STR-34	05-04-22	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-36	05-04-22	TURF REINFORCEMENT MAT FOR CHANNEL INSTALLATION
EC-STR-37	06-10-14	SEDIMENT TUBE
EC-STR-39A	08-01-12	CURB INLET PROTECTION TYPE 3 & 4

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STANDARD ROADWAY DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	1A2

STANDARD TRAFFIC DESIGN AND STRUCTURE DRAWINGS

DWG.	REV.	DESCRIPTION
10-200.00	**SIGNS**	
T-S-16	07-02-15	GROUND MOUNTED ROADSIDE SIGN PLACEMENT DETAILS
T-S-17	07-11-17	STANDARD GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE
T-S-19	06-12-20	STANDARD STEEL SIGN SUPPORTS
T-S-20	07-11-17	SIGN DETAILS
T-S-21	04-10-19	DETAILS FOR SIGNS MOUNTS ON CONCRETE MEDIAN BARRIERS
T-S-23C	07-02-15	BREAKAWAY POST SIGN SUPPORTS
10-204.00	**DESIGN - TRAFFIC CONTROL**	
T-M-1	01-24-25	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-4	01-24-25	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-15A	01-24-25	ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED RURAL ROUTES
T-M-18A	01-24-25	DELINEATOR MOUNTING DETAILS
T-WZ-10	03-26-25	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-36	03-26-25	LANE CLOSURE ON LOW-VOLUME 2-LANE HIGHWAY
T-WZ-FAB1	03-26-25	FLASHING YELLOW ARROW BOARD
T-WZ-PBR1	03-26-25	INTERCONNECTED PORTABLE BARRIER RAIL
T-WZ-PBR2	03-26-25	DETAILS FOR WORK ZONE CHANNELIZATION DEVICES
T-WZ-PCB1	03-26-25	10 FOOT PORTABLE CONCRETE BARRIER RAIL
T-WZ-PCB2	03-26-25	20 FOOT PORTABLE CONCRETE BARRIER RAIL
T-WZ-PCB2A	03-26-25	20 FOOT PORTABLE CONCRETE BARRIER RAIL STIFFENER TUBE
T-WZ-PCB3	03-26-25	PORTABLE CONCRETE BARRIER RAIL DETAILS
T-WZ-PCB4	03-26-25	PORTABLE CONCRETE BARRIER RAIL ANCHOR PIN DETAILS

STANDARD STRUCTURE DRAWINGS

10-300.00	**NEW STRUCTURES**	
STD-1-1SS	07-24-24	BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET
STD-10-2	06-05-23	MISC. ABUTMENT & PAVEMENT AT BRIDGE ENDS BACKFILL DETAILS

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05/20/2026

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STANDARD TRAFFIC DESIGN AND STRUCTURE DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	1B
PIH	2024	BR-STP-70(24)	1B
PS&E	2025	BR-STP-70(24)	1B

REV. 04-24-25: UPDATED PROJECT COMMITMENTS.

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISON	DESCRIPTION	STA. / LOCATION
EDHZ001	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	AN ASBESTOS CONTAINING MATERIAL (ACM) SURVEY WAS COMPLETED ON BRIDGE NO. 37SR0700009, SR-70 OVER NORFOLK SOUTHERN RAILROAD LM 6.19 (37-SR070-06.19). THE BRIDGE HAS ASBESTOS IN APPROXIMATELY 5 SQUARE FEET OF MASTIC THAT HAS A PAPER-LIKE BACKING MATERIAL WITH 2% CHRYSOTILE (THE ACM IS IN THE BACKING MATERIAL). OTHER MATERIAL SIMILAR TO THIS, BUT NOT SAMPLED OR IDENTIFIED ON THE BRIDGE SHOULD BE ASSUMED TO CONTAIN ASBESTOS AND SHALL BE HANDLED AS SUCH. PLEASE SEE THE REPORT FOR FURTHER DETAILS AND PHOTOGRAPHS.	Bridge No. 37SR0700009
EDHZ002	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	THE STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TDEC RULES CHAPTER 1200-01-20) MANDATES THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS. ABATEMENT OF THIS MATERIAL SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. ACM ABATEMENT SHOULD BE COMPLETED PRIOR TO ANY DEMOLITION ACTIVITIES IF POSSIBLE. PRIOR TO THE DEMOLITION OR REHABILITATION OF ANY STRUCTURE (BRIDGE OR BUILDING), THE CONTRACTOR IS REQUIRED TO SUBMIT THE NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS STANDARD 10-DAY NOTICE OF DEMOLITION TO THE TDEC DIVISION OF AIR POLLUTION CONTROL (PER TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 1, 2021) SECTIONS 107.08 D AND 202.03).	Bridge No. 37SR0700009
EDHS001	TDOT CULTURAL RESOURCES (HISTORIC PRESERVATION)	THE HISTORIC PROPERTY (PARCEL 17) SHALL NOT BE USED AS A STAGING AREA FOR CONSTRUCTION.	STA. 119+00.00 LT.
EDHS002	TDOT CULTURAL RESOURCES (HISTORIC PRESERVATION)	NO ADDITIONAL TEMPORARY OR PERMANENT RIGHT-OF-WAY OR EASEMENTS WILL BE TAKEN FROM THE HISTORIC PROPERTY (PARCEL 17).	STA. 119+00.00 LT.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROJECT COMMITMENTS

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ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY 37011-3237-94
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	
	201-01	CLEARING AND GRUBBING	LS	1
(1)	202-02.01	REMOVAL OF PIPE (15" CMP SIDE DRAIN, STA. 113+57)	L.F.	30
(2)(31)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	6289
(31)	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	3415
(31)	203-04	PLACING AND SPREADING TOPSOIL	C.Y.	1197
	203-06	WATER	M.G.	37
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	94
(34)	203-10.05	SETTLEMENT PLATE / MONITORING DEVICE	EACH	2
(23)	203-50	CONSTRUCTION OF HAUL ROAD	LS	1
	208-01.05	BROOMING & DEGRASSING SHOULDERS	L.M.	1
(3)(4)	209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.	102
(3)(4)	209-03.22	FILTER SOCK (18 INCH)	L.F.	318
(3)(4)	209-05	SEDIMENT REMOVAL	C.Y.	62
(3)(4)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	8115
(3)(4)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	983
(3)(4)	209-08.07	ROCK CHECK DAM	EACH	6
(3)(4)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	9
	209-09.01	SANDBAGS	BAG	200
(3)(4)	209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	5
	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	20
	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	8218
(19)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	698
	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	740
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	590
	307-01.20	ASP. CONC. MIX(PG64-22) (BPMB-HM) GR. A-S	TON	697
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	10
(12)	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	33
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	8
	407-20.05	SAW CUTTING ASPHALT PAVEMENT	L.F.	1580
	411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	TON	148
	411-01.10	ACS MIX(PG64-22) GRADING D	TON	400
	411-12.02	SCORING SHOULDERS (NON-CONTINUOUS) (16IN WIDTH)	L.M.	0.7
(22)	415-01.01	COLD PLANING BITUMINOUS PAVEMENT	TON	610
(21)	604-07.01	RETAINING WALL (SR-70 STA. 118+03.82 TO STA. 126+84.42)	S.F.	5301
(17)	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	72
	607-39.02	18" PIPE CULVERT (SIDE DRAIN)	L.F.	24
(26)	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	3
(27)	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	135
	611-07.31	18IN ENDWALL (SIDE DRAIN)	EACH	2
	611-51.02	CATCH BASINS, TYPE 51, > 4' - 8' DEPTH	EACH	4
	611-52.02	CATCH BASINS, TYPE 52, > 4FT - 8FT DEPTH	EACH	1
(32)	621-03.06	42" TEMPORARY DRAINAGE PIPE	L.F.	85
	621-05.01	TEMPORARY SHORING	S.F.	5000
	703-01	PORTLAND CEMENT CONCRETE DITCH PAVING	C.Y.	1
	705-06.01	W BEAM GR (TYPE 2) MASH TL3	L.F.	1363
	705-06.11	GR TERMINAL (IN-INLINE) MASH TL3	EACH	6
	705-06.20	TANGENT ENERGY ABSORBING TERM MASH TL-3	EACH	1
	705-06.25	THRIE BEAM BRIDGE TRANSITION MASH TL-3	EACH	4
	705-06.30	GR TERMINAL (ENERGY ABSORBING) MASH TL2	EACH	2
	706-06.03	RADIUS RAIL	L.F.	194
	706-10.26	ROUNDED END ELEMENT	EACH	3
(33)	707-03.03	STOCK FENCE GATE (HAUL ROAD)	EACH	3
(3)(4)	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	2138
(29)	708-02.01	MARKERS (CONCRETE R.O.W. POSTS)	EACH	11
(16)	709-02.01	RUBBLE STONE RIP-RAP (GROUTED)	C.Y.	73
(3)(4)	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	100

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY 37011-3237-94
(3)(4)(15)	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	412
	710-02	AGGREGATE UNDERDRAINS (WITH PIPE)	L.F.	1250
	710-05	LATERAL UNDERDRAIN	L.F.	176
	710-06.11	LATERAL UNDERDRAIN ENDWALL (2:1)	EACH	3
(5)	710-10.02	6" PERFORATED PLASTIC PIPE	L.F.	911
	712-01	TRAFFIC CONTROL	LS	1
(24)	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	500
(24)	712-02.60	TEMPORARY WORK ZONE CRASH CUSHION (MASH TL-3)	EACH	4
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	10
	712-05.01	WARNING LIGHTS (TYPE A)	EACH	18
	712-06	SIGNS (CONSTRUCTION)	S.F.	1408
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	132
	712-09.04	REMOVABLE PAVEMENT MARKING (STOP LINE)	L.F.	51
	713-01.01	CLASS A CONCRETE (FOUNDATION FOR SIGN SUPPORTS)	C.Y.	0.12
	713-01.02	STEEL BAR REINFORCEMENT(FOUNDATION FOR SIGN SUPPORTS)	LB.	25
(14)	713-02.21	SIGN POST DELINEATION ENHANCEMENT	L.F.	24
	713-11.01	"U" SECTION STEEL POSTS	LB.	100
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	140
	713-11.22	U POST SLIP BASE	EACH	1
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	43
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	8
	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	1
	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	4
	713-30.10	BARRIER MOUNTED SIGN SUPPORT (PERF/KNOCKOUT)	EACH	1
	716-01.21	SNOWPLOWABLE RAISED PAVEMENT MARKERS (BI-DIR) (1 COLOR)	EACH	21
	716-01.30	REMOVAL OF SNOWPLOWABLE REFLECTIVE MARKER	EACH	21
(30)	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	2.8
(6)	716-05.05	PAINTED PAVEMENT MARKING (STOP LINE)	L.F.	71
	716-09.86	CONTRAST PAVEMENT MARKING 6"	L.M.	0.2
(7)	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	1.3
	716-13.02	SPRAY THERMO PVMT MRKNG (60 mil) (6IN LINE)	L.M.	0.2
	717-01	MOBILIZATION	LS	1
(18)	740-07.04	GEOGRID REINFORCEMENT TYPE 2	S.Y.	1013
(3)(4)	740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	873
(20)	740-10.04	GEOTEXTILE (TYPE IV) (STABILIZATION)	S.Y.	611
(3)(4)	740-11.04	TEMPORARY SEDIMENT TUBE 20IN	L.F.	6027
	801-01	SEEDING (WITH MULCH)	UNIT	46
(3)(4)(8)	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	436
(28)	801-01.38	NATVE SEED MX FINAL STABLIZATN OF SLOPES	UNIT	24
(8)	801-02	SEEDING (WITHOUT MULCH)	UNIT	130
(13)	801-03	WATER (SEEDING & SODDING)	M.G.	80
	801-07	SEED (SUPPLEMENTAL APPLICATION)	LB.	35
(9)	801-08	FERTILIZER (SUPPLEMENTAL APPLICATION)	TON	3
(11)	803-01	SODDING (NEW SOD)	S.Y.	2542
	805-01.03	TURF REINFORCEMENT MAT (CLASS III)	S.Y.	521
(3)(4)	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	11016
(10)	806-02.03	PROJECT MOWING	CYCL	4

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	2
PS&E	2025	BR-STP-70(24)	2

REV. 07/10/25: REMOVED ITEM NUMBER 725-03.28.

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COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 2003 MODEL.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

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FOOTNOTES

(1) SALVAGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
(2) INCLUDES 286 C.Y. FOR EROSION CONTROL, 50 C.Y. FOR RIP-RAP DRAINAGE DITCH CONSTRUCTION, AND 5953 C.Y. FOR GRADING.
(3) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATION FOR MAINTENANCE REPLACEMENT.
(4) ALL EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.
(5) USED IN RETAINING WALL CONSTRUCTION.
(6) PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
(7) CONTRACTOR SHALL USE THE EXTRUDED OR RIBBON METHOD FOR APPLICATION.
(8) THE COST OF FERTILIZER AND LIME USED IN INITIAL SEED BED PREPARATION IS TO BE INCLUDED IN COST OF THE SEEDING. SEE SECTION 801 OF TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
(9) THE COST OF ANY NECESSARY LIME TO BE USED IN CONJUNCTION WITH SUPPLEMENTAL FERTILIZER IS TO BE INCLUDED IN THE COST OF THE SUPPLEMENTAL FERTILIZER. SEE SECTION 801 OF TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
(10) ITEM INCLUDES LITTER AND TRASH REMOVAL. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE COST OF ITEM NO. 806-02.03, PROJECT MOWING, PER CYCLE.
(11) 716 S.Y. FOR ROADWAY DITCHES AND 2' STRIP ALONG RIP-RAP OUTLET DITCHES 19 S.Y. 119+34 LT, 15 S.Y. 122+48 LT, 12 S.Y. 125+62 LT., AND 1780 S.Y. FOR RESTABILIZATION OF HAUL RD. AREA.
(12) ITEM TO BE USED AS DIRECTED BY THE ENGINEER.
(13) INCLUDES 44 THOUSAND GALLONS FOR EPSC.
(14) 12 L.F. IS RED POST DELINEATION AND 12 L.F. IS YELLOW DELINEATION.
(15) 26 TON RIP-RAP PADS STA. 116+26 RT., 70 TON FOR FLUME CONSTRUCTION & 316 TONS EPSC.
(16) RUBBLE STONE RIP-RAP (GROUTED) DOWN EXIST. 1.5:1 SLOPE 33 C.Y. STA. 119+34 LT, 22 C.Y. STA. 122+48 LT, 14 C.Y. STA. 125+62 LT, & 4 C.Y. FOR FLUME CONSTRUCTION.
(17) BEDDING MATERIAL SHALL BE INCLUDED IN THE COST OF THE PROPOSED PIPE CULVERT.
(18) FOR USE IN PAVEMENT AT BRIDGE ENDS.
(19) INCLUDES 104 TON FOR USE WITH EPSC AND 594 TON FOR USE IN PAVEMENT AT BRIDGE ENDS
(20) INCLUDES 96 S.Y. FOR USE WITH FLUME CONSTRUCTION AND 515 S.Y. FOR PAVEMENT AT BRIDGE ENDS.
(21) ALL COST OF BUILDING AND INSTALLING THE RETAINING WALL, INCLUDING FOUDATION PREPARATION, BACKFILLING, AND EXCAVATION, SHALL BE INCLUDED IN THE SQUARE FOOTAGE COST OF THE RETAINING WALL. QUANTITIES FOR FOUNDATION PREPARATION, BACKFILL, AND EXCAVATION ARE REFLECTED IN THE END AREA CALCULATIONS ON CROSS SECTIONS AND IN GRADING QUANTITY ROADWAY ITEM 203-01, ROAD AND DRAINAGE EXCAVATION (C.Y.). THE DESIGNER HAS NOTED THE PORTION OF THIS QUANTITY FOR THESE ITEMS ON THE PROFILE SHEET 4B AND ON THE GRADING QUANITITY TABULATION SHEET. THE PORTION OF THIS QUANTITY HAS BEEN REMOVED FROM ROADWAY ITEM 203-01, ROAD AND DRAINAGE EXCAVATION (C.Y.). FOR FURTHER INFORMATION ON RETAINING WALLS AND QUANTITIES, SEE SHEET R-1.
(22) 85 TONS FOR TRAFFIC CONTROL AND 525 TONS FOR OVERLAY.
(23) HAUL ROAD SHALL BE CONSTRUCTED WITHIN PROPOSED RIGHTS-OF-WAY AND EASEMENTS WITHIN THE PROJECT LIMITS AS DEFINED IN THE CONTRACT PLANS. PAYMENT OF THIS ITEM INCLUDES ALL REQUIREMENTS FOR INSTALLATION INCLUDING GRADING, ROCK, GEOTEXTILE, AND 57 STONE NEEDED FOR BUILDING OF THE HAUL ROAD, MAINTENANCE OF THE HAUL ROAD DURING THE LIFE OF THE PROJECT, AND THE REMOVAL OF THE HAUL ROAD TO PREEXISTING CONDITIONS INCLUDING SEEDING AND STRAWING UPON COMPLETION OF THE HAUL ROAD REMOVAL. NO ADDITIONAL COMPENSATION WILL BE MADE FOR CLEARING, SURVEYING OR INCIDENTALS DUE TO THE LOCATION CHOSEN BY THE CONTRACTOR FOR ACCESS TO THE SITE. THE CONTRACTOR IS REQUIRED TO SUBMIT A PROPOSED LOCATION AND PLAN FOR REVIEW AND APPROVAL TO THE TDOT DISTRICT OPERATIONS MANAGER PRIOR TO THE CONSTRUCTION OF THE HAUL ROAD. INCLUDES 3 HAUL ROADS (HAUL RD. 1 OFF HAGAN REYNOLDS RD. STA. 19+38.47, HAUL RD. 2 OFF CORDAN RD. STA. 21+00.00, AND HAUL RD. 3 OFF SR-70 STA. 121+50).
(24) ITEM # 705-20.25 SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF AASHTO MASH FOR TEST LEVEL 3. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN ON THE MANUFACTURER'S DRAWING. ITEM # 705-20.25 AND 712-02.02 TO BE USED IF NEEDED AS DIRECTED BY THE CONSTRUCTION ENGINEER.
(25) OMITTED
(26) INCLUDES 3 C.Y. FOR MEDIAN DRAIN ENDWALLS.

FOOTNOTES

(27) INCLUDES 135 LB. FOR MEDIAN DRAIN ENDWALLS.
(28) PERMANENT STABILIZATION WITH NATIVE OR NATURALIZED PERENNIAL VEGETATION IS REQUIRED IN ALL AREAS AUTHORIZED FOR TEMPORARY AND PERMANENT IMPACTS TO STREAMS AND RIPARIAN AREAS, INCLUDING ADJACENT BUFFER ZONES WITHIN 60 FT OF THE EDGE OF WATER. THE APPROPRIATE SEED MIXTURE FOR THE REGION AND SITE CONDITIONS SHALL BE SELECTED FROM TABLE 7.9-1 (PREFERRED SEED MIXES USING NATIVES OR NATURALIZED PLANTS AND PLANTING DATES) FOUND IN CHAPTER 7.9 (PERMANENT VEGETATION) OF THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK 4TH EDITION.
(29) ALL ROW MARKERS ARE TO BE FLUSH MOUNTED.
(30) INCLUDES 2.6 MILES FOR CENTERLINE STRIPING OF DETOUR ROUTE ON OLD HWY 66 AND OLD STATE HWY 113.
(31) SEE GRADING SPECIAL NOTES ON SHEET 2D.
(32) FOR USE UNDER HAUL ROAD 2 TO CONVEY STR-1.
(33) SEE HAUL ROAD GATE DETAILS REFERENCE SHEET FOR MORE DETAILS. COST SHALL INCLUDE ALL ITEMS NECESSARY TO INSTALL 3 GATES PER SHEET "4B" AND SHALL INCLUDE REMOVAL.
(34) SEE RETAINING WALL SHEETS FOR MORE DETAILS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	2-1
PS&E	2025	BR-STP-70(24)	2-1

REV. 07/10/25: UPDATED NOTE 21.

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COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 2003 MODEL.

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DEPARTMENT OF TRANSPORTATION

FOOTNOTES

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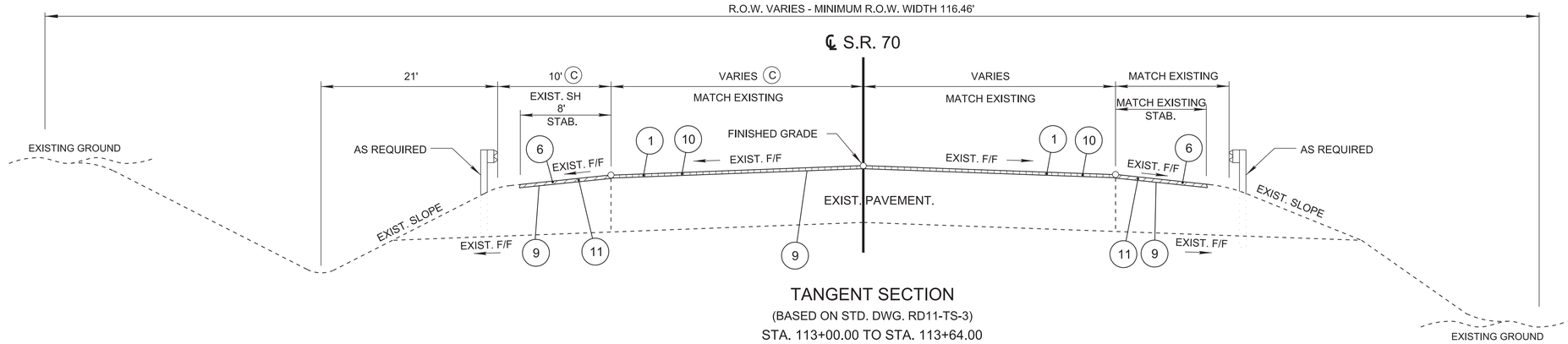
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	2B
PIH	2024	BR-STP-70(24)	2B
PS&E	2025	BR-STP-70(24)	2B

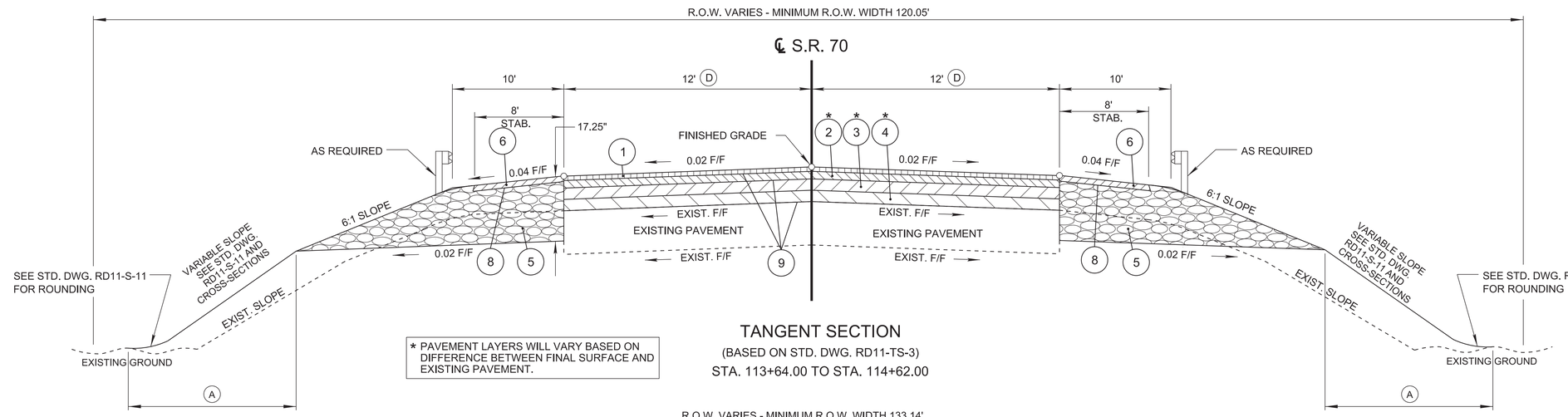
REV. 04-24-25: UPDATED TYPICAL SECTIONS.



TANGENT SECTION

(BASED ON STD. DWG. RD11-TS-3)

STA. 113+00.00 TO STA. 113+64.00
STA. 126+84.42 TO STA. 129+50.00

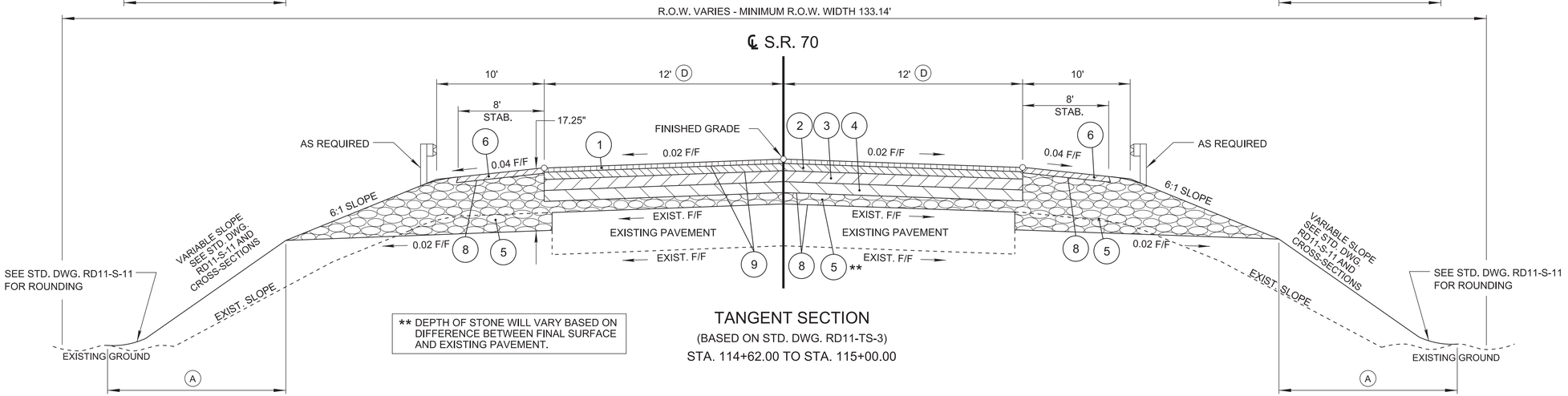


* PAVEMENT LAYERS WILL VARY BASED ON DIFFERENCE BETWEEN FINAL SURFACE AND EXISTING PAVEMENT.

TANGENT SECTION

(BASED ON STD. DWG. RD11-TS-3)

STA. 113+64.00 TO STA. 114+62.00



** DEPTH OF STONE WILL VARY BASED ON DIFFERENCE BETWEEN FINAL SURFACE AND EXISTING PAVEMENT.

TANGENT SECTION

(BASED ON STD. DWG. RD11-TS-3)

STA. 114+62.00 TO STA. 115+00.00

(A) SEED AND MULCH, OR SEED WITH EROSION CONTROL BLANKET, OR SOD. SEE EPSC STAGE 2 PLANS FOR DETAILS.

(B) SEE DITCH LINING DETAIL SHEET 2G.

(C) PAVEMENT TRANSITIONS:
FROM LT. STA. 126+84.42 - 12'
TO LT. STA. 127+34.42 - 11.6'
PAVED SHOULDER TRANSITIONS:
FROM LT. STA. 126+84.42 - 10'
TO LT. STA. 127+34.42 - 8.5'

(D) MATCH EXISTING:
STA. 113+64.00 TO STA. 114+15.86
PAVEMENT TRANSITIONS:
FROM STA. 114+15.86 - 11.3' LT. / 11.8' RT
TO STA. 114+64.91 - 12' LT./RT.

SEE SHEET 2B3 FOR PAVEMENT SCHEDULE

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TYPICAL SECTIONS

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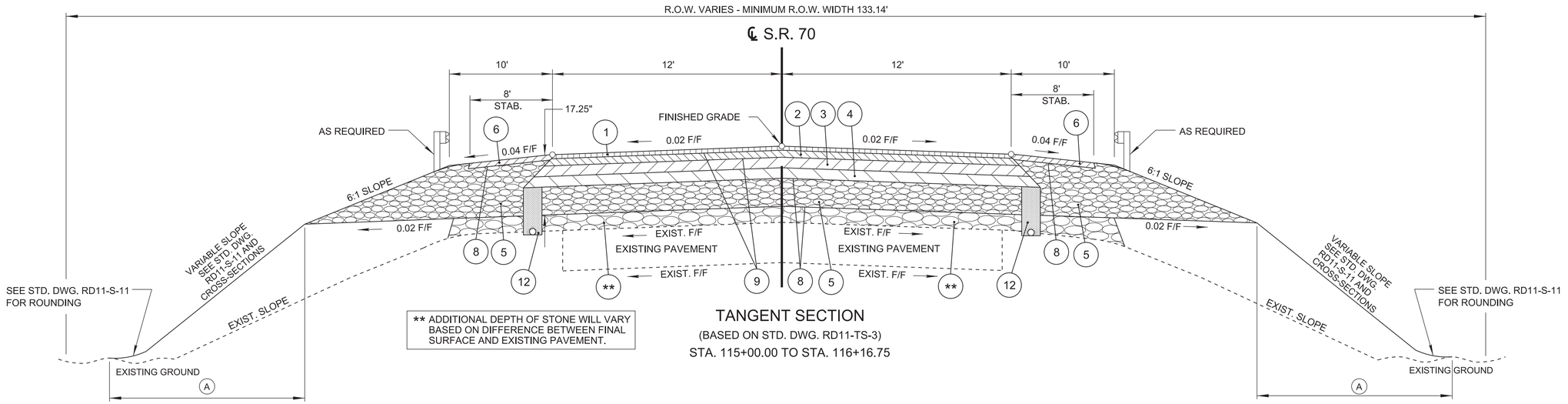
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	2B1
PIH	2024	BR-STP-70(24)	2B1
PS&E	2025	BR-STP-70(24)	2B1

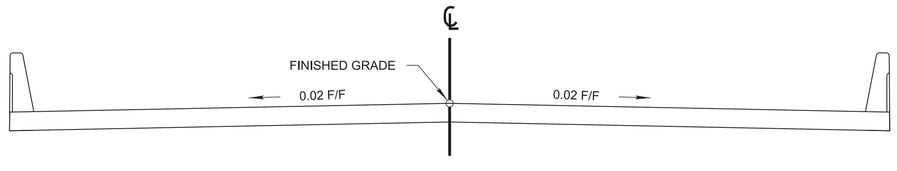
REV. 04-24-25: UPDATED TYPICAL SECTIONS.



TANGENT SECTION

(BASED ON STD. DWG. RD11-TS-3)

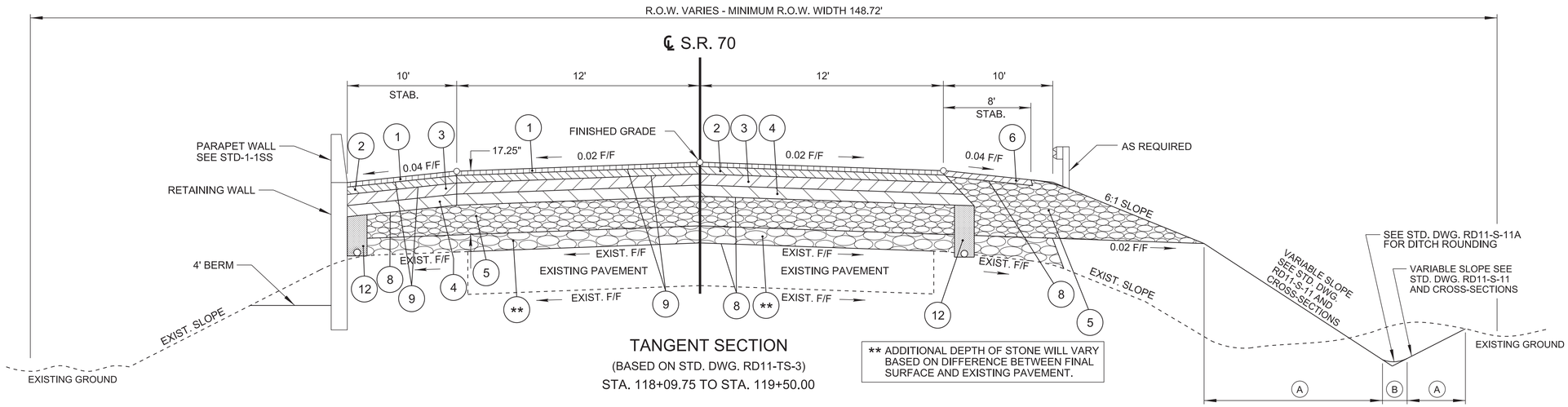
STA. 115+00.00 TO STA. 116+16.75



BRIDGE

STA. 116+16.75 TO STA. 118+09.75

(SEE BRIDGE PLANS FOR DETAILS)



TANGENT SECTION

(BASED ON STD. DWG. RD11-TS-3)

STA. 118+09.75 TO STA. 119+50.00

Ⓐ SEED AND MULCH, OR SEED WITH EROSION CONTROL BLANKET, OR SOD. SEE EPSC STAGE 2 PLANS FOR DETAILS.

Ⓑ SEE DITCH LINING DETAIL SHEET 2G.

SEE SHEET 2B3 FOR PAVEMENT SCHEDULE

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TYPICAL SECTIONS

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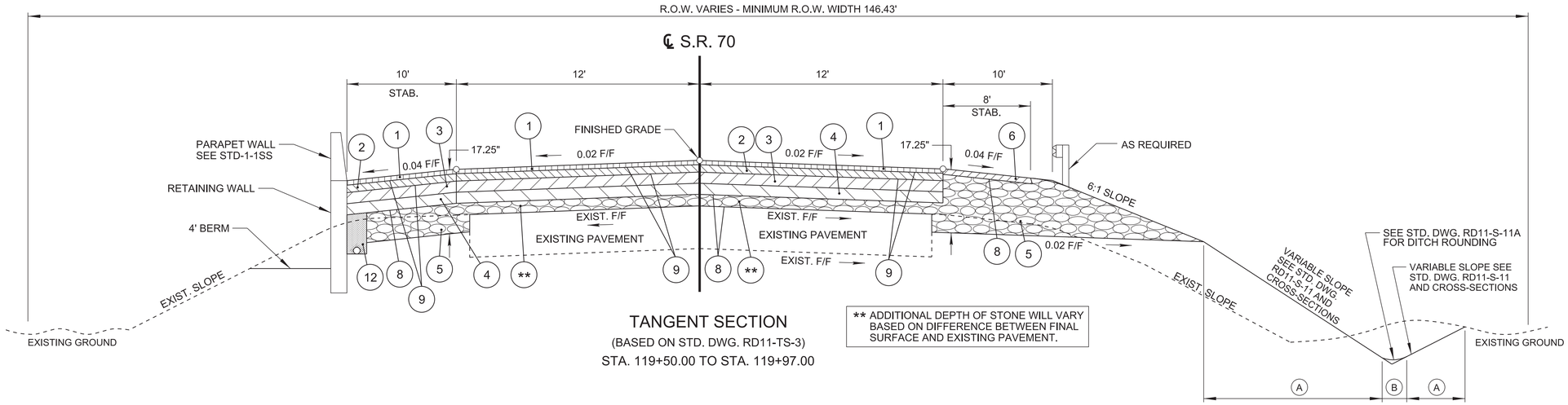
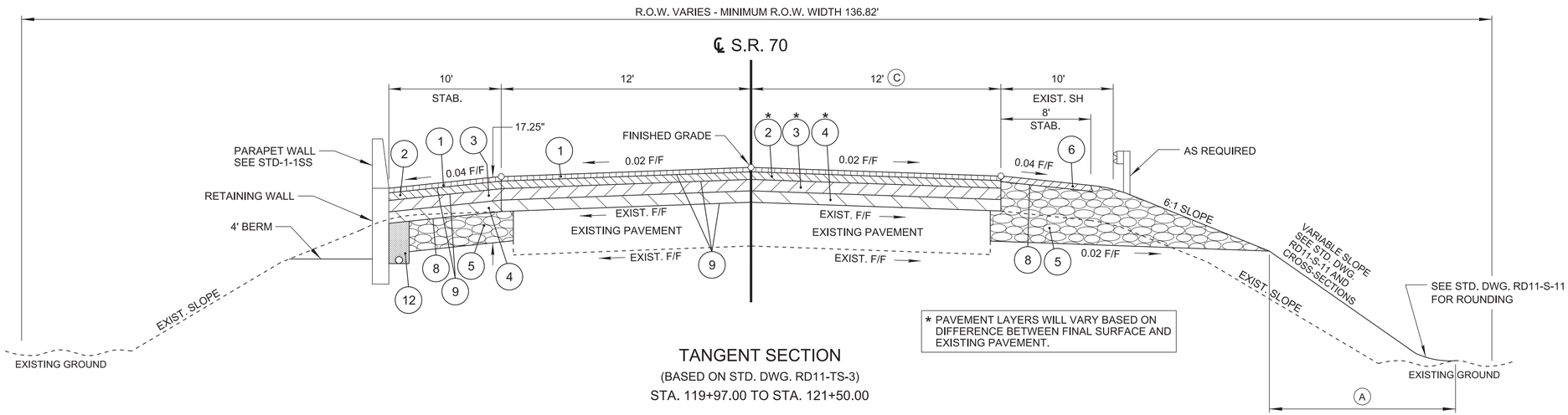
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	2B2
PIH	2024	BR-STP-70(24)	2B2
PS&E	2025	BR-STP-70(24)	2B2

REV. 04-24-25: UPDATED TYPICAL SECTIONS.



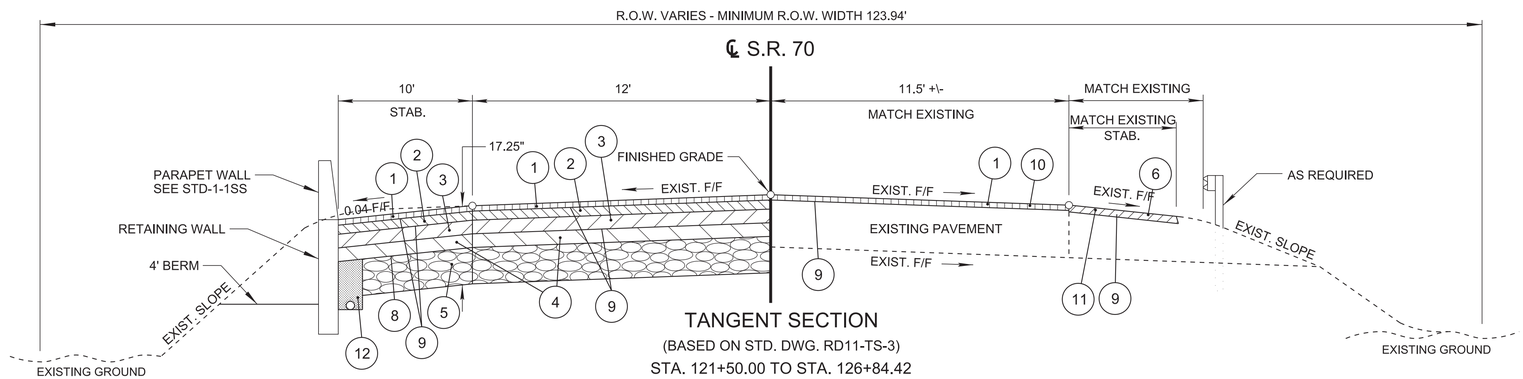
TANGENT SECTION
(BASED ON STD. DWG. RD11-TS-3)
STA. 119+50.00 TO STA. 119+97.00

** ADDITIONAL DEPTH OF STONE WILL VARY BASED ON DIFFERENCE BETWEEN FINAL SURFACE AND EXISTING PAVEMENT.



TANGENT SECTION
(BASED ON STD. DWG. RD11-TS-3)
STA. 119+97.00 TO STA. 121+50.00

* PAVEMENT LAYERS WILL VARY BASED ON DIFFERENCE BETWEEN FINAL SURFACE AND EXISTING PAVEMENT.



TANGENT SECTION
(BASED ON STD. DWG. RD11-TS-3)
STA. 121+50.00 TO STA. 126+84.42

NOTE:
PAVE FULL DEPTH LT. SIDE DUE TO EXCAVATION OF RETAINING WALL

(A) SEED AND MULCH, OR SEED WITH EROSION CONTROL BLANKET, OR SOD. SEE EPSC STAGE 2 PLANS FOR DETAILS.

(B) SEE DITCH LINING DETAIL SHEET 2G.

(C) PAVEMENT TRANSITIONS:
FROM RT. STA. 121+00.00 - 12'
TO RT. STA. 121+50.00 - 11.5'

SEE SHEET 2B3 FOR PAVEMENT SCHEDULE

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TYPICAL SECTIONS

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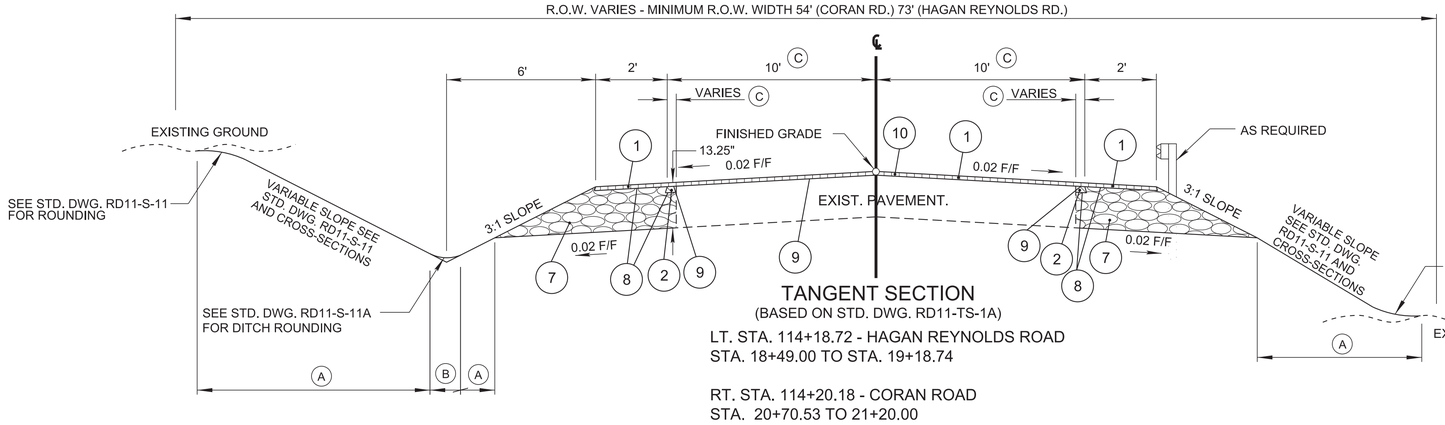
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	2B3
PIH	2024	BR-STP-70(24)	2B3
PS&E	2025	BR-STP-70(24)	2B3

REV. 04-24-25: ADDED SHEET.

SIDE ROADS

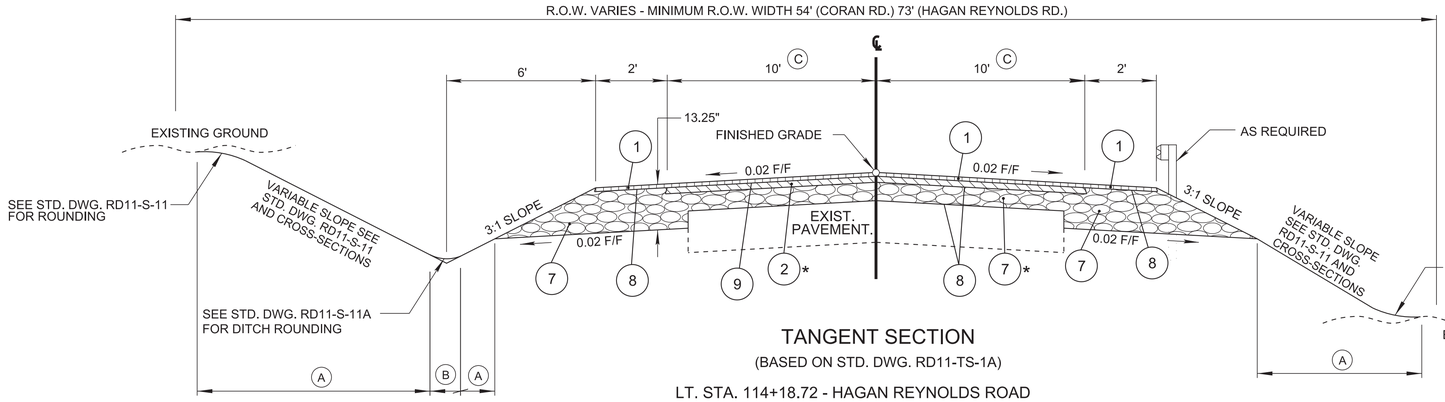


TANGENT SECTION

(BASED ON STD. DWG. RD11-TS-1A)

LT. STA. 114+18.72 - HAGAN REYNOLDS ROAD
STA. 18+49.00 TO STA. 19+18.74

RT. STA. 114+20.18 - CORAN ROAD
STA. 20+70.53 TO 21+20.00



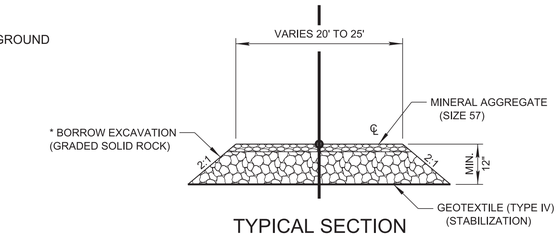
TANGENT SECTION

(BASED ON STD. DWG. RD11-TS-1A)

LT. STA. 114+18.72 - HAGAN REYNOLDS ROAD
STA. 19+18.74 TO STA. 20+00.00

RT. STA. 114+20.18 - CORAN ROAD
STA. 20+00.00 TO 20+70.53

* PAVEMENT LAYERS WILL VARY BASED ON DIFFERENCE BETWEEN FINAL SURFACE AND EXISTING PAVEMENT.



TYPICAL SECTION

HAUL ROAD

*NOTE: IF CONSTRUCTION IN AREAS THAT ARE EITHER DRY OR UNSATURATED, HAUL ROAD SHALL BE CONSTRUCTED OF ONE OF THE FOLLOWING MATERIALS:

- MACHINED RIP-RAP (CLASS A-1)
- MACHINED RIP-RAP (CLASS B)
- MACHINED RIP-RAP (CLASS C)

IF CONSTRUCTED IN WATER OR IN AN AREA WITHIN THE FLOODPLAIN IN THE CASE OF A 5 YEAR STORM EVENT, BORROW EXCAVATION (GRADED SOLID ROCK) SHALL BE USED IN LIEU OF RIP-RAP.

(A) SEED AND MULCH, OR SEED WITH EROSION CONTROL BLANKET, OR SOD. SEE EPSC STAGE 2 PLANS FOR DETAILS.

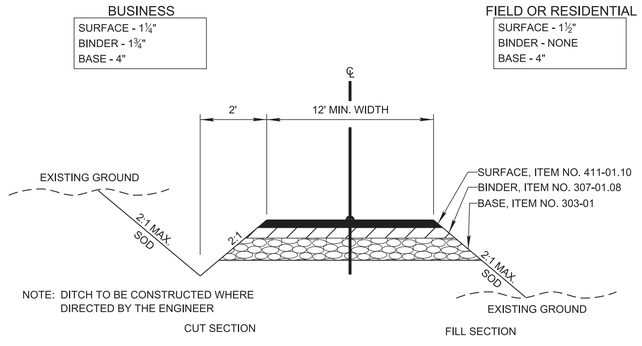
(B) SEE DITCH LINING DETAIL SHEET 2G.

(C)

HAGAN REYNOLDS ROAD TRANSITIONS	CORAN ROAD TRANSITIONS
FROM LT. STA. 18+49.00 - 9.2'	FROM LT. STA. 20+78.55 - 10'
TO LT. STA. 19+00.00 - 10'	TO LT. STA. 21+20.00 - 8.8'
FROM RT. STA. 18+49.00 - 9.3'	FROM RT. STA. 20+78.55 - 10'
TO RT. STA. 19+00.00 - 10'	TO RT. STA. 21+20.00 - 8.8'

PROPOSED PAVEMENT SCHEDULE

(1) **ASPHALTIC CONCRETE SURFACE (HOT MIX) PG64-22 GRADING "D" SURFACE @ 1.25" THICK (APPROX. 132.5 LB./S.Y.)** 411-01.10 ACS MIX (PG64-22) GRADING "D"	(7) **MINERAL AGGREGATE 10.00" THICK (ROADWAY), 12.00" THICK (SHOULDER)** 303-01 MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D"
(2) **BITUMINOUS PLANT MIX BASE (HOT MIX) PG64-22 GRADING "B-M2" @ 2.00" THICK (APPROX. 226 LB./S.Y.)** 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING "B-M2"	(8) **PRIME COAT** 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) AT 0.30 - 0.35 GALLONS/S.Y. 402-02 AGGREGATE FOR COVER MATERIAL (PC) AT 8 - 12 LB./S.Y.
(3) **BITUMINOUS PLANT MIX BASE (HOT MIX) PG64-22 GRADING "A" @ 3.00" THICK (APPROX. 345 LB./S.Y.)** 307-01.01 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING "A"	(9) **TACK COAT** 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) SEE 403.05 FOR DETERMINING APPLICATION RATE IN THE FIELD.
(4) **BITUMINOUS PLANT MIX BASE (HOT MIX) PG64-22 GRADING "A-S" @ 3.00" THICK (APPROX. 318 LB./S.Y.)** 307-01.20 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING "A-S"	(10) **COLD PLANING @ 1.25" THICK** 415-01.01 COLD PLANING BITUMINOUS PAVEMENT
(5) **MINERAL AGGREGATE 8.00" THICK (ROADWAY), 15.75" THICK (SHOULDER)** 303-01 MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D"	(11) **COLD PLANING @ 1.50" THICK** 415-01.01 COLD PLANING BITUMINOUS PAVEMENT
(6) **ASPHALTIC CONCRETE SURFACE (HOT MIX) PG64-22 GRADING "E" SHOULDERS @ 1.50" THICK (APPROX. 159 LB./S.Y.)** 411-01.07 ACS MIX (PG64-22) GRADING "E" SHOULDER	(12) **UNDERDRAIN** 710-02 AGGREGATE UNDERDRAINS (WITH PIPE) SEE DETAIL "D" AND ALTERNATIVE DETAIL "F" STD. DWG. NO. RD-UD-3



TYPICAL SECTION

PRIVATE DRIVE TO BUSINESS,
FIELD, OR RESIDENTIAL PROPERTY
WHERE SURFACE OF EXISTING DRIVE IS CONCRETE,
SUBSTITUTE 6" OF CONCRETE FOR BASE AND SURFACE.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS AND PAVEMENT SCHEDULE

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GENERAL NOTES

GRADING

(1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

(2) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.

(3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) WITHOUT APPROVAL BY FEMA. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

SEEDING AND SODDING

(2) SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES.

(4) ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.

(5) ITEM NO. 801-02, SEEDING (WITHOUT MULCH) AND EROSION CONTROL BLANKET, SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS AS WELL AS LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL

(1) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

(3) IF ANY APPROACH END OF A SECTION OF GUARDRAIL OR BRIDGE RAIL MUST TEMPORARILY BE LEFT INCOMPLETE AND EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL USE TWO (2) TEMPORARY BARRICADES OR DRUMS WITH TYPE “A” LIGHTS AND ROUNDED END ELEMENTS AS MINIMUM MEASURES TO PROTECT TRAFFIC FROM THE HAZARD OF AN EXPOSED END. ALL COST OF FURNISHING AND INSTALLING TEMPORARY BARRICADES OR DRUMS WITH TYPE “A” LIGHTS TO DELINEATE GUARDRAIL END AND A TEMPORARY ROUNDED END ELEMENT SHALL BE INCLUDED IN THE COST OF THE PROPOSED GUARDRAIL END TERMINAL.

(4) GUARDRAIL IS TO BE COMPLETE IN PLACE BEFORE THE MAINLINE ROADWAY IS OPENED TO TRAFFIC.

DRAINAGE

(1) THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

(2) EXCAVATION FOR PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CULVERTS AND MINOR STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE.

(4) THE CUTTING OF INLET AND OUTLET DITCHES WHERE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER WILL BE MEASURED AND PAID FOR AS ITEM NO. 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED).

(5) WHERE A CULVERT (PIPE, SLAB OR BOX) IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASING OR DECREASING THE AMOUNT OF CULVERT EXCAVATION WILL NOT RESULT IN AN INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT THAT WILL BE MADE DUE TO SUCH CHANGE.

(6) DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND TRAFFIC CONTROL ITEMS.

FENCING

(3) THE CONTRACTOR SHALL GIVE THE AFFECTED PROPERTY OWNERS A TWO-WEEK NOTICE PRIOR TO CUTTING FENCES.

MISCELLANEOUS

(1) ALL DETOUR, ACCESS, SERVICE AND FRONTAGE ROADS SHALL BE CONSTRUCTED WITH A MINIMUM OF ONE (1) COURSE OF BASE MATERIAL BEFORE TRAFFIC IS INTERRUPTED ON EXISTING ROADS.

(2) THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RESET MAILBOXES AND POSTS WHERE AND AS DIRECTED BY THE ENGINEER. COST TO BE INCLUDED IN PRICE BID FOR OTHER CONSTRUCTION ITEMS.

(3) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

ROAD CLOSURE

(1) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

PAVEMENT MARKINGS

FINAL PAVEMENT MARKING

(5) THE CONTRACTOR WILL BE REQUIRED TO PERFORM THE FOLLOWING WORK:

a. SHOULDERS SHALL BE BROOMED AND DE-GRASSED AND MATERIAL SHALL BE PICKED UP AND REMOVED. THIS WILL BE PAID FOR UNDER ITEM NO. 208-01.05.

b. REMOVE ALL GARBAGE AND CONSTRUCTION DEBRIS FROM PROJECT. THE COST FOR THIS WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

(8) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6” ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY’S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.02, ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY’S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

(13) PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY’S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4IN LINE), L.M.

SNOWPLOWABLE REFLECTIVE PAVEMENT MARKERS

(19) REMOVE EXISTING SNOWPLOWABLE MARKERS PRIOR TO PAVING AND/OR COLD PLANING. REMOVE ALL ADHESIVES PRIOR TO PAVING. PATCH ANY HOLES OR DIVOTS RESULTING FROM THE REMOVAL OF A MARKER IN A MANNER WHICH ENSURES A UNIFORM PAVED SURFACE. PATCH WORK SHALL BE INCLUDED WITH COST OF OTHER ITEMS OF CONSTRUCTION.

PAVEMENT

PAVING

(1) THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE DIRECTION OF TRAFFIC.

(2) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

(3) THE CONTRACTOR SHALL ATTACH A DEVICE TO THE SCREED OF THE PAVER SUCH THAT MATERIAL IS CONFINED AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A CONSOLIDATED WEDGE-SHAPE PAVEMENT EDGE OF APPROXIMATELY 25 TO 30 DEGREES AS IT LEAVES THE PAVER (MEASURED FROM A LINE PARALLEL TO THE PAVEMENT SURFACE.) THE DEVICE SHALL MEET THE REQUIREMENTS THAT ARE CURRENTLY SET FORTH IN SPECIAL PROVISION 407SE.

RESURFACING

(4) WHERE DIRECTED BY THE TDOT ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SHAPE PUBLIC SIDE ROADS, BUSINESS ENTRANCES, AND PRIVATE DRIVES, AS WELL AS CLEANING OF EXISTING DRAINS BEFORE PLACING MATERIALS. ALL COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

(5) ALL PUBLIC SIDE ROADS SHALL BE PAVED ONE PAVER WIDTH THROUGH THE INTERSECTION AS A MINIMUM. A SATISFACTORY TRANSITION FROM THE NEW PAVEMENT TO THE EXISTING GRADE OF THE INTERSECTING PUBLIC ROAD OR BUSINESS ENTRANCE SHALL BE PROVIDED. SHOULD THE PAVEMENT OF THE INTERSECTING PUBLIC ROAD BE DISTRESSED, THE RESURFACING WIDTH MAY BE INCREASED TO THE NORMAL RIGHT OF WAY LINE.

(6) PRIVATE DRIVEWAYS, FIELD ENTRANCES, AND BUSINESS ENTRANCES WILL BE RESURFACED A PAVER WIDTH (LANE WIDTH) AS A MINIMUM. A PAVEMENT TAPER TO TRANSITION THE NEW PAVEMENT SHALL BE REQUIRED, IT SHALL BE BASED ON AN ADDITIONAL ONE FOOT OF WIDTH PER ONE INCH DEPTH OF PAVEMENT. IF THE SHOULDER IS NARROW ENOUGH THAT THE SUM OF THE SHOULDER AND THE TRANSITION ARE LESS THAN A PAVER WIDTH, THE TRANSITION SHALL OCCUR WITHIN THE PAVER WIDTH. IF THE SUM OF THE SHOULDER AND THE TRANSITION IS GREATER THAN A PAVER WIDTH (LANE WIDTH), THE TRANSITION SHALL OCCUR OUTSIDE OF THE PAVER WIDTH.

(9) IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	2C
PS&E	2025	BR-STP-70(24)	2C

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COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 2003 MODEL.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	2C1
PS&E	2025	BR-STP-70(24)	2C1

GENERAL NOTES (CONT'D.)

SIGNING

(2) FOR ALL PERMANENT PANEL SIGNS WITH A SILVER-WHITE, YELLOW, RED, GREEN, BROWN, OR BLUE BACKGROUND, PROVIDE REFLECTIVE SHEETING THAT MEETS OR EXCEEDS AASHTO M268, TYPE D.

(3) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE LENGTHS WERE COMPUTED FROM THE CROSS-SECTIONS CONTAINED IN THE CONSTRUCTION PLANS. IN THE EVENT THE SUPPORT LENGTHS ARE 2 FEET SHORTER OR LONGER THAN SHOWN ON THE PLANS, THE ENGINEER SHALL VERIFY THE SUPPORT TYPE WITH THE REGIONAL TRAFFIC DESIGN OFFICE,TELEPHONE 865-594-2330. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ORDERING MATERIAL.

(4) THE TOP OF THE SIGN FOOTINGS SHALL BE PLACED LEVEL WITH THE GROUND LINE.

(5) AFTER THE SIGN LOCATIONS HAVE BEEN STAKED, BUT PRIOR TO ORDERING ANY MATERIAL FOR THE SUPPORTS, THERE SHALL BE A FIELD INSPECTION AND APPROVAL BY THE REGIONAL CONSTRUCTION OFFICE.

(7) ALL SIGNS MARKED "TO BE REMOVED" ARE TO BE REMOVED BY THE CONTRACTOR AND PAID FOR UNDER ITEM NO. 713-15 AND BECOME THE PROPERTY OF THE CONTRACTOR.

(8) THE EXISTING FOOTINGS ARE TO BE REMOVED 6 INCHES BELOW GROUND LINE.

(9) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUT-OUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND, OR BROWN BACKGROUND.

(10) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ERECTION.

(11) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS.

(12) ALL SIGNS WHICH INTERFERE WITH CONSTRUCTION WILL BE RELOCATED OUTSIDE LIMITS OF CONSTRUCTION BY THE CONTRACTOR. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR WILL RESTORE THE SIGNS TO ORIGINAL LOCATION. THE CONTRACTOR SHALL CHECK WITH THE REGIONAL TRAFFIC ENGINEER PRIOR TO MOVING ANY PERMANENT SIGNS.

(13) AFTER THE PERMANENT SIGN LOCATIONS HAVE BEEN STAKED, THERE SHALL BE A FIELD INSPECTION AND APPROVAL BY THE CONSTRUCTION FIELD OFFICE. PAYMENT FOR LOCATION AND STAKING SHOULD BE INCLUDED IN THE BID PRICE FOR OTHER ITEMS OF CONSTRUCTION. ANY RELOCATION REQUIRED, DUE TO THE SIGN NOT BEING INSTALLED IN THE CORRECT LOCATION, WILL BE DONE AT THE CONTRACTOR'S EXPENSE.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

(1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.

(2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.

(3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

(4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

(5) USE OF BARRICADES, PORTABLE BARRIER RAILS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

(8) ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED, AND FLEXIBLE DRUMS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.

(9) THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING CONSTRUCTION SIGNS. THE COST OF THIS WORK SHALL BE INCLUDED IN ITEM NO. 712-06, SIGNS (CONSTRUCTION), S.F.

SEALED BY

BRIAN LEE
REGISTERED ENGINEER
SIGNATURE
NUMBER
LIC. 107290
STATE OF TENNESSEE
05/21/2025

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 2003 MODEL.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	2D
PS&E	2025	BR-STP-70(24)	2D

SPECIAL NOTES

GRADING

(1) THE GRADING TABULATIONS AND RESULTING EARTHWORK ASSOCIATED BID QUANTITIES WERE PREPARED UTILIZING AVAILABLE GEOTECHNICAL INFORMATION AND/OR REPORTS PREPARED FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR GENERAL INFORMATION AND ESTIMATION GUIDANCE ONLY.

(2) BORING DEPICTIONS SHOWN ON THE FOUNDATION DATA SHEETS, SOILS SHEETS, PLANS, AND CROSS-SECTIONS INDICATE SOIL AND ROCK CONDITIONS AT THE SPECIFIC BORING LOCATIONS. ANY SOIL PROFILE AND/OR ROCK LINE IS INTERPRETIVE BASED ON THE JUDGMENT OF THE GEOTECHNICAL ENGINEER/GEOLOGIST. THE TRANSITION BETWEEN BORINGS AND LAYERS MAY VARY SIGNIFICANTLY DEPENDING ON THE GEOLOGIC FORMATIONS ENCOUNTERED.

(3) TO ASSIST IN BID PREPARATION FOR EARTHWORK AND FOUNDATION CONSTRUCTION, DETAIL ROCK AND SOIL DESCRIPTION AND ON SOME PROJECTS, ROCK CORE SAMPLES ARE AVAILABLE FOR INSPECTION AT THE MATERIALS AND TESTS HEADQUARTERS AT 6601 CENTENNIAL BOULEVARD, NASHVILLE, TN OR AT THE TDOT REGION 1 BUILDING IN KNOXVILLE, TN.

(4) THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE PLANS, CROSS-SECTIONS AND CONTRACT DOCUMENTS INCLUDING ANY SPECIAL PROVISIONS AS WELL AS UTILIZING HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID FOR EARTHWORK ITEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.

(5) EARTHWORK IS PAID FOR UNDER ITEM NO. 203-01, ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED). NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK QUANTITIES BASED SOLELY ON A CLAIM THAT THE QUANTITIES SHOWN IN THE GRADING TABULATION OR ELSEWHERE IN THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF MATERIALS ENCOUNTERED DURING CONSTRUCTION EXCEPT AS PROVIDED FOR BY SECTION 104.02 IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OR AS AMENDED IN SUPPLEMENTAL SPECIFICATIONS.

DEMOLITION

DEMOLITION, REPAIR, OR REHABILITATION OF BRIDGES

(1) THE CONTRACTOR SHALL VERIFY THAT AN ASBESTOS SURVEY HAS BEEN COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATIONS ACTIVITIES (NOT INCLUDING ASPHALT MILLING OR OVERLAY).

(2) ASBESTOS-CONTAINING MATERIALS (ACM) ABATEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATION OF BRIDGE(S). ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS.

(3) THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO THE TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT, DEMOLITION, OR MAJOR REPAIR INVOLVING THE REMOVAL/REPLACEMENT OF A STRUCTURAL COMPONENT.

RETAINING WALLS

(1) THE (RIGHT-OF-WAY/EASEMENT) BETWEEN STATION 118+03.82 TO STATION 126+84.42 SHALL REMAIN CLEAR FOR THE CONSTRUCTION OF THE RETAINING WALL. NO UTILITY LINES MAY BE PLACED THERE WITHOUT APPROVAL FROM STRUCTURES DIVISION.

(2) THE OPTIONS FOR RETAINING WALL TYPES SHALL BE LIMITED TO THE APPROVED ALTERNATIVES AS SPECIFIED ON THE RETAINING WALL SHEET(S).

(3) VALUE ENGINEERING CHANGE PROPOSALS WILL NOT BE ACCEPTED FOR RETAINING WALLS ITEM NUMBER(S): 604-07.01 (STA. 118+03.82 TO STA. 126+84.42).

(4) ALL COST OF BUILDING, INSTALLING AND BACKFILLING THE RETAINING WALL, INCLUDING GRANULAR BACKFILL, GEOTEXTILE FABRIC (TYPE IV), LEVELING PAD, AMD MOMENT SLAB, SHALL BE INCLUDED IN THE COST OF THE RETAINING WALL. COSTS FOR EXCAVATION OF THE WALL SHALL BE INCLUDED IN ITEM NO. 203-01, ROAD AND DRAINAGE EXCAVATION PER CUBIC YARD. END AREAS FOR EXCAVATION FOR THE WALL SHALL BE INCLUDED IN END AREA TOTALS ON CROSS-SECTIONS.

SEALED BY

BRIAN LEE
REGISTERED ENGINEER
107299
STATE OF TENNESSEE
05/20/2026

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 2003 MODEL.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPECIAL NOTES

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ENVIRONMENTAL NOTES

SUBSECTION 1 – ENVIRONMENTAL GENERAL NOTES

ENVIRONMENTAL GENERAL NOTES

NATURAL RESOURCES

(1) SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT NATURAL RESOURCES AND WATER QUALITY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG NATURAL RESOURCES IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS, WETLANDS OR OTHER NATURAL FEATURES IN ACCORDANCE WITH TDOT STANDARDS. EPSC MEASURES SHALL BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.

(2) NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.

(3) INSTREAM EPSC DEVICES REQUIRE THE TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION REVIEW AND MUST BE PROCESSED BY THE PERMITS SECTION TO OBTAIN WATER QUALITY PERMITS.

(4) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS AND EPHEMERAL, INTERMITTENT, AND PERENNIAL STREAMS, IS NOT ALLOWED.

(5) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING, NOT TO EXCEED THE WIDTH SPECIFIED IN THE STANDARD DRAWING.

(6) STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CULVERT CROSSINGS SHALL BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES SHALL BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK SHALL BE USED AT THE CROSSING POINT AND CULVERTED TO PREVENT THE IMPOUNDMENT OF WATER FLOW. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER MATERIALS USED FOR ALL TEMPORARY FILLS SHALL BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO PREEXISTING ELEVATIONS. ALL TEMPORARY CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (E.G. BAILEY BRIDGE OR EQUIVALENT, TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK OR THE APPROPRIATE USE OF BARGES AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.

(7) HEAVY EQUIPMENT WORKING IN WETLANDS WITH PERMITTED TEMPORARY IMPACTS SHALL BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE AND COMPACTION UNLESS SPECIFICALLY ADDRESSED IN THE CONSTRUCTION PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT SHALL BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED. ALL AFFECTED AREAS SHOULD BE RETURNED TO PRE-EXISTING CONDITIONS.

(8) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION PLANS AND PERMITS.

(9) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS PRIOR TO ANY CONSTRUCTION AND MAINTENANCE ACTIVITIES TO ENSURE THAT ENVIRONMENTAL FEATURES (E.G., STREAMS, WETLANDS, SPRINGS, ETC.) ARE NOT IMPACTED BEYOND PERMITTED LOCATIONS. IF THE CONTRACTOR OR TDOT INSPECTOR IS UNSURE OF THE IDENTITY OF AN ENVIRONMENTAL FEATURE, THE INSPECTOR SHALL CONTACT THE TDOT REGION ENVIRONMENTAL TECH GROUP IMMEDIATELY.

SPECIES

(10) NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA.

(11) SHOULD CLIFF SWALLOW OR BARN SWALLOW NESTS, EGGS, OR BIRDS (YOUNG AND ADULTS) BE PRESENT, THE CONTRACTOR SHALL CONTACT THE REGIONAL ECOLOGY OFFICE TO DETERMINE IF SEASONAL RESTRICTIONS WILL BE NECESSARY. GENERALLY, BIRDS, NESTS, AND EGGS MAY NOT BE DISTURBED BETWEEN APRIL 15 AND JULY 31. FROM AUGUST 1 TO APRIL 14, NESTS CAN BE REMOVED OR DESTROYED SO LONG AS BIRDS OR EGGS ARE NOT PRESENT, AND MEASURES IMPLEMENTED TO PREVENT FUTURE NEST BUILDING AT THE SITE (I.E., CLOSING OFF AREA USING NETTING).

(12) IF THE REMOVAL OF ANY TREES WITH A DIAMETER AT BREAST HEIGHT (DBH) GREATER THAN 3 INCHES IS DEEMED NECESSARY THE TDOT MANAGER SHALL CONTACT THE TDOT ENVIRONMENTAL DIVISION, ECOLOGY SECTION IMMEDIATELY.

PERMITS, PLANS & RECORDS

(13) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO ARCHAEOLOGY, ECOLOGY, HISTORICAL, HAZARDOUS MATERIALS, AIR AND NOISE, TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING ANY MATERIAL AND STAGING AREAS AND THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS TO BE USED. ANY SUCH PERMITS SHALL BE SUPPLIED TO THE TDOT PROJECT RESPONSIBLE PARTY PRIOR TO THE USE OF THE PERMITTED AREA(S).

(14) ANY DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT PROJECT RESPONSIBLE PARTY. THE ENVIRONMENTAL DIVISION, DESIGN DIVISION, AND HEADQUARTERS CONSTRUCTION OFFICE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.

(15) IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE TDOT PERMIT SECTION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS ARE NEEDED. THE ROADWAY DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.

(16) THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATE. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE TDOT PROJECT RESPONSIBLE PARTY TO COMMENCE PERMIT RENEWAL PROCESS.

(17) ALL WATER QUALITY PERMITS SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. THE NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER, OPERATOR, OR A LOCAL CONTACT PERSON WITH A BRIEF DESCRIPTION OF THE PROJECT SHALL ALSO BE POSTED. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE. ALL POSTINGS SHALL BE MAINTAINED IN LEGIBLE CONDITION.

SUPPORT ACTIVITIES

(18) MATERIALS AND STAGING AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY ENVIRONMENTAL PERMITS, OBTAINED SOLELY BY THE CONTRACTOR. THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATES. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE TDOT PROJECT RESPONSIBLE PARTY TO COMMENCE PERMIT RENEWAL PROCESS.

ENVIRONMENTAL

(20) EXCEPT AS OTHERWISE SPECIFIED, THERE ARE NO KNOWN SPECIAL ENVIRONMENTAL FACTORS PRESENT ON THIS PROJECT THAT INDICATE A NEED FOR SEASONAL LIMITATIONS ON THE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OPERATIONS OR ON THE TOTAL AREA OF EXPOSED SOIL.

SUBSECTION 2 – ENVIRONMENTAL SPECIAL NOTES

ENVIRONMENTAL SPECIAL NOTES

ENVIRONMENTAL

(1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE SHALL BE INVITED TO ALL PRE-CONSTRUCTION MEETINGS.

ECOLOGY

(2) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE SHALL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR A DESIGNATED CONSULTANT WILL NEED TO BE ONSITE FOR WORK BEING DONE WHICH COULD AFFECT WATERS OF THE STATE/U.S. OR SPECIES.

(3) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE SHALL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS THAT MUST BE FOLLOWED.

(4) ALL PROJECTS WITH LEGALLY PROTECTED SPECIES OR CRITICAL HABITAT IDENTIFIED SHALL HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER WATERS OF THE STATE/U.S.

PROJECT COMMITMENTS

(5) SEE PROJECT COMMITMENTS, SHEET 1B, FOR DETAILS RELATING TO SPECIAL ENVIRONMENTAL COMMITMENTS REQUIRED BY THIS PROJECT.

SCOPE OF WORK

(6) THIS PROJECT INCLUDES THE GRADING, DRAINAGE, BASE, AND PAVEMENT FOR S.R. 70 TO LINES AND GRADES AS INDICATED ON THE TYPICAL CROSS-SECTIONS AND PLAN AND PROFILE SHEETS OR AS DIRECTED BY THE T.D.O.T. MANAGER. ALSO INCLUDED IS THE DEMOLITION AND REMOVAL OF THE EXISTING BRIDGE OVER THE RAILROAD AND THE CONSTRUCTION OF THE NEW BRIDGE AND RETAINING WALL.

(7) CONSTRUCTION OF PRIVATE DRIVES AND BUSINESS ENTRANCES TO LINES AND GRADES INDICATED ON THE PLANS OR AS DIRECTED BY THE T.D.O.T. MANAGER.

(8) CONSTRUCTION OF ALL DITCHES, GUARDRAIL, APPLICATION OF EROSION CONTROL DEVICES, SODDING, PAVEMENT MARKINGS, SIGNINGS, INSTALLATION OF TRAFFIC CONTROL DEVICES, AND OTHER DESIGN FEATURES AS INDICATED ON THE PLANS OR AS DIRECTED BY THE T.D.O.T. MANAGER.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	2E
PIH	2024	BR-STP-70(24)	2E
PS&E	2025	BR-STP-70(24)	2E

REV. 04-24-25: REVISED SCOPE OF WORK NOTES.

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DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	2F
PIH	2024	BR-STP-70(24)	2F
PS&E	2025	BR-STP-70(24)	2F

REV. 04-24-25: REVISED STORM DRAINAGE PIPES TABLE.

RIGHT OF WAY MARKERS

SHEET NO.	Item #: 708-02.01 QUANTITIES "A"	"B"	"C"	TOTALS
4A	5	1	5	11
TOTALS	5	1	5	11

STORM DRAINAGE PIPES

SHEET NO.	INLET CODE NO.	INLET ELEV.	OUTLET CODE NO.	OUTLET ELEV.	% GRADE	REINFORCED CONCRETE PIPE - CLASS, ITEM NO., SIZE & LENGTH (FT.)	CLASS III 607-03.02 18"	CLASS III 607-05.02 24"	CLASS III 607-06.02 30"	CLASS III 607-07.02 36"	CLASS III 607-08.02 42"	
4B	6	1120.28	7	1119.53	1.00%		8'					
4B	4	1106.48	5	1105.74	1.00%		8'					
5B	1	1101.35	2	1101.05	1.25%		24'					
5B	2	1100.39	3	1099.66	1.00%		8'					
5B	8	1101.21	2	1101.01	0.83%		24'					
TOTALS							72'					

NOTE: BEDDING MATERIAL SHALL BE INCLUDED IN THE COST OF THE PROPOSED PIPE CULVERT. SEE STANDARD DRAWING NO. D-PB-1 FOR ADDITIONAL DETAILS.

STORM DRAIN ENDWALLS

LOCATION \ SHEET NO.	STATION	OFFSET (FT.)	SKEW	CODE	TYPE	STANDARD DRAWING NO.	RUBBLE STONE RIP-RAP (GROUTED) 709-02.01 (C.Y.)	PROTECTED ENDWALLS CLASS "A" CONCRETE 611-07.01 (C.Y.)	STEEL BAR REINFORCING 611-07.02 (LB.)	SAFETY ENDWALLS (ITEM NO. 611-07.54 THRU 611-07.71 SERIES) 18 IN. 3:1 07.54 (EACH)	18 IN. 4:1 07.55 (EACH)	18 IN. 6:1 07.56 (EACH)	24" IN. 3:1 07.57 (EACH)	24" IN. 4:1 07.58 (EACH)	24" IN. 6:1 07.59 (EACH)	30" IN. 3:1 07.60 (EACH)	30" IN. 4:1 07.61 (EACH)	30" IN. 6:1 07.62 (EACH)
4B	119+34.00	28.71 LT	90°	7.0	ST	D-PE-4	33	1.0	45									
4B	122+48.00	28.63 LT	90°	5.0	ST	D-PE-4	22	1.0	45									
5B	125+62.00	28.59 LT	90°	3.0	ST	D-PE-4	14	1.0	45									
TOTALS							69	3.0	135									

CATCH BASINS

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	GRATE ELEV.	INVERT ELEV.	DEPTH (FT.)	INSIDE DIM.	STANDARD DRAWING NO.	PAY ITEMS TYPE 51 611-51.02 4'-8'	TYPE 52 611-52.02 4'-8'
4B	SR-70	119+34	22' LT.	6	1126.28	1120.28	6	62" SQ.	D-CB-51SC	1	
4B	SR-70	122+48	22' LT.	4	1111.11	1106.48	4.63	62" SQ.	D-CB-51SC	1	
5B	SR-70	125+32.50	22' LT.	1	1105.5	1101.35	4.15	62" SQ.	D-CB-51SC	1	
5B	SR-70	125+62	22' LT.	2	1105.29	1100.39	4.9	108" SQ.	D-CB-52SE		1
5B	SR-70	125+91.50	22' LT.	8	1105.33	1101.21	4.12	62" SQ.	D-CB-51SC	1	
TOTALS										4	1

SEALED BY

BRIAN LEE REGISTERED ENGINEER SIGNATURE 05/20/2025 NUMBER 107290 STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	2F1
PS&E	2025	BR-STP-70(24)	2F1

PAVEMENT QUANTITIES

LOCATION (ROADWAY)	TYPE - GRADE - PAY ITEM (TON)											
	MINERAL AGG.	BITUMINOUS PLANT MIX BASE (HOT MIX)				PRIME COAT		TACK COAT	ASPHALTIC CONCRETE SURFACE (HOT MIX)			COLD PLANE
	D	A	A-S	B-M	B-M2				D	E		
	303-01	307-01.01	307-01.20	307-01.07	307-01.08	402-01	402-02	403-01	411-01.10	411-01.07		415-01.01
SR-70	7384	740	697		476	8	27	6	321	148		459
HAGAN REYNOLDS ROAD	387				62	1	3	1	37			36
CORAN ROAD	350				52	1	3	1	31			30
MAINTENANCE OF TRAFFIC	30											85
DRIVEWAYS	67								11			
TOTALS	**8218**	**740**	**697**		**590**	**10**	**33**	**8**	**400**	**148**		**610**

ESTIMATED GRADING QUANTITIES

DESCRIPTION	UNADJUSTED VOLUMES (CY)		ADJUSTED VOLUMES (CY)
	EXC.	EMB.	EXC.
MAINLINE	4690	7644	4456
SIDE ROADS	87	379	83
PVT. DRIVES, BUSINESS AND FIELD ENTRANCES	29	67	28
INDEPENDENT DITCHES			
TEMPORARY CONSTRUCTION EXITS			
EPSC	286		272
TOPSOIL (EMB.)	883		
TOPSOIL (EXC.)	314		
TOPSOIL TOTALS (SEE TOPSOIL TABLE)			

ROCK (C.Y.)		TOTALS (C.Y.)				
EXC.	EMB.	EXC. (UNCL.)	EMB. (UNCL.)	EXC (COMMON)	EXC. (AVAIL.)	EXC. (ADJ.)
0	0	6289	8090	6289	5092	4838

BALANCE SUMMARY

SHRINK = 5 % SWELL = 15 %

EMB.		EXC.
8090	VS.	-4838
AVAILABLE	=	3252
BORROW MATERIAL	=	3415

TOPSOIL

IF EXISTING TOPSOIL IS SUITABLE FOR REUSE

PROPOSED SLOPE AREA S.F.	EXISTING TOPSOIL (EXC.)	EXISTING TOPSOIL (EMB.)	EXISTING TOPSOIL (TOTAL) C.Y.	REQUIRED TOPSOIL C.Y.	PLACING TOPSOIL 203-04 C.Y.	FURNISHED TOPSOIL 203-07 C.Y.	EXCESS TOPSOIL C.Y.
69705	314	883	1197	1291	1197	94	0

IF EXISTING TOPSOIL IS NOT SUITABLE FOR REUSE

PROPOSED SLOPE AREA S.F.	EXISTING TOPSOIL (EXC.)	EXISTING TOPSOIL (EMB.)	EXISTING TOPSOIL (TOTAL) C.Y.	REQUIRED TOPSOIL C.Y.	PLACING TOPSOIL 203-04 C.Y.	FURNISHED TOPSOIL 203-07 C.Y.	EXCESS TOPSOIL C.Y.
0	N/A	N/A	N/A	0	N/A	0	N/A

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BRIAN LEE
REGISTERED ENGINEER
SIGNATURE
05/20/2025
NUMBER 107209
STATE OF TENNESSEE

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 2003 MODEL.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	2F2
PS&E	2025	BR-STP-70(24)	2F2

PROPOSED GUARDRAIL

SHEET NO.	LOCATION	SIDE		STATIONS		GUARDRAIL				TERMINAL ANCHORS			REMARKS
		LT	RT	FROM	TO	THRIE BEAM BRIDGE TRAN. MASH TL-3 (20.65') 705-06.25 EACH	RADIUS RAIL 706-06.03 (L.F.)	W BEAM GR (TYPE 2) MASH TL3 705-06.01 (L.F.)	ROUND END ELEMENT 706-10.26 (EACH)	IN-LINE MASH TL3 705-06.11 (EACH)	TYPE 38 MASH TL3 (46.875') 705-06.20 (EACH)	TYPE 21 MASH TL2 (21.875') 705-06.30 (EACH)	
4B	HAGAN REYNOLDS RD / SR-70	X		18+49.00	116+01.12	1	100	156.25	2	3		1	TIE TO BRIDGE
4B	CORAN RD / SR-70		X	21+20.00	116+13.14	1	75	112.50		2		1	TIE TO BRIDGE
4B	SR-70		X	118+25.38	128+92.91	1		1000.00			1		TIE TO BRIDGE
5B	SR-70	X		126+81.59	128+04.08	1	18.75	93.75	1	1			TIE TO RETAINING WALL
TOTALS						4	193.75	1362.50	3	6	1	2	

SIDE DRAIN TABULATION

STATION	LOCATION		DESCRIPTION	SURFACE WIDTH FT.	SKEW	RCP CLASS III OR CMP 16 GA OR PVC OR SRTRP OR HDPE OR PP (L.F.) FILL HEIGHT ≤ 10 FT.						RCP CLASS III OR CMP 14 GA OR PVC OR SRTRP OR HDPE OR PP (L.F.) FILL HEIGHT > 10 FT. AND ≤ 16 FT						END TREATMENT				REMARKS
	LT.	RT.				18"	24"	30"	36"	42"	48"	18"	24"	30"	36"	42"	48"	INLET TYPE	INLET DRAWING NO.	OUTLET TYPE	OUTLET DRAWING NO.	
113+57.00		X	PVT. DR.	12	90°	24												"SD"	D-SEW-1A	"SD"	D-SEW-1A	D-PE-18(A&B)
TOTALS						24																

Pipe Tabulation For Private Drives, Business & Field Entrances

SIDE DRAIN ENDWALLS

LOCATION	DRIVE OR ENTRANCE STATION	OFFSET (FT.)	TYPE	STANDARD DRAWING NO.	SKEW	ENDWALLS 18 IN. 6:1 611-07.31 (EACH)	ENDWALLS 24 IN. 6:1 611-07.32 (EACH)
SR-70	113+46.55	36.08' RT	6:1 "U"	D-SEW-1A	88°43'44" LT	1	
SR-70	113+70.48	36.61' RT	6:1 "U"	D-SEW-1A	88°43'44" LT	1	
TOTALS						2	

REMOVAL OF SIGNS

SHEET NO.	STATION	LOCATION	DESCRIPTION	REMARKS
4	110+22.77 RT.	SR-70	NARROW BRIDGE	
4	116+42.18 LT.	SR-70	OBJECT MARKER	
4	116+42.96 RT.	SR-70	OBJECT MARKER	
4	117+83.16 RT.	SR-70	OBJECT MARKER	
4	117+83.21 RT	SR-70	OBJECT MARKER	
4	122+37.44 LT.	SR-70	NARROW BRIDGE	
4	19+35.19 RT.	HAGAN REYNOLDS RD.	STOP	
4	20+50.76 LT.	CORAN RD.	STOP	

NOTE: COST OF REMOVAL OF SIGNS TO BE INCLUDED IN ITEM # 713-15.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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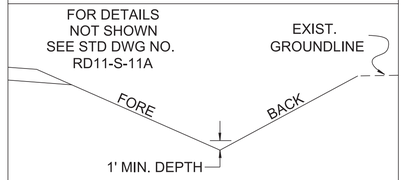
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	2G
PIH	2024	BR-STP-70(24)	2G
PS&E	2025	BR-STP-70(24)	2G

REV. 04-24-25: REVISED SPECIAL DITCHES TABLE AND DETAILS.

SPECIAL DITCHES

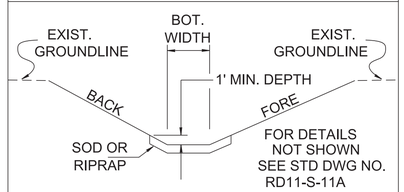
ROADWAY	STATION		SIDE	DETAIL NO.	CONFIGURATION			TURF REINF. MAT (CLASS III) 805-01.03 (S.Y.)	SEEDING W/O MULCH 801-02 (UNITS)	SODDING NEW SOD 803-01 (S.Y.)
	FROM	TO			FORE (H/V)	BOTTOM WIDTH (FT.)	BACK (H/V)			
SR-70	113+00	113+40	RT	1	3	0	3	56		56
SR-70	113+78	114+12	RT	1	6	0	3			70
SR-70	117+45	117+51	LT	2	2	2	2			67
SR-70	117+51	118+00	RT	2	2	2	2			122
SR-70	118+00	120+50	RT	3	2	4	2	360	4	
SR-70	120+50	122+00	RT	3	2	4	2			216
CORAN RD	20+50	21+00	RT	1	3	0	4	81	1	
CORAN RD	21+00	21+20	RT	1	3	0	2	24	0.3	
HAGAN REYNOLDS	17+85	18+00	RT	1	3	0	3			21
HAGAN REYNOLDS	18+00	18+50	RT	1	3	0	2			60
HAGAN REYNOLDS	18+50	19+14	RT	1	3	0	4			104
TOTALS								**521**	**5**	**716**

DETAIL NO. 1



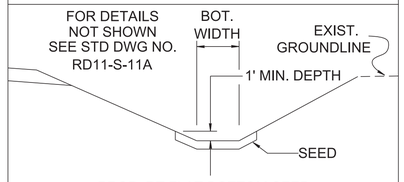
PROP. RT. "V" BOTTOM
TURF RENIFORCEMENT MAT
(CLASS III) OR ROCK DITCH

DETAIL NO. 2



PROP. FLAT BOTTOM
TURF RENIFORCEMENT MAT
(CLASS III) OR SODDED DITCH

DETAIL NO. 3



PROP. RT FLAT BOTTOM SEED,
TURF REINFORCEMENT MAT (CLASS III),
OR RIP-RAP DITCH

SEALED BY

BRIAN LEE
REGISTERED ENGINEER
AGRICULTURE
05/20/2025
COMMERCE
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETAIL SHEET

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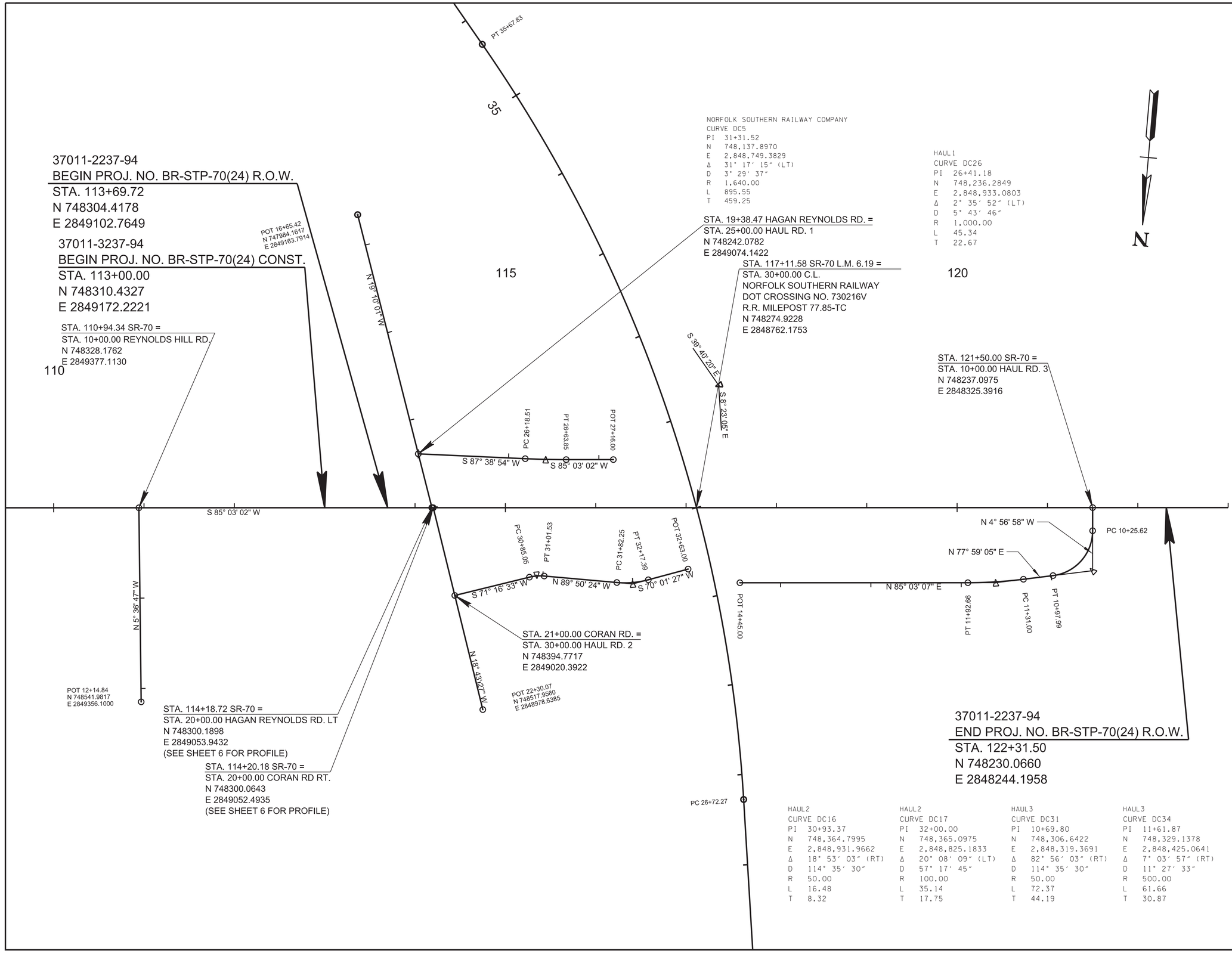
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	2G1
PIH	2024	BR-STP-70(24)	2G1
PS&E	2025	BR-STP-70(24)	2G1

REV. 04-24-25: ADDED SHEET.



HAUL2
CURVE DC16
PI 30+93.37
N 748,364.7995
E 2,848,931.9662
Δ 18° 53' 03" (RT)
D 114° 35' 30"
R 50.00
L 16.48
T 8.32

HAUL2
CURVE DC17
PI 32+00.00
N 748,365.0975
E 2,848,825.1833
Δ 20° 08' 09" (LT)
D 57° 17' 45"
R 100.00
L 35.14
T 17.75

HAUL3
CURVE DC31
PI 10+69.80
N 748,306.6422
E 2,848,319.3691
Δ 82° 56' 03" (RT)
D 114° 35' 30"
R 50.00
L 72.37
T 44.19

HAUL3
CURVE DC34
PI 11+61.87
N 748,329.1378
E 2,848,425.0641
Δ 7° 03' 57" (RT)
D 11° 27' 33"
R 500.00
L 61.66
T 30.87

SEALED BY

05/20/2025

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOMETRIC LAYOUT

HAUL ROADS
SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	3
PIH	2024	BR-STP-70(24)	3
PS&E	2025	BR-STP-70(24)	3

REV. 04-24-25: ADDED RAILROAD NOTES AND UPDATED UTILITY OWNER CONTACTS.

RIGHT-OF-WAY

(1) IT IS INTENDED THAT ALL BUILDINGS AND/OR PORTIONS OF BUILDINGS THAT ARE WITHIN THE PROPOSED RIGHT-OF-WAY AND/OR EASEMENT LINES FOR THE PROJECT BE REMOVED THERE FROM IN THE PROCESS OF RIGHT-OF-WAY ACQUISITION. IF ANY SUCH BUILDINGS OR IMPROVEMENTS ARE NOT REMOVED IN THE COURSE OF RIGHT-OF-WAY ACQUISITION, THE PROJECT MANAGER AND REGIONAL PROJECT DEVELOPMENT OFFICE ARE TO BE NOTIFIED IN SUFFICIENT TIME TO PERMIT HAVING SUCH REMOVALS DESIGNATED AS A PART OF THE CONSTRUCTION CONTRACT.

(2) ALL RAMPS MUST CONFORM TO THE DEPARTMENT'S "POLICY ON FINANCING CONSTRUCTION OF PUBLIC ROAD INTERSECTIONS AND DRIVEWAYS ON HIGHWAY RESURFACING, RECONSTRUCTION AND CONSTRUCTION PROJECTS ON NEW LOCATIONS", THE MANUAL ON RULES AND REGULATIONS FOR CONSTRUCTING DRIVEWAYS ON STATE HIGHWAY RIGHT-OF-WAY, STANDARD DRAWING RP-R-1, AND OTHER ACCEPTED DESIGN AND SAFETY STANDARDS.

(3) EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.

(4) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY EXCEEDS 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED TO A TOUCHDOWN POINT OR UNTIL THE GRADE IS LESS THAN 7 PERCENT.

(5) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY IS LESS THAN 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED A SHOULDER WIDTH FROM THE EDGE OF PAVEMENT AND THE REMAINDER OF THAT DRIVEWAY REPLACED IN KIND TO A TOUCHDOWN POINT.

(6) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.

(8) NEW DRIVEWAYS PROVIDED IN THE PLANS WILL BE PAVED BASED ON THE 7 PERCENT CRITERIA. THOSE 7 PERCENT OR STEEPER IN GRADE WILL BE PAVED AND THOSE FLATTER THAN 7 PERCENT WILL BE COVERED WITH BASE STONE.

(9) ON PROJECTS WITHOUT CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

(11) ON NON-STATE ROUTES, ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS SHALL REQUIRE A PERMIT ONLY IF THE LOCAL AGENCY SPECIFIES THE NEED FOR THAT PERMIT.

UTILITY

(1) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORDS, AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE UPON THE TYPE, SIZE, AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION, AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN THREE (3) OR NOT MORE THAN TEN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.

(2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.

(3) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

(4) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

(5) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC AT 1-800-351-1111 WILL BE REQUIRED.

RAILROAD

(1) ALL UTILITY INSTALLATIONS OR RELOCATIONS THAT ARE REQUIRED IN CONJUNCTION WITH THIS PROJECT CAN BE INSTALLED OR RELOCATED AS PART OF THE PROJECT PROVIDED THE CONSTRUCTION IS PERFORMED BY THE PROJECT CONTRACTOR OR PROJECT CONTRACTOR'S SUB-CONTRACTOR. HOWEVER, THE UTILITY MUST SUBMIT AN APPLICATION FOR-THE INSTALLATION-OR RELOCATION TO NS PIPE AND WIRE FOR APPROPRIATE HANDLING FOR LICENSE AGREEMENT AND APPLICATION FEES. FOR UTILITY APPLICATIONS GO TO: HTTP://WWW.NSCORP.COM/CONTENT/NSCORP/EN/REAL-ESTATE/NORFOLK-SOUTHERN-SERVICES/WIRE-PIPELINE-FIBER-OPTIC-PROJECTS.HTML.
NOTE: LICENSE AGGREMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.

UTILITY OWNERS

CABLE:

CHARTER COMMUNICATIONS
1774 HENRY G. LANE ST.
MARYVILLE, TN 37801
CONTACT: BILLY CLICK
OFFICE PHONE: 865 273 2761
CELL PHONE: 865 388 7524
Email: BILLY.CLICK@CHARTER.COM

WATER:

PERSIA UTILITY DISTRICT
206 HWY 70 SOUTH
ROGERSVILLE, TN 37860
CONTACT: ANTHONY RICHARDS
OFFICE PHONE: 423 272 9692
CELL PHONE: 423 748 5689
Email: ARICHARDS996@YAHOO.COM

POWER:

HOLSTON ELECTRIC COOPERATIVE
P.O. BOX 190, 1200 WEST MAIN ST.
ROGERSVILLE, TN 37857
CONTACT: JASON MONTGOMERY
OFFICE PHONE: 423 272 8821
CELL PHONE: 423 677 2743
Email: JMONTGOMERY@HOLSTONELECTRIC.COM

GAS:

HAWKINS COUNTY GAS UTILITY DISTRICT
202 PARK BLVD.
ROGERSVILLE, TN 37857
CONTACT: PATRICK LUND
OFFICE PHONE: 423 272 8841
CELL PHONE: 423 358 0339
Email: PLUND@HCGAS.COM

PHONE:

AT&T
9733 PARKSIDE DR.
KNOXVILLE, TN 37922
CONTACT: JAY FRAZIER
OFFICE PHONE:
CELL PHONE: 865 387 2685
Email: JF092G@ATT.COM

SEALED BY

BRIAN LEE
REGISTERED ENGINEER
SIGNATURE
05/31/2026
NUMBER
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY
NOTES,
UTILITY NOTES,
AND
UTILITY OWNERS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	3A
PIH	2024	BR-STP-70(24)	3A
PS&E	2025	BR-STP-70(24)	3A

REV. 8-24-23: REMOVED STRIKE THROUGH AND ADDED FOOTNOTE FOR TRACT 10.

REV. 04-24-25: ADDED STRIKE THROUGH AND REMOVED FOOTNOTE FOR TRACT 10, UPDATED EASEMENTS FOR TRACT 16, AND UPDATED DISTURBED AREA TABLE.

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA (ACRES)			AREA TO BE ACQUIRED (ACRES)			AREA REMAINING (ACRES)		EASEMENT (ACRES)				
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE		LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM DRAINAGE	SLOPE	CONST	AIR RIGHTS	PERM RAILROAD
				BOOK	PAGE													
~~1~~	~~HAGAN L. REYNOLDS~~	~~136~~	~~18~~	~~142~~	~~483~~		~~10.000~~	~~10.000~~					~~10.000~~					
~~2~~	~~HAGAN L. REYNOLDS~~	~~136~~	~~23~~	~~105~~	~~332~~	~~29.770~~		~~29.770~~				~~29.770~~						
~~3~~	~~CEMETERY~~	~~136~~	~~19~~			~~0.151~~		~~0.151~~				~~0.151~~						
~~4~~	~~TIMOTHY S. SMITH~~	~~136D~~	~~"A" 4~~	~~1164~~	~~433~~		~~0.479~~	~~0.479~~					~~0.479~~					
~~5~~	~~ROGER D. CAVIN AND WIFE, PATRICIA J. CAVIN~~	~~136D~~	~~"A" 3~~	~~363~~	~~329~~		~~0.458~~	~~0.458~~					~~0.458~~					
~~6~~	~~JUDY HUGHES ESTATE MARAGARET HUGHES TRUSTEE~~	~~136D~~	~~"A" 2~~	~~1210~~	~~692~~		~~0.459~~	~~0.459~~					~~0.459~~					
~~7~~	~~MICHAEL HUGHES AND WIFE, KATHY HUGHES~~	~~136D~~	~~"A" 1~~	~~435~~	~~339~~		~~0.459~~	~~0.459~~					~~0.459~~					
~~8~~	~~LAWRENCE S. WHEELER I AND WIFE, JANIE J. WHEELER~~	~~136D~~	~~"A" 30~~	~~416~~	~~692~~		~~0.885~~	~~0.885~~					~~0.885~~					
		~~136D~~	~~"A" 31~~															
~~9~~	~~MICHAEL T. HUGHES AND WIFE, CATHY A. HUGHES~~	~~136D~~	~~"A" 29~~	~~393~~	~~663~~		~~0.517~~	~~0.517~~					~~0.517~~					
~~10~~	~~PERSIA UTILITY DISTRICT~~	~~136~~	~~20~~	~~303~~	~~893~~	~~0.730~~		~~0.730~~				~~0.730~~						
~~11~~	~~MICHAEL T. HUGHES AND WIFE, CATHY HUGHES~~	~~136D~~	~~"A" 32~~	~~398~~	~~359~~		~~1.777~~	~~1.777~~					~~1.777~~					
		~~136~~	~~17.04~~															
~~12~~	~~HAGAN L. REYNOLDS~~	~~136~~	~~22~~	~~105~~	~~332~~	~~0.293~~		~~0.293~~				~~0.293~~						
~~13~~	~~JUANITA TRAHAN AND HUSBAND, RAYMOND TRAHAN~~	~~136~~	~~21~~	~~1151~~	~~880~~	~~0.234~~		~~0.234~~				~~0.234~~						
14	RAYMOND TRAHAN AND WIFE, JUANITA TRAHAN	136	21.01	726	579	0.360		0.360	2931 S.F.		2931 S.F.	0.293						
15	DAVID HAMMOND SR	136	16	1185	1		1.010	1.010		0.174	0.174		0.836					
** 16	NORFOLK SOUTHERN RAILWAY COMPANY															0.756 ①	0.218	0.434
~~17~~	~~HARRIETT REYNOLDS~~	~~136~~	~~38~~	~~841~~	~~74~~	~~16.498~~		~~16.498~~				~~16.498~~						
~~17A~~	~~HARRIETT REYNOLDS~~	~~136~~	~~38~~	~~841~~	~~74~~	~~2.352~~		~~2.352~~				~~2.352~~						
18	JOHN W. REYNOLDS & DAVID H. REYNOLDS	136	17	304	379		114.470	114.470		0.291	0.291		114.179					
~~19~~	~~LARRY JOHNSON~~	~~136~~	~~38.02~~	~~768~~	~~470~~	~~1.100~~		~~1.100~~				~~1.100~~						
~~20~~	~~JERRY PINKSTON AND WIFE, TINA L. PINKSTON~~	~~136~~	~~14.02~~	~~363~~	~~718~~		~~6.320~~	~~6.320~~					~~6.320~~					
~~21~~	~~SHAUNA MARKHAM~~	~~136~~	~~39.03~~	~~1046~~	~~43~~	~~1.640~~		~~1.640~~				~~1.640~~						
ACQUISITION TOTALS (ACRES)										**0.532**						**0.756**	**0.218**	**0.434**

① FOR WORKING ROOM DURING CONSTRUCTION OF BRIDGE AND TEMPORARY HAUL ROAD CONSTRUCTION IN RAILROAD R.O.W.

** TR. NO. 16 ACQUIRED AN EASMENT FOR RAILROAD PURPOSES BY DEED DATED X-XX-XX

DISTURBED AREA

IN BETWEEN SLOPE LINES	2.128	(AC)
15 FOOT WIDE STRIP (OUT SIDE SLOPE LINES)	0.871	(AC)
TOTAL DISTURBED AREA	2.999	(AC)
TOTAL PROJECT AREA	8.257	(AC)

SEALED BY

J. BRIAN LEE
REGISTERED ENGINEER
SIGNATURE
NUMBER 107299
STATE OF TENNESSEE
05/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY ACQUISITION TABLE

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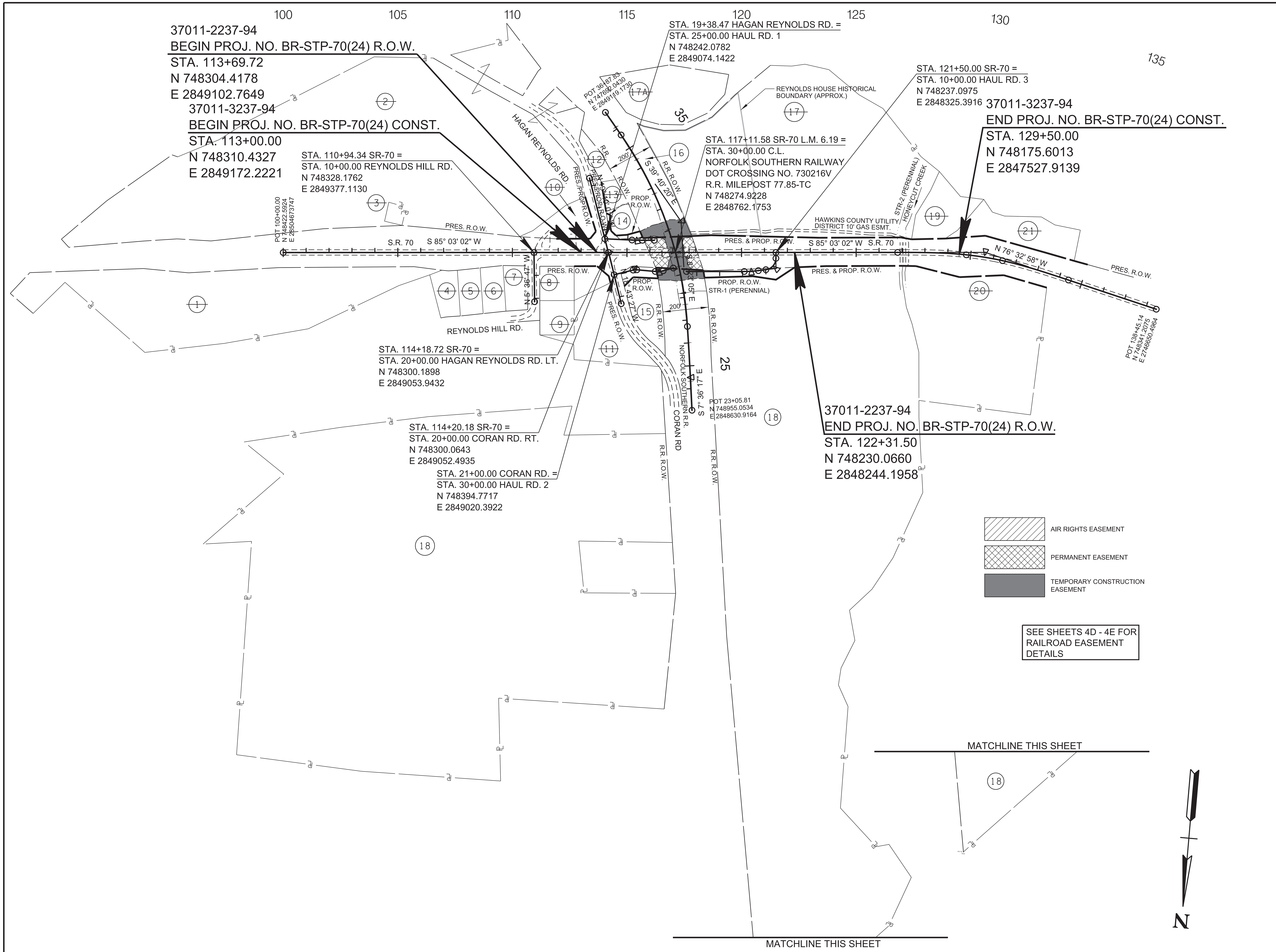

37011-2237-94
BEGIN PROJ. NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178
E 2849102.7649
37011-3237-94
BEGIN PROJ. NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327
E 2849172.2221
STA. 110+94.34 SR-70 =
STA. 10+00.00 REYNOLDS HILL RD.
N 748328.1762
E 2849377.1130
STA. 19+38.47 HAGAN REYNOLDS RD. =
STA. 25+00.00 HAUL RD. 1
N 748242.0782
E 2849074.1422
STA. 117+11.58 SR-70 L.M. 6.19 =
STA. 30+00.00 C.L.
NORFOLK SOUTHERN RAILWAY
DOT CROSSING NO. 730216V
R.R. MILEPOST 77.85-TC
N 748274.9228
E 2848762.1753
REYNOLDS HOUSE HISTORICAL BOUNDARY (APPROX.)
STA. 121+50.00 SR-70 =
STA. 10+00.00 HAUL RD. 3
N 748237.0975
E 2848325.3916
37011-3237-94
END PROJ. NO. BR-STP-70(24) CONST.
STA. 129+50.00
N 748175.6013
E 2847527.9139
HAWKINS COUNTY UTILITY DISTRICT 10' GAS ESMT.
HONEYCUT CREEK
STR-2 (PERENNIAL)
STR-1 (PERENNIAL)
HAGAN REYNOLDS RD.
REYNOLDS HILL RD.
S.R. 70
S 85° 03' 02" W
N 76° 32' 58" W
PRES. R.O.W.
PRES. & PROP. R.O.W.
PROP. R.O.W.
R.R. R.O.W.
NORFOLK SOUTHERN R.R.
CORAN RD
STA. 114+18.72 SR-70 =
STA. 20+00.00 HAGAN REYNOLDS RD. LT.
N 748300.1898
E 2849053.9432
STA. 114+20.18 SR-70 =
STA. 20+00.00 CORAN RD. RT.
N 748300.0643
E 2849052.4935
STA. 21+00.00 CORAN RD. =
STA. 30+00.00 HAUL RD. 2
N 748394.7717
E 2849020.3922
37011-2237-94
END PROJ. NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660
E 2848244.1958
AIR RIGHTS EASEMENT
PERMANENT EASEMENT
TEMPORARY CONSTRUCTION EASEMENT
SEE SHEETS 4D - 4E FOR RAILROAD EASEMENT DETAILS
MATCHLINE THIS SHEET
MATCHLINE THIS SHEET
N

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	3B
PIH	2024	BR-STP-70(24)	3B
PS&E	2025	BR-STP-70(24)	3B

REV. 8-24-23: ADJUSTED PROPERTY AND EXIST. R.O.W. FOR TRACTS 2 AND 10, AND REMOVED STRIKE THROUGH FOR TRACT 10.

REV. 04-24-25: ADDED STRIKE THROUGH FOR TRACT 10 AND EASEMENTS FOR TRACT 16, AND REMOVED RAILROAD CROSSING AGREEMENT NOTE.

SEALED BY

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA.113+00 TO STA.135+00
SCALE: 1"=200'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	4
PIH	2024	BR-STP-70(24)	4
PS&E	2025	BR-STP-70(24)	4

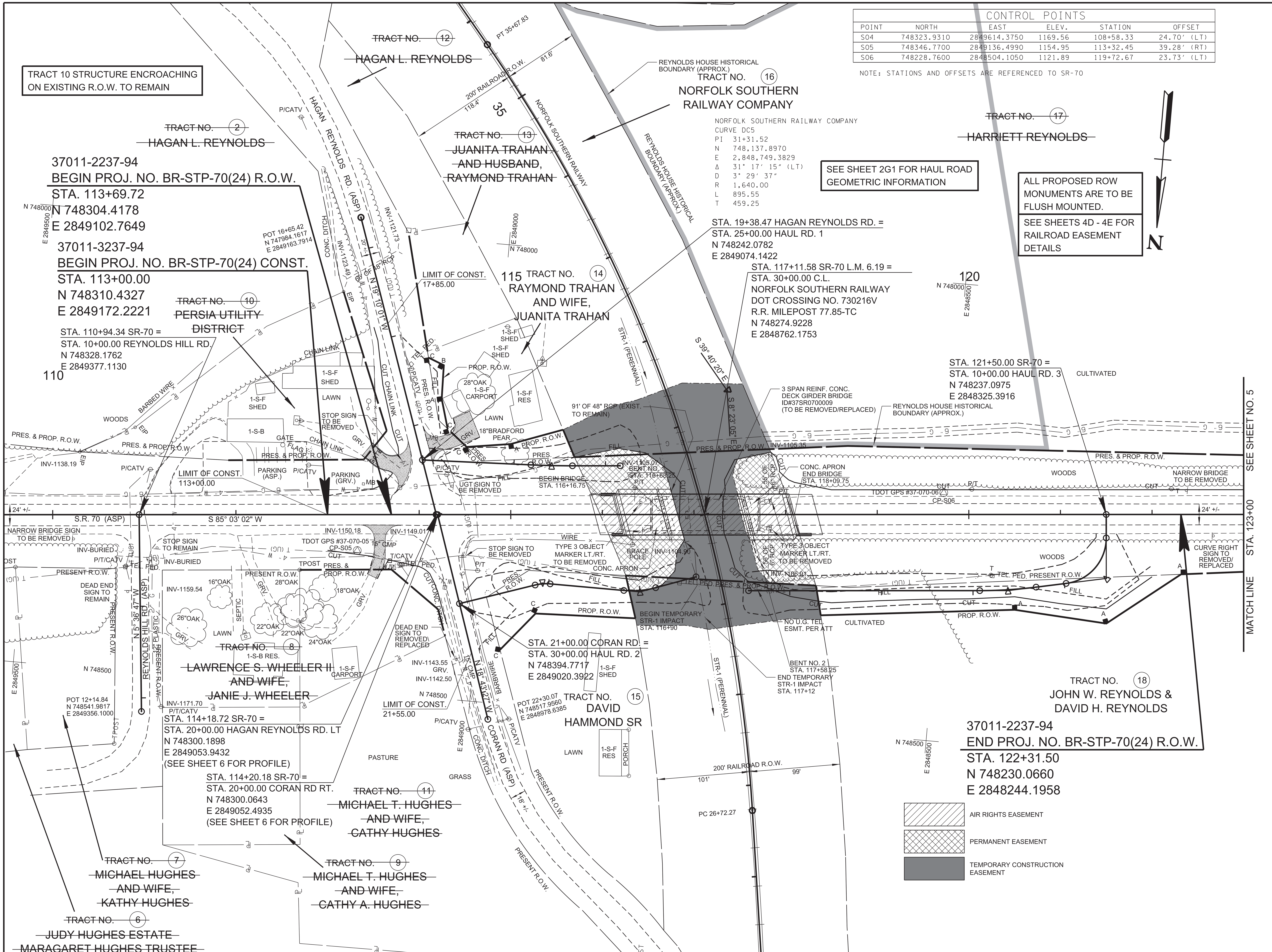
REV. 8-24-23: ADJUSTED PROPERTY AND EXIST. R.O.W. FOR TRACTS 2 AND 10, REMOVED STRIKE THROUGH FOR TRACT 10, REMOVED SPECIAL DITCH RT. STA. 115+00 TO STA. 116+26.08, AND ADDED STRUCTURE ENCROACHING ON R.O.W. TO REMAIN NOTE FOR TRACT 10.

REV. 04-24-25: ADDED STRIKE THROUGH FOR TRACT 10, UPDATED EASEMENTS FOR TRACT 16, REVISED HAUL RD. 1 AND HAUL RD. 2, AND ADDED HAUL RD. 3, REVISED LIMITS OF PROPOSED BRIDGE, AND REMOVED RAILROAD CROSSING AGREEMENT NOTE.

CONTROL POINTS

POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S04	748323.9310	2849614.3750	1169.56	108+58.33	24.70' (LT)
S05	748346.7700	2849136.4990	1154.95	113+32.45	39.28' (RT)
S06	748228.7600	2848504.1050	1121.89	119+72.67	23.73' (LT)

NOTE: STATIONS AND OFFSETS ARE REFERENCED TO SR-70



TRACT 10 STRUCTURE ENCROACHING ON EXISTING R.O.W. TO REMAIN
TRACT NO. 12
HAGAN L. REYNOLDS
TRACT NO. 2
HAGAN L. REYNOLDS
37011-2237-94
BEGIN PROJ. NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178
E 2849102.7649
37011-3237-94
BEGIN PROJ. NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327
E 2849172.2221
TRACT NO. 10
PERSIA UTILITY DISTRICT
STA. 110+94.34 SR-70 =
STA. 10+00.00 REYNOLDS HILL RD.
N 748328.1762
E 2849377.1130
TRACT NO. 13
JUANITA TRAHAN AND HUSBAND, RAYMOND TRAHAN
TRACT NO. 14
RAYMOND TRAHAN AND WIFE, JUANITA TRAHAN
REYNOLDS HOUSE HISTORICAL BOUNDARY (APPROX.)
TRACT NO. 16
NORFOLK SOUTHERN RAILWAY COMPANY
NORFOLK SOUTHERN RAILWAY COMPANY
CURVE DC5
PI 31+31.52
N 748,137.8970
E 2,848,749.3829
Δ 31° 17' 15" (LT)
D 3° 29' 37"
R 1,640.00
L 895.55
T 459.25
SEE SHEET 2G1 FOR HAUL ROAD GEOMETRIC INFORMATION
TRACT NO. 17
HARRIETT REYNOLDS
ALL PROPOSED ROW MONUMENTS ARE TO BE FLUSH MOUNTED.
SEE SHEETS 4D - 4E FOR RAILROAD EASEMENT DETAILS
N
STA. 19+38.47 HAGAN REYNOLDS RD. =
STA. 25+00.00 HAUL RD. 1
N 748242.0782
E 2849074.1422
STA. 117+11.58 SR-70 L.M. 6.19 =
STA. 30+00.00 C.L.
NORFOLK SOUTHERN RAILWAY
DOT CROSSING NO. 730216V
R.R. MILEPOST 77.85-TC
N 748274.9228
E 2848762.1753
STA. 121+50.00 SR-70 =
STA. 10+00.00 HAUL RD. 3
N 748237.0975
E 2848325.3916
3 SPAN REINF. CONC. DECK GIRDER BRIDGE ID#37SR0700009 (TO BE REMOVED/REPLACED)
LIMIT OF CONST. 17+85.00
LIMIT OF CONST. 113+00.00
LIMIT OF CONST. 21+55.00
S.R. 70 (ASP)
S 85° 03' 02" W
SEE SHEET NO. 5
MATCH LINE STA. 123+00
TRACT NO. 8
LAWRENCE S. WHEELER II AND WIFE, JANIE J. WHEELER
STA. 114+18.72 SR-70 =
STA. 20+00.00 HAGAN REYNOLDS RD. LT
N 748300.1898
E 2849053.9432
(SEE SHEET 6 FOR PROFILE)
STA. 114+20.18 SR-70 =
STA. 20+00.00 CORAN RD RT.
N 748300.0643
E 2849052.4935
(SEE SHEET 6 FOR PROFILE)
STA. 21+00.00 CORAN RD. =
STA. 30+00.00 HAUL RD. 2
N 748394.7717
E 2849020.3922
TRACT NO. 15
DAVID HAMMOND SR
TRACT NO. 11
MICHAEL T. HUGHES AND WIFE, CATHY HUGHES
TRACT NO. 7
MICHAEL HUGHES AND WIFE, KATHY HUGHES
TRACT NO. 9
MICHAEL T. HUGHES AND WIFE, CATHY A. HUGHES
TRACT NO. 6
JUDY HUGHES ESTATE
MARAGARET HUGHES TRUSTEE
TRACT NO. 18
JOHN W. REYNOLDS & DAVID H. REYNOLDS
37011-2237-94
END PROJ. NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660
E 2848244.1958
AIR RIGHTS EASEMENT
PERMANENT EASEMENT
TEMPORARY CONSTRUCTION EASEMENT

SEALED BY

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA.113+00 TO STA.123+00
SCALE: 1"=50'

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CONTROL POINTS					
POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S04	748323.9310	2849614.3750	1169.56	108+58.33	24.70' (LT)
S05	748346.7700	2849136.4990	1154.95	113+32.45	39.28' (RT)
S06	748228.7600	2848504.1050	1121.89	119+72.67	23.73' (LT)

NOTE: STATIONS AND OFFSETS ARE REFERENCED TO SR-70

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	4A
PIH	2024	BR-STP-70(24)	4A
PS&E	2025	BR-STP-70(24)	4A

REV. 8-24-23: ADJUSTED PROPERTY AND EXIST. R.O.W. FOR TRACTS 2 AND 10, REMOVED STRIKE THROUGH FOR TRACT 10, AND REMOVED SPECIAL DITCH RT. STA. 115+00 TO STA. 116+26.08.

REV. 04-24-25: ADDED STRIKE THROUGH FOR TRACT 10, UPDATED EASEMENTS FOR TRACT 16, REVISED HAUL RD. 1 AND HAUL RD. 2, ADDED HAUL RD. 3, AND REMOVED RAILROAD CROSSING AGREEMENT NOTE.

PROPOSED LINE TABLE

LINE	BEARING	DISTANCE
L1	N 68° 29' 05" W	18.66'
L2	N 01° 20' 53" W	36.76'
L3	N 16° 09' 25" W	33.33'
L4	S 81° 17' 14" W	48.29'
L5	S 69° 46' 18" W	59.22'
L6	N 27° 32' 14" W	32.58'
L7	N 17° 33' 33" W	47.78'
L8	N 39°28' 50" E	55.32'
L9	N 14° 03' 33" W	32.78'

PRES. R.O.W. LINE TABLE

LINE	BEARING	DISTANCE
E1	N 13° 59' 37" W	131.21'
E2	N 13° 59' 37" W	6.79'
E3	N 13° 59' 37" W	68.97'
E4	N 51° 14' 36" W	13.87'
E5	N 51° 14' 36" W	28.65'
E6	N 51° 14' 36" W	22.39'
E7	N 17° 33' 33" W	3.99'
E8	S 82° 42' 11" W	101.73'
E9	N 19° 25' 39" W	59.14'
E10	N 54° 28' 02" W	67.05'
E11	N 19° 35' 02" W	30.00'

SEE SHEET 2G1 FOR HAUL ROAD GEOMETRIC INFORMATION

SEE SHEETS 4D - 4E FOR RAILROAD EASEMENT DETAILS

37011-2237-94
BEGIN PROJ. NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178
E 2849102.7649

37011-3237-94
BEGIN PROJ. NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327
E 2849172.2221

STA. 110+94.34 SR-70 =
STA. 10+00.00 REYNOLDS HILL RD.
N 748328.1762
E 2849377.1130

STA. 19+38.47 HAGAN REYNOLDS RD. =
STA. 25+00.00 HAUL RD. 1
N 748242.0782
E 2849074.1422

STA. 117+11.58 SR-70 L.M. 6.19 =
STA. 30+00.00 C.L.
NORFOLK SOUTHERN RAILWAY
DOT CROSSING NO. 730216V
R.R. MILEPOST 77.85-TC
N 748274.9228
E 2848762.1753

STA. 121+50.00 SR-70 =
STA. 10+00.00 HAUL RD. 3
N 748237.0975
E 2848325.3916

STA. 114+18.72 SR-70 =
STA. 20+00.00 HAGAN REYNOLDS RD. LT
N 748300.1898
E 2849053.9432
(SEE SHEET 6 FOR PROFILE)

STA. 114+20.18 SR-70 =
STA. 20+00.00 CORAN RD RT.
N 748300.0643
E 2849052.4935
(SEE SHEET 6 FOR PROFILE)

STA. 21+00.00 CORAN RD. =
STA. 30+00.00 HAUL RD. 2
N 748394.7717
E 2849020.3922

37011-2237-94
END PROJ. NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660
E 2848244.1958

TRACT NO. 2 — HAGAN L. REYNOLDS
TRACT NO. 10 — PERSIA UTILITY DISTRICT
TRACT NO. 12 — HAGAN L. REYNOLDS
TRACT NO. 13 — JUANITA TRAHAN AND HUSBAND, RAYMOND TRAHAN
TRACT NO. 14 — RAYMOND TRAHAN AND WIFE, JUANITA TRAHAN
TRACT NO. 16 — NORFOLK SOUTHERN RAILWAY COMPANY
TRACT NO. 17 — HARRIETT REYNOLDS
TRACT NO. 8 — LAWRENCE S. WHEELER II AND WIFE, JANIE J. WHEELER
TRACT NO. 15 — DAVID HAMMOND SR
TRACT NO. 18 — JOHN W. REYNOLDS & DAVID H. REYNOLDS
TRACT NO. 7 — MICHAEL HUGHES AND WIFE, KATHY HUGHES
TRACT NO. 6 — JUDY HUGHES ESTATE MARAGARET HUGHES TRUSTEE
TRACT NO. 11 — MICHAEL T. HUGHES AND WIFE, CATHY HUGHES
TRACT NO. 9 — MICHAEL T. HUGHES AND WIFE, CATHY A. HUGHES

REYNOLDS HILL RD.
HAGAN REYNOLDS RD.
CORAN RD.
S.R. 70
NORFOLK SOUTHERN R.R.
REYNOLDS HOUSE HISTORICAL BOUNDARY (APPROX.)
HAWKINS COUNTY UTILITY DISTRICT 10' GAS ESMT.
LIMIT OF CONST. 17+85.00
LIMIT OF CONST. 113+00.00
LIMIT OF CONST. 21+55.00
TDOT GPS #37-070-05 CP-S05
TDOT GPS #37-070-06 CP-S06
MATCH LINE STA. 123+00 SEE SHEET NO. 5A

AIR RIGHTS EASEMENT
PERMANENT EASEMENT
TEMPORARY CONSTRUCTION EASEMENT

SEALED BY
BRIAN LEE
REGISTERED ENGINEER
No. 107290
STATE OF TENNESSEE
05/21/2025

COORDINATES ARE NAD 83(1995). ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY DETAILS

STA.113+00 TO STA.123+00
SCALE: 1"=50'

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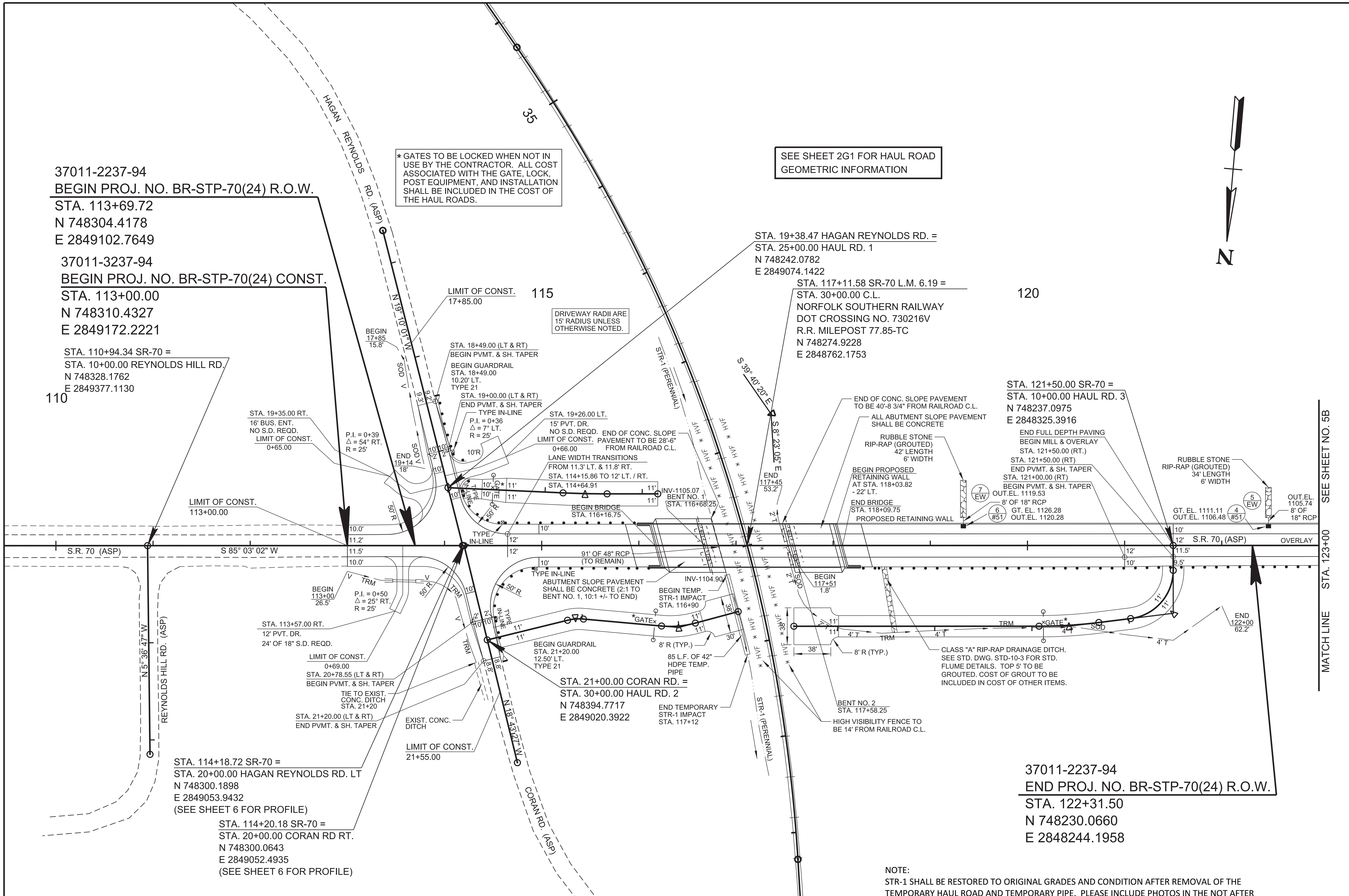
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	4B
PIH	2024	BR-STP-70(24)	4B
PS&E	2025	BR-STP-70(24)	4B

REV. 8-24-23: UPDATED BUS. ENT. LENGTH RT. STA. 19+35 AND REMOVED SPECIAL DITCH RT. STA. 115+00 TO STA. 116+26.08.

REV. 04-24-25: REVISED HAUL RD. 1 AND HAUL RD. 2, ADDED HAUL RD. 3, REMOVED 48" CULVERT EXTENSIONS AND DITCHES, REVISED LIMITS OF PROPOSED BRIDGE, REMOVED PERMANENT IMPACTS TO STR-1, REVISED LIMITS OF PROPOSED RETAINING WALL, ADJUSTED LOCATION OF FLUME, AND UPDATED STORMSEWER DESIGN.



37011-2237-94
BEGIN PROJ. NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178
E 2849102.7649
37011-3237-94
BEGIN PROJ. NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327
E 2849172.2221
STA. 110+94.34 SR-70 =
STA. 10+00.00 REYNOLDS HILL RD.
N 748328.1762
E 2849377.1130
110
115
120
35
HAGAN REYNOLDS RD. (ASP)
N 19° 10' 01" W
* GATES TO BE LOCKED WHEN NOT IN USE BY THE CONTRACTOR. ALL COST ASSOCIATED WITH THE GATE, LOCK, POST EQUIPMENT, AND INSTALLATION SHALL BE INCLUDED IN THE COST OF THE HAUL ROADS.
SEE SHEET 2G1 FOR HAUL ROAD GEOMETRIC INFORMATION
N
STA. 19+38.47 HAGAN REYNOLDS RD. =
STA. 25+00.00 HAUL RD. 1
N 748242.0782
E 2849074.1422
STA. 117+11.58 SR-70 L.M. 6.19 =
STA. 30+00.00 C.L.
NORFOLK SOUTHERN RAILWAY
DOT CROSSING NO. 730216V
R.R. MILEPOST 77.85-TC
N 748274.9228
E 2848762.1753
LIMIT OF CONST.
17+85.00
DRIVEWAY RADII ARE 15' RADIUS UNLESS OTHERWISE NOTED.
BEGIN 17+85 15.8'
STA. 18+49.00 (LT & RT)
BEGIN PVMT. & SH. TAPER
BEGIN GUARDRAIL
STA. 18+49.00
10.20' LT.
TYPE 21
STA. 19+00.00 (LT & RT)
END PVMT. & SH. TAPER
TYPE IN-LINE
P.I. = 0+36
Δ = 7° LT.
R = 25'
STA. 19+26.00 LT.
15' PVT. DR.
NO S.D. REQD.
LIMIT OF CONST.
0+66.00
END OF CONC. SLOPE PAVEMENT TO BE 28'-6" FROM RAILROAD C.L.
LANE WIDTH TRANSITIONS
FROM 11.3' LT. & 11.8' RT.
STA. 114+15.86 TO 12' LT. / RT.
STA. 114+64.91
STA. 19+35.00 RT.
16' BUS. ENT.
NO S.D. REQD.
LIMIT OF CONST.
0+65.00
P.I. = 0+39
Δ = 54° RT.
R = 25'
END 19+14 18'
LIMIT OF CONST.
113+00.00
INV-1105.07
BENT NO. 1
STA. 116+68.25
BEGIN BRIDGE
STA. 116+16.75
STR-1 (PERENNIAL)
S 39° 40' 20" E
S 8° 23' 05" E
END 117+45 53.2'
END OF CONC. SLOPE PAVEMENT TO BE 40'-8 3/4" FROM RAILROAD C.L.
ALL ABUTMENT SLOPE PAVEMENT SHALL BE CONCRETE
RUBBLE STONE RIP-RAP (GROUTED) 42' LENGTH 6' WIDTH
BEGIN PROPOSED RETAINING WALL AT STA. 118+03.82 - 22' LT.
END BRIDGE STA. 118+09.75
PROPOSED RETAINING WALL
STA. 121+50.00 SR-70 =
STA. 10+00.00 HAUL RD. 3
N 748237.0975
E 2848325.3916
END FULL DEPTH PAVING
BEGIN MILL & OVERLAY
STA. 121+50.00 (RT.)
STA. 121+50.00 (RT)
END PVMT. & SH. TAPER
STA. 121+00.00 (RT)
BEGIN PVMT. & SH. TAPER
7 EW OUT.EL. 1119.53
8' OF 18" RCP
6 #51 GT. EL. 1126.28
OUT.EL. 1120.28
RUBBLE STONE RIP-RAP (GROUTED) 34' LENGTH 6' WIDTH
5 EW OUT.EL. 1105.74
8' OF 18" RCP
GT. EL. 1111.11
OUT.EL. 1106.48
4 #51
SEE SHEET NO. 5B
MATCH LINE STA. 123+00
S.R. 70 (ASP)
S 85° 03' 02" W
OVERLAY
TYPE IN-LINE
91' OF 48" RCP (TO REMAIN)
INV-1104.90
TYPE IN-LINE
ABUTMENT SLOPE PAVEMENT SHALL BE CONCRETE (2:1 TO BENT NO. 1, 10:1 +/- TO END)
BEGIN TEMP. STR-1 IMPACT STA. 116+90
BEGIN 117+51 1.8'
BEGIN 113+00 26.5'
P.I. = 0+50
Δ = 25° RT.
R = 25'
STA. 113+57.00 RT.
12' PVT. DR.
24' OF 18" S.D. REQD.
LIMIT OF CONST.
0+69.00
STA. 20+78.55 (LT & RT)
BEGIN PVMT. & SH. TAPER
TIE TO EXIST. CONC. DITCH STA. 21+20
STA. 21+20.00 (LT & RT)
END PVMT. & SH. TAPER
EXIST. CONC. DITCH
LIMIT OF CONST.
21+55.00
BEGIN GUARDRAIL
STA. 21+20.00
12.50' LT.
TYPE 21
STA. 21+00.00 CORAN RD. =
STA. 30+00.00 HAUL RD. 2
N 748394.7717
E 2849020.3922
8' R (TYP.)
85 L.F. OF 42" HDPE TEMP. PIPE
END TEMPORARY STR-1 IMPACT STA. 117+12
BENT NO. 2
STA. 117+58.25
HIGH VISIBILITY FENCE TO BE 14' FROM RAILROAD C.L.
CLASS "A" RIP-RAP DRAINAGE DITCH. SEE STD. DWG. STD-10-3 FOR STD. FLUME DETAILS. TOP 5' TO BE GROUTED. COST OF GROUT TO BE INCLUDED IN COST OF OTHER ITEMS.
END 122+00 62.2'
N 5° 36' 47" W
REYNOLDS HILL RD. (ASP)
N 18° 43' 27" W
CORAN RD. (ASP)
STA. 114+18.72 SR-70 =
STA. 20+00.00 HAGAN REYNOLDS RD. LT
N 748300.1898
E 2849053.9432
(SEE SHEET 6 FOR PROFILE)
STA. 114+20.18 SR-70 =
STA. 20+00.00 CORAN RD RT.
N 748300.0643
E 2849052.4935
(SEE SHEET 6 FOR PROFILE)
37011-2237-94
END PROJ. NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660
E 2848244.1958

NOTE: THE CONTRACTOR SHALL USE ANY MEASURES NECESSARY TO ENSURE THAT NO CONSTRUCTION ACTIVITY WILL OCCUR IN, NOR THAT ANY CONSTRUCTION EQUIPMENT OR MATERIALS WILL ENTER, ANY PORTION OF STR-1 AND THAT THE STREAM AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

NOTE:
STR-1 SHALL BE RESTORED TO ORIGINAL GRADES AND CONDITION AFTER REMOVAL OF THE TEMPORARY HAUL ROAD AND TEMPORARY PIPE. PLEASE INCLUDE PHOTOS IN THE NOT AFTER REMOVAL.

NOTE: RIP-RAP SHALL BE PLACED AS TO MIMIC THE EXISTING CONTOURS OF THE STREAM CHANNEL. THE TOP OF THE PROPOSED RIP-RAP SHALL BE AT GRADE WITH THE BOTTOM OF THE EXISTING STREAM CHANNEL. VOIDS WITHIN THE RIP-RAP SHALL BE FILLED WITH CREEK GRAVEL, IF AVAILABLE, TO PREVENT LOSS OF STREAM WITHIN RIP-RAP AREAS. CREEK GRAVEL MAY BE REMOVED FROM CULVERT EXCAVATION AREA.

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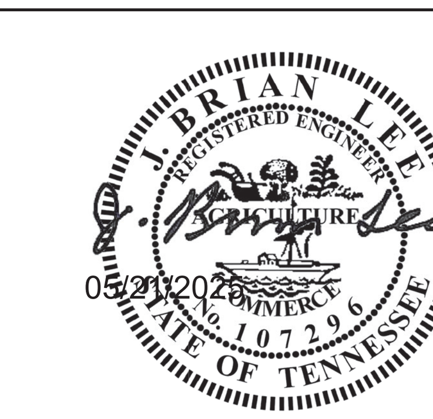

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA.113+00 TO STA.123+00
SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	4C
PIH	2024	BR-STP-70(24)	4C
PS&E	2025	BR-STP-70(24)	4C

REV. 8-24-23: REMOVED SPECIAL DITCH RT. STA. 115+00 TO STA. 116+26.08.

REV. 04-24-25: REVISED LIMITS OF PROPOSED BRIDGE AND SLOPE PAVEMENTS, ADDED BRIDGE EXCAVATION AREAS, UPDATED PROPOSED RETAINING WALL, AND UPDATED STORMSEWER DESIGN.

OH WIRE
STA. 110+89.17
LOW WIRE EL.1186.63' (OFF SHEET)
TEMP. 40° DEG.
1 POWER
1 TELEPHONE
1 CABLE

SR-70 STA. 110+94.34 =
REYNOLDS HILL RD. RT. STA. 10+00.00

SR-70 STA. 114+18.72 =
HAGAN REYNOLDS RD. LT. STA. 20+00.00
N 748300.1896
E 2849053.9432

OH WIRE
STA. 114+44.24
LOW WIRE EL.1174.59'
TEMP. 40° DEG.
3 POWER
1 TELEPHONE
1 CABLE

SR-70 STA. 114+20.18 =
CORAN RD. RT. STA. 20+00.00
N 748300.0643
E 2849052.4935

OH WIRE
STA. 116+34.46
LOW WIRE EL.1163.39'
TEMP. 40° DEG.
3 GUY WIRE

SR-70 STA. 117+11.58 =
NORFOLK SOUTHERN R.R. STA. 30+00.00
DOT CROSSING NO. 730216V
R.R. MILEPOST 77.85-TC

EXIST. GROUND

VPI 113+50.00
EL. 1153.07
VPC 113+66.00
EL. 1152.63

VPI 114+50.00
EL. 1148.61

113+50.00
EL. 1160.00

XCP-SO5
STA. 113+32.45, 39.28'(RT)
N 748346.7700
E 2849136.4990
ELEV 1154.95
ALUM. DISK
TDOT GPS PT# 37-070-05

VC = 180.00'
K = 102

VPT 115+40.00
EL. 1146.16
VPC 115+45.00
EL. 1146.02

VPI 117+15.00
EL. 1141.40

STA. 111+33
4" WATER

37011-3237-94
BEGIN PROJ. NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327
E 2849172.2221

113+00.00
EL. 1153.00

37011-2237-94
BEGIN PROJ. NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178
E 2849102.7649

-6.00%
-3.47%
-2.72%

114+00.00
EL. 1148.38
114+11.64
EL. 1148.00

STA. 114+51.86
TEL. UG
STA. 114+62.55
2" GAS

BEGIN BRIDGE
STA. 116+16.75
F.G. ELEV. 1143.78

3 SPAN REINF. CONC.
DECK GIRDER BRIDGE
ID#37SR0700009
(TO BE REMOVED/REPLACED)

C.L. BENT NO. 1
STA. 116+68.25
F.G. ELEV. 1141.81

C.L. BENT NO. 2
STA. 117+58.25
F.G. ELEV. 1137.64

END BRIDGE
STA. 118+09.75
F.G. ELEV. 1134.85

BEGIN RETAINING WALL
118+03.82, 22' LT.

VC = 240.00'
K = 120

VPT 118+85.00
EL. 1130.23
VPC 118+90.00
EL. 1129.90

THE RETAINING WALL PAY QUANTITY IS BASED ON THE SURFACE AREA BETWEEN THE APPROXIMATE TOP OF WALL (AT THE BOTTOM OF STD-1-1SS PARAPET WALL) AND 2'-0" BELOW THE EXISTING GROUND LINE AT FRONT OF THE WALL. THE ESTIMATE QUANTITY FOR RETAINING WALL IS = 5,301 S.F.

LENGTH PARAPET WALL = 881 L.F.
SEE TDOT STD DWG STD-1-1SS FOR MORE DETAILS.

37011-2237-94
END PROJ. NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660
E 2848244.1958

EXISTING LOW BEAM

-6.57%

EXIST. GROUND

119+34.00
1126.28
6
#51

TOP OF CONC. PARAPET WALL
SEE STD. DWG. STD-1-1SS

VPT 121+30.00
EL. 1116.53
VPI 121+50.00
EL. 1115.62

PROPOSED GRADE

EXIST. GROUND LINE AT
FRONT FACE OF WALL

-4.35%

1120.28

8' PROP. 18"
RCP -1.00%

122+48.00
1111.11
4
#51

8' PR
RCP

1116.48

VC = 340.00'
K = 80

CROSS HATCHED AREA TO BE
EXCAVATED AND PAID FOR
UNDER ROADWAY ITEM 203-01.

ALL ABUTMENT SLOPE PAVEMENT
SHALL BE CONCRETE

XCP-SO6
STA. 119+72.67, -23.73'(LT)
N 748228.7600
E 2848504.1050
ELEV 1121.89
ALUM. DISK
TDOT GPS PT# 37-070-06

TOP RAIL
EL. 1110.75
STA. 117+14.48

VPI 120+10.00
EL. 1122.02

PROPOSED SHOULDER AT
BOTTOM OF PARAPET WALL

PROPOSED GRADE
(OVERLAY)

118+00
1104.02

118+50
1101.47

119+00
1099.59

119+50
1097.53

120+00
1095.04

120+50
1092.60

121+00
1091.83

122+00
1090.02

121+50
1090.97

-5.10%
-3.76%
-4.12%
-4.98%
-4.88%
-1.54%
-1.72%
-1.90%

4' FB DT. RT.

STA 116+82.63
EXISTING 48" RCP
SKEW 74° 55' 29" RT
FLOWS RIGHT
INLET 1105.07
OUTLET 1104.90

STA. 113+00.00 LT. AND RT.

STA. 121+50.00 LT. AND RT.

S.R. 70

-0.020 LT. -0.020 RT.

EXISTING S.E.

PIPE CULVERT
STATION: 122+48.00
STRUCTURE: #51-SC C.B.@ 22' LT. 8' OF 18" RCP

SKEW	90° LT.	DEG.
DRAINAGE AREA	0.16	AC.
DESIGN DISCHARGE (Q10)	0.83	CFS
DESIGN DISCHARGE (Q50)	1.11	CFS
OVERTOPPING	1111.89	ELEV.
ALLOWABLE HEADWATER	1111.60	ELEV.
Q10 HEADWATER (C.B.)	1111.42	ELEV.
Q50 HEADWATER (C.B.)	1111.43	ELEV.
VELOCITY (Q10)	7.05	FT/S
VELOCITY (Q50)	7.28	FT/S
ENDWALLS REQUIRED:		
TYPE "ST"		
STANDARD DRAWING NOS.:		
D-PB-1, D-CB-51SC, & D-PE-4		
QUANTITIES:		
CLASS "A" CONCRETE	1.0	C.Y.
STEEL BAR REINFORCING	45.0	LB.
BEDDING MATERIAL	2.2	C.Y.
ENDWALL ITEM NOS.: 611-07.01, 611-07.02		

PIPE CULVERT
STATION: 119+34.00
STRUCTURE: #51-SC C.B. @ 22' LT. 8' OF 18" RCP

SKEW	90° LT.	DEG.
DRAINAGE AREA	0.16	AC.
DESIGN DISCHARGE (Q10)	0.83	CFS
DESIGN DISCHARGE (Q50)	1.02	CFS
OVERTOPPING	1127.09	ELEV.
ALLOWABLE HEADWATER	1126.77	ELEV.
Q10 HEADWATER (C.B.)	1126.57	ELEV.
Q50 HEADWATER (C.B.)	1126.58	ELEV.
VELOCITY (Q10)	7.09	FT/S
VELOCITY (Q50)	7.33	FT/S
ENDWALLS REQUIRED:		
TYPE "ST"		
STANDARD DRAWING NOS.:		
D-PB-1, D-CB-5ISC, & D-PE-4		
QUANTITIES:		
CLASS "A" CONCRETE	1.0	C.Y.
STEEL BAR REINFORCING	45.0	LB.
BEDDING MATERIAL	2.2	C.Y.
ENDWALL ITEM NOS.: 611-07.01, 611-07.02		

SEALED BY

J. BRIAN LEE
REGISTERED ENGINEER
AGRICULTURE
NUMBER
107299
STATE OF TENNESSEE
05/21/2026

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED PROFILE

STA.113+00 TO STA.123+00

SCALE: 1"= 50' HORIZ.
1"=5 ' VERT.

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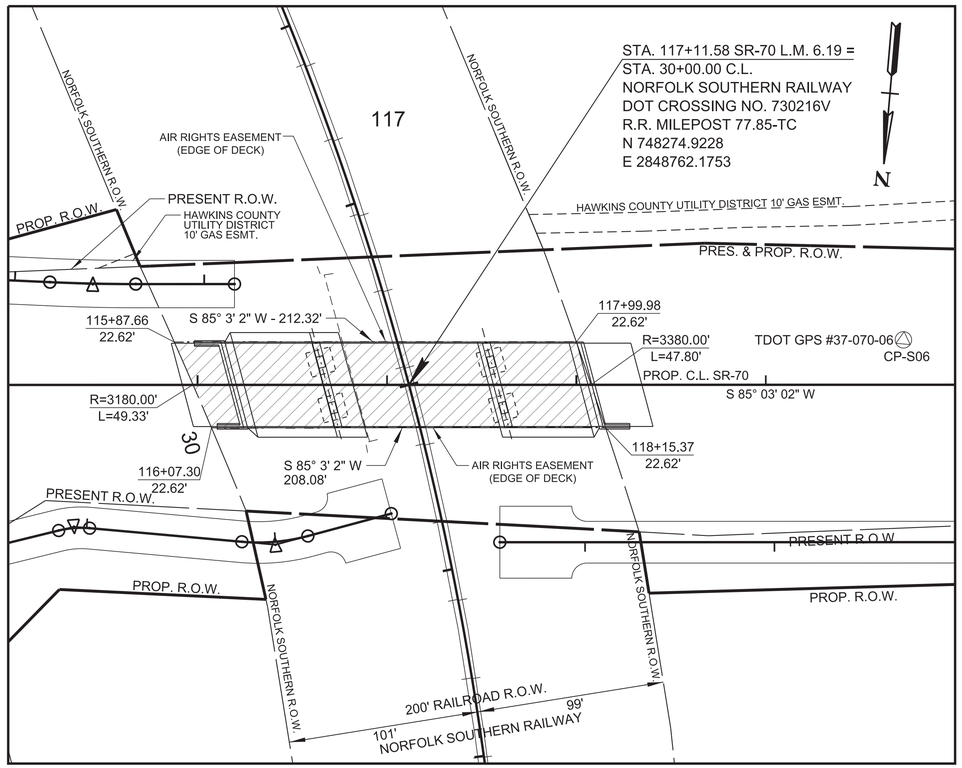
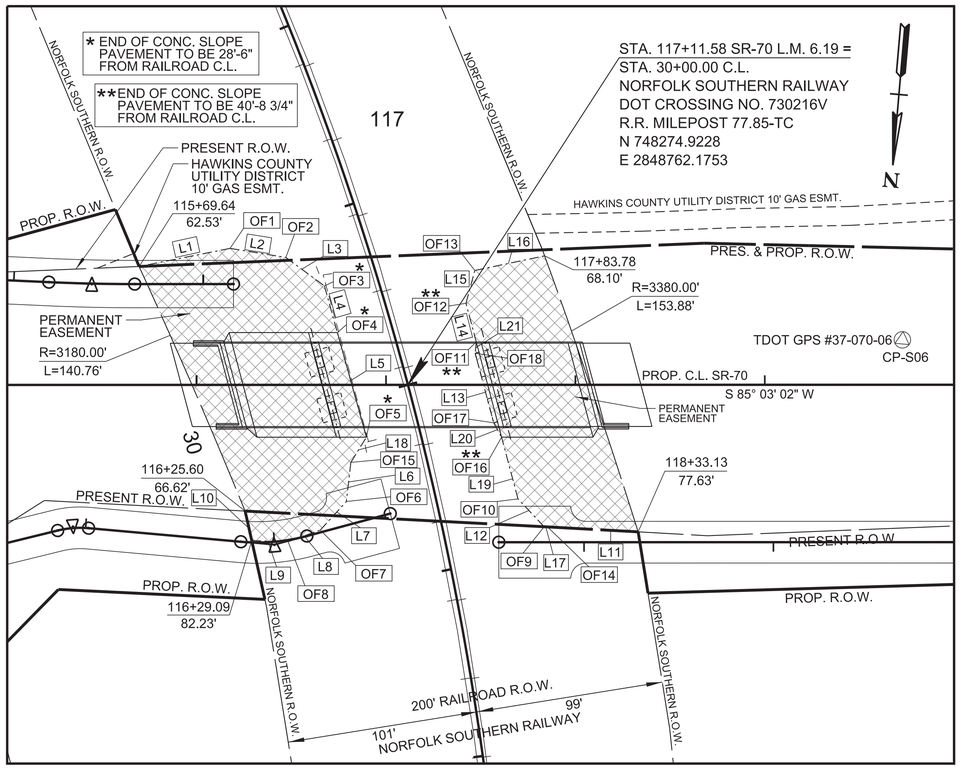
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	4D
PIH	2024	BR-STP-70(24)	4D
PS&E	2025	BR-STP-70(24)	4D

REV. 04-24-25: REVISED AIR RIGHTS AND PERMANENT EASEMENTS, AND REMOVED RAILROAD CROSSING AGREEMENT NOTE.



BRIDGE #1
AIR RIGHTS EASEMENT

AIR RIGHTS EASEMENT



BRIDGE #1
PERMANENT EASEMENT

PERMANENT EASEMENT

LINE TABLE

LINE	BEARING	DISTANCE
L1	S 73°48'25" W	48.95
L2	N 85°44'00" W	29.84
L3	N 58°30'31" W	25.34
L4	N 20°27'23" W	25.54
L5	N 20°27'23" W	57.34
L6	N 01°35'46" E	20.80
L7	N 37°27'48" E	20.42
L8	N 65°10'13" E	18.07
L9	N 86°46'43" E	19.21
L10	S 17°33'33" E	15.99
L11	N 88°10'37" E	47.94

LINE TABLE

LINE	BEARING	DISTANCE
L12	S 48°09'38" E	20.18
L13	S 19°50'04" E	38.00
L14	S 19°50'04" E	21.14
L15	S 10°08'43" W	17.95
L16	S 73°13'41" W	37.67
L17	N 88°03'37" E	1.77
L18	N 26°48'28" E	15.63
L19	S 19°50'04" E	33.72
L20	S 33°43'46" E	8.66
L21	S 00°35'38" W	5.96

STATION / OFFSET TABLE

LABEL	STATION	OFFSET
OF1	116+17.65	-72.07
OF2	116+47.11	-67.29
OF3	116+67.50	-52.24
OF4	116+74.33	-27.62
OF5	116+89.66	27.62
OF6	116+79.06	61.58
OF7	116+65.28	76.66
OF8	116+48.29	82.81
OF9	117+83.50	74.92

STATION / OFFSET TABLE

LABEL	STATION	OFFSET
OF10	117+69.68	60.22
OF11	117+47.66	-22.62
OF12	117+42.43	-43.05
OF13	117+46.91	-60.38
OF14	117+85.27	75.02
OF15	116+81.43	40.91
OF16	117+61.02	27.62
OF17	117+56.85	20.03
OF18	117+47.09	-16.69

SEALED BY

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY DETAILS

BRIDGE #1
STA.113+00 TO STA.123+00
SCALE: 1"=40'

TRACT #16

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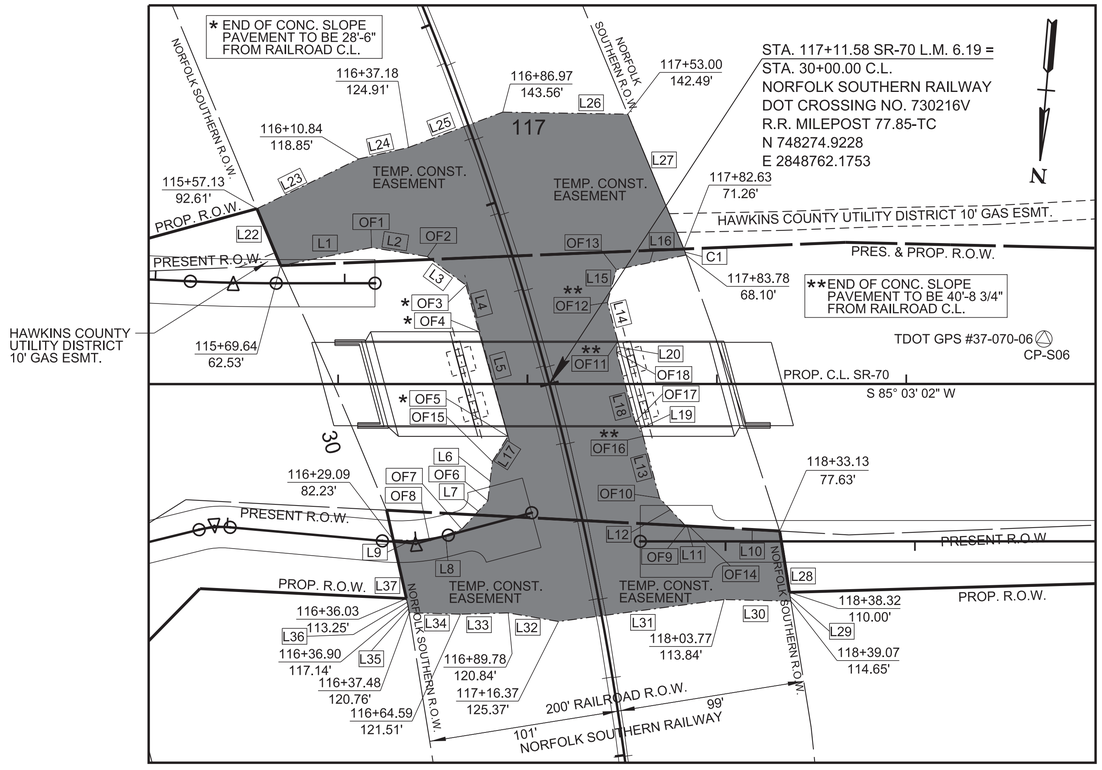
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	4E
PIH	2024	BR-STP-70(24)	4E
PS&E	2025	BR-STP-70(24)	4E

REV. 04-24-25: REVISED TEMPORARY CONSTRUCTION EASEMENT, AND REMOVED RAILROAD CROSSING AGREEMENT NOTE.



BRIDGE #1
TEMPORARY CONSTRUCTION EASEMENT

TEMPORARY CONSTRUCTION EASEMENT

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 73°48'25" E	48.95
L2	S 85°44'00" E	29.84
L3	S 58°30'31" E	25.34
L4	S 20°27'23" E	25.54
L5	S 20°27'23" E	57.34
L6	S 01°35'46" W	20.80
L7	S 37°27'48" W	20.42
L8	S 65°10'13" W	18.07
L9	S 86°46'43" W	19.21
L10	N 88°10'37" E	47.94
L11	N 88°03'37" E	1.77
L12	S 48°09'38" E	20.18
L13	S 19°50'04" E	33.72
L14	S 19°50'04" E	21.14
L15	S 10°08'43" W	17.95
L16	S 73°13'41" W	37.67
L17	S 26°48'28" E	15.63
L18	S 19°50'04" E	38.00
L19	S 33°43'46" E	8.66

LINE TABLE

LINE	BEARING	DISTANCE
L20	S 00°35'38" W	5.96
L22	S 27°32'14" E	32.58
L23	S 59°00'55" W	59.78
L24	S 72°04'44" W	27.03
L25	S 64°30'58" W	53.17
L26	S 85°58'54" W	66.03
L27	N 27°32'14" W	77.15
L28	N 14°03'33" W	32.78
L29	N 14°03'33" W	4.71
L30	N 86°22'41" E	35.31
L31	N 77°31'51" E	88.16
L32	S 85°16'38" E	26.97
L33	N 83°31'54" E	25.20
L34	N 86°37'55" E	27.12
L35	S 14°03'33" E	3.67
L36	S 17°33'33" E	3.99
L37	S 17°33'33" E	31.79

L21 HAS BEEN OMITTED

STATION / OFFSET TABLE

LABEL	STATION	OFFSET
OF1	116+17.65	-72.07
OF2	116+47.11	-67.29
OF3	116+67.50	-52.24
OF4	116+74.33	-27.62
OF5	116+89.66	27.62
OF6	116+79.06	61.58
OF7	116+65.28	76.66
OF8	116+48.29	82.81
OF9	117+83.50	74.92
OF10	117+69.68	60.22
OF11	117+47.66	-22.62
OF12	117+42.43	-43.05
OF13	117+46.91	-60.38
OF14	117+85.27	75.02
OF15	116+81.43	40.91
OF16	117+61.02	27.62
OF17	117+56.85	20.03
OF18	117+47.09	-16.69

CURVE TABLE

CURVE	RADIUS	LENGTH
C1	3380.00'	3.36'

SEALED BY

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY DETAILS

BRIDGE #1
STA.113+00 TO STA.123+00
SCALE: 1"=40'

TRACT #16

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	5
PIH	2024	BR-STP-70(24)	5
PS&E	2025	BR-STP-70(24)	5

REV. 04-24-25: UPDATED LIMIT OF CONSTRUCTION AND END MILL AND OVERLAY FLAG LOCATIONS.

CONTROL POINTS

POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S07	748190.7590	2848063.7690	1105.81	124+14.65	23.59' (LT)

NOTE: STATIONS AND OFFSETS ARE REFERENCED TO SR-70

SR-70
CURVE DC12
PI 130+63.47
N 748,158.2862
E 2,847,415.3257
Δs 18° 24' 00" (RT)
θs 6° 00' 00"
Δc 6° 24' 00" (RT)
Dc 4° 00' 00"
Rc 1,432.39
Lc 160.00
Ts 382.37
Ls 300.00

37011-3237-94
END PROJ. NO. BR-STP-70(24) CONST.
STA. 129+50.00
N 748175.6013
E 2847527.9139

N

SEE SHEET NO. 4

MATCH LINE

STA. 123+00

TRACT NO. 17
HARRIETT REYNOLDS

125

130

135

TRACT NO. 19
LARRY JOHNSON

TRACT NO. 21
SHAUNA MARKHAM

TRACT NO. 18
JOHN W. REYNOLDS &
DAVID H. REYNOLDS

TRACT NO. 20
JERRY PINKSTON AND WIFE,
TINA L. PINKSTON

N 748000 E 2846000

N 748000 E 2847000

N 748500 E 2848000

N 748500 E 2847500

N 748500 E 2847000

SC 129+81.11

ST 134+41.11

CS 131+41.11

TS 126+81.11

LIMIT OF CONST.
END MILL & OVERLAY
129+50.00

HONEYCUT CREEK
STR-2 (PERENNIAL)

IRON ROD EIP

30" CMP

GATE

GRAVEL

G.M.

P/CATV

FPIPE EIP

PRES. & PROP. R.O.W.

INV. 1086.06

CUT

TDOT GPS #37-070-07

P/T

CP-S07 PERSIA UNINCORPORATED
TO BE REMOVED/REPLACED

24' +/-

S.R. 70 (ASP)

S 85° 03' 02" W

N 76° 32' 58" W

3 @ 8' X 6' RCBB
(EXIST. TO REMAIN)

INV. 1086.01

JCT. 66 SIGN
EXIST. TO
REMAIN

CULTIVATED

3 @ 12' X 6' RCBB
ID#37SR0700011
(TO REMAIN)

STR-2 (PERENNIAL)

HONEYCUT CREEK

ASP.

SCHOOL SIGN
EXIST. TO
REMAIN

S.R. 70 (ASP)

SEALED BY

BRIAN LEE
REGISTERED ENGINEER
SIGNATURE
05/20/2025
NUMBER
115796
STATE OF TENNESSEE

COORDINATES ARE NAD 83(1995). ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA.123+00 TO STA.129+50
SCALE: 1"=50'

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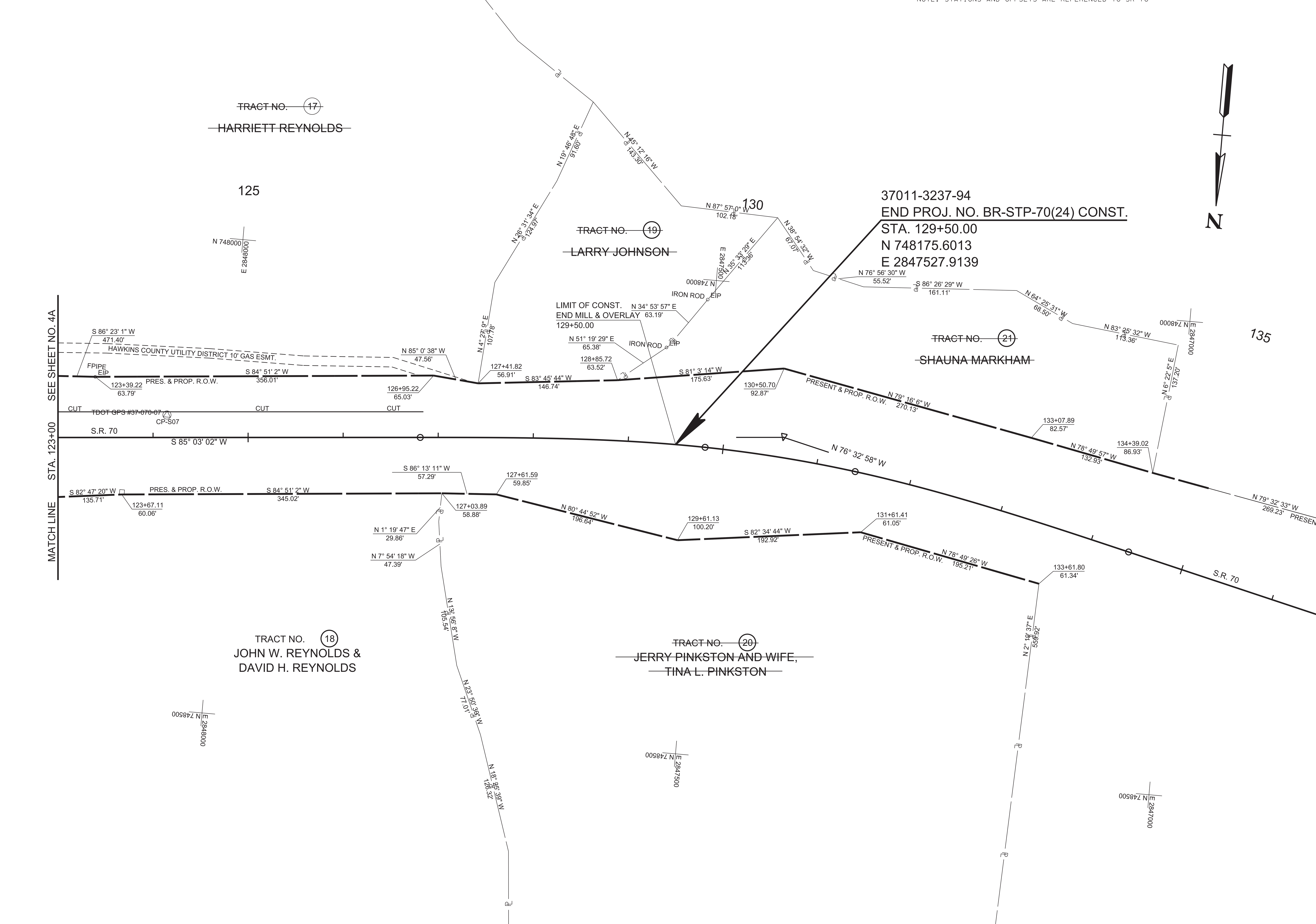
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	5A
PIH	2024	BR-STP-70(24)	5A
PS&E	2025	BR-STP-70(24)	5A

REV. 04-24-25: UPDATED LIMIT OF CONSTRUCTION AND END MILL AND OVERLAY FLAG LOCATIONS.

CONTROL POINTS

POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S07	748190.7590	2848063.7690	1105.81	124+14.65	23.59' (LT)

NOTE: STATIONS AND OFFSETS ARE REFERENCED TO SR-70



SEALED BY

J. BRIAN LEE, REGISTERED ENGINEER, STATE OF TENNESSEE

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY DETAILS

STA.123+00 TO STA.129+50
SCALE: 1"=50'

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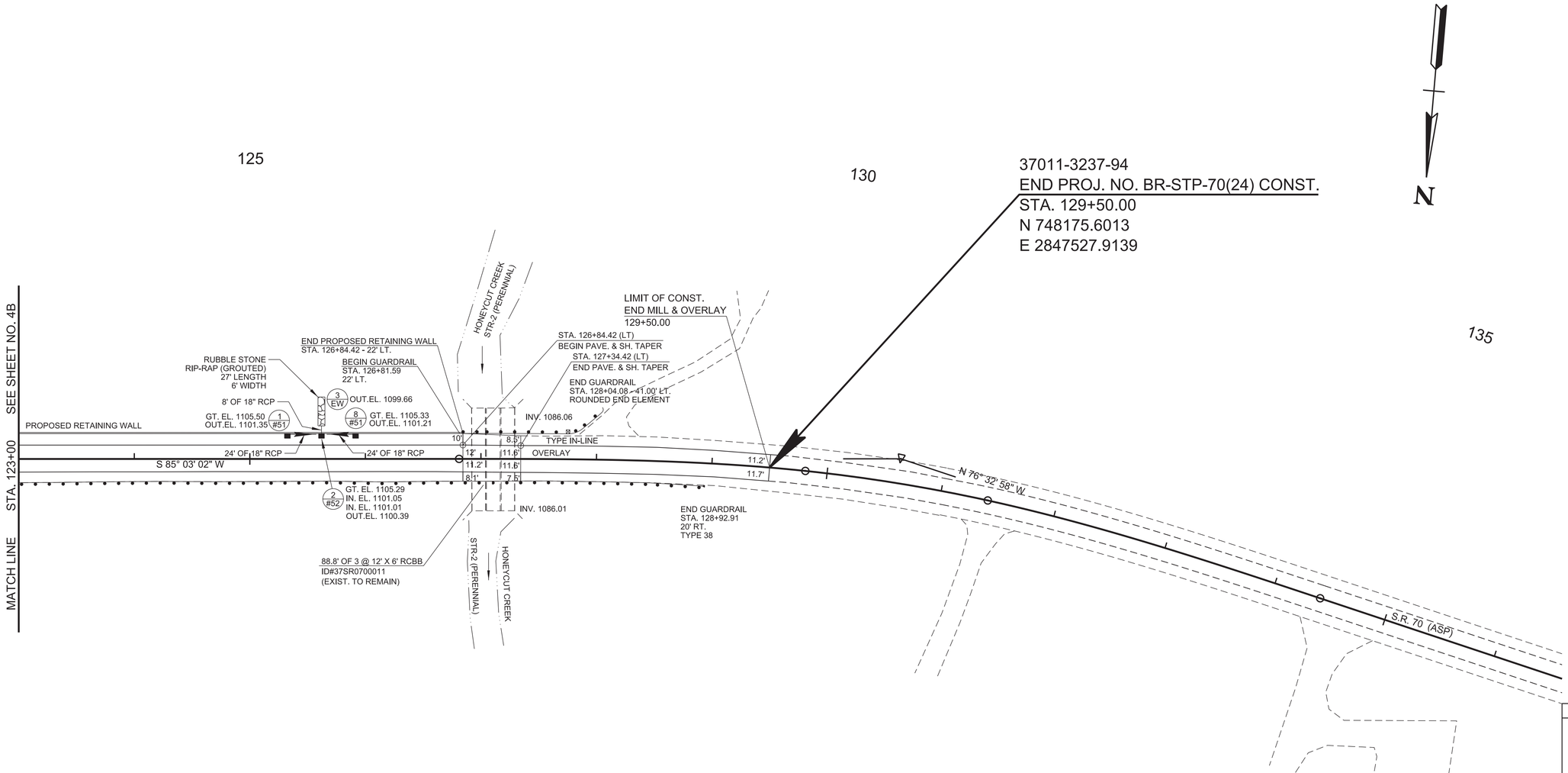
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	5B
PIH	2024	BR-STP-70(24)	5B
PS&E	2025	BR-STP-70(24)	5B

REV. 04-24-25: UPDATED LIMIT OF CONSTRUCTION AND END MILLING AND OVERLAY FLAG LOCATIONS, REVISED PROPOSED GUARDRAIL, AND UPDATED STORMSEWER DESIGN.



NOTE:
THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF STR-2 AND THAT THE STREAM AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS

SEALED BY

J. BRIAN LEE
REGISTERED ENGINEER
107209
STATE OF TENNESSEE
05/21/2025

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA.123+00 TO STA.129+50
SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	5C
PIH	2024	BR-STP-70(24)	5C
PS&E	2025	BR-STP-70(24)	5C

REV. 04-24-25: REVISED END OF CONSTRUCTION FLAG LOCATION, PROPOSED RETAINING WALL, AND UPDATED STORMSEWER DESIGN.

THE RETAINING WALL PAY QUANTITY IS BASED ON THE SURFACE AREA BETWEEN THE APPROXIMATE TOP OF WALL (AT THE BOTTOM OF STD-1-1SS PARAPET WALL) AND 2'-0" BELOW THE EXISTING GROUND LINE AT FRONT OF THE WALL. THE ESTIMATE QUANTITY FOR RETAINING WALL IS = 5,301 S.F.

LENGTH PARAPET WALL = 881 L.F.
SEE TDOT STD DWG STD-1-1SS FOR MORE DETAILS.

37011-3237-94
END PROJ. NO. BR-STP-70(24) CONST.
STA. 129+50.00
N 748175.6013
E 2847527.9139

OH WIRE
STA. 130+59.09
LOW WIRE EL.1139.89'
TEMP. 40° DEG.
2 POWER
2 CABLE

EXIST. GROUND
STA. 131+02.25 TO END
INFO ONLY (FROM
AS DESIGNED PLANS)

TOP OF CONC. PARAPET WALL
SEE STD. DWG. STD-1-1SS

PROPOSED SHOULDER AT
BOTTOM OF PARAPET WALL

EXIST. GROUND

END RETAINING WALL
LT. STA. 126+84.42

PROPOSED GRADE
(OVERLAY)

1 #51 — 125+32.50 1105.50
2 #52 — 125+62.00 1105.29
8 #51 — 125+91.50 1105.33

OP. 18"
-1.00%

8' PROP. 18"
RCP -1.00%

24' PROP. 18"
RCP -1.25%

24' PROP. 18"
RCP -0.83%

1101.35
1101.05
1100.39
1101.01
1101.21

STA. 127+82.69
6" GAS

6" C

XCP-SOT
STA. 124+14.65, -23.59'(LT)
N 748190.7590
E 2848063.7690
ELEV 1105.81
ALUM. DISK
TDOT GPS PT# 37-070-07

STA 127+10.69
EXISTING 3 @ 12' X 6' RCBB
SKEW 89°54'32" RT
FLOWS RIGHT
INLET 1086.06
OUTLET 1086.01

EXISTING 3 @ 12' X 6'
RCBB (TO REMAIN)

S.R. 70

STA. 129+50.00 LT. AND RT.

EXISTING S.E.

PIPE CULVERT		
STATION: 125+62.00		
STRUCTURE: #52-SE C.B. @ 22' LT. 8' OF 18" RCP		
SKEW	90° LT.	DEG.
DRAINAGE AREA	0.24	AC.
DESIGN DISCHARGE (Q10)	1.22	CFS
DESIGN DISCHARGE (Q50)	1.51	CFS
OVERTOPPING	1106.13	ELEV.
ALLOWABLE HEADWATER	1105.86	ELEV.
Q10 HEADWATER (C.B.)	1105.61	ELEV.
Q50 HEADWATER (C.B.)	1105.64	ELEV.
VELOCITY (Q10)	6.65	FT/S
VELOCITY (Q50)	6.90	FT/S
ENDWALLS REQUIRED:		
TYPE "ST"		
STANDARD DRAWING NOS.:		
D-PB-1, D-CB-52SE, & D-PE-4		
QUANTITIES:		
CLASS "A" CONCRETE	1.0	C.Y.
STEEL BAR REINFORCING	45.0	LB.
BEDDING MATERIAL	1.9	C.Y.
ENDWALL ITEM NOS.: 611-07.01, 611-07.02		

SEALED BY

BRIAN LEE
REGISTERED ENGINEER
AGRICULTURE
No. 107290
STATE OF TENNESSEE

05/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED PROFILE

STA.123+00 TO STA.129+50

SCALE: 1"=50' HORIZ.
1"=5' VERT.

5/20/2025 5:26:12 PM
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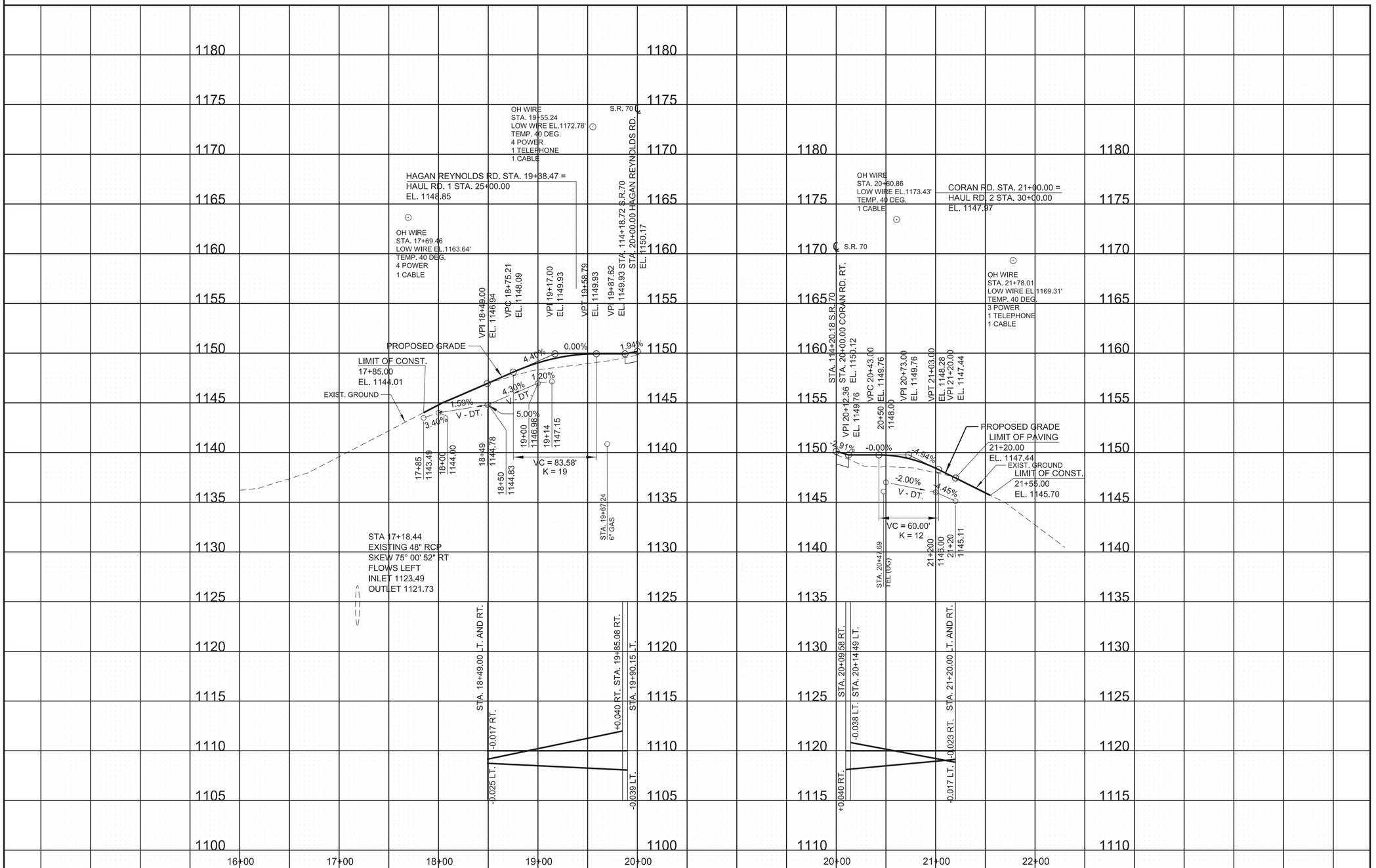
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	6
PIH	2024	BR-STP-70(24)	6
PS&E	2025	BR-STP-70(24)	6



DRAINAGE DATA FOR PIPE
STATION 17+18.44 HAGAN REYNOLDS RD

DIRECTION OF FLOW: LEFT

DRAINAGE AREA 64.64 AC., ( ) FLAT; ( ) ROLLING; (X) HILLY; ( ) MTNS.

PRESENT STRUCTURE: 48" RCP

EXISTING STRUCTURE CONDITION: FAIR

REMARKS:

HAGAN REYNOLDS ROAD
LOCATED ON PRESENT
LAYOUT SHEET 4

CORAN ROAD
LOCATED ON PRESENT
LAYOUT SHEET 4.

SEALED BY

J. BRIAN LEE
REGISTERED ENGINEER
AGRICULTURE
NUMBER
110729
STATE OF TENNESSEE

05/21/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIDE ROAD PROFILES

SCALE: 1"= 50' HORIZ.
1"=5 ' VERT.

5/20/2025 5:26:14 PM
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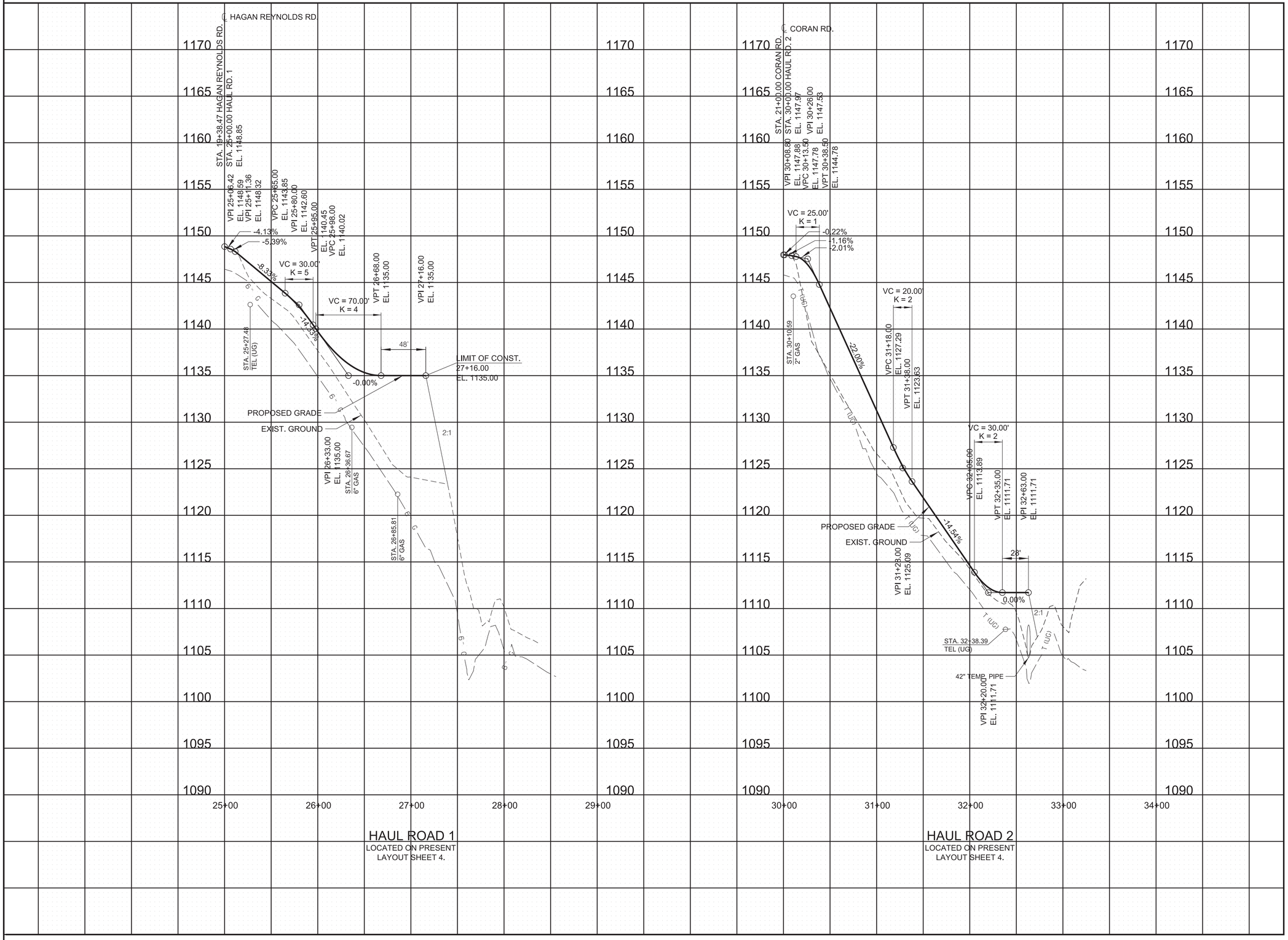
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	7
PIH	2024	BR-STP-70(24)	7
PS&E	2025	BR-STP-70(24)	7

REV. 04-24-25: REVISED LIMITS OF CONSTRUCTION FOR HAUL RD. 1 AND HAUL RD. 2.



HAUL ROAD 1
LOCATED ON PRESENT LAYOUT SHEET 4.

HAUL ROAD 2
LOCATED ON PRESENT LAYOUT SHEET 4.

SEALED BY

BRIAN LEE
REGISTERED ENGINEER
1072909
STATE OF TENNESSEE
05/20/2026

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

HAUL ROAD PROFILES

SCALE: 1"= 50' HORIZ.
1"=5 ' VERT.

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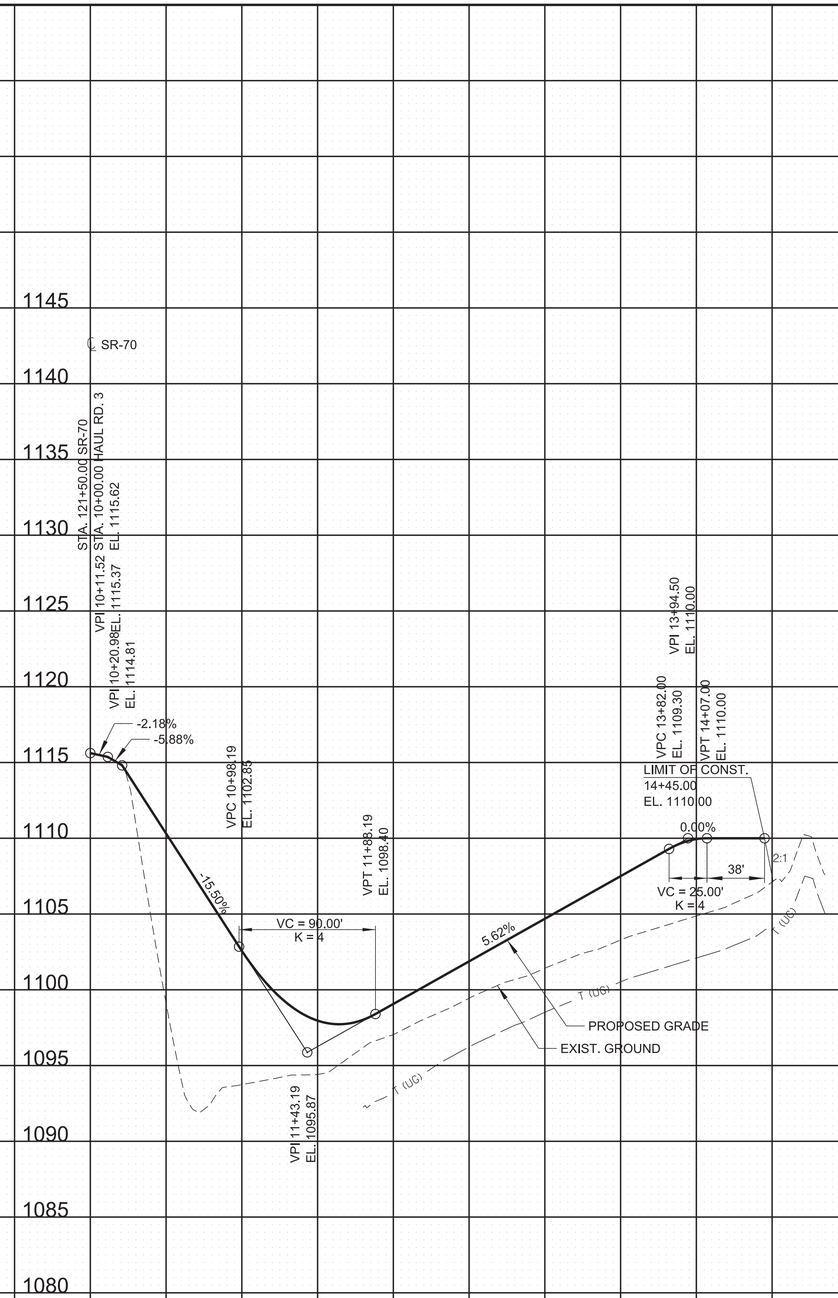
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	8
PS&E	2025	BR-STP-70(24)	8

REV. 04-24-25: ADDED SHEET AND HAUL RD. 3 PROFILE.



HAUL ROAD 3
LOCATED ON PRESENT LAYOUT SHEET 4.

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DEPARTMENT OF TRANSPORTATION

HAUL ROAD PROFILES

SCALE: 1"= 50' HORIZ.
1"=5 ' VERT.

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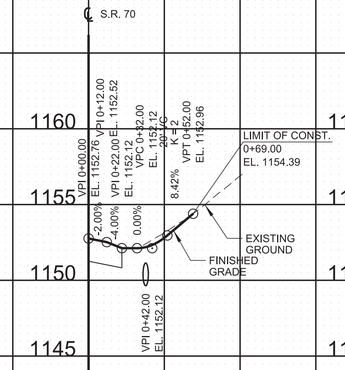
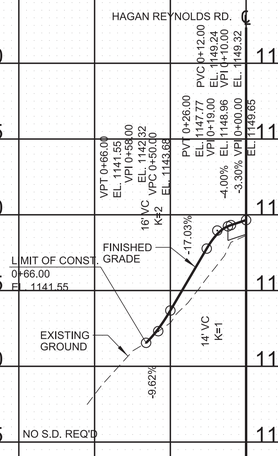
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	9
PIH	2024	BR-STP-70(24)	8
PS&E	2025	BR-STP-70(24)	9

REV. 8-24-23: UPDATED BUS. ENT. LENGTH RT. STA. 19+35 FOR TRACT 10.

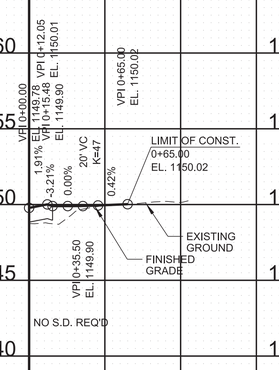
REV. 04-24-25: REVISED SHEET NUMBER.



S.R. 70
12' ASP. PVT. DR. RT. 113+57.00
TRACT NO. 11



HAGAN REYNOLDS RD.
15' ASP. PVT. DR. LT. 19+26.00
TRACT NO. 14



HAGAN REYNOLDS RD.
16' GRV. BUS. ENT. RT. 19+35.00
TRACT NO. 10

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRIVATE DRIVE AND BUSINESS ENTRANCE PROFILES

SCALE: 1"=50' HORIZ.
1"=5' VERT.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	10
PIH	2024	BR-STP-70(24)	9
PS&E	2025	BR-STP-70(24)	10

REV. 04-24-25: REVISED END OF CONSTRUCTION FLAG LOCATION, REMOVED CULVERT EXTENSIONS ON 48" RCP, AND REVISED SHEET NUMBER.

DRAINAGE DATA FOR PIPE
STATION 116+82.63 SR-70

DIRECTION OF FLOW: RIGHT

DRAINAGE AREA 69.04 AC., ( ) FLAT; ( ) ROLLING; (X) HILLY; ( ) MTNS.

PRESENT STRUCTURE: 48" RCP

EXISTING STRUCTURE CONDITION: FAIR

REMARKS:

DRAINAGE DATA FOR PIPE
STATION 17+18.44 HAGAN REYNOLDS RD.

DIRECTION OF FLOW: LEFT

DRAINAGE AREA 64.64 AC., ( ) FLAT; ( ) ROLLING; (X) HILLY; ( ) MTNS.

PRESENT STRUCTURE: 48" RCP

EXISTING STRUCTURE CONDITION: FAIR

REMARKS:

DRAINAGE DATA FOR BOX BRIDGE
STATION 127+10.69 SR-70

DIRECTION OF FLOW: RIGHT

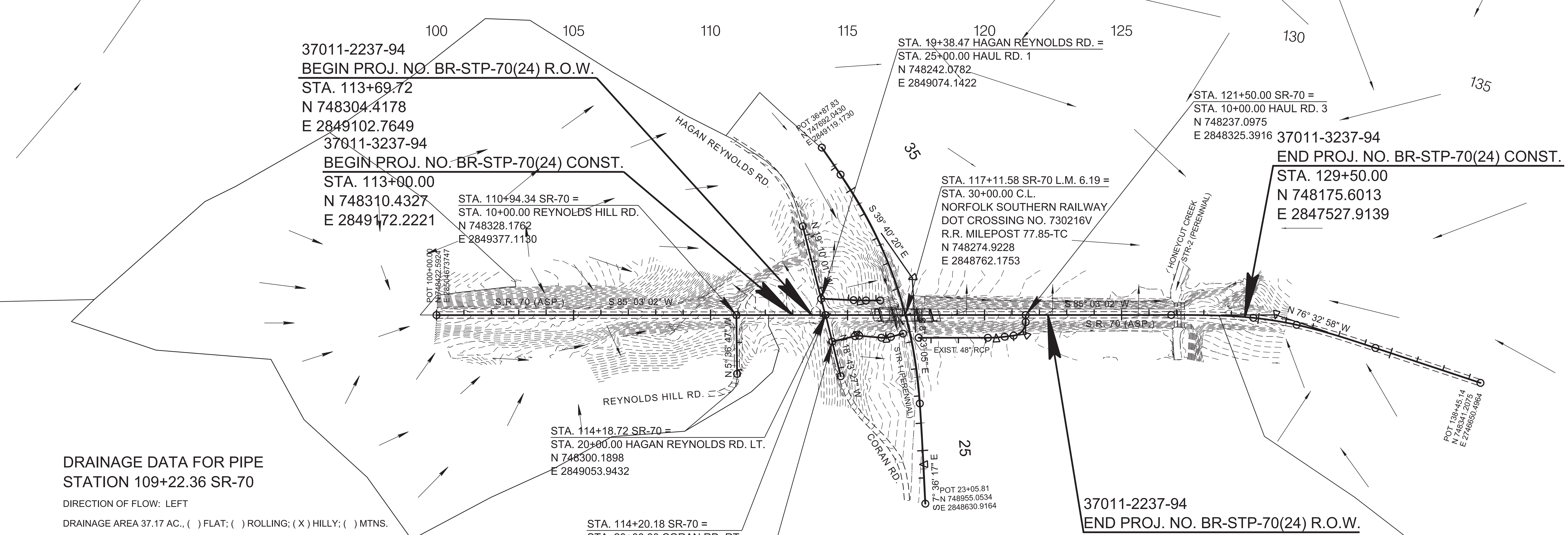
DRAINAGE AREA 3952 AC., ( ) FLAT; ( ) ROLLING; (X) HILLY; ( ) MTNS.

PRESENT STRUCTURE: 3@12' x 6' RCBB

EXISTING STRUCTURE CONDITION: FAIR

REMARKS:

N



DRAINAGE DATA FOR PIPE
STATION 109+22.36 SR-70

DIRECTION OF FLOW: LEFT

DRAINAGE AREA 37.17 AC., ( ) FLAT; ( ) ROLLING; (X) HILLY; ( ) MTNS.

PRESENT STRUCTURE: 42" CMP

EXISTING STRUCTURE CONDITION: FAIR

REMARKS:

DRAINAGE DATA FOR PIPE
STATION 10+46.40 REYNOLDS HILL RD.

DIRECTION OF FLOW: RIGHT

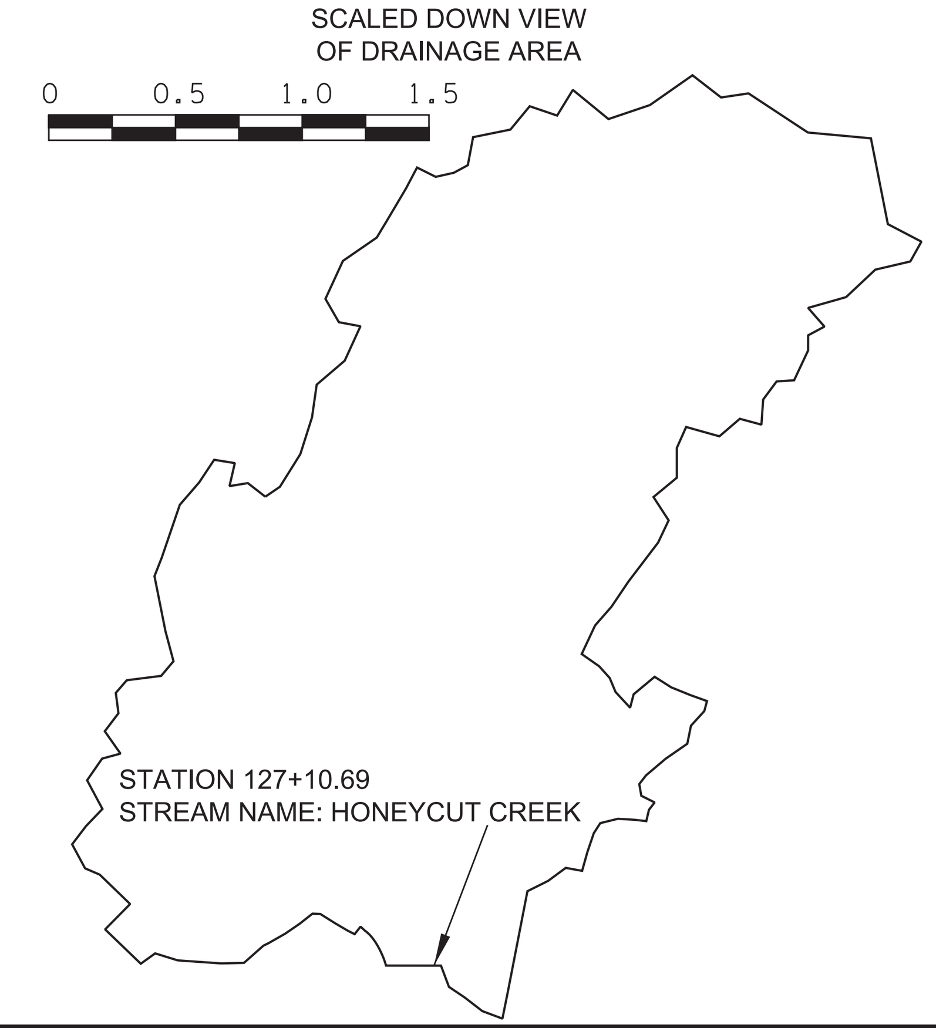
DRAINAGE AREA 0.94 AC., ( ) FLAT; ( ) ROLLING; (X) HILLY; ( ) MTNS.

PRESENT STRUCTURE: SIZE UNKNOWN (BURIED)

EXISTING STRUCTURE CONDITION: UNKNOWN

REMARKS: SHOT TOP (PIPE IS BURIED)

SCALED DOWN VIEW
OF DRAINAGE AREA



DRAINAGE DATA FOR PIPE
STATION: 119+34.00
PROPOSED STRUCTURE:
#51-SC C.B. @ 22' LT. 8' OF 18" RCP

INLET	1120.28	ELEV.
OUTLET	1119.53	ELEV.
SKEW	90° LT.	DEG.
FLOW	RIGHT TO LEFT	
DRAINAGE AREA	0.16	AC.
TERRAIN	FLAT	
IMPERVIOUS AREA	100	%
DISCHARGE (Q50)	0.83	CFS
DISCHARGE (Q100)	1.02	CFS
VELOCITY (Q50)	7.09	FT/S
VELOCITY (Q100)	7.33	FT/S

DRAINAGE DATA FOR PIPE
STATION: 122+48.00
PROPOSED STRUCTURE:
#51-SC C.B. @ 22' LT. 8' OF 18" RCP

INLET	1106.48	ELEV.
OUTLET	1105.74	ELEV.
SKEW	90° LT.	DEG.
FLOW	RIGHT TO LEFT	
DRAINAGE AREA	0.16	AC.
TERRAIN	FLAT	
IMPERVIOUS AREA	100	%
DISCHARGE (Q50)	0.83	CFS
DISCHARGE (Q100)	1.11	CFS
VELOCITY (Q50)	7.05	FT/S
VELOCITY (Q100)	7.28	FT/S

DRAINAGE DATA FOR PIPE
STATION: 125+62.00
PROPOSED STRUCTURE:
#52-SE C.B. @ 22' LT. 8' OF 18" RCP

INLET	1100.39	ELEV.
OUTLET	1099.66	ELEV.
SKEW	90° LT.	DEG.
FLOW	RIGHT TO LEFT	
DRAINAGE AREA	0.24	AC.
TERRAIN	FLAT	
IMPERVIOUS AREA	100	%
DISCHARGE (Q50)	1.22	CFS
DISCHARGE (Q100)	1.51	CFS
VELOCITY (Q50)	6.65	FT/S
VELOCITY (Q100)	6.90	FT/S

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J. BRIAN LEE
STATE OF TENNESSEE

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA.113+00.00 TO STA.135+00.00

SCALE: 1"=200'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	11
PIH	2024	BR-STP-70(24)	10
PS&E	2025	BR-STP-70(24)	11

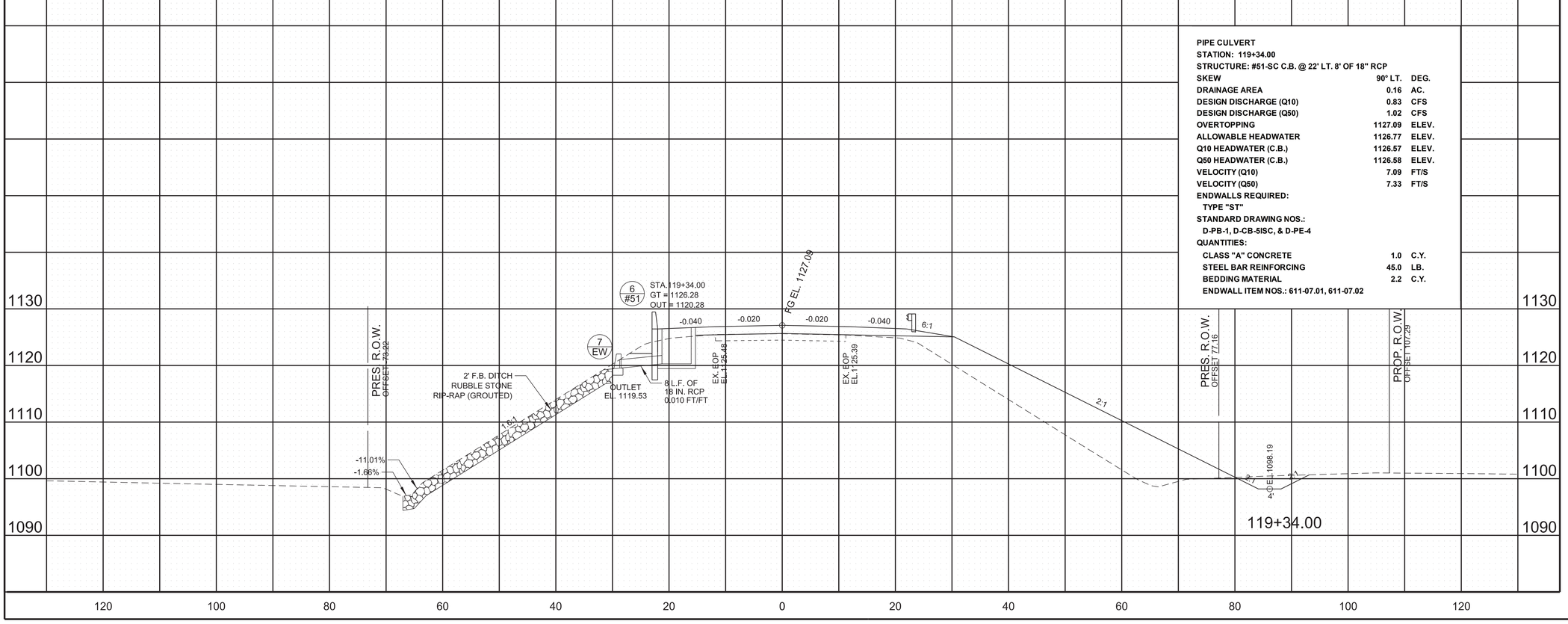
REV. 04-24-25: REVISED DRAINAGE DESIGN FOR STRUCTURE AT STA. 119+34.00, REMOVED CULVERT SECTION FOR EXTENSIONS OF 48" RCP STA. 116+82.63, AND REVISED SHEET NUMBER.

PIPE CULVERT
STATION: 119+34.00
STRUCTURE: #51-SC C.B. @ 22' LT. 8' OF 18" RCP

SKEW	**90° LT.**	**DEG.**
DRAINAGE AREA	**0.16**	**AC.**
DESIGN DISCHARGE (Q10)	**0.83**	**CFS**
DESIGN DISCHARGE (Q50)	**1.02**	**CFS**
OVERTOPPING	**1127.09**	**ELEV.**
ALLOWABLE HEADWATER	**1126.77**	**ELEV.**
Q10 HEADWATER (C.B.)	**1126.57**	**ELEV.**
Q50 HEADWATER (C.B.)	**1126.58**	**ELEV.**
VELOCITY (Q10)	**7.09**	**FT/S**
VELOCITY (Q50)	**7.33**	**FT/S**

ENDWALLS REQUIRED:
TYPE "ST"
STANDARD DRAWING NOS.:
D-PB-1, D-CB-5ISC, & D-PE-4
QUANTITIES:

CLASS "A" CONCRETE	**1.0**	**C.Y.**
STEEL BAR REINFORCING	**45.0**	**LB.**
BEDDING MATERIAL	**2.2**	**C.Y.**
ENDWALL ITEM NOS.: 611-07.01, 611-07.02		



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CULVERT SECTION

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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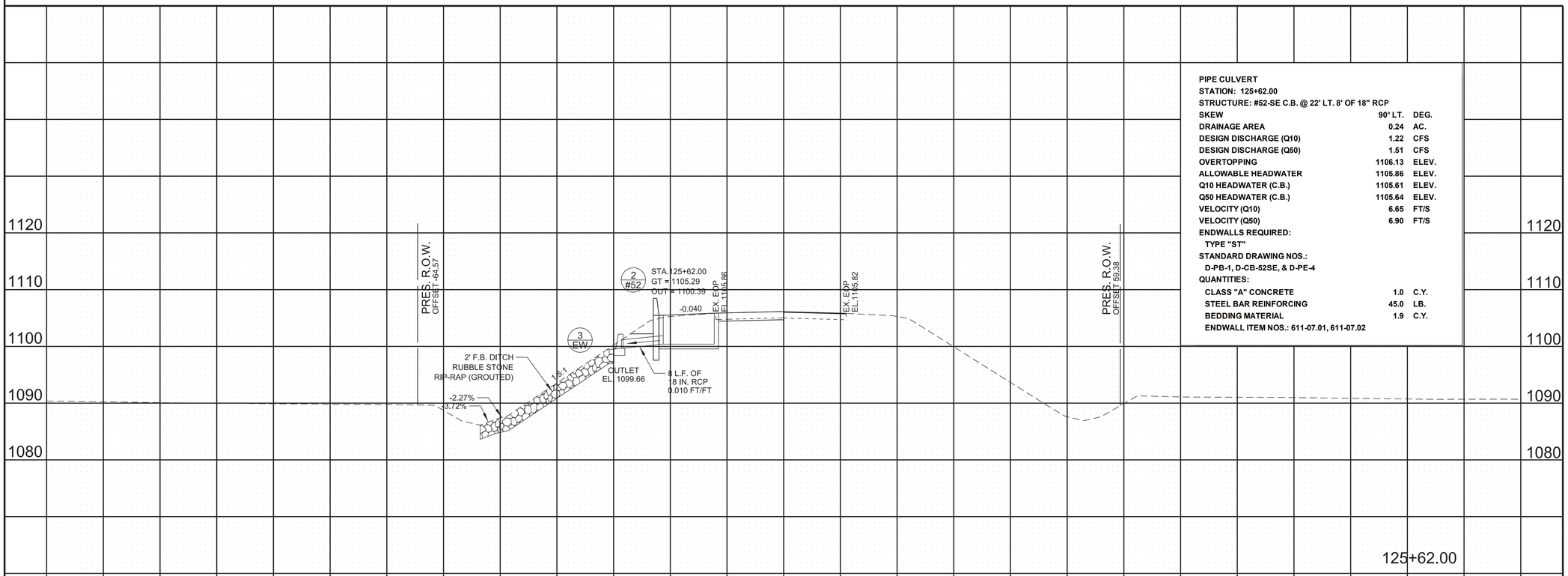
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	12
PIH	2024	BR-STP-70(24)	11
PS&E	2025	BR-STP-70(24)	12

REV. 04-24-25: REVISED DRAINAGE DESIGN FOR STA. 122+48.00 AND STA. 125+62.00 AND REVISED SHEET NUMBER.



PIPE CULVERT
STATION: 125+62.00
STRUCTURE: #52-SE C.B. @ 22' LT. 8' OF 18" RCP

SKEW	90° LT.	DEG.
DRAINAGE AREA	0.24	AC.
DESIGN DISCHARGE (Q10)	1.22	CFS
DESIGN DISCHARGE (Q50)	1.51	CFS
OVERTOPPING	1106.13	ELEV.
ALLOWABLE HEADWATER	1105.86	ELEV.
Q10 HEADWATER (C.B.)	1105.61	ELEV.
Q50 HEADWATER (C.B.)	1105.64	ELEV.
VELOCITY (Q10)	6.65	FT/S
VELOCITY (Q50)	6.90	FT/S

ENDWALLS REQUIRED:
TYPE "ST"
STANDARD DRAWING NOS.:
D-PB-1, D-CB-52SE, & D-PE-4
QUANTITIES:

CLASS "A" CONCRETE	1.0	C.Y.
STEEL BAR REINFORCING	45.0	LB.
BEDDING MATERIAL	1.9	C.Y.

ENDWALL ITEM NOS.: 611-07.01, 611-07.02

PIPE CULVERT
STATION: 122+48.00
STRUCTURE: #51-SC C.B. @ 22' LT. 8' OF 18" RCP

SKEW	90° LT.	DEG.
DRAINAGE AREA	0.16	AC.
DESIGN DISCHARGE (Q10)	0.83	CFS
DESIGN DISCHARGE (Q50)	1.11	CFS
OVERTOPPING	1111.89	ELEV.
ALLOWABLE HEADWATER	1111.60	ELEV.
Q10 HEADWATER (C.B.)	1111.42	ELEV.
Q50 HEADWATER (C.B.)	1111.43	ELEV.
VELOCITY (Q10)	7.05	FT/S
VELOCITY (Q50)	7.28	FT/S

ENDWALLS REQUIRED:
TYPE "ST"
STANDARD DRAWING NOS.:
D-PB-1, D-CB-51SC, & D-PE-4
QUANTITIES:

CLASS "A" CONCRETE	1.0	C.Y.
STEEL BAR REINFORCING	45.0	LB.
BEDDING MATERIAL	2.2	C.Y.

ENDWALL ITEM NOS.: 611-07.01, 611-07.02

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DEPARTMENT OF TRANSPORTATION

CULVERT SECTION

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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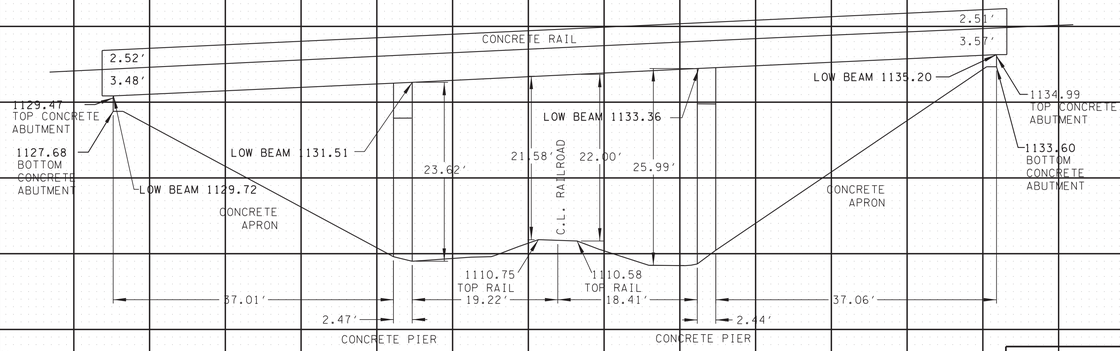
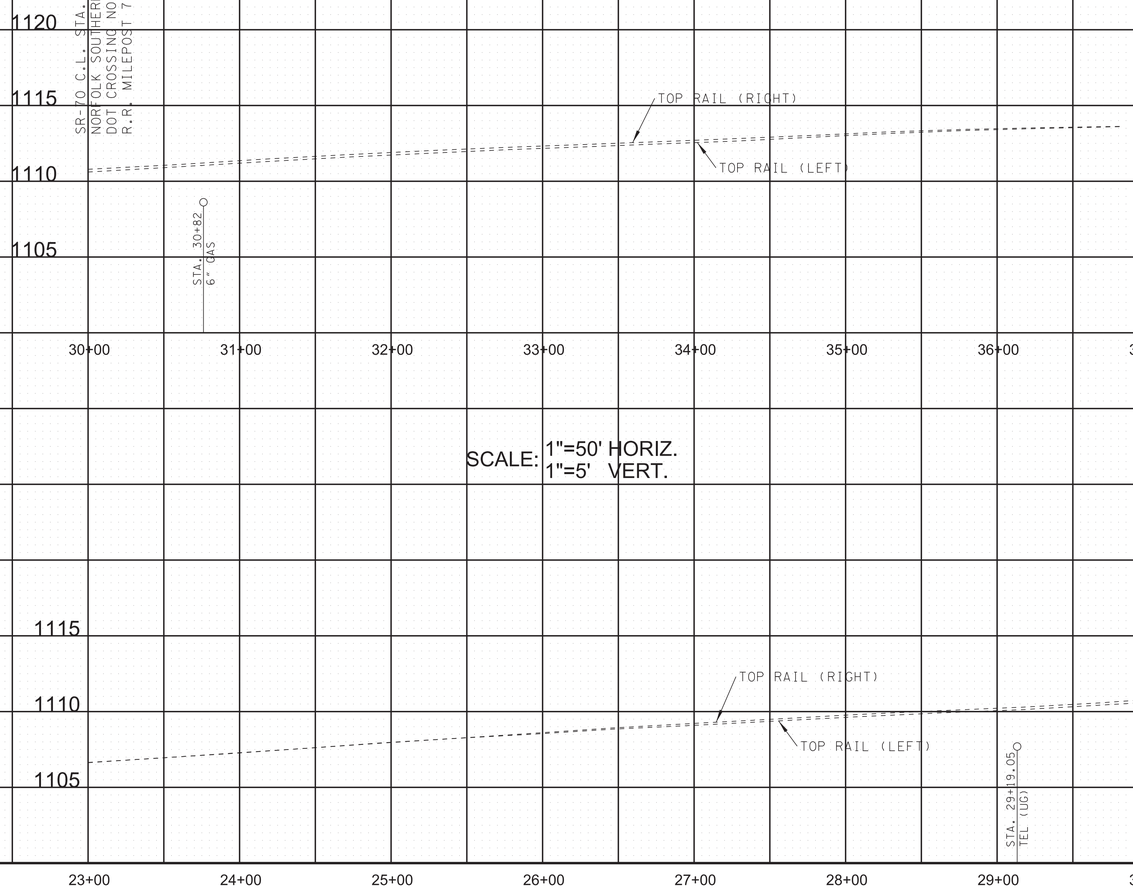
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	13
PIH	2024	BR-STP-70(24)	12
PS&E	2025	BR-STP-70(24)	13

REV. 04-24-25: REVISED SHEET NUMBER.



3 SPAN REINF. CONC.
DECK GIRDER BRIDGE
ID#37SR0700009
117+11.58 SR-70 C.L.
STA. 30+00.00 NORFOLK SOUTHERN RAILWAY C.L.
LOOKING NORTH
SCALE 1"=10'
(THIS SKETCH DIPICTS THE EXISTING GIRDER BRIDGE)

NOTE
THE ELEVATIONS OF THE EXISTING TOP-OF-RAIL PROFILE SHALL BE VERIFIED BEFORE BEGINNING CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE NORFOLK SOUTHERN PUBLIC PROJECTS ENGINEER.



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RAILROAD PROFILE

STA.23+00 TO STA.37+00

SCALE: 1"=50' HORIZ.
1"=5' VERT.

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REV. 04-24-25: REVISED EPSC QUANTITIES AND SHEET NUMBER.

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

INSPECTION, MAINTENANCE & REPAIR

(11) REFER TO THE STORM WATER POLLUTION AND PREVENTION PLAN SHEET SERIES (S-1) FOR SWPPP, PERMITS, AND RECORDS NOTES.

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

(29) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS SHALL BE REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFFSITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EPSC SHALL BE REMOVED FROM THE SITE.

(30) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION. APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED.

(31) CONTRACTORS SHALL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED, NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE, AND PROPERLY SIGNED. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS SHALL NOT BE PERMITTED ONSITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.

(32) WHEEL WASH WATER SHALL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER SHALL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM.

(33) IF PORTABLE SANITARY FACILITIES ARE PROVIDED ON CONSTRUCTION SITES, SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY REGULATIONS. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

(34) ONLY CONSTRUCTION PRODUCTS NEEDED SHALL BE STORED ONSITE BY THE CONTRACTOR. THE CONTRACTOR SHALL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING SHALL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR'S RESPONSIBLE PARTY SHALL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.

(35) WHEN POSSIBLE, ALL PRODUCTS SHALL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFFSITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS SHALL BE FOLLOWED.

(36) ALL PAINT CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHALL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.

(37) ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

(38) OPEN BURNING IS PROHIBITED UNLESS IT IS SPECIFICALLY ALLOWED BY LAW. IF ALLOWED, NATURAL VEGETATION, TREES, AND UNTREATED LUMBER SHALL BE THE ONLY MATERIALS THAT CAN BE OPEN BURNED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE STATE AND LOCAL PERMITS PRIOR TO ANY BURNING.

(39) DISPOSAL OF ONSITE VEGETATION AND TREES BY CHIPPING THEM INTO MULCH IS PREFERABLE TO OPEN BURNING. THIS MULCH MAY BE USED AS AN ONSITE SOIL STABILIZATION MEASURE WHERE APPROPRIATE.

(40) WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S), CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

EROSION PREVENTION AND SEDIMENT CONTROL SPECIAL NOTES

RAILROAD ENVIRONMENTAL

(15) THE CONTRACTOR SHALL MAINTAIN A COMPLETE AND COMPREHENSIVE EPSC PLAN AND SWPPP TO PREVENT ROADWAY AND/OR CONSTRUCTION SEDIMENT OR DEBRIS AND ANY PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, PAINTS OR COATINGS ETC. FROM FALLING ONTO THE RAILROAD'S RIGHT-OF-WAY AND/OR FROM ENTERING THE DRAINAGE DITCHES OR DRAINAGE STRUCTURES OF THE RAILROAD, AND ANY SEDIMENT OR DEBRIS OR PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, ETC. THAT DO ENTER SUCH DRAINAGE AREAS OF THE RAILROAD'S RIGHT-OF-WAY ARE TO BE REMOVED IN ACCORDANCE WITH RULES SET FORTH BY NORFOLK SOUTHERN RAILROAD AND AT THE CONTRACTOR'S EXPENSE.

TABULATED EPSC QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY 37011-3237-94
(1)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	286
(1)	209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.	102
(1)	209-03.22	FILTER SOCK (18 INCH)	L.F.	318
(1)	209-05	SEDIMENT REMOVAL	C.Y.	62
(1)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	8115
(1)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	983
(1)	209-08.07	ROCK CHECK DAM	EACH	6
(1)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	9
	209-09.01	SANDBAGS	BAG	200
(1)	209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	5
	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	20
	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	104
	621-03.06	42" TEMPORARY DRAINAGE PIPE	L.F.	85
	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	2138
	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	100
	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	316
	740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	873
(1)	740-11.04	TEMPORARY SEDIMENT TUBE 20IN	L.F.	6027
(2)	801-01.38	NATVE SEED MX FINAL STABLIZATN OF SLOPES	UNIT	24
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	11016

(1) ALL EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER. SEE SUBSECTION OF 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.

(2) PERMANENT STABILIZATION WITH NATIVE OR NATURALIZED PERENNIAL VEGETATION IS REQUIRED IN ALL AREAS AUTHORIZED FOR TEMPORARY AND PERMANENT IMPACTS TO STREAMS AND RIPARIAN AREAS, INCLUDING ADJACENT BUFFER ZONES WITHIN 60 FT OF THE EDGE OF WATER. THE APPROPRIATE SEED MIXTURE FOR THE REGION AND SITE CONDITIONS SHALL BE SELECTED FROM TABLE 7.9-1 (PREFERRED SEED MIXES USING NATIVES OR NATURALIZED PLANTS AND PLANTING DATES) FOUND IN CHAPTER 7.9 (PERMANENT VEGETATION) OF THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK 4TH EDITION.

ITEMS TO BE USED FOR TEMPORARY CONSTRUCTION ENTRANCES / EXITS. TO BE INSTALLED AT LOCATIONS DIRECTED BY ENGINEER IN FIELD.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SF SF SF	SILT FENCE	EC-STR-3B
SFB SFB SFB	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
SOCK 18" SOCK 18"	18 INCH FILTER SOCK	EC-STR-8
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
TCC	TEMPORARY CULVERT CROSSING (1 - 42" TEMP. PIPE)	EC-STR-25
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY DIVERSION CULVERT (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-32
	EROSION CONTROL BLANKET	EC-STR-34
	TURF REINFORCEMENT MAT	EC-STR-36
TUBE 20" TUBE 20"	20 INCH SEDIMENT TUBE	EC-STR-37
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
HVF HVF	HIGH VISIBILITY FENCE	S-F-1

NOTE: SF / SFB NOT ON CONTOUR SHOULD HAVE J-HOOKS ADDED.

TEMPORARY CONSTRUCTION EXITS TO BE LOCATED BY THE ENGINEER.

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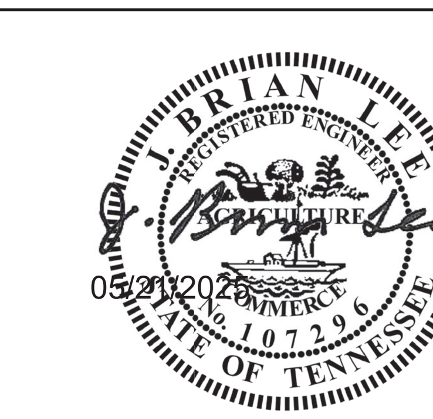

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) SPECIAL NOTES, LEGEND, & TABULATION

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	15
PIH	2024	BR-STP-70(24)	14
PS&E	2025	BR-STP-70(24)	15

REV. 8-24-23: ADJUSTED EXIST. R.O.W. LT. SIDE OF SR-54, RT. SIDE OF HAGAN REYNOLDS ROAD, AND REMOVED SPECIAL DITCH RT. STA. 115+00 TO STA. 116+26.08.

REV. 04-24-25: REVISED HAUL RD. 1 AND HAUL RD. 2, ADDED HAUL RD. 3, REVISED SHEET NUMBER, REVISED LOCATION OF SFB ALONG RAILROAD AND ADDED MINIMUM OFFSET NOTE.

37011-2237-94
BEGIN PROJ. NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178
E 2849102.7649

37011-3237-94
BEGIN PROJ. NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327
E 2849172.2221

STA. 110+94.34 SR-70 =
STA. 10+00.00 REYNOLDS HILL RD.
N 748328.1762
E 2849377.1130

ALL SF AND SFB NOT SHOWN ON CONTOUR SHALL BE INSTALLED WITH J-HOOKS.

SEE SHEET 2G1 FOR HAUL ROAD GEOMETRIC INFORMATION

STA. 19+38.47 HAGAN REYNOLDS RD. =
STA. 25+00.00 HAUL RD. 1
N 748242.0782
E 2849074.1422

STA. 117+11.58 SR-70 L.M. 6.19 =
STA. 30+00.00 C.L.
NORFOLK SOUTHERN RAILWAY
DOT CROSSING NO. 730216V
R.R. MILEPOST 77.85-TC
N 748274.9228
E 2848762.1753

NOTE:
ALL EPSC MEASURES ARE TEMPORARY AND SHALL BE REMOVED AFTER CONSTRUCTION.

STA. 121+50.00 SR-70 =
STA. 10+00.00 HAUL RD. 3
N 748237.0975
E 2848325.3916

STA. 114+18.72 SR-70 =
STA. 20+00.00 HAGAN REYNOLDS RD. LT
N 748300.1898
E 2849053.9432
(SEE SHEET 6 FOR PROFILE)

STA. 114+20.18 SR-70 =
STA. 20+00.00 CORAN RD RT.
N 748300.0643
E 2849052.4935
(SEE SHEET 6 FOR PROFILE)

STA. 21+00.00 CORAN RD. =
STA. 30+00.00 HAUL RD. 2
N 748394.7717
E 2849020.3922

37011-2237-94
END PROJ. NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660
E 2848244.1958

OUTFALL LABEL	DRAINAGE AREA (AC)	SLOPE WITHIN R.O.W. (%)
OUT-1	0.7	7
OUT-2	0.4	15
OUT-3	0.5	13
OUT-4	1.2	8

SEALED BY

BRIAN LEE
REGISTERED ENGINEER
SIGNATURE
05/20/2025
NO. 107296
STATE OF TENNESSEE

COORDINATES ARE NAD 83(1995). ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STAGE 1
CLEARING & GRUBBING

EXISTING CONTOURS

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS

STA.110+00 TO STA.123+00

SCALE: 1"=50'

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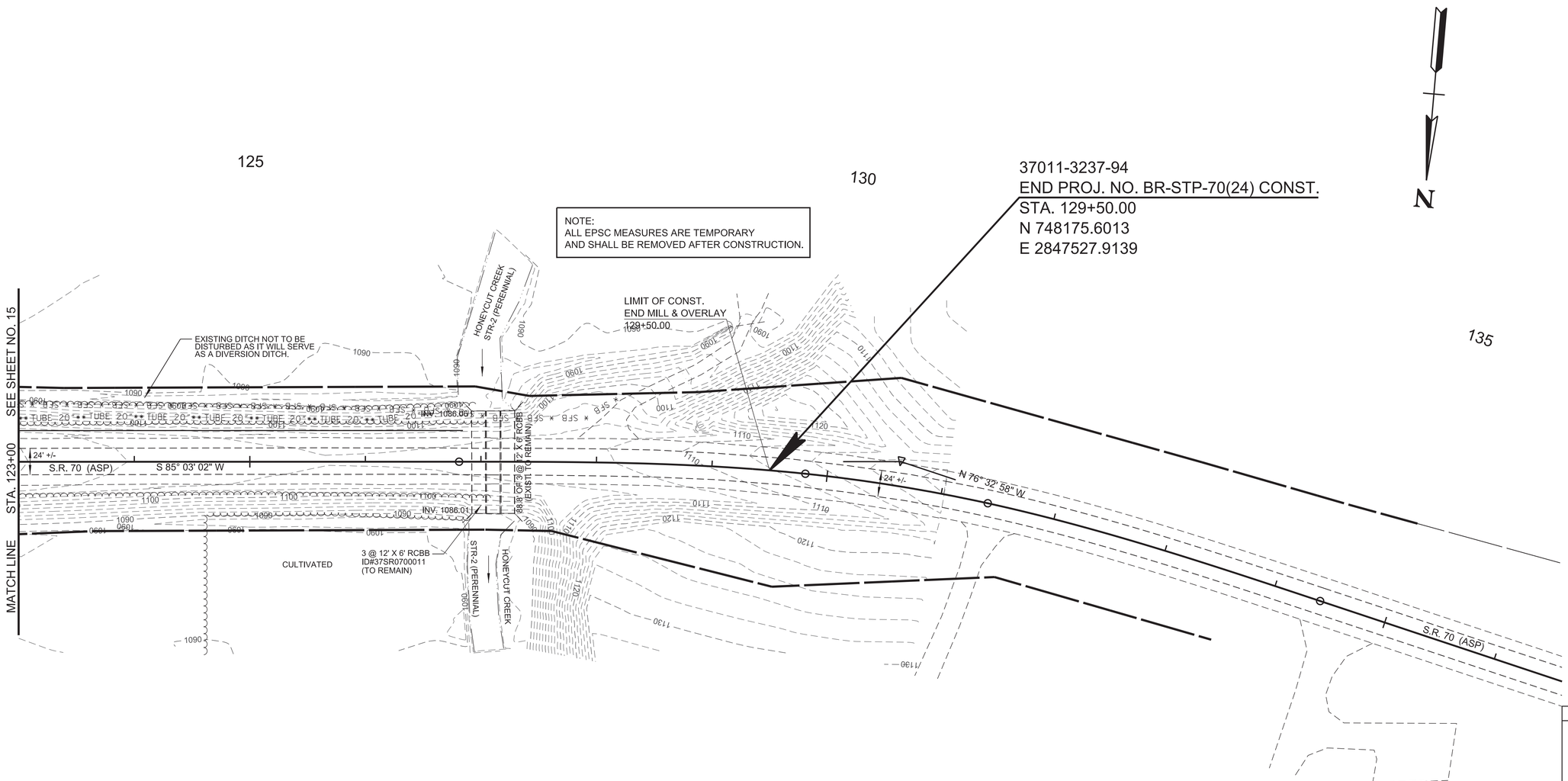
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	15A
PIH	2024	BR-STP-70(24)	14A
PS&E	2025	BR-STP-70(24)	15A

REV. 04-24-25: REVISED END OF CONSTRUCTION AND END OF MILL AND OVERLAY FLAG LOCATIONS AND REVISED SHEET NUMBER.



SEALED BY

J. BRIAN LEE
REGISTERED ENGINEER
AGRICULTURE
NUMBER 107299
STATE OF TENNESSEE
05/21/2026

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STAGE 1
CLEARING & GRUBBING

EXISTING
CONTOURS

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS

STA.123+00 TO STA.129+50

SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	16
PIH	2024	BR-STP-70(24)	15
PS&E	2025	BR-STP-70(24)	16

REV. 8-24-23: ADJUSTED EXIST. R.O.W. LT. SIDE OF SR-54, RT. SIDE OF HAGAN REYNOLDS ROAD, AND REMOVED SPECIAL DITCH RT. STA. 115+00 TO STA. 116+26.08.

REV. 04-24-25: REVISED HAUL RD. 1 AND HAUL RD. 2, ADDED HAUL RD. 3, REMOVED EXTENSIONS ON 48" RCP, REVISED LIMITS OF BRIDGE, REVISED LOCATION OF FLUME, REVISED SHEET NUMBER, REVISED LOCATION OF SFB ALONG RAILROAD AND ADDED MINIMUM OFFSET NOTE.

37011-2237-94
BEGIN PROJ. NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178
E 2849102.7649

37011-3237-94
BEGIN PROJ. NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327
E 2849172.2221

STA. 110+94.34 SR-70 =
STA. 10+00.00 REYNOLDS HILL RD.
N 748328.1762
E 2849377.1130

* GATES TO BE LOCKED WHEN NOT IN USE BY THE CONTRACTOR. ALL COST ASSOCIATED WITH THE GATE, LOCK, POST EQUIPMENT, AND INSTALLATION SHALL BE INCLUDED IN THE COST OF THE HAUL ROADS.

ALL SF AND SFB NOT SHOWN ON CONTOUR SHALL BE INSTALLED WITH J-HOOKS.

SEE SHEET 2G1 FOR HAUL ROAD GEOMETRIC INFORMATION

STA. 19+38.47 HAGAN REYNOLDS RD. =
STA. 25+00.00 HAUL RD. 1
N 748242.0782
E 2849074.1422

STA. 117+11.58 SR-70 L.M. 6.19 =
STA. 30+00.00 C.L.
NORFOLK SOUTHERN RAILWAY
DOT CROSSING NO. 730216V
R.R. MILEPOST 77.85-TC
N 748274.9228
E 2848762.1753

NOTE:
ALL EPSC MEASURES ARE TEMPORARY AND SHALL BE REMOVED AFTER CONSTRUCTION.

STA. 121+50.00 SR-70 =
STA. 10+00.00 HAUL RD. 3
N 748237.0975
E 2848325.3916

HAGAN REYNOLDS RD. (ASP)
NORFOLK SOUTHERN R.R.
S.R. 70 (ASP)
S 85° 03' 02" W
REYNOLDS HILL RD. (ASP)
N 5° 36' 47" W
CORAN RD (ASP)
N 18° 43' 27" W
N 19° 10' 01" W
S 39° 40' 20" E
S 8° 23' 05" E
STR-1 (PERENNIAL)
OUT - 1
OUT - 2
OUT - 3
OUT - 4
OUT - 5
LIMIT OF CONST. 17+85.00
LIMIT OF CONST. 113+00.00
LIMIT OF CONST. 21+55.00
16' MIN FROM CENTER OF R.R.
BENT NO. 1 STA. 116+68.25
BEGIN BRIDGE STA. 116+16.75
BENT NO. 2 STA. 117+58.25
END BRIDGE STA. 118+09.75
INV. 1105.03
92' OF 48" RCP (TO REMAIN)
SILT FENCE WITH BACKING TO BE A MINIMUM OF 15' FROM CENTER OF R.R. ON EAST SIDE OF R.R.
15' MIN FROM CENTER OF R.R.
85 L.F. OF 42" HDPE TEMP. PIPE
GATE
24' +/-
SEE SHEET NO. 16A
MATCH LINE
STA. 123+00

STA. 114+18.72 SR-70 =
STA. 20+00.00 HAGAN REYNOLDS RD. LT
N 748300.1898
E 2849053.9432
(SEE SHEET 6 FOR PROFILE)

STA. 114+20.18 SR-70 =
STA. 20+00.00 CORAN RD RT.
N 748300.0643
E 2849052.4935
(SEE SHEET 6 FOR PROFILE)

STA. 21+00.00 CORAN RD. =
STA. 30+00.00 HAUL RD. 2
N 748394.7717
E 2849020.3922

37011-2237-94
END PROJ. NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660
E 2848244.1958

OUTFALL LABEL	DRAINAGE AREA (AC)	SLOPE WITHIN R.O.W. (%)
OUT-1	0.7	6
OUT-2	0.4	17
OUT-3	0.4	17
OUT-4	1.0	9
OUT-5	0.8	8

SEALED BY

BRIAN LEE
REGISTERED ENGINEER
SIGNATURE
05/21/2025
NUMBER
115729
STATE OF TENNESSEE

COORDINATES ARE NAD 83(1995). ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STAGE 2
INTERMEDIATE GRADING

EXISTING CONTOURS

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS
STA.110+00 TO STA.123+00
SCALE: 1"=50'

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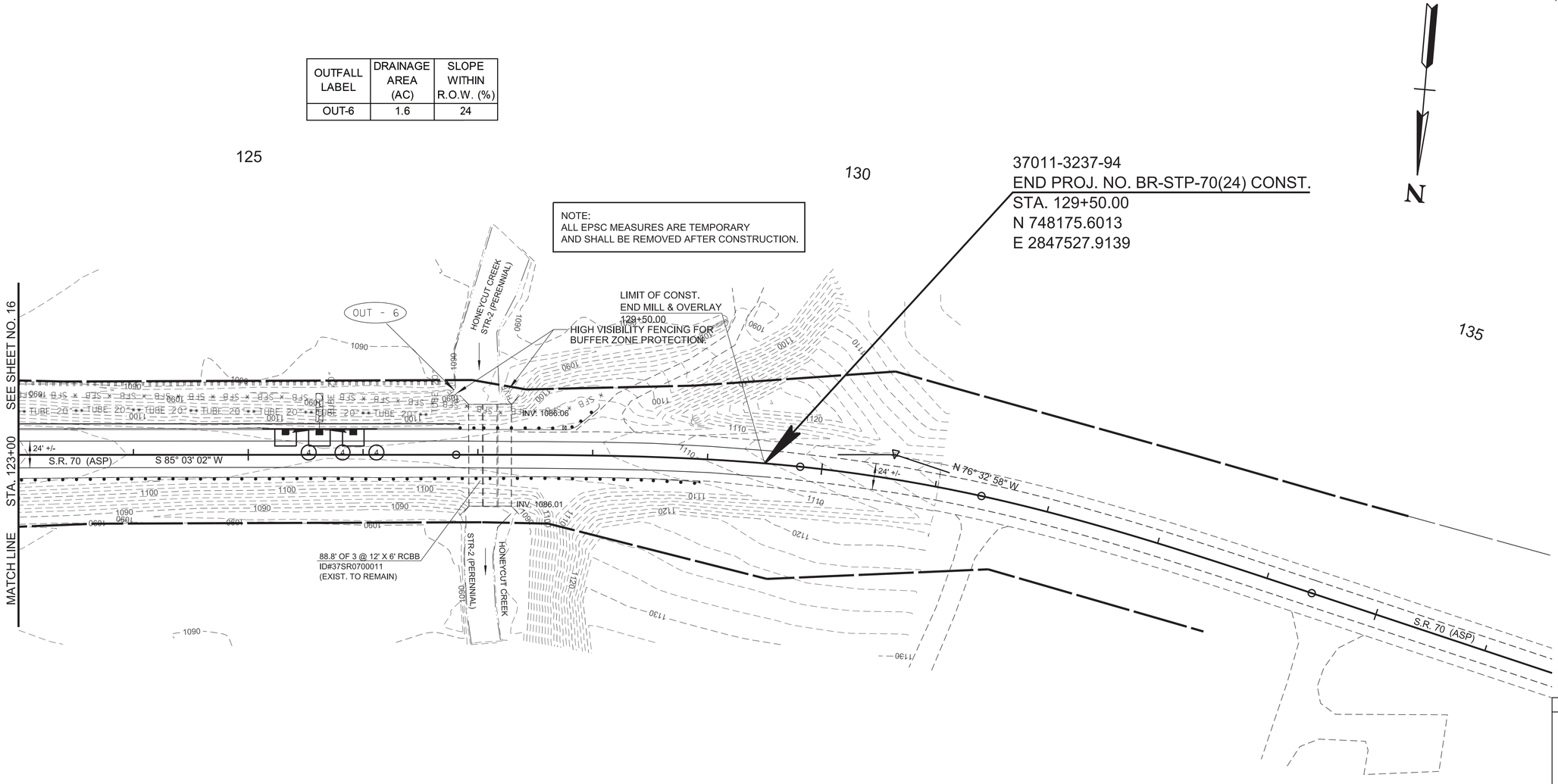
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	16A
PIH	2024	BR-STP-70(24)	15A
PS&E	2025	BR-STP-70(24)	16A

REV. 04-24-25: REVISED END CONSTRUCTION AND MILL AND OVERLAY FLAG LOCATIONS, REVISED PROPOSED GUARDRAIL, REVISED OUTFALL 6, AND REVISED SHEET NUMBER.

OUTFALL LABEL	DRAINAGE AREA (AC)	SLOPE WITHIN R.O.W. (%)
OUT-6	1.6	24



SEALED BY

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STAGE 2
INTERMEDIATE GRADING

EXISTING CONTOURS

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS

STA.123+00 TO STA.129+50

SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	17
PIH	2024	BR-STP-70(24)	16
PS&E	2025	BR-STP-70(24)	17

REV. 04-24-25: ADDED SHEET.

37011-2237-94
BEGIN PROJ. NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178
E 2849102.7649

37011-3237-94
BEGIN PROJ. NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327
E 2849172.2221

STA. 110+94.34 SR-70 =
STA. 10+00.00 REYNOLDS HILL RD.
N 748328.1762
E 2849377.1130

110

HAGAN REYNOLDS RD. (ASP)

N 19° 10' 01" W

35

NORFOLK SOUTHERN R.R.

SEE SHEET 2G1 FOR HAUL ROAD GEOMETRIC INFORMATION

N

115

120

STA. 117+11.58 SR-70 L.M. 6.19 =
STA. 30+00.00 C.L.
NORFOLK SOUTHERN RAILWAY
DOT CROSSING NO. 730216V
R.R. MILEPOST 77.85-TC
N 748274.9228
E 2848762.1753

NOTE:
ALL EPSC MEASURES ARE TEMPORARY AND SHALL BE REMOVED AFTER CONSTRUCTION.

LIMIT OF CONST.
17+85.00

STR-1 (PERENNIAL)

S 39° 40' 20" E

S 8° 23' 50" E

BENT NO. 1
STA. 116+68.25

BEGIN BRIDGE
STA. 116+16.75

92' OF 48" RCP
(TO REMAIN)

BENT NO. 2
STA. 117+58.25

END BRIDGE
STA. 118+09.75

RUBBLE STONE
RIP-RAP (GROUTED)
42' LENGTH
6' WIDTH

RUBBLE STONE
RIP-RAP (GROUTED)
34' LENGTH
6' WIDTH

7 EW OUT.EL. 1119.53
8' OF 18" RCP

6 #51 GT. EL. 1126.28
OUT.EL. 1120.28

GT. EL. 1111.11 4 #51
OUT.EL. 1106.48

5 EW OUT.EL. 1105.74
8' OF 18" RCP

INV-1105.07

INV-1104.90

SEE SHEET NO. 17A

STA. 123+00

MATCH LINE

LIMIT OF CONST.
113+00.00

24' +/-

S.R. 70 (ASP)

S 85° 03' 02" W

24' +/-

TRM

SOD

1140

1130

1120

1110

1100

N 5° 36' 47" W

REYNOLDS HILL RD. (ASP)

STA. 114+18.72 SR-70 =
STA. 20+00.00 HAGAN REYNOLDS RD. LT
N 748300.1898
E 2849053.9432
(SEE SHEET 6 FOR PROFILE)

STA. 114+20.18 SR-70 =
STA. 20+00.00 CORAN RD RT.
N 748300.0643
E 2849052.4935
(SEE SHEET 6 FOR PROFILE)

LIMIT OF CONST.
21+55.00

N 18° 43' 27" W

CORAN RD (ASP)

18' +/-

37011-2237-94
END PROJ. NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660
E 2848244.1958

LEGEND	
SYMBOL	DESCRIPTION
	EROSION CONTROL BLANKET

STAGE 3
FINAL CONSTRUCTION

PROPOSED CONTOURS

SEALED BY

J. BRIAN LEE
REGISTERED ENGINEER
No. 107209
STATE OF TENNESSEE

05/20/2025

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS

STA.110+00 TO STA.123+00

SCALE: 1"=50'

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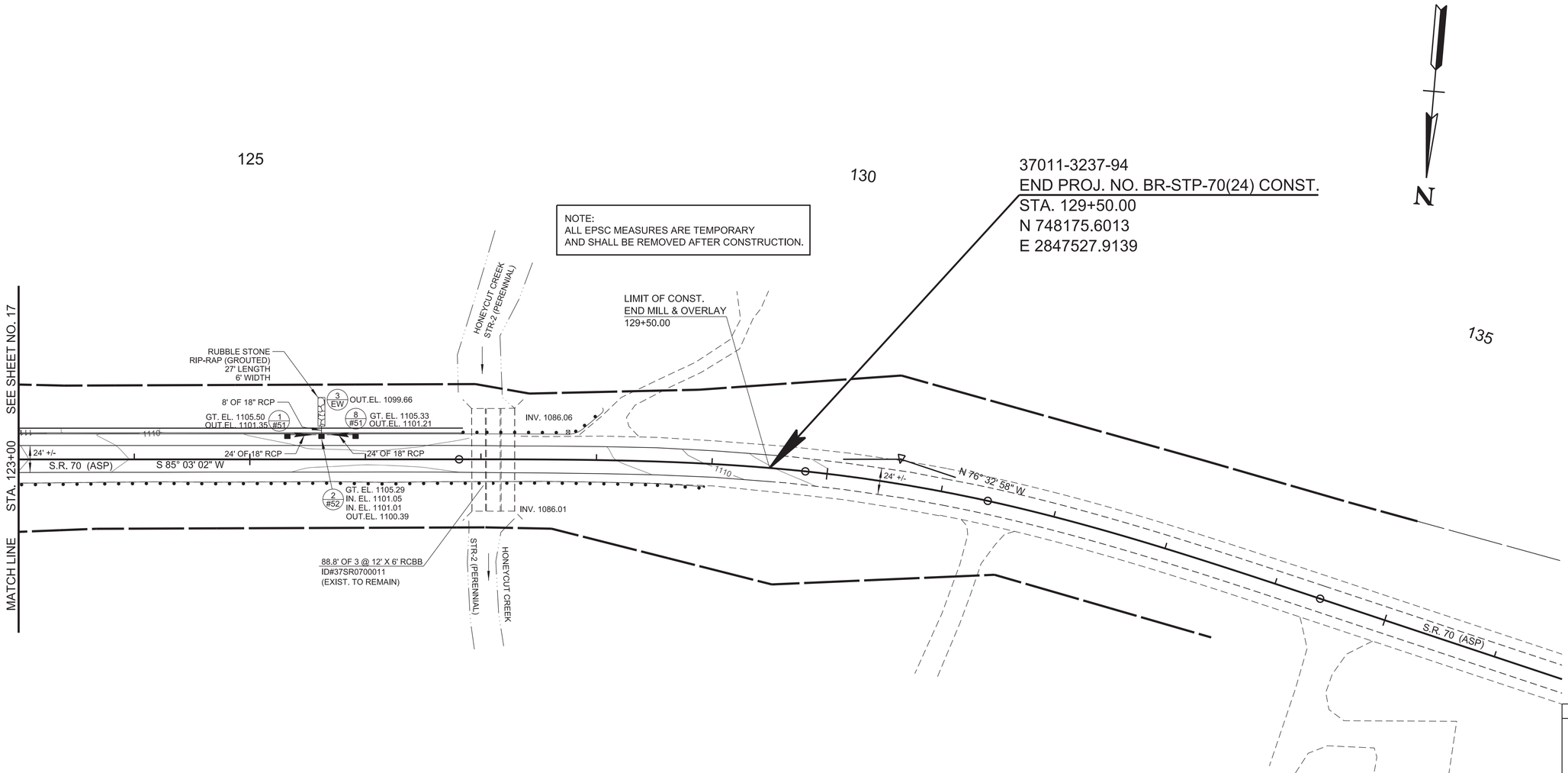
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	17A
PIH	2024	BR-STP-70(24)	16A
PS&E	2025	BR-STP-70(24)	17A

REV. 04-24-25: ADDED SHEET.



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J. BRIAN LEE
REGISTERED ENGINEER
05/21/2025
NO. 107299
STATE OF TENNESSEE

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS

STA.123+00 TO STA.129+50

SCALE: 1"=50'

STAGE 3
FINAL CONSTRUCTION

PROPOSED CONTOURS

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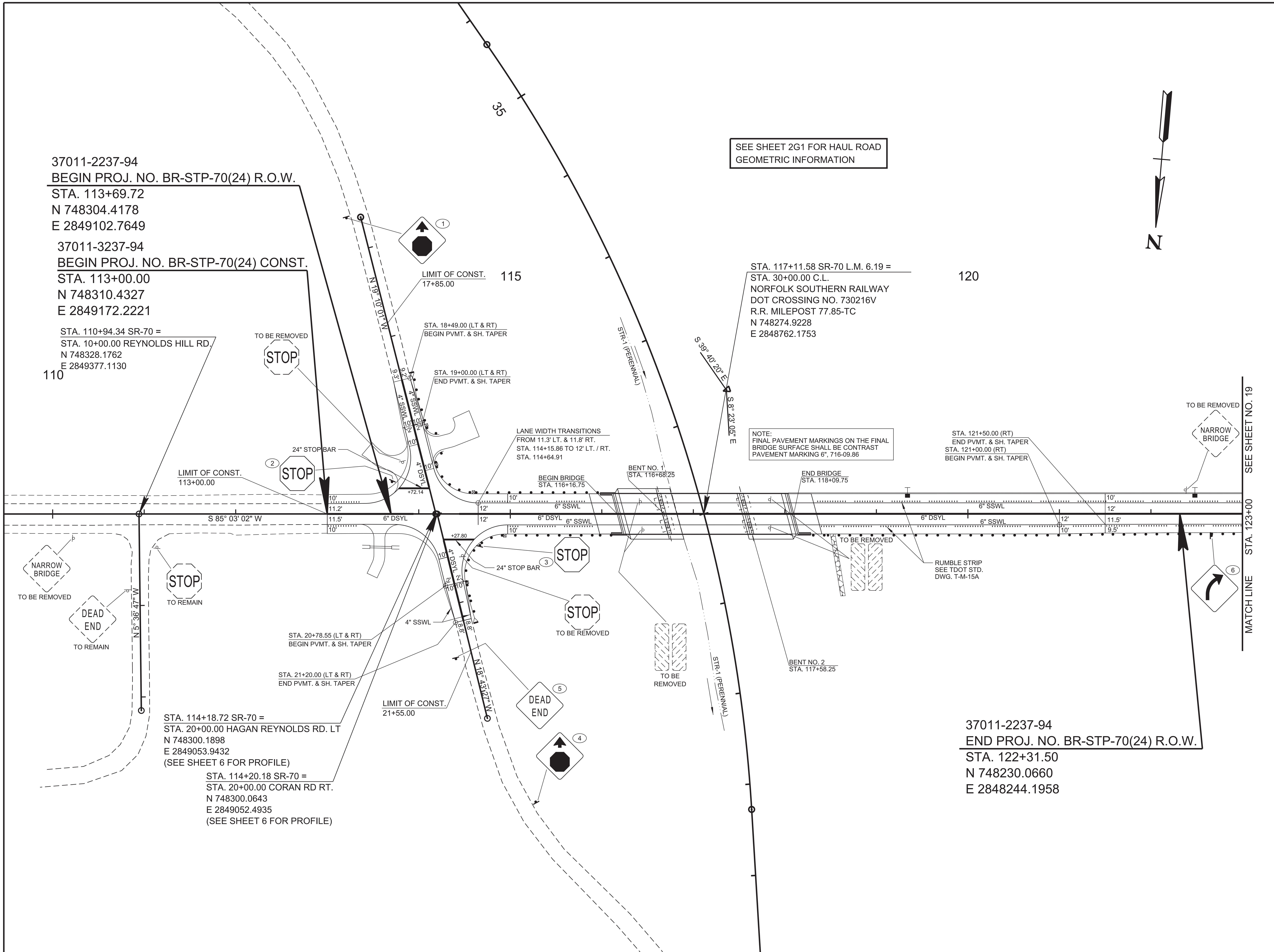
TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	17
PS&E	2025	BR-STP-70(24)	18



SEE SHEET 2G1 FOR HAUL ROAD
GEOMETRIC INFORMATION
N
35
115
120
110
37011-2237-94
BEGIN PROJ. NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178
E 2849102.7649
37011-3237-94
BEGIN PROJ. NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327
E 2849172.2221
STA. 110+94.34 SR-70 =
STA. 10+00.00 REYNOLDS HILL RD.
N 748328.1762
E 2849377.1130
LIMIT OF CONST.
17+85.00
STA. 18+49.00 (LT & RT)
BEGIN PVMT. & SH. TAPER
STA. 19+00.00 (LT & RT)
END PVMT. & SH. TAPER
N 19° 10' 01" W
TO BE REMOVED
STOP
24" STOP BAR
LIMIT OF CONST.
113+00.00
S 85° 03' 02" W
6" DSYL
4" SSWL
4" DSYL
LANE WIDTH TRANSITIONS
FROM 11.3' LT. & 11.8' RT.
STA. 114+15.86 TO 12' LT. / RT.
STA. 114+64.91
BEGIN BRIDGE
STA. 116+16.75
BENT NO. 1
STA. 116+68.25
6" SSWL
STR-1 (PERENNIAL)
STA. 117+11.58 SR-70 L.M. 6.19 =
STA. 30+00.00 C.L.
NORFOLK SOUTHERN RAILWAY
DOT CROSSING NO. 730216V
R.R. MILEPOST 77.85-TC
N 748274.9228
E 2848762.1753
S 39° 40' 20" E
S 8° 23' 05" E
NOTE:
FINAL PAVEMENT MARKINGS ON THE FINAL
BRIDGE SURFACE SHALL BE CONTRAST
PAVEMENT MARKING 6", 716-09.86
END BRIDGE
STA. 118+09.75
STA. 121+50.00 (RT)
END PVMT. & SH. TAPER
STA. 121+00.00 (RT)
BEGIN PVMT. & SH. TAPER
TO BE REMOVED
NARROW BRIDGE
SEE SHEET NO. 19
MATCH LINE STA. 123+00
RUMBLE STRIP
SEE TDOT STD.
DWG. T-M-15A
NARROW BRIDGE
TO BE REMOVED
DEAD END
TO REMAIN
STOP
TO REMAIN
N 5° 36' 47" W
24" STOP BAR
STOP
TO BE REMOVED
STA. 20+78.55 (LT & RT)
BEGIN PVMT. & SH. TAPER
STA. 21+20.00 (LT & RT)
END PVMT. & SH. TAPER
LIMIT OF CONST.
21+55.00
N 18° 43' 27" W
DEAD END
TO BE REMOVED
BENT NO. 2
STA. 117+58.25
STA. 114+18.72 SR-70 =
STA. 20+00.00 HAGAN REYNOLDS RD. LT
N 748300.1898
E 2849053.9432
(SEE SHEET 6 FOR PROFILE)
STA. 114+20.18 SR-70 =
STA. 20+00.00 CORAN RD RT.
N 748300.0643
E 2849052.4935
(SEE SHEET 6 FOR PROFILE)
37011-2237-94
END PROJ. NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660
E 2848244.1958

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SEALED BY

J. BRIAN LEE
REGISTERED ENGINEER
STATE OF TENNESSEE

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING AND PAVEMENT MARKING PLAN

STA.113+00 TO STA.123+00

SCALE: 1"=50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	18
PS&E	2025	BR-STP-70(24)	19

125

130

135

37011-3237-94
END PROJ. NO. BR-STP-70(24) CONST.
STA. 129+50.00
N 748175.6013
E 2847527.9139

N

SEE SHEET NO. 18

MATCH LINE

STA. 123+00

7 PERSIA
UNINCORPORATED

CATCH

S 85° 03' 02" W

6" DSYL

RUMBLE STRIP
SEE TDOT STD.
DWG. T-M-15A

HONEYCUT CREEK
STR-2 (PERENNIAL)

LIMIT OF CONST.
END MILL & OVERLAY
129+50.00

STA. 126+84.42 (LT)
BEGIN PAVE. & SH. TAPER

STA. 127+34.42 (LT)
END PAVE. & SH. TAPER

INV. 1086.06

10'
8.5'
6" SSWL
12'
11.6'
6" SSWL
11.2'
11.6'
8'
7'
11.2'
11.7'

INV. 1086.01

88.8' OF 3 @ 12' X 6' RCBB
ID#37SR0700011
(EXIST. TO REMAIN)

STR-2 (PERENNIAL)

HONEYCUT CREEK

N 76° 32' 58" W

JCT
66
Tennessee
TO REMAIN

TO REMAIN

SEALED BY

J. BRIAN LEE
REGISTERED ENGINEER
AGRICULTURE
SUMNER
No. 107209
STATE OF TENNESSEE

05/21/2026

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING AND PAVEMENT MARKING PLAN

STA.123+00 TO STA.129+50

SCALE: 1"=50'

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ALL SIGNS SHOWN WITH DESIGNATIONS ARE TO BE FABRICATED AS DETAILED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (CURRENT EDITION)

SEE STD. DWG. NO. T-S-19

THE FOLLOWING STANDARD DRAWINGS APPLY UNLESS OTHERWISE NOTED IN THE REMARKS: FLAT SHEET (T-S SERIES 10, 12, 16, 17, 19, 20); EXTRUDED PANEL (T-S SERIES 6, 9, 13, 14); WALL/BARRIER MOUNTED (T-S-21), MULTI-DIRECTIONAL BASE (T-S SERIES 23A, 23B, 23C); RAILROAD (T-S-16)

SIGN NO	LEGEND	SHEET NO	SIZE				COPY				SHIELD	ARROW	SIGN FACE			STEEL DESIGN (BREAK-AWAY)					MINIMUM VERTICAL CLEARANCE	REMARKS
			LENGTH	HEIGHT	RADIUS	BORDER WIDTH	CAPITAL	LOWER CASE	NUMERAL	SERIES			COPY	BACKGROUND	MATERIAL	SUPPORT TYPE	SUPPORT LENGTH	FOOTING	CONC. CU. YD.	REIN STEEL LBS.		
1 4		W3-1	18	30"	30"								BLACK (ARROW) RED (STOP) (REF.)	YELLOW (FLOR.)	0.080" SHEET ALUM.	P4	h1=15'-3"				5'-0"	USE YELLOW REFLECTIVE STRIP SIGN POST DELINEATION
2 3		R1-1	18	36"	36"								WHITE	RED (REF.)	0.080" SHEET ALUM.	U6 U6	h1=12'-0" h1=14'-6"				5'-0"	USE RED REFLECTIVE STRIP SIGN POST DELINEATION
5		W14-1	18	30"	30"								BLACK	YELLOW (REF.)	0.080" SHEET ALUM.	U7	h1=11'-0"				5'-0"	
6		W1-2R	18	30"	30"								BLACK	YELLOW (REF.)	0.080" SHEET ALUM.	P3	h1=14'-0"				5'-0"	
7		TN-4	19	48"	24"								WHITE (REF.)	GREEN (REF.)	0.100" SHEET ALUM.	MOUNTED ON BARRIER RAIL SEE TDOT STD. DWG. T-S-21						USE ITEM 713-30.10

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	19
PS&E	2025	BR-STP-70(24)	20

U-POST SUBSTITUTION TABLE	
BID ITEM 713-11.01	SUBSTITUTION ALLOWED
2'/FT. U1	2'/FT. MUI OR 2'/FT. R1
2.5'/FT. U3	2.5'/FT. MU3 OR 3'/FT. R2*
3'/FT. U6	
4'/FT. U7	NO SUBSTITUTES

* PAID AT A RATE OF 2.5'/FT.

SEALED BY

05/21/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN SCHEDULE

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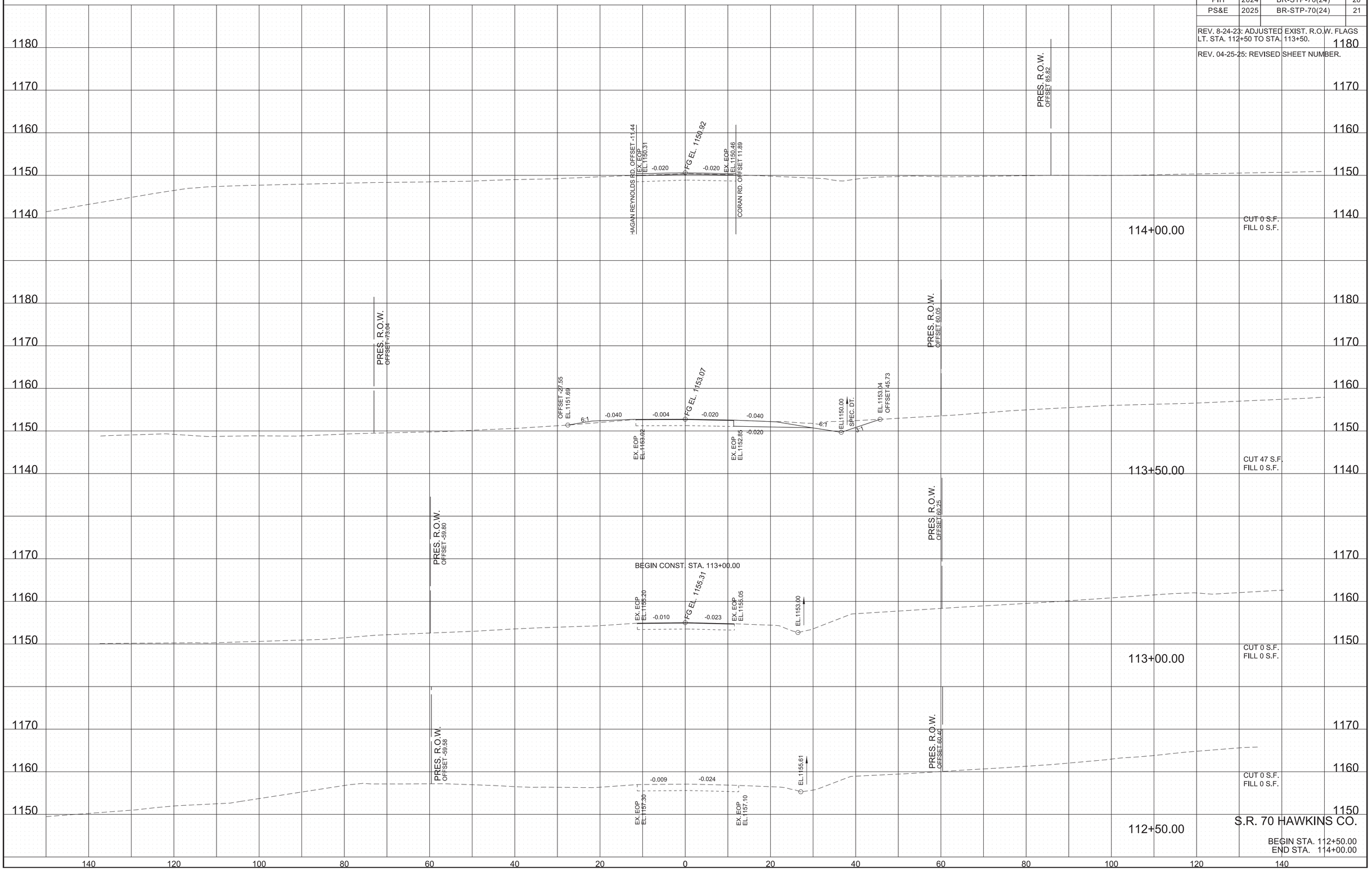
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	18
PIH	2024	BR-STP-70(24)	20
PS&E	2025	BR-STP-70(24)	21

REV. 8-24-23: ADJUSTED EXIST. R.O.W. FLAGS LT. STA. 112+50 TO STA. 113+50.

REV. 04-25-25: REVISED SHEET NUMBER.



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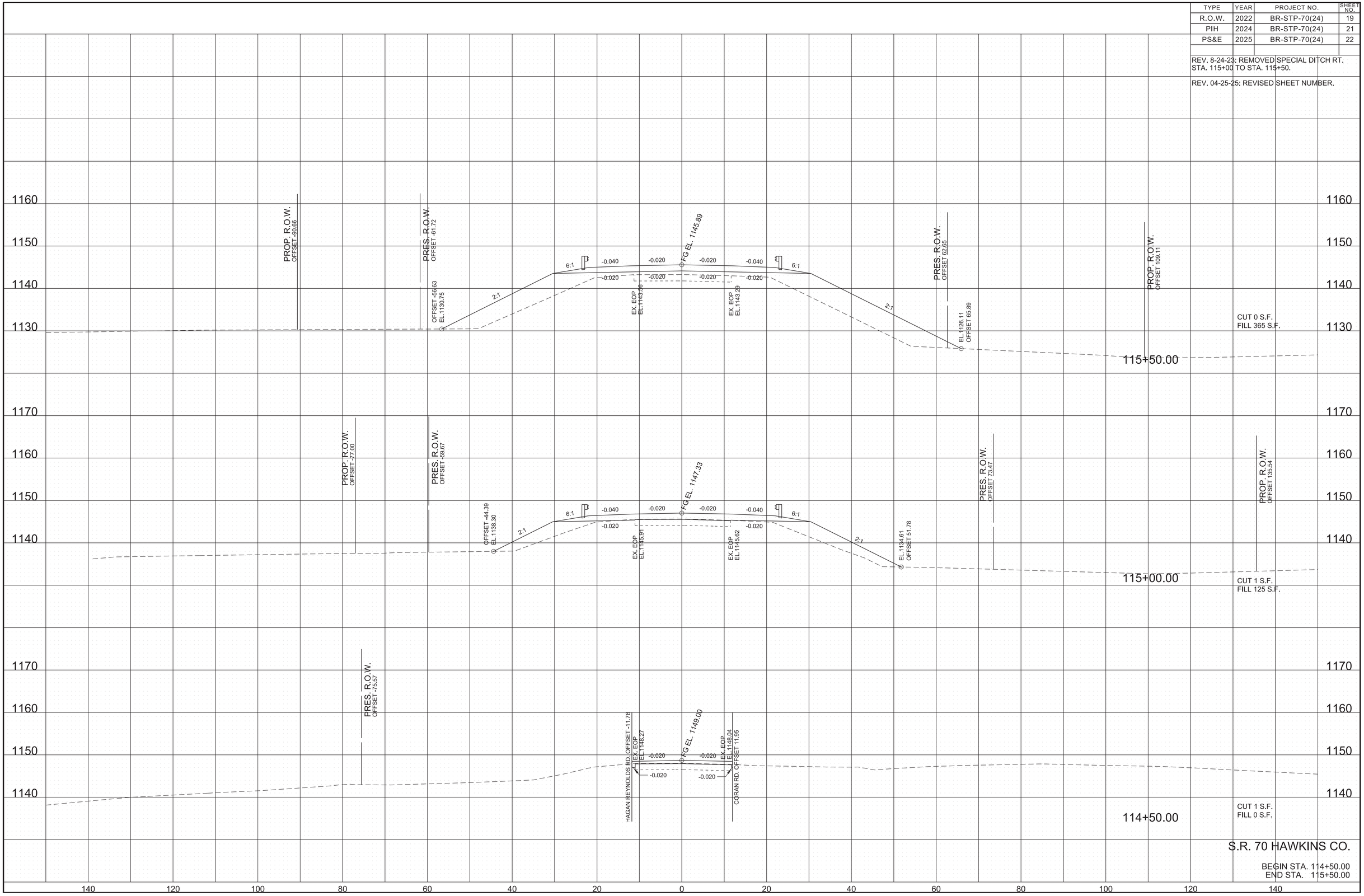
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	19
PIH	2024	BR-STP-70(24)	21
PS&E	2025	BR-STP-70(24)	22

REV. 8-24-23: REMOVED SPECIAL DITCH RT. STA. 115+00 TO STA. 115+50.

REV. 04-25-25: REVISED SHEET NUMBER.



S.R. 70 HAWKINS CO.

BEGIN STA. 114+50.00
END STA. 115+50.00

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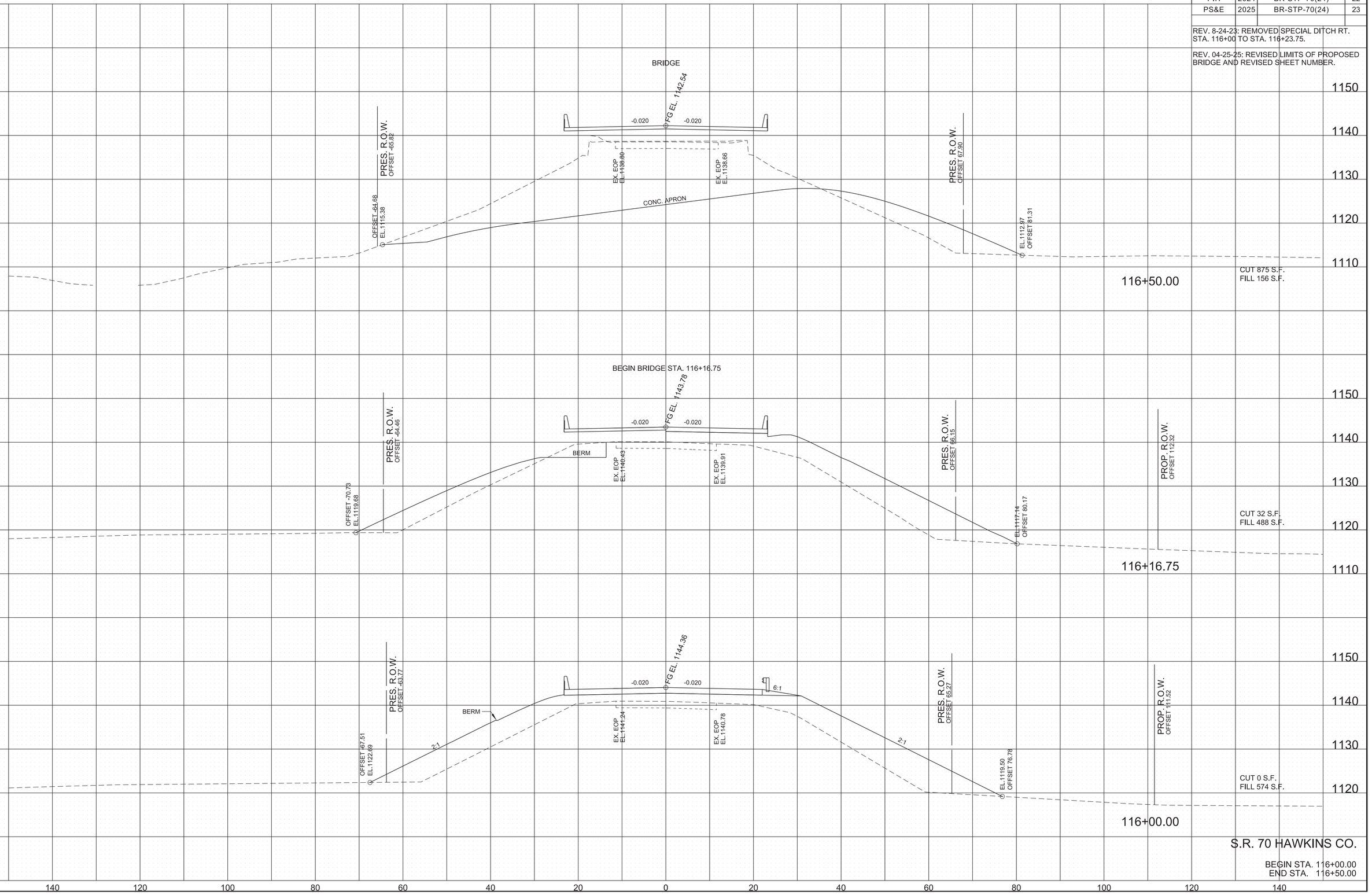
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	20
PIH	2024	BR-STP-70(24)	22
PS&E	2025	BR-STP-70(24)	23

REV. 8-24-23: REMOVED SPECIAL DITCH RT. STA. 116+00 TO STA. 116+23.75.

REV. 04-25-25: REVISED LIMITS OF PROPOSED BRIDGE AND REVISED SHEET NUMBER.



S.R. 70 HAWKINS CO.

BEGIN STA. 116+00.00
END STA. 116+50.00

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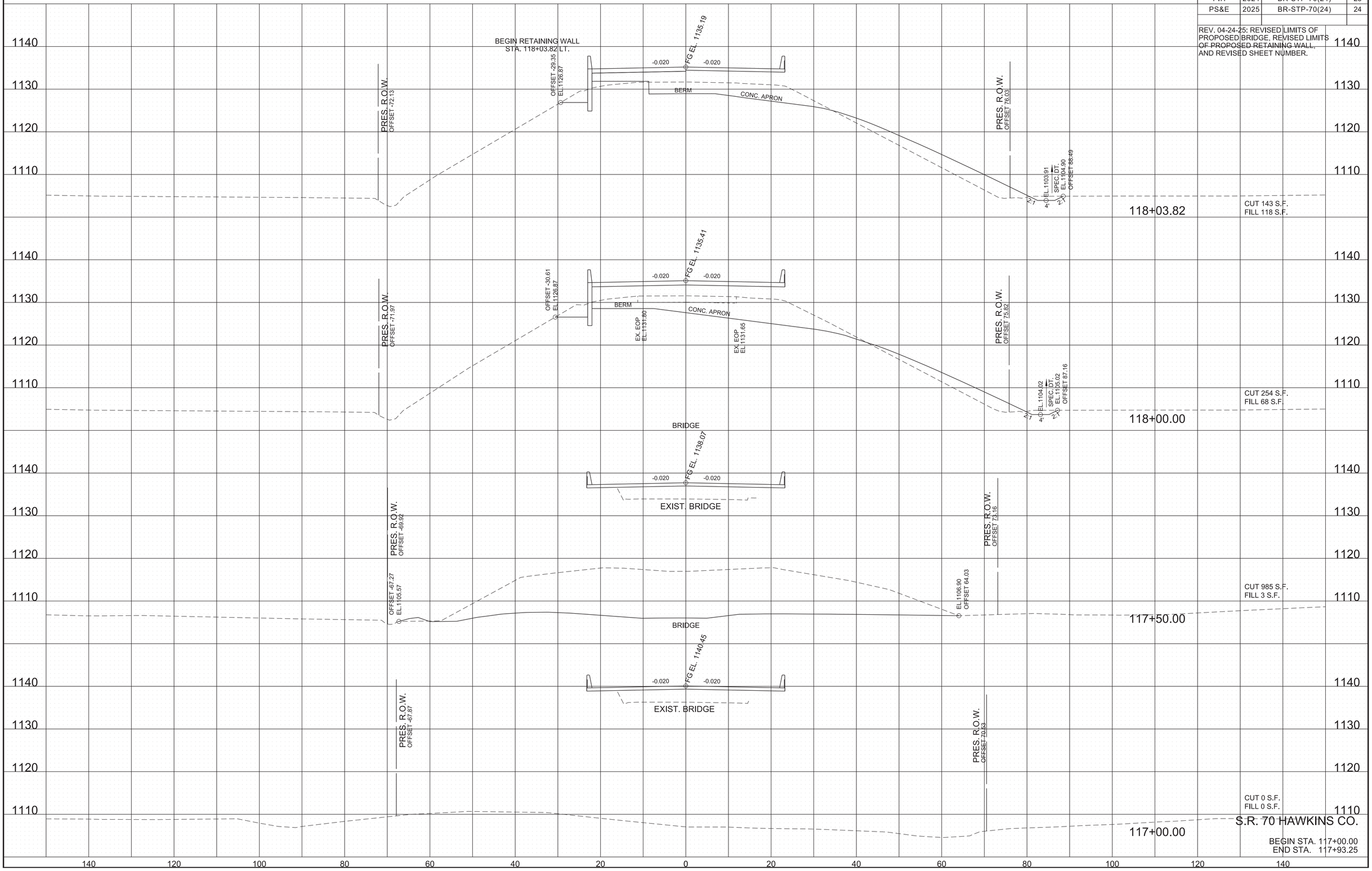
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	21
PIH	2024	BR-STP-70(24)	23
PS&E	2025	BR-STP-70(24)	24

REV. 04-24-25: REVISED LIMITS OF PROPOSED BRIDGE, REVISED LIMITS OF PROPOSED RETAINING WALL, AND REVISED SHEET NUMBER.



S.R. 70 HAWKINS CO.

BEGIN STA. 117+00.00
END STA. 117+93.25

5/20/2025 5:27:11 PM
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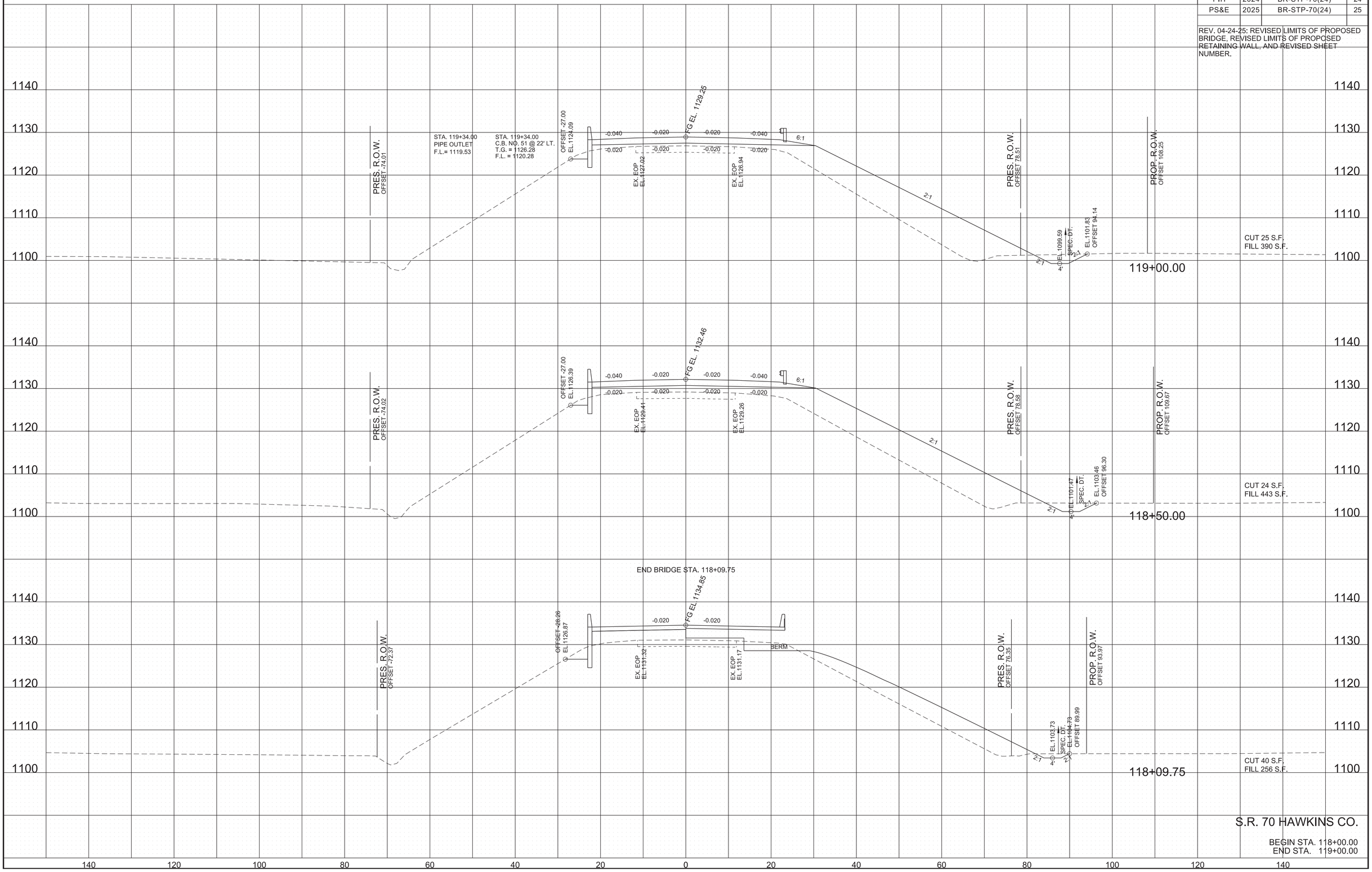
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	22
PIH	2024	BR-STP-70(24)	24
PS&E	2025	BR-STP-70(24)	25

REV. 04-24-25: REVISED LIMITS OF PROPOSED BRIDGE, REVISED LIMITS OF PROPOSED RETAINING WALL, AND REVISED SHEET NUMBER.



S.R. 70 HAWKINS CO.

BEGIN STA. 118+00.00
END STA. 119+00.00

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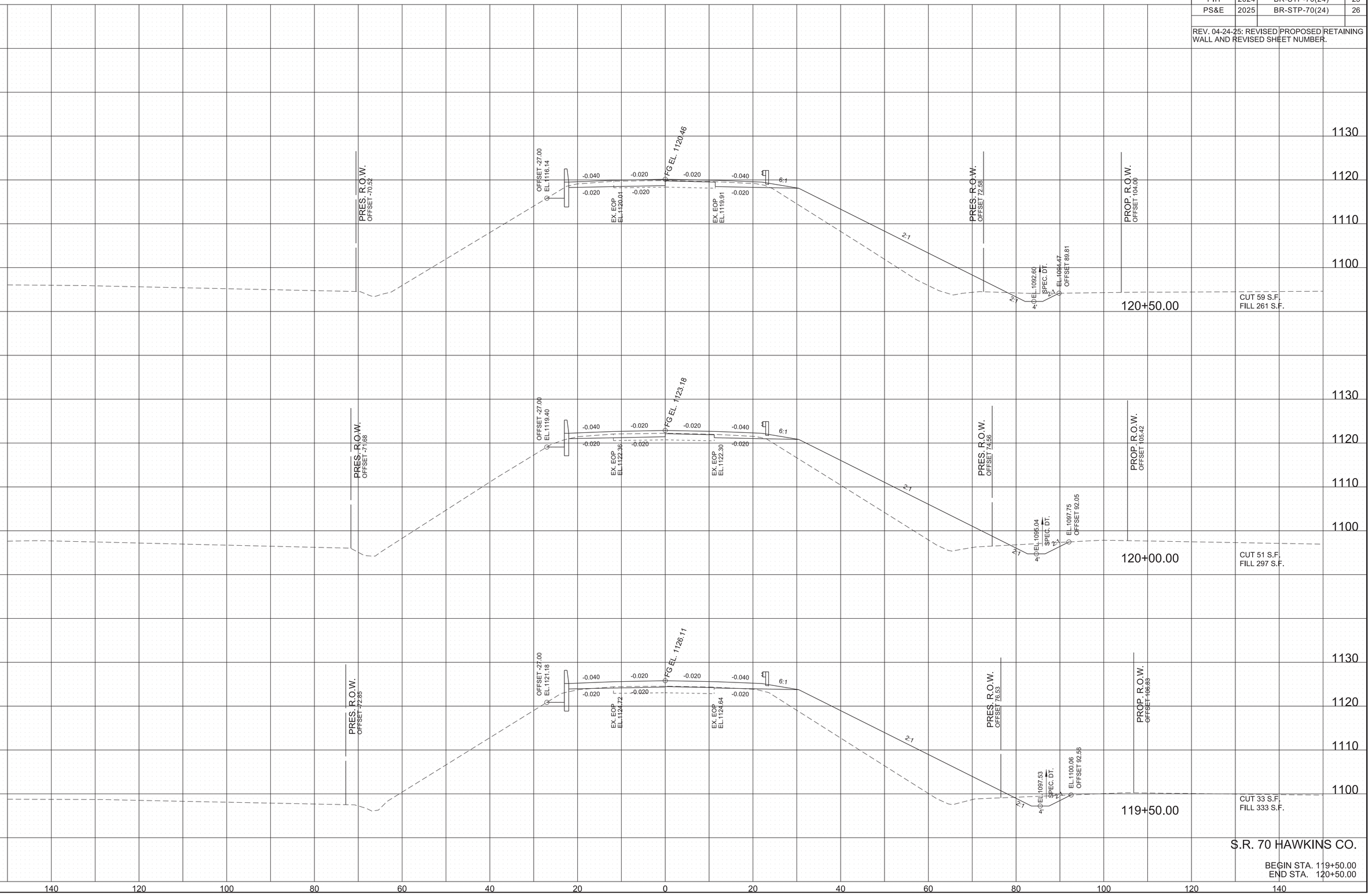
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	23
PIH	2024	BR-STP-70(24)	25
PS&E	2025	BR-STP-70(24)	26

REV. 04-24-25: REVISED PROPOSED RETAINING WALL AND REVISED SHEET NUMBER.



S.R. 70 HAWKINS CO.

BEGIN STA. 119+50.00
END STA. 120+50.00

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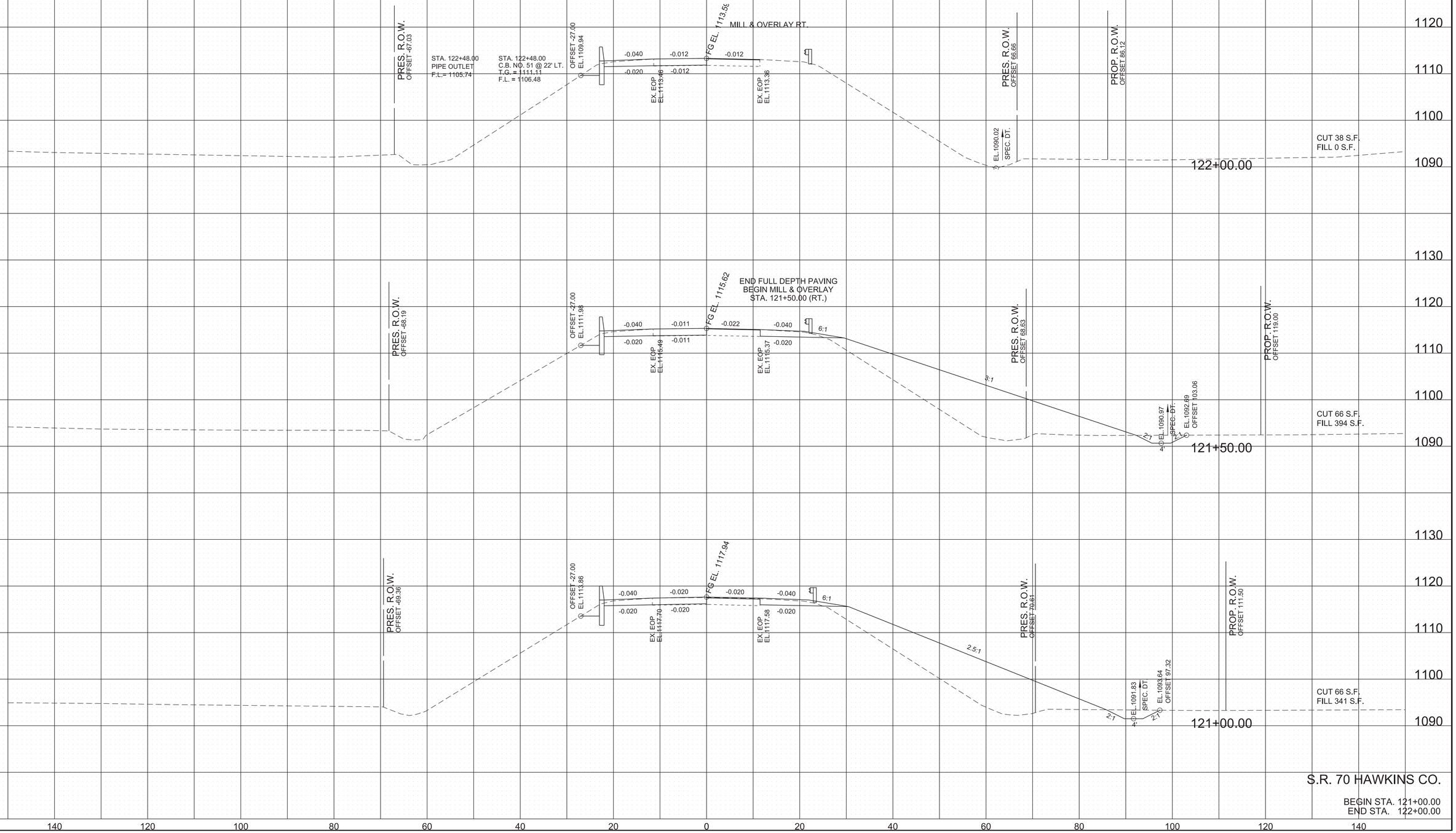
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	24
PIH	2024	BR-STP-70(24)	26
PS&E	2025	BR-STP-70(24)	27

REV. 04-24-25: REVISED PROPOSED RETAINING WALL AND REVISED SHEET NUMBER.



S.R. 70 HAWKINS CO.

BEGIN STA. 121+00.00
END STA. 122+00.00

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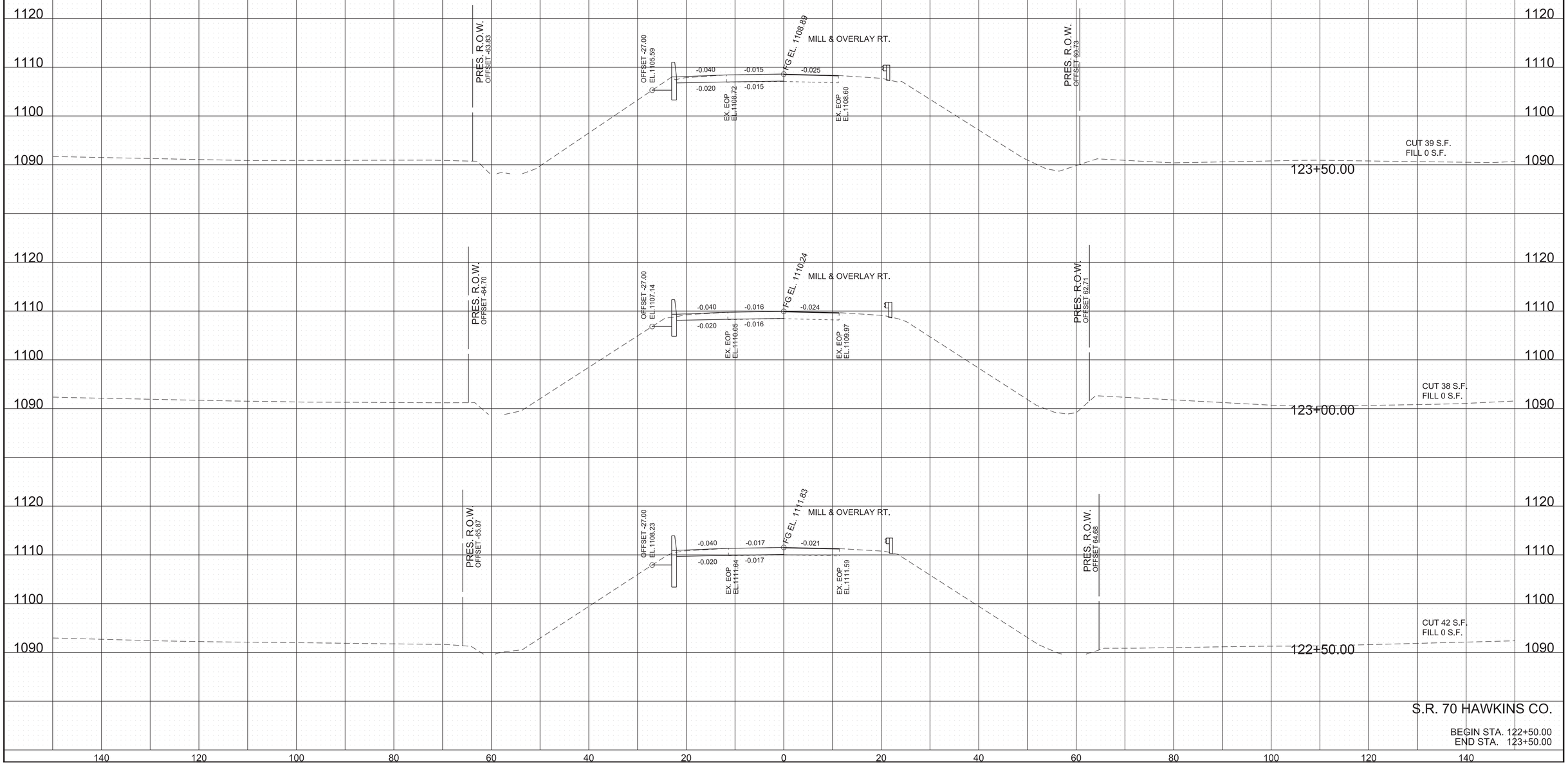
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	25
PIH	2024	BR-STP-70(24)	27
PS&E	2025	BR-STP-70(24)	28

REV. 04-24-25: REVISED PROPOSED RETAINING WALL AND REVISED SHEET NUMBER.



S.R. 70 HAWKINS CO.

BEGIN STA. 122+50.00
END STA. 123+50.00

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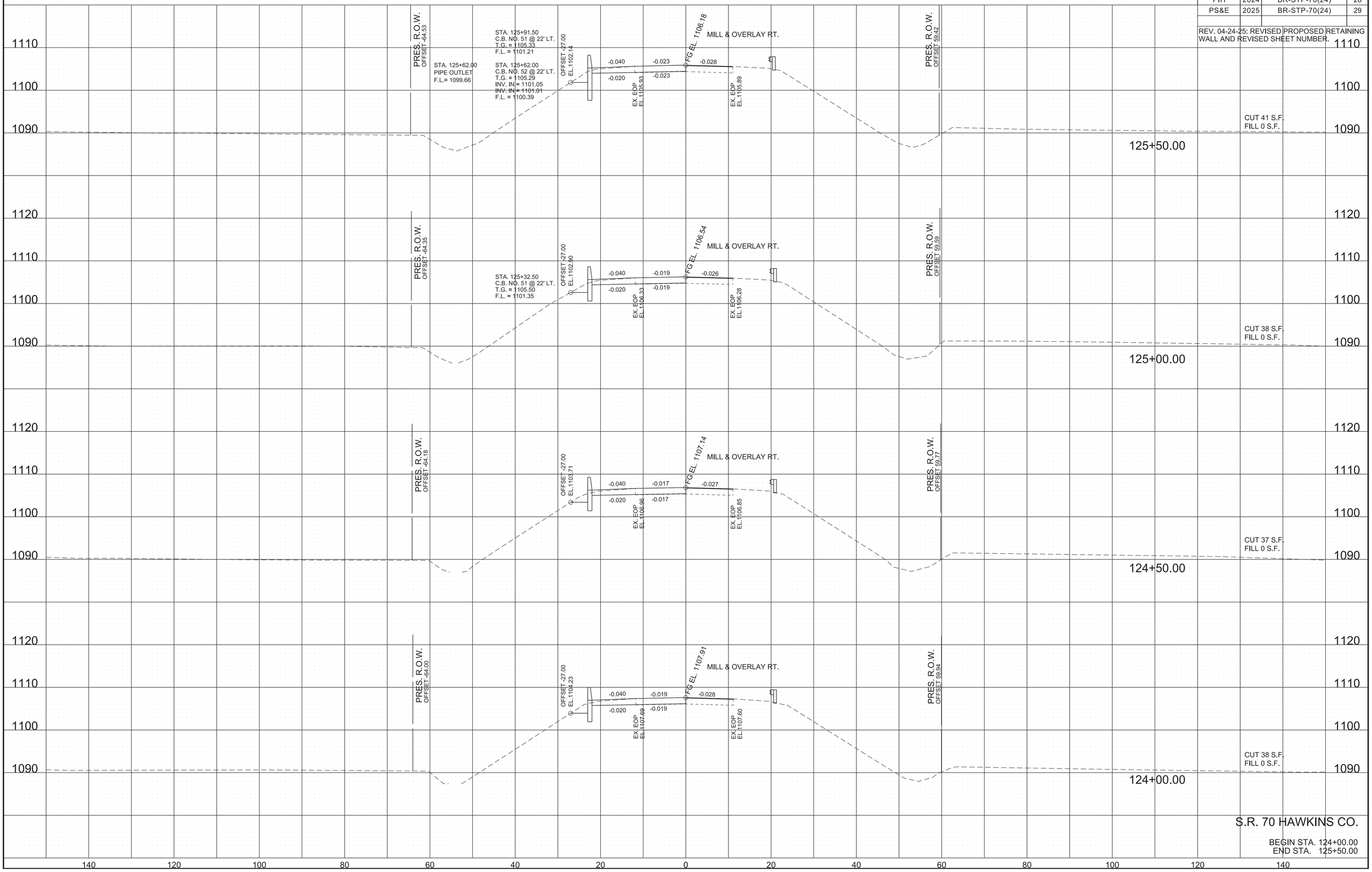
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	26
PIH	2024	BR-STP-70(24)	28
PS&E	2025	BR-STP-70(24)	29

REV. 04-24-25: REVISED PROPOSED RETAINING WALL AND REVISED SHEET NUMBER.



S.R. 70 HAWKINS CO.

BEGIN STA. 124+00.00
END STA. 125+50.00

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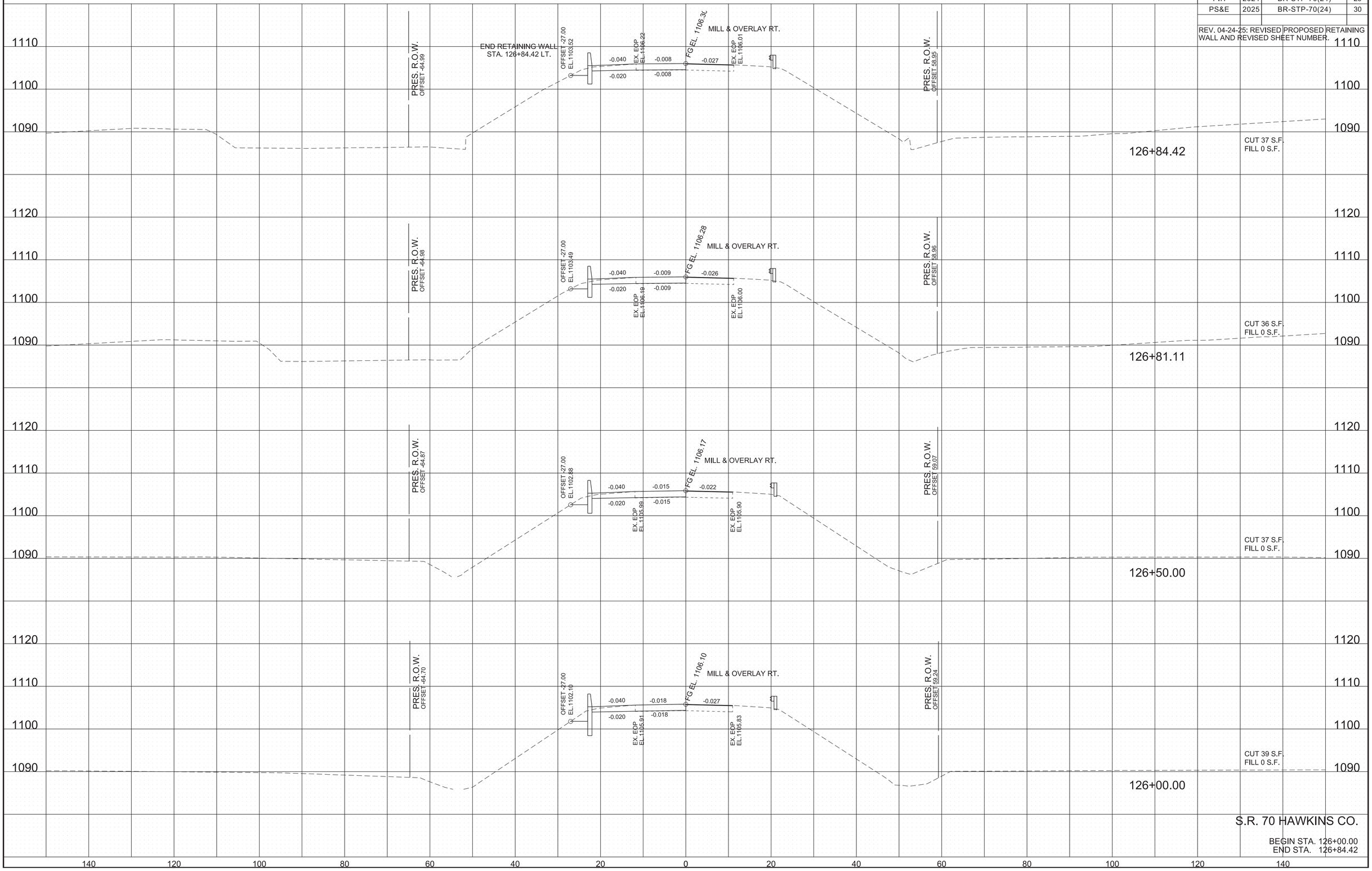
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	27
PIH	2024	BR-STP-70(24)	29
PS&E	2025	BR-STP-70(24)	30

REV. 04-24-25: REVISED PROPOSED RETAINING WALL AND REVISED SHEET NUMBER.



S.R. 70 HAWKINS CO.

BEGIN STA. 126+00.00
END STA. 126+84.42

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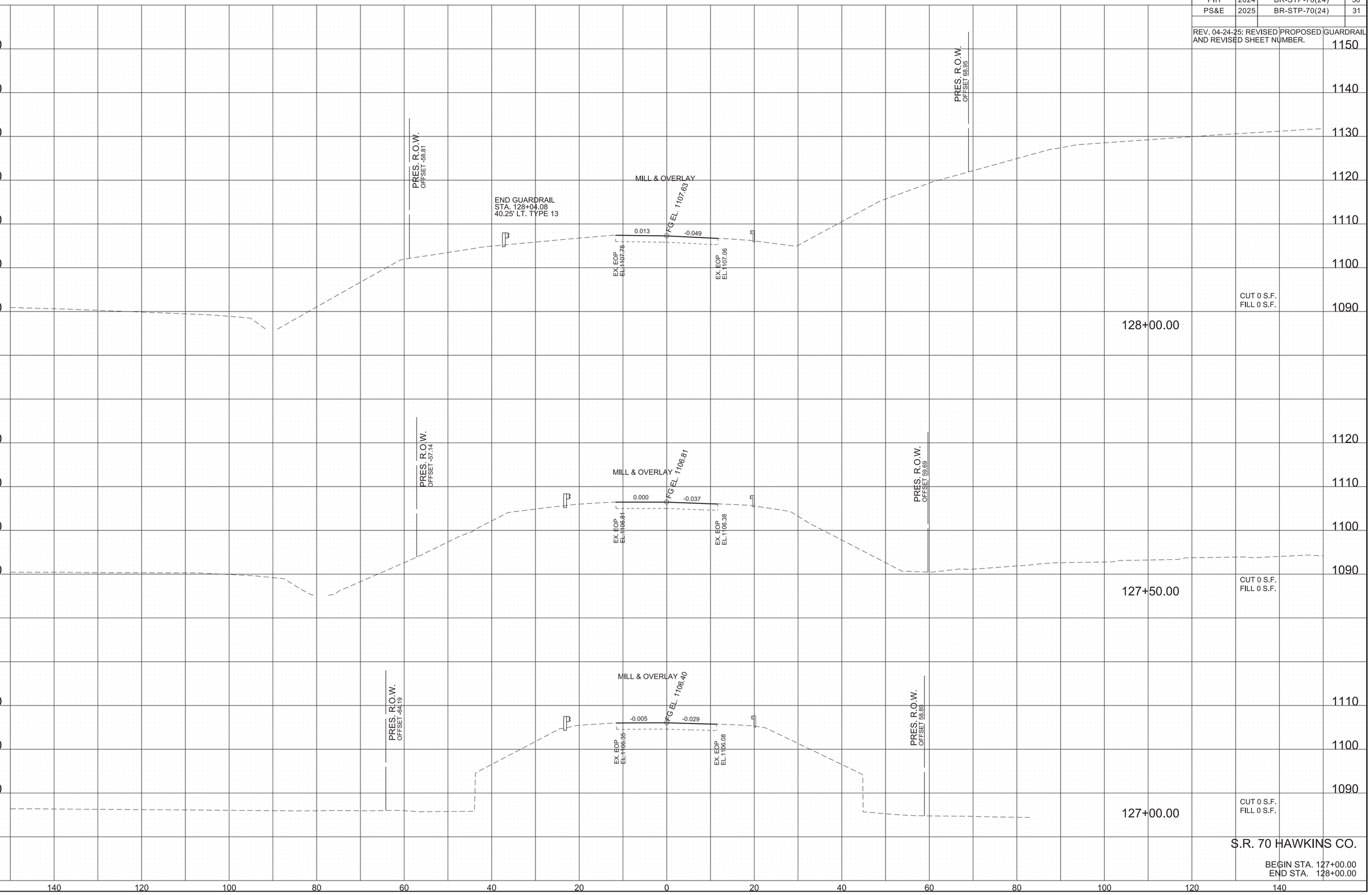
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	28
PIH	2024	BR-STP-70(24)	30
PS&E	2025	BR-STP-70(24)	31

REV. 04-24-25: REVISED PROPOSED GUARDRAIL AND REVISED SHEET NUMBER.



S.R. 70 HAWKINS CO.

BEGIN STA. 127+00.00
END STA. 128+00.00

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	29
PIH	2024	BR-STP-70(24)	31
PS&E	2025	BR-STP-70(24)	32

REV. 04-24-25: REVISED PROPOSED GUARDRAIL AND REVISED SHEET NUMBER.

PRES. R.O.W.
OFFSET -61.20

MILL & OVERLAY

PTG EL. 1108.64

END GUARDRAIL
STA. 128+92.91
20' RT. TYPE 38

-0.033

-0.071

13:1

EX. EOP
EL. 1109.24

EX. EOP
EL. 1108.03

PRES. R.O.W.
OFFSET -80.04

128+50.00

CUT 0 S.F.
FILL 0 S.F.

PRES. R.O.W.
OFFSET -58.97

MILL & OVERLAY

PTG EL. 1107.71

0.014

-0.050

4:1

EX. EOP
EL. 1107.86

EX. EOP
EL. 1107.12

PRES. R.O.W.
OFFSET -69.89

128+04.08

CUT 0 S.F.
FILL 0 S.F.

S.R. 70 HAWKINS CO.

BEGIN STA. 128+04.08
END STA. 128+50.00

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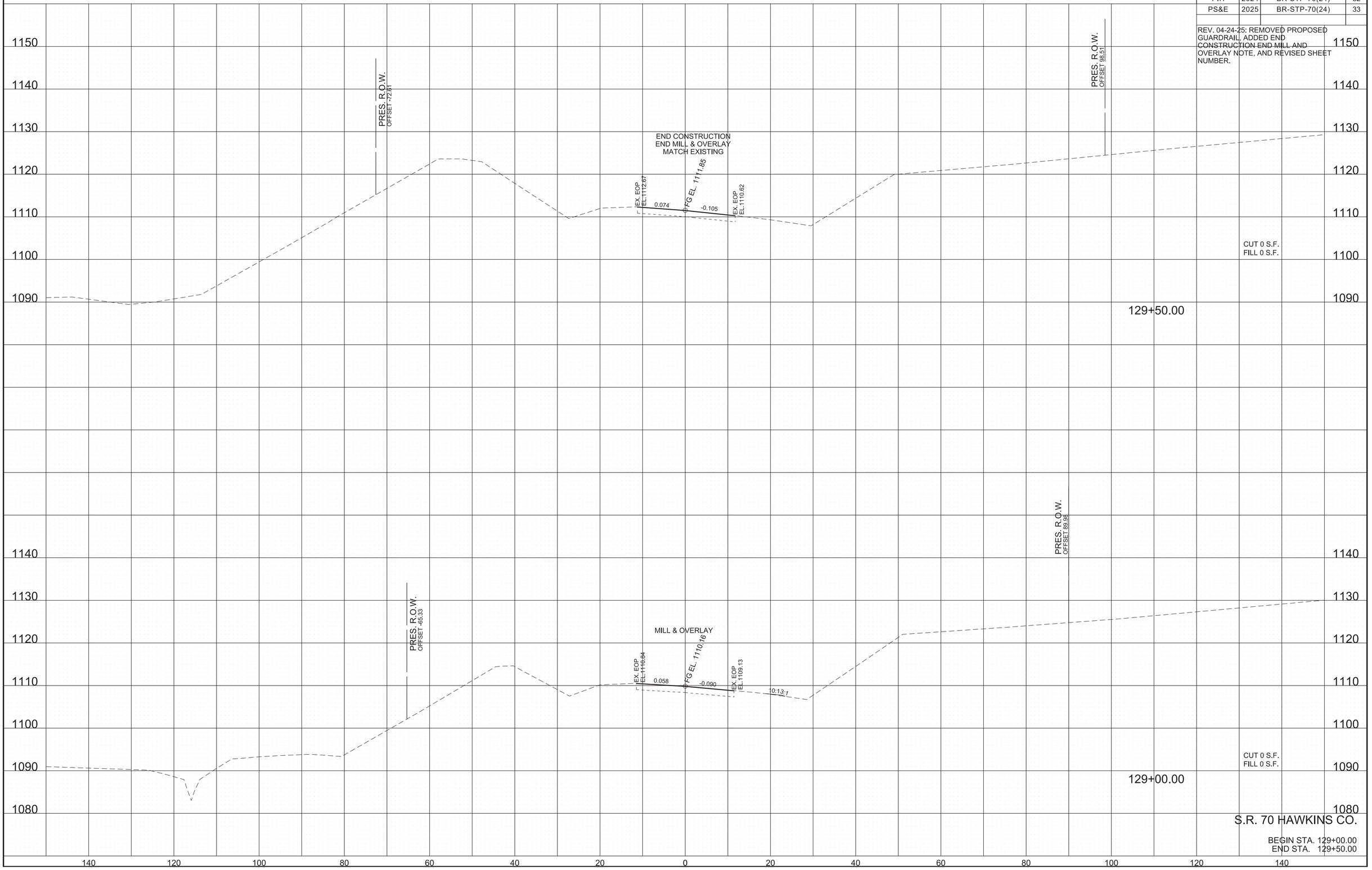
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	30
PIH	2024	BR-STP-70(24)	32
PS&E	2025	BR-STP-70(24)	33

REV. 04-24-25: REMOVED PROPOSED GUARDRAIL, ADDED END CONSTRUCTION END MILL AND OVERLAY NOTE, AND REVISED SHEET NUMBER.



S.R. 70 HAWKINS CO.

BEGIN STA. 129+00.00
END STA. 129+50.00

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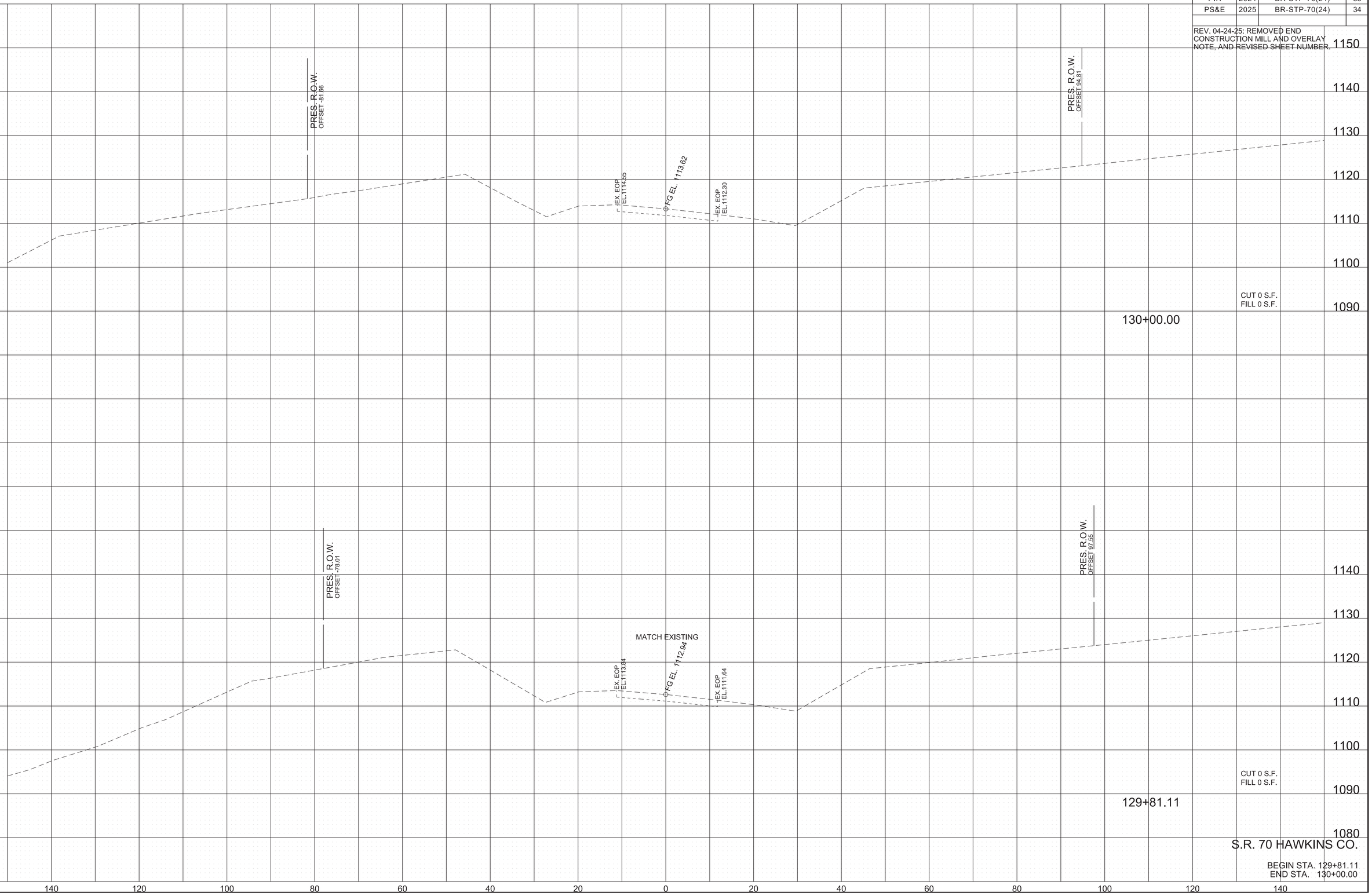
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	31
PIH	2024	BR-STP-70(24)	33
PS&E	2025	BR-STP-70(24)	34

REV. 04-24-25: REMOVED END CONSTRUCTION MILL AND OVERLAY NOTE, AND REVISED SHEET NUMBER.



S.R. 70 HAWKINS CO.

BEGIN STA. 129+81.11
END STA. 130+00.00

5/20/2025 5:27:19 PM
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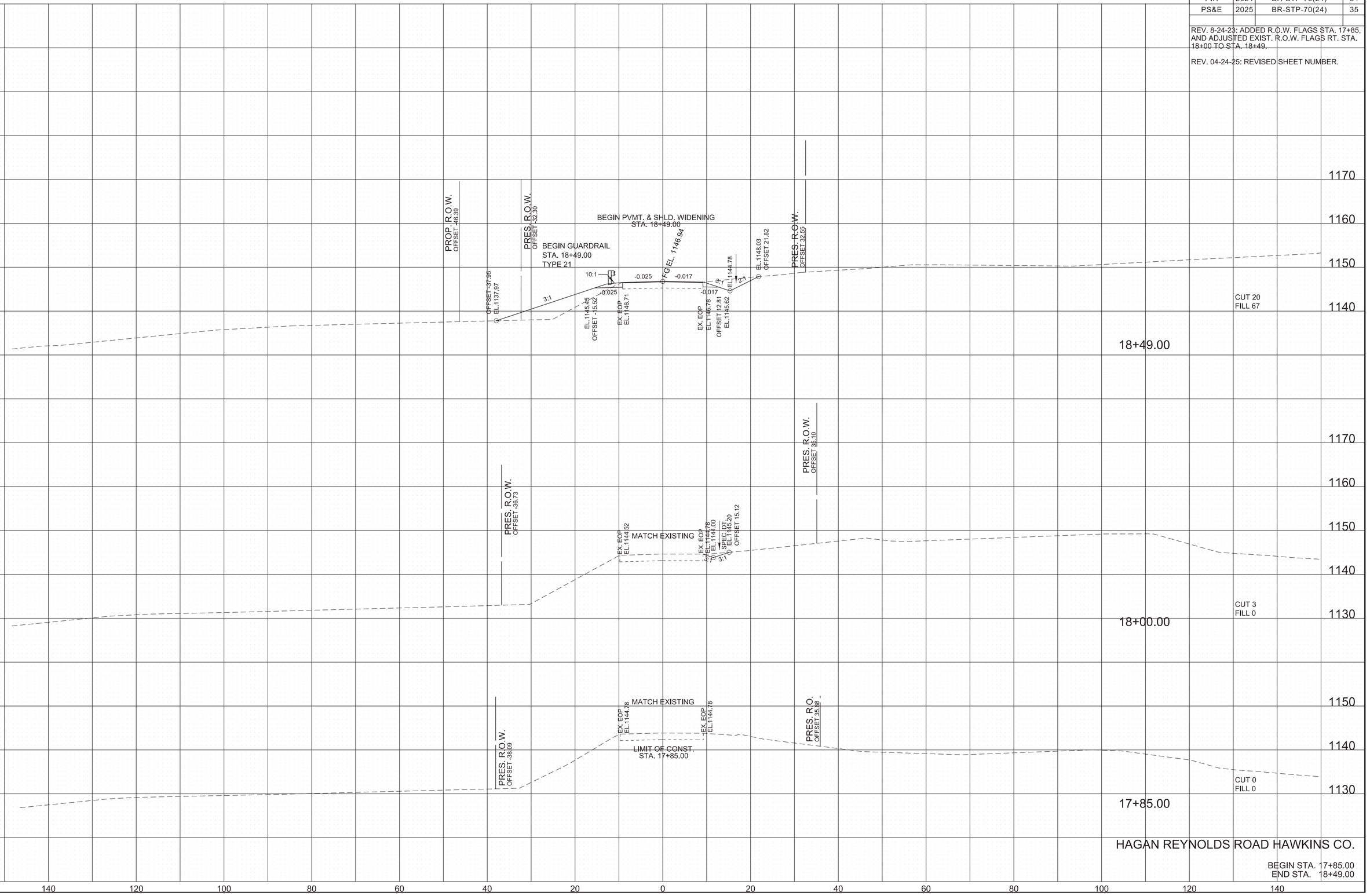
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	32
PIH	2024	BR-STP-70(24)	34
PS&E	2025	BR-STP-70(24)	35

REV. 8-24-23: ADDED R.O.W. FLAGS STA. 17+85, AND ADJUSTED EXIST. R.O.W. FLAGS RT. STA. 18+00 TO STA. 18+49.

REV. 04-24-25: REVISED SHEET NUMBER.



HAGAN REYNOLDS ROAD HAWKINS CO.

BEGIN STA. 17+85.00
END STA. 18+49.00

5/20/2025 5:27:20 PM
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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	33
PIH	2024	BR-STP-70(24)	35
PS&E	2025	BR-STP-70(24)	36

REV. 8-24-23: ADJUSTED EXIST. R.O.W. FLAGS RT. STA. 18+50 TO STA. 19+00.

REV. 04-24-25: REVISED SHEET NUMBER.

5/20/2025 5:27:21 PM
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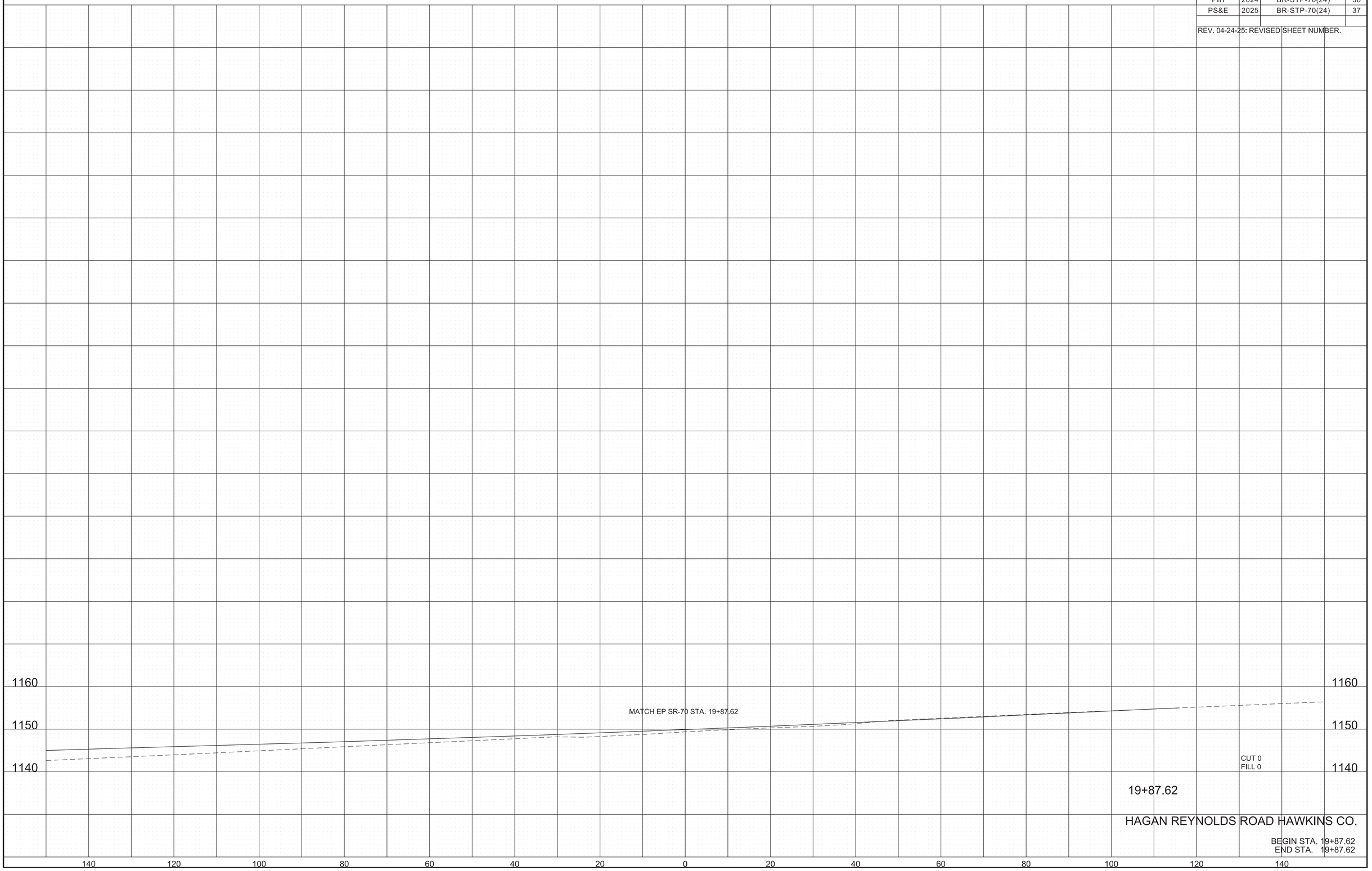
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	34
PIH	2024	BR-STP-70(24)	36
PS&E	2025	BR-STP-70(24)	37

REV. 04-24-25: REVISED SHEET NUMBER.



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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	35
PIH	2024	BR-STP-70(24)	37
PS&E	2025	BR-STP-70(24)	38

REV. 04-24-25: REVISED SHEET NUMBER.

CORAN ROAD HAWKINS CO.

BEGIN STA. 20+12.36
END STA. 21+00.00

5/20/2025 5:27:22 PM
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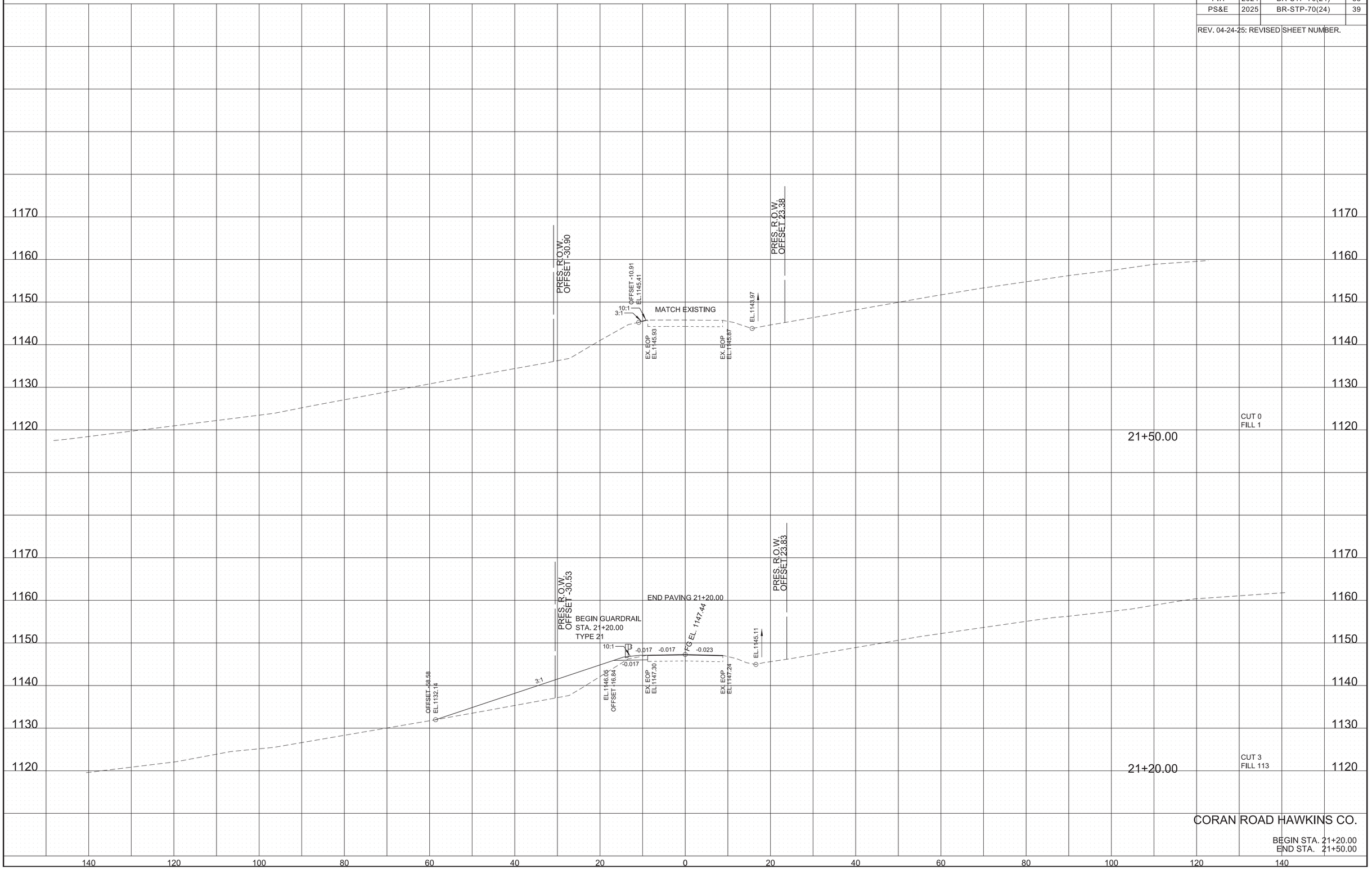
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	36
PIH	2024	BR-STP-70(24)	38
PS&E	2025	BR-STP-70(24)	39

REV. 04-24-25: REVISED SHEET NUMBER.



CORAN ROAD HAWKINS CO.

BEGIN STA. 21+20.00
END STA. 21+50.00

5/20/2025 5:27:22 PM
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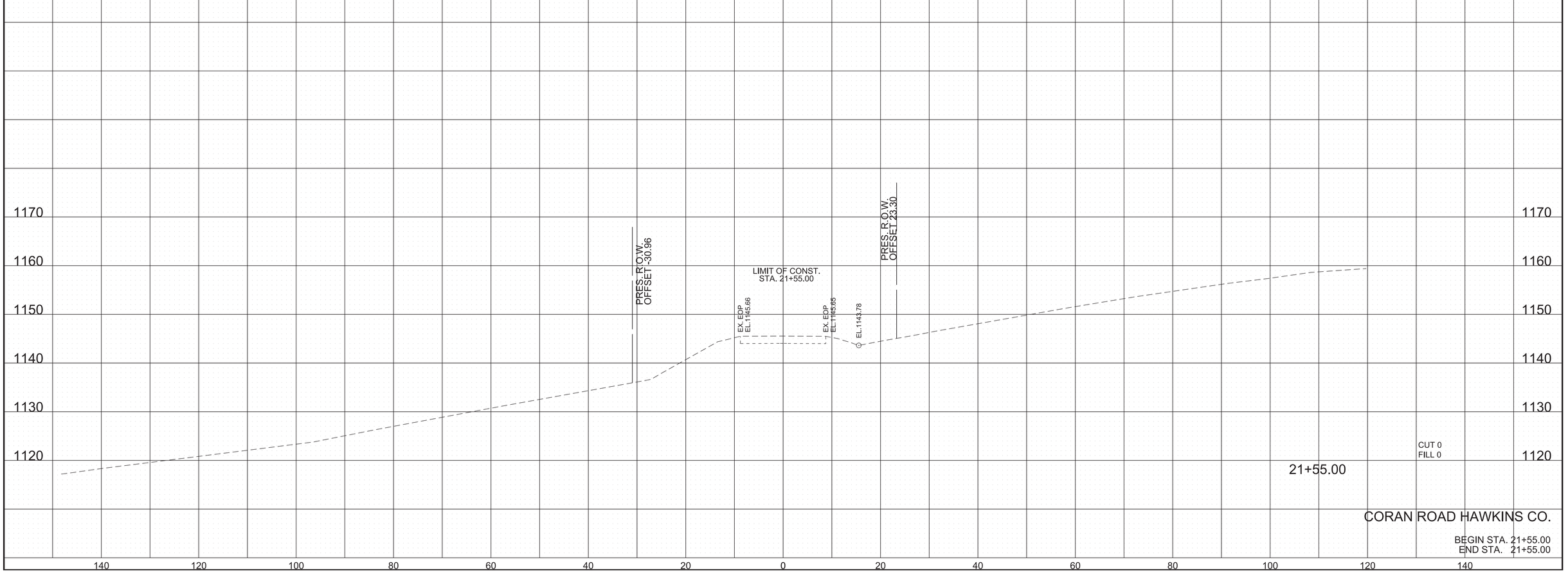
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	37
PIH	2024	BR-STP-70(24)	39
PS&E	2025	BR-STP-70(24)	40

REV. 04-24-25: REVISED SHEET NUMBER.



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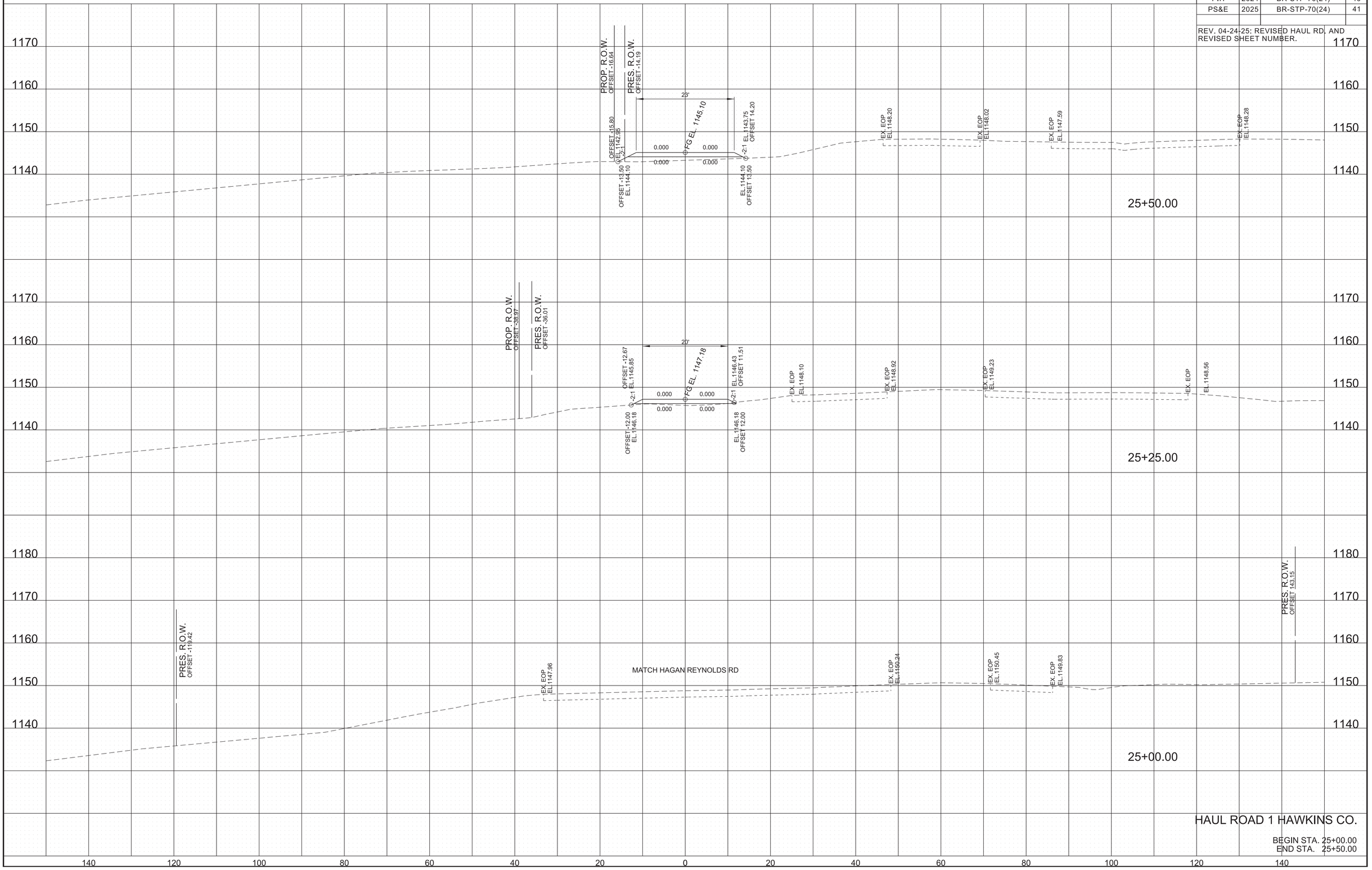
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	38
PIH	2024	BR-STP-70(24)	40
PS&E	2025	BR-STP-70(24)	41

REV. 04-24-25: REVISED HAUL RD. AND REVISED SHEET NUMBER.



HAUL ROAD 1 HAWKINS CO.

BEGIN STA. 25+00.00
END STA. 25+50.00

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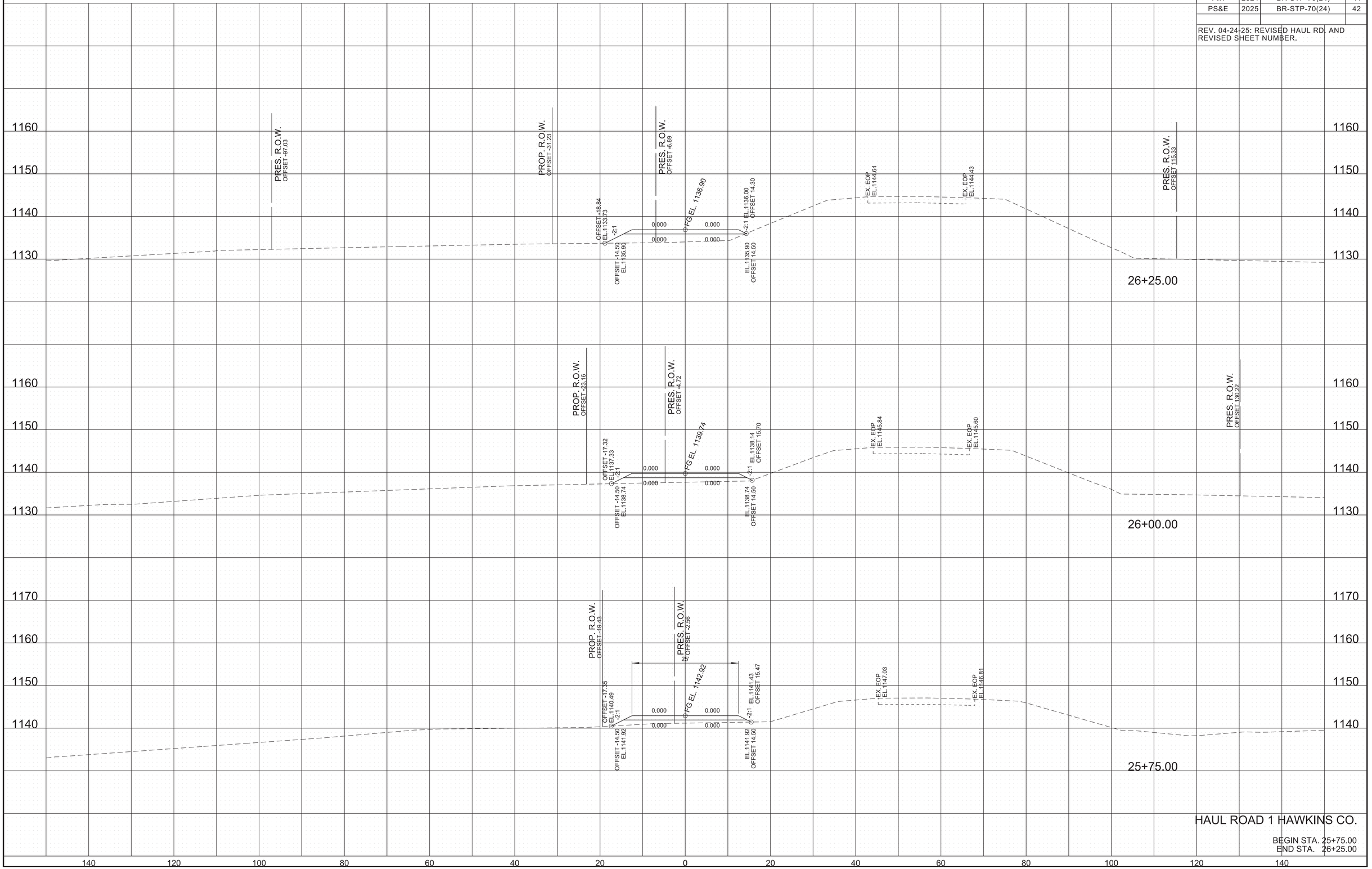
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	39
PIH	2024	BR-STP-70(24)	41
PS&E	2025	BR-STP-70(24)	42

REV. 04-24-25: REVISED HAUL RD. AND REVISED SHEET NUMBER.



HAUL ROAD 1 HAWKINS CO.

BEGIN STA. 25+75.00
END STA. 26+25.00

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T:\TDOT\Hawkins_SR-70\HaulRd1XSections.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	40
PIH	2024	BR-STP-70(24)	42
PS&E	2025	BR-STP-70(24)	43

REV. 04-24-25: REVISED HAUL RD. AND REVISED SHEET NUMBER.

27+00.00

PRES. R.O.W. OFFSET -38.84 EL.1121.83
-2:1
PRES. R.O.W. OFFSET -10.68
OFFSET -14.50 EL.1134.00
FG EL. 1135.00
0.000 0.000 0.000 0.000
-2:1 EL.1132.65 OFFSET 17.20
EL.1134.00 OFFSET 14.50
EX. EOP EL.1141.07
EX. EOP EL.1140.58
PRES. R.O.W. OFFSET 66.91
PRES. R.O.W. OFFSET 118.70

26+75.00

PRES. R.O.W. OFFSET -30.07 EL.1126.22
-2:1
PRES. R.O.W. OFFSET -9.65
OFFSET -14.50 EL.1134.00
FG EL. 1135.00
0.000 0.000 0.000 0.000
PRES. R.O.W. OFFSET 10.09
-2:1 EL.1133.42 OFFSET 15.67
EL.1134.00 OFFSET 14.50
EX. EOP EL.1142.27
EX. EOP EL.1141.97
PRES. R.O.W. OFFSET 117.38

26+50.00

PRES. R.O.W. OFFSET -46.52
PROP. R.O.W. OFFSET -39.42
OFFSET -22.98 EL.1130.10
-2:1
OFFSET -14.50 EL.1134.33
FG EL. 1135.33
0.000 0.000 0.000 0.000
-2:1 EL.1134.47 OFFSET 14.23
EL.1134.33 OFFSET 14.50
EX. EOP EL.1143.43
EX. EOP EL.1143.17
PRES. R.O.W. OFFSET 116.09

HAUL ROAD 1 HAWKINS CO.

BEGIN STA. 26+50.00
END STA. 27+00.00

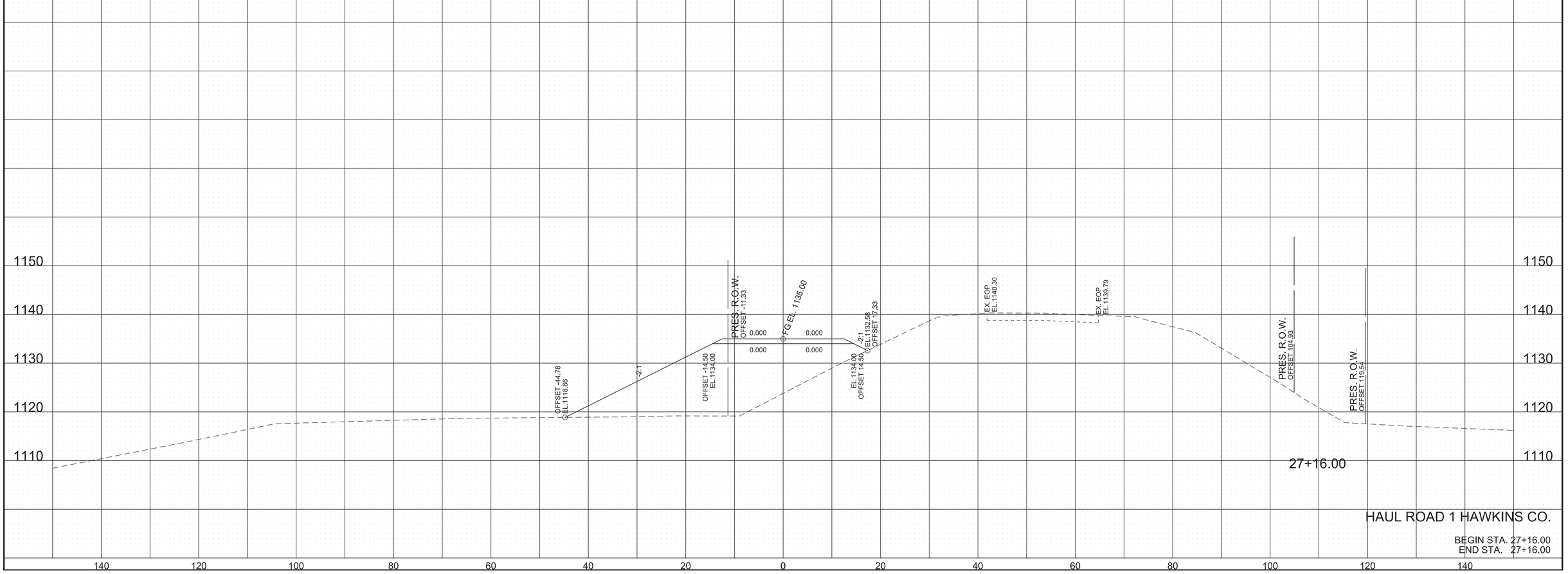
1170 1160 1150 1140 1130 1120

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

5/20/2025 5:27:25 PM
T:\TDOT\Hawkins_SR-70\HaulRd1XSections.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	41
PIH	2024	BR-STP-70(24)	43
PS&E	2025	BR-STP-70(24)	44

REV. 04-24-25: REVISED HAUL RD., REMOVED CROSS SECTIONS BEYOND STA. 27+16.00, AND REVISED SHEET NUMBER.



HAUL ROAD 1 HAWKINS CO.

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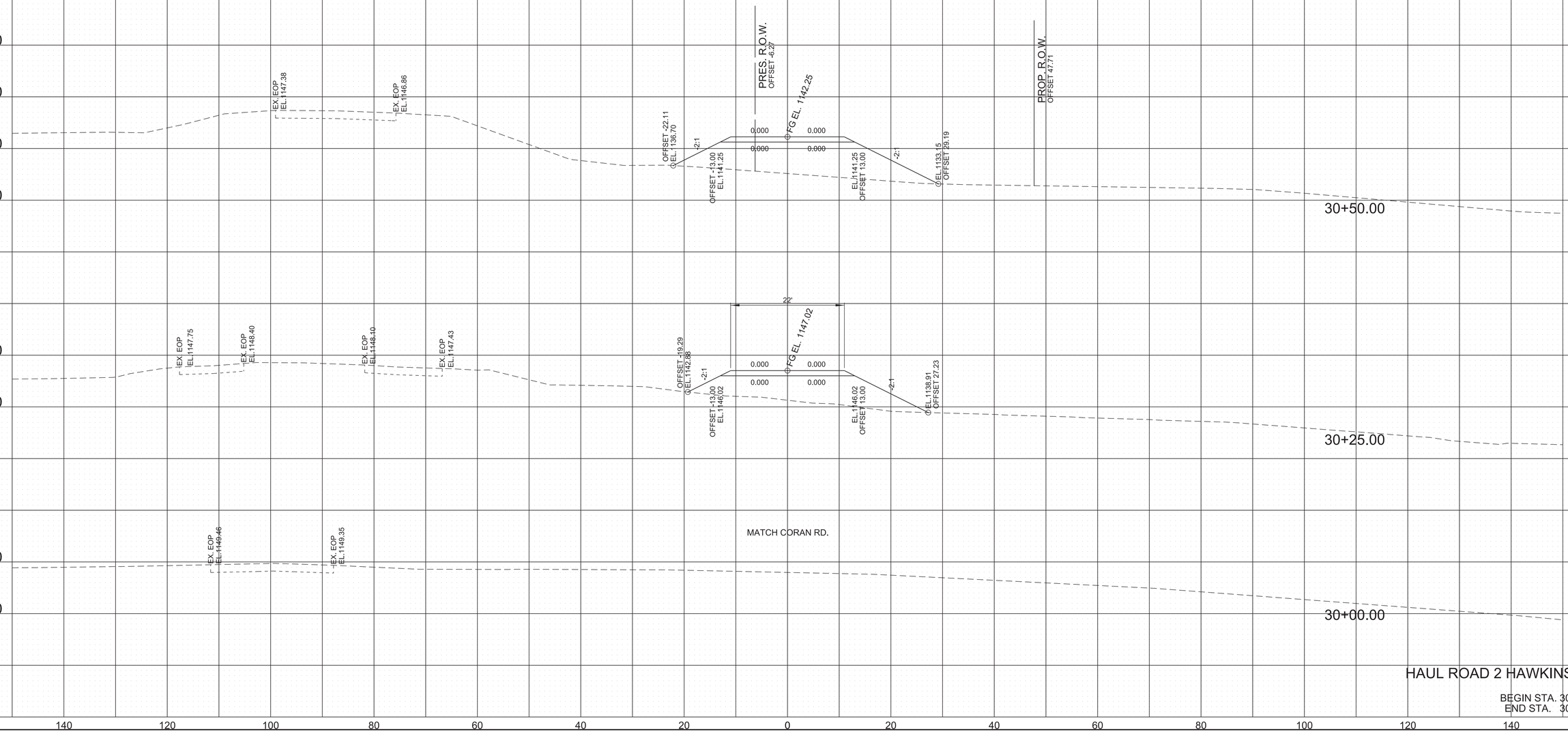
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	42
PIH	2024	BR-STP-70(24)	44
PS&E	2025	BR-STP-70(24)	45

REV. 04-24-25: REVISED HAUL RD. AND REVISED SHEET NUMBER.



HAUL ROAD 2 HAWKINS CO.

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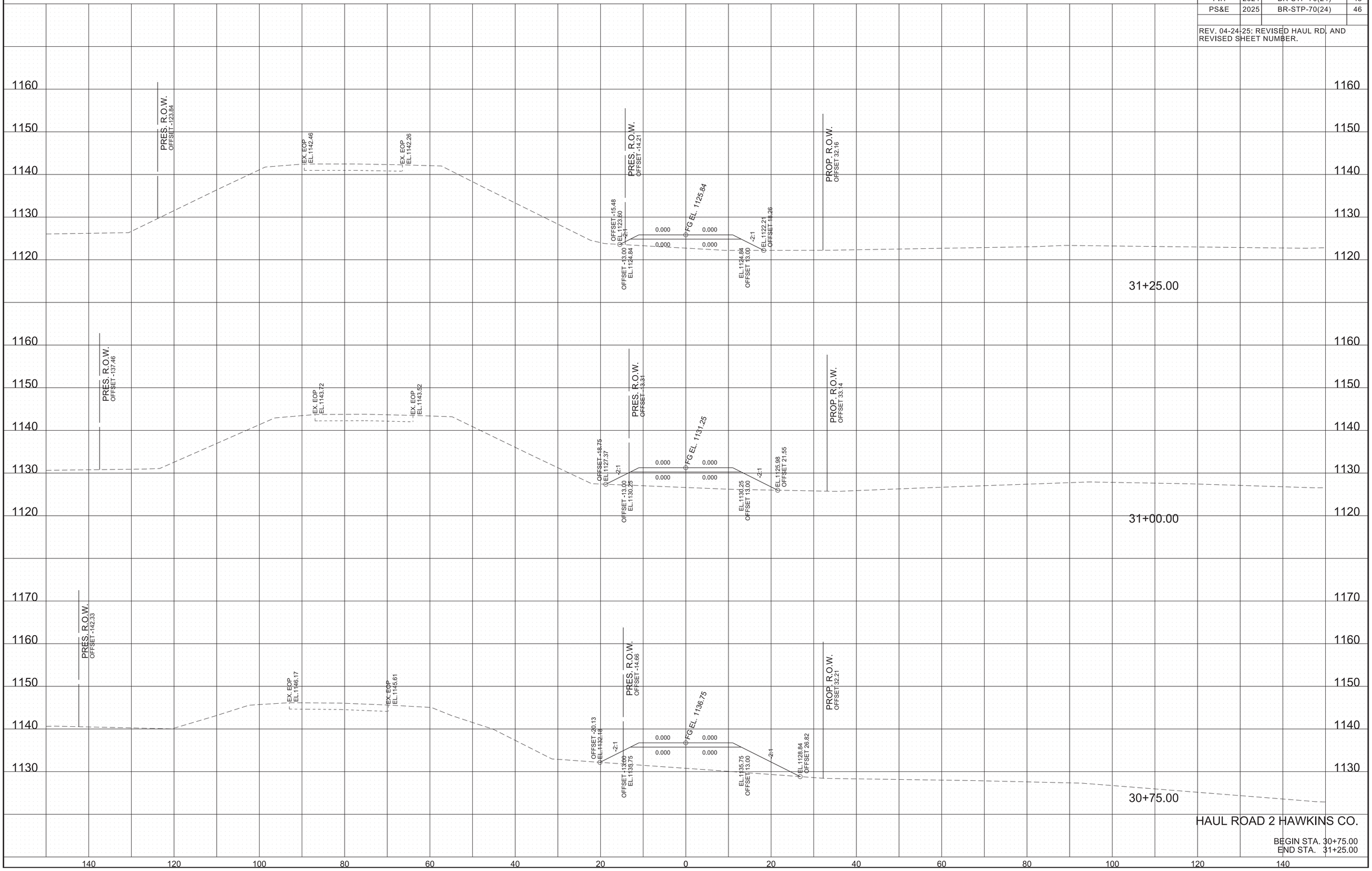
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	43
PIH	2024	BR-STP-70(24)	45
PS&E	2025	BR-STP-70(24)	46

REV. 04-24-25: REVISED HAUL RD. AND REVISED SHEET NUMBER.



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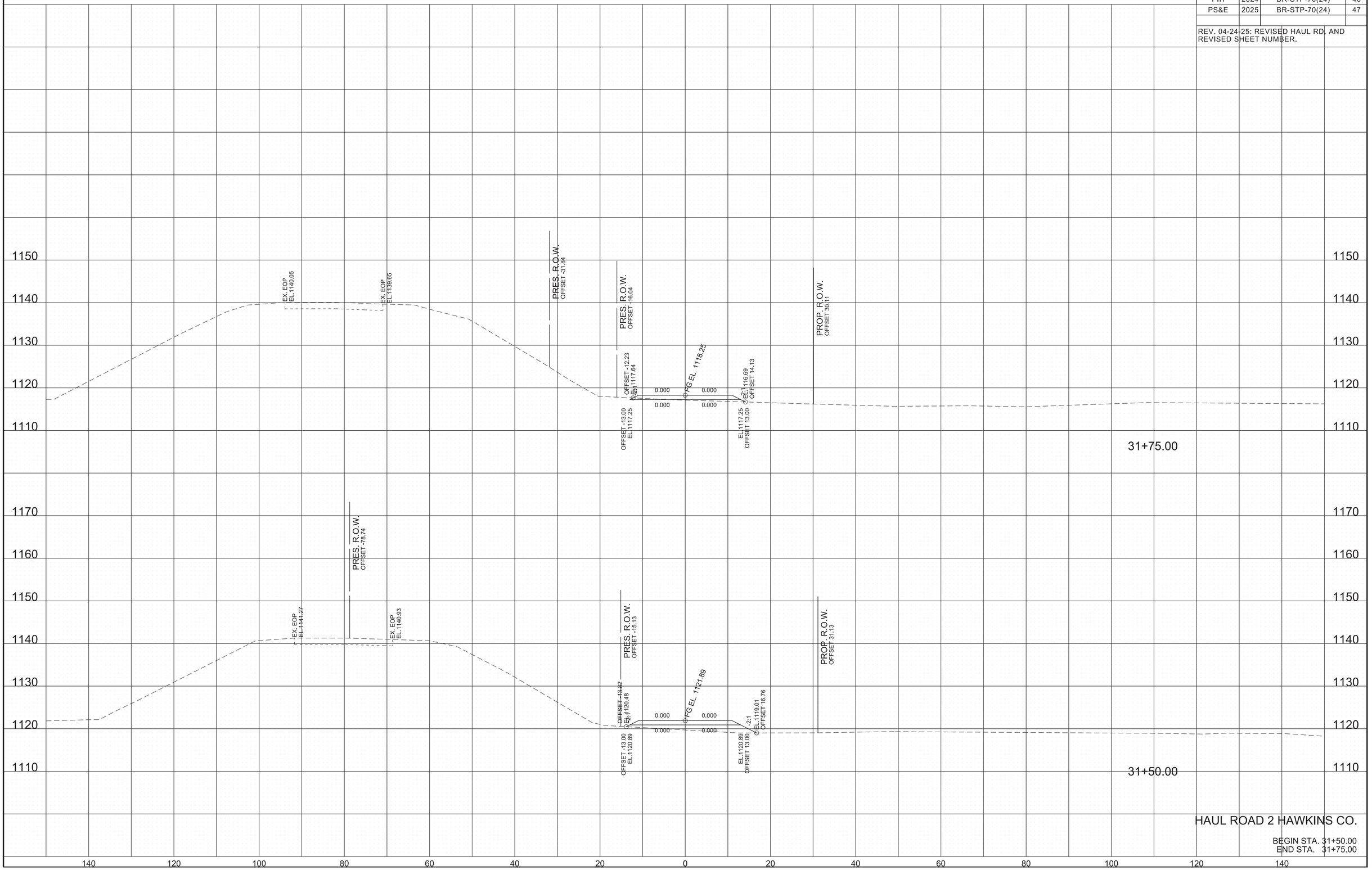
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	44
PIH	2024	BR-STP-70(24)	46
PS&E	2025	BR-STP-70(24)	47

REV. 04-24-25: REVISED HAUL RD. AND REVISED SHEET NUMBER.



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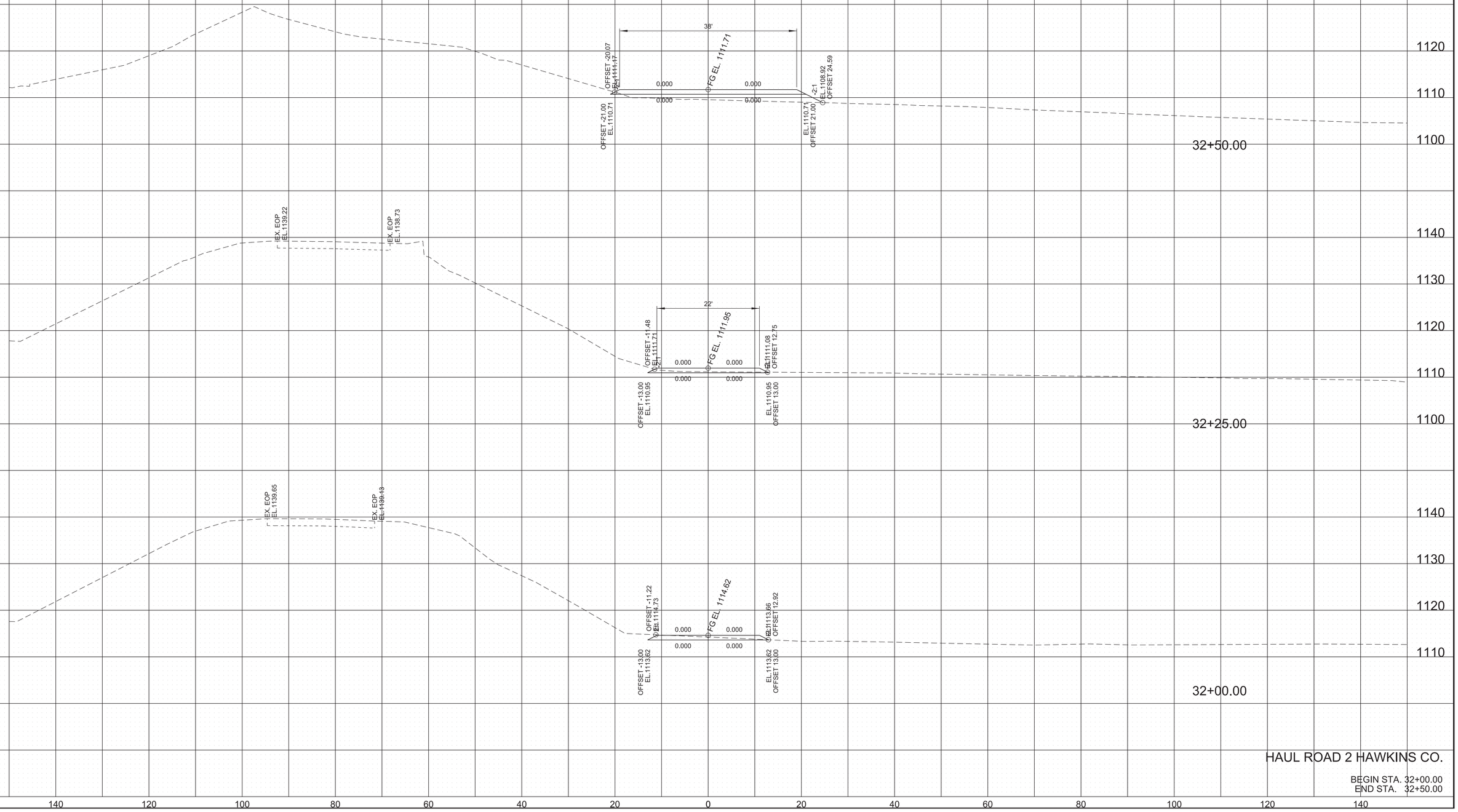
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	45
PIH	2024	BR-STP-70(24)	47
PS&E	2025	BR-STP-70(24)	48

REV. 04-24-25: REVISED HAUL RD. AND REVISED SHEET NUMBER.



HAUL ROAD 2 HAWKINS CO.

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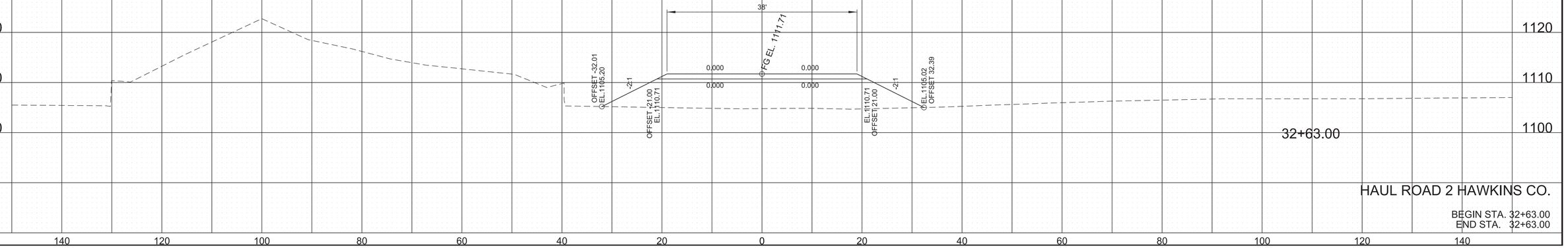
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	46
PIH	2024	BR-STP-70(24)	48
PS&E	2025	BR-STP-70(24)	49

REV. 04-24-25: REVISED HAUL RD., REMOVED CROSS SECTIONS BEYOND STA. 32+63.00, AND ADDED SHEET.



HAUL ROAD 2 HAWKINS CO.

BEGIN STA. 32+63.00
END STA. 32+63.00

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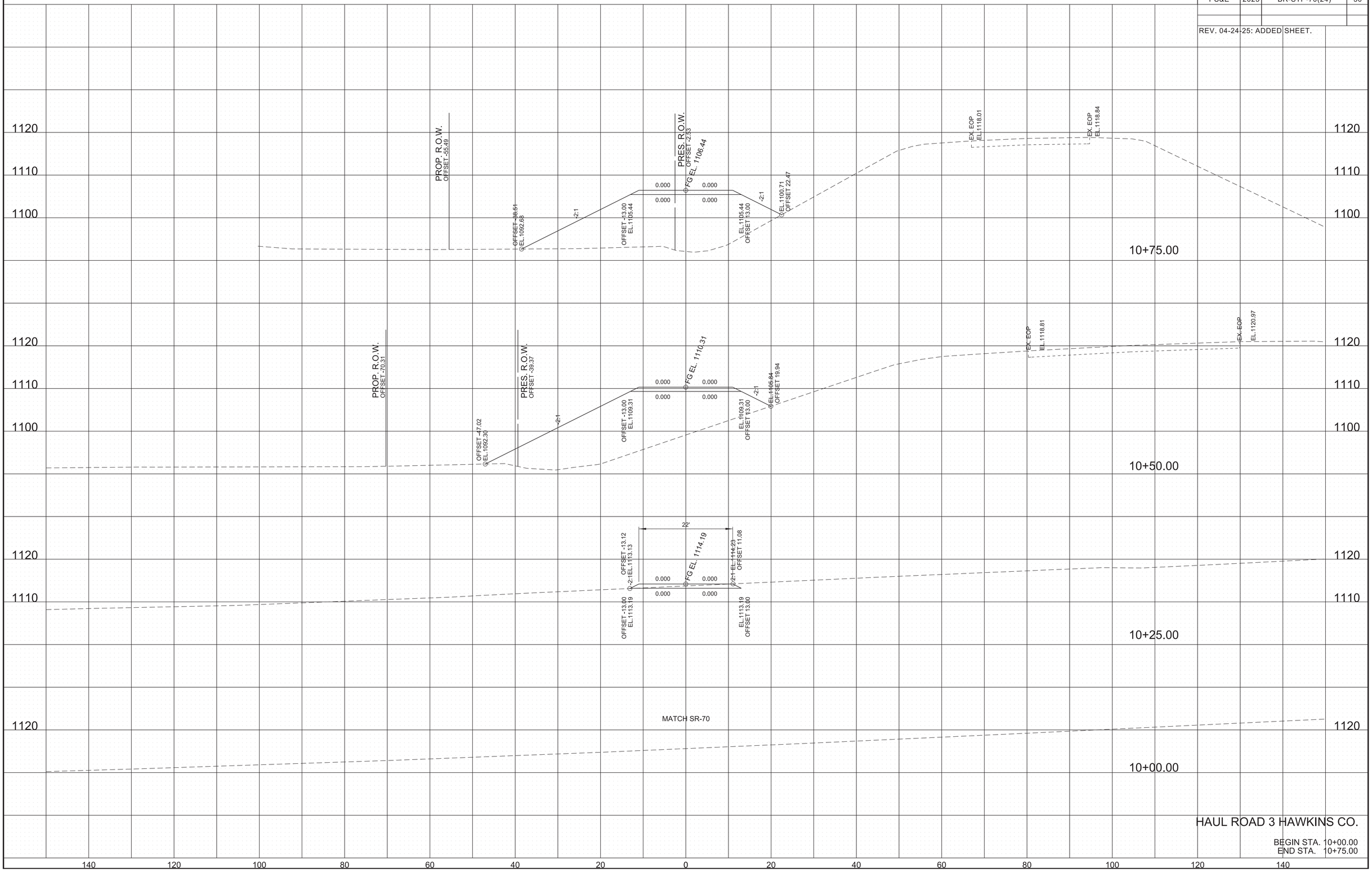
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	47
PS&E	2025	BR-STP-70(24)	50

REV. 04-24-25: ADDED SHEET.



HAUL ROAD 3 HAWKINS CO.

BEGIN STA. 10+00.00
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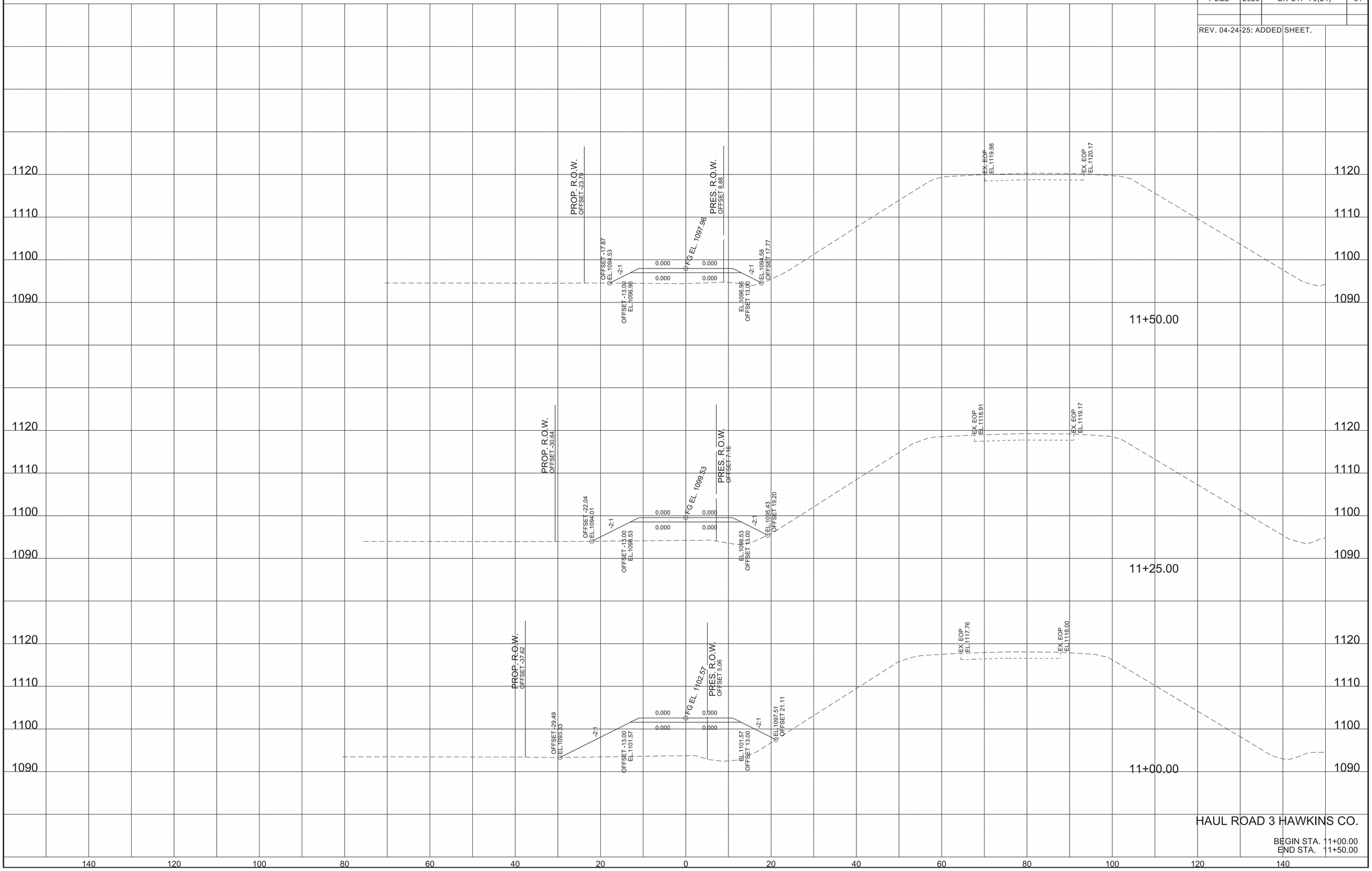
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	48
PS&E	2025	BR-STP-70(24)	51

REV. 04-24-25: ADDED SHEET.



HAUL ROAD 3 HAWKINS CO.

BEGIN STA. 11+00.00
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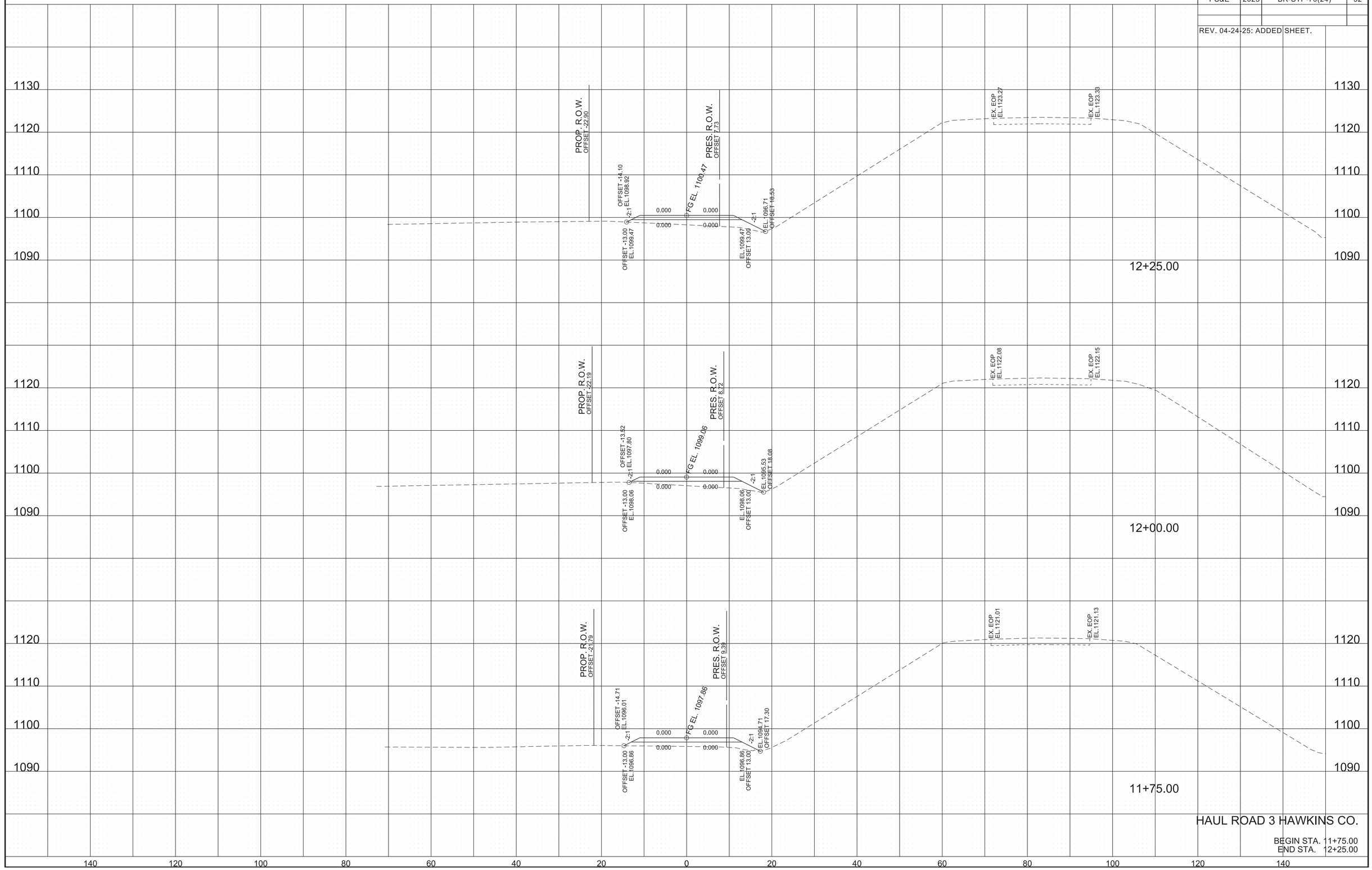
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	49
PS&E	2025	BR-STP-70(24)	52

REV. 04-24-25: ADDED SHEET.



HAUL ROAD 3 HAWKINS CO.

BEGIN STA. 11+75.00
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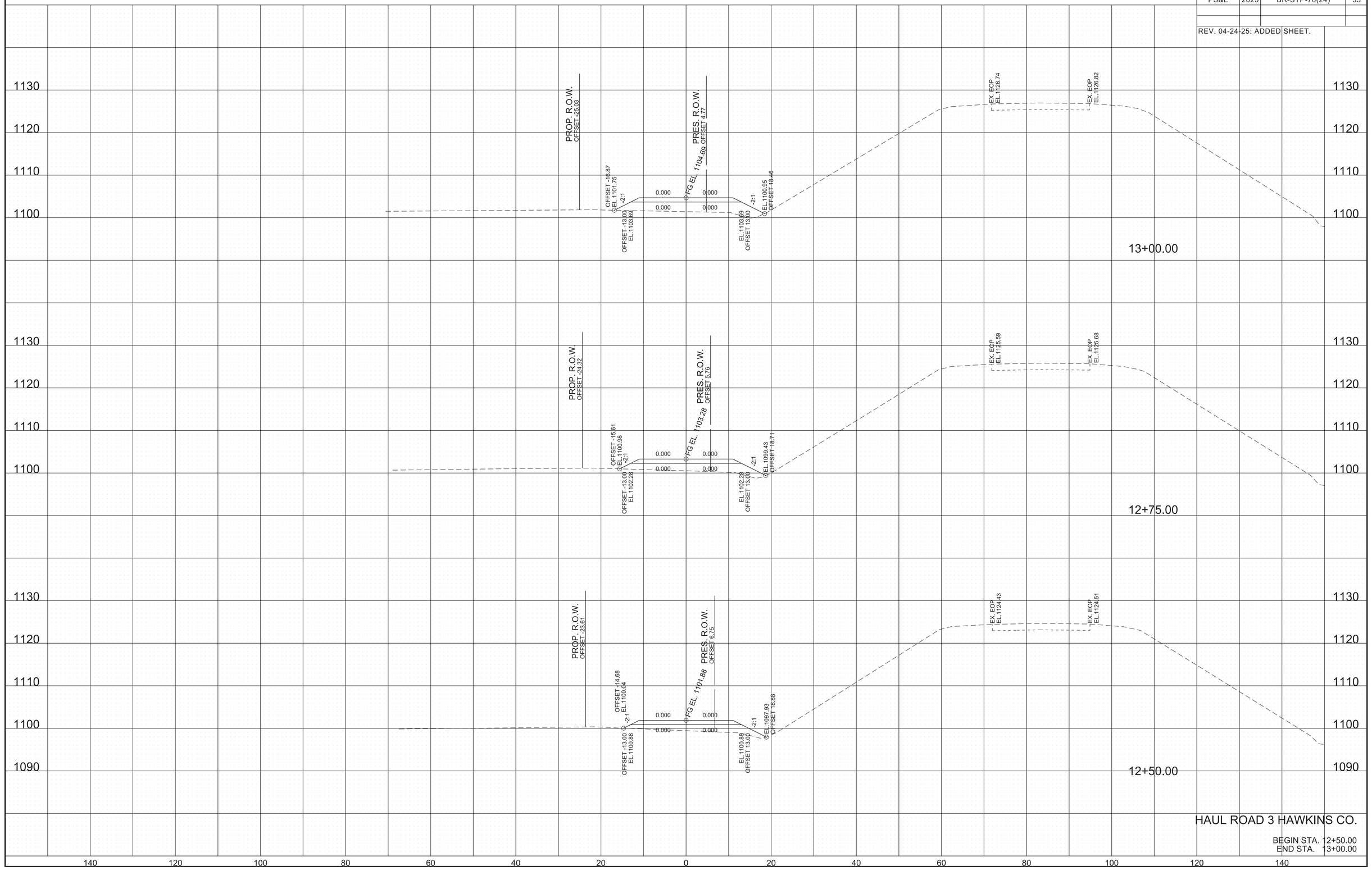
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	50
PS&E	2025	BR-STP-70(24)	53

REV. 04-24-25: ADDED SHEET.



HAUL ROAD 3 HAWKINS CO.

BEGIN STA. 12+50.00
END STA. 13+00.00

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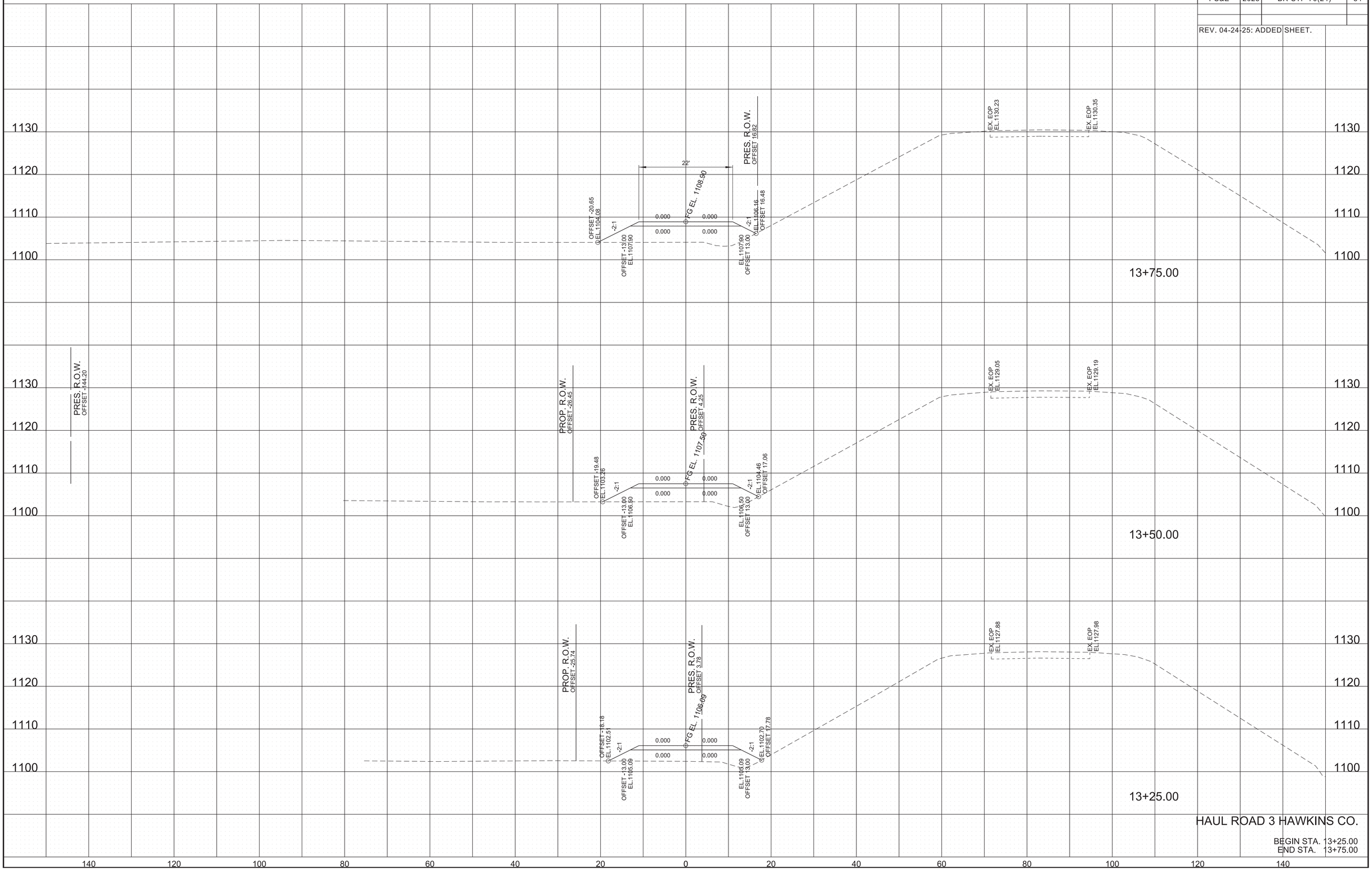
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	51
PS&E	2025	BR-STP-70(24)	54

REV. 04-24-25: ADDED SHEET.



HAUL ROAD 3 HAWKINS CO.

BEGIN STA. 13+25.00
END STA. 13+75.00

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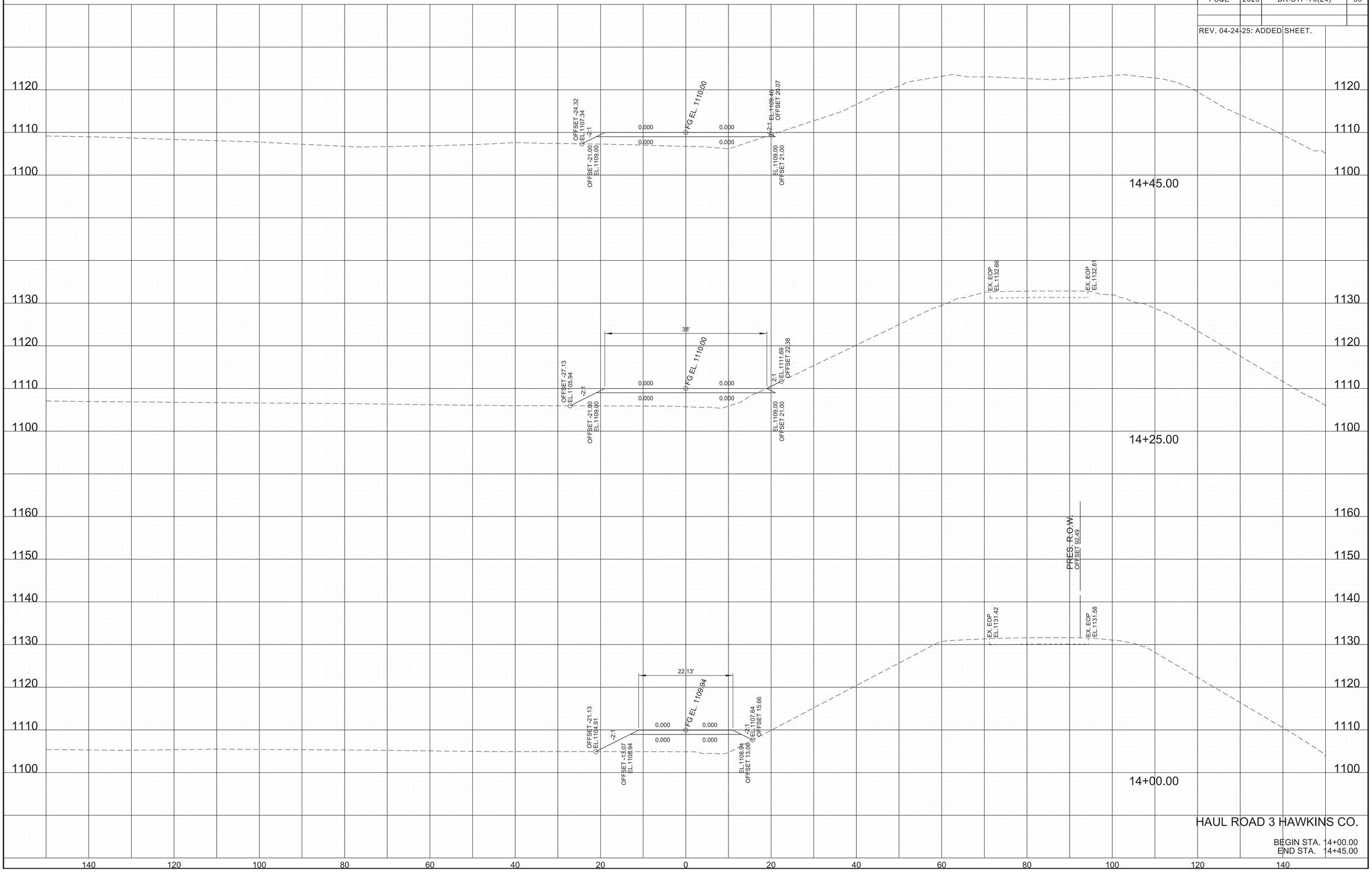
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	52
PS&E	2025	BR-STP-70(24)	55

REV. 04-24-25: ADDED SHEET.



HAUL ROAD 3 HAWKINS CO.

BEGIN STA. 14+00.00
END STA. 14+45.00

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	T1
PS&E	2025	BR-STP-70(24)	T1

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

A. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES OR TRAFFIC LANE AND SHOULDER WHERE THE TRAFFIC LANE IS BEING USED BY TRAFFIC, CAUSED BY BASE, PAVING OR RESURFACING:

1. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 0.75 INCH AND NOT EXCEEDING 1.75 INCHES:

   a. WARNING SIGNS, UNEVEN LANES (W8-11) AND/OR SHOULDER DROP-OFF WITH PLAQUE (W8-17 AND W8-17P), SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

   b. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY ADDED PAVEMENT SHALL BE ELIMINATED WITHIN THREE WORKDAYS.

   c. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY COLD PLANING SHALL BE ELIMINATED WITHIN THREE WORKDAYS.

   d. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE TRAFFIC LANE BEING UTILIZED BY TRAFFIC AND SHOULDER THE DIFFERENCE IN ELEVATION SHALL BE ELIMINATED WITHIN SEVEN WORKDAYS AFTER THE CONDITION IS CREATED.

2. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 1.75 INCHES AND NOT EXCEEDING 6 INCHES, TRAFFIC IS NOT TO BE ALLOWED TO TRAVERSE THIS DIFFERENCE IN ELEVATION.

   a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

   b. IF THE DIFFERENCE IN ELEVATION IS ELIMINATED OR DECREASED TO 2 INCHES OR LESS BY THE END OF EACH WORKDAY, CONES MAY BE USED DURING DAYLIGHT HOURS IN LIEU OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES MENTIONED IN PARAGRAPH a, PROVIDED WARNING SIGNS ARE ERECTED. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

   c. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE THROUGH TRAFFIC LANE AND THE SHOULDER AND THE ELEVATION DIFFERENCE IS LESS THAN 3 INCHES, THE CONTRACTOR MAY USE WARNING SIGNS AND/OR PROTECTIVE DEVICES AS APPLICABLE AND APPROVED BY THE REGIONAL TRAFFIC ENGINEER. SEE PARAGRAPH a REGARDING USE OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) WILL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

IN THESE SITUATIONS, THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 2 MILES IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

3. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 6 INCHES BUT NOT EXCEEDING 18 INCHES, THE CONTRACTOR, WITH THE ENGINEER'S APPROVAL, MAY UTILIZE ONE OF THE FOLLOWING:

   a. THE CONTRACTOR SHALL ACCOMPLISH SEPARATION BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

   IN ORDER TO USE THIS METHOD, THE CONTRACTOR MUST REDUCE THE DIFFERENCE IN ELEVATION TO 6 INCHES OR LESS BY THE END OF THE WORKDAY THAT THE CONDITION IS CREATED.

   b. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH a, AND CONSTRUCT A STONE WEDGE WITH A 4:1 SLOPE, OR FLATTER, TO ELIMINATE THE VERTICAL OFFSET IF THE LOWER ELEVATION IS AT OR BELOW SUBGRADE AT THE END OF EACH DAY.

   c. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH a AND IF THE LOWER ELEVATION IS BASE STONE OR ASPHALT PAVEMENT, PLACEMENT OF SUBSEQUENT LAYERS OF PAVEMENT MUST BEGIN THE NEXT WORK DAY AND PROGRESS CONTINUOUSLY UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED OR REDUCED TO SIX INCHES OR LESS.

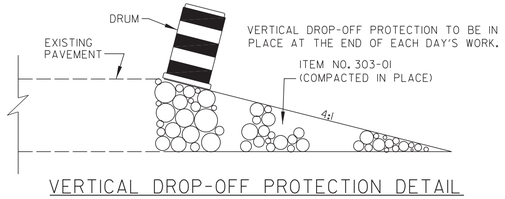
   d. THE CONTRACTOR SHALL PROVIDE SEPARATION BY PORTABLE BARRIER RAIL.

   FOR PRECEDING CONDITIONS a, b, AND c, THE CONTRACTOR SHALL USE THE SHOULDER DROP-OFF WARNING SIGN WITH PLAQUE (W8-17 AND W8-17P). IT SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN THE SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. IN THESE SITUATIONS, THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 1 MILE IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

4. FOR DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 18 INCHES.

   SEPARATION WILL BE PROVIDED BY USE OF PORTABLE BARRIER RAIL.

   IN THIS SITUATION THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 1 MILE IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.



VERTICAL DROP-OFF PROTECTION DETAIL

B. IF THE DIFFERENCE IN ELEVATION IS WITHIN 30 FEET OF THE NEAREST TRAFFIC LANE BEING USED BY TRAFFIC CAUSED BY GRADING, EXCAVATION FOR UTILITIES, DRAINAGE STRUCTURES, UNDERCUTTING, ETC.:

1. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 3/4 INCH AND NOT EXCEEDING 2 INCHES.

   a. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

2. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 2 INCHES AND NOT EXCEEDING 6 INCHES:

   a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

3. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 6 INCHES:

   a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

   b. ELIMINATE VERTICAL OFFSET BY CONSTRUCTING A STONE WEDGE OR GRADING TO A 4:1 SLOPE, OR FLATTER, OR USE PORTABLE BARRIER RAIL.

   THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE WITHIN 8 FEET OF A TRAFFIC LANE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

C. IF THE DIFFERENCE IN ELEVATION IS FARTHER THAN 8 FEET FROM THE NEAREST TRAFFIC LANE BUT NOT MORE THAN 30 FEET FROM THE NEAREST TRAFFIC LANE:

SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

1. WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

2. WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE DROP-OFF NOTES FOR TRAFFIC CONTROL

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	T2
PS&E	2025	BR-STP-70(24)	T2

TABULATED TRAFFIC CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY 37011-3237-94
712-01	TRAFFIC CONTROL	LS	1
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	500
712-02.60	TEMPORARY WORK ZONE CRASH CUSHION (MASH TL-3)	EACH	4
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	10
712-05.01	WARNING LIGHTS (TYPE A)	EACH	18
712-06	SIGNS (CONSTRUCTION)	S.F.	1408
712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	132
712-09.04	REMOVABLE PAVEMENT MARKING (STOP LINE)	L.F.	51
713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	4
716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	2.6

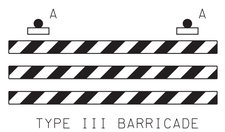
PHASE 1 NOTES:

1. INSTALL ALL TRAFFIC CONTROL SIGNS ON DETOUR ROUTE AND RESTRIPE CENTER LINE STRIPING ON DETOUR ROUTE.
2. INSTALL TRAFFIC CONTROL MEASURES TO CLOSE SR-70 BETWEEN HAGAN REYNOLDS RD. / CORAN RD. AND SR-66.
3. INSTALL HIGH VISIBILITY FENCE ALONG RAILROAD.
4. REMOVE EXISTING SR-70 BRIDGE.
5. CONSTRUCT NEW SR-70 BRIDGE, PROPOSED RETAINING WALL, AND ASSOCIATED ROADWAY.
6. REMOVE ALL TEMPORARY SIGNS AND HAUL ROADS AT COMPLETION OF THE PROJECT.

TRAFFIC CONTROL SIGN TABULATION

M.U.T.C.D. SIGN NO.	LEGEND	SIZE IN INCHES L		W	S.F.	NO. REQUIRED PHASE I	TOTAL NO. REQUIRED	ITEM NO. 712-06 S.F.	STANDARD DRAWING NO.	REMARKS
G20-2	END ROAD WORK	36"	X	18"	5	4	4	18.00		
M3-2	CARDINAL DIRECTION	36"	X	18"	5	12	12	54.00		EAST
M3-4	CARDINAL DIRECTION	36"	X	18"	5	8	8	36.00		WEST
M4-10L	DETOUR	48"	X	18"	6	3	3	18.00		LEFT
M4-10R	DETOUR	48"	X	18"	6	1	1	6.00		RIGHT
M4-8	DETOUR	24"	X	12"	2	61	61	122.00		
M4-8A	END DETOUR	24"	X	18"	3	2	2	6.00		
M5-1L	ADVANCE TURN ARROW (LEFT)	21"	X	15"	2	1	1	2.19		
M5-1R	ADVANCE TURN ARROW (RIGHT)	21"	X	15"	2	1	1	2.19		
M6-1L	DIRECTONAL ARROW (LEFT)	21"	X	15"	2	10	10	21.88		
M6-1R	DIRECTONAL ARROW (RIGHT)	21"	X	15"	2	15	15	32.81		
M6-3	DIRECTIONAL ARROW	21"	X	15"	2	34	34	74.38		
R1-1	STOP	36"	X	36"	9	3	3	27.00		
R11-2	ROAD CLOSED	48"	X	30"	10	2	2	20.00		
R11-3A	ROAD CLOSED	60"	X	30"	13	1	1	12.50		0.3 MILES AHEAD LOCAL TRAFFIC ONLY
R11-3A	ROAD CLOSED	60"	X	30"	13	2	2	25.00		0.5 MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	ROAD CLOSED TO THRU TRAFFIC	60"	X	30"	13	2	2	25.00		
R3-1	MOVEMENT PROHIBITION	24"	X	24"	4	2	2	8.00		
SPECIAL	SR 70 TO SR 66 CLOSED TO WIDE LOADS OVER 11 FT.	114"	X	48"	38	5	5	190.00		
SPECIAL	SR 70 TO I-81 CLOSED TO WIDE LOADS OVER 11 FT.	138"	X	48"	46	5	5	230.00		
SPECIAL	ONE LANE BRIDGE 11 MILES HORIZ CLEARANCE 11 FT.	117"	X	66"	54	1	1	53.63		
SPECIAL	FOLLOW DETOUR AT EXIT 23 (US 11W/SR 34)	114"	X	48"	38	2	2	76.00		
TN-6C	TN STATE ROUTE	30"	X	24"	5	55	55	275.00		
W20-1	ROAD WORK AHEAD	36"	X	36"	9	2	2	18.00		
W20-2	DETOUR (WITH DISTANCE)	36"	X	36"	9	1	1	9.00		1500 FT
W20-3	ROAD CLOSED (WITH DISTANCE)	36"	X	36"	9	2	2	18.00		1000 FT
W20-3	ROAD CLOSED (WITH DISTANCE)	36"	X	36"	9	2	2	18.00		500 FT
W3-1	STOP AHEAD	36"	X	36"	9	1	1	9.00		
							TOTAL	1408	S.F.	

NOTE:
EACH TYPE III BARRICADE SECTION WILL BE 12' X 5'



TYPE III BARRICADE
w/ TYPE A
WARNING LIGHTS

TYPE III BARRICADE ROAD CLOSURE
w/ TYPE A
WARNING LIGHTS

SEALED BY

05/31/2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PHASING NOTES, LEGEND AND TABULATION

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	T3
PS&E	2025	BR-STP-70(24)	T3

M4-10L
48" X 18"
DETOUR
ROAD CLOSED
R11-2
48" X 30"
A
TYPE III BARRICADE ROAD CLOSURE w/ TYPE A WARNING LIGHTS
A

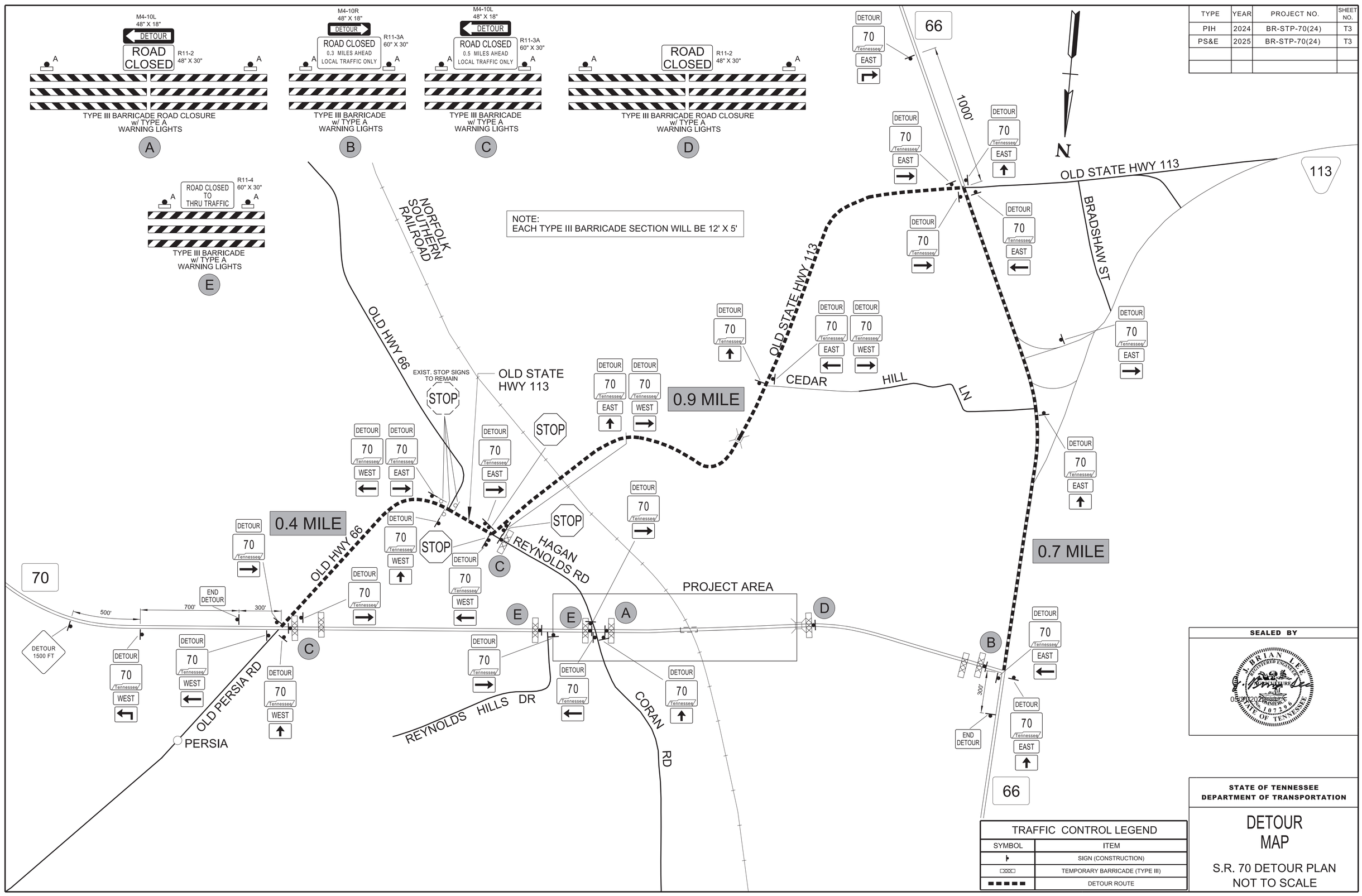
M4-10R
48" X 18"
DETOUR
ROAD CLOSED
0.3 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3A
60" X 30"
TYPE III BARRICADE w/ TYPE A WARNING LIGHTS
B

M4-10L
48" X 18"
DETOUR
ROAD CLOSED
0.5 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3A
60" X 30"
TYPE III BARRICADE w/ TYPE A WARNING LIGHTS
C

ROAD CLOSED
R11-2
48" X 30"
TYPE III BARRICADE ROAD CLOSURE w/ TYPE A WARNING LIGHTS
D

R11-4
60" X 30"
ROAD CLOSED TO THRU TRAFFIC
TYPE III BARRICADE w/ TYPE A WARNING LIGHTS
E

NOTE:
EACH TYPE III BARRICADE SECTION WILL BE 12' X 5'



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETOUR MAP

S.R. 70 DETOUR PLAN
NOT TO SCALE

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	TEMPORARY BARRICADE (TYPE III)
	DETOUR ROUTE

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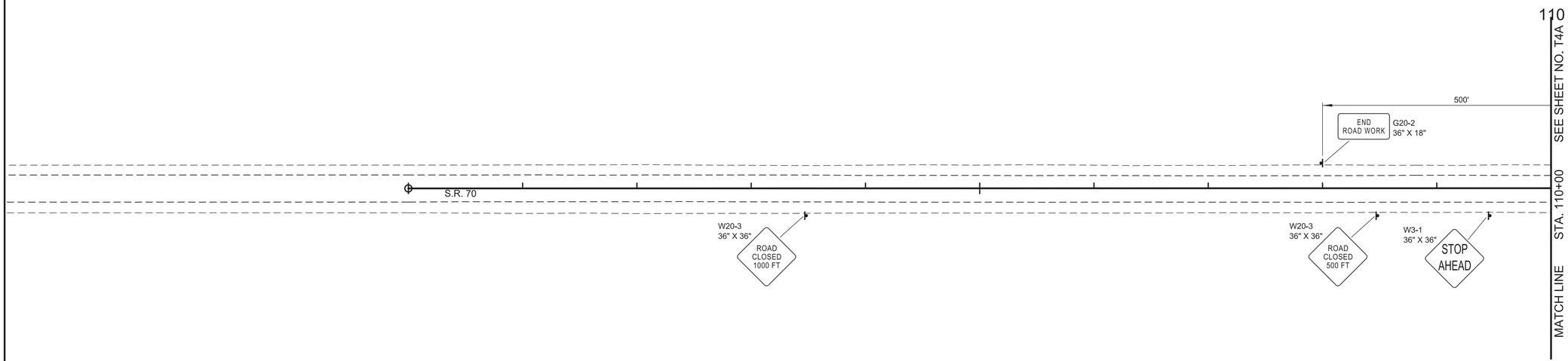
TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	T4
PS&E	2025	BR-STP-70(24)	T4

N

100

105

110



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J. BRIAN LEE
REGISTERED ENGINEER
AGRICULTURE
NUMBER
10729
STATE OF TENNESSEE

05/21/2025

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
▸	SIGN (CONSTRUCTION)

PHASE 1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS

B.O.P. TO STA.110+00

SCALE: 1"=50'

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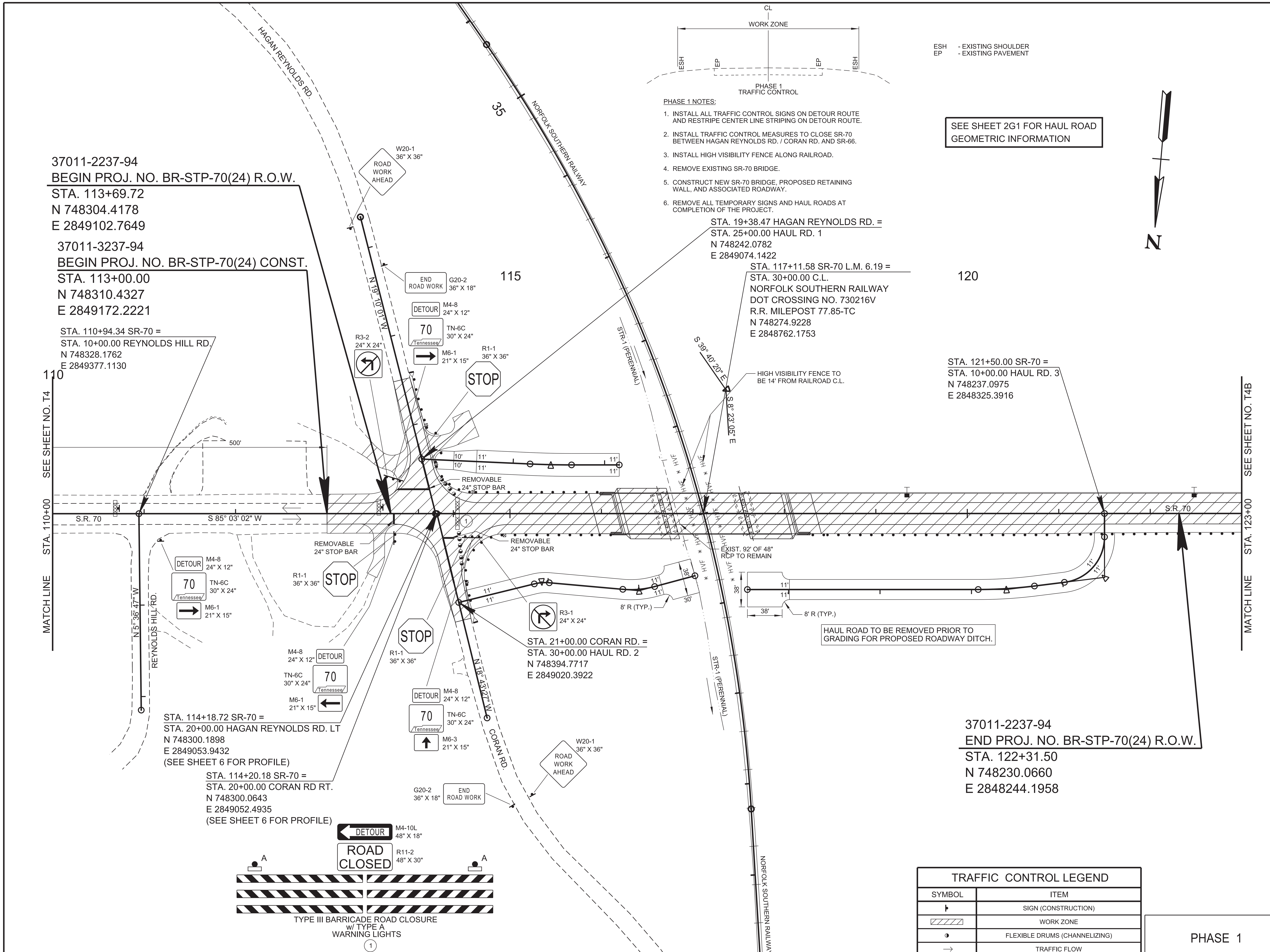
TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	T4A
PS&E	2025	BR-STP-70(24)	T4A

ESH - EXISTING SHOULDER
EP - EXISTING PAVEMENT



CL
WORK ZONE
ESH
EP
EP
ESH
PHASE 1
TRAFFIC CONTROL
SEE SHEET 2G1 FOR HAUL ROAD GEOMETRIC INFORMATION
N
HAGAN REYNOLDS RD.
NORFOLK SOUTHERN RAILWAY
35
115
120
110
37011-2237-94
BEGIN PROJ. NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178
E 2849102.7649
37011-3237-94
BEGIN PROJ. NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327
E 2849172.2221
STA. 110+94.34 SR-70 =
STA. 10+00.00 REYNOLDS HILL RD.
N 748328.1762
E 2849377.1130
STA. 19+38.47 HAGAN REYNOLDS RD. =
STA. 25+00.00 HAUL RD. 1
N 748242.0782
E 2849074.1422
STA. 117+11.58 SR-70 L.M. 6.19 =
STA. 30+00.00 C.L.
NORFOLK SOUTHERN RAILWAY
DOT CROSSING NO. 730216V
R.R. MILEPOST 77.85-TC
N 748274.9228
E 2848762.1753
STA. 121+50.00 SR-70 =
STA. 10+00.00 HAUL RD. 3
N 748237.0975
E 2848325.3916
HIGH VISIBILITY FENCE TO BE 14' FROM RAILROAD C.L.
S 39° 40' 20" E
S 8° 23' 05" E
N 19° 10' 01" W
N 18° 43' 27" W
N 5° 36' 47" W
S 85° 03' 02" W
S.R. 70
STR-1 (PERENNIAL)
W20-1 36" X 36"
ROAD WORK AHEAD
END ROAD WORK
G20-2 36" X 18"
DETOUR
M4-8 24" X 12"
70
Tennessee
TN-6C 30" X 24"
M6-1 21" X 15"
R3-2 24" X 24"
R1-1 36" X 36"
STOP
R3-1 24" X 24"
M6-3 21" X 15"
500'
10'
11'
REMOVABLE 24" STOP BAR
EXIST. 92' OF 48" RCP TO REMAIN
38'
30'
8' R (TYP.)
REYNOLDS HILL RD.
CORAN RD.
STA. 21+00.00 CORAN RD. =
STA. 30+00.00 HAUL RD. 2
N 748394.7717
E 2849020.3922
HAUL ROAD TO BE REMOVED PRIOR TO GRADING FOR PROPOSED ROADWAY DITCH.
STA. 114+18.72 SR-70 =
STA. 20+00.00 HAGAN REYNOLDS RD. LT
N 748300.1898
E 2849053.9432
(SEE SHEET 6 FOR PROFILE)
STA. 114+20.18 SR-70 =
STA. 20+00.00 CORAN RD RT.
N 748300.0643
E 2849052.4935
(SEE SHEET 6 FOR PROFILE)
37011-2237-94
END PROJ. NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660
E 2848244.1958
MATCH LINE
STA. 110+00
SEE SHEET NO. T4
MATCH LINE
STA. 123+00
SEE SHEET NO. T4B
DETOUR
M4-10L 48" X 18"
ROAD CLOSED
R11-2 48" X 30"
A
TYPE III BARRICADE ROAD CLOSURE w/ TYPE A WARNING LIGHTS
1

PHASE 1 NOTES:

1. INSTALL ALL TRAFFIC CONTROL SIGNS ON DETOUR ROUTE AND RESTRIPE CENTER LINE STRIPING ON DETOUR ROUTE.
2. INSTALL TRAFFIC CONTROL MEASURES TO CLOSE SR-70 BETWEEN HAGAN REYNOLDS RD. / CORAN RD. AND SR-66.
3. INSTALL HIGH VISIBILITY FENCE ALONG RAILROAD.
4. REMOVE EXISTING SR-70 BRIDGE.
5. CONSTRUCT NEW SR-70 BRIDGE, PROPOSED RETAINING WALL, AND ASSOCIATED ROADWAY.
6. REMOVE ALL TEMPORARY SIGNS AND HAUL ROADS AT COMPLETION OF THE PROJECT.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
▸	SIGN (CONSTRUCTION)
▨	WORK ZONE
◑	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW

SEALED BY

J. BRIAN LEE, REGISTERED ENGINEER, STATE OF TENNESSEE, No. 107229

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PHASE 1

TRAFFIC CONTROL PLANS
STA.110+00 TO STA.123+00
SCALE: 1"=50'

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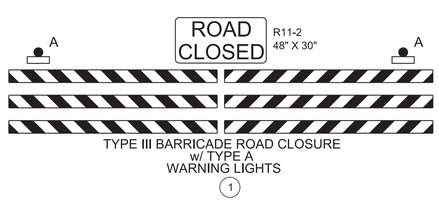
TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	T4B
PS&E	2025	BR-STP-70(24)	T4B



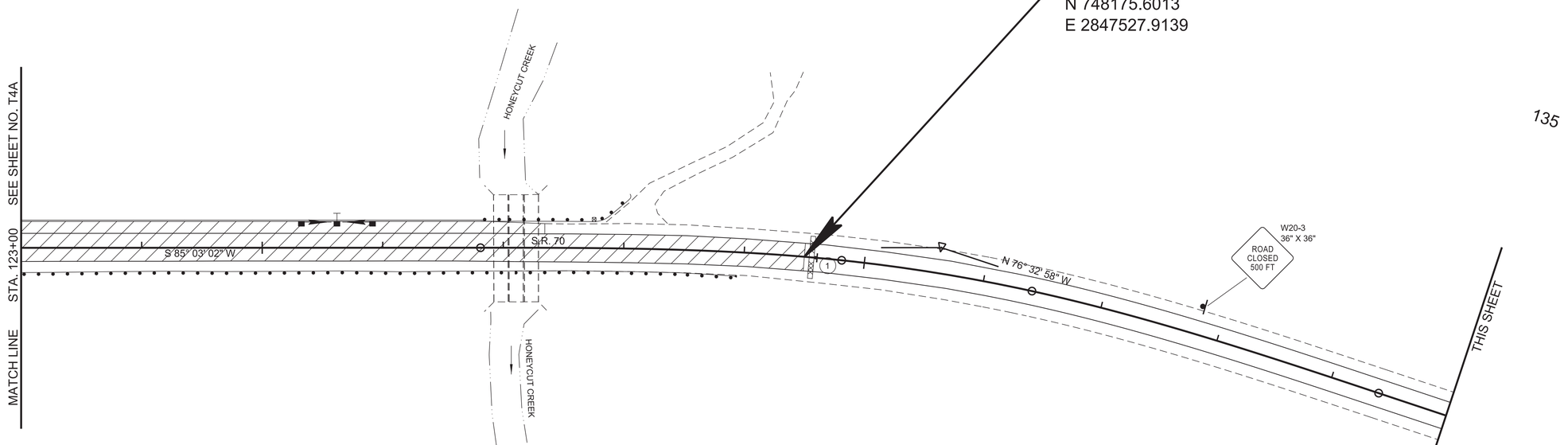
125

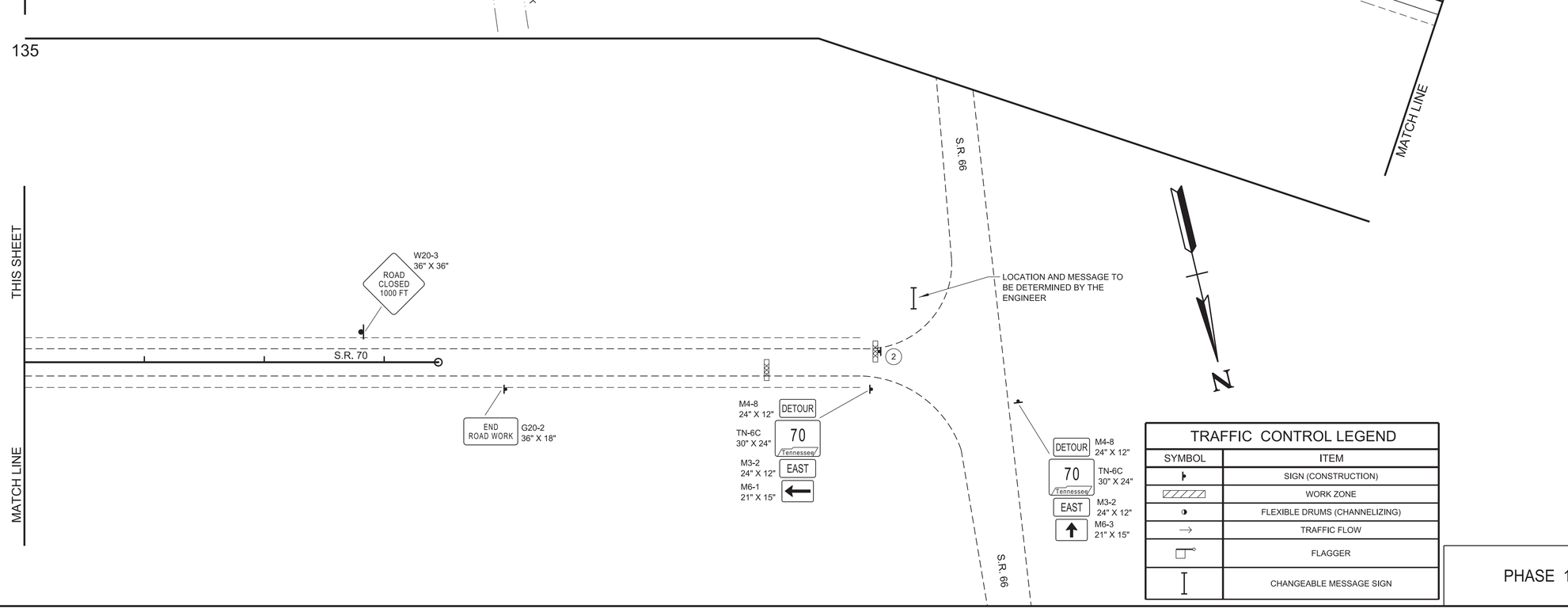
130

37011-3237-94
END PROJ. NO. BR-STP-70(24) CONST.
STA. 129+50.00
N 748175.6013
E 2847527.9139

N

135





TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
	TRAFFIC FLOW
	FLAGGER
	CHANGEABLE MESSAGE SIGN

PHASE 1

SEALED BY

BRIAN LEE
REGISTERED ENGINEER
AGRICULTURE
FARMERS
No. 107296
STATE OF TENNESSEE
05/20/2025

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS

STA.123+00 TO STA.129+50

SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-70(24)	T5
PS&E	2025	BR-STP-70(24)	T5

Carter Chapel

7.2 MILES

LOCATION AND MESSAGE TO BE DETERMINED BY THE ENGINEER

LOCATION AND MESSAGE TO BE DETERMINED BY THE ENGINEER

3.7 MILES

NORFOLK SOUTHERN RAILROAD

COUNTY HAMBLEN

COUNTY

BULLS GAP

WHITE HORN

SUMMIT

8.7 MILES

OTES

OLD HWY 66

NORFOLK SOUTHERN

OLD HWY 113

PROJECT AREA

0.5 MILE

NEEDMORE

ENTERPRISE

PERSIA

HORTON HWY. GAP CREEK RD.

11.3 MILES

GREENE HAWKINS

COUNTY

N

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	CHANGEABLE MESSAGE SIGN
	DETOUR ROUTE

SR 70 TO SR 66 CLOSED TO WIDE LOADS OVER 11 FT. — SPECIAL

FOLLOW DETOUR AT EXIT 23 (US 11W/SR 34) — SPECIAL — A

ONE LANE BRIDGE 11 MILES HORIZ. CLEARANCE 11 FEET — SPECIAL — B

SR 70 TO SR 66 CLOSED TO WIDE LOADS OVER 11 FT. — SPECIAL — DETOUR M4-8, M6-3 — C

SR 70 TO SR 66 CLOSED TO WIDE LOADS OVER 11 FT. — SPECIAL — DETOUR M4-8, M6-1L — D

SR 70 TO I-81 CLOSED TO WIDE LOADS OVER 11 FT. — SPECIAL — DETOUR M4-8, M6-3 — E

SR 70 TO I-81 CLOSED TO WIDE LOADS OVER 11 FT. — SPECIAL — DETOUR M4-8, M6-1R — F

DETOUR M4-8, 70 Tennessee TN-6C, M6-1L — G

DETOUR M4-8, 70 Tennessee TN-6C, M6-1R — H

DETOUR M4-8, 70 Tennessee TN-6C, M6-3 — J

SR 70 TO SR 66 CLOSED TO WIDE LOADS OVER 11 FT. — SPECIAL — K

SR 70 TO I-81 CLOSED TO WIDE LOADS OVER 11 FT. — SPECIAL — L

SEALED BY

BRIAN LEE — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — No. 107296 — STATE OF TENNESSEE

05/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

WIDELOAD DETOUR

SCALE: 1"=1/2 MILE

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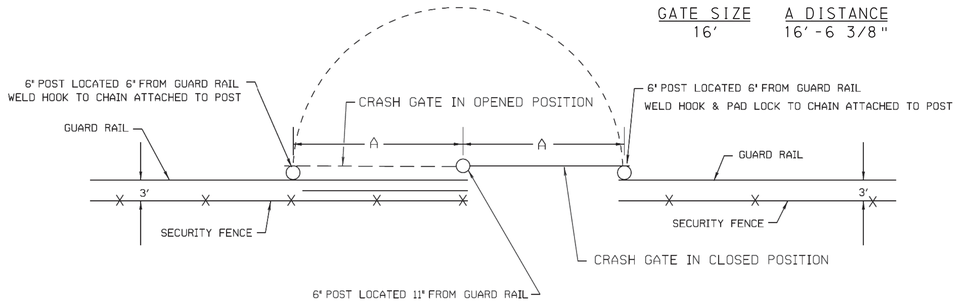
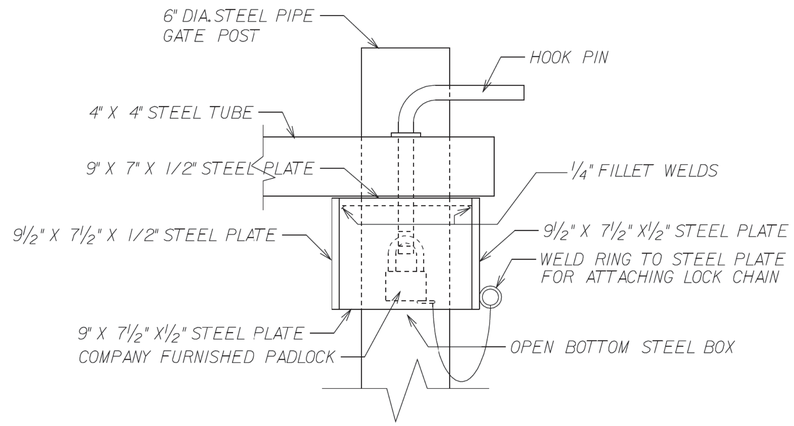


TYPICAL TOP VIEW OF TEMPORARY CRASH GATE

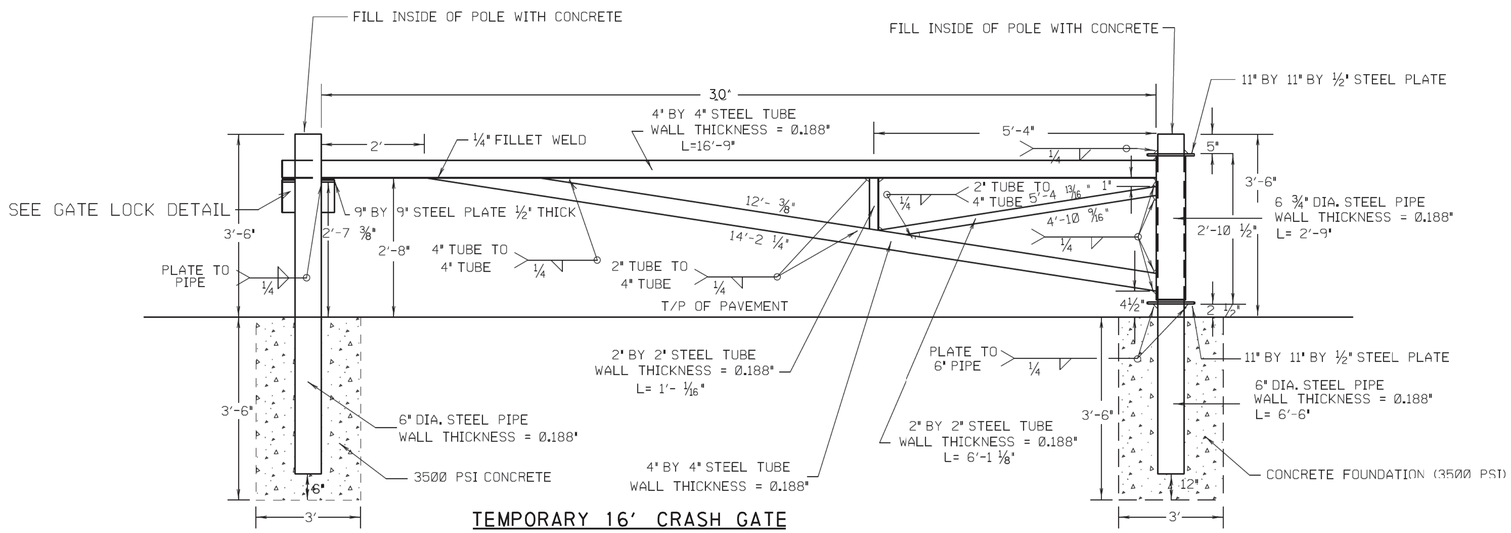
NOT TO SCALE

NOTES:

1. WELD A CHAIN FROM HOOK PIN TO POST.
2. WELD A CHAIN FROM PAD LOCK TO POST.
3. COMPANY WILL FURNISH PAD LOCK.
4. GATES WILL BE PAINTED HIGHWAY YELLOW.



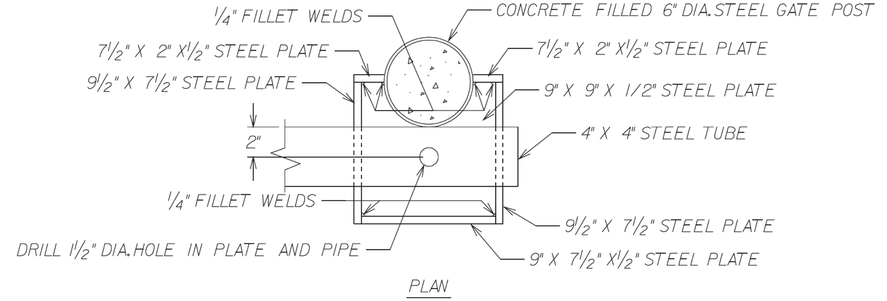
ELEVATION



TEMPORARY 16' CRASH GATE

NOT TO SCALE

ITEM 9000-3999 NORFOLK SOUTHERN CRASH GATE, 16' WIDTH



PLAN

GATE LOCK DETAIL

NOT TO SCALE

HAUL ROAD GATE DETAILS

YEAR	PROJECT NO.	SHEET NO.
2025	BR-STP-70(24)	STRUCTURE-SIGN1

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Ali Omar

Digitally signed by Ali Omar
Date: 2025.05.20 10:22:44 -05'00'

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

TENNESSEE DEPARTMENT OF TRANSPORTATION
JAMES K. POLK BUILDING, SUITE 1100
505 DEADERICK STREET
NASHVILLE, TN 37243
ALI OMAR, P.E. NO. 119955

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
SIGNATURE SHEET	STRUCTURE-SIGN1
LAYOUT OF BRIDGE	U-94-445
INDEX OF DRAWINGS	U-94-446
GENERAL NOTES AND ESTIMATED QUANTITIES	U-94-447
SUPERSTRUCTURE	U-94-450
SUPERSTRUCTURE DETAILS	U-94-451
SUPERSTRUCTURE DETAILS	U-94-452
PRESTRESSED BOX BEAM DETAILS SPANS 1 & 3	U-94-453
PRESTRESSED BOX BEAM DETAILS SPAN 2	U-94-454
ABUTMENT NO. 1	U-94-455
ABUTMENT NO. 1 DETAILS	U-94-456
ABUTMENT NO. 1 DETAILS	U-94-457
ABUTMENT NO. 2	U-94-458
ABUTMENT NO. 2 DETAILS	U-94-459
BENT NO. 1	U-94-460
BENT NO. 2	U-94-461
BENT NOS. 1 AND 2 DETAILS	U-94-462
BILL OF STEEL	U-94-464

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

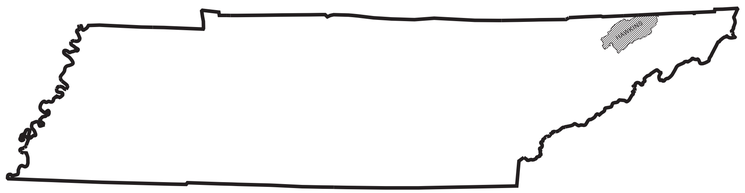
SIGNATURE
SHEET

CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	B-1

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
	- -		
	- -		



HAWKINS COUNTY

X580

STATE ROUTE 70
OVER
NORFOLK SOUTHERN RAILROAD
STATION 117+11.58

CONTINUOUS PRECAST
PRESTRESSED CONCRETE
BOX BEAM (33" X 48")
WITH COMPOSITE
CONCRETE DECK SLAB

3 SPAN BRIDGE
SPAN NO. 1 = 51'-6"
SPAN NO. 2 = 90'-0"
SPAN NO. 3 = 51'-6"
TOTAL LENGTH = 193'-0"

44'-0" ROADWAY
WITH STD-1-1SS PARAPET
75°06'54" SKEW

LAYOUT
DWG. NO. U-94-445

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL
202-01.05	REMOVAL OF ASBESTOS (EXISTING BR. NO. 37-SR070-06.19)	L.S.	1
202-04.01	REMOVAL OF STRUCTURES (EXIST. BR. NO. 37-SR070-06.19)	L.S.	1
204-02.01	DRY EXCAVATION (BRIDGES)	C.Y.	554
204-14	CORE DRILLING FOR PILES (ROCK)	L.F.	464
204-15	CORE DRILLING FOR PILES (SOIL)	L.F.	240
303-01.02	GRANULAR BACKFILL (BRIDGES)	TON	30
604-02.03	EPOXY COATED REINFORCING STEEL	LB.	110,364
604-03.01	CLASS 'A' CONCRETE (BRIDGES)	C.Y.	351
604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LB.	77,248
604-03.04	PAVEMENT AT BRIDGE ENDS	S.Y.	228
604-03.09	CLASS 'D' CONCRETE (BRIDGE DECK)	C.Y.	266
604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURES)	S.Y.	1,238
604-04.41	THREE STAR STATE EMBLEM	EA.	7
604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	S.Y.	1,090
606-03.03	STEEL PILES (12 INCH)	L.F.	1,381
606-03.06	PILE TIPS (STEEL PILES, 12 INCH)	EA.	83
615-02.11	PRESTRESSED CONCRETE BOX BEAMS (33" X 48")	L.F.	1,122
620-05.01	CONCRETE PARAPET SINGLE SLOPE (STD-1-1SS)	L.F.	1,321
707-07.01	CHAIN-LINK FENCE (BRIDGES)	S.F.	2,702
709-04	REINFORCED CONCRETE SLOPE PAVEMENT	C.Y.	100
710-09.01	6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	126
710-09.02	6" PIPE UNDERDRAIN	L.F.	44

LIST OF DRAWINGS

LIST OF DRAWINGS	DWG. NO.	LAST REV. DATE
LAYOUT OF BRIDGE	U-94-445	
INDEX OF DRAWINGS	U-94-446	
GENERAL NOTES AND ESTIMATED QUANTITIES	U-94-447	
SPECIAL PROVISIONS	U-94-448	
FOUNDATION DATA	U-94-449	
SUPERSTRUCTURE	U-94-450	
SUPERSTRUCTURE DETAILS	U-94-451	
SUPERSTRUCTURE DETAILS	U-94-452	
PRESTRESSED BOX BEAM DETAILS SPANS 1 & 3	U-94-453	
PRESTRESSED BOX BEAM DETAILS SPAN 2	U-94-454	
ABUTMENT NO. 1	U-94-455	
ABUTMENT NO. 1 DETAILS	U-94-456	
ABUTMENT NO. 1 DETAILS	U-94-457	
ABUTMENT NO. 2	U-94-458	
ABUTMENT NO. 2 DETAILS	U-94-459	
BENT NO. 1	U-94-460	
BENT NO. 2	U-94-461	
BENT NOS. 1 & 2 DETAILS	U-94-462	
FINAL FOUNDATION DATA	U-94-463	
BILL OF STEEL	U-94-464	

LIST OF STANDARD DRAWINGS

LIST OF STANDARD DRAWINGS	DWG. NO.	LAST REV. DATE
BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET	STD-1-1SS	07-24-24
REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS	STD-1-5	06-05-23
STANDARD PILE DETAILS	STD-5-1	
STANDARD SEISMIC DETAILS	STD-6-1	12-08-23
STANDARD PROTECTIVE FENCE DETAILS	STD-8-5	05-10-21
TRI-STAR STATE EMBLEM FINISH DETAILS	STD-8-6	10-03-18
STANDARD REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS	STD-9-1	10-07-08
MISCELLANEOUS ABUTMENT & DRAINAGE DETAILS	STD-10-1	06-05-23
MISCELLANEOUS ABUTMENT & PAVEMENT AT BRIDGE ENDS BACKFILL DETAILS	STD-10-2	06-05-23
STANDARD FLUME DETAILS	STD-10-3	01-10-24
STANDARD DETAILS FOR PRESTRESSED BOX BEAMS	STD-14-3	03-06-24

LIST OF SPECIAL PROVISIONS

LIST OF SPECIAL PROVISIONS	PROV. NO.	LAST REV. DATE
REMOVAL OF ASBESTOS CONTAINING MATERIAL (ACM)	202ACM	07-07-14

LIST OF EXISTING REFERENCE DRAWINGS

K-56-1
K-56-2
K-56-3
K-56-4
K-56-5
K-56-6
K-38-151
H-5-111

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX OF DRAWINGS AND ESTIMATED BRIDGE QUANTITIES

DRAWN BY: A. HUNTER 04-09-2025

4/9/2025 7:09:39 AM
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CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
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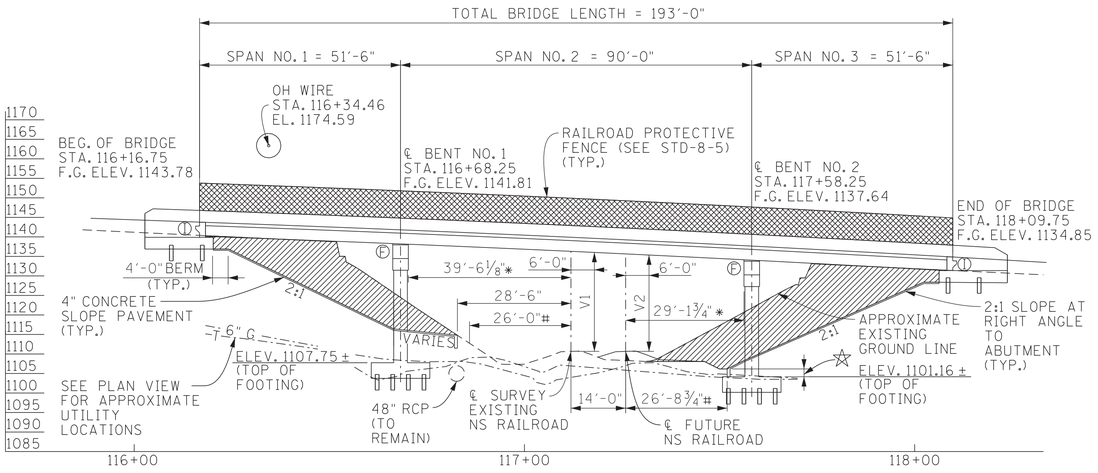


ELEVATION

SCALE: 1" = 20'-0"

▨ DENOTES: EXCAVATION TO BE INCLUDED IN ROADWAY QUANTITIES.

* DENOTES: HORIZONTAL CLEARANCES SHOWN ARE ACTUAL VALUES TO FACE OF BENT CAP MEASURED PERPENDICULAR TO ℄ OF TRACK.

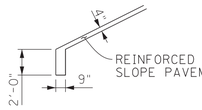
\# DENOTES: 26'-0" MINIMUM REQUIRED FOR MAINTENANCE ROADWAY PER DRAWING NO. 2 OF NS PUBLIC PROJECT MANUAL.

☆ 2'-0" COVER MIN. (TYP.)

V1 DENOTES: REQUIRED MINIMUM VERTICAL CLEARANCE = 23'-6"
PROPOSED MINIMUM VERTICAL CLEARANCE = 24'-7 9/16" @ 6'-0" RT.
OFFSET FROM ℄ RAILROAD.

V2 DENOTES: REQUIRED MINIMUM VERTICAL CLEARANCE = 23'-6"
PROPOSED MINIMUM VERTICAL CLEARANCE = 23'-11 3/4" @ 6'-0" RT.
OFFSET FROM ℄ FUTURE RAILROAD.

MIN. TEMPORARY VERTICAL CLEARANCE: A MINIMUM TEMPORARY VERTICAL CLEARANCE OF 22'-0" ABOVE TOP OF HIGHEST RAIL SHALL BE MAINTAINED AT ALL TIMES. SEE NS PUBLIC PROJECT MANUAL, APPENDIX H.1, SECTION 2.B.2.



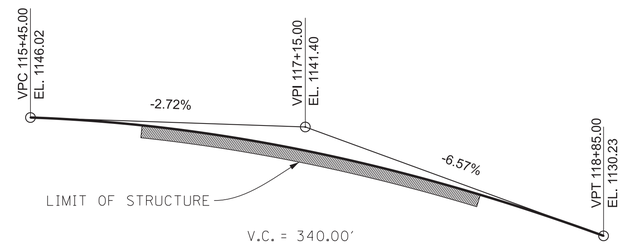
REINFORCED CONCRETE SLOPE PAVEMENT

PAVE SLOPES AND EXPOSED EARTH UNDER BRIDGE WITH A 4" THICK CONCRETE SLAB REINFORCED WITH 6 X 6 - D4.5 X D4.5 WELDED WIRE REINFORCEMENT. THE WELDED WIRE REINFORCEMENT SHALL BE PLACED AT ONE-HALF THE DEPTH OF THE SLAB AND EXTEND TO WITHIN 3" OF ITS EDGE WITH A 1'-0" LAP REQUIRED ON ALL SHEETS. THE COST OF THE WELDED WIRE REINFORCEMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 709-04, REINFORCED CONCRETE SLOPE PAVEMENT. ONE-HALF INCH PREMOLDED EXPANSION JOINTS WITHOUT LOAD TRANSFERS SHALL BE FORMED AROUND ALL STRUCTURES AND FEATURES PROJECTING THROUGH, IN, OR AGAINST THE SLAB. THE SLAB SHALL BE GROOVED PARALLEL WITH AND AT RIGHT ANGLES TO THE UNDER ROADWAY CENTERLINE AT 6'-0" SPACING IN EACH DIRECTION. DEPTH OF GROOVE SHALL NOT BE LESS THAN 1". SEE STD. DWG. NO. RD01-SA-1 FOR LIMITS OF SLOPE PROTECTION.

HORIZONTAL CURVE DATA

(NORFOLK SOUTHERN RAILROAD)

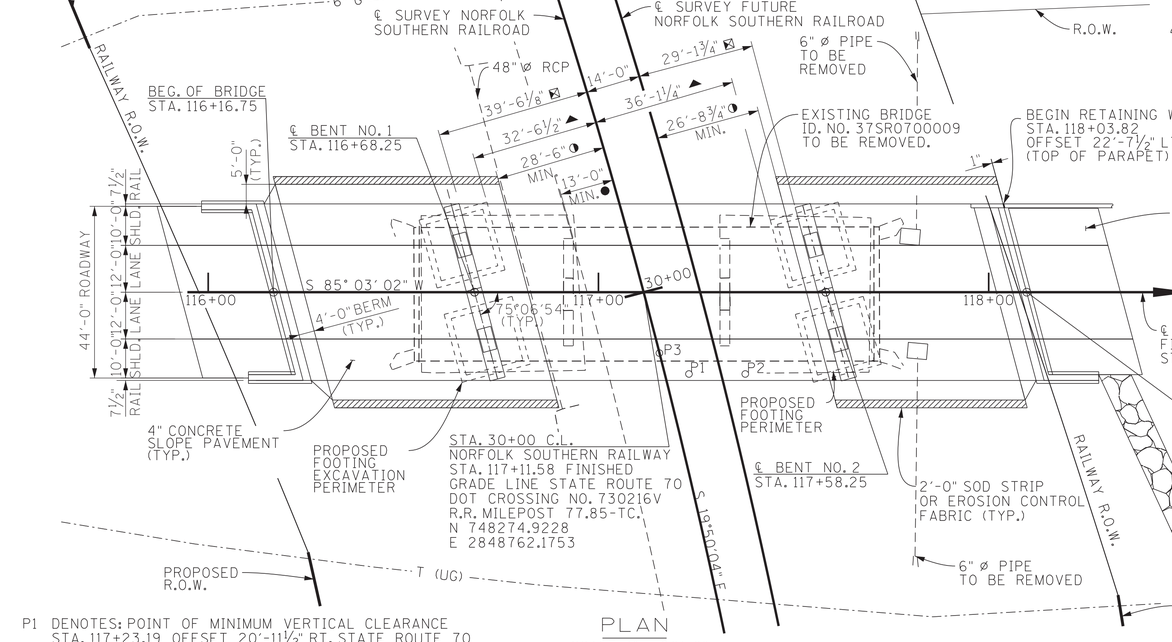
PI 31+31.52
N 748,137.8970
E 2,848,749.3829
Δ 31°17'15" (LT)
D 3°29'37"
R 1,640.00
L 895.55
T 459.25



V.C. = 340.00'

GRADE SKETCH

(STATE ROUTE 70)



PLAN

SCALE: 1" = 20'-0"

P1 DENOTES: POINT OF MINIMUM VERTICAL CLEARANCE
STA. 117+23.19 OFFSET 20'-11½" RT. STATE ROUTE 70
STA. 29+76.85 OFFSET 6.00' RT. NORFOLK SOUTHERN RAILROAD
REQUIRED MINIMUM VERTICAL CLEARANCE = 23'-6"

P2 DENOTES: POINT OF MINIMUM VERTICAL CLEARANCE
STA. 117+37.62 OFFSET 20'-11½" RT. STATE ROUTE 70
STA. 29+73.38 OFFSET 6.00' RT. NORFOLK SOUTHERN RAILROAD
REQUIRED MINIMUM VERTICAL CLEARANCE = 23'-6"

P3 DENOTES: POINT OF MINIMUM EXISTING VERTICAL CLEARANCE = 21'-7" (EXISTING BRIDGE)

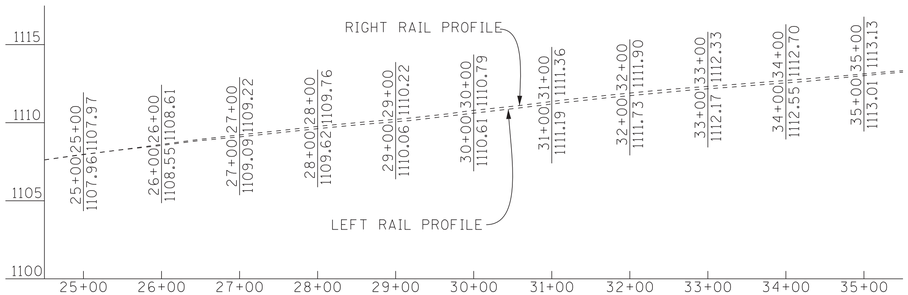
⊠ DENOTES: PROPOSED MINIMUM HORIZONTAL CLEARANCE = 29'-1¾"
REQUIRED MINIMUM HORIZONTAL CLEARANCE = 28'-0"

◑ DENOTES: PROPOSED MINIMUM SLOPE CLEARANCE = 26'-8¾"
REQUIRED MINIMUM SLOPE CLEARANCE = 26'-0"

● DENOTES: EXISTING HORIZONTAL CLEARANCE = 13'-0" (MIN.)

▲ DENOTES: MINIMUM TEMPORARY HORIZONTAL CLEARANCE (MEASURED FROM ℄ EXISTING R.R. TO EDGE OF EXCAVATION) = 32'-6½"

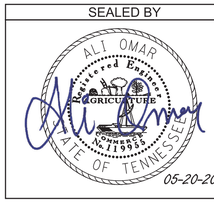
▲ MIN. TEMPORARY HORIZONTAL CLEARANCE: A MINIMUM TEMPORARY HORIZONTAL CLEARANCE OF 14'-0" FROM CENTERLINE OF CURVED TRACK SHALL BE MAINTAINED AT ALL TIMES. SEE NS PUBLIC PROJECT MANUAL, SECTION H.1.2.B.2.



GRADE SKETCH

(NORFOLK SOUTHERN RAILROAD)

SEALED BY



PIN NO.:	124383.00
DESIGN BY:	ALI OMAR DATE: 01/2024
DRAWN BY:	P. MOSHER DATE: 02/2024
SUPERVISED BY:	DRE/AAO DATE: 02/2024
CHECKED BY:	RICK CRAWFORD DATE: 04/2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE
STATE ROUTE 70 OVER
NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

ENGINEER OF STRUCTURES

U-94-445

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CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
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	- -		
	- -		
	- -		

LIST OF DRAWINGS

LIST OF DRAWINGS	DWG. NO.	LAST REV. DATE
LAYOUT OF BRIDGE	U-94-445	
INDEX OF DRAWINGS	U-94-446	
GENERAL NOTES AND ESTIMATED QUANTITIES	U-94-447	
SPECIAL PROVISIONS	U-94-448	
FOUNDATION DATA	U-94-449	
SUPERSTRUCTURE	U-94-450	
SUPERSTRUCTURE DETAILS	U-94-451	
SUPERSTRUCTURE DETAILS	U-94-452	
PRESTRESSED BOX BEAM DETAILS SPANS 1 & 3	U-94-453	
PRESTRESSED BOX BEAM DETAILS SPAN 2	U-94-454	
ABUTMENT NO. 1	U-94-455	
ABUTMENT NO. 1 DETAILS	U-94-456	
ABUTMENT NO. 1 DETAILS	U-94-457	
ABUTMENT NO. 2	U-94-458	
ABUTMENT NO. 2 DETAILS	U-94-459	
BENT NO. 1	U-94-460	
BENT NO. 2	U-94-461	
BENT NOS. 1 & 2 DETAILS	U-94-462	
FINAL FOUNDATION DATA	U-94-463	
BILL OF STEEL	U-94-464	

LIST OF STANDARD DRAWINGS

LIST OF STANDARD DRAWINGS	DWG. NO.	LAST REV. DATE
BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET	STD-1-1SS	07-24-24
REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS	STD-1-5	06-05-23
STANDARD PILE DETAILS	STD-5-1	
STANDARD SEISMIC DETAILS	STD-6-1	12-08-23
STANDARD PROTECTIVE FENCE DETAILS	STD-8-5	05-10-21
TRI-STAR STATE EMBLEM	STD-8-6	10-03-18
STANDARD REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS	STD-9-1	10-07-08
MISCELLANEOUS ABUTMENT & DRAINAGE DETAILS	STD-10-1	06-05-23
MISCELLANEOUS ABUTMENT & PAVEMENT AT BRIDGE ENDS BACKFILL DETAILS	STD-10-2	06-05-23
STANDARD FLUME DETAILS	STD-10-3	01-10-24
STANDARD DETAILS FOR PRESTRESSED BOX BEAMS	STD-14-3	03-06-24

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K-38-151
H-5-111

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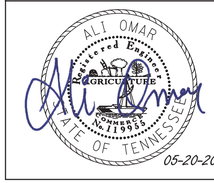

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CHECKED BY:	RICK CRAWFORD	DATE: 04/2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX OF DRAWINGS
STATE ROUTE 70 OVER NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-446

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CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

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GENERAL NOTES

02212024

CONSTRUCTION SPECIFICATIONS: TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 1, 2021 EDITION).

DESIGN SPECIFICATIONS: 9TH EDITION (2020) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND THE 2ND EDITION (2011) AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN WITH INTERIMS.

LOADING:

A. HL-93 LIVE LOADING
B. SEISMIC DESIGN CATEGORY "A" WITH A_S= 0.155, S_{DS}=0.292, S_{D1}=0.110, (1000 YEAR RETURN PERIOD).
C. DEAD LOAD INCLUDES 35 LB/SQ. FT. FOR FUTURE WEARING SURFACE.

CONCRETE: TO BE CLASS A (CAST-IN-PLACE) F'C = 3000 PSI EXCEPT AS NOTED OTHERWISE.

BRIDGE DECKS: CLASS D CONCRETE FOR BRIDGE DECKS SHALL BE IN ACCORDANCE WITH SECTION 604 OF THE STANDARD SPECIFICATIONS.

BRIDGE DECK SURFACE FINISH: TO BE IN ACCORDANCE WITH METHOD 3 IN ARTICLE 604.22 OF THE STANDARD SPECIFICATIONS.

BRIDGE DECK FORMS: BRIDGE DECK FORMS FOR CONCRETE DECKS SHALL BE CONSTRUCTED USING EITHER REMOVABLE FORMS OR PERMANENT FORMS. PERMANENT FORMS SHALL BE REMAIN-IN-PLACE STEEL. FORMS SHALL BE ATTACHED BY MEANS OTHER THAN WELDING TO MAIN STRUCTURAL MEMBERS OR REINFORCING STEEL. TEMPORARY ERECTION DIAPHRAGMS MUST BE USED AT THE ENDS OF PRECAST CONCRETE GIRDERS WHERE END DIAPHRAGMS, SUPPORT DIAPHRAGMS, OR ABUTMENT ENDWALLS ARE TO BE POURED CONCURRENTLY WITH THE DECK AND SHALL BE PROVIDED ELSEWHERE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS TO PREVENT GIRDER ROTATION. SEE STANDARD DRAWING STD-14-3 AND ARTICLE 604.05 OF THE STANDARD SPECIFICATIONS.

REINFORCING STEEL: SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. SEE SECTIONS 604 AND 907 OF THE STANDARD SPECIFICATIONS.

END-BEARING STEEL PILES AT BENTS: FOUNDATIONS FOR BENTS SHALL BE EXCAVATED TO THE BOTTOM OF FOOTING ELEVATIONS SHOWN. ROD SOUNDINGS SHALL THEN BE MADE AS DIRECTED BY THE ENGINEER. FROM THE RESULTS OBTAINED, THE ENGINEER OF STRUCTURES WILL DECIDE IF PILES WILL BE USED OR THE FOOTINGS LOWERED TO ROCK. COST OF ROD SOUNDINGS TO BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS. NO REINFORCING STEEL FOR BENT COLUMNS OR FOOTINGS SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED.

END-BEARING STEEL PILES: TO BE HP12X53 DRIVEN TO REFUSAL ON ROCK OR A MINIMUM BEARING OF 100 TONS FOR THE BENTS AND 100 TONS FOR THE ABUTMENTS. ALL PILES SHALL BE ASTM A709 GRADE 50 STEEL.

PILE TIPS: PILES SHALL BE EQUIPPED WITH CAST STEEL POINTS. ALSO, SEE STANDARD DRAWINGS STD-5-1 FOR ADDITIONAL NOTES.

RAILROAD CROSSING: THE CONTRACTOR SHALL CONDUCT HIS WORK SO AS TO PROTECT THE RAILROAD TRACKS AND PROPERTIES FROM ANY DAMAGE. THE WORK SHALL BE DONE IN ACCORDANCE WITH REGULATIONS STIPULATED BY THE NORFOLK SOUTHERN RAILROAD SO AS TO MAINTAIN CLEARANCE AND NOT INTERRUPT TRAFFIC.

UTILITIES: IT IS INTENDED THAT THE COST OF MATERIALS AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION OF UTILITIES SHALL BE BORNE BY OTHERS AND SHALL NOT BE PAID FOR AS A PART OF THIS CONTRACT. THE CONTRACTOR SHALL COOPERATE WITH OTHERS IN THE INSTALLATION OF UTILITIES WITH NO ADDITIONAL COMPENSATION ALLOWED THE CONTRACTOR AS A RESULT.

SHOP DRAWINGS: SEE SECTION 105.02 OF THE STANDARD SPECIFICATIONS.

ASBESTOS: OUR BRIDGE DRAWINGS, INSPECTION REPORTS, OR ACM (ASBESTOS CONTAINING MATERIAL) SURVEY INDICATE THIS BRIDGE CONTAINS ELEMENTS WITH ACM. TO MINIMIZE THE AMOUNT OF HAZARDOUS MATERIAL WASTE, THE ELEMENTS CONTAINING ASBESTOS SHALL BE REMOVED PRIOR TO DEMOLITION OF THE ENTIRE STRUCTURE. THE CONTRACTOR IS REQUIRED TO TAKE ALL MANDATORY SAFEGUARDS PRESCRIBED BY STATE AND FEDERAL LAW FOR BOTH WORKER PROTECTION AND HAZARDOUS MATERIALS DISPOSAL.

PROTECTIVE FENCE: RAILROAD PROTECTIVE FENCE IS REQUIRED TO BE BUILT IN ACCORDANCE WITH STANDARD DRAWING STD-8-5. DIMENSION "H" AS SHOWN ON STANDARD DRAWING STD-8-5 SHALL BE 10'-0".

PARAPET SYSTEM: BUILD PARAPETS ACCORDING TO STANDARD DRAWING STD-1-1SS. THE PARAPETS SHALL BE FORMED AND CAST PLUMB, NOT PERPENDICULAR TO THE SLAB. THE DIMENSIONS AT THE TRAFFIC FACE SHALL BE KEPT CONSTANT, WITH VARIATION DUE TO CROSS-SLOPE ACCOMMODATED AT THE REAR FACE.

SLOPE PAVEMENT: PAVE SLOPES AND EXPOSED EARTH UNDER BRIDGE WITH A 4" THICK CONCRETE SLAB REINFORCED WITH 6 X 6 – D4.5 X D4.5 WELDED WIRE REINFORCEMENT. THE WELDED WIRE REINFORCEMENT SHALL BE PLACED AT ONE-HALF THE DEPTH OF THE SLAB AND EXTEND TO WITHIN 3" OF ITS EDGE WITH A 1'-0" LAP REQUIRED ON ALL SHEETS. THE COST OF THE WELDED WIRE REINFORCEMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 709-04, REINFORCED CONCRETE SLOPE PAVEMENT. ONE-HALF INCH PREMOLDED EXPANSION JOINTS WITHOUT LOAD TRANSFERS SHALL BE FORMED AROUND ALL STRUCTURES AND FEATURES PROJECTING THROUGH, IN, OR AGAINST THE SLAB. THE SLAB SHALL BE GROOVED PARALLEL WITH AND AT RIGHT ANGLES TO THE UNDER-ROADWAY CENTERLINE AT 6'-0" SPACING IN EACH DIRECTION. DEPTH OF GROOVE SHALL NOT BE LESS THAN 1".

VALUE ENGINEERING ALTERNATE BRIDGE DESIGN CRITERIA: ALTERNATE BRIDGE DESIGN PROPOSALS MAY NOT DIMINISH THE FUNCTIONAL OR STRUCTURAL EQUIVALENCY OF THE BRIDGE AND MUST MEET OR EXCEED THE CAPACITIES OF THE CONTRACT PLANS STRUCTURE AT ALL LIMIT STATES IN AASHTO TABLE 3.4.1-1. ADDITIONALLY, THE WATERWAY OPENING AND FLOOD CLEARANCES MAY NOT BE REDUCED. FOR GRADE SEPARATIONS, THE HORIZONTAL CLEARANCES MAY NOT BE REDUCED, NOR MAY THE VERTICAL CLEARANCES BE LESS THAN THE MINIMUM ACCEPTABLE FOR THE TYPE FACILITY CROSSED.

FALSEWORK OVER TRAFFIC: SEE SECTION 604.06 OF THE STANDARD SPECIFICATIONS.

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.21 OF THE STANDARD SPECIFICATIONS. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. THE APPLIED TEXTURE FINISH SHALL BE MEASURED AND PAID FOR UNDER ITEM NO. 604-04.01.

ESTIMATED QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	TOTAL	SUPERSTRUCTURE	ABUTMENT 1	BENT NO. 1	BENT NO. 2	ABUTMENT 2
(3)	202-01.05	REMOVAL OF ASBESTOS (EXIST. BR. NO. 37-SR070-06.19)	L.S.	1					
(2)	202-04.01	REMOVAL OF STRUCTURES (EXIST. BR. NO. 37-SR070-06.19)	L.S.	1					
(4)	204-02.01	DRY EXCAVATION (BRIDGES)	C.Y.	554		72	230	180	72
	204-14	CORE DRILLING FOR PILES (ROCK)	L.F.	464			176	288	
	204-15	CORE DRILLING FOR PILES (SOIL)	L.F.	240			176	64	
(9)	303-01.02	GRANULAR BACKFILL (BRIDGES)	TON	30		15			15
	604-02.03	EPOXY COATED REINFORCING STEEL	LB.	110,364	107,306	1,615			1,443
(8)	604-03.01	CLASS 'A' CONCRETE (BRIDGES)	C.Y.	351		45	131	135	40
	604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LB.	77,248	1,072	5,154	33,120	33,633	4,269
(1)	604-03.04	PAVEMENT AT BRIDGE ENDS	S.Y.	228		114			114
	604-03.09	CLASS 'D' CONCRETE (BRIDGE DECK)	C.Y.	266	266				
	604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURES)	S.Y.	1,238	806	41	180	178	33
(10)	604-04.41	THREE STAR STATE EMBLEM	EA.	7		2	2	2	1
	604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	S.Y.	1,090	1,090				
	606-03.03	STEEL PILES (12 INCH)	L.F.	1,381		398	352	352	279
(12)	606-03.06	PILE TIPS (STEEL PILES, 12 INCH)	EA.	83		10	32	32	9
(6)	615-02.11	PRESTRESSED CONCRETE BOX BEAMS (33" X 48")	L.F.	1,122	1,122				
(11)	620-05.01	CONCRETE PARAPET SINGLE SLOPE (STD-1-1SS)	L.F.	1,321					
	707-07.01	CHAIN-LINK FENCE (BRIDGES)	S.F.	2,702	2,702				
	709-04	REINFORCED CONCRETE SLOPE PAVEMENT	C.Y.	100		51			49
(7)	710-09.01	6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	126		63			63
	710-09.02	6" PIPE UNDERDRAIN	L.F.	44		24			20

ESTIMATED QUANTITIES NOTES

1. **NOTE:** PRIOR TO CONSTRUCTION OF THE PAVEMENT AT BRIDGE ENDS, THE CONTRACTOR SHALL SUBMIT A PROPOSED BILL OF STEEL TO THE ENGINEER FOR APPROVAL.
2. **NOTE:** LUMP SUM (EXISTING BRIDGE ID. NO. 37SR0700009 AND APPROACHES TO BE REMOVED TO FINAL PROFILE BETWEEN STATIONS 116+00 AND 118+00. EXISTING BRIDGE DESCRIPTION: 3 SPAN, 34'-6" OUT-TO-OUT, CONTINUOUS CONCRETE DECK WITH AASHTO TYPE I I-BEAMS, CONCRETE BENTS AND ABUTMENTS).
3. **NOTE:** SEE PROJECT COMMITMENTS AND SPECIAL PROVISION 202ACM.
4. **NOTE:** EXCAVATION BASED ON FINAL PROFILE AT ABUTMENTS AND FINAL PROFILE AT BENTS.
5. **NOTE:** THE COST OF BITUMINOUS-FIBERBOARD AND ALL MISCELLANEOUS JOINT MATERIAL TO BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.
6. **NOTE:** COST OF ELASTOMERIC PADS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PRESTRESSED BEAM.
7. **NOTE:** COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN THE UNIT PRICE BID FOR PERFORATED PIPE.
8. **NOTE:** THE COST OF ALL MATERIALS AND LABOR NECESSARY FOR THE INSTALLATION OF 36 ANCHOR BOLT ASSEMBLIES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CLASS A CONCRETE (BRIDGES), ITEM NO. 604-03.01.
9. **NOTE:** GRANULAR BACKFILL SHALL BE TYPE "A" GRADING "D" MATERIAL. SEE STANDARD DRAWING STD-10-1.
10. **NOTE:** FOR THREE STAR STATE EMBLEM DETAILS SEE DWG. NOS. U-94-457, U-94-459, AND U-94-462.
11. **NOTE:** RETAINING WALL PARAPET QUANTITY IS INCLUDED IN BRIDGE PARAPET QUANTITY.
12. **NOTE:** THE UNIT PRICE BID FOR CAST STEEL POINTS SHALL INCLUDE FURNISHING AND INSTALLATION TO THE PILES.

PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: A. HUNTER DATE: 02 /2024
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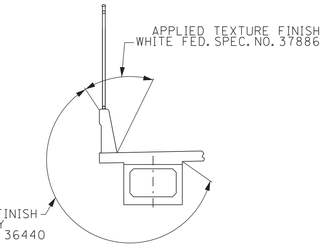
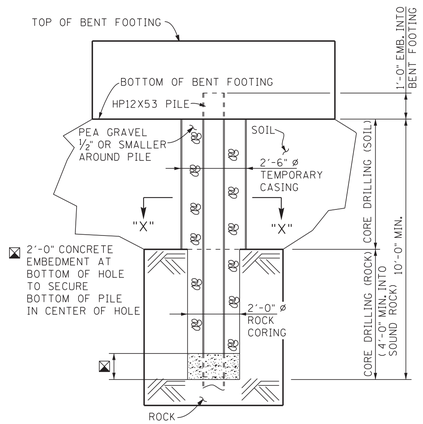


TYPICAL ℄ CANTILEVER

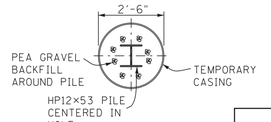
APPLIED TEXTURE FINISH SKETCH

NOTE: IN ADDITION TO THE SURFACES SHOWN IN THE APPLIED TEXTURE FINISH SKETCH ALL EXPOSED SURFACES OF BENTS, THE WINGWALLS, ABUTMENT BEAMS, APRON WALLS, AND EXTERIOR PORTIONS OF ENDWALLS ARE TO RECEIVE AN APPLIED TEXTURE FINISH (MOUNTAIN GREY, FED. SPEC. NO. 36440).



PILE EMBEDMENT DETAIL

(TYPICAL AT BENT NOS. 1 AND 2)



SECTION "X"-"X"

ALL PILES THAT CANNOT BE DRIVEN TO A MINIMUM OF 7'-0" SHALL BE INSTALLED IN IN ACCORDANCE WITH THE DETAILS ON THIS SHEET.

1) A 2'-6" DIAMETER HOLE SHALL BE DRILLED IN THE PLANS LOCATIONS THROUGH INITIAL SOIL LAYER AND 2'-0" DIAMETER HOLE THROUGH ROCK LAYER. THE AMOUNT OF SOIL DRILLING (SOIL) AND CORE DRILLING (ROCK) MAY VARY DUE TO LOCATION OF ROCK. TEMPORARY CASING SHALL BE PROVIDED TO SUPPORT THE HOLE IN INITIAL (SOIL) LAYER.

2) THE HOLE SHALL BE THOROUGHLY CLEANED OF ALL LOOSE MATERIAL AND OBSTRUCTIONS TO ALLOW FOR DRIVING PILE THROUGH CENTER OF HOLE.

3) THE PILE SHALL BE DRIVEN THROUGH CENTER OF HOLE TO REFUSAL OR A MINIMUM LOAD OF 100 TONS OR REFUSAL.

4) MINIMUM OF 2'-0" OF HIGH EARLY STRENGTH CONCRETE PLACED IN THE BOTTOM OF THE HOLE AND THE PILE SHALL BE SUPPORTED UNTIL THE CONCRETE REACHES ITS INITIAL SET STRENGTH.

5) THE REMAINDER OF THE ANNULAR SPACE IS TO BE BACKFILLED WITH PEA GRAVEL. SUPPORT SHALL BE PROVIDED AT THE TOP OF THE PILE DURING BACKFILLING TO ENSURE THE PILE DOES NOT SHIFT WITHIN THE HOLE.

BASIS FOR PAYMENT:
THE COST OF ALL MATERIAL AND LABOR FOR DRILLING THE HOLES, TEMPORARY CASING, PILE END ENCASEMENT, CONCRETE, BACKFILLING WITH PEA GRAVEL ½" OR SMALLER BRACING OF THE PILES, AND ANY OTHER INCIDENTALS REQUIRED FOR FULL INSTALLATION OF THE PILES SHALL BE INCLUDED IN THE ITEM NOS. 204-14 AND 204-15.

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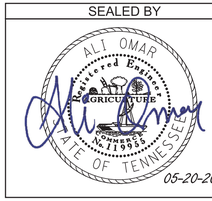

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND ESTIMATED QUANTITIES
STATE ROUTE 70 OVER
NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-447

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CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
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SPECIAL RAILROAD NOTES:

1.) THE CONTRACTOR SHALL CONDUCT HIS WORK SO AS TO PROTECT THE RAILROAD'S TRACKS AND PROPERTIES FROM ANY DAMAGE. THE WORK SHALL BE DONE IN ACCORDANCE WITH ACCORDANCE WITH REGULATIONS STIPULATED BY THE RAILROAD BEING AFFECTED BY THIS PROJECT SO AS TO MAINTAIN CLEARANCE AND NOT INTERRUPT TRAFFIC IN ANY MANNER.

2.) FOR A GENERAL LIST OF ANTICIPATED CONSTRUCTION SUBMISSIONS, PLEASE REVIEW SECTION 6.A.2 OF THE NORFOLK SOUTHERN SPECIAL PROVISIONS FOR PROTECTION OF RAILWAYS INTERESTS. A LIST OF REQUIRED SUBMISSIONS WILL BE PROVIDED AT THE PRECONSTRUCTION MEETING.

3.) THE CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURES NECESSARY TO PREVENT DEBRIS FROM FALLING ON TO THE RAILROAD'S RIGHTS-OF-WAY. THE METHOD PROPOSED TO ACCOMPLISH THIS MUST BE SUBMITTED TO NORFOLK SOUTHERN FOR REVIEW AND APPROVAL PRIOR TO USE AND MUST NOT INFRINGE ON THE VERTICAL AND/OR HORIZONTAL CLEARANCES IN THESE PLANS. THE TEMPORARY MINIMUM VERTICAL AND HORIZONTAL CONSTRUCTION CLEARANCES THAT THE CONTRACTOR MUST MEET AT ALL TIMES ARE LISTED IN SECTION 5.A OF THE NORFOLK SOUTHERN SPECIAL PROVISIONS FOR PROTECTION OF RAILWAYS INTERESTS, WHICH CRITERIA ARE INCLUDED IN THE SPECIAL PROVISION 105C. NORFOLK SOUTHERN RAILROAD WILL OT ALLOW TRACK OR TRACKS TO BE OBSTRUCTED WITH AT GRADE CRANE MAT PROTECTION. COMPLETE AND FULL ENCLOSURE OF STRUCTURE DEMOLITION WITHIN ALLOWABLE CLEARANCES WILL BE REQUIRED. THE COST OF REMOVING AND DISPOSING OF DEBRIS, AND THE COMPLETE AND FULL PROTECTION OF THE CONTRACTOR'S WORK AREA FOR DEMOLITION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR REMOVAL OF STRUCTURES.

4.) THE ELEVATIONS OF THE EXISTING TOP-OF-RAIL PROFILE SHALL BE VERIFIED BEFORE BEGINNING CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE NORFOLK SOUTHERN PUBLIC PROJECTS ENGINEER.

5.) CONTRACTOR PROTECTIVE SERVICES SHALL BE ONSITE ANYTIME CONSTRUCTION ACTIVITIES ARE TAKING PLACE ON OR ADJACENT TO THE RAILROAD PROPERTY AND/OR HAVE THE POTENTIAL TO FOUL THE RAILROAD'S TRACK OR OPERATIONS. SEE SECTION 8 OF THE NORFOLK SOUTHERN SPECIAL PROVISIONS FOR PROTECTION OF RAILWAY INTERESTS – DIRECT HIRE FOR ADDITIONAL CLARIFICATIONS AND REQUIREMENTS REGARDING CONTRACTOR PROTECTIVE SERVICES.

SPECIAL PROVISIONS:

1. ALL UTILITY INSTALLATIONS OR RELOCATIONS THAT ARE REQUIRED IN CONJUNCTION WITH THIS PROJECT CAN BE INSTALLED OR RELOCATED AS PART OF THE PROJECT PROVIDED THE CONSTRUCTION IS PERFORMED BY THE PROJECT CONTRACTOR OR PROJECT CONTRACTOR'S SUB-CONTRACTOR. HOWEVER, THE UTILITY MUST SUBMIT AN APPLICATION FOR THE INSTALLATION OR RELOCATION TO NS PIPE AND WIRE FOR APPROPRIATE HANDLING FOR LICENSE AGREEMENT AND APPLICABLE FEES. FOR UTILITY APPLICATIONS GO TO HTTP://WWW.NSCORP.COM/CONTENT/NSCORP/EN/REAL-ESTATE/NORFOLK-SOUTHERN-SERVICES/WIRE-PIPELINE-FIBER-OPTIC-PROJECTS.HTML.
2. NOTE: LICENSE AGREEMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.
3. NOTE: EXISTING SUBSTANDARD CLEARANCES SHALL NOT BE FURTHER REDUCED FOR THE TEMPORARY CONSTRUCTION CONDITION WITHOUT WRITTEN PERMISSION FROM NS.
4. THE CONTRACTOR WILL NOT BE PERMITTED TO STORE ANY EQUIPMENT ON NS PROPERTY WITHOUT PERMISSION FROM THE NS RAILROAD ENGINEER IN ACCORDANCE WITH SECTION E.5.K.1 OF THE NS PUBLIC PROJECTS MANUAL.
5. NO SHORING WILL BE PERMITTED WITHIN 10'-0" CENTERLINE OF TRACK. THE SUPPORT OF EXCAVATION IS TO BE CUT OFF AT LEAST 2'-0" BELOW PROPOSED GRADE IN ACCORDANCE WITH E.5.D.7 AND H.1.5.H OF THE NS PUBLIC PROJECTS MANUAL.
6. DEMOLITION OF THE EXISTING SUBSTRUCTURE LOCATED IN OR ADJACENT TO THE TRACK DITCH SHALL EXTEND A SUFFICIENT DEPTH BELOW GRADE TO ENABLE RESTORATION OF THE EXISTING/PROPOSED TRACK DITCH, BUT IN NO CASE LESS THAN 2'-0" BELOW FINAL GRADE.
7. TEMPORARY CASING FOR PILES EXTENDING INTO THE RAILROAD LIVE LOAD INFLUENCE ZONE SHALL BE DESIGNED FOR THE FULL RAILROAD SURCHARGE, PER NS PUBLIC PROJECTS MANUAL SECTION H.1.3.C.3.

NORFOLK SOUTHERN RAILROAD CONTACT ADDRESSES

SHAWN STARLING, P.E.
SENIOR ENGINEER PUBLIC IMPROVEMENTS
NORFOLK SOUTHERN RAILWAY COMPANY
ENGINEERING – DESIGN & CONSTRUCTION
650 WEST PEACHTREE STREET NW – BOX 45
ATLANTA, GA 30308
PHONE: (470) 463-6721
E-MAIL: DOUGLAS.STARLING@NSCORP.COM

AND

SHAUN P. McCOY, DIVISION ENGINEER
1400 NORFOLK SOUTHERN DRIVE
BIRMINGHAM, AL 35210
PHONE: (276) 639-9051
E-MAIL: SHAUN.McCOY@NSCORP.COM

DISCLAIMER:

THE ENGINEER SEAL CERTIFICATION DOES NOT APPLY TO THE NORFOLK SOUTHERN RAILROAD NOTES INCLUDED ON THIS DRAWING.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISIONS

STATE ROUTE 70 OVER
NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-448

PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: A. HUNTER DATE: 02 / 24
SUPERVISED BY: DRE/AAO DATE: 02 / 24
CHECKED BY: RICK CRAWFORD DATE: 04/2024

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CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
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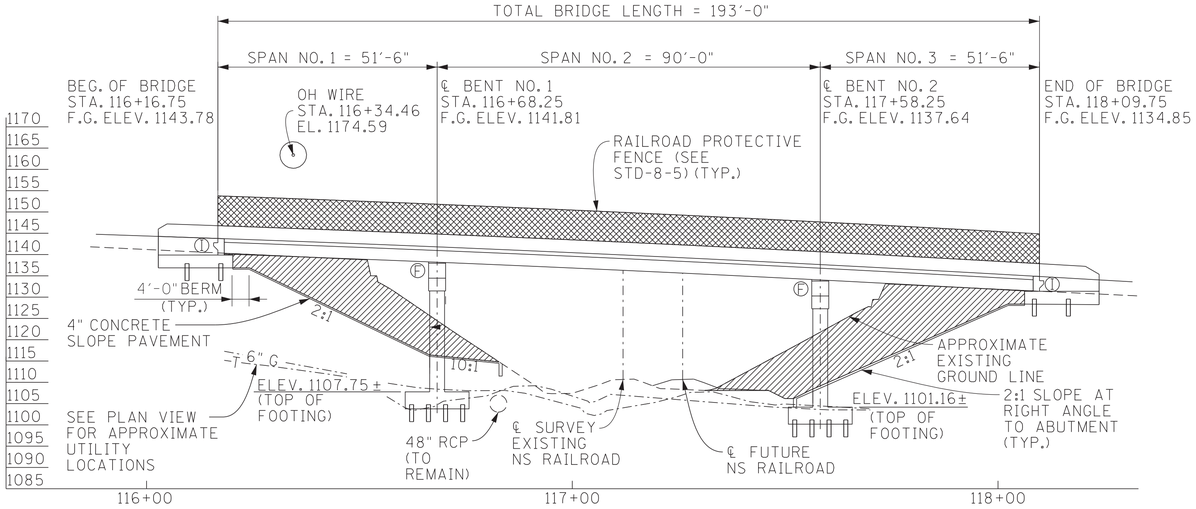
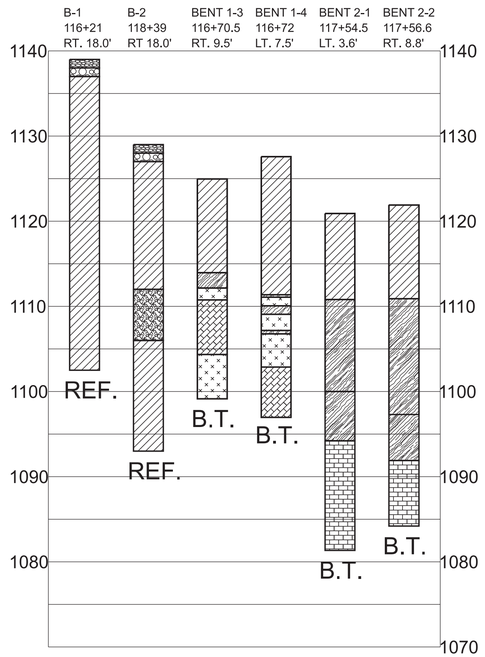


DENOTES: EXCAVATION TO BE INCLUDED IN ROADWAY QUANTITIES.

ELEVATION

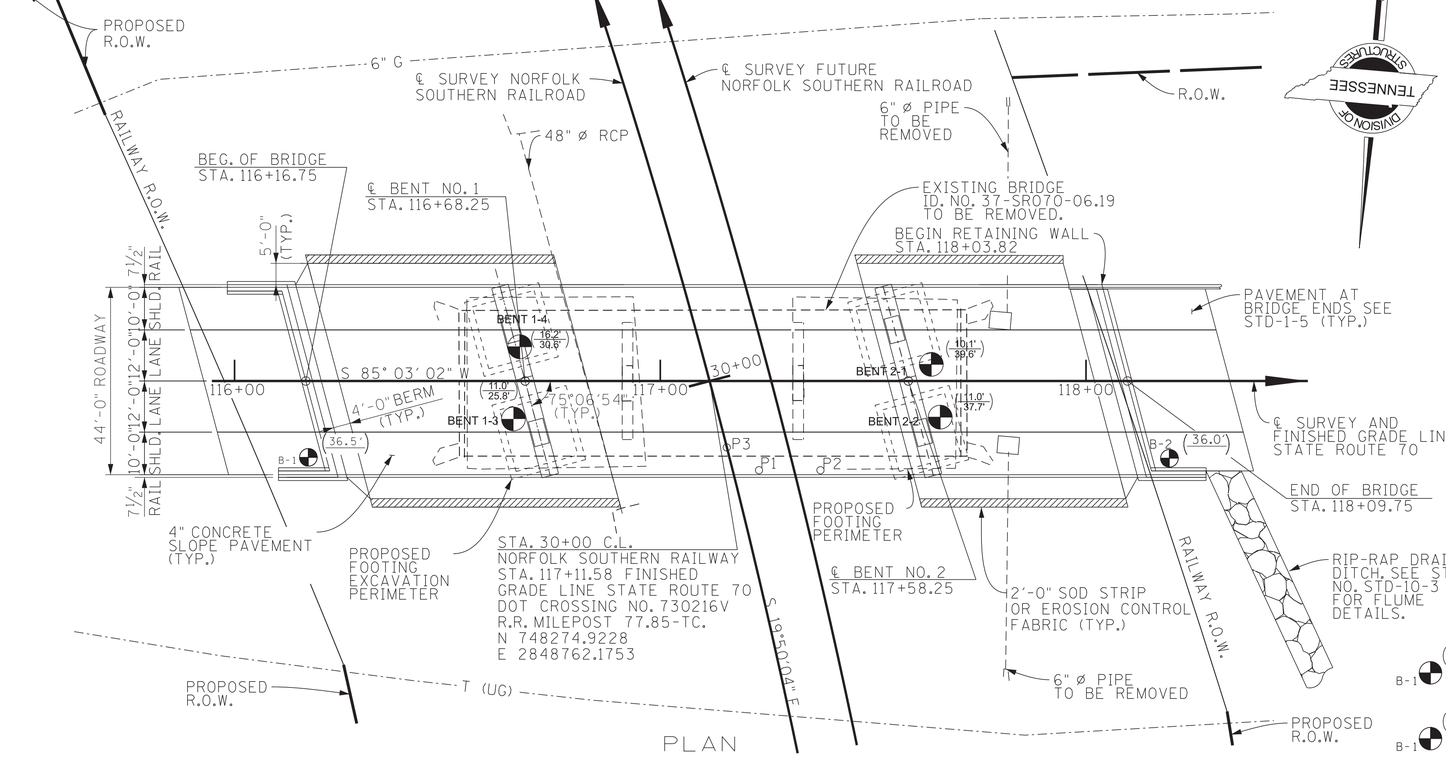
SCALE: 1" = 20'-0"



LEGEND

- ASPHALT
- CLAY
- SMALL BOULDERS
- LIMESTONE
- SILTSTONE
- WEATHERED SHALE
- WEATHERED LIMESTONE

B.T.= BORING TERMINATED
REF.= AUGER REFUSAL



PLAN

SCALE: 1" = 20'-0"

BORING NO.	STATION	OFFSET	GROUND ELEVATION (FT)	ROCK ELEVATION (FT)	TOTAL DEPTH (FT)
1	116+21	18' RT	1139.0	1102.5	36.5
2	118+39	18' RT	1129.0	1093.0	36.0
B-BENT 1-3	116+70.5	9.5' R	1124.9	1113.9	25.8
B-BENT 1-4	116+72	7.5' L	1127.6	1111.4	30.6
B-BENT 2-1	117+54.5	3.6' L	1120.9	1110.9	39.6
B-BENT 2-2	117+56.6	8.8' R	1121.9	1110.9	37.7

THIS DRAWING IS FOR FOUNDATION DATA ONLY AND IS NOT TO BE USED AS A LAYOUT.

B-1 (24.5'/10.3') — BORING LOCATION. DEPTH TO REFUSAL (ABOVE LINE), BOTTOM OF HOLE (BELOW LINE)

B-1 (24.5') — BORING LOCATION WITH DEPTH TO REFUSAL

B-1 (24.5') — BORING LOCATION TERMINATION DEPTH (NO REFUSAL)

NOTE:
BORING DEPICTIONS SHOWN ON FOUNDATION DATA SHEET INDICATE GENEREAL SOIL AND ROCK TYPE AT SPECIFIC BORING LOCATIONS.

PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: D. EASTERLY DATE: 03/2024
SUPERVISED BY: DRE/AAO DATE: 03/2024
CHECKED BY: RICK CRAWFORD DATE: 04/2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
FOUNDATION DATA

STATE ROUTE 70 OVER
NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-449

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CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
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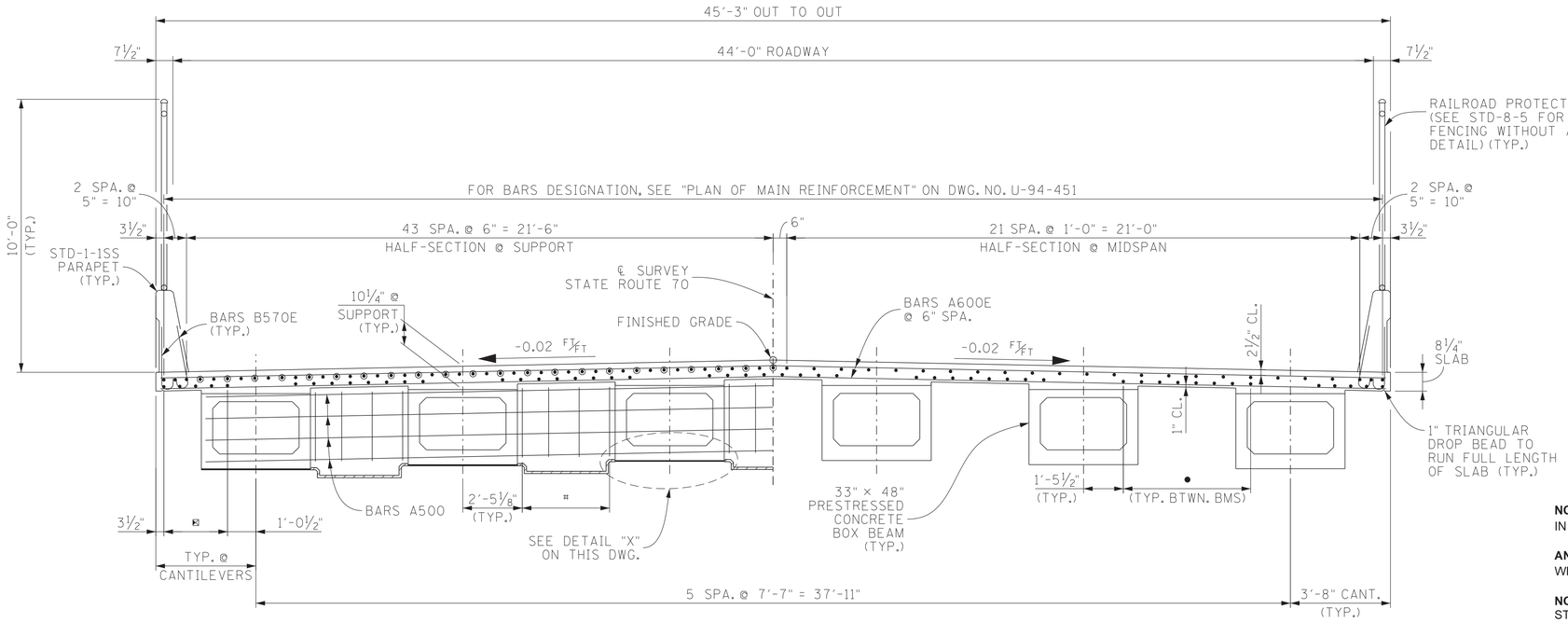


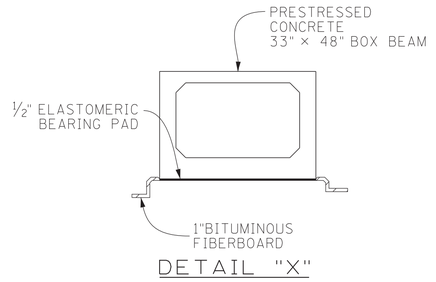
TYPICAL CROSS-SECTION

◉ DENOTES: CUT-OFF BARS (OVER BENTS)

◘ DENOTES: BARS A60-E - 4 SPA. @ 7" = 2'-4"

● DENOTES: BARS A60-E - 7 SPA. @ 8" = 4'-8"

DENOTES: BARS L400 - 3 SPA. @ 1'-0" = 3'-0" (MEASURED PARALLEL TO DIAPHRAGM)



DETAIL "X"

NOTE: NO PORTION OF THE PARAPETS SHALL BE POURED UNTIL THE ENTIRE DECK SLAB IS IN PLACE.

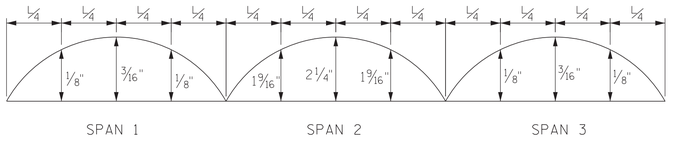
ANCHOR BOLTS AT PIERS: ANCHOR BOLT ASSEMBLIES AT PIERS SHALL BE IN ACCORDANCE WITH STANDARD DRAWING STD-6-1.

NOTE: WHEN POURING SLAB, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR PARAPET. THE PARAPET SHALL NOT BE POURED UNTIL THE CORRESPONDING SLAB IS POURED AND CURED. ALSO SEE STD. DWG. NO. STD-1-1SS.

NOTE: THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SUPPORTING THE BEAMS TO PREVENT DAMAGE DUE TO TWISTING OR OVERTURNING DURING ALL PHASES OF CONSTRUCTION. IT IS STRONGLY RECOMMENDED THAT THE TEMPORARY ERECTION DIAPHRAGMS BE INSTALLED PRIOR TO PLACING ANY LOADS ON THE BEAMS.

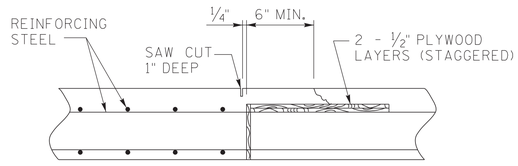
NOTE: THE SUPPORT DIAPHRAGMS AT BENTS SHALL BE FORMED AND THE BOTTOM 15 INCHES POURED AS SOON AS POSSIBLE AFTER THE BEAMS HAVE BEEN SET. THE REMAINDER OF THE DIAPHRAGMS SHALL BE POURED CONCURRENTLY WITH THE DECK SLAB. THE BEAMS SHALL ATTAIN AN AGE OF AT LEAST 90 DAYS PRIOR TO POURING THE REMAINDER OF THE SUPPORT DIAPHRAGMS AND DECK SLAB. ALL DIAPHRAGM CONCRETE SHALL BE INCLUDED IN THE QUANTITY FOR CLASS D CONCRETE.

NOTE: PRESTRESSED CONCRETE DECK PANELS AND FORMS ARE NOT ALLOWED.



DEAD LOAD CORRECTION CURVE

DEAD LOAD CORRECTION CURVE: THIS CURVE IS FOR DEAD LOAD SLAB AND ALL DEAD LOADS THAT ARE APPLIED AFTER SLABS ARE IN PLACE AND SHOULD BE CORRECTED TO COMPENSATE FOR THE EFFECTS DUE TO VERTICAL CURVE.



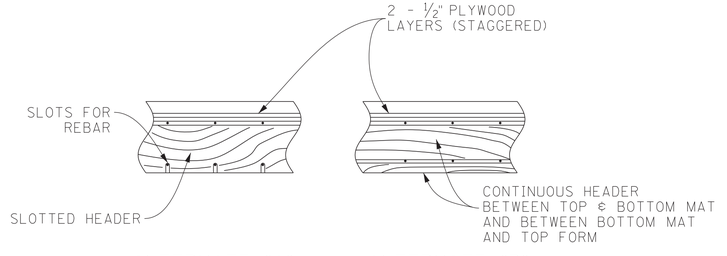
SLAB CONSTRUCTION JOINT DETAIL

DECK CONCRETE POURING SEQUENCE: SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S OPTION SUBJECT TO THE FOLLOWING:

1. NO CONSTRUCTION JOINT MAY BE LOCATED CLOSER THAN 10 FEET OR FURTHER THAN 15 FEET FROM AN INTERIOR SUPPORT.

2. THE SLAB IN THE MIDDLE SECTION OF BOTH ADJACENT SPANS MUST BE POURED TO WITHIN AT LEAST 15 FEET OF THE SUPPORTS EITHER PRIOR TO OR CONCURRENTLY WITH THE SLAB OVER AN INTERIOR SUPPORT.

NOTE: ALL SLAB CONSTRUCTION JOINTS SHALL BE IN ACCORDANCE WITH THE SLAB CONSTRUCTION JOINT DETAIL SHOWN ABOVE.



ALTERNATE HEADER DETAILS

ESTIMATED QUANTITIES

CLASS 'D' CONCRETE (BRIDGE DECK) C.Y.	STEEL BAR REINFORCEMENT (BRIDGES) LBS.	EPOXY COATED REINFORCING STEEL LBS.
266	1,072	107,306

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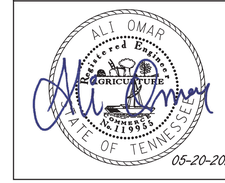

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STATE ROUTE 70 OVER NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-450

PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: P. MOSHER DATE: 02/2024
SUPERVISED BY: DRE/AAO DATE: 02/2024
CHECKED BY: RICK CRAWFORD DATE: 04/2024

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CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
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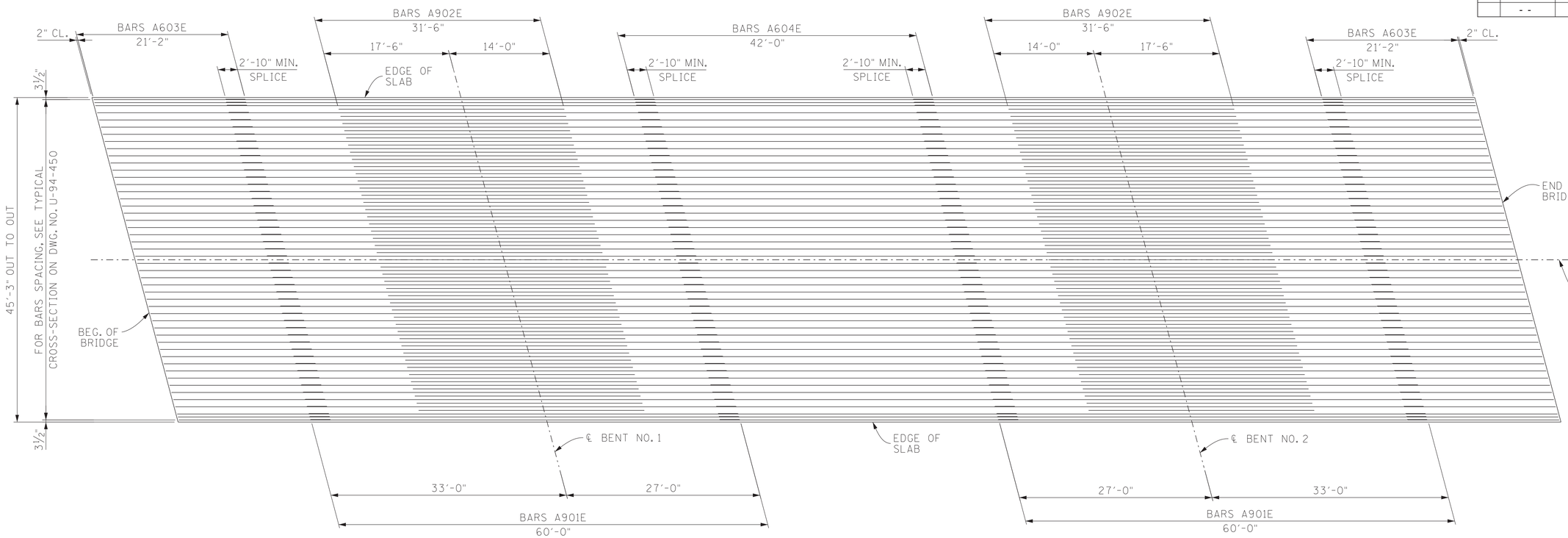
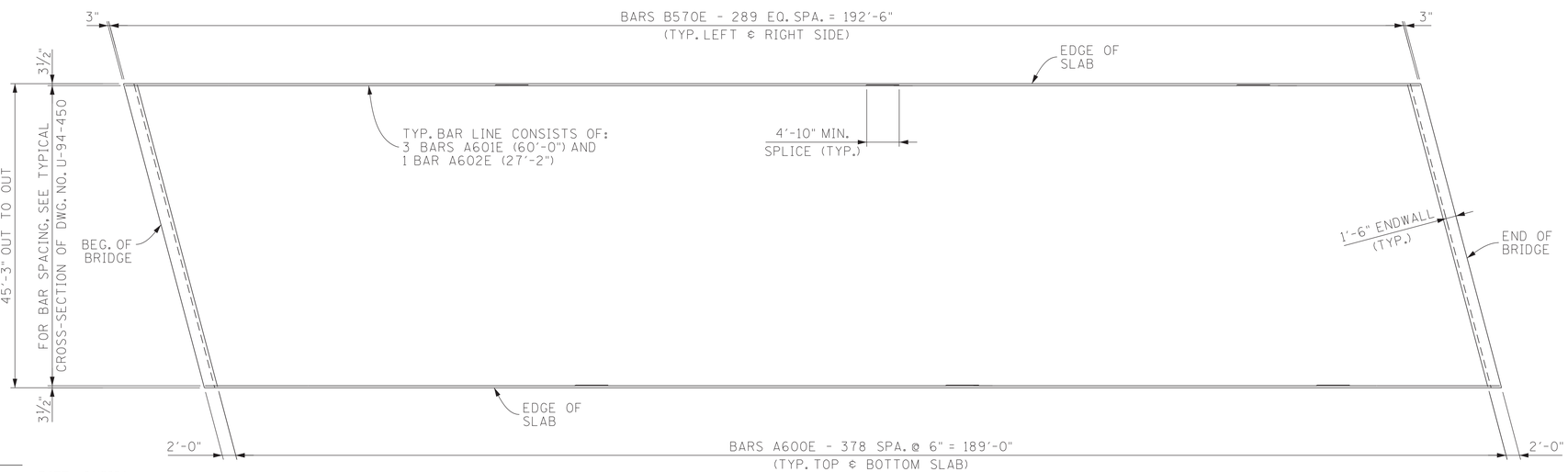


PLAN OF MAIN REINFORCEMENT



SLAB PLAN

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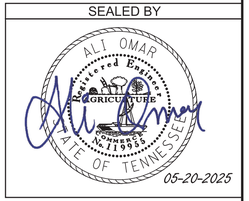

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STATE ROUTE 70 OVER NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-451

PIN NO.:	124383.00	
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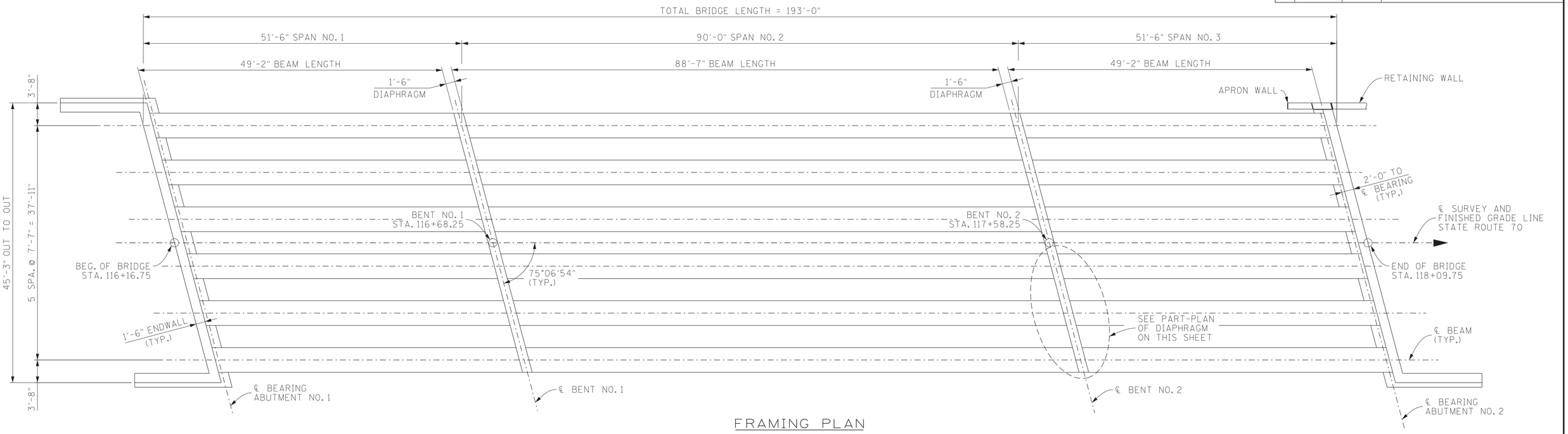
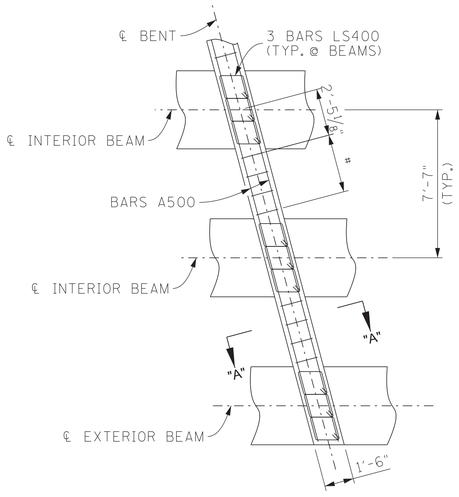
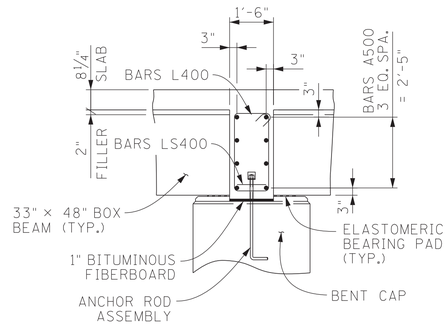


FRAMING PLAN



PART-PLAN OF DIAPHRAGM

DENOTES: BARS L400 - 3 SPA. @ 1'-0" = 3'-0"



SECTION "A"-"A"

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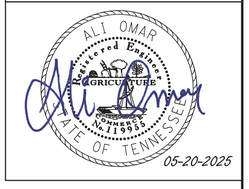

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STATE ROUTE 70 OVER NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-452

PIN NO.: 124383.00
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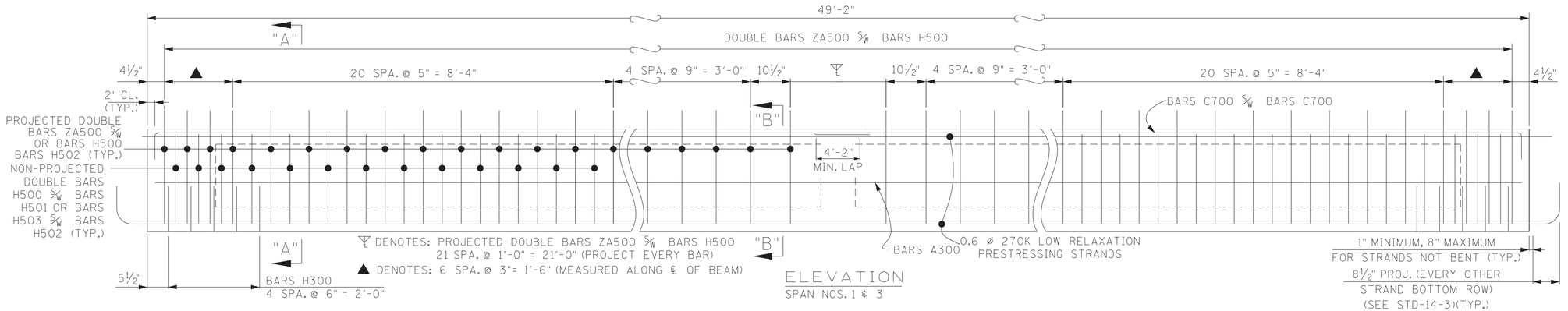
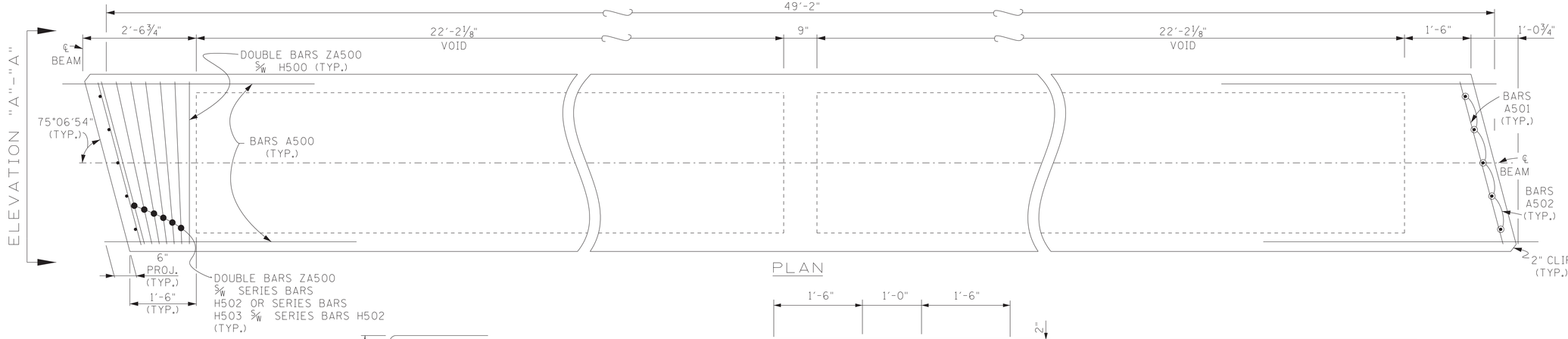
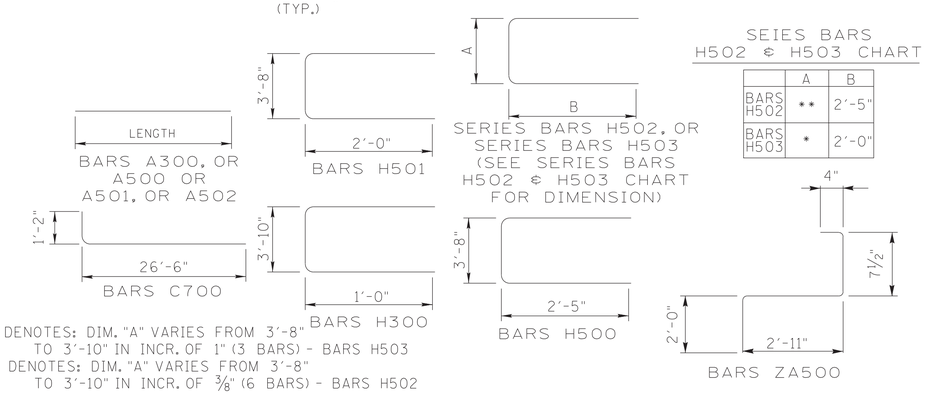
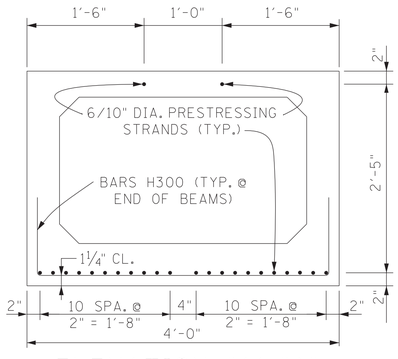






SEIES BARS H502 & H503 CHART

	A	B
BARS H502	**	2'-5"
BARS H503	*	2'-0"



BILL OF STEEL PER BEAM

BAR	SIZE	NO. REQ'D	LENGTH
A300	3	2	48'-10"
A500	5	12	5'-6"
A501	5	8	3'-8"
A502	5	10	2'-5"
C700	7	10	27'-8"
H300	3	10	5'-10"
H500	5	52	8'-6"
H501	5	20	7'-8"
SERIES H502	5	2	51'-6"
SERIES H503	5	2	23'-3"
ZA500	5	116	5'-11"

ESTIMATED QUANTITIES PER BEAM

NO. BEAMS REQ'D	PRESTRESSING STRANDS (LOW RELAXATION) LB.	CONCRETE C.Y.	REINFORCING STEEL LB.
12	949	11	2,242

GENERAL NOTES

NOTE: SEE STD-14-3 FOR BOX BEAM STANDARD DETAILS, NOTES AND REINFORCING.

NOTE: THE PRESTRESSED BEAMS SHALL ATTAIN AN AGE OF AT LEAST 90 DAYS PRIOR TO POURING THE SUPPORT DIAPHRAGMS (EXCLUDING BOTTOM 15") AND DECK SLAB.

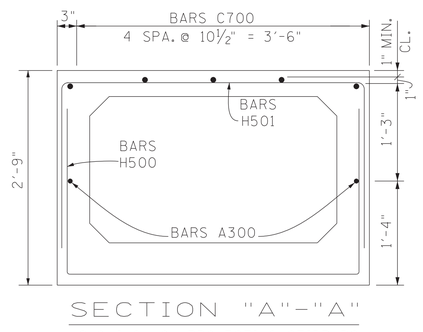
NOTE: ALL BEAMS ARE 33" (HEIGHT) X 48" (WIDTH) PRESTRESSED CONCRETE BEAMS.

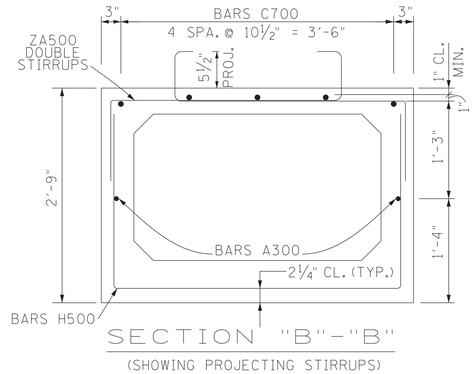
NOTE: THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 9500 PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 8500 PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE.

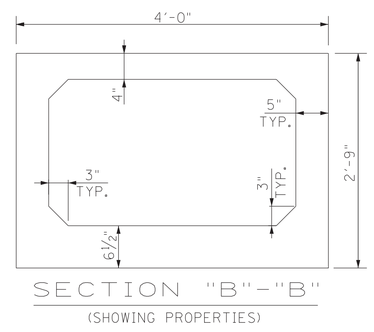
PRESTRESSING STRANDS: ALL STRANDS SHALL BE 6/10" DIAMETER, UNCOATED 7- WIRE STRANDS, ASTM A416 GRADE 270,LOW-LAX, A = 0.217 SQ. IN. PULLED TO 43,943 LBS. PER STRAND UNLESS OTHERWISE NOTED.

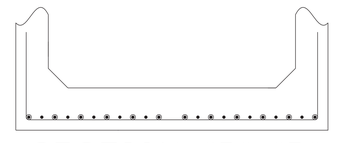
PRESTRESSED BEAM DESIGN DATA (PER BEAM):
LIVE LOAD DISTRIBUTION FACTOR: MOMENT = 0.80 LANES
SHEAR = 0.87 LANES
COMPOSITE DEAD LOAD: DC = 125 LB/FT
DW = 250 LB/FT
COMPOSITE SLAB DESIGN STRENGTH: F 'C = 4000 PSI

DOWNWARD DEFLECTION UNDER TOTAL DL IS NOT ALLOWED.









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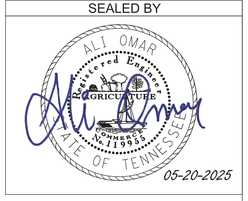


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESTRESSED BOX BEAM DETAILS SPANS 1 & 3 STATE ROUTE 70 OVER NORFOLK SOUTHERN RAILROAD BRIDGE I.D. NO. 37SR0700009 STATION 117+11.58 HAWKINS COUNTY 2025

U-94-453

PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: TRENT JOHNSTON DATE: 02/2024
SUPERVISED BY: DRE/AAO DATE: 02/2024
CHECKED BY: RICK CRAWFORD DATE: 04/2024

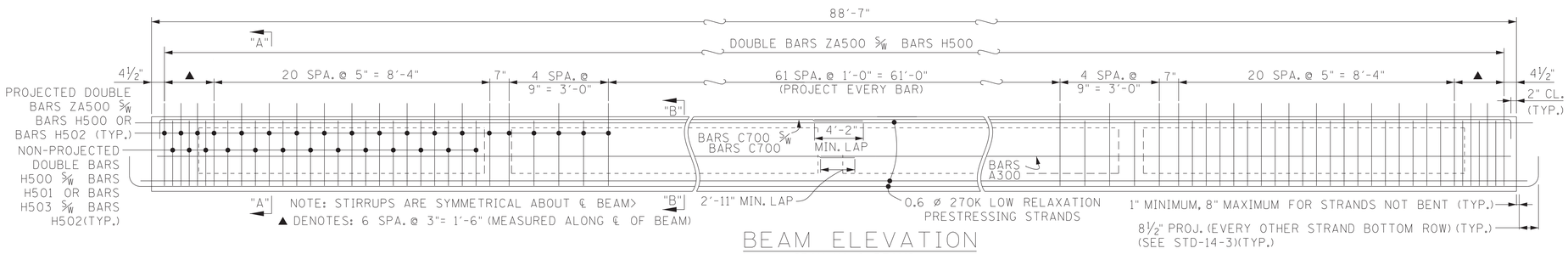
5/20/2025 8:29:55 AM
P:\STRUCTURES\CADD_REGION_1\37-HAWKINS\37SR0700009\BRIDGE_DRAWINGS\37SR0700009BORDER.DGN

CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

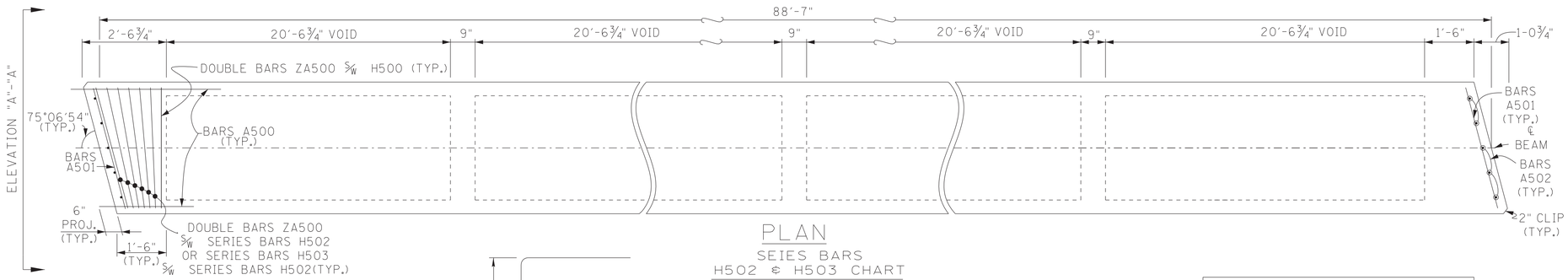
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
	- -		
	- -		



BEAM ELEVATION

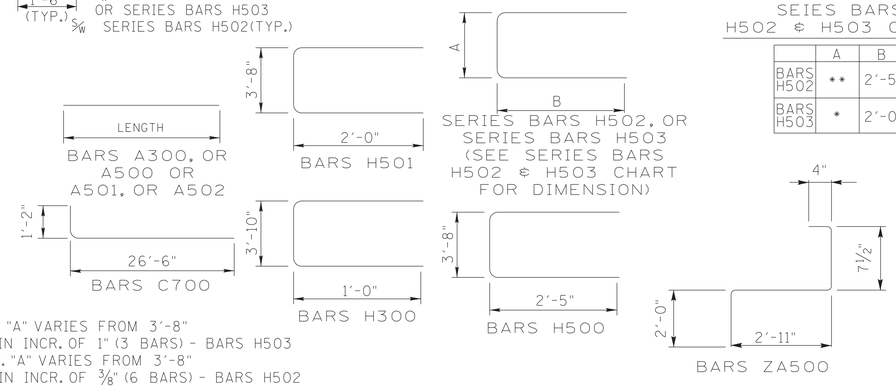
SPAN NO. 2 BEAMS



PLAN

SEIES BARS H502 & H503 CHART

	A	B
BARS H502	**	2'-5"
BARS H503	*	2'-0"



* DENOTES: DIM. "A" VARIES FROM 3'-8" TO 3'-10" IN INCR. OF 1" (3 BARS) - BARS H503

** DENOTES: DIM. "A" VARIES FROM 3'-8" TO 3'-10" IN INCR. OF ⅜" (6 BARS) - BARS H502

BILL OF STEEL PER BEAM

BAR	SIZE	NO. REQ'D	LENGTH
A300	3	4	45'-8"
A500	5	12	5'-6"
A501	5	8	3'-8"
A502	5	10	2'-5"
C700	7	10	47'-5"
H300	3	10	5'-10"
H500	5	92	8'-6"
H501	5	20	7'-8"
SERIES H502	5	2	51'-6"
SERIES H503	5	6	23'-3"
ZA500	5	196	5'-11"

GENERAL NOTES

NOTE: SEE STD-14-3 FOR BOX BEAM STANDARD DETAILS, NOTES AND REINFORCING.

NOTE: THE PRESTRESSED BEAMS SHALL ATTAIN AN AGE OF AT LEAST 90 DAYS PRIOR TO POURING THE SUPPORT DIAPHRAGMS (EXCLUDING BOTTOM 15") AND DECK SLAB.

NOTE: ALL BEAMS ARE 33" (HEIGHT) X 48" (WIDTH) PRESTRESSED CONCRETE BEAMS.

NOTE: THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 9500 PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 8500 PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE.

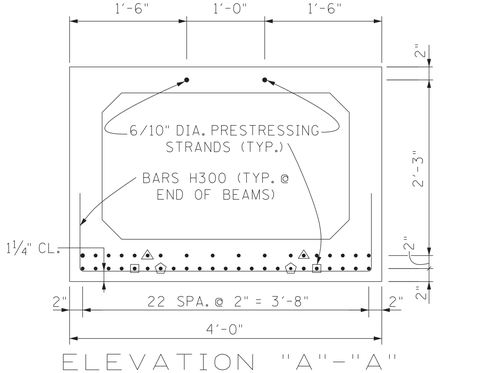
PRESTRESSING STRANDS: ALL STRANDS SHALL BE 6/10" DIAMETER, UNCOATED 7- WIRE STRANDS, ASTM A416 GRADE 270,LOW-LAX, A = 0.217 SQ. IN. PULLED TO 43,943 LBS. PER STRAND UNLESS OTHERWISE NOTED.

PRESTRESSED BEAM DESIGN DATA (PER BEAM):
LIVE LOAD DISTRIBUTION FACTOR: MOMENT = 0.80 LANES
SHEAR = 0.87 LANES
COMPOSITE DEAD LOAD: DC = 125 LB/FT
DW = 250 LB/FT
COMPOSITE SLAB DESIGN STRENGTH: F 'C = 4000 PSI

DOWNWARD DEFLECTION UNDER TOTAL DL IS NOT ALLOWED.

ESTIMATED QUANTITIES PER BEAM

NO. BEAMS REQ'D	PRESTRESSING STRANDS (LOW RELAXATION) LB.	CONCRETE C.Y.	REINFORCING STEEL LB.
6	2,776	20	3,525



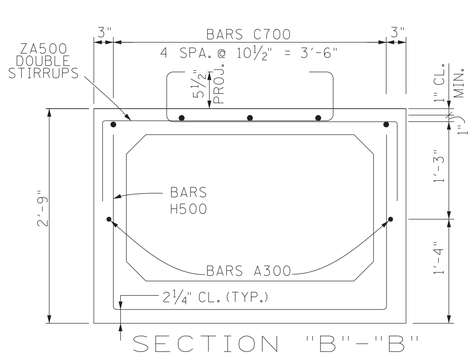
ELEVATION "A"-"A"

SHOWING 6/10 ø" PRESTRESSING STRANDS (43 STRANDS)

△ DENOTES: BREAK BOND 3'-0" FROM EACH END OF BEAM

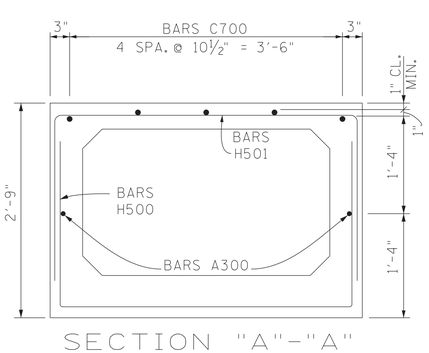
⊡ DENOTES: BREAK BOND 9'-0" FROM EACH END OF BEAM

⬠ DENOTES: BREAK BOND 6'-0" FROM EACH END OF BEAM



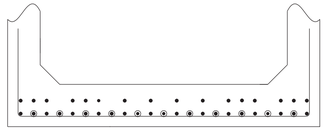
SECTION "B"-"B"

(SHOWING PROJECTING STIRRUPS)



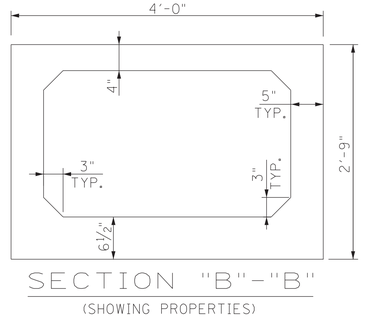
SECTION "A"-"A"

(SHOWING NON-PROJECTING STIRRUPS)



SECTION "B"-"B"

⊙DENOTES: STRANDS TO BE BENT



SECTION "B"-"B"

(SHOWING PROPERTIES)

SEALED BY

ALI OMAR — Registered Engineer — STATE OF TENNESSEE — DEPARTMENT OF AGRICULTURE — LICENSED — No. 119958 — 05-20-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESTRESSED BOX BEAM DETAILS SPAN 2 STATE ROUTE 70 OVER NORFOLK SOUTHERN RAILROAD BRIDGE I.D. NO. 37SR0700009 STATION 117+11.58 HAWKINS COUNTY 2025

U-94-454

PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: TRENT JOHNSTON DATE: 02/2024
SUPERVISED BY: DRE/AAO DATE: 02/2024
CHECKED BY: RICK CRAWFORD DATE: 04/2024

5/20/2025 9:08:52 AM
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CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
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	- -		
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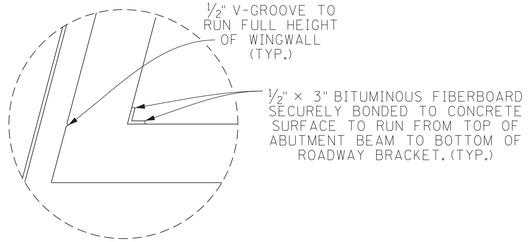
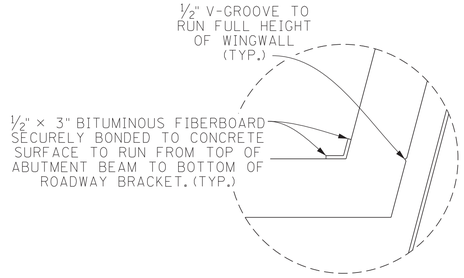
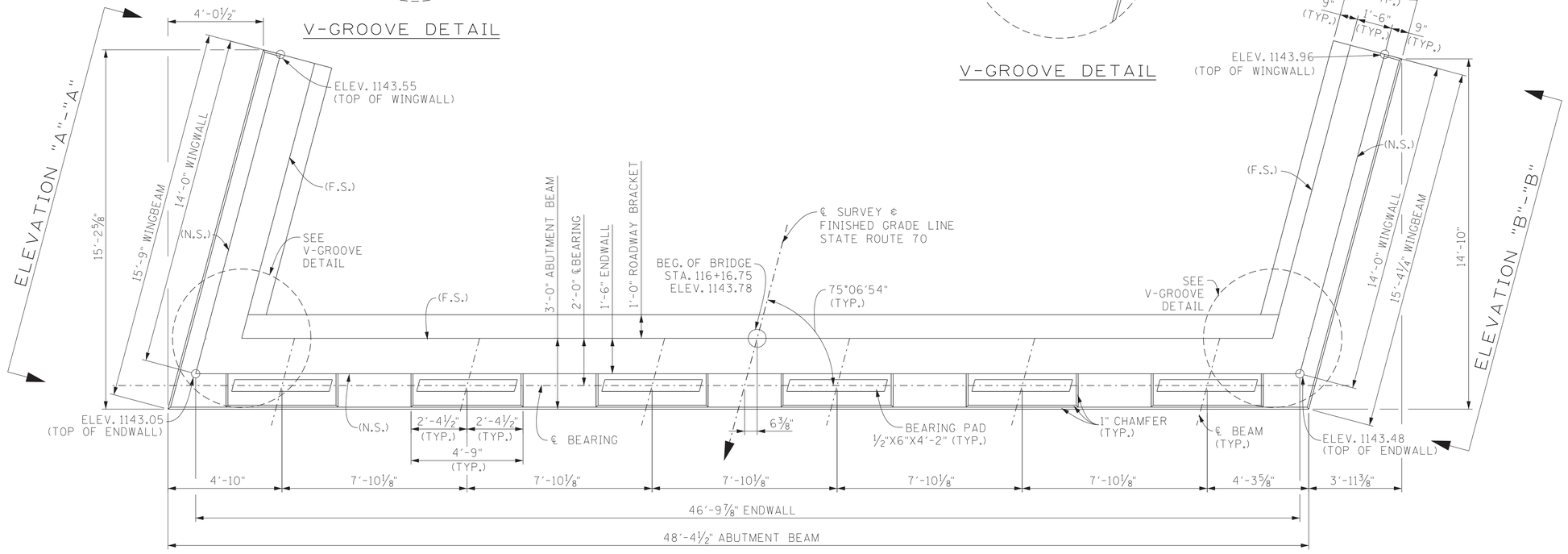


V-GROOVE DETAIL

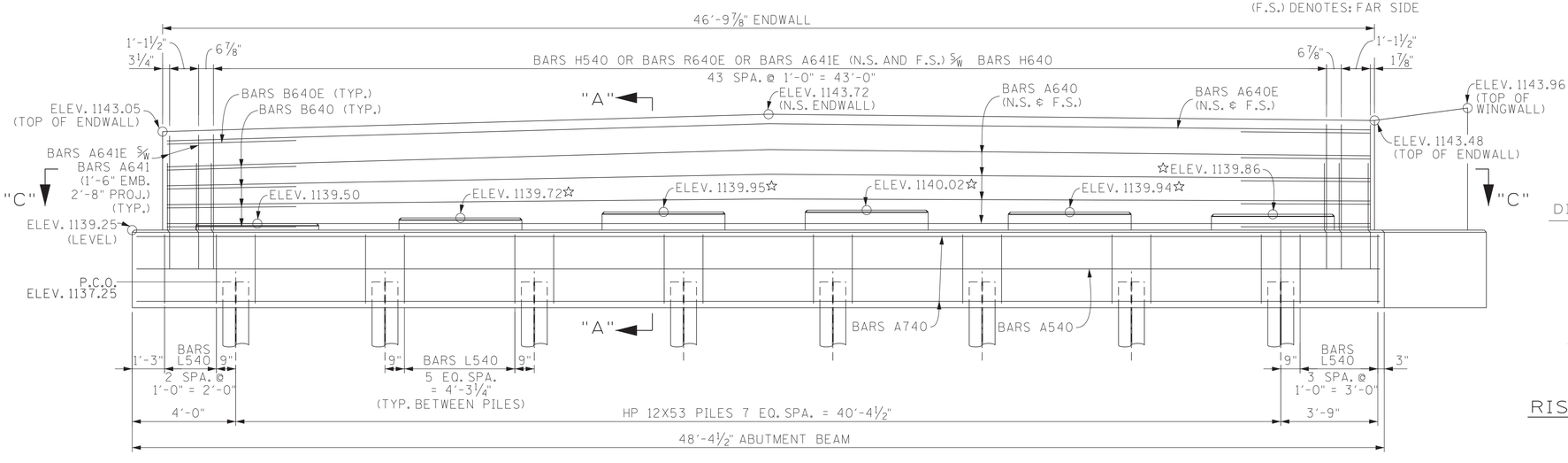


V-GROOVE DETAIL



PLAN

(N.S.) DENOTES: NEAR SIDE
(F.S.) DENOTES: FAR SIDE



ELEVATION
(LOOKING BACK ON SURVEY)

☆DENOTES: FOR RISER BLOCK REINFORCEMENT DETAILS, SEE DWG. NO. U-94-456.

NOTE: RISER BLOCKS SHALL BE POURED MONOLITHICALLY WITH THE ABUTMENT BEAM.

NOTE: RISER BLOCK BEARING SURFACE TO CONFORM TO BOTTOM OF BEAM GRADE.

NOTE: ELASTOMERIC PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE BEING DISTURBED BY SETTING BEAMS. PLACE RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.

NOTE: WHEN POURING WINGWALLS, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR WINGPOSTS AND PARAPETS. FOR DETAILS OF WINGPOSTS AND PARAPETS, SEE STD. DWG. NO. STD-1-1SS.

NOTE: NOT LESS THAN HALF OF THE SLAB IN THE END SPANS SHALL BE POURED PRIOR TO, OR CONCURRENTLY WITH, PLACEMENT OF ANY PART OF THE ABUTMENT ENDWALLS. AT LEAST THE TOP 12 INCHES OF THE ENDWALLS SHALL BE POURED CONCURRENTLY WITH THE END OF SLAB.

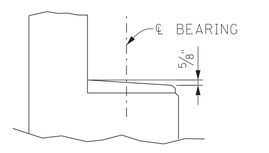
NOTE: COST OF PARAPET AND POST IS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PARAPET SYSTEM.

NOTE: SEE STANDARD DRAWING STD-6-1 FOR PILE DETAILS AND NOTES.

NOTE: WINGBEAM PILES SHALL BE DRIVEN TO THE PLANS TIP ELEVATION OR REFUSAL. SEISMIC ATTACHMENT IS NOT REQUIRED FOR WINGBEAM PILES.

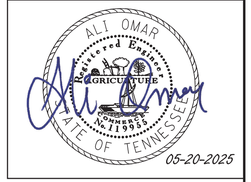
ESTIMATED QUANTITIES

CLASS 'A' CONCRETE (BRIDGES) C.Y.	STEEL BAR REINFORCEMENT (BRIDGES) LB.	EPOXY COATED REINFORCING STEEL LB.
45	5,154	1,615



RISER BLOCK DETAIL

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 1
STATE ROUTE 70 OVER
NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-455

PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: N. SHOUKATH/DE DATE: 03/2024
SUPERVISED BY: DRE/AAO DATE: 03/2024
CHECKED BY: RICK CRAWFORD DATE: 04/2024

1/27/2025 11:40:14 AM
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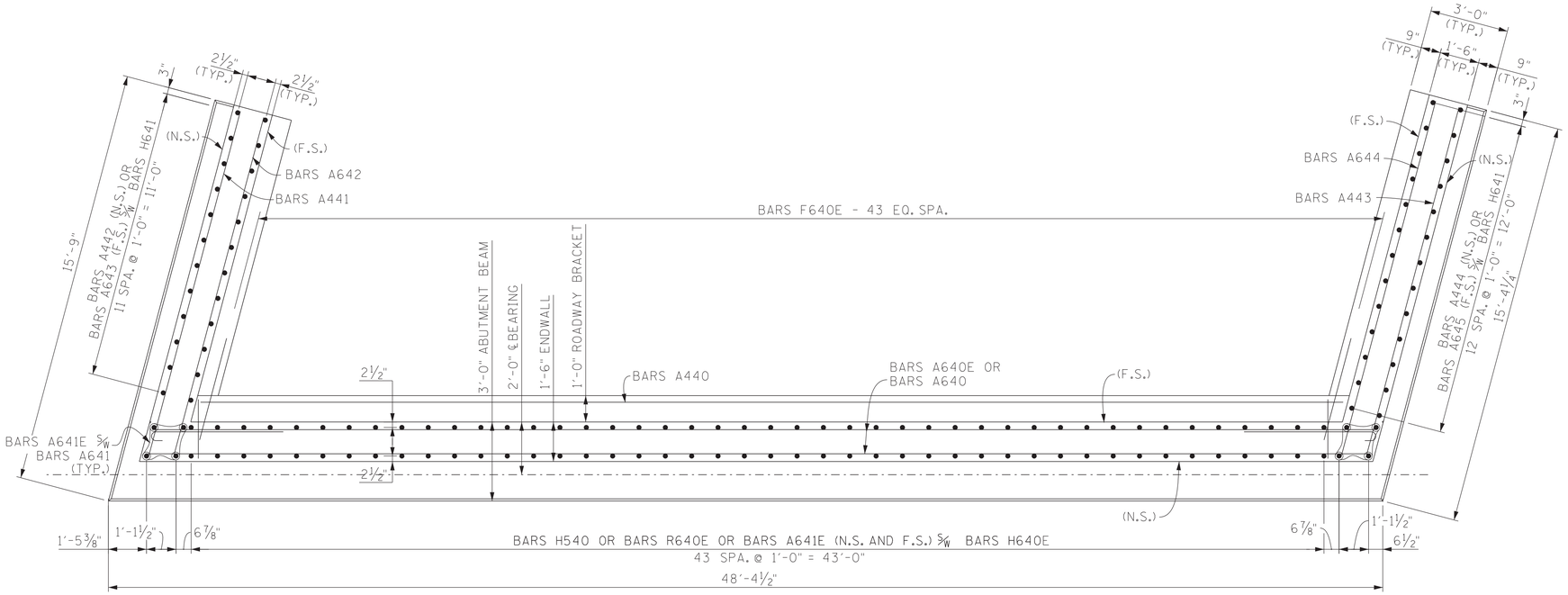
CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

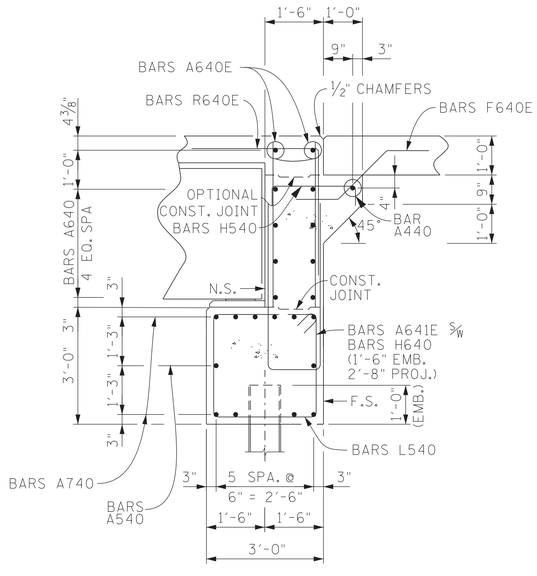
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
	- -		
	- -		

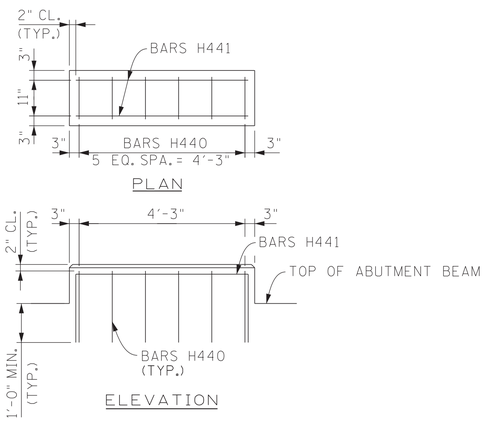


SECTION "C"-"C"

(N.S.) DENOTES: NEAR SIDE
(F.S.) DENOTES: FAR SIDE



SECTION "A"-"A"



RISER BLOCK REINFORCEMENT DETAIL

SEALED BY

ALI OMAR
Registered Engineer
AGRICULTURE
TENNESSEE
119958
STATE OF TENNESSEE
05-20-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 1 DETAILS
STATE ROUTE 70 OVER NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-456

PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: N. SHOUKATH/DE DATE: 03/2024
SUPERVISED BY: DRE/AAO DATE: 03/2024
CHECKED BY: RICK CRAWFORD DATE: 04/2024

1/27/2025 11:41:17 AM
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CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
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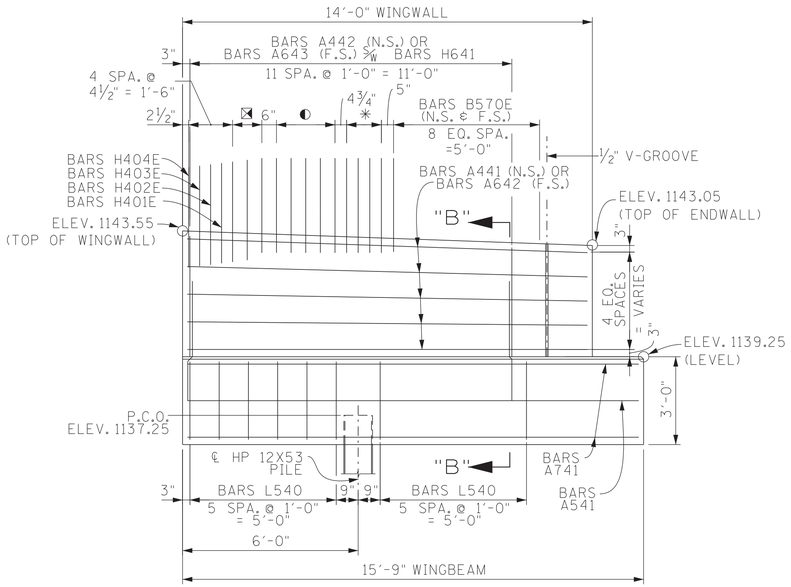
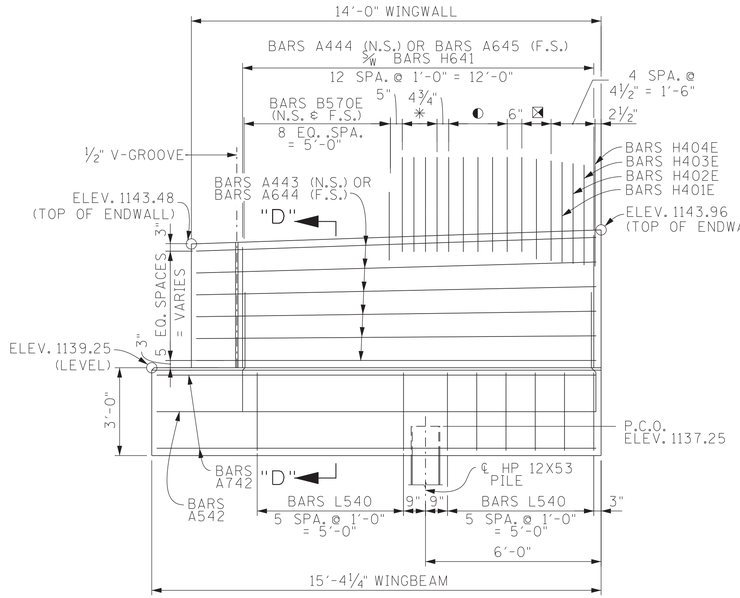
	- -		



ELEVATION "A"-"A"



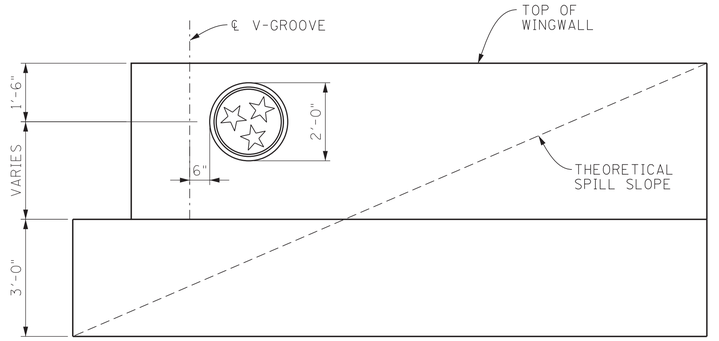
ELEVATION "B"-"B"

▩ DENOTES: BARS H400E
2 SPA. @ 6" = 1'-0"

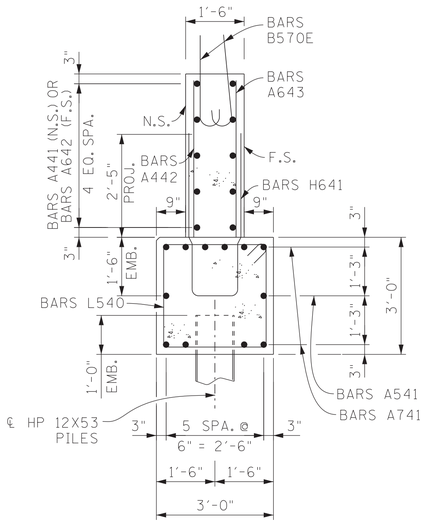
◑ DENOTES: SER. BARS HD401E
4 SPA. @ 6" = 2'-0"

✳ DENOTES: SER. BARS HD400E
3 SPA. @ 4¾" = 1'-2¼"

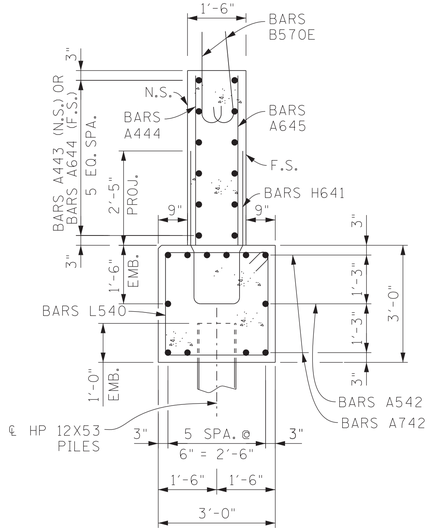
(N.S.) DENOTES: NEAR SIDE
(F.S.) DENOTES: FAR SIDE



TRI-STAR TREATMENT
AT ABUTMENT WINGWALL

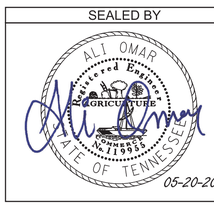


SECTION "B"-"B"



SECTION "D"-"D"

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 1 DETAILS
STATE ROUTE 70 OVER
NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-457

PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: NINU SHOUKATH/DE DATE: 03/2024
SUPERVISED BY: DRE/AAO DATE: 03/2024
CHECKED BY: RICK CRAWFORD DATE: 04/2024

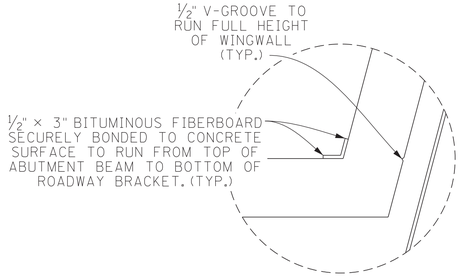
1/27/2025 11:42:10 AM
P:\STRUCTURES\CADD_REGION_1\37-HAWKINS\37SR0700009\BRIDGE_DRAWINGS\37SR0700009BORDER.DGN

CONST. NO.: 37011-3237-94

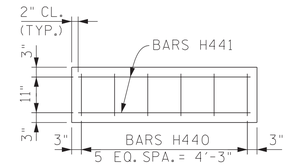
PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

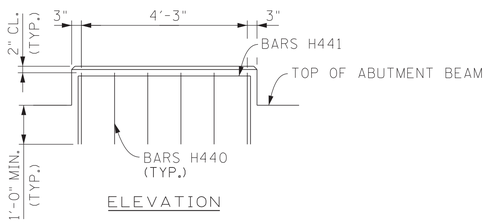
NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
	- -		
	- -		



V-GROOVE DETAIL

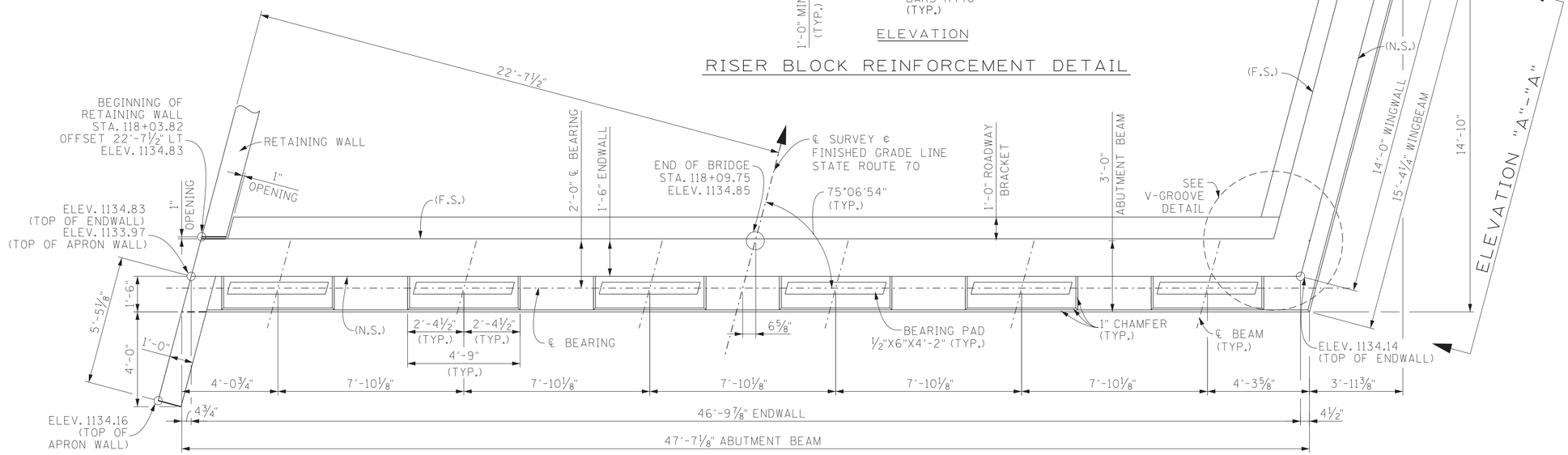


PLAN



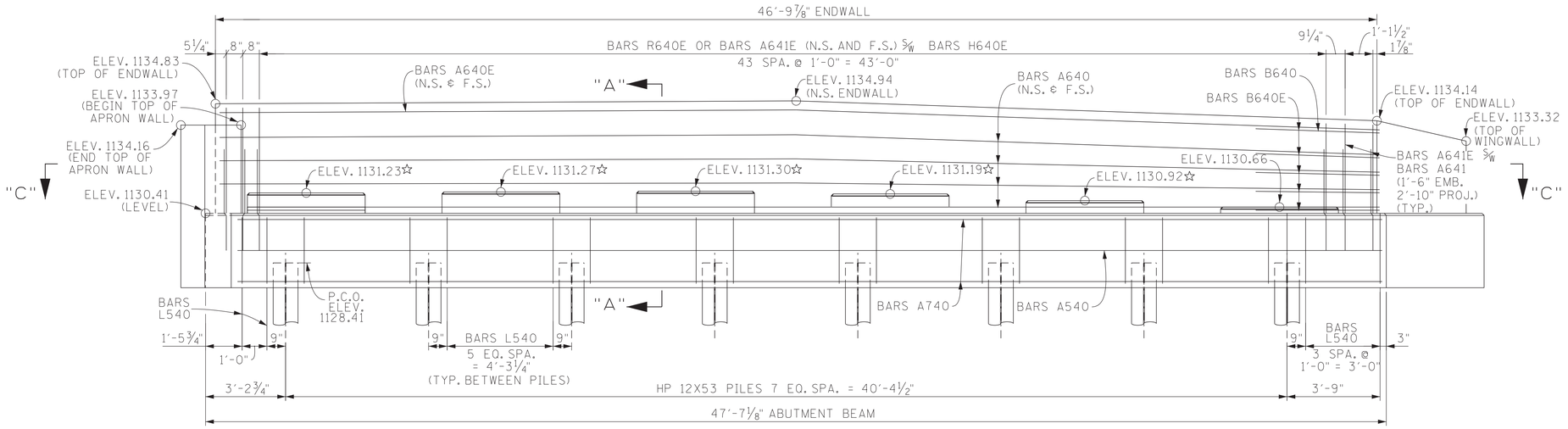
ELEVATION

RISER BLOCK REINFORCEMENT DETAIL



PLAN

(N.S.) DENOTES: NEAR SIDE
(F.S.) DENOTES: FAR SIDE



ELEVATION
(LOOKING FORWARD ON SURVEY)

☆ DENOTES: FOR RISER BLOCK REINFORCEMENT DETAILS ON THIS SHEET.

NOTE: RISER BLOCKS SHALL BE POURED MONOLITHICALLY WITH THE ABUTMENT BEAM.

NOTE: RISER BLOCK BEARING SURFACE TO CONFORM TO BOTTOM OF BEAM GRADE.

NOTE: ELASTOMERIC PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE BEING DISTURBED BY SETTING BEAMS. PLACE RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.

NOTE: WHEN POURING WINGWALLS. PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR WINGPOSTS AND PARAPETS. FOR DETAILS OF WINGPOSTS AND PARAPETS, SEE STD. DWG. NO. STD-1-1SS.

NOTE: NOT LESS THAN HALF OF THE SLAB IN THE END SPANS SHALL BE POURED PRIOR TO, OR CONCURRENTLY WITH, PLACEMENT OF ANY PART OF THE ABUTMENT ENDWALLS. AT LEAST THE TOP 12 INCHES OF THE ENDWALLS SHALL BE POURED CONCURRENTLY WITH THE END OF SLAB.

NOTE: COST OF PARAPET AND POST IS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PARAPET SYSTEM.

NOTE: SEE STANDARD DRAWING STD-6-1 FOR PILE DETAILS AND NOTES.

NOTE: WINGBEAM PILES SHALL BE DRIVEN TO THE PLANS TIP ELEVATION OR REFUSAL. SEISMIC ATTACHMENT IS NOT REQUIRED FOR WINGBEAM PILES.

WRAP-AROUND RETAINING WALL: ACTUAL WALL THICKNESS MAY BE DIFFERENT. ALL NECESSARY CHANGES TO THE ABUTMENT LENGTH IN ORDER TO ACCOMMODATE IN THE WALL THICKNESS SHALL BE SUBMITTED TO THE ENGINEER OF STRUCTURES FOR APPROVAL.

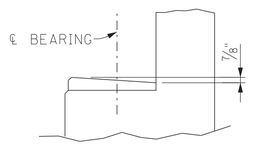
NOTE: THE COST OF PARAPET ON RETAINING WALL SHALL BE INCLUDED IN THE COST OF RETAINING WALL.

NOTE: TOP OF APRON WALL TO BE 2" BELOW THE BOTTOM OF ROADWAY SLAB. SEE APRON WALL ELELVATION VIEW DETAILS ON DWG. NO. U-94-459.

ESTIMATED QUANTITIES

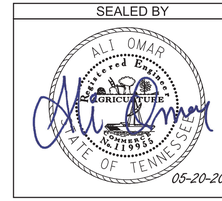
CLASS 'A' CONCRETE (BRIDGES) C.Y.	STEEL BAR REINFORCEMENT (BRIDGES) LB.	EPOXY COATED REINFORCING STEEL LB.
40	4,269	1,443

DIRECTION OF SURVEY



RISER BLOCK DETAIL

SEALED BY



PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: N. SHOUKATH/DE DATE: 03/2024
SUPERVISED BY: DRE/AAO DATE: 03/2024
CHECKED BY: RICK CRAWFORD DATE: 04/2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 2
STATE ROUTE 70 OVER NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-458

1/27/2025 11:43:12 AM
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CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
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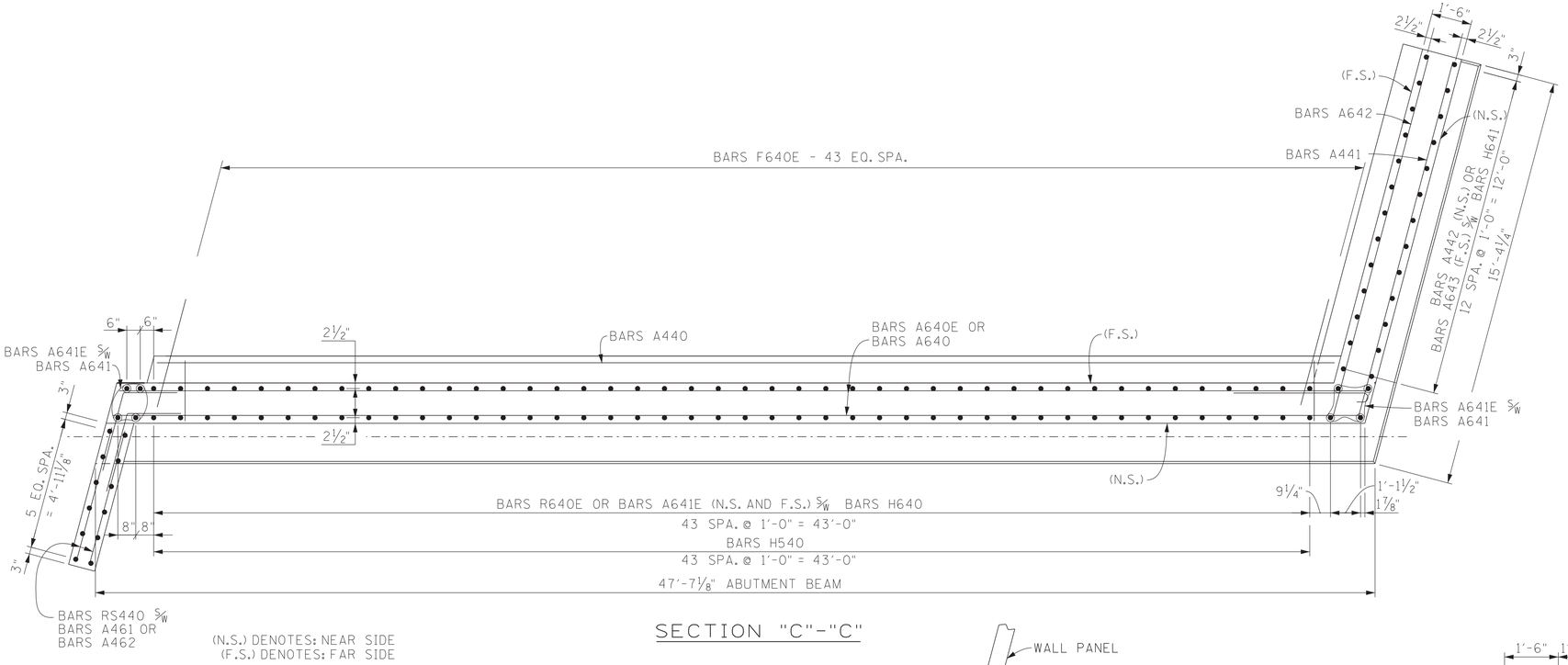
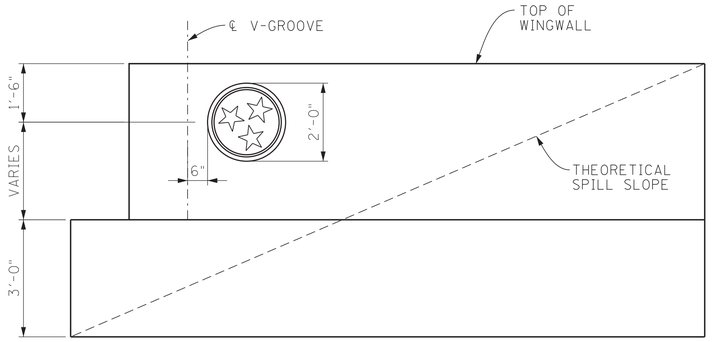
	- -		
	- -		
	- -		

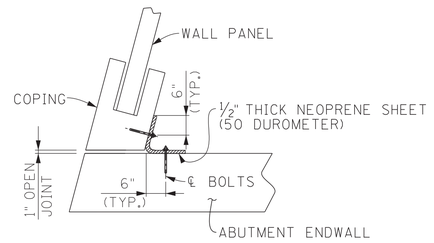


(N.S.) DENOTES: NEAR SIDE
(F.S.) DENOTES: FAR SIDE

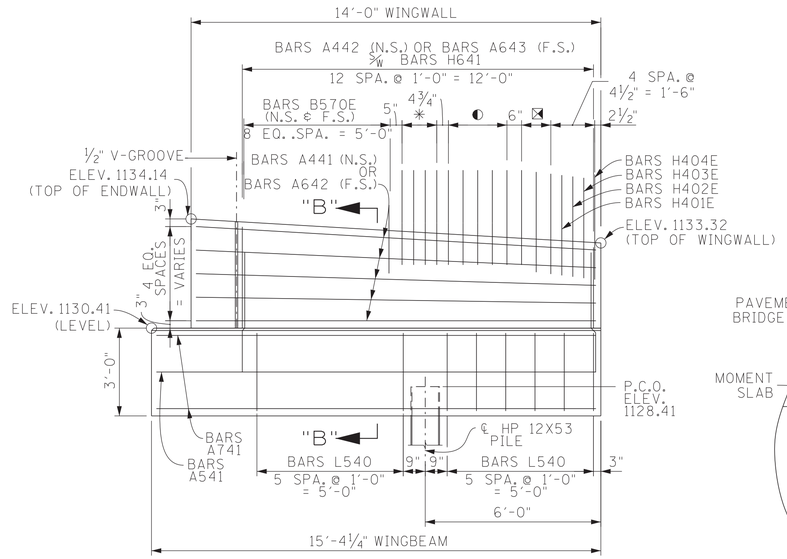


TRI-STAR TREATMENT AT ABUTMENT WINGWALL

SECTION "C"-"C"



SECTION "R"-"R"

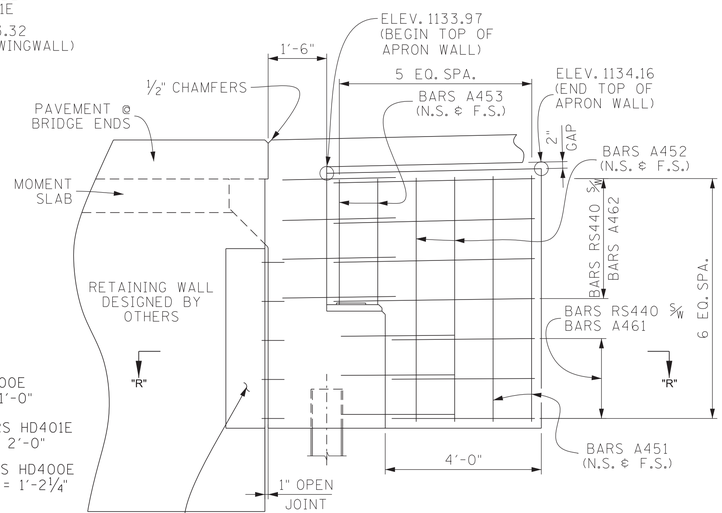


ELEVATION "A"-"A"

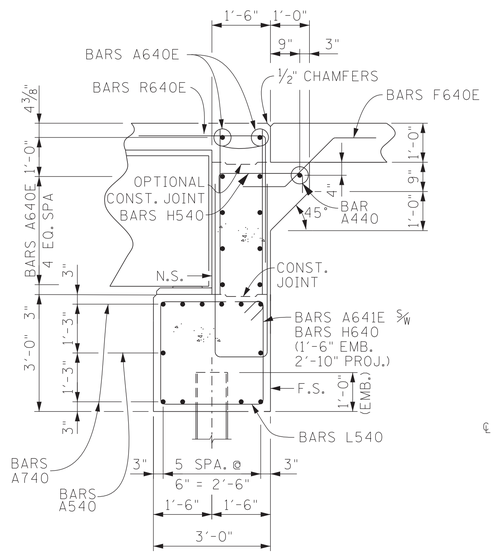
▣ DENOTES: BARS H400E
2 SPA. @ 6" = 1'-0"

◑ DENOTES: SER. BARS HD401E
4 SPA. @ 6" = 2'-0"

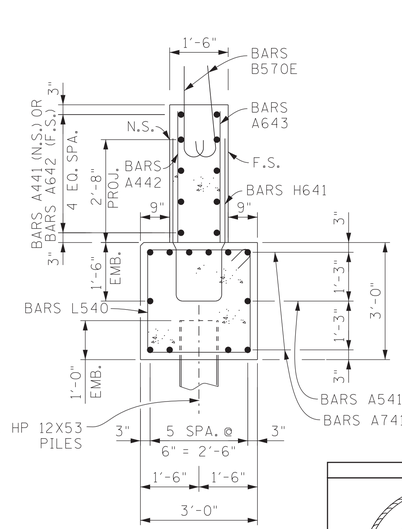
✳ DENOTES: SER. BARS HD400E
3 SPA. @ 4¾" = 1'-2¼"



APRON WALL DETAIL

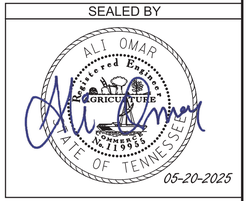


SECTION "A"-"A"



SECTION "B"-"B"

SEALED BY



PIN NO.:	124383.00	
DESIGN BY:	ALI OMAR	DATE: 01/2024
DRAWN BY:	N. SHOUKATH/DE	DATE: 03/2024
SUPERVISED BY:	DRE/AAO	DATE: 03/2024
CHECKED BY:	RICK CRAWFORD	DATE: 04/2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 2 DETAILS
STATE ROUTE 70 OVER NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-459

1/27/2025 11:44:12 AM
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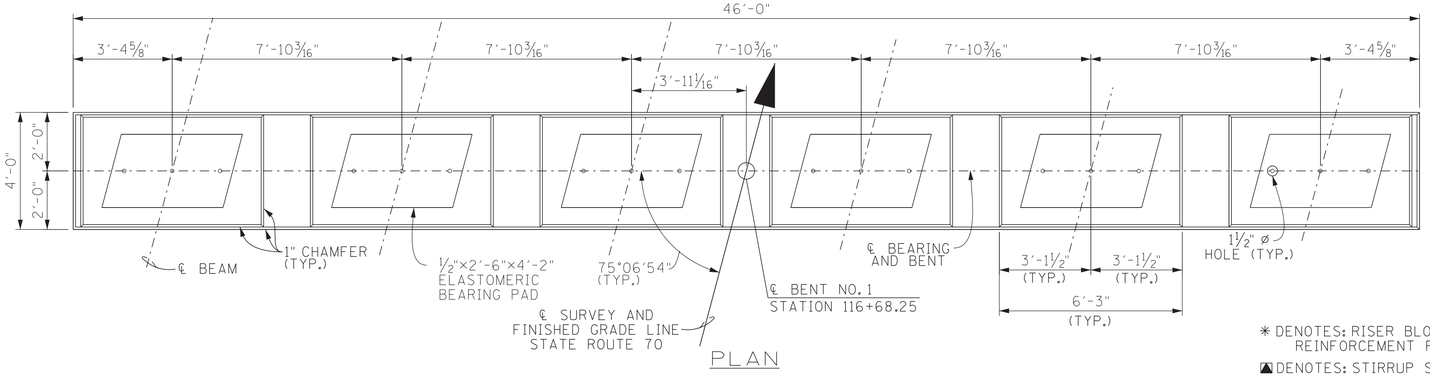
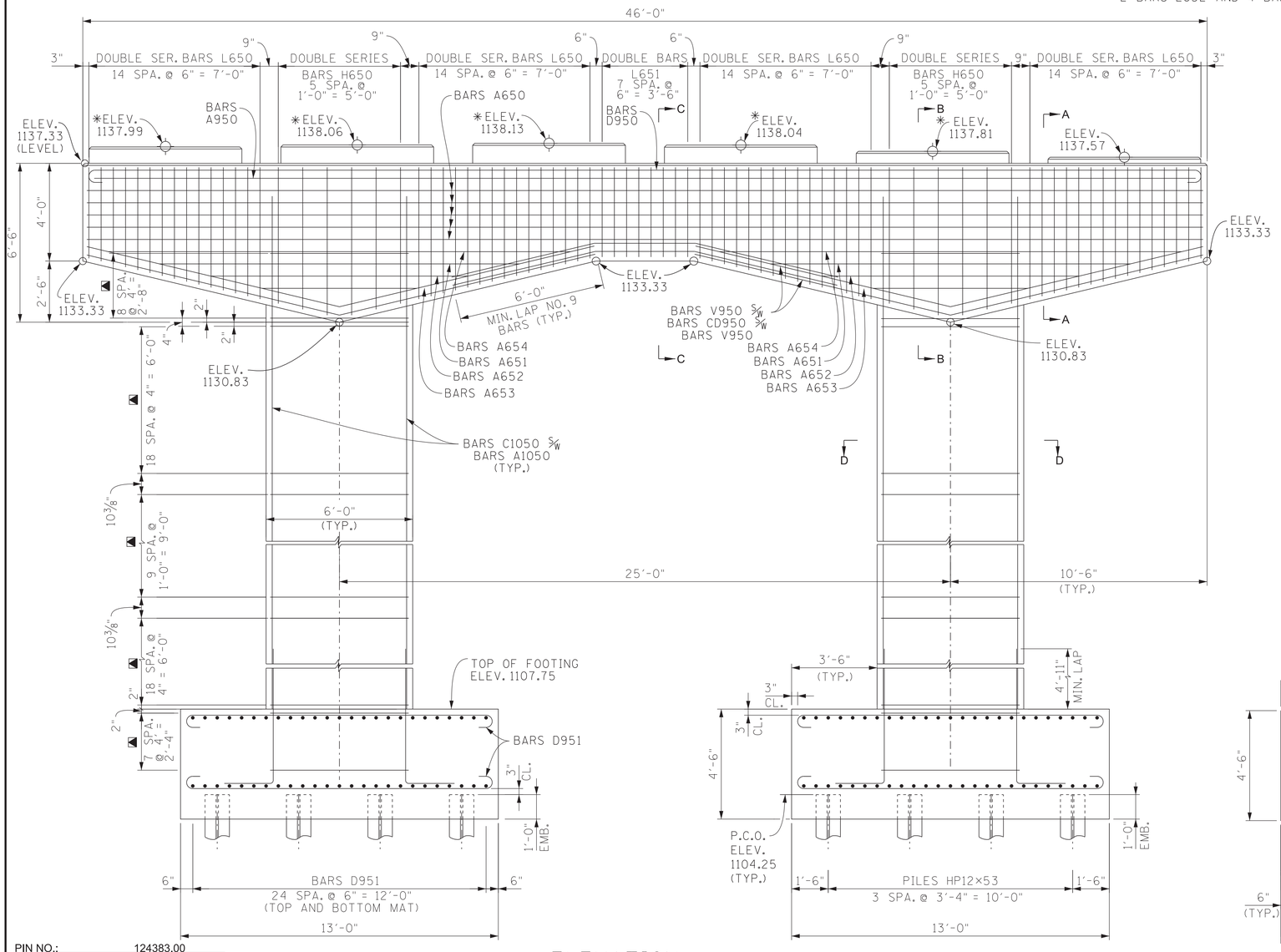


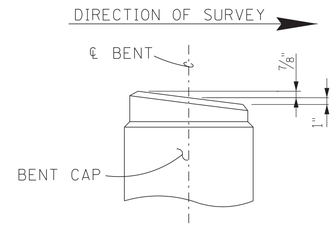
PLAN

✳ DENOTES: RISER BLOCK REINFORCEMENT REQUIRED

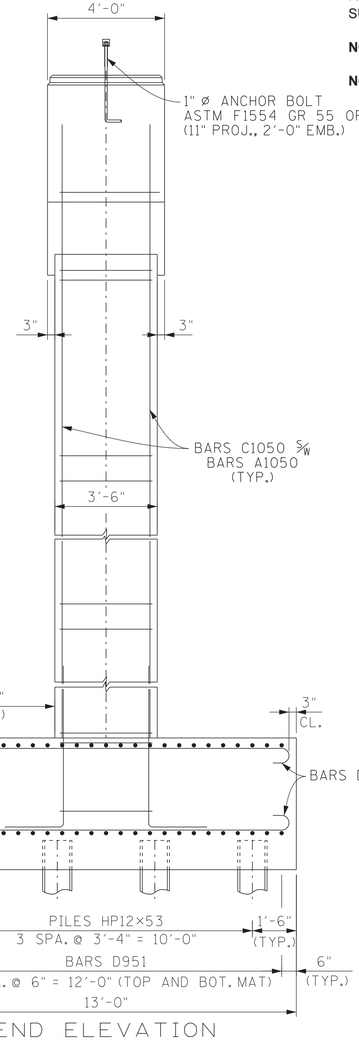
▲ DENOTES: STIRRUP SET CONSISTS OF 2 BARS L652 AND 4 BARS YB650



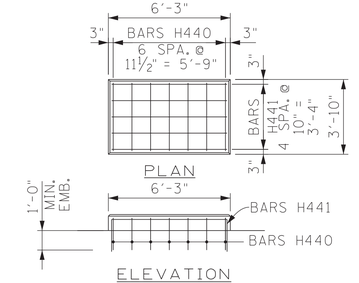
ELEVATION
(LOOKING FORWARD ON SURVEY)



RISER BLOCK SLOPE DETAIL



END ELEVATION



PLAN OF RISER BLOCK REINFORCING

ESTIMATED QUANTITIES	
CLASS "A" CONCRETE (BRIDGES) C.Y.	REINFORCING STEEL (BRIDGES) LB.
131	33,120

CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
	- -		
	- -		

GENERAL NOTES

NOTE: WHEN POURING CAP BEAM, PROVISIONS SHALL BE MADE FOR SETTING ANCHOR BOLTS. SEE STANDARD DRAWING STD-6-1. BOLT PROJECTION 11".

NOTE: RISER BLOCKS SHALL BE POURED MONOLITHICALLY WITH BENT CAP.

NOTE: RISER BLOCK BEARING SURFACE SHALL CONFORM TO BOTTOM OF BEAM GRADE.

NOTE: ELASTOMERIC PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE BEING DISTURBED BY SETTING BEAMS ON CONCRETE. PLACE RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.

NOTE: COLUMN STEEL SHALL EXTEND 4'-6" INTO BENT CAP.

NOTE: SEE STANDARD DRAWING STD-6-1 FOR PILE DETAILS AND NOTES.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BENT NO. 1
STATE ROUTE 70
OVER
NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-460

PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: D. EASTERLY DATE: 02/2024
SUPERVISED BY: DRE/AAO DATE: 02/2024
CHECKED BY: RICK CRAWFORD DATE: 04/2024

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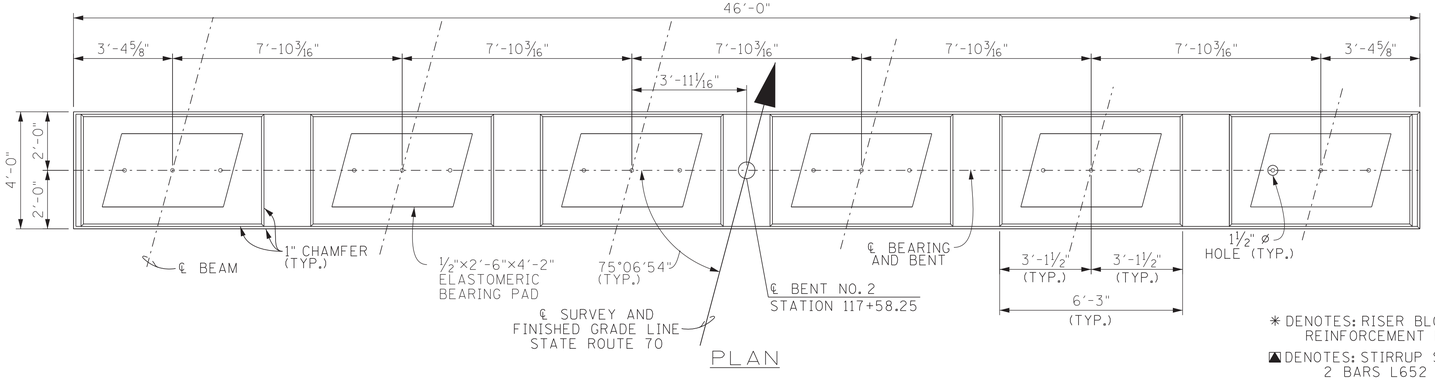
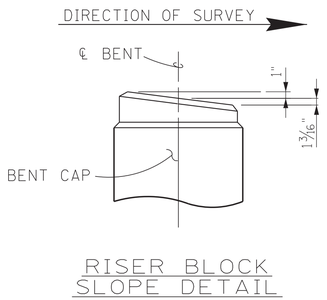


PLAN

✳ DENOTES: RISER BLOCK REINFORCEMENT REQUIRED

▲ DENOTES: STIRRUP SET CONSISTS OF 2 BARS L652 AND 4 BARS YB650



RISER BLOCK SLOPE DETAIL

CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
	- -		
	- -		

GENERAL NOTES

NOTE: WHEN POURING CAP BEAM, PROVISIONS SHALL BE MADE FOR SETTING ANCHOR BOLTS. SEE STANDARD DRAWING STD-6-1. BOLT PROJECTION 11".

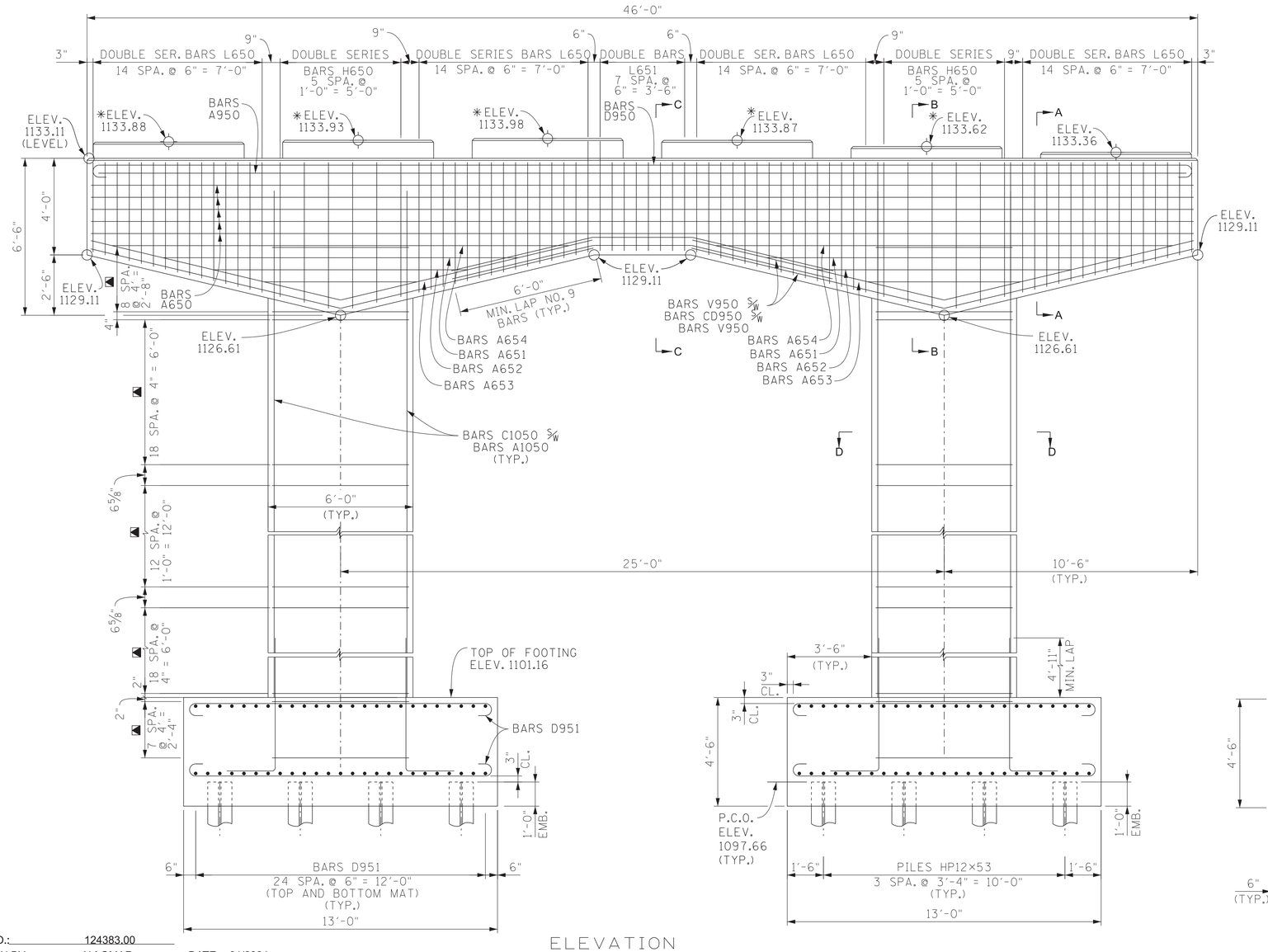
NOTE: RISER BLOCKS SHALL BE POURED MONOLITHICALLY WITH BENT CAP.

NOTE: RISER BLOCK BEARING SURFACE SHALL CONFORM TO BOTTOM OF BEAM GRADE.

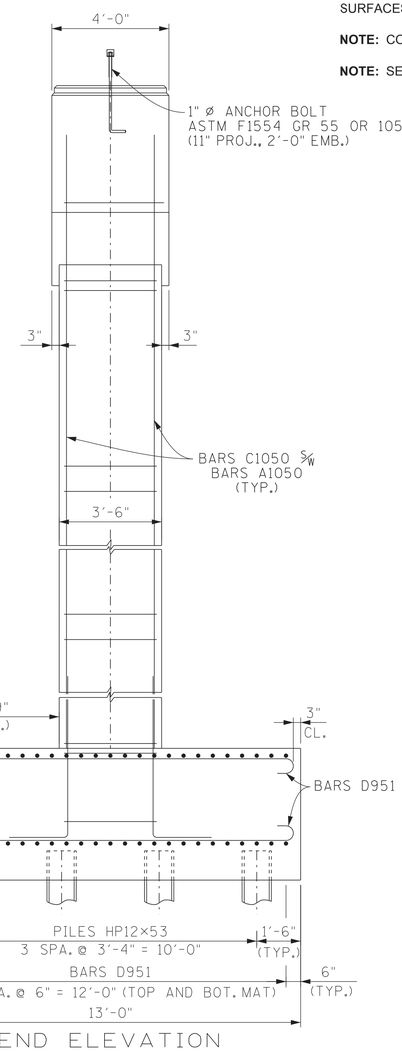
NOTE: ELASTOMERIC PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE BEING DISTURBED BY SETTING BEAMS ON CONCRETE. PLACE RUBBER BONDING CEMENT INMSUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.

NOTE: COLUMN STEEL SHALL EXTEND 4'-6" INTO BENT CAP.

NOTE: SEE STANDARD DRAWING STD-6-1 FOR PILE DETAILS AND NOTES.



ELEVATION
(LOOKING FORWARD ON SURVEY)



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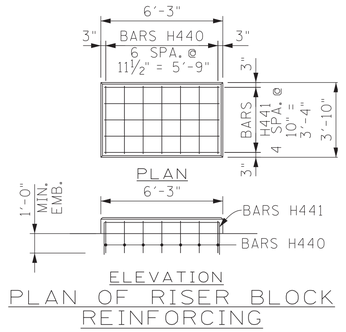
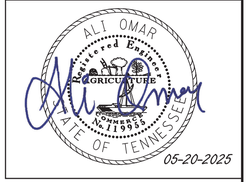


PLAN OF RISER BLOCK REINFORCING

ESTIMATED QUANTITIES	
CLASS "A" CONCRETE (BRIDGES) C.Y.	REINFORCING STEEL (BRIDGES) LB.
135	33,633

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BENT NO. 2
STATE ROUTE 70
OVER
NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-461

PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: D. EASTERLY DATE: 02/2024
SUPERVISED BY: DRE/AAO DATE: 02/2024
CHECKED BY: RICK CRAWFORD DATE: 04/2024

12/11/2024 7:29:57 AM
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CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
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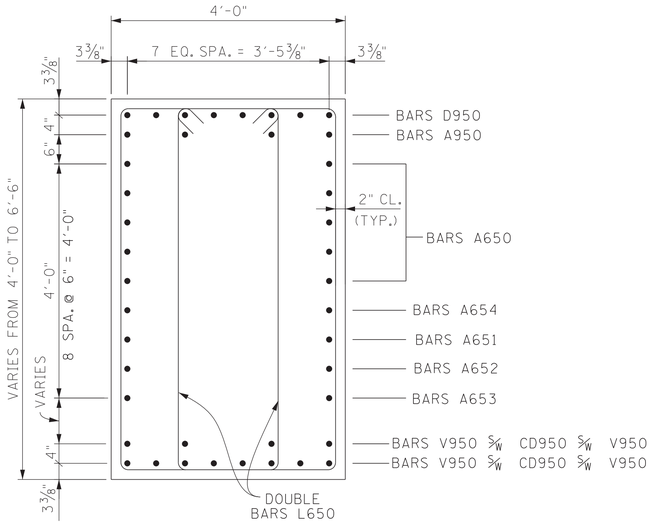
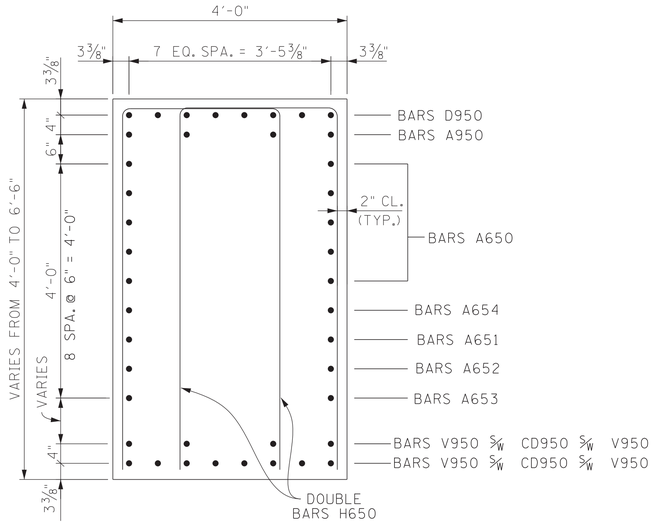
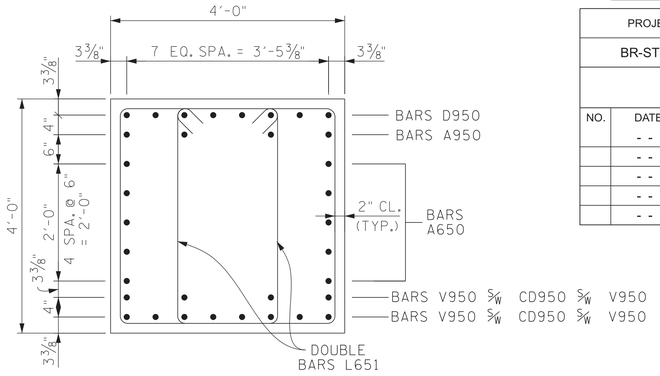


SECTION "A"-"A"

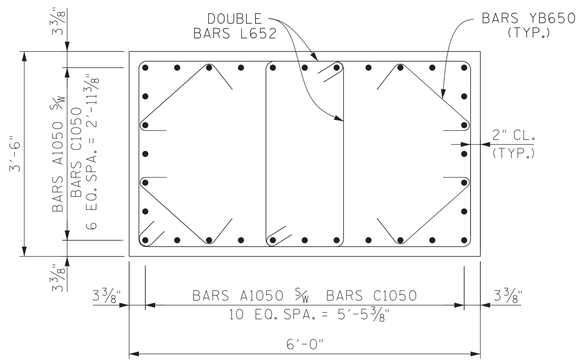


SECTION "B"-"B"

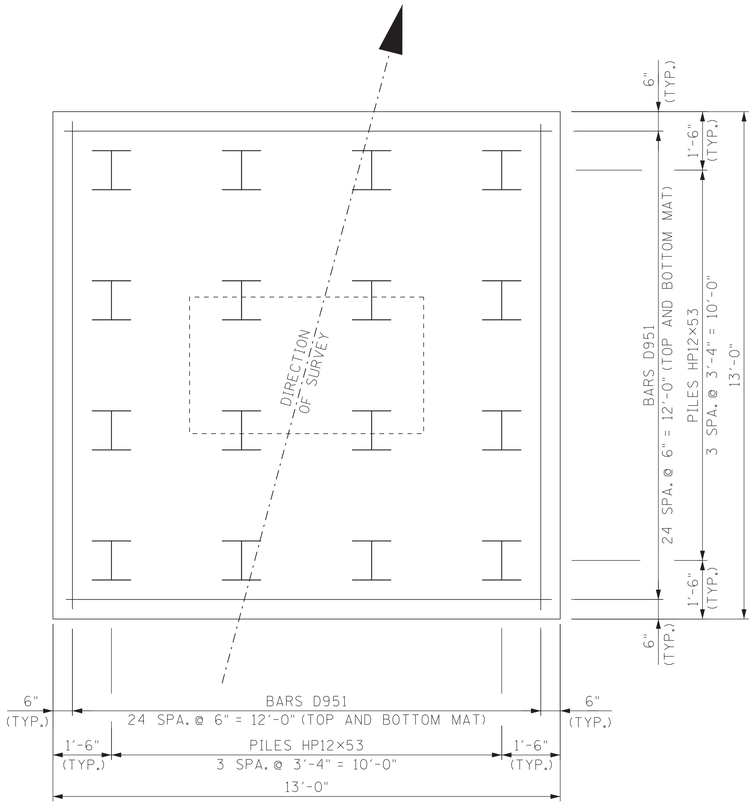
(RISER BLOCK AND COLUMN REINFORCEMENT NOT SHOWN)



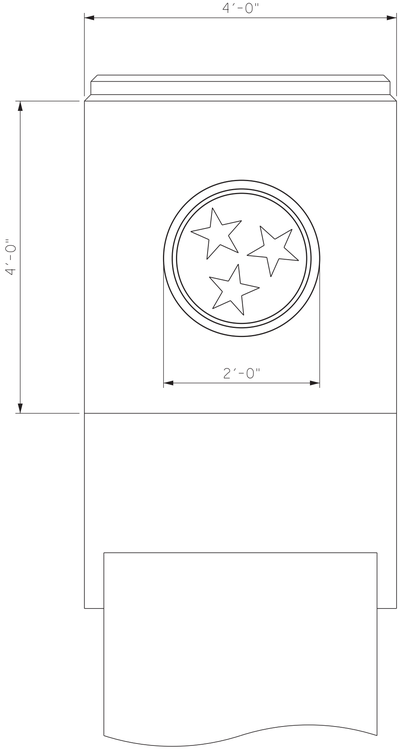
SECTION "C"-"C"



SECTION "D"-"D"



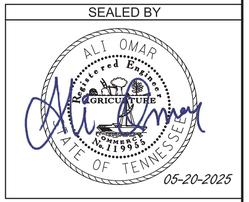
FOOTING PLAN VIEW



TRI-STAR AT CAP BENTS

(TYPICAL AT EACH SIDE OF CAP AND AT EACH BENT)

SEALED BY



PIN NO.: 124383.00

DESIGN BY:	ALI OMAR	DATE: 01/2024
DRAWN BY:	D. EASTERLY	DATE: 02/2024
SUPERVISED BY:	DRE/AAO	DATE: 02/2024
CHECKED BY:	RICK CRAWFORD	DATE: 04/2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BENT NOS. 1 AND 2 DETAILS
STATE ROUTE 70
OVER
NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-462

12/11/2024 7:34:34 AM
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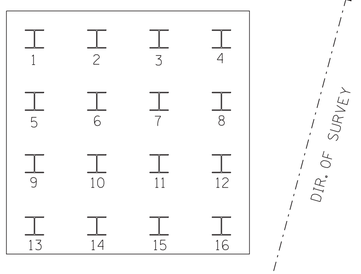
CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

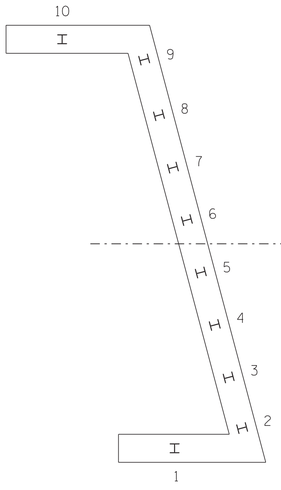
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
	- -		
	- -		

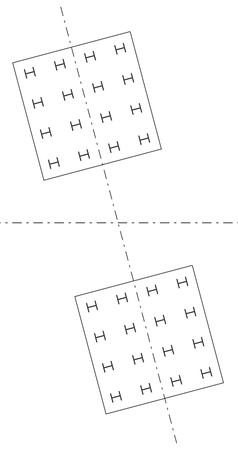
NOTE TO CONTRACTOR AND CONSTRUCTION OFFICE:
THE BLANKS ON THIS SHEET ARE TO BE FILLED IN BY THE CONSTRUCTION OFFICE AND/OR FIELD ENGINEER GIVING AS BUILT CONDITIONS. AFTER COMPLETION IT IS TO BE SENT TO THE DIVISION OF STRUCTURES TO BECOME PART OF FINAL BRIDGE DOCUMENTS.



PILE FOOTING DETAIL
(TYP. @ BENTS)



ABUTMENT NO. 1



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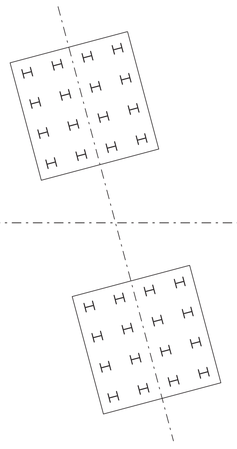

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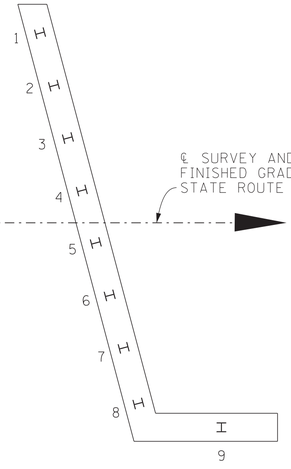


ABUTMENT NO. 2

TABLE OF PILE DATA

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ABUTMENT NO. 1	PILE CUT-OFF ELEVATION																
	PILE TIP ELEVATION																
	IN PLACE PILE LENGTH																
BENT NO. 1	PILE CUT-OFF ELEVATION																
	PILE TIP ELEVATION																
	IN PLACE PILE LENGTH																
BENT NO. 2	PILE CUT-OFF ELEVATION																
	PILE TIP ELEVATION																
	IN PLACE PILE LENGTH																
ABUTMENT NO. 2	PILE CUT-OFF ELEVATION																
	PILE TIP ELEVATION																
	IN PLACE PILE LENGTH																

PIN NO.: 124383.00
DESIGN BY: ALI OMAR DATE: 01/2024
DRAWN BY: P. MOSHER DATE: 02/2024
SUPERVISED BY: DRE/AAO DATE: 02/2024
CHECKED BY: RICK CRAWFORD DATE: 04/2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FINAL FOUNDATION DATA
STATE ROUTE 70 OVER NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

U-94-463

1/27/2025 11:37:52 AM P:\STRUCTURES\CADD_REGION_1\37-HAWKINS\37SR0700009\BRIDGE_DRAWINGS\37SR0700009BORDER.DGN

CONST. NO.: 37011-3237-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-70(24)	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
	- -		
	- -		

SUPERSTRUCTURE

BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A500	DIAPHRAGMS	5	16					43'-0"
L400	DIAPHRAGMS	4	40	1'-2"	2'-6"			8'-3"
LS400	DIAPHRAGMS	4	36	1'-2 1/2"	1'-2 1/2"			5'-7"

SUPERSTRUCTURE (EPOXY)

BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A600E	SLAB	6	758					46'-6"
A601E	SLAB	6	150					60'-0"
A602E	SLAB	6	50					27'-2"
A603E	SLAB	6	96					21'-2"
A604E	SLAB	6	48					42'-0"
A901E	SLAB	9	96					60'-0"
A902E	SLAB	9	86					31'-6"
B570E	PARAPET/SLAB	5	1160	2'-8"				3'-3"

ABUTMENT NO. 1

BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A440	RDWY. BRKT.	4	1					43'-5"
A441	WINGWALL	4	5					13'-7"
A442	WINGWALL	4	12					3'-9"
A443	WINGWALL	4	6					13'-9"
A444	WINGWALL	4	13					4'-2"
A540	ABUTMENT BEAM	5	2					48'-1"
A541	WINGBEAM	5	2					15'-5"
A542	WINGBEAM	5	2					15'-0"
A640	ENDWALL	6	8					46'-6"
A641	ENDWALL	6	8					4'-2"
A642	WINGWALL	6	5					13'-4"
A643	WINGWALL	6	12					3'-9"
A644	WINGWALL	6	6					14'-0"
A645	WINGWALL	6	13					4'-2"
A740	ABUTMENT BEAM	7	10					48'-1"
A741	WINGBEAM	7	10					15'-5"
A742	WINGBEAM	7	10					15'-0"
B640	ENDWALL	6	8	5'-0"				5'-8"
H440	RISER BLOCK	4	30	1'-1"	1'-9"			4'-7"
H441	RISER BLOCK	4	10	4'-5"	1'-9"			7'-11"
H540	ENDWALL	5	44	2'-2"	6"			3'-2"
H640	ABUTMENT BEAM	6	44	1'-2"	4'-2"			9'-6"
H641	WINGBEAM	6	25	1'-2"	3'-11"			9'-0"
L540	ABUT. BEAM/WINGBEAM	5	73	2'-8"	2'-8"			11'-7"

ABUTMENT NO. 1 (EPOXY)

BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A640E	ENDWALL	6	2					46'-6"
A641E	ENDWALL	6	96					3'-8"
B570E	W.WALL/PARAPET	5	36	2'-8"				3'-3"
B640E	ENDWALL	6	2	5'-0"				5'-8"
F640E	E.WALL/RDWY.BRKT.	6	44	1'-1"	1'-3"	1'-1"	1'-3"	4'-0"
H400E	WINGWALLS	4	6	10 1/2"	3'-11"			8'-9"
H401E	WINGWALLS	4	2	9 7/8"	3'-10"			8'-6"
H402E	WINGWALLS	4	2	8 3/4"	3'-9"			8'-3"
H403E	WINGWALLS	4	2	7 5/8"	3'-8"			8'-0"
H404E	WINGWALLS	4	2	6 1/2"	3'-7"			7'-9"
SER								
HD400E	WINGWALLS	4	2	*	3'-11"	9"		33'-0"
				* DIM. A FROM 5 7/8" TO 3 3/4" IN INC. of 11/16" 4 BARS				
SER								
HD401E	WINGWALLS	4	2	*	3'-11"	9"		42'-6"
				* DIM. A FROM 10" TO 6 1/2" IN INC. of 7/8" 5 BARS				
R640E	ENWALL/SLAB	6	44	3'-6"	2'-0"			5'-6"

ABUTMENT NO. 2

BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A440	RDWY. BRKT.	4	1					43'-10"
A441	WINGWALL	4	5					13'-9"
A442	WINGWALL	4	13					2'-9"
A451	APRON WALL	4	4					6'-4"
A452	APRON WALL	4	4					6'-3"
A453	APRON WALL	4	4					3'-3"
A461	APRON WALL	4	6					3'-8"
A462	APRON WALL	4	8					5'-2"
A540	ABUTMENT BEAM	5	2					47'-3"
A541	WINGBEAM	5	2					15'-0"
A640	ENDWALL	6	8					46'-6"
A641	ENDWALL	6	8					4'-4"
A642	WINGWALL	6	5					14'-0"
A643	WINGWALL	6	13					2'-9"
A740	ABUTMENT BEAM	7	10					47'-3"
A741	WINGBEAM	7	10					15'-5"
B640	ENDWALL	6	4	5'-0"				5'-8"
H440	RISER BLOCK	4	30	1'-1"	1'-9"			4'-7"
H441	RISER BLOCK	4	10	4'-5"	1'-9"			7'-11"
H540	ENDWALL	5	44	2'-2"	6"			3'-2"
H640	ABUTMENT BEAM	6	44	1'-2"	4'-4"			9'-10"
H641	WINGBEAM	6	13	1'-2"	4'-2"			9'-6"
L540	ABUT. BEAM/WINGBEAM	5	60	2'-8"	2'-8"			11'-7"
RS440	APRON WALL	4	14	2'-0"	3'-0"	9 1/4"		5'-0"

ABUTMENT NO. 2 (EPOXY)

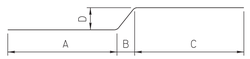
BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A640E	ENDWALL	6	2					46'-6"
A641E	ENDWALL	6	96					3'-7"
B570E	W.WALL/PARAPET	5	18	2'-8"				3'-3"
B640E	ENDWALL	6	1	5'-0"				5'-8"
F640E	E.WALL/RDWY.BRKT	6	44	1'-1"	1'-3"	1'-1"	1'-3"	4'-0"
H400E	WINGWALLS	4	3	10 1/2"	3'-11"			8'-9"
H401E	WINGWALLS	4	1	9 7/8"	3'-10"			8'-6"
H402E	WINGWALLS	4	1	8 3/4"	3'-9"			8'-3"
H403E	WINGWALLS	4	1	7 5/8"	3'-8"			8'-0"
H404E	WINGWALLS	4	1	6 1/2"	3'-7"			7'-9"
SER								
HD400E	WINGWALLS	4	1	*	3'-11"	9"		33'-0"
				* DIM. A FROM 5 7/8" TO 3 3/4" IN INC. of 11/16" 4 BARS				
SER								
HD401E	WINGWALLS	4	1	*	3'-11"	9"		42'-6"
				* DIM. A FROM 10" TO 6 1/2" IN INC. of 7/8" 5 BARS				
R640E	ENDWALL/SLAB	6	44	3'-6"	2'-0"			5'-6"

BENT NO. 1

BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A650	CAP	6	10					45'-8"
A651	CAP	6	4					14'-9"
A652	CAP	6	4					10'-6"
A653	CAP	6	4					6'-4"
A654	CAP	6	4					18'-11"
A950	CAP	9	4					45'-1"
A1050	CAP/COLUMN	10	32					28'-3"
C1050	COLUMN/FOOTINGS	10	32	8'-2"	1'-10"			10'-0"
CD950	CAP	9	12	4'-2"	6'-0"	1'-4 5/8"	5'-10"	16'-2"
D950	CAP	9	8	45'-6"				48'-0"
D951	FOOTINGS	9	200	12'-6"				15'-0"
H440	RISER BLOCKS	4	35	3'-6"	1'-8"			6'-10"
H441	RISER BLOCKS	4	25	5'-11"	1'-8"			9'-3"
SERIES H650	CAP	6	8	2'-8"	*			42'-11"
				* LENGTH VARIES FROM 5'-6 7/8" TO 6'-0 1/2" IN INC. of 2 13/16" 3 BARS				
SERIES L650	CAP	6	8	2'-8"	*			236'-11"
				* LENGTH VARIES FROM 3'-9" TO 5'-4 5/8" IN INC. of 1 3/8" 15 BARS				
L651	CAP	6	16	2'-8"	3'-8"			14'-0"
L652	CAP/COL/FTGS	6	260	3'-2"	3'-6"			14'-8"
V950	CAP	9	24	10'-8"	10'-8"			21'-4"
YB650	CAP/COL/FTGS	6	520	1'-8"	1'-0"			3'-4"

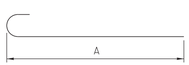
BENT NO. 2

BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A650	CAP	6	10					45'-8"
A651	CAP	6	4					14'-9"
A652	CAP	6	4					10'-6"
A653	CAP	6	4					6'-4"
A654	CAP	6	4					18'-11"
A950	CAP	9	4					45'-1"
A1050	CAP/COLUMN	10	32					30'-7"
C1050	COLUMN/FOOTINGS	10	32	8'-2"	1'-10"			10'-0"
CD950	CAP	9	12	4'-2"	6'-0"	1'-4 5/8"	5'-10"	16'-2"
D950	CAP	9	8	45'-6"				48'-0"
D951	FOOTINGS	9	200	12'-6"				15'-0"
H440	RISER BLOCKS	4	35	3'-6"	1'-8"			6'-10"
H441	RISER BLOCKS	4	25	5'-11"	1'-8"			9'-3"
SERIES H650	CAP	6	8	2'-8"	*			42'-11"
				* LENGTH VARIES FROM 5'-6 7/8" TO 6'-0 1/2" IN INC. of 2 13/16" 3 BARS				
SERIES L650	CAP	6	8	2'-8"	*			236'-11"
				* LENGTH VARIES FROM 3'-9" TO 5'-4 5/8" IN INC. of 1 3/8" 15 BARS				
L651	CAP	6	16	2'-8"	3'-8"			14'-0"
L652	CAP/COL/FTGS	6	266	3'-2"	3'-6"			14'-8"
V950	CAP	9	24	10'-8"	10'-8"			21'-4"
YB650	CAP/COL/FTGS	6	532	1'-8"	1'-0"			3'-4"



BARS F

BARS A



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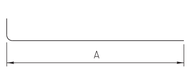
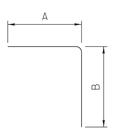
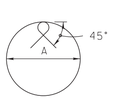


BARS C

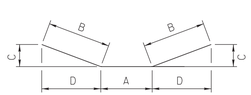
BARS D



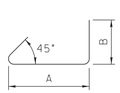
BARS R



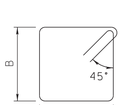
BARS T



BARS CD



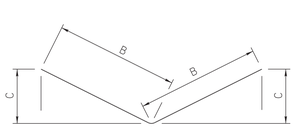
BARS YB



BARS L

BARS H

BARS LS



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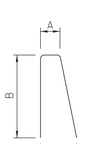
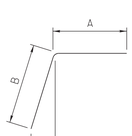


BARS HD



BARS RS

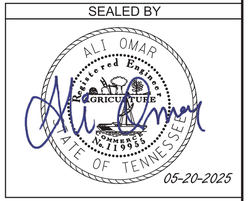
REINFORCING STEEL CODE

TYPE	SIZE	SERIES
A	5	06

NOTE: DIMENSIONS SHOWN ON THIS SHEET ARE OUTSIDE TO OUTSIDE OF BAR. STANDARD C.R.S.I. HOOK DETAILS SHALL APPLY, EXCEPT AS NOTED.

NOTE: THE SUFFIX E FOR BARS SO MARKED DENOTES EPOXY COATED REINFORCEMENT.

SEALED BY



PIN NO.: 124383.00

DESIGN BY:	ALI OMAR	DATE: 01/2024
DRAWN BY:	P. MOSHER	DATE: 02/2024
SUPERVISED BY:	DRE/AAO	DATE: 02/2024
CHECKED BY:	RICK CRAWFORD	DATE: 04/2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BILL OF STEEL
STATE ROUTE 70 OVER NORFOLK SOUTHERN RAILROAD
BRIDGE I.D. NO. 37SR0700009
STATION 117+11.58
HAWKINS COUNTY
2025

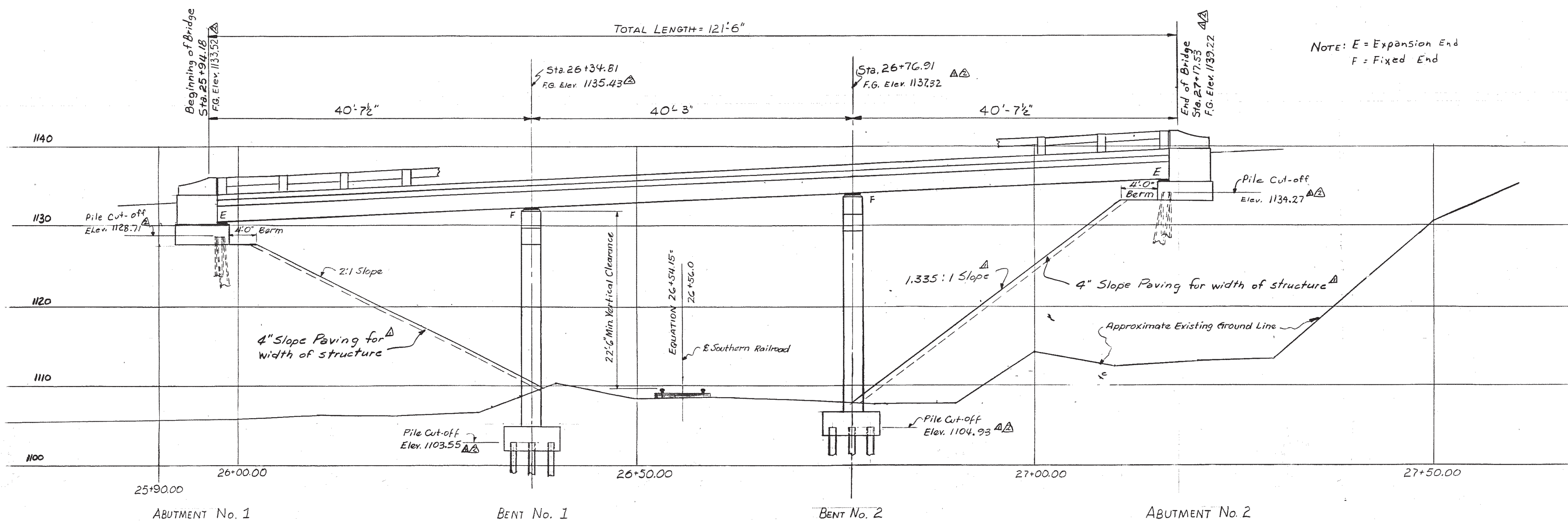
U-94-464

1/27/2025 11:46:21 AM P:\STRUCTURES\CADD_REGION_1\37-HAWKINS\37SR0700009\BRIDGE_DRAWINGS\37SR0700009BORDER.DGN

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19		

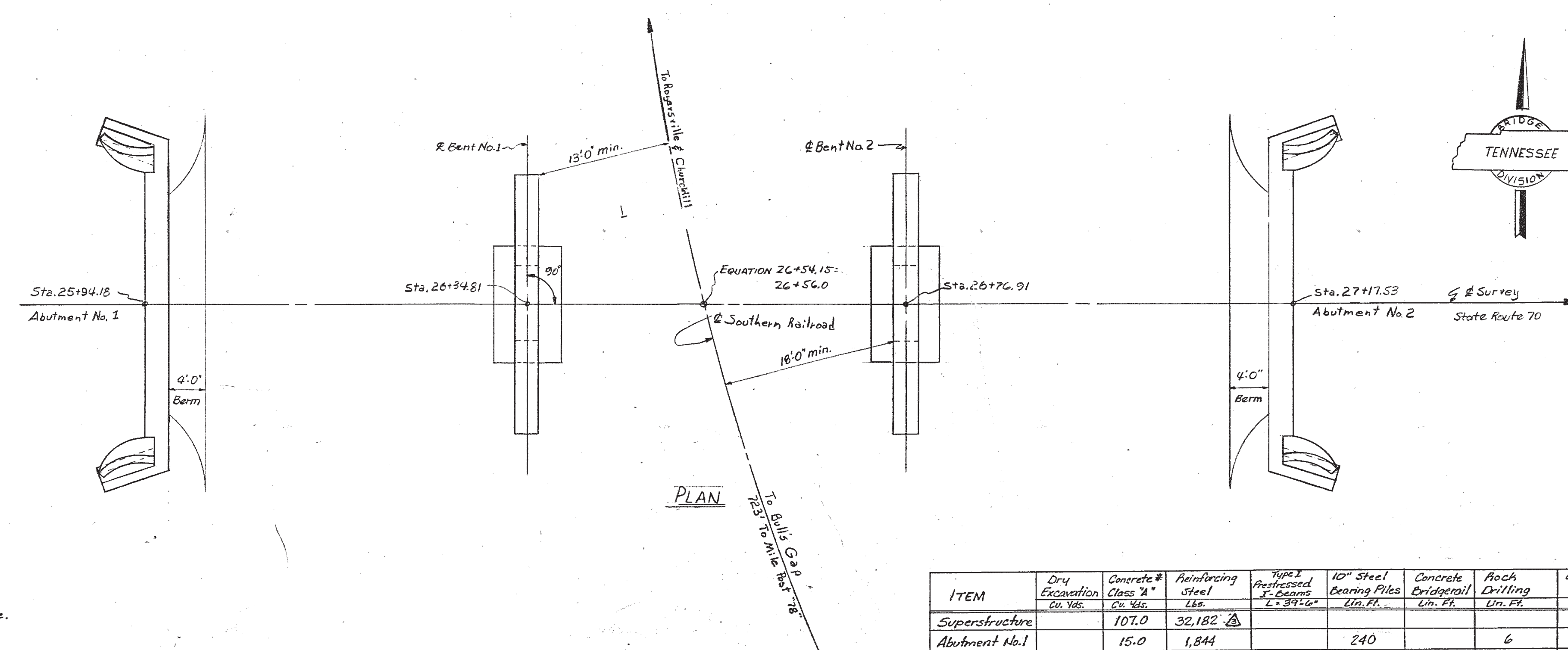
△ Revised 7-15-66 Elevations & Slope
△ Grade raised 0.25'. 10-25-66.
△ Revised 5-11-67 Reinf. Quantities

Note: E = Expansion End
F = Fixed End

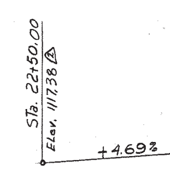


NOTE: Fills at ends of bridge are to be in place and thoroughly compacted before Abutment piles are driven.

ELEVATION



PLAN



SKETCH SHOWING GRADE

NOTE: Elevation shown is based on Finished Grade.

GENERAL NOTES

SPECIFICATIONS: Standard Road and Bridge Specifications of the Tennessee Department of Highways.

DESIGN SPECIFICATIONS: See 1961 A.A.S.H.O. Specifications.

LOADING: HS20-44.

CONCRETE: To be Class "A" (cast-in-place).

REINFORCING STEEL: To be Intermediate or Hard Grade. See specifications. Standard Hook Details as recommended by C.R.S.I. shall apply.

NEOPRENE BEARING PADS: See Special Provisions.

JOINT SEALER: See Special Provisions. Class "A" or "B".

SPECIAL FOUNDATION NOTE

Foundations for Bents shall be excavated to the pile cutoff elevations shown; Rod Soundings shall then be made as directed by the engineer. From the results obtained, the Bridge Engineer will decide if piles are to be used or the footing carried to rock. Piles shall be driven to refusal on rock or a minimum bearing of 38 tons for Bents and 25 tons for Abuts. No reinforcing steel for columns shall be ordered until final footing elevations are established. Cost of Rod Soundings shall be included in the cost of items bid on. If footings are carried to rock, holes 6 Ft. deep shall be drilled at points designated by the engineer.

BRIDGERAIL NOTE

Build Bridgerail according to standard drawing K-38-151, except use Endpost Details as shown on drawing K-56-4.
Dimension "X" = ½"
"Q" = 119'-4"
Spans 1 & 3, "L" = 6'-8½" 5 spaces.
Span No. 2, "L" = 6'-10⅛" 5 spaces.

LIST OF DRAWINGS

LAYOUT OF BRIDGE K-56-1
SUPERSTRUCTURE K-56-2
PRESTRESSED BEAM DETAILS K-56-3
ABUTMENT DETAILS K-56-4
BENT DETAILS K-56-5
BILL OF STEEL K-56-6
BRIDGERAIL DETAILS K-38-151
PILE SPLICE DETAILS H-5-111

ITEM	Dry Excavation Cu. Yds.	Concrete* Class "A" Cu. Yds.	Reinforcing Steel Lbs.	Type I Prestressed I-Beams L = 39'-6"	10" Steel Bearing Piles Lin. Ft.	Concrete Bridgerail Lin. Ft.	Rock Drilling Lin. Ft.	Linseed Oil Treatment Sq. Yds.
Superstructure		107.0	32,182 △					
Abutment No. 1		15.0	1,844		240		6	
Bent No. 1	60.0	34.5	6,821		270			
Bent No. 2	84.0	34.8	6,874		270			
Abutment No. 2		15.0	1,844		240		6	
Total	144.0	206.3	49,565 △	12	1,020	239	12	670.0

Note: Concrete endpost to be measured and paid for as linear feet of bridgerail.
* Cast-in-place

28'-0" ROADWAY WITH 3'-3" SAFETY CURBS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

LAYOUT OF BRIDGE
STATE ROUTE 70 OVER SOUTHERN RAILROAD
STATION 25+94.18
HAWKINS COUNTY
1966

DESIGNED BY E. Urschuck — DATE May '66
DRAWN BY — DATE 5-12-66
TRACED BY — DATE
CHECKED BY EU & LEH — DATE May '66

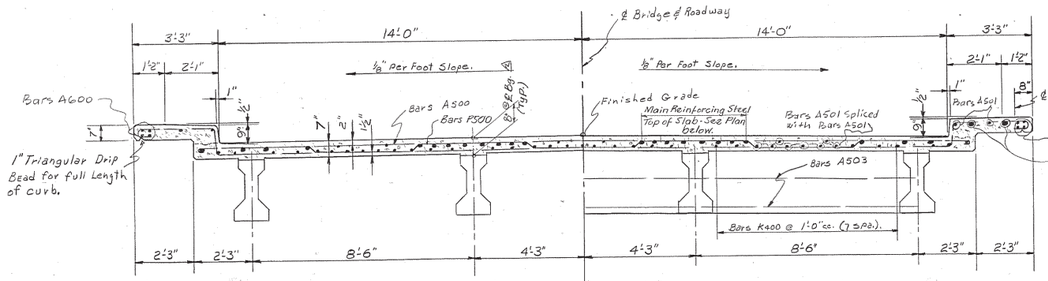
STATE HIGHWAY ENGINEER

K-56-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19		

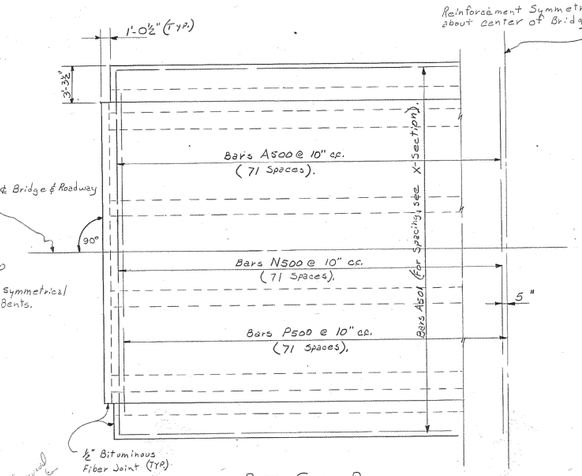
△ Revised 7-15-66 Stations
△ Dimension added 10-26-66
△ Revised 5-11-67 Reinf. & Quantities & Deflection

NOTE: When pouring curb, provisions shall be made for setting steel for concrete Bridgerail, see Drawing K-38-151.



HALF SECTION AT MID-SPAN

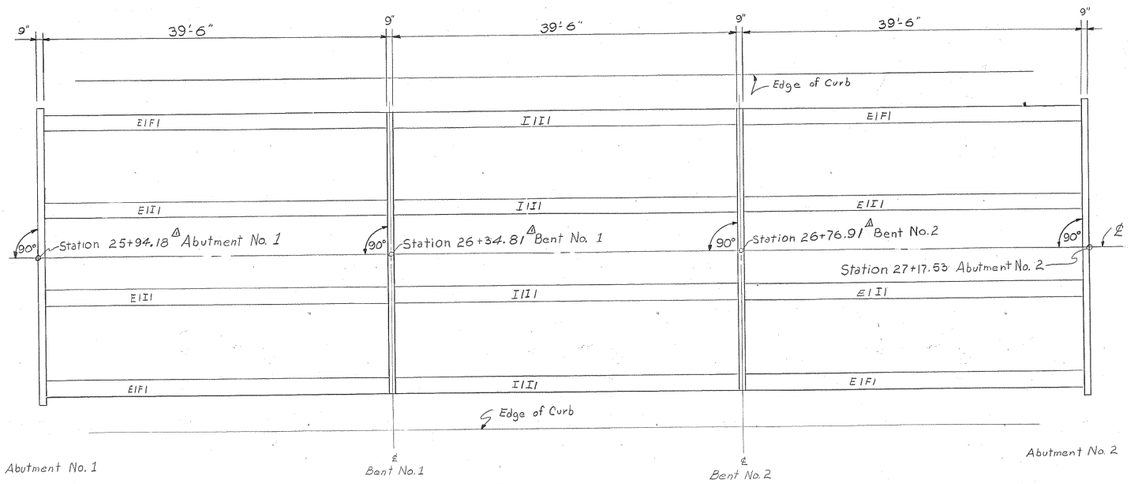
HALF SECTION AT SUPPORT



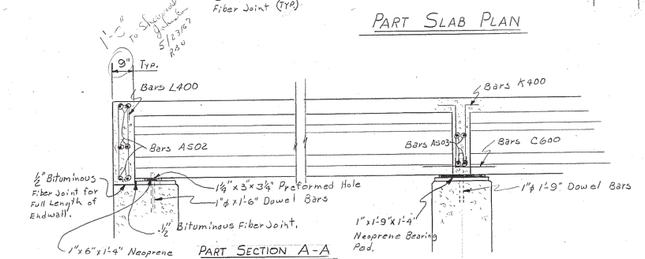
PART SLAB PLAN

SLAB NOTE

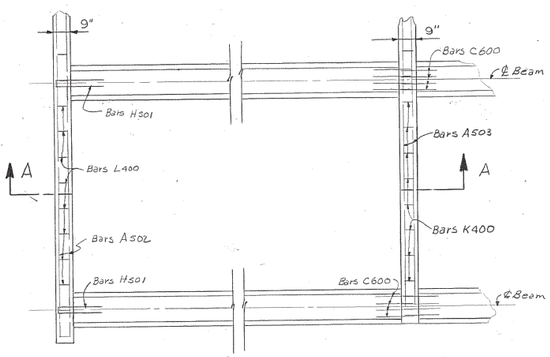
Slab Construction Joints may be Located at Coneractors Option. However, No Equipment shall be Permitted on the Bridge until all Pours are made and the concrete is properly cured.



FRAMING PLAN



PART SECTION A-A

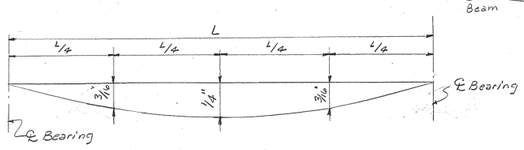


PLAN-ENDWALL AND SUPPORT DIAPHRAGMS.

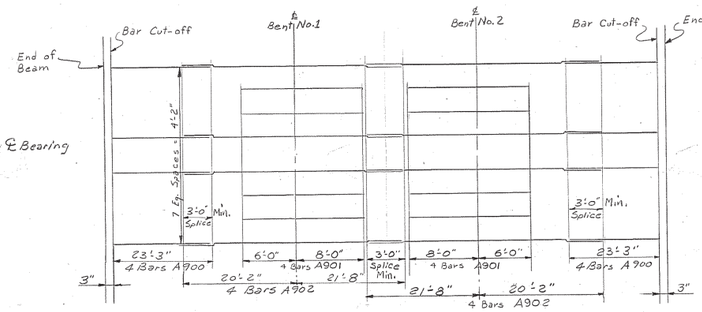
* ESTIMATED QUANTITIES △

Concrete Class "A"	107.0 cu. yds.
Reinforcing Steel	32,182 Lbs.

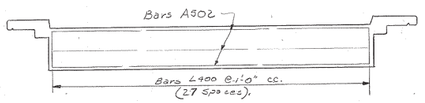
* Cast-in-place



DEAD LOAD DEFLECTION △
TYPICAL ALL BEAMS



PLAN - MAIN REINFORCING STEEL - TOP OF SLAB
Typical For All Beams △



ENDWALL ELEVATION

DESIGNED BY S Upchurch DATE May '66
DRAWN BY Danny Stapleton DATE 5-5-66
TRACED BY DATE
CHECKED BY SUC & LEM DATE 5-'66

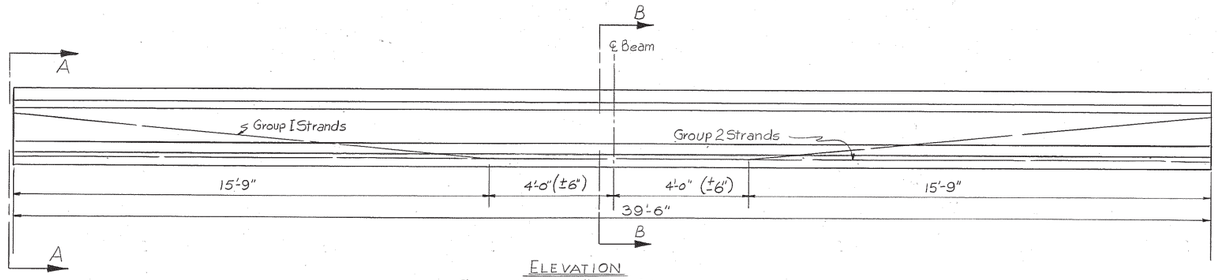
STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE
SUPERSTRUCTURE DETAILS
STATE ROUTE 70 OVER SOUTHERN RAILROAD
STATION 25+94.18
HAWKINS COUNTY
1966

CORRECT Fred Greve BRIDGE ENGINEER
APPROVED [signature] STATE HIGHWAY ENGINEER

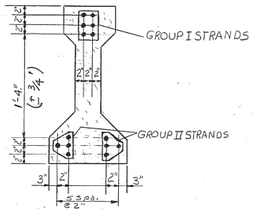
K-56-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19		

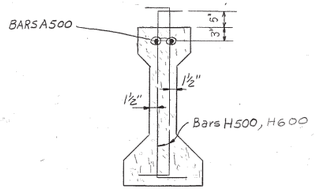
△ Dimension Revised. 9-2-66



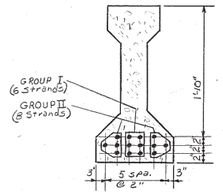
ELEVATION
Showing Strand Deflection Pattern



SECTION A-A

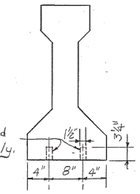


SECTION C-C
Web Reinforcement

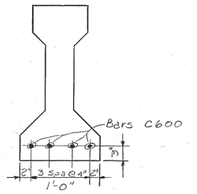


SECTION B-B

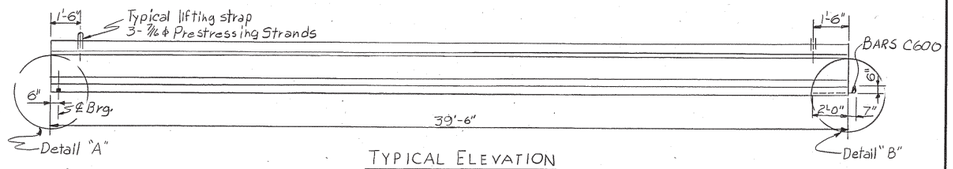
△ 1¼" x 3" x 3¾" Preformed Slot @ Abut. Ends only.



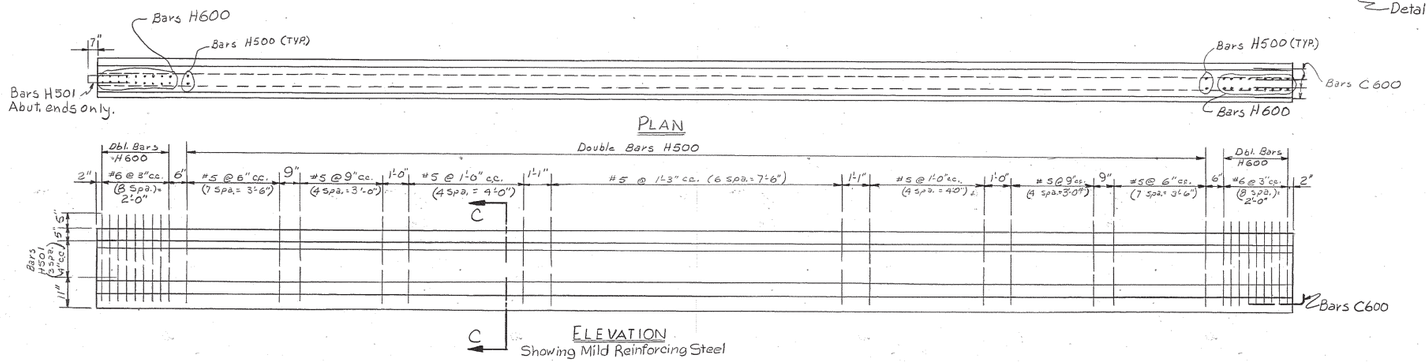
DETAIL "A"
Typical @ Abutments only



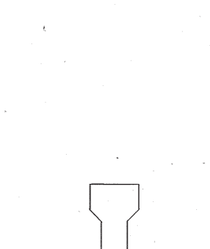
DETAIL "B"
Typical @ Fixed Ends.



TYPICAL ELEVATION



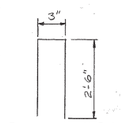
ELEVATION
Showing Mild Reinforcing Steel



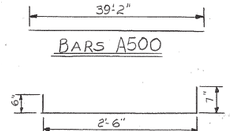
AASHO TYPE I

GENERAL NOTES

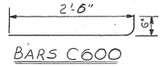
1. The Top of all Beams are To Be Rough floated, at Approximately The Time of initial Set, The Top of Beams will Be Scrubbed Transversely with a Coarse Wire Brush to Remove all Laitance and to Produce a Rough Surface.
2. After the Beam is Removed from the Prestress bed, Bars C600 shall be Bent Horizontally A Sufficient Amount So as to Permit Bars C600 of Adjoining Beams To mesh when in an erected Position. The Strands Shall be Left Projecting 3" from The ends of The Beams, There Shall not be any Protective Coating Placed on the ends of Beams or on Projecting Strands.
3. Anchorage at expansion Ends of Beams Accomplished By Dowels 1"ϕ x 1'-6" Fixed ends Dowels 1" x 1'-9".
4. Mild Reinforcing Steel To Be Intermediate or hard Grade.
5. All Prestressing Strands To Be ½" ϕ, 7 wire, Type Uncoated, Stress Relieved.
6. An Initial force of 25,200 Lbs. Shall Be Applied To each Strand In All Beams.
7. All Beams Are AASHO-PCI- Standard Type I.



BARS H501



BARS A500
BARS H500
BARS H600



BARS C600

BILL OF STEEL ~ EACH BEAM

Bar	Size	SPANS 1 & 3 No.	SPANS 1 & 3 Length	SPAN 2 No.	SPAN 2 Length
A500	# 5	2	39'-2"	2	39'-2"
C600	# 6	4	3'-0"	8	3'-0"
H500	# 4	43	3'-7"	43	3'-7"
H501	# 5	4	5'-3"	—	—
H600	# 6	18	3'-7"	18	3'-7"

ESTIMATED QUANTITIES ~ PER BEAM

Beam	Conc. Cu. Yds.	Reinf. Stl. lbs.	Pres. Stl. lbs.		
E1F1	2.8	321	273		
E1I1	2.8	321	273		
I1F1	2.8	317	273		
I1I1	2.8	317	273		
			273		

Reqd.: 16 - 1"ϕ x 1'-6" Dowel Bars,
16 - 1"ϕ x 1'-9" Dowel Bars.
8 - 1" x 6" x 1'-4" Neoprene Bearing Pad.
8 - 1" x 1'-9" x 1'-4" Neoprene Bearing Pad.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

PRESTRESSED BEAM DETAILS

STATE ROUTE 70 OVER SOUTHERN RAILROAD
STATION 25+94.18
HAWKINS COUNTY
1966

CORRECT Fred Grove
BRIDGE ENGINEER
APPROVED H. H. Dunlop
STATE HIGHWAY ENGINEER

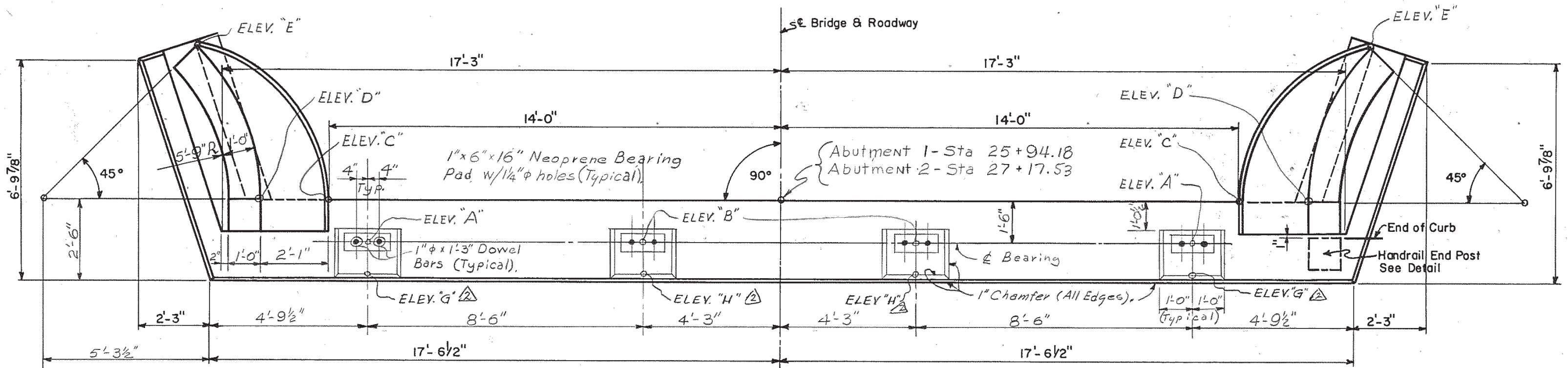
DESIGNED BY S. Upchurch DATE May '66
DRAWN BY Danny Stanley DATE 4-25-66
TRACED BY DATE
CHECKED BY S.U. & L.E.H. DATE May '66

K-56-3

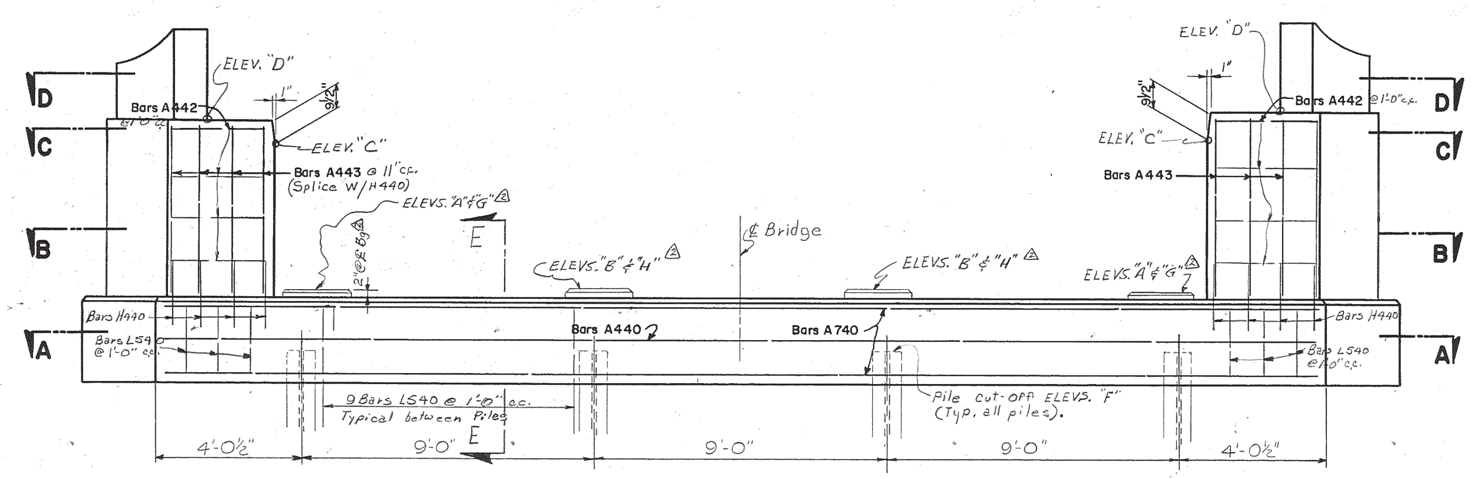
Fed. Road Dist. No.	State	Fed. Aid Proj. No.	Fiscal Year	Sheet No.	Total Sheets
3	Tenn.		19		

⚠1 Revised: 7-18-66 - Elevations
⚠2 Grade raised 0.25' & Elevs. "G" & "H" added. (10-25-66).

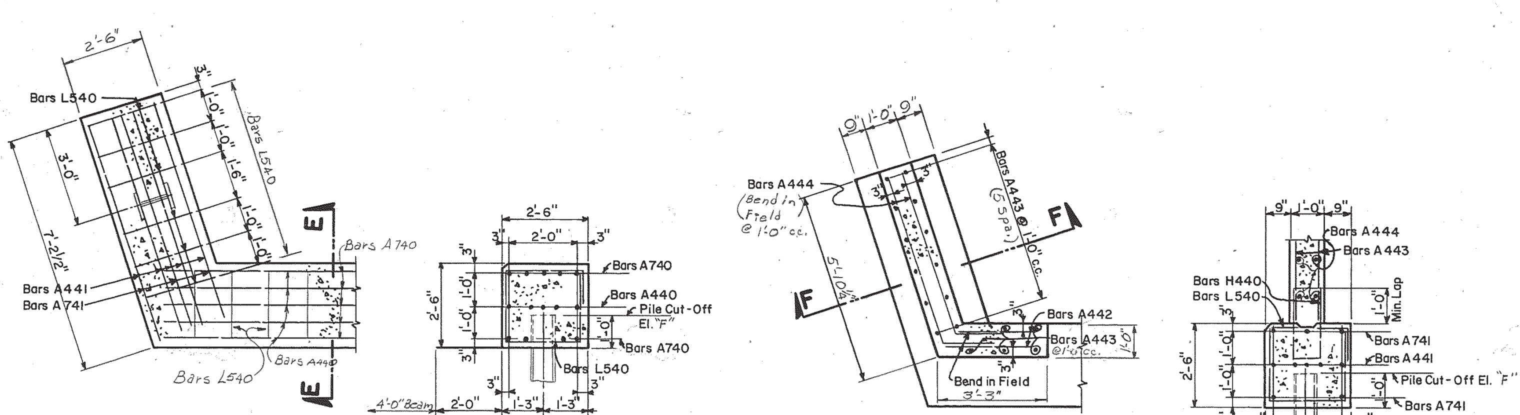
NOTE: When pouring abutment beam provisons shall be made for setting dowel bars for prestressed beams. Dowel bar proj. 3¾".



PLAN



ELEVATION
(Looking back on Survey.)

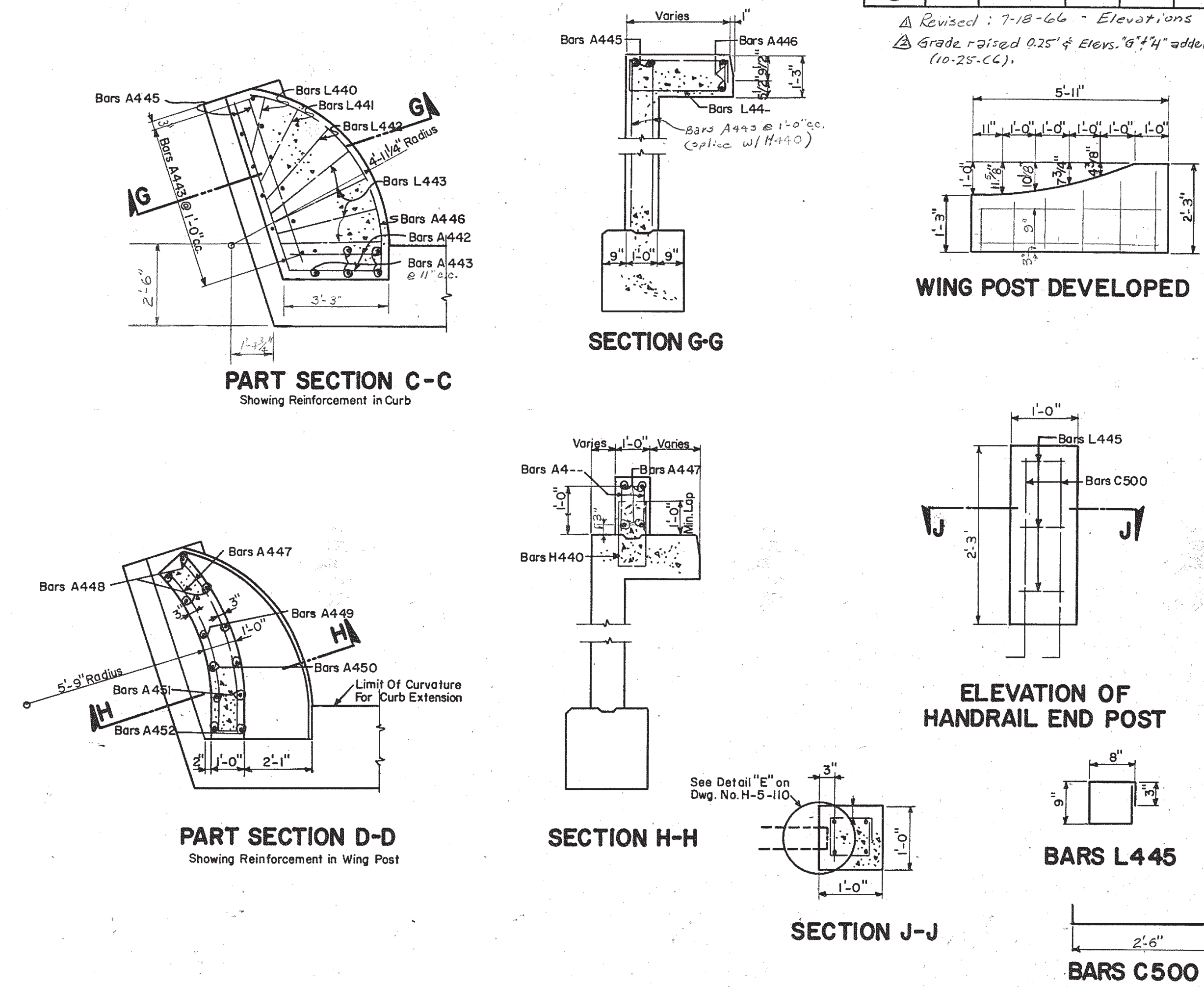


PART SECTION A-A
Showing Reinforcement in Abutment Beam

SECTION E-E

PART SECTION B-B
Showing Reinforcement in Wingwall

SECTION F-F



PART SECTION C-C
Showing Reinforcement in Curb

SECTION G-G

WING POST DEVELOPED

PART SECTION D-D
Showing Reinforcement in Wing Post

SECTION H-H

ELEVATION OF HANDRAIL END POST

SECTION J-J

BARS L445

BARS C500

END POST - LIST OF QUANTITIES - EACH

Bars	Size	No.	Length	Quantities: Concrete Cu. Yds.	Quantities: Steel Lbs.
C500	5	4	2'-10"	.10	18
L445	4	3	3'-1"		

TABLE OF ELEVATIONS ⚠2

Elevations	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
Abutment No. 1	1130.38	1130.46	1133.37	1134.16	⚠1 1133.94	1128.71	1130.42	1130.50
Abutment No. 2	⚠1 1135.93	⚠1 1136.02	⚠1 1139.07	⚠1 1139.87	⚠1 1140.10	⚠1 1134.27	1135.90	1135.98

ESTIMATED QUANTITIES
(each abutment)

Class "A" Concrete 15.0 cu. yds.
Reinforcing Steel 1,844 Lbs.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

ABUTMENT DETAILS

STATE ROUTE 70 OVER SOUTHERN RAILROAD
STATION 25+94.18
HAWKINS COUNTY
1966

CORRECT: Fred Greve, BRIDGE ENGINEER
APPROVED: [signature], STATE HIGHWAY ENGINEER

K-56-4

DESIGNED BY	S. Upelmich	DATE	May '66
DRAWN BY	[signature]	DATE	4-28-66
RETRACED BY	Albert Lanier	DATE	11-20-63
CHECKED BY	SU & LEH	DATE	5-66

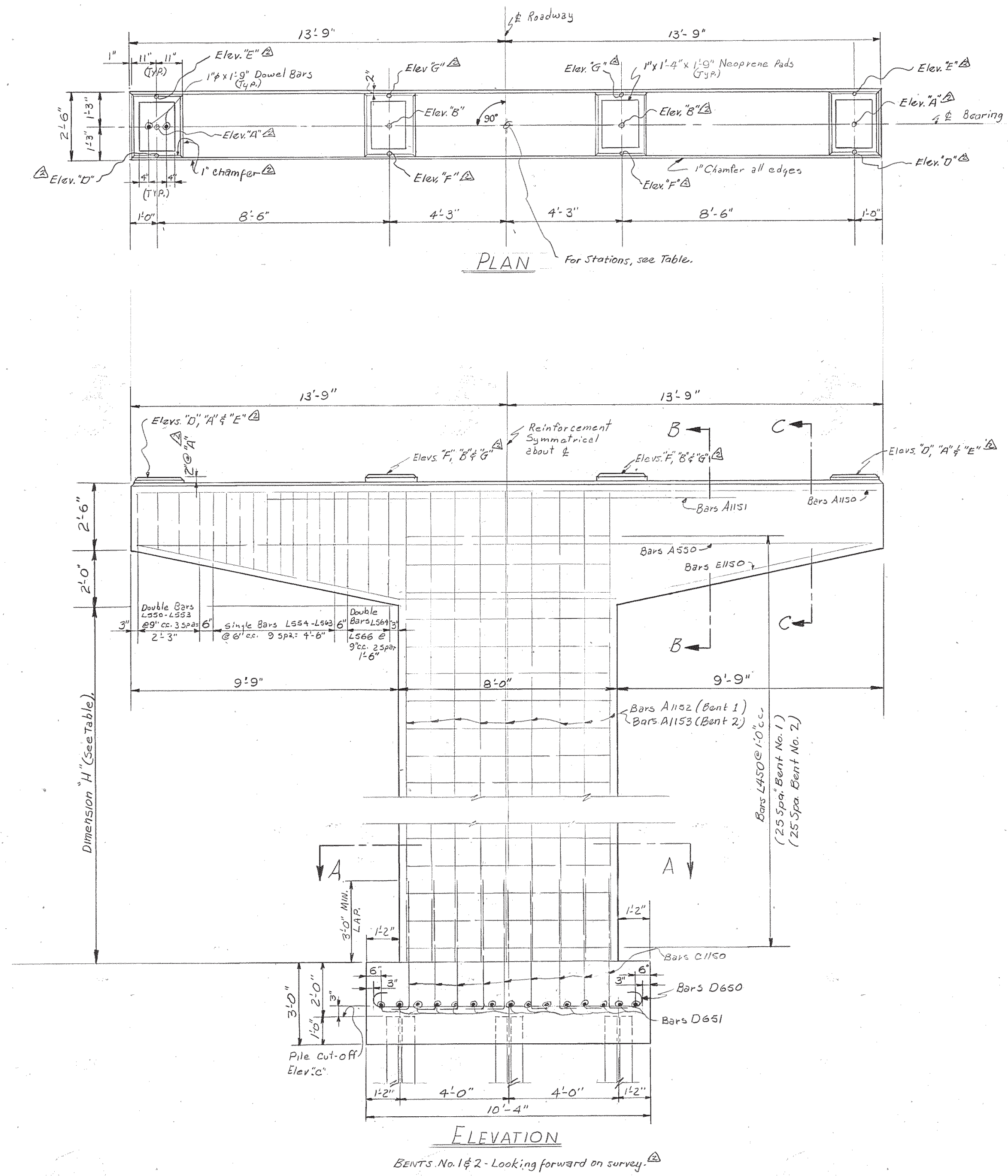
Drawing Not To Scale

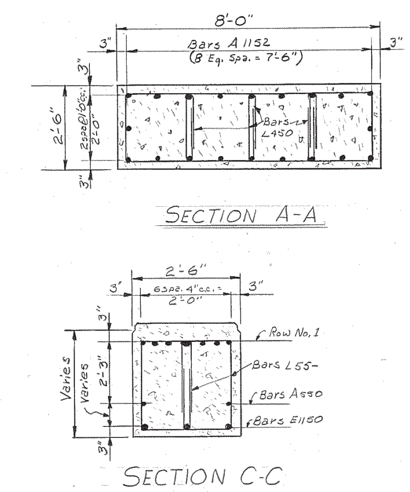
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19		

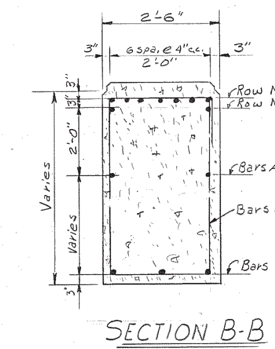
△1 Revised: 7-18-66 - Elevations

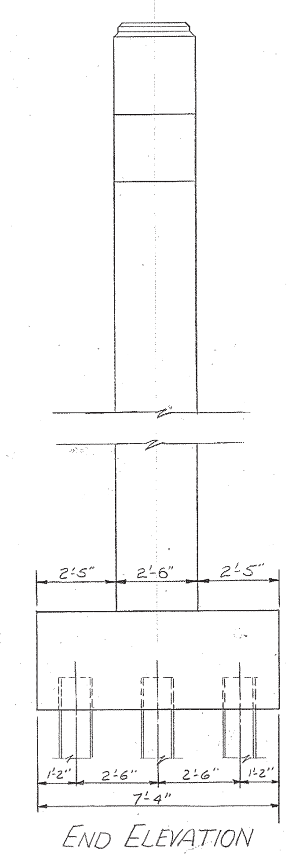
△2 Grade raised 0.25'. 10-25-66 & Elevs. "D", "E", "F" & "G" added.

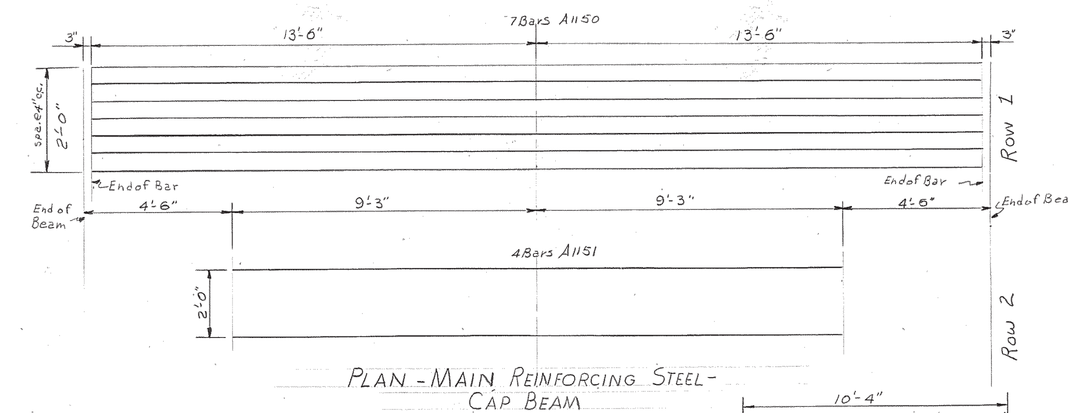
NOTE: When Pouring Cap Beam, Provisions Shall be made for Setting Dowel Bars. Bar Projection To be 6".

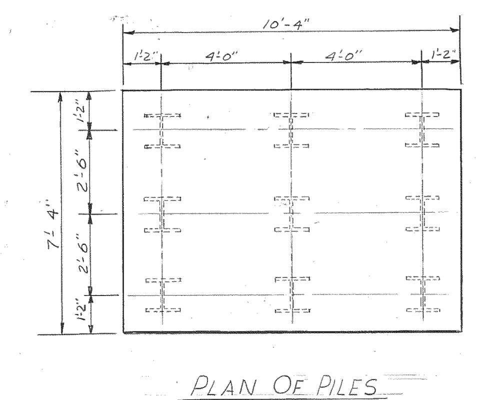


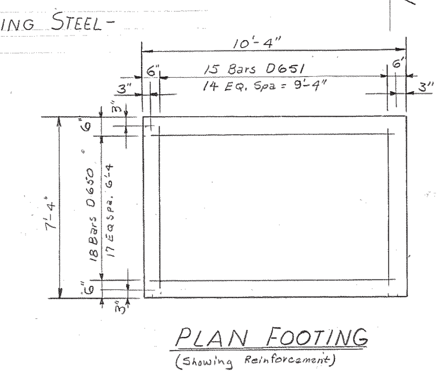












ESTIMATED QUANTITIES

ITEM	CONCRETE CLASS "A" - CU. YDS.	REINFORCING STEEL - LBS.
BENT No. 1	34.5	6821
BENT No. 2	34.8	6874

TABLE OF STATIONS & ELEVATIONS

ITEM	STATION	DIMENSION "H"	ELEVATIONS △2						
			"A"	"B"	"C"	"D"	"E"	"F"	"G"
Bent No. 1	26+34.81	22'-0"	1132.21	1132.30	1103.55 △1	1132.16	1132.26	1132.25	1132.35
Bent No. 2	26+76.91	22'-6"	1134.10 △1	1134.19 △1	1104.93 △1	1134.05	1134.15	1134.14	1134.24

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

BENT DETAILS
STATE ROUTE 70 OVER SOUTHERN RAILROAD
STATION 25+94.18
HAWKINS COUNTY
1966

DESIGNED BY S. Upchurch DATE May '66
DRAWN BY Danny Harbison DATE 5-12-66
TRACED BY DATE
CHECKED BY SU & LEH DATE May '66

CORRECT Fred [signature] BRIDGE ENGINEER
APPROVED [signature] STATE HIGHWAY ENGINEER

K-56-5

BILL OF STEEL

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19		

△ Revised 5-11-67 - Reinf. added

SUPERSTRUCTURE

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
A500	Slab	#5	144					29'-6"
A501	Slab & Curb	#5	141					41'-3"
A502	End wall	#5	12					27'-8"
A503	Support Dia.	#5	8					25'-6"
A600	Curbs	#6	24					40'-6"
A800	Curbs	#8	8					15'-0"
△ A900	Slab	#9	32					23'-3"
A901	Slab	#9	32					14'-0"
K400	Support Dia.	#4	98	6"	5"	2'-8"		6'-5"
L400	End wall	#4	56	5"	6"	2'-9"		6'-10"
N500	Slab & Curbs	#5	149	34'-0"	2'-9"	28'-3"	1'-1"	37'-5"
P500	Slab	#5	143	29'-6"	4'-1"	3'-9"	4'-2"	31'-3"
△ A902	Slab	#9	32					41'-10

ABUTMENTS No. 1 & 2

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
A440	Abutment Beam	#4	10					34'-11"
A441	Abutment Beam	#4	20					6'-10"
A442	Wingwall	#4	32					3'-0"
A443	Wingwall	#4	68					3'-10"
A444	Wingwall	#4	32					6'-6"
A445	Curb	#4	8					5'-6"
A446	Curb	#4	8					7'-3"
A447	Wing Post	#4	16					5'-8"
A448	Wing Post	#4	16					1'-1"
A449	Wing Post	#4	8					1'-4"
A450	Wing Post	#4	8					1'-8"
A451	Wing Post	#4	8					2'-0"
A452	Wing Post	#4	8					2'-1"
A740	Abutment Beam	#7	18					34'-11"
A741	Abutment Beam	#7	20					6'-10"
H440	Abutment Beam & Curb	#4	60	8"	2'-0"			4'-8"
L440	Curb	#4	4	1'-9"	6"	11"		5'-10"
L441	Curb	#4	4	2'-6"	6"	11"		7'-4"
L442	Curb	#4	4	2'-11"	6"	11"		8'-2"
L443	Curb	#4	16	3'-2"	6"	11"		8'-8"
L540	Abutment Beam	#5	90	2'-2"	1'-0"	2'-2"		9'-8"

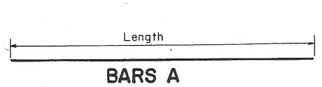
BENTS 1 & 2

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
A550	Bent Cap	#5	4					27'-0"
A1150	Bent Cap	#11	14					27'-0"
A1151	Bent Cap	#11	4					18'-6"
A1152	Column Bent No. 1	#11	20					26'-3"
A1153	Column Bent No. 2	#11	20					26'-9"
C1150	Column & Footing	#11	40	4'-9"				5'-6"
D650	Footing	#6	36	9'-10"				11'-2"
D651	Footing	#6	30	6'-10"				8'-2"
E1150	Bent Cap	#11	6	8'-0"	9'-10"	2'-0"		27'-8"
L450	Bent Cap & Column	#4	200	2'-2"	1'-0"	2'-2"		9'-8"
L550	Bent Cap	#5	8	2'-2"	1'-0"	2'-4"		10'-0"
L551	Bent Cap	#5	8	2'-2"	1'-0"	2'-6"		10'-4"
L552	Bent Cap	#5	8	2'-2"	1'-0"	2'-8"		10'-8"
L553	Bent Cap	#5	8	2'-2"	1'-0"	2'-10"		10'-10"
L554	Bent Cap	#5	4	2'-2"	1'-0"	2'-11"		11'-2"
L555	Bent Cap	#5	4	2'-2"	1'-0"	3'-0"		11'-4"
L556	Bent Cap	#5	4	2'-2"	1'-0"	3'-1"		11'-6"
L557	Bent Cap	#5	4	2'-2"	1'-0"	3'-2"		11'-8"
L558	Bent Cap	#5	4	2'-2"	1'-0"	3'-4"		12'-0"
L559	Bent Cap	#5	4	2'-2"	1'-0"	3'-5"		12'-2"
L560	Bent Cap	#5	4	2'-2"	1'-0"	3'-6"		12'-4"
L561	Bent Cap	#5	4	2'-2"	1'-0"	3'-7"		12'-6"
L562	Bent Cap	#6	4	2'-2"	1'-0"	3'-8"		12'-8"
L563	Bent Cap	#5	4	2'-2"	1'-0"	3'-9"		12'-10"
L564	Bent Cap	#5	8	2'-2"	1'-0"	3'10"		13'-0"
L565	Bent Cap	#5	8	2'-2"	1'-0"	4'-0"		13'-4"
L566	Bent Cap	#5	8	2'-2"	1'-0"	4'-1"		13'-6"

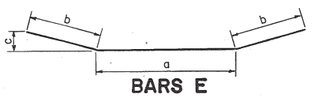
REINFORCING STEEL CODE

TYPE	SIZE	SERES
A	5	06

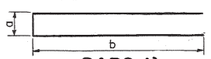
NOTE Dimensions shown on this sheet are outside to outside of bar. Standard C.R.S.I. Hook Details Shall Apply, Except As Noted.



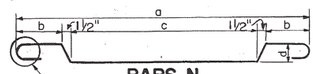
BARS A



BARS E

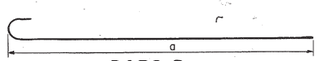


BARS H

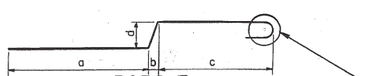


BARS N

SEE DETAIL "A"

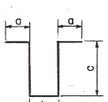


BARS B

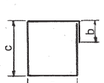


BARS F

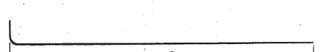
SEE DETAIL "A"



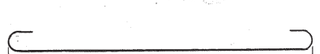
BARS K



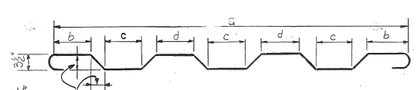
BARS L



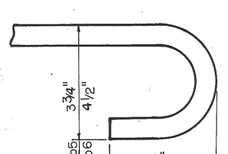
BARS C



BARS D



BARS P



DETAILS SHOWING HOOK ON F or N BARS

DETAIL "A"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

BILL OF STEEL

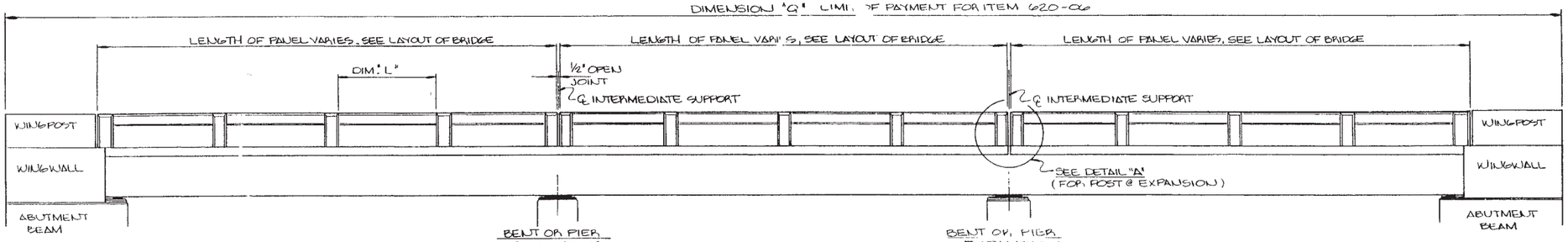
STATE ROUTE 70 OVER SOUTHERN RAILROAD
STATION 25+94.18
HAWKINS COUNTY
1966

DESIGNED BY Superintendent DATE May '66
DRAWN BY Don Harbison DATE May '66
TRACED BY DATE
CHECKED BY SUP & LEH DATE May '66

CORRECT Fred Groves BRIDGE ENGINEER
APPROVED STATE HIGHWAY ENGINEER

K-56-6

DIMENSION "Q" LIMITS OF PAYMENT FOR ITEM 620-06



TYPICAL ELEVATION

PROJECT NO.	YEAR	SHEET NO.

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	8/4/86		
2	1/24/86		ADDED STD. LIGHTING DETAILS
3	3/28/88		REDRAWN, FABRICATED INSERT ADDED, DIM. "Q" REVISED.

GENERAL NOTES:

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (MAR. 1983)

DESIGN SPECIFICATIONS: AASHTO 1977 EDITION WITH ADDENDA.

CONCRETE: TO BE CLASS "A".

REINFORCING STEEL: TO BE ASTM A615 GRADE 60. STANDARD CRSI HOOK DETAILS APPLY UNLESS OTHERWISE NOTED ON BILL OF STEEL. SPACING DIMENSIONS ARE CENTER TO CENTER, UNLESS OTHERWISE NOTED ON DETAIL DRAWINGS.

FOR DIMENSIONS "Q" AND "L" SEE LAYOUT SHEET OF STRUCTURE.

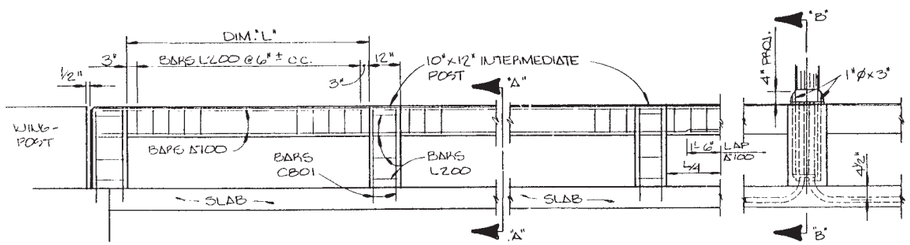
MAXIMUM "L" = 7'-0".

"Q" = OUT TO OUT WINGPOST.

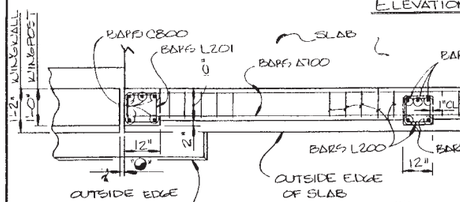
ALL POST SHALL BE VERTICAL. RAIL SHALL CONFORM TO LINE AND GRADE OF ROADWAY.

PAYMENT FOR CONCRETE RAIL SHALL BE BASED ON LINEAR FEET FROM END OF WINGPOST TO END OF WINGPOST.

RAILING SHALL NOT BE CONSTRUCTED ON ANY STRUCTURE UNTIL THE FALSEWORK HAS BEEN STRUCK.

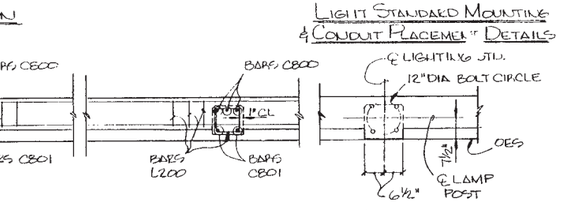


ELEVATION



PLAN

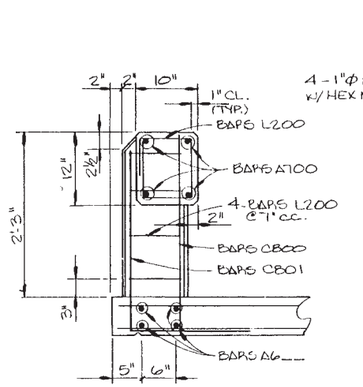
DENOTES: ½"



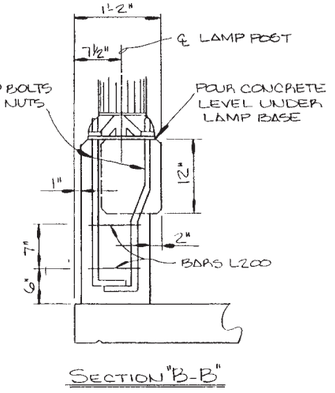
PLAN

FOR LOCATION OF LIGHTING STD, IF APPLICABLE, SEE LAYOUT DWG.

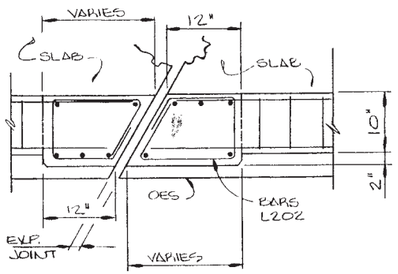
LIGHT STANDARD MOUNTING & CONDUIT PLACEMENT DETAILS



SECTION "A-A"
(CHAMFERS SHOWN ARE ½" (TYP.)



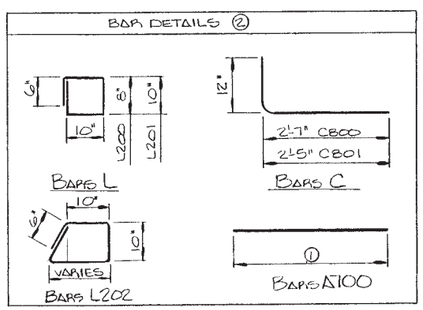
SECTION "B-B"



PLAN OF SKEWED POST @ EXPANSION

DETAIL "A"

(TYPICAL @ ANY EXPANSION JOINT)

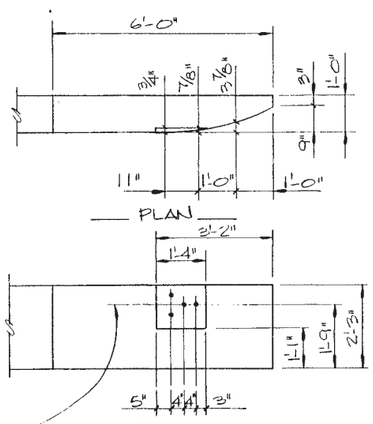


① A100 TO BE CONTINUOUS FROM END TO END OF PANEL FOR PERMISSIBLE LOCATION AND DETAIL OF Ssplice SEE ELEVATION.

② BAR DIMENSIONS ARE OUT TO OUT. FIRST DIGIT OF BAR NUMBER INDICATES SIZE.

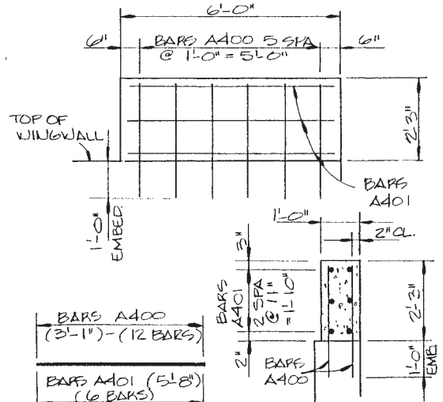
ESTIMATED QUANTITIES

ITEM	CLASS "A" CONCRETE C.Y.	REINF. STEEL "⬢" LBS	LINSEED OR TEXTURE FINISH SY
ONE INTER. POST 90°	0.0719	49.95	.8621
ONE END POST 90°	0.0808	50.39	.9084
ONE LIN. FT. RAIL	0.0307	9.35	.3966



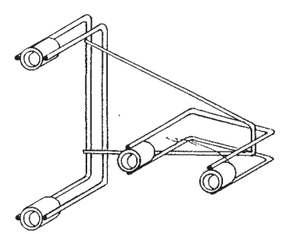
℄ ONE PIECE FABRICATED INSERT ASSEMBLY W/ 4 - 7/8" x 1½", (A307), HEX. HEAD BOLTS AND WASHERS. INSERTS TO BE CLOSED END AND BOLTED TO FORMS DURING CONCRETE POURING AND CURING PROCESS IN ORDER TO KEEP THE THREADS CLEAN AND CLEAR OF DEBRIS AND TO INSURE PROPER ALIGNMENT. SEE STD. DWG. S-GR-15 FOR ADDITIONAL INFORMATION.

DENOTES: ALL STEEL TO BE EPOXY COATED WHEN EPOXY BARS ARE USED IN BRIDGE DECK. COST TO BE INCLUDED IN UNIT PRICE BID FOR RAIL.



ESTIMATED QUANTITIES (PER WINGPOST)

CLASS "A" CONCRETE (C.Y.)	REINFORCING STEEL LBS.
0.5	47



DETAIL OF FABRICATED INSERT

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

STANDARD
CONCRETE BRIDGE
RAIL
1985

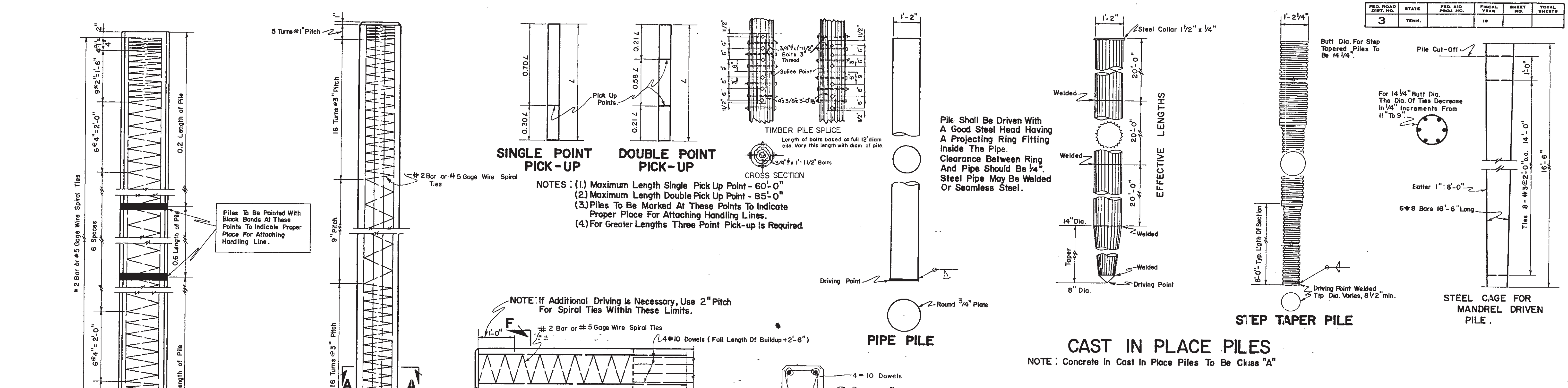
CORRECT Clifton Lovell
ENGINEER OF STRUCTURES

APPROVED James Evans
DIRECTOR OF HIGHWAYS

K-38-151

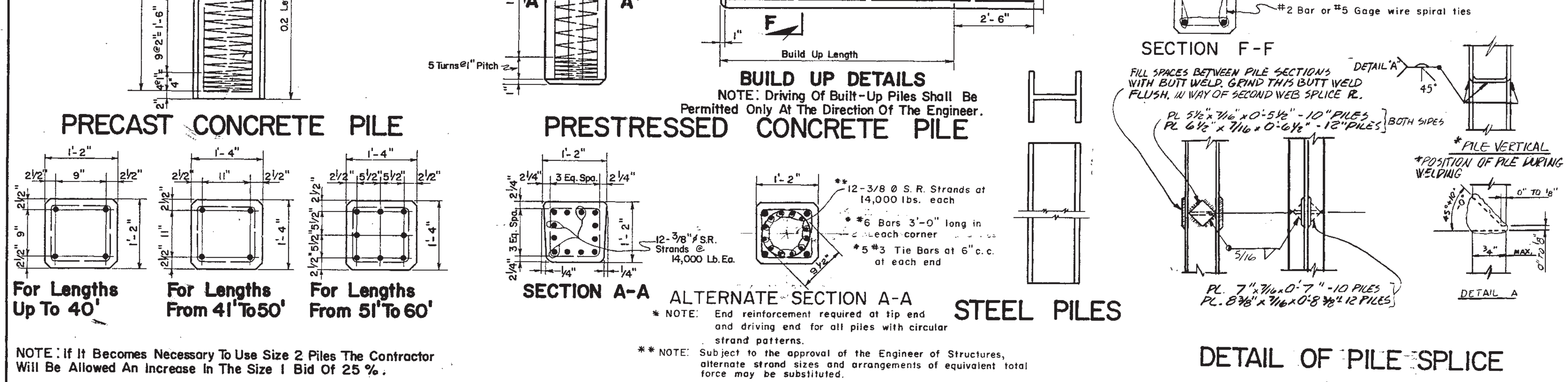
DESIGNED BY BAB & LHKD DATE 1965
DRAWN BY K. PHILLIPS DATE 2-85
SUPERVISED BY B. DEHNER & J. FIELDS DATE 3-85
CHECKED BY DATE

BRUNING 44-141 61318



NOTES : (1.) Maximum Length Single Pick Up Point - 60'-0"
(2.) Maximum Length Double Pick Up Point - 85'-0"
(3.) Piles To Be Marked At These Points To Indicate Proper Place For Attaching Handling Lines.
(4.) For Greater Lengths Three Point Pick-up Is Required.

NOTE : Concrete In Cast In Place Piles To Be Class "A"

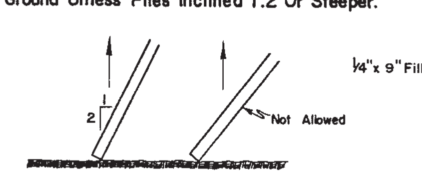


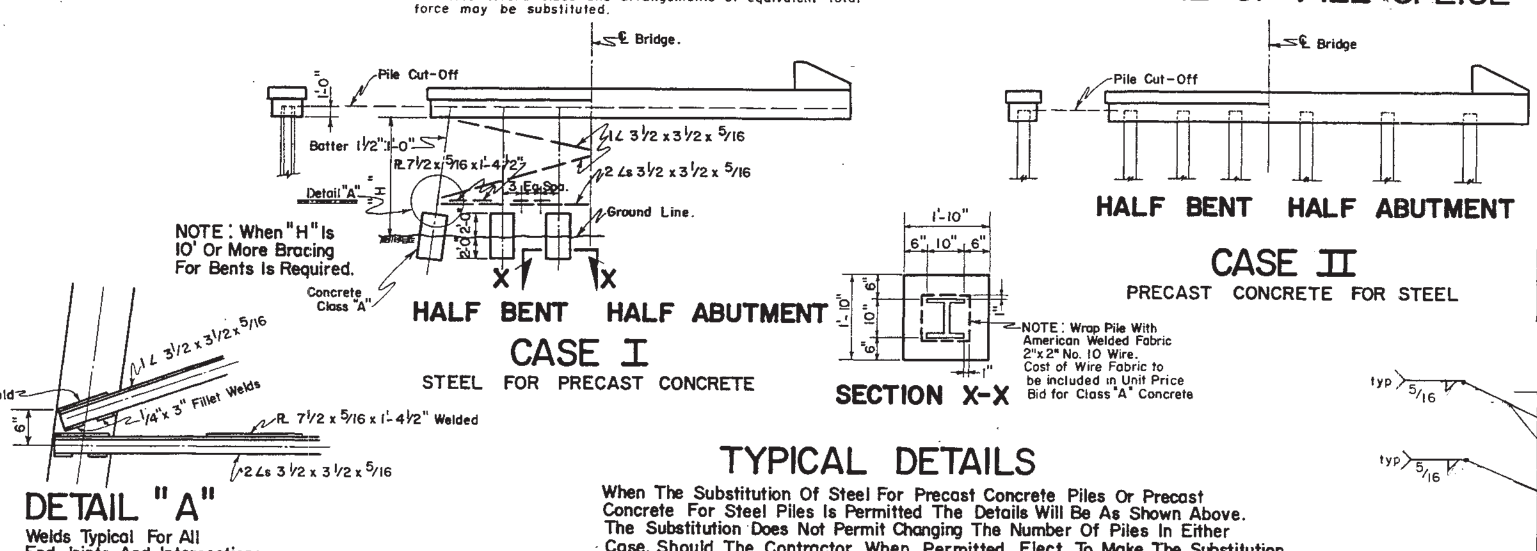
* NOTE: End reinforcement required at tip end and driving end for all piles with circular strand patterns.
** NOTE: Subject to the approval of the Engineer of Structures, alternate strand sizes and arrangements of equivalent total force may be substituted.

NOTE : If It Becomes Necessary To Use Size 2 Piles The Contractor Will Be Allowed An Increase In The Size 1 Bid Of 25 %.

Length Of Of Pile	Longitudinal Reinforcing	Weight Of Steel Per Ft.	Weight Of Pile Per Ft.
Up To 35'	4 #7 Bars	9.6 #	205.3 #
36' To 40'	4 #8 Bars	12.2 #	205.3 #
41' To 45'	4 #9 Bars	15.1 #	265.3 #
46' To 50'	4 #10 Bars	18.8 #	265.3 #
51' To 55'	8 # 9 Bars	28.9 #	265.3 #
56' To 60'	8 # 10 Bars	36.2 #	265.3 #

NOTE : In Handling The Piles, They Shall Be Supported At The Points Indicated. Piles To Be Picked Up By Pulling On Both Lines Uniformly. End Of Pile Not To Touch Ground Unless Piles Inclined 1:2 Or Steeper.





GENERAL NOTES

(1.) SPECIFICATIONS: Standard Road And Bridge Specifications Of The Tennessee Department Of Highways.

(2.) CHOICE OF PILES: To Be Specified On The Layout Sheet For Each Bridge.

(3.) CAST IN PLACE: Pile Shells Shall Have A Minimum Thickness As Follows:
1. Piles Driven Without Mandrel - 7 Gage.
2. Piles Driven With Mandrel Shall Be Of Sufficient Strength And Thickness To Hold Its Original Form And Show No Sign Of Distortion After The Core Has Been Withdrawn.
3. Steel Pipe Shall Be Welded Or Seamless Steel Conforming To ASTM Designation A-252 Grade 2 Welded And Seamless Steel Pipe Piles.
Steel Cage For All Mandrel Driven Piles Will Be Required.
The Contractor Shall Maintain On The Job At All Time Prior To And During The Filling Of The Shells, A Light Suitable For Their Inspection. Improperly Driven, Broken Or Otherwise Defective Shells Shall Be Removed And Replaced Or Otherwise Corrected To The Satisfaction Of The Engineer By Removal And Replacement Or The Driving Of An Additional Pile At No Extra Cost.

(4.) PRESTRESSED CONCRETE PILES: 1. Concrete Shall Have A Minimum 28 Day Strength Of 5000 PSI With A Release Strength Of 3500 PSI For 3/8" ϕ Strands.
2. Spiral Ties Shall Be Tied To Corner Strands At Intervals Adequate To Prevent Excessive Movement During Vibration. They May Be Manufactured From Stock Meeting Any Grade Of Reinforcing Steel Or Hard Drawn Wire.

(5.) PILE POINTS: All Cast In Place Piles Shall Be Equipped With A Steel Driving Point. Driving Points Shall Be Mill Welded To The Pile Shell. Driving Points May Be Either Structural Steel, Forged Steel Or Cast Steel. Steel Piles Shall Have A Square Cut End Only. No Driving Point Is Required Unless Shown On The Bridge Plans.

(6.) SPLICES: Splice Details For Cast In Place Piles Shall Be Made In Accordance With The Manufacturers Recommendations, Subject To The Approval Of The Engineer. Splice Details For Steel And Prestressed Concrete Piles Shall Be In Accordance With The Details Shown On This Sheet.

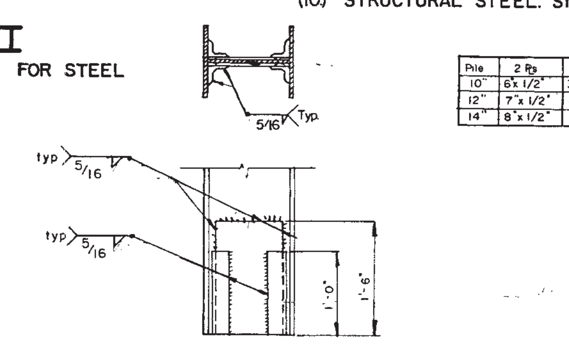
(7.) DRIVING FORMULA: Piles Shall Be Driven To A Minimum Capacity As Specified On The Layout Sheet As Determined By The Driving Formulas Stipulated In The Specifications.

(8.) MILL TEST REPORTS: Notarized Mill Test Reports Will Be Required For All Steel Piles And Cast In Place Pile Shells.

(9) WELDING SPECIFICATIONS: AWS for Bridges.

(10) STRUCTURAL STEEL: Structural Steel conforming to ASTM A-7 or ASTM A-36-62T will be acceptable.

Pile	2 Ps	4 ∠s
10"	6"x 1/2"	3 1/2"x 3 1/2"x 1/2"
12"	7"x 1/2"	4"x 4"x 1/2"
14"	8"x 1/2"	5"x 5"x 1/2"



DETAIL OF PILE DRIVING POINT
NOTE: Cost of driving point to be included in the unit price bid for steel piles

TYPICAL DETAILS

When The Substitution Of Steel For Precast Concrete Piles Or Precast Concrete For Steel Piles Is Permitted The Details Will Be As Shown Above. The Substitution Does Not Permit Changing The Number Of Piles In Either Case. Should The Contractor, When Permitted, Elect To Make The Substitution Of Case I, The Cost Of Encasing Blocks At Ground Lines And Bracing If Required Shall Be Included In The Price Per Lin. Ft. Of Piles.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

STANDARD PILE DETAILS

VOID

CORRECT: Fred Green, BRIDGE ENGINEER
APPROVED: C.W. Long, STATE HIGHWAY ENGINEER

DESIGNED BY ______ DATE ______
DRAWN BY J.W. SOUTHERLAND DATE 5-27-60
RETRACED BY JOE B. CANTRELL JR. DATE 2-6-62
CHECKED BY ______ DATE ______

REV. - FEB. 6, 1962
REV. - MAR. 1, 1961 BATTER ON PRESTRESSED PILE
REV. - DEC. 8, 1960
REV. - OCT. 27, 1960
REV. - SEPT. 27, 1960 DELETE PILE SUBSTITUTIONS
REV. - JULY 25, 1960
REV. - DEC. 14, 1964 SPIRAL TIES
REV. - JAN. 22, 1964 COST OF WIRE FABRIC
REV. - FEB. 24, 1966 TIMBER PILE SPLICE, DETAIL OF PILE DRIVING POINT
REV. - NOV. 27, 1973 ADDED ALT. SECTION A-A
REV. - NOV. 12, 1982 DETAIL OF PILE SPLICE

H-5-111

SEE Std-5-1 & 5-2

THIS DOCUMENT HAS BEMN DIGITALLY SIGNED AND SEALED BY:

Lori Fiorentino

Digitally signed by Lori Fiorentino
Date: 2025.02.05 11:41:34 -05'00'

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

TENNESSEE DEPARTMENT OF TRANSPORTATION
MATERIALS & TESTS DIVISION- GEOTECHNICAL ENGINEERING SECTION
7345 REGION LN.
KNOXVILLE, TN 37914
LORI ANN FIORENTINO, P.E. NO. 113743

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE OF TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
SIGNATURE SHEET	GEOTECH-SIGN1
GEOTECHNICAL INDEX	G-1
GEOTECHNICAL NOTES	G-2
GEOTECHNICAL BORING LAYOUT	G-3
GEOTECHNICAL BORING PROFILE	G-4

YEAR	PROJECT NO.	SHEET NO.
2025	BR-STP-70(24)	GEOTECH-SIGN1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2025	BR-STP-70(24)	G-1

GEOTECHNICAL INDEX

SHEET NAME **SHEET NO.**

SIGNATURE SHEET GEOTECH-SIGN1

GEOTECHNICAL INDEX G-1

GEOTECHNICAL NOTES SHEET G-2

GEOTECHNICAL BORING LAYOUT G-3

GEOTECHNICAL BORING PROFILE G-4

SEALED BY

LORI ANN FIORENTINO
REGISTERED ENGINEER
DEPARTMENT OF AGRICULTURE
COMMERCE
STATE OF TENNESSEE

02/05/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL INDEX

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2025	BR-STP-70(24)	G-2

DEFINTION OF EARTHWORK TERMS

THE TERMS AND DEFINITIONS BELOW SHALL CHARACTERIZE THE MATERIAL TYPE THAT WILL BE ENCOUNTERED DURING EXCAVATION AND GRADING. SEE TYPE MATERIAL REFERENCE IN TYPICAL SECTIONS LEGEND.

A. SOIL MATERIAL

SOIL MATERIAL IS MATERIAL THAT IS PREDOMINANTLY MADE UP OF NATURALLY OCCURRING MINERAL PARTICLES WHICH ARE FAIRLY READILY SEPARATED INTO RELATIVELY SMALL PIECES, AND IN WHICH THE MASS MAY CONTAIN AIR, WATER OR ORGANIC MATERIALS. THIS MATERIAL MAY CONTAIN ROCK PIECES IN THE FORM OF DISCONNECTED SLABS, LENSES, OR BOULDERS OF LESS THAN APPROXIMATELY 0.5 CUBIC YARDS. THE MAIN SOIL GROUPS CONSIST OF CLAY, SILT, SAND, GRAVEL, COBBLES, BOULDERS (LESS THAN 0.5 CUBIC YARD VOLUME) OR A COMBINATION OF ANY OF THE CONSTITUENTS. FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY BE CONSIDERED TO BE EXCAVATABLE BY CONVENTIONAL EXCAVATION MACHINERY SUCH AS PANS, TRACK HOES, OR FRONT END EXCAVATORS/LOADERS.

B. SOLID ROCK MATERIAL

SOLID ROCK MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES SO FIRMLY BONDED TOGETHER THAT RELATIVELY GREAT EFFORT IS REQUIRED TO SEPARATE THE PARTICLES (I.E. BLASTING OR HEAVY CRUSHING FORCES). FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY HAVE TO BE BLASTED TO SEPARATE INTO PIECES SMALL ENOUGH TO LOAD AND TRANSPORT ON EARTH MOVING TRUCKS AND WHICH WHEN SUBJECTED TO PROPER PRE- SPLIT AND PRODUCTION BLASTING WOULD RESULT IN A UNIFORM STABLE ROCK CUT FACE. NOTE THAT THIS MATERIAL WOULD NOT BY DEFINITION NECESSARILY BE PROVEN SOURCE OF ANY ROCK TYPE AGGREGATE SUCH AS SOLID ROCK, GRADED SOLID ROCK, RIP RAP. OR OTHER ROCK AGGREGATE CONSTRUCTION PRODUCTS.

C. SOFT ROCK OR DEGRADABLE ROCK

THIS MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES THAT ARE SO FIRMLY BONDED SUCH THAT THEY ARE NOT FAIRLY READILY SEPARATED INTO SMALL PIECES YET HAS SUCH RELATIVELY LOW BONDING STRENGTH THAT WOULD ALLOW FOR SEPARATING INTO SMALL PIECES THROUGH MODERATE TO HEAVY CRUSHING FORCES. FOR CONSTRUCTION PURPOSES THIS MATERIAL WOULD HAVE TO BE SUBJECTED TO RIPPING TYPE EQUIPMENT, HOE RAMS, OR RUGGED USE OF A LARGE BULLDOZER IN ORDER TO SEPARATE THE MATERIAL SUCH THAT IT CAN BE READILY LOADED INTO EARTH MOVING TRUCKS. THESE MATERIALS WOULD TYPICALLY BE SHALES, CLAYSTONES, SILTSTONES, WEATHERED SANDSTONES, WEATHERED SCHIST AND WEATHERED GNEISS.

D. TRANSITIONAL MATERIALS

THIS MATERIAL IS THAT MATERIAL COMPRISED OF A COMBINATION OF SOIL AND ROCK (MATERIALS A, B, AND C) OCCURRING IN EITHER NON-UNIFORM INTERBEDDED LAYERS OF THE ABOVE MATERIALS (I.E. SHALE MATERIAL WITH RELATIVELY THIN LAYERS OF SOLID ROCK SUCH AS HARD LIMESTONE) OR ERRATIC LOCALIZED CHANGES OF MATERIAL TYPES BOTH LATERALLY AND WITH DEPTH (SUCH AS A GEOLOGIC FORMATION RESULTING IN PINNACLED ROCK COLUMNS, FLOATING BOULDERS OR LENSES INTERCALATED WITH CLAY SOIL, A COMMON OCCURRENCE IN CERTAIN REGIONS OF TENNESSEE). FOR CONSTRUCTION PURPOSES, THIS MATERIAL MAY HAVE TO BE EXCAVATED USING A COMBINATION OF EXCAVATION METHODS SUCH AS BLASTING OF ROCK PINNACLES, LAYERS OR BOULDERS ALONG WITH A RIPPING OF WEATHERED ROCK AND EXCAVATING OF SOIL WITH TRACK HOES OR LOADERS ALL WITHIN A LOCALIZED AREA. THIS MATERIAL WOULD NOT BE SUITABLE FOR THE USE OF EXCAVATING PAN TYPE EQUIPMENT.

SEALED BY

LORI ANN FIORENTINO
STATE OF TENNESSEE

Lori Ann Fiorentino

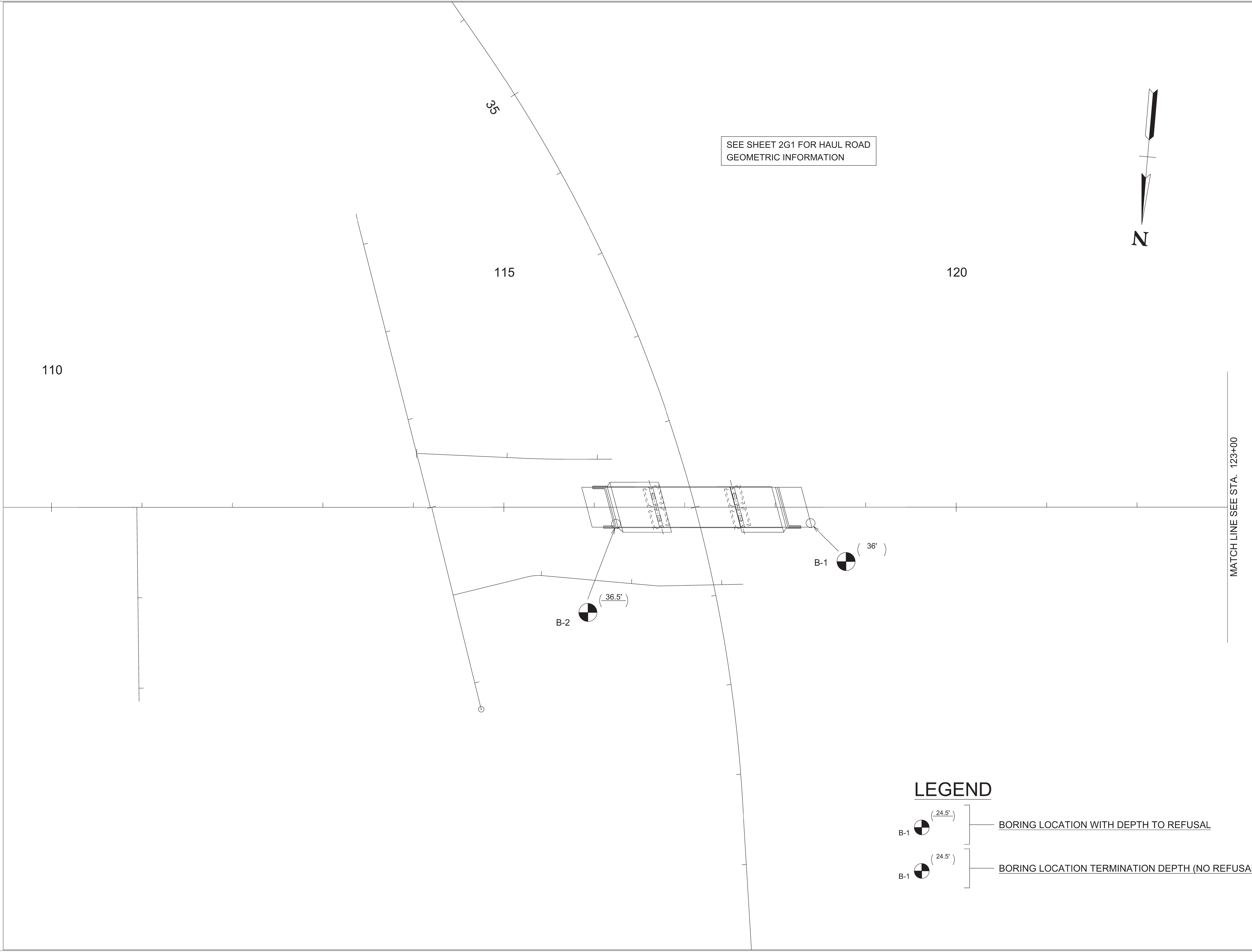
02/05/2025

STATE OF TENNESSEE
DEPARTMENT OF
TRANSPORTATION

GEOTECHNICAL

NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	G-3



LEGEND

B-1 (24.5') — BORING LOCATION WITH DEPTH TO REFUSAL

B-1 (24.5') — BORING LOCATION TERMINATION DEPTH (NO REFUSAL)

SEALED BY

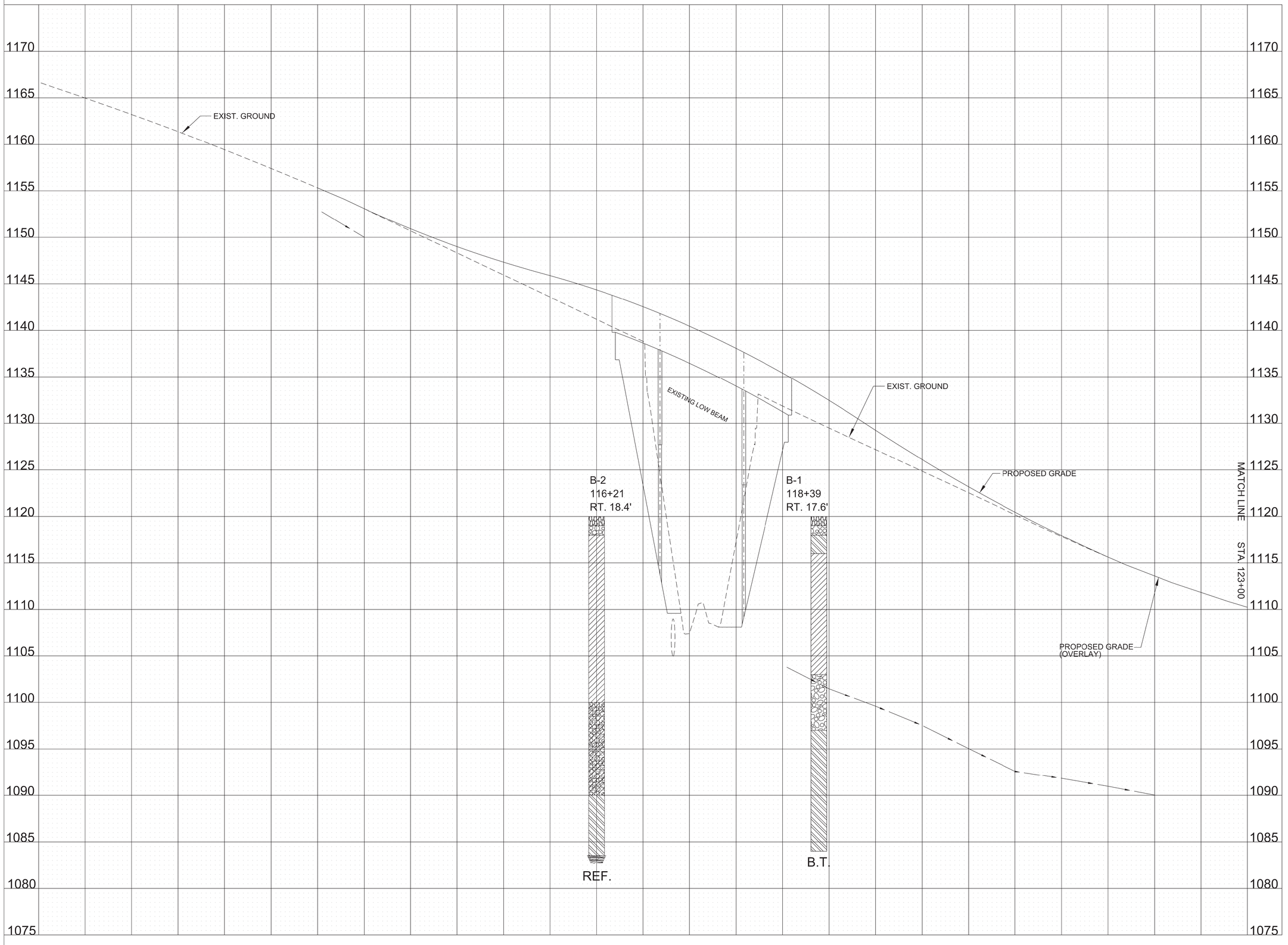
Lori Ann Fiorentino

02/05/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL BORING LAYOUT

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	G-4



LEGEND

- ASPHALT
- BOULDERS
- GRAVEL (TYPE A MATERIAL)
- CLAY (TYPE A MATERIAL)
- GRAVELLY CLAY (TYPE A MATERIAL)
- CLAYEY GRAVEL WITH SAND (TYPE A MATERIAL)
- SHALE (TYPE C MATERIAL)

TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON GEOTECHNICAL NOTES AND EST. QTYS. SHEET.
B.T.= BORING TERMINATED
REF.= AUGER REFUSAL

SEALED BY

L'ORI ANN FIORENTINO
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE

Lori Ann Fiorentino

02/05/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL BORING PROFILE

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	R1A
PS&E	2025	BR-STP-70(24)	R-1

RETAINING WALL INDEX

RETAINING WALL INDEX R-1

SOLDIER PILE RETAINING WALL GEOTECHNICAL DESIGN NOTES & REQUIREMENTS R-2

MSE RETAINING WALL GEOTECHNICAL DESIGN NOTES & REQUIREMENTS R-3

RETAINING WALL NO.1 GEOMETRIC LAYOUT R-4, R-5

RETAINING WALL NO.1 SOIL PROFILES AND DETAILS R-6, R-7

RETAINING WALL TYPICAL DETAILS R-8

MSE RETAINING WALL SETTLEMENT MONITORING DETAILS R-9

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL INDEX

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	R-2

ACCEPTABLE WALL TYPES

SOLDIER PILE AND LAGGING WALL (UNANCHORED)
(SEE SHEET R1A)

MECHANICALLY STABILIZED EARTH (MSE) WALL - SEGMENTAL PRECAST
MECHANICALLY STABILIZED EARTH (MSE) WALL - MODULAR BLOCK
(SEE SHEET R1B)

THE RETAINING WALL(S) SHALL BE ONE OF THE WALL TYPE(S) AS LISTED ABOVE OR ON FORTHCOMING "RETAINING WALL DETAIL-GEOMETRIC LAYOUT" SHEET(S). ANY PROPRIETARY RETAINING WALL SYSTEM SHALL BE LISTED AS PRE-APPROVED IN QPL 38.

RETAINING WALL DESIGN NOTES

UNLESS SPECIFICALLY STATED OTHERWISE IN THE CONTRACT PLANS, THE BIDDING FOR, THE DESIGN OF AND THE CONSTRUCTION OF RETAINING WALLS SHOWN IN THE PLANS SHALL BE GOVERNED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. THIS SPECIAL PROVISION SHALL BE CONSIDERED AS ONE OF THOSE DOCUMENTS WHICH THE BIDDER/CONTRACTOR HAS EXAMINED AND MADE HIMSELF FAMILIAR WITH AS DESCRIBED IN SECTION 102.04 - EXAMINATION OF THE SITE, THE WORK, THE PLANS, AND THE SPECIFICATIONS IN THE TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

EXCAVATION FOR THE WALL AND/OR ITS FOOTING SHALL NOT BE ACCOMPLISHED UNTIL THE CONTRACTOR HAS SUBMITTED WALL DESIGNS AND CALCULATIONS AND HAS BEEN ISSUED AN APPROVED SET OF WALL PLANS AND HAS LABOR AND MATERIAL RESOURCES AVAILABLE TO BEGIN AND CONTINUE WALL CONSTRUCTION IMMEDIATELY AFTER EXCAVATION.

THIS WALL SHALL BE DESIGNED IN ACCORDANCE WITH LRFD DESIGN PROCEDURES AND REQUIREMENTS AS DESCRIBED IN:
- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020
- PUBLICATION FHWA-IF-99-015/FHWA GEC 004 GROUND ANCHORS AND ANCHORED SYSTEMS, JUNE 1999

FOR PROPRIETARY WALL SYSTEMS THAT HAVE BEEN APPROVED AS SHOWN IN QPL 38, THE WALL DESIGNER SHALL BE RESPONSIBLE FOR PROVIDING WALL DESIGNS INCORPORATING MATERIALS AND COMPONENTS (I.E. REINFORCEMENT CONNECTION DEVICES, SPECIFIC MANUFACTURER AND PROPERTIES OF GEOGRID) AS WAS ORIGINALLY SUBMITTED AND APPROVED BY TDOT. IF A MATERIAL AND/OR COMPONENT OF THE WALL SYSTEM HAVE BEEN MODIFIED FROM THE ORIGINALLY APPROVED SYSTEM, A WALL DESIGN AND SET OF PLANS AND CALCULATIONS FOR THIS WALL SYSTEM CANNOT BE SUBMITTED FOR REVIEW AND APPROVAL UNTIL THE WALL SYSTEM DESIGNER WHO ORIGINALLY SUBMITTED THE WALL SYSTEM FOR APPROVAL BY TDOT SUBMITS A REQUEST FOR RE-APPROVAL UTILIZING THE MODIFIED ELEMENTS OF THE WALL. THIS SUBMITTAL DOES NOT GUARANTEE APPROVAL OF THE MODIFIED SYSTEM. IF THIS RE-APPROVAL PROCESS DOES NOT MEET THE CONTRACTOR'S SCHEDULE OR IF THE MODIFIED SYSTEM IS NOT APPROVED, THE CONTRACTOR/WALL DESIGNER SHALL PROVIDE A WALL DESIGN FOR ONE OF THE APPROVED SYSTEMS AT NO CHANGE IN CONTRACT PRICE FOR THE RETAINING WALL AND NO CHANGE IN PROJECT SCHEDULE REQUIREMENTS WILL BE ALLOWED.

THE WALL DESIGNER SHALL PROVIDE RETAINING WALL PLANS, DETAILS AND CALCULATIONS AS REQUIRED BY SPECIAL PROVISION 624 AND AS REQUIRED HEREIN.

- THE WALL DESIGNER SHALL UTILIZE THE GEOTECHNICAL PARAMETERS AND RESISTANCE FACTORS AS PROVIDED FOR EACH PROJECT RETAINING WALL ON THE "RETAINING WALL DETAIL" SHEET(S) TO PREPARE AND SUBMIT DESIGN CALCULATIONS. LOAD FACTORS AND OTHER PERTINENT DESIGN REQUIREMENTS PROVIDED IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020 AND INTERIMS SHALL BE USED FOR NON-MSE WALLS
- CALCULATIONS FOR BOTH INTERNAL AND EXTERNAL STABILITY (SLIDING, ECCENTRICITY, AND BEARING CAPACITY-GLOBAL STABILITY AND SETTLEMENT BEING THE EXCEPTIONS) SHALL BE PROVIDED FOR EACH CRITICAL WALL SECTION WHICH DEMONSTRATES THE REQUIRED CAPACITY TO DEMAND RATIO OF 1.0 IS MET UTILIZING THE DESIGN PARAMETERS PROVIDED.
- UNLESS OTHERWISE STATED, THE WALL DESIGNER CAN ASSUME THAT MINIMUM GLOBAL STABILITY AND SETTLEMENT CRITERIA IS ACHIEVED WITH A WALL DESIGN MEETING OTHER MINIMUM EXTERNAL STABILITY REQUIREMENTS AND ASSUMING WALL FOUNDATION BEARING IMPROVEMENTS ARE MET. WHILE THE WALL DESIGNER'S DESIGN MUST DEMONSTRATE COMPLIANCE WITH EXTERNAL STABILITY REQUIREMENTS AS DISCUSSED ABOVE, THE WALL DESIGNER PROVIDES CERTIFICATION (BY SIGNING AND STAMPING BY PROFESSIONAL ENGINEER REGISTERED IN STATE OF TENNESSEE) OF THE WALLS, PLANS, AND CALCULATIONS "FOR INTERNAL STABILITY ONLY".
- LOAD COMBINATIONS STRENGTH I, EXTREME EVENT I, AND EXTREME EVENT II SHALL BE EVALUATED AS GIVEN IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020 AND INTERIMS.

NOTE REGARDING CONSTRUCTION SLOPES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE EXCAVATION IN ACCORDANCE WITH OSHA AND OTHER APPLICABLE STATE AND LOCAL REGULATIONS REGARDING CONSTRUCTION SLOPES AND TRENCHES. IN ADDITION TO FOLLOWING APPLICABLE REGULATORY REQUIREMENTS, AS A MINIMUM REQUIREMENT, ALL TEMPORARY CONSTRUCTION SLOPES SHALL BE PLACED AT A MAXIMUM OF A 1:1 SLOPE IN SOIL AND SHALL NOT BE LEFT OPEN WITHOUT SHORING FOR ANY LONGER THAN ABSOLUTELY NECESSARY. THE CONTRACTOR BUILDING THE WALL SHALL ENSURE THAT THESE TEMPORARY BACK SLOPES ARE NOT AND DO NOT BECOME UNSTABLE. IF SLOPE IS UNSTABLE, BECOMES UNSTABLE, IS CUT STEEPER THAN A 1:1 SLOPE OR IS UNACCEPTABLE FOR ANOTHER REASON, THEN TEMPORARY SHORING SHALL BE USED. ANY UNUSUAL SOIL CONDITIONS OTHER THAN THOSE ASSUMED SHOULD BE REPORTED TO THE PROJECT ENGINEER.

OTHER DESIGN REQUIREMENTS

WALL FASCIA REQUIREMENT IS CONCRETE BROOM FINISH.

ALL EXPOSED SURFACES OF THE RETAINING WALL SHALL BE STAINED SO THAT THEY APPEAR UNIFORM IN COLOR. THE COLOR SHALL BE MOUNTAIN GRAY, FEDERAL SPECIFICATION NO. 36440, FEDERAL COLOR STANDARD 595B. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR THE RETAINING WALL.

FOR SOLDIER PILE ALTERNATIVE, THE LATERAL DEFLECTION AT THE TOP OF THE WALL SHALL BE LIMITED TO 1/8" PER FOOT OF HEIGHT.

ALL WALL ELEMENTS SHALL BE WITHIN TDOT ROW.

ALL CONSTRUCTION MUST STAY WITHIN TDOT ROW, SLOPE EASEMENT, AND CONSTRUCTION EASEMENT.

IF A STEEPER THAN 1:1 BACKSLOPE IS REQUIRED BEHIND RETAINING WALL OR TEMPORARY SHORING, THE EFFECTIVE FRICTION ANGLE FOR SELECT BACKFILL WILL NOT BE ALLOWABLE FOR DESIGN AND THE EFFECTIVE FRICTION ANGLE FOR UNCLASSIFIED SITE OR BORROW SITE SHALL BE REQUIRED.

THE CONTRACTOR SHALL COORDINATE AND PERFORM ALL UTILITY RELOCATION SO THAT IT DOES NOT INTERFERE WITH THE RETAINING WALL INSTALLATION.

AASHTO LRFD SECTION 3.10.3.1 - SITE CLASS DEFINITION

SITE CLASS D

GES No. 3725519

VERSION 01/29/2024

TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION	SOLDIER PILE AND LAGGING WALLS (UNANCHORED)	NOTE *
DESIGN LIFE	75 YEARS	
SEISMIC ACCELERATION COEFFICIENTS		
As	0.199	
S_{DS}	0.389	
S_{D1}	0.155	
EFFECTIVE (DRAINED) FRICTION ANGLE		
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL	SEE TABLE 4A & 4B	
RETAINED BACKFILL-SELECT BACKFILL	SEE TABLE 4A & 4B	
UNIT WEIGHT		
UNCLASSIFIED SITE OR BORROW SOIL	SEE TABLE 4A & 4B	
SELECT BACKFILL MATERIAL	SEE TABLE 4A & 4B	
RESISTANCE FACTORS		
FLEXURAL CAPACITY OF VERTICAL ELEMENTS	0.90	
PASSIVE RESISTANCE OF VERTICAL ELEMENTS	0.75	
RESISTANCE FACTORS OF A SINGLE DRIVEN PILE		
STATIC ANALYSIS METHODS		
SIDE BEARING RESISTANCE AND END BEARING: CLAY AND MIXED SOILS		
α -METHOD (TOMLINSON, 1987; SKEMPTON, 1951)	0.35	
β -METHOD (ESRIG & KIRBY, 1997; SKEMPTON 1951)	0.25	
λ -METHOD (VIJAYVERGIYA & FOCHT, 1972; SKEMPTON 1951)	0.40	
SIDE BEARING RESISTANCE AND END BEARING: SAND		
NORDLUND/THURMAND METHOD (HANNIGAN ET AL, 2005	0.45	
SPT-METHOD (MEYERHOF)	0.30	
CPT-METHOD (SCHMERTMANN)	0.50	
END BEARING IN ROCK (CANADIAN GEOTECH SOCIETY)	0.45	
LATERAL GEOTECHNICAL RESISTANCE OF A SINGLE PILE		
ALL SOILS AND ROCK	1.0	
RESISTANCE FACTORS OF A SINGLE DRILLED PILE/SHAFT		
SIDE RESISTANCE IN CLAY		
α -METHOD (BROWN ET AL., 2010)	0.45	
TIP RESISTANCE IN CLAY		
TOTAL STRESS (BROWN ET AL., 2010)	0.40	
SIDE RESISTANCE IN SAND		
β -METHOD (BROWN ET AL., 2010)	0.55	
TIP RESISTANCE IN SAND		
BROWN ET AL. (2010)	0.50	
SIDE RESISTANCE IN COHESIVE INTERMEDIATE GEOMATERIALS (IGMs)		
BROWN ET AL. (2010)	0.60	
TIP RESISTANCE IN COHESIVE INTERMEDIATE GEOMATERIALS (IGMs)		
BROWN ET AL, (2010)	0.55	
SIDE RESISTANCE IN ROCK		
KULHAWY ET AL. (2005), BROWN ET AL. (2010)	0.55	
CARTER AND KULHAWY (1988)	0.50	
TIP RESISTANCE IN ROCK		
CANADIAN GEOTECH. SOCIETY (1985), BROWN ET AL. (2010)	0.50	
LATERAL GEOTECHNICAL RESISTANCE OF A SINGLE PILE/SHAFT		
ALL MATERIALS	1.0	

OTHER DESIGN REQUIREMENTS

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PRESERVING THE INTEGRITY AND FUNCTION OF THE CULVERT BELOW THE WALL DURING CONSTRUCTION AND THROUGHOUT THE DESIGN LIFE OF THE WALL.

THE RETAINING WALL SHALL BE CONSTRUCTED USING "TOP-DOWN" CONSTRUCTION METHODS ONLY.

WHERE A PROPOSED RETAINING WALL MEETS AN EXISTING RETAINING WALL, BRIDGE ABUTMENT, CATCH BASIN, OR ANOTHER STRUCTURE, THE INTERFACE SHOULD BE ONE VERTICAL JOINT. THIS INTERFACE SHOULD BE DESIGNED TO PREVENT LOSS OF FINES AND ALLOW FOR DIFFERENTIAL SETTLEMENT. DETAILS OF THIS JOINT SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS AND COSTS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE WALL.

ASSUME PILE TIPS AND/OR PRE DRILLING THROUGH IN-PLACE FILL CONSISTING OF SHALE AND BOULDERS REQUIRED FOR INSTALLATION OF SOLDIER PILES.

THE WALL SHALL INCORPORATE DRAINAGE FEATURES AS NOTED ON CULVERT SHEETS. WALL GUTTER SHALL BE DESIGNED TO CARRY SURFACE RUNOFF TO THESE FEATURES. SEQUENCING FOR INSTALLATION OF CATCH BASIN BEHIND THE WALL SHALL BE ACCOUNTED FOR. NO CONSTRUCTION EXCAVATION BEHIND THE WALL WILL BE PERMITTED, REGARDLESS OF AVAILABLE ROW, SLOPE EASEMENT OR CONSTRUCTION EASEMENT. IF BACKFILL IS UTILIZED AS A PART OF CATCH BASIN INSTALLATION, THE CONTRACTOR/DESIGNER MUST DETERMINE BACKFILL UNIT WEIGHT DEPENDING ON ACTUAL BACKFILL MATERIAL USED. DETAILS OF THIS SEQUENCING SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS AND COSTS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE WALL.

A MAXIMUM FRICTION ANGLE OF 34 DEGREES CAN BE ASSUMED FOR MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1. MATERIALS OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. A HIGHER FRICTION ANGLE THAN 34 DEGREES CAN BE UTILIZED IF THE CONTRACTOR SUBMITS INDEPENDENT TESTING AND IT IS VERIFIED BY TDOT. HOWEVER, IN NO CASE SHALL THE FRICTION ANGLE FOR ANALYSIS EXCEED 40-DEGREES. INDEPENDENT TESTING MUST BE VERIFIED ANNUALLY.

TABLE 2 - DESIGN PARAMETERS FOR PILE-SUPPORTED WALLS

STATION LIMITS	ELEVATION INTERVAL (FT-MSL)	MATERIAL	SHEAR STRENGTH PARAMETERS				TOTAL UNIT WEIGHT (PCF)
			SEISMIC AND SHORT TERM CONDITIONS		LONG TERM CONDITIONS		
			ϕ (DEGREES)	UNDRAINED SHEAR STRENGTH (PSF)	ϕ'(DEGREES)	DRAINED SHEAR STRENGTH (PSF)	
118+03 TO 120+25	1130 TO 1120	FILL: SANDS, GRAVELS, AND CLAYS (CL, SC, GC)	0	1500	30	0	125
118+03 TO 118+50	1120 TO 1110	FILL: SILTY CLAYS AND SANDS (SM, CL-ML)	0	1200	32	0	125
118+50 TO 123+00	1125 TO 1110	FILL: SANDS, GRAVELS, AND CLAYS (CL, SC, GC)	0	1500	30	0	125
118+03 TO 119+50	1110 TO 1100	FILL: SILTY CLAYS AND SANDS (SM, CL-ML)	0	1200	32	0	125
119+50 TO 123+00	1110 TO 1100	FILL: SANDS, GRAVELS, AND CLAYS (CL, SC, GC)	0	1500	30	0	125
118+03 TO 120+25	1100 TO 1093	RESIDUAL CLAYEY SAND (SC)	0	2500	33	0	125
120+25 TO 123+00	1110 TO 1093	FILL: SANDS, GRAVELS, AND CLAYS (CL, SC, GC)	0	1500	30	0	125
118+03 TO 120+25	1093	WEATHERED ROCK AND SHALE	N/A	N/A	38	0	135
120+25 TO 123+00	1093 TO 1088	ALLUVIAL CLAYS (CL)	0	1000	28	0	125
120+25 TO 123+00	1088 TO 1085	RESIDUAL CLAYEY SAND (SC)	0	2500	33	0	125
123+00 TO 127+00	1107 TO 1100	FILL: SANDS, GRAVELS, AND CLAYS (CL, SC, GC)	0	1500	30	0	125
123+00 TO 127+00	1100 TO 1085	ALLUVIAL CLAYS (CL)	0	1000	28	0	125
123+00 TO 127+00	1085	WEATHERED ROCK AND SHALE	N/A	N/A	38	0	135

TABLE 3-RESISTANCE PARAMETERS FOR SOLDIER PILE & LAGGING WALL (UNANCHORED WALL)

STATION LIMITS	ELEVATION INTERVAL	MATERIAL	MINIMUM PILE EMBEDMENT* (FEET)
118+03.82 TO 123+00.00	TOP OF WALL TO TOP OF GROUND	MEDIUM DENSE SAND AND STIFF CLAY	14 FEET
123+00.00 TO 126+84.42	TOP OF GROUND TO ELEV. 945	MEDIUM DENSE SAND AND STIFF CLAY	8 FEET

*EMBEDMENT BELOW DESIGN HEIGHT, DESIGN HEIGHT = PROPOSED FINSIHED GRADE (TOP) - 2FT BELOW PROPOSED FINSIHED GRADE (BENCH). MINIMUM DESIGN HEIGHT BASED ONLY ON GLOBAL STABILITY. DO NOT USE MINIMUM EMBEDMENT TO ENSURE GLOBAL STABILITY TO ESTIMATE QUANTITIES. EMBEDMENT WILL BE DEPENDENT ON PILE SIZE AND SPACING SELECTED IN FINAL DESIGN.

OTHER DESIGN REQUIREMENTS

SELECT BACKFILL UNIT WEIGHT TO BE DETERMINED BY CONTRACTOR/DESIGNER DEPENDING ON ACTUAL BACKFILL MATERIAL USED. SELECT BACKFILL IS DEFINED AS MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, MATERIALS OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. IN ORDER TO UTILIZE ϕ FOR SELECT BACKFILL DESIGN, SELECT BACKFILL MUST BE PLACED FOR A MINIMUM ZONE FORMED BY A 1:1 SLOPE FROM 2 FEET BEHIND THE BOTTOM OF BACK OF WALL FOOTING OR REINFORCED SOIL ZONE FOR MSE WALLS UP TO FINISHED GRADE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOLDIER PILE RETAINING WALL GEOTECHNICAL DESIGN NOTES & REQUIREMENTS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	R-3

ACCEPTABLE WALL TYPES

SOLDIER PILE AND LAGGING WALL (UNANCHORED)
(SEE SHEET R1A)

MECHANICALLY STABILIZED EARTH (MSE) WALL - SEGMENTAL PRECAST
MECHANICALLY STABILIZED EARTH (MSE) WALL - MODULAR BLOCK
(SEE SHEET R1B)

THE RETAINING WALL(S) SHALL BE ONE OF THE WALL TYPE(S) AS LISTED ABOVE OR ON FORTHCOMING "RETAINING WALL DETAIL-GEOMETRIC LAYOUT" SHEET(S). ANY PROPRIETARY RETAINING WALL SYSTEM SHALL BE LISTED AS PRE-APPROVED IN QPL 38.

RETAINING WALL DESIGN NOTES

UNLESS SPECIFICALLY STATED OTHERWISE IN THE CONTRACT PLANS, THE BIDDING FOR, THE DESIGN OF AND THE CONSTRUCTION OF RETAINING WALLS SHOWN IN THE PLANS SHALL BE GOVERNED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. THIS SPECIAL PROVISION SHALL BE CONSIDERED AS ONE OF THOSE DOCUMENTS WHICH THE BIDDER/CONTRACTOR HAS EXAMINED AND MADE HIMSELF FAMILIAR WITH AS DESCRIBED IN SECTION 102.04 - EXAMINATION OF THE SITE, THE WORK, THE PLANS, AND THE SPECIFICATIONS IN THE TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

EXCAVATION FOR THE WALL AND/OR ITS FOOTING SHALL NOT BE ACCOMPLISHED UNTIL THE CONTRACTOR HAS SUBMITTED WALL DESIGNS AND CALCULATIONS AND HAS BEEN ISSUED AN APPROVED SET OF WALL PLANS AND HAS LABOR AND MATERIAL RESOURCES AVAILABLE TO BEGIN AND CONTINUE WALL CONSTRUCTION IMMEDIATELY AFTER EXCAVATION.

THIS WALL SHALL BE DESIGNED IN ACCORDANCE WITH LRFD DESIGN PROCEDURES AND REQUIREMENTS AS DESCRIBED IN:

- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020
- PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS

FOR PROPRIETARY WALL SYSTEMS THAT HAVE BEEN APPROVED AS SHOWN IN QPL 38, THE WALL DESIGNER SHALL BE RESPONSIBLE FOR PROVIDING WALL DESIGNS INCORPORATING MATERIALS AND COMPONENTS (I.E. REINFORCEMENT CONNECTION DEVICES, SPECIFIC MANUFACTURER AND PROPERTIES OF GEOGRID) AS WAS ORIGINALLY SUBMITTED AND APPROVED BY TDOT. IF A MATERIAL AND/OR COMPONENT OF THE WALL SYSTEM HAVE BEEN MODIFIED FROM THE ORIGINALLY APPROVED SYSTEM, A WALL DESIGN AND SET OF PLANS AND CALCULATIONS FOR THIS WALL SYSTEM CANNOT BE SUBMITTED FOR REVIEW AND APPROVAL UNTIL THE WALL SYSTEM DESIGNER WHO ORIGINALLY SUBMITTED THE WALL SYSTEM FOR APPROVAL BY TDOT SUBMITS A REQUEST FOR RE-APPROVAL UTILIZING THE MODIFIED ELEMENTS OF THE WALL. THIS SUBMITTAL DOES NOT GUARANTEE APPROVAL OF THE MODIFIED SYSTEM. IF THIS RE-APPROVAL PROCESS DOES NOT MEET THE CONTRACTOR'S SCHEDULE OR IF THE MODIFIED SYSTEM IS NOT APPROVED, THE CONTRACTOR/WALL DESIGNER SHALL PROVIDE A WALL DESIGN FOR ONE OF THE APPROVED SYSTEMS AT NO CHANGE IN CONTRACT PRICE FOR THE RETAINING WALL AND NO CHANGE IN PROJECT SCHEDULE REQUIREMENTS WILL BE ALLOWED.

THE WALL DESIGNER SHALL PROVIDE RETAINING WALL PLANS, DETAILS AND CALCULATIONS AS REQUIRED BY SPECIAL PROVISION 624 AND AS REQUIRED HEREIN.

- THE WALL DESIGNER SHALL UTILIZE THE GEOTECHNICAL PARAMETERS AND RESISTANCE FACTORS AS PROVIDED FOR EACH PROJECT RETAINING WALL ON THE "RETAINING WALL DETAIL" SHEET(S) TO PREPARE AND SUBMIT DESIGN CALCULATIONS. LOAD FACTORS AND OTHER PERTINENT DESIGN REQUIREMENTS PROVIDED IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020 AND INTERIMS SHALL BE USED FOR NON-MSE WALLS AND PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS.

- CALCULATIONS FOR BOTH INTERNAL AND EXTERNAL STABILITY (SLIDING, ECCENTRICITY, AND BEARING CAPACITY-GLOBAL STABILITY AND SETTLEMENT BEING THE EXCEPTIONS) SHALL BE PROVIDED FOR EACH CRITICAL WALL SECTION WHICH DEMONSTRATES THE REQUIRED CAPACITY TO DEMAND RATIO OF 1.0 IS MET UTILIZING THE DESIGN PARAMETERS PROVIDED. FOR MSE WALLS, THE WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL REQUIREMENTS. THE WALL DESIGNER/CONTRACTOR PLANS MUST INCLUDE ANY FOUNDATION IMPROVEMENTS AS REQUIRED HEREIN ON THE WALL DESIGNER/CONTRACTOR'S WALL ELEVATION VIEWS AND ANY CROSS-SECTIONAL DETAIL DRAWINGS.

- UNLESS OTHERWISE STATED, THE WALL DESIGNER CAN ASSUME THAT MINIMUM GLOBAL STABILITY AND SETTLEMENT CRITERIA IS ACHIEVED WITH A WALL DESIGN MEETING OTHER MINIMUM EXTERNAL STABILITY REQUIREMENTS AND ASSUMING WALL FOUNDATION BEARING IMPROVEMENTS ARE MET. WHILE THE WALL DESIGNER'S DESIGN MUST DEMONSTRATE COMPLIANCE WITH EXTERNAL STABILITY REQUIREMENTS AS DISCUSSED ABOVE, THE WALL DESIGNER PROVIDES CERTIFICATION (BY SIGNING AND STAMPING BY PROFESSIONAL ENGINEER REGISTERED IN STATE OF TENNESSEE) OF THE WALLS, PLANS, AND CALCULATIONS "FOR INTERNAL STABILITY ONLY".

- LOAD COMBINATIONS STRENGTH I, EXTREME EVENT I, AND EXTREME EVENT II SHALL BE EVALUATED AS GIVEN IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020 AND INTERIMS.
  FOR MSE WALLS, LOAD COMBINATIONS STRENGTH I, EXTREME EVENT I, AND EXTREME EVENT II AS GIVEN IN TABLE 4-1 OF PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS SHALL BE EVALUATED.

NOTE REGARDING CONSTRUCTION SLOPES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE EXCAVATION IN ACCORDANCE WITH OSHA AND OTHER APPLICABLE STATE AND LOCAL REGULATIONS REGARDING CONSTRUCTION SLOPES AND TRENCHES. IN ADDITION TO FOLLOWING APPLICABLE REGULATORY REQUIREMENTS, AS A MINIMUM REQUIREMENT, ALL TEMPORARY CONSTRUCTION SLOPES SHALL BE PLACED AT A MAXIMUM OF A 1:1 SLOPE IN SOIL AND SHALL NOT BE LEFT OPEN WITHOUT SHORING FOR ANY LONGER THAN ABSOLUTELY NECESSARY. THE CONTRACTOR BUILDING THE WALL SHALL ENSURE THAT THESE TEMPORARY BACK SLOPES ARE NOT AND DO NOT BECOME UNSTABLE. IF SLOPE IS UNSTABLE, BECOMES UNSTABLE, IS CUT STEEPER THAN A 1:1 SLOPE OR IS UNACCEPTABLE FOR ANOTHER REASON, THEN TEMPORARY SHORING SHALL BE USED. ANY UNUSUAL SOIL CONDITIONS OTHER THAN THOSE ASSUMED SHOULD BE REPORTED TO THE PROJECT ENGINEER.

AASHTO LRFD SECTION 3.10.3.1 - SITE CLASS DEFINITION

SITE CLASS D

GES No. 3725519

VERSION 01/29/2024

TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION	MSE WALLS	NOTE
DESIGN LIFE	75 YEARS	
SEISMIC ACCELERATION COEFFICIENTS		
As	0.199	
S_{DS}	0.389	
S_{D1}	0.155	
EFFECTIVE (DRAINED) FRICTION ANGLE		
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL	30 °	
RETAINED BACKFILL-SELECT BACKFILL	34 ° TO MAX 40 °	1
REINFORCED BACKFILL	34 ° TO MAX 40 °	1
UNIT WEIGHT		
UNCLASSIFIED SITE OR BORROW SOIL	125 POUNDS PER CUBIC FOOT	
SELECT BACKFILL MATERIAL	VARIES	1A
DESIGN BASIS		
COEFFICIENT OF SLIDING FRICTION	SEE TABLE 2	3
NOMINAL BEARING RESISTANCE	SEE TABLE 2	3
MINIMUM LENGTH OF SOIL REINFORCEMENT, L	GREATER OF 10-FT OR 0.7H OR AS SPECIFIED ON THE PLANS	2,2A,2B
LIMITING ECCENTRICITY	L/4 (SOIL), 3L/8 (ROCK)	
RESISTANCE FACTORS		
SLIDING-STATIC	1.0	4
SLIDING-COMBINED STATIC+EARTHQUAKE	1.0	4
BEARING-STATIC	0.65	5
BEARING-COMBINED STATIC+EARTHQUAKE	0.9	5
PULLOUT RESISTANCE OF METALLIC REINFORCEMENT		
STATIC -STEEL STRIP REINFORCEMENTS -STEEL GRID REINFORCEMENTS	 0.90 0.90	 6
COMBINED STATIC/EARTHQUAKE -STEEL STRIP REINFORCEMENTS -STEEL GRID REINFORCEMENTS	 1.20 1.20	 6
PULLOUT RESISTANCE OF GEOSYNTHETIC REINFORCEMENT		
STATIC -GEOTEXTILES AND GEOGRIDS -GEOSTRIP REINFORCEMENTS	 0.70 0.70	 6
COMBINED STATIC/EARTHQUAKE -GEOTEXTILES AND GEOGRIDS -GEOSTRIP REINFORCEMENTS	 1.00 1.00	 6
TENSILE RESISTANCE OF METALLIC REINFORCEMENTS AND CONNECTORS		
STATIC -STRIP REINFORCEMENT -GRID REINFORCEMENT	 0.75 0.65	 7 7,8
COMBINED STATIC/EARTHQUAKE -STRIP REINFORCEMENT -GRID REINFORCEMENT	 1.00 0.85	 7 7,8
TENSILE RESISTANCE OF GEOSYNTHETIC REINFORCEMENTS AND CONNECTORS		
STATIC -GEOTEXTILE AND GEOGRID REINFORCEMENTS -GEOSTRIP REINFORCEMENTS	 0.80 0.55	
COMBINED STATIC/EARTHQUAKE -GEOTEXTILE AND GEOGRID REINFORCEMENTS -GEOSTRIP REINFORCEMENTS	 1.00 1.00	

NOTES FOR TABLE 1

NO.	NOTE
1	A MAXIMUM FRICTION ANGLE OF 34 DEGREES CAN BE ASSUMED FOR MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, MATERIALS OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. A HIGHER FRICTION ANGLE THAN 34 DEGREES CAN BE UTILIZED IF THE CONTRACTOR SUBMITS INDEPENDENT TESTING AND IT IS VERIFIED BY TDOT. HOWEVER, IN NO CASE SHALL THE FRICTION ANGLE FOR ANALYSIS EXCEED 40-DEGREES. INDEPENDENT TESTING MUST BE VERIFIED ANNUALLY.
1A	SELECT BACKFILL UNIT WEIGHT TO BE DETERMINED BY CONTRACTOR/DESIGNER DEPENDING ON ACTUAL BACKFILL MATERIAL USED. SELECT BACKFILL IS DEFINED AS MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1. MATERIALS OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. IN ORDER TO UTILIZE Φ FOR SELECT BACKFILL DESIGN, SELECT BACKFILL MUST BE PLACED FOR A MINIMUM ZONE FORMED BY A 1:1 SLOPE FROM 2 FEET BEHIND THE BOTTOM OF BACK OF WALL FOOTING OR REINFORCED SOIL ZONE FOR MSE WALLS UP TO FINISHED GRADE.
2	H IS DESIGN HEIGHT OF THE WALL AND IS DEFINED AS THE DIFFERENCE IN ELEVATION BETWEEN THE FINISHED GRADE AT THE TOP OF THE WALL AND THE TOP OF LEVELING PAD OR BOTTOM OF FOOTING FOR NON-MSE WALLS. THE TOP OF THE LEVELING PAD SHALL ALWAYS BE BELOW THE MINIMUM EMBEDMENT REFERENCE LINE AS INDICATED ON THE PLANS FOR THAT LOCATION. THE LENGTH OF THE SOIL REINFORCEMENT, L, IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT. IN CASE OF GRID TYPE REINFORCEMENTS THE LENGTH OF THE SOIL REINFORCEMENT IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT TO THE LAST FULL TRANSVERSE MEMBER. FOR MODULAR BLOCKFACING UNITS, THE TOTAL LENGTH OF THE REINFORCEMENT, Br AS MEASURED FROM THE FRONT FACE OF THE WALL IS THE LENGTH L AS DEFINED ABOVE PLUS THE WIDTH OF THE MODULAR BLOCK UNIT (THE HORIZONTAL DIMENSION OF THE BLOCK UNIT MEASURED PERPENDICULAR TO THE WALL FACE).
2A	WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL STABILITY REQUIREMENTS. MINIMUM REINFORCEMENT LENGTHS MAY BE REQUIRED FOR GLOBAL STABILITY. THIS REQUIREMENT WILL BE SHOWN IN THE PLANS.
2B	ALL DESIGN SECTION REINFORCEMENT LENGTHS SHALL BE EQUAL.
3	THESE VALUES WILL BE PROVIDED IN TABLES 2 AND/OR 3
4	PASSIVE RESISTANCE SHALL NOT BE CONSIDERED IN EVALUATION OF SLIDING RESISTANCE. NO SHEAR KEYS NOR DOWELS WILL BE PERMITTED. FOR CAST-IN-PLACE CONCRETE CANTILEVER WALLS, THE FOOTING SHALL BE UNIFORM IN THICKNESS THROUGHOUT THE DESIGN SECTION.
5	FOR ALL LIMIT STATES, THE DESIGN LOADING FOR THE RETAINING WALL SYSTEM SHALL NOT EXCEED THE FACTORED BEARING RESISTANCE, WHICH IS THE PRODUCT OF THE NOMINAL BEARING RESISTANCE SPECIFIED IN TABLES 2 AND/OR 3 AND THE APPROPRIATE RESISTANCE FACTOR.
6	LIVE LOAD DUE TO VEHICULAR TRAFFIC SHALL BE INCLUDED IN THE COMPUTATIONS TO DETERMINE THE MAXIMUM TENSILE FORCES IN REINFORCEMENT LAYERS, BUT SHALL BE NEGLECTED IN THE COMPUTATIONS FOR PULLOUT RESISTANCE.
7	APPLY TO GROSS CROSS-SECTION LESS SACRIFICIAL AREA. FOR SECTIONS WITH HOLES, REDUCE GROSS AREA IN ACCORDANCE WITH ARTICLE 6.8.3 OF AASHTO (2020) AND APPLY TO NET SECTION LESS SACRIFICIAL AREA.
8	APPLIES TO GRID REINFORCEMENTS CONNECTED TO A RIGID FACING ELEMENT, E.G., A CONCRETE PANEL OR BLOCK. FOR GRID REINFORCEMENTS CONNECTED TO A FLEXIBLE FACING MAT OR WHICH ARE CONTINUOUS WITH THE FACING MAT, USE THE RESISTANCE FACTOR FOR STRIP REINFORCEMENTS.

TABLE 2-FOUNDATION PARAMETERS AND REQUIREMENTS FOR MSE WALLS

STATION LIMITS	FOUNDATION (REINFORCED ZONE) BEARING CONDITION REQUIREMENT	NOMINAL BEARING RESISTANCE (psf)	COEFFICIENT OF SLIDING FRICTION
118+03.82 TO 126+84.42	ON SOIL AT MINIMUM EMBEDMENT DEPTH	5,000	0.54

OTHER DESIGN REQUIREMENTS

THE WALL SHALL INCORPORATE DRAINAGE FEATURES AS NOTED ON CULVERT SHEETS. WALL GUTTER SHALL BE DESIGNED TO CARRY SURFACE RUNOFF TO THESE FEATURES. SEQUENCING FOR INSTALLATION OF CATCH BASIN BEHIND THE WALL SHALL BE ACCOUNTED FOR. NO CONSTRUCTION EXCAVATION BEHIND THE WALL WILL BE PERMITTED, REGARDLESS OF AVAILABLE ROW, SLOPE EASEMENT OR CONSTRUCTION EASEMENT. IF BACKFILL IS UTILIZED AS A PART OF CATCH BASIN INSTALLATION, THE CONTRACTOR/DESIGNER MUST DETERMINE BACKFILL UNIT WEIGHT DEPENDING ON ACTUAL BACKFILL MATERIAL USED. DETAILS OF THIS SEQUENCING SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS AND COSTS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE WALL.

WALL FASCIA REQUIREMENT IS CONCRETE BROOM FINISH

ALL EXPOSED SURFACES OF THE RETAINING WALL SHALL BE STAINED SO THAT THEY APPEAR UNIFORM IN COLOR. THE COLOR SHALL BE MOUNTAIN GRAY, FEDERAL SPECIFICATION NO. 36440, FEDERAL COLOR STANDARD 595B. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR THE RETAINING WALL.

ALL WALL ELEMENTS SHALL BE WITHIN TDOT ROW.

ALL CONSTRUCTION MUST STAY WITHIN TDOT ROW, SLOPE EASEMENT, AND CONSTRUCTION EASEMENT.

IF A STEEPER THAN 1:1 BACKSLOPE IS REQUIRED BEHIND RETAINING WALL OR TEMPORARY SHORING, THE EFFECTIVE FRICTION ANGLE FOR SELECT BACKFILL WILL NOT BE ALLOWABLE FOR DESIGN AND THE EFFECTIVE FRICTION ANGLE FOR UNCLASSIFIED SITE OR BORROW SITE SHALL BE REQUIRED.

THE CONTRACTOR SHALL COORDINATE AND PERFORM ALL UTILITY RELOCATION SO THAT IT DOES NOT INTERFERE WITH THE RETAINING WALL INSTALLATION.

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PRESERVING THE INTEGRITY AND FUNCTION OF THE CULVERT BELOW THE WALL DURING CONSTRUCTION AND THROUGHOUT THE DESIGN LIFE OF THE WALL.

WHERE A PROPOSED RETAINING WALL MEETS AN EXISTING RETAINING WALL, BRIDGE ABUTMENT, CATCH BASIN, OR ANOTHER STRUCTURE, THE INTERFACE SHOULD BE ONE VERTICAL JOINT. THIS INTERFACE SHOULD BE DESIGNED TO PREVENT LOSS OF FINES AND ALLOW FOR DIFFERENTIAL SETTLEMENT. DETAILS OF THIS JOINT SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS AND COSTS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE WALL.

FOR MSE WALLS, A MINIMUM HORIZONTAL BENCH 4 FEET WIDE AS MEASURED FROM THE FACE SHALL BE PROVIDED IN FRONT OF WALLS FOUNDED ON SLOPES. THE BENCH MAY BE FORMED OR THE SLOPE CONTINUED ABOVE THAT LEVEL. SEE ARTICLE 11.10.2.2, AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020 AND INTERIMS. ALTERNATIVELY, THE EMBEDMENT DEPTH MAY BE INCREASED TO SATISFY THE REQUIREMENTS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

MSE RETAINING WALL GEOTECHNICAL DESIGN NOTES & REQUIREMENTS

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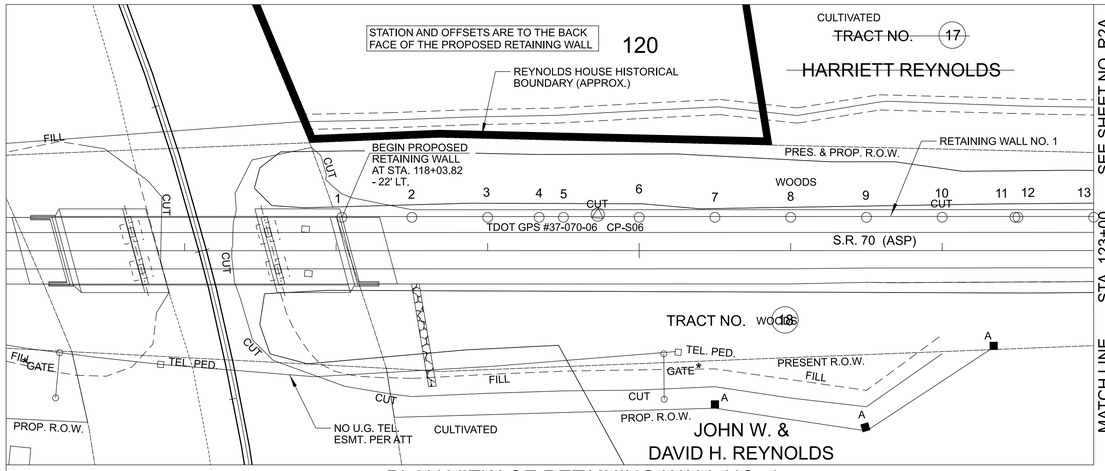
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	R1A
PS&E	2025	BR-STP-70(24)	R-4



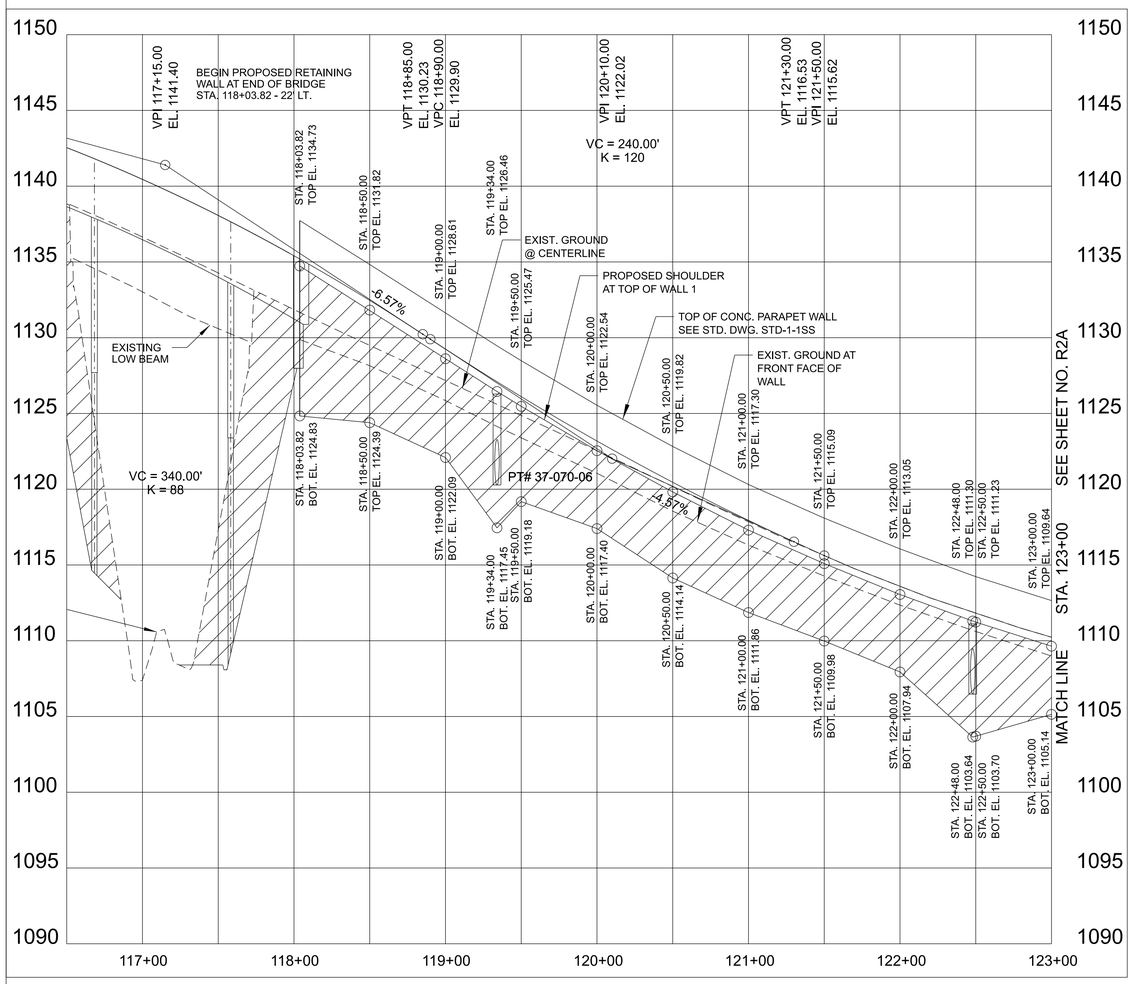
PLAN VIEW OF RETAINING WALL NO. 1

SCALE: 1"=50'

ESTIMATED QUANTITIES

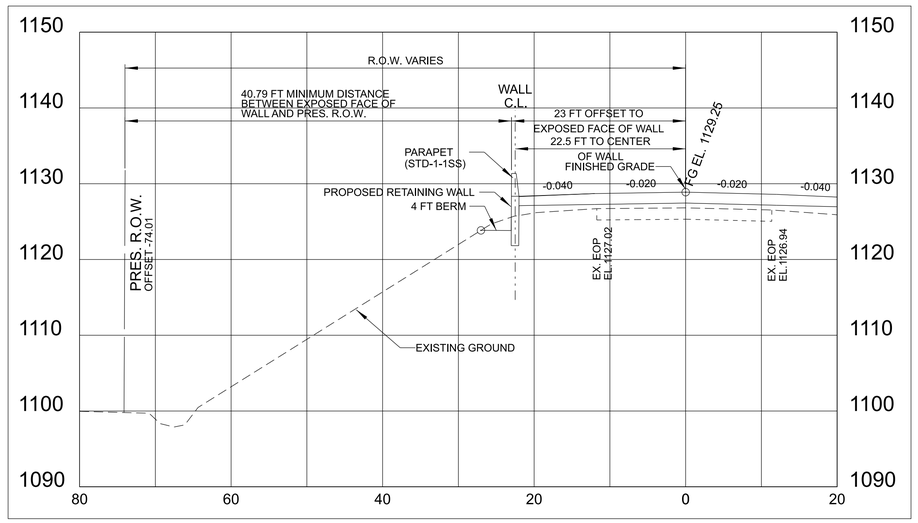
ITEM NO.	604-07.01	620-05.01
DESCRIPTION	RETAINING WALL (WALL NO. 1) SQ. FT.	CONCRETE PARAPET SINGLE SLOPE (STD-1-1SS) L.F.
QUANTITY	5,301	880.60

NOTE:
THE RETAINING WALL ESTIMATED QUANTITY IS BASED ON THE SURFACE AREA BETWEEN THE TOP OF WALL AND 2' BELOW THE APPROXIMATE EXISTING/PROPOSED GROUND LINE. FOR BIDDING PURPOSES, THESE QUANTITIES ARE INCLUDED IN THE SHEET 2 SERIES AND SHEET B-1.



PROFILE VIEW OF RETAINING WALL NO. 1

SCALE: 1"=50' HORIZ.
1"=5' VERT.



SR-70
TYPICAL SECTION STATION 119+00

SCALE: 1"=10' HORIZ. & VERT.

RETAINING WALL NO. 1

NO.	CHAIN	STATION	OFFSET	N	E	TOP ELEVATION	BOTTOM ELEVATION
1	SR-70	118+03.82	22	748245.047	2848672.179	1134.73	1124.83
2	SR-70	118+50	22	748241.062	2848626.165	1131.82	1124.39
3	SR-70	119+00	22	748236.748	2848576.351	1128.61	1122.09
4	SR-70	119+34.00	22	748233.815	2848542.482	1126.46	1117.45
5	SR-70	119+50	22	748232.434	2848526.538	1125.47	1119.18
6	SR-70	120+00	22	748228.121	2848476.724	1122.54	1117.40
7	SR-70	120+50	22	748223.807	2848426.911	1119.82	1114.14
8	SR-70	121+00	22	748219.493	2848377.097	1117.30	1111.86
9	SR-70	121+50	22	748215.179	2848327.284	1115.09	1109.98
10	SR-70	122+00	22	748210.470	2848277.470	1113.05	1107.94
11	SR-70	122+48	22	748206.724	2848229.653	1111.30	1103.64
12	SR-70	122+50	22	748206.551	2848227.656	1111.23	1103.70
13	SR-70	123+00	22	748202.238	2848177.843	1109.64	1105.14

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL NO. 1 GEOMETRIC LAYOUT

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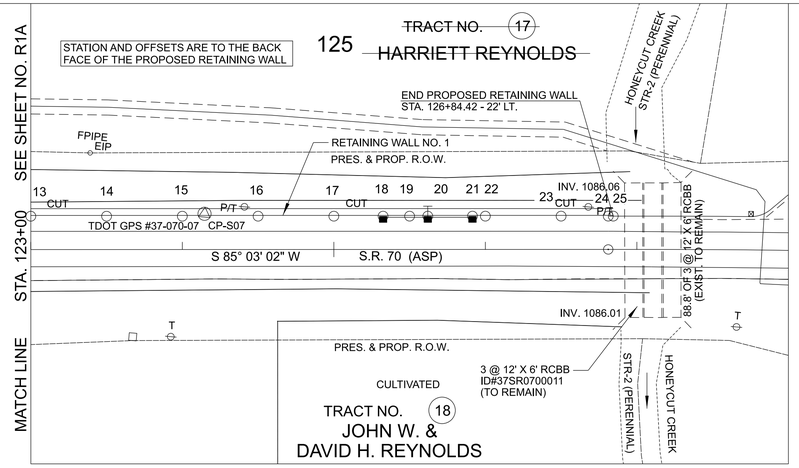
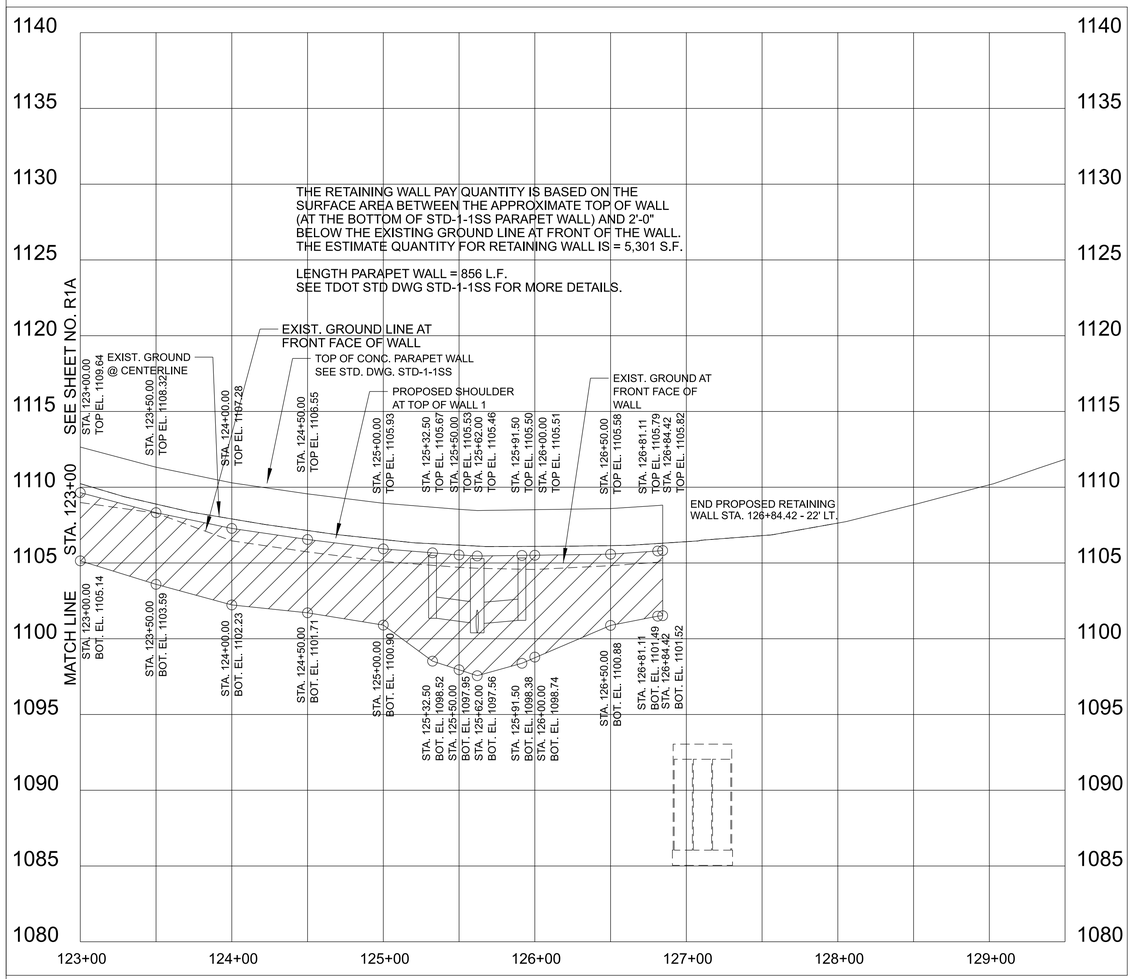
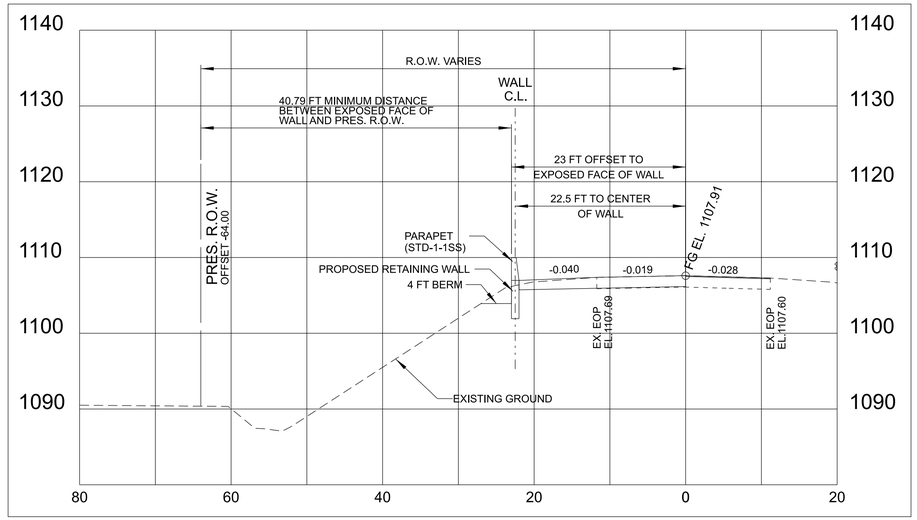
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	R2A
PS&E	2025	BR-STP-70(24)	R-5



PLAN VIEW OF RETAINING WALL NO. 1
SCALE: 1"=50'



PROFILE VIEW OF RETAINING WALL NO. 1
SCALE: 1"=50' HORIZ.
1"=5' VERT.



SR-70
TYPICAL SECTION STATION 124+00
SCALE: 1"=10' HORIZ. & VERT.

RETAINING WALL NO. 1

NO.	CHAIN	STATION	OFFSET	N	E	TOP ELEVATION	BOTTOM ELEVATION
13	SR-70	123+00	22	748202.238	2848177.843	1109.64	1105.14
14	SR-70	123+50	22	748197.924	2848128.035	1108.32	1103.59
15	SR-70	124+00	22	748193.610	2848078.222	1107.28	1102.23
16	SR-70	124+50	22	748189.297	2848028.408	1106.55	1101.71
17	SR-70	125+00	22	748184.983	2847978.595	1105.93	1100.90
18	SR-70	125+32.50	22	748182.179	2847946.220	1105.67	1098.52
19	SR-70	125+50	22	748180.669	2847928.781	1105.53	1097.95
20	SR-70	125+62.00	22	748179.633	2847916.820	1105.46	1097.56
21	SR-70	125+91.50	22	748177.089	2847887.440	1105.50	1098.38
22	SR-70	126+00	22	748176.355	2847878.968	1105.51	1098.74
23	SR-70	126+50	22	748172.041	2847829.154	1105.58	1100.88
24	SR-70	126+81.11	22	748169.357	2847798.164	1105.79	1101.49
25	SR-70	126+84.42	22	748169.072	2847794.866	1105.82	1101.52

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL NO. 1 GEOMETRIC LAYOUT

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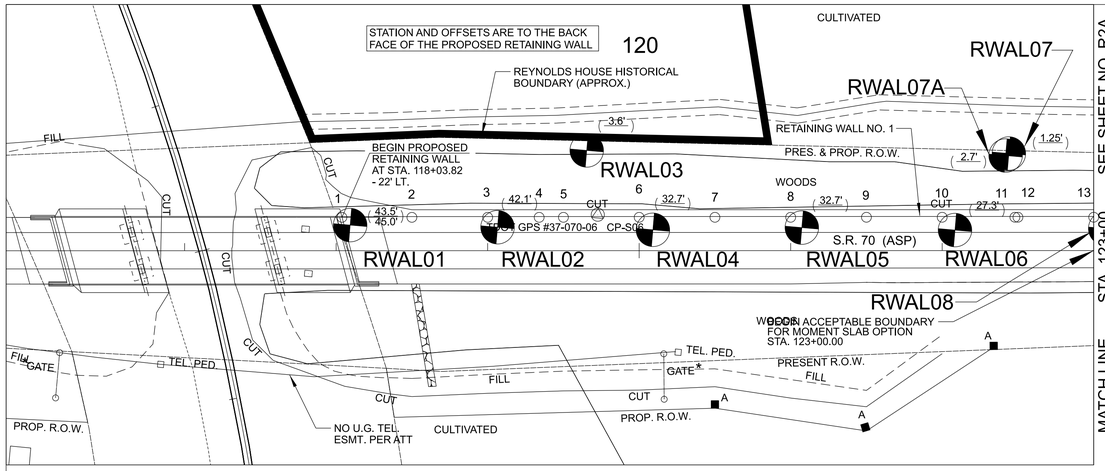


PLAN VIEW OF RETAINING WALL NO. 1
SCALE: 1"=50'

*MOMENT SLAB ACCEPTABLE ALTERNATIVE TO WALL BETWEEN SR-70 STA. 123+00.00 TO SR-70 STA. 126+84.42.

LEGEND

B-1 (XX / XX) — BORING LOCATION, DEPTH TO REFUSAL (ABOVE LINE), BOTTOM OF HOLE (BELOW LINE)

B-1 (XX) — BORING LOCATION WITH DEPTH TO REFUSAL

B-1 (XX) — BORING LOCATION TERMINATION DEPTH (NO REFUSAL)

N

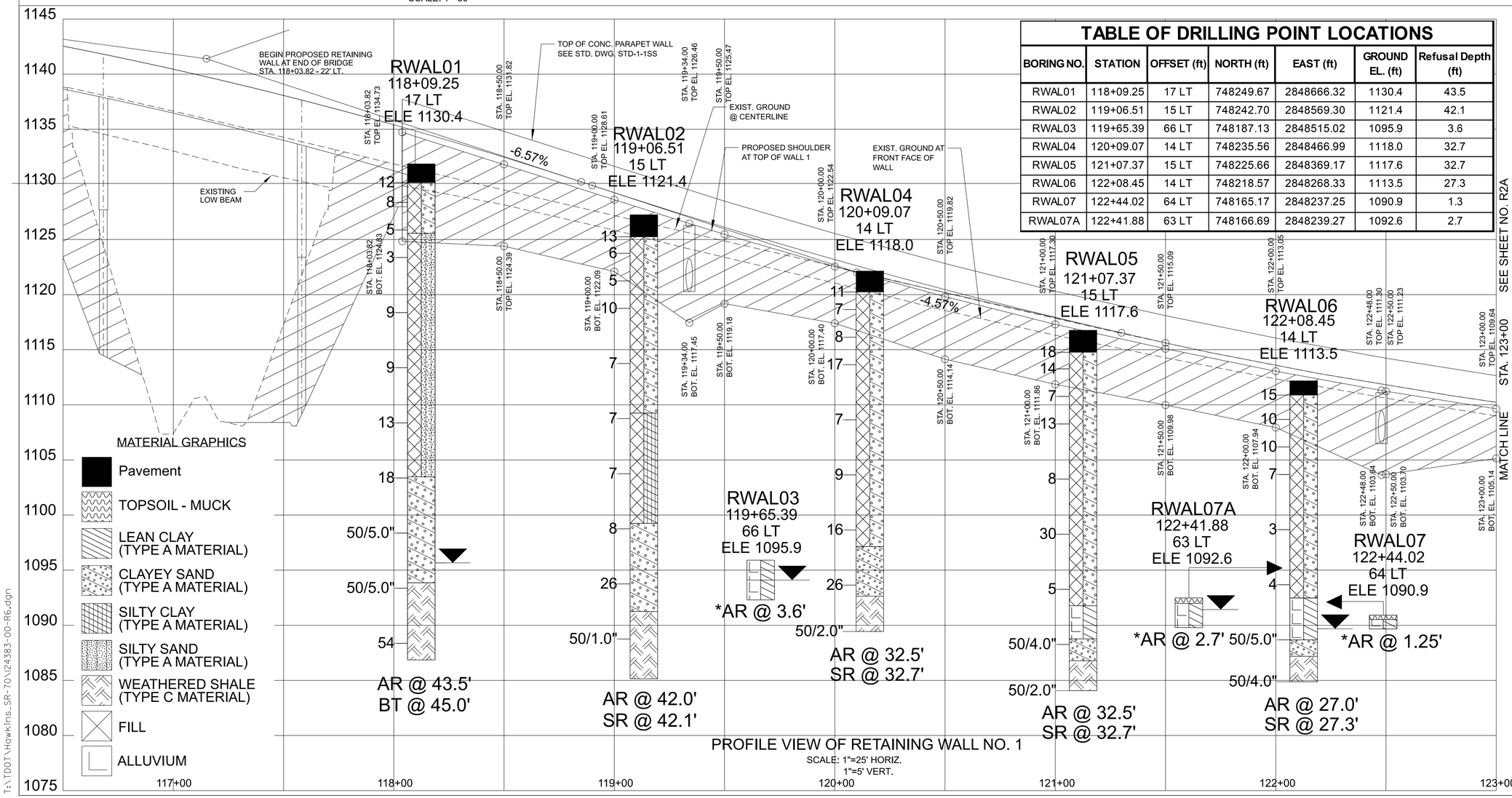
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	R1A
PS&E	2025	BR-STP-70(24)	R-6

FOUNDATION PARAMETERS AND REQUIREMENTS

STATION LIMITS	FOUNDATION BEARING CONDITION REQUIREMENT	NOMINAL BEARING PRESSURE (psf)	COEFFICIENT OF SLIDING FRICTION
SR-70 (LT.) 118+03.82 TO 126+84.42	N/A	5,000	0.54

SOIL TEST RESULTS

BORING NO.	SAMPLE NO.	ALIGNMENT	STATION	OFFSET	DEPTH INTERVAL	USCS CLASS.	AASHTO CLASS.	L.L.	P.L.	P.I.	% BY WEIGHT				% PASSING SIEVE			% MOISTURE
											GRAVEL	SAND	SILT	CLAY	10	40	200	
RWAL01	S-4	SR70	118+09.25	17 LT	8.5-10.0	SM	A-7-6 (2)	42	27	15	35.0	28.2	15.1	21.7	48.7	43.0	36.8	23.4
RWAL02	S-2	SR70	119+06.51	15 LT	3.5-5.0	SC	A-2-4 (0)	31	21	10	24.9	49.1	14.4	11.6	58.9	35.8	26.0	11.8
RWAL02	S-7	SR70	119+06.51	15 LT	23.5-25.0	CL-ML	A-4 (1)	20	15	5	0.4	20.4	50.5	28.7	98.6	95.1	79.2	18.8
RWAL02	S-8	SR70	119+06.51	15 LT	28.5-30.0	SC	A-6 (3)	30	16	14	10.8	44.9	14.6	29.7	85.4	77.9	44.3	15.6
RWAL03	S-3	SR70	119+65.39	66 LT	1.7-2.4	CL	A-6 (8)	29	17	12	0.0	16.0	50.0	34.0	98.1	95.5	84.0	19.8
RWAL05	S-3	SR70	121+07.37	15 LT	6.0-7.5	SC	A-2-6 (0)	30	19	11	42.4	35.7	12.2	9.6	44.3	29.5	21.9	8.5
RWAL05	UD-1	SR70	121+07.37	15 LT	25.5-27.5	CL	A-6 (16)	37	17	20	1.5	14.8	42.4	41.3	96.3	94.3	83.7	21.9
RWAL07A	S-2	SR70	122+41.88	63 LT	1.0-1.5	GC	A-7-6 (3)	47	25	22	51.9	10.9	16.7	20.5	43.1	40.8	37.2	30.9



PROFILE VIEW OF RETAINING WALL NO. 1
SCALE: 1"=25' HORIZ.
1"=5' VERT.

TABLE OF DRILLING POINT LOCATIONS

BORING NO.	STATION	OFFSET (ft)	NORTH (ft)	EAST (ft)	GROUND EL. (ft)	Refusal Depth (ft)
RWAL01	118+09.25	17 LT	748249.67	2848666.32	1130.4	43.5
RWAL02	119+06.51	15 LT	748242.70	2848569.30	1121.4	42.1
RWAL03	119+65.39	66 LT	748187.13	2848515.02	1095.9	3.6
RWAL04	120+09.07	14 LT	748235.56	2848466.99	1118.0	32.7
RWAL05	121+07.37	15 LT	748225.66	2848369.17	1117.6	32.7
RWAL06	122+08.45	14 LT	748218.57	2848268.33	1113.5	27.3
RWAL07	122+44.02	64 LT	748165.17	2848237.25	1090.9	1.3
RWAL07A	122+41.88	63 LT	748166.69	2848239.27	1092.6	2.7

GEOTECHNICAL BORING LEGEND

BT @ 20.0' BORING TERMINATED AT 20.0'
AR @ 20.0' AUGER REFUSAL AT 20.0'
SR @ 20.0' SPOON REFUSAL AT 20.0'
*DENOTES HAND AUGER

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL NO. 1 SOIL PROFILES AND DETAILS

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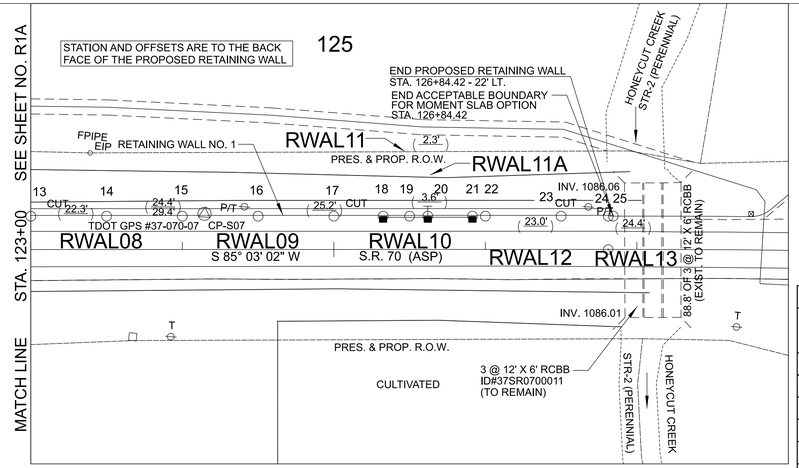


PLAN VIEW OF RETAINING WALL NO. 1
SCALE: 1"=50'

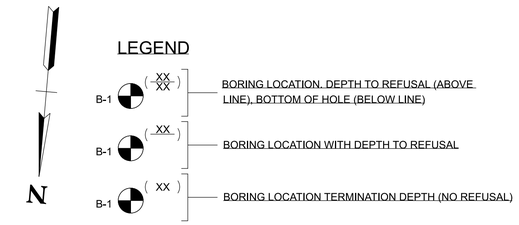


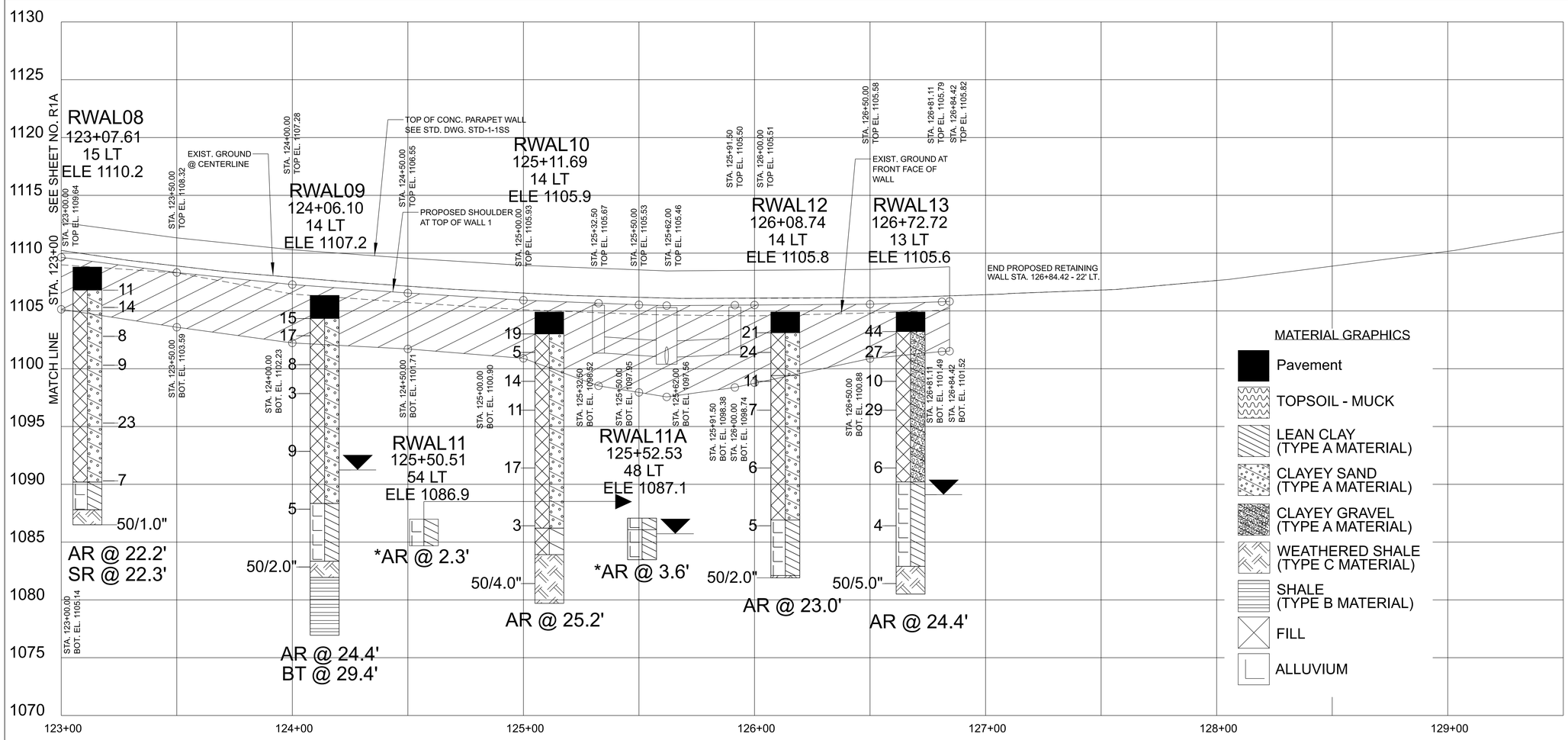
TABLE OF DRILLING POINT LOCATIONS

BORING NO.	STATION	OFFSET (ft)	NORTH (ft)	EAST (ft)	GROUND EL. (ft)	Refusal Depth (ft)
RWAL08	123+07.61	15 LT	748209.00	2848169.63	1110.2	22.3
RWAL09	124+06.10	14 LT	748200.91	2848071.46	1107.2	24.4
RWAL10	125+11.69	14 LT	748192.23	2847966.24	1105.9	25.2
RWAL11	125+50.51	54 LT	748148.90	2847931.02	1086.9	2.3
RWAL11A	125+52.53	48 LT	748154.65	2847928.49	1087.1	3.6
RWAL12	126+08.74	14 LT	748183.45	2847869.58	1105.8	23.0
RWAL13	126+72.72	13 LT	748178.59	2847805.79	1105.6	24.4

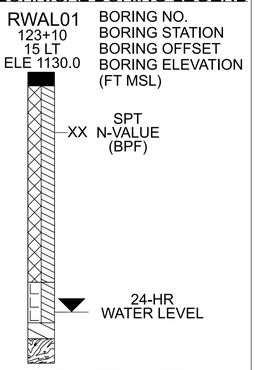
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2022	BR-STP-70(24)	R2A
PS&E	2025	BR-STP-70(24)	R-7

SOIL TEST RESULTS

BORING NO.	SAMPLE NO.	ALIGNMENT	STATION	OFFSET	DEPTH INTERVAL	USCS CLASS.	AASHTO CLASS.	L.L.	P.L.	P.I.	% BY WEIGHT				% PASSING SIEVE			%
											GRAVEL	SAND	SILT	CLAY	10	40	200	MOISTURE
RWAL08	S-3	SR70	123+07.61	15 LT	6.0-7.5	SC	A-2-6 (0)	30	19	11	47.5	32.1	12.2	8.3	37.3	25.2	20.4	7.0
RWAL09	S-6	SR70	124+06.10	14 LT	18.5-20.0	CL	A-6 (14)	34	19	15	0.0	7.9	65.0	27.1	100.0	99.4	92.1	24.9
RWAL10	S-2	SR70	125+11.69	14 LT	3.5-5.0	SC	A-2-6 (0)	32	19	13	40.1	30.3	19.6	10.0	44.4	32.7	29.6	10.4
RWAL10	S-6	SR70	125+11.69	14 LT	18.5-20.0	CL	A-7-6 (8)	41	24	17	5.9	36.5	28.2	29.4	89.2	70.6	57.6	34.3
RWAL12	S-2	SR70	126+08.74	14 LT	3.5-5.0	SC	A-2-6 (0)	29	18	11	41.8	27.9	22.4	7.9	42.8	33.1	30.4	8.4
RWAL12	S-6	SR70	126+08.74	14 LT	18.5-20.0	CL	A-6 (11)	34	21	13	0.4	13.5	53.7	32.4	99.1	96.8	86.1	24.4
RWAL13	S-5	SR70	126+72.72	13 LT	13.5-15.0	GC	A-2-6 (0)	34	21	13	64.7	17.1	10.3	7.9	26.1	21.6	18.2	16.7



PROFILE VIEW OF RETAINING WALL NO. 1
SCALE: 1"=25' HORIZ.
1"=5' VERT.



BT @ 20.0' BORING TERMINATED AT 20.0'
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL NO. 1 SOIL PROFILES AND DETAILS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	R-8

SOLDIER PILE WALL TYPES

STEEL PILES WITH WOOD LAGGING

STEEL PILES WITH CONCRETE LAGGING

CONCRETE WITH WOOD LAGGING

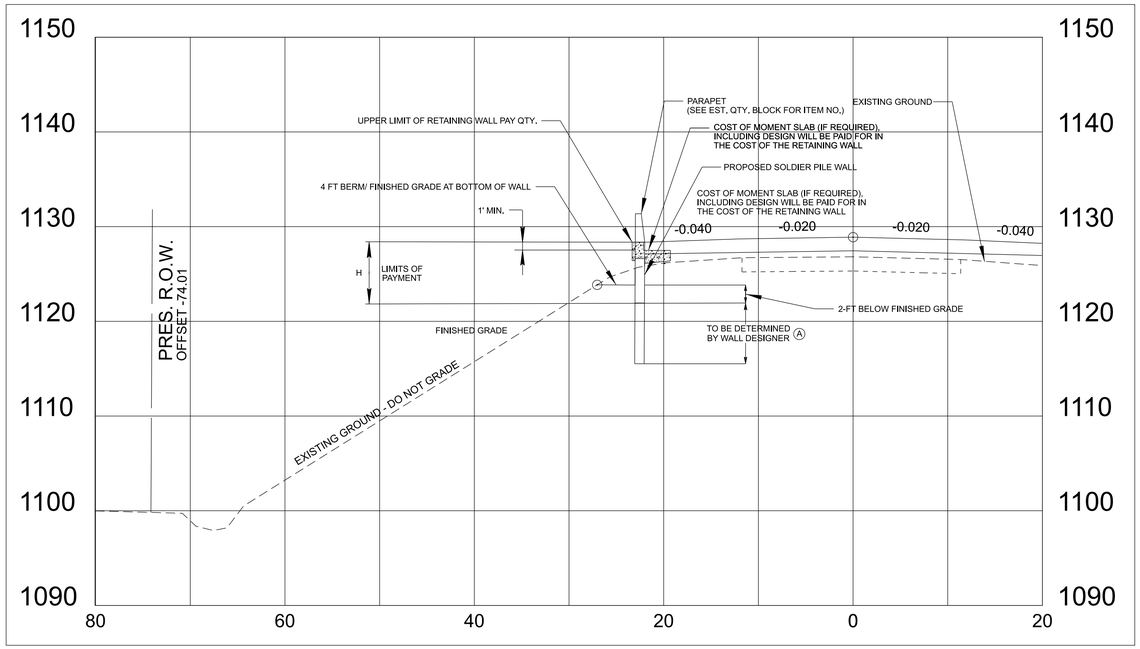
CONCRETE WITH CONCRETE LAGGING

GENERAL NOTES FOR SOLDIER PILE WALL

THE PURPOSE OF THIS DRAWING IS TO BE A GUIDE AND TO ILLUSTRATE TO THE ROADWAY DESIGNER THE RIGHT-OF-WAY, SAFETY AND DRAINAGE REQUIREMENTS ASSOCIATED WITH RETAINING WALLS. THIS IS NOT A STRUCTURAL DESIGN DRAWING.

(A) DESIGNER TO CALCULATE S.F. OF WALL BASED ON TOP OF PILE DOWN TO 2' BELOW FINISHED GRADE. DISTANCE NEEDED BELOW FINISHED GRADE TO BE DETERMINED BY WALL DESIGNER. COSTS FOR LENGTH BELOW 2' TO BE INCLUDED IN PRICE BID FOR RETAINING WALL.

(B) SEE STANDARD DRAWING W-SP-1 FOR MORE INFORMATION.



SR-70
TYPICAL SECTION STATION 119+00

NOT TO SCALE

MSE WALL TYPES

SEGMENTAL PRECAST

MODULAR BLOCK

GENERAL NOTES FOR MSE WALL

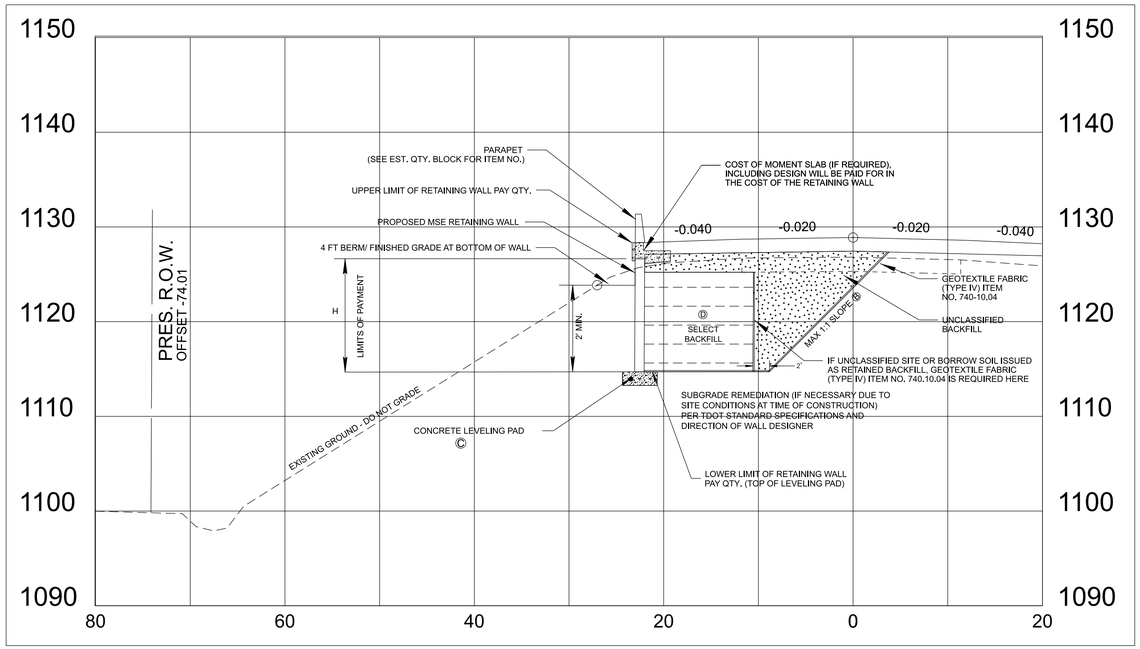
THE PURPOSE OF THIS DRAWING IS TO BE A GUIDE AND TO ILLUSTRATE TO THE ROADWAY DESIGNER THE RIGHT-OF-WAY, SAFETY AND DRAINAGE REQUIREMENTS ASSOCIATED WITH RETAINING WALLS. THIS IS NOT A STRUCTURAL DESIGN DRAWING.

(B) ACTUAL UNDERCUT DEPTH AND BACKFILL SLOPE TO BE DETERMINED BY GEOTECHNICAL ENGINEER.

(C) COST OF LEVELING PAD, WILL BE PAID FOR IN THE COST OF RETAINING WALL

(D) WALL DESIGNER TO BE AWARE OF ANY FEATURES THAT MAY INTERFERE WITH STRUCTURAL BACKFILL. ITEMS COULD INCLUDE BUT ARE NOT LIMITED TO; DRAINAGE STRUCTURES, LIGHT POLES, (FOUNDATIONS ARE TYPICALLY AT LEAST 15' DEEP), UTILITIES, ETC.

(E) SEE STANDARD DRAWING W-MSE-1 AND W-MSE-2 FOR MORE INFORMATION.



SR-70
TYPICAL SECTION STATION 119+00

NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL TYPICAL DETAILS

NOT TO SCALE

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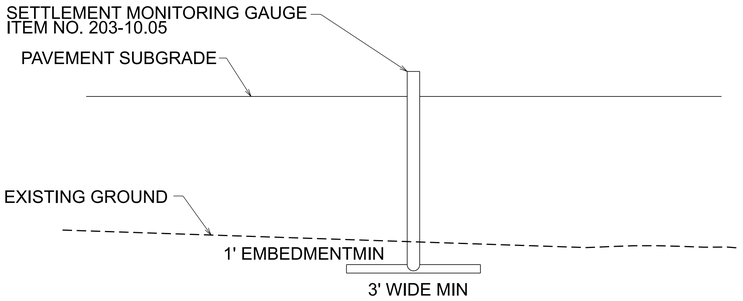
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	R-9

NOTES:

1. THE USE OF EITHER WOOD OR STEEL BASE SETTLEMENT GAUGES SHALL BE THE CONTRACTOR'S OPTION.
2. INSTALL SETTLEMENT PLATES AT LEAST ONE FOOT BELOW ORIGINAL GRADE AND BEGIN MONITORING PRIOR TO PLACING FIRST LIFT OF THE EMBANKMENT.
3. REPAIR OR REPLACE ANY DAMAGED SETTLEMENT GAUGES AS DIRECTED BY THE ENGINEER.
4. SETTLEMENT GAUGE AND EMBANKMENT ELEVATIONS ARE TO BE RECORDED AND FORWARDED TO THE GEOTECHNICAL ENGINEER OF RECORD AS FOLLOWS:
   - DAILY DURING PLACEMENT OF EMBANKMENT FILL
   - WEEKLY AFTER COMPLETION OF EMBANKMENT CONSTRUCTION TO PAVEMENT SUBGRADE ELEVATION
5. THE INITIAL ELEVATION OF THE SETTLEMENT GAUGE PLATE (TOP OF PLATE) SHALL BE DETERMINED AT THE TIME OF INSTALLATION ALONG WITH THE EXISTING GROUND SURFACE ELEVATION. WHEN NEW SECTIONS OF PIPE ARE ADDED, ELEVATIONS SHALL BE RECORDED AT THE TOP OF THE EXISTING PIPE AND AT THE TOP OF THE NEW PIPE.
6. EMBANKMENT MONITORING SHOULD CONTINUE UNTIL A READING OF 0.1 INCHES OR LESS IS RECORDED FOR TWO CONSECUTIVE WEEKS.



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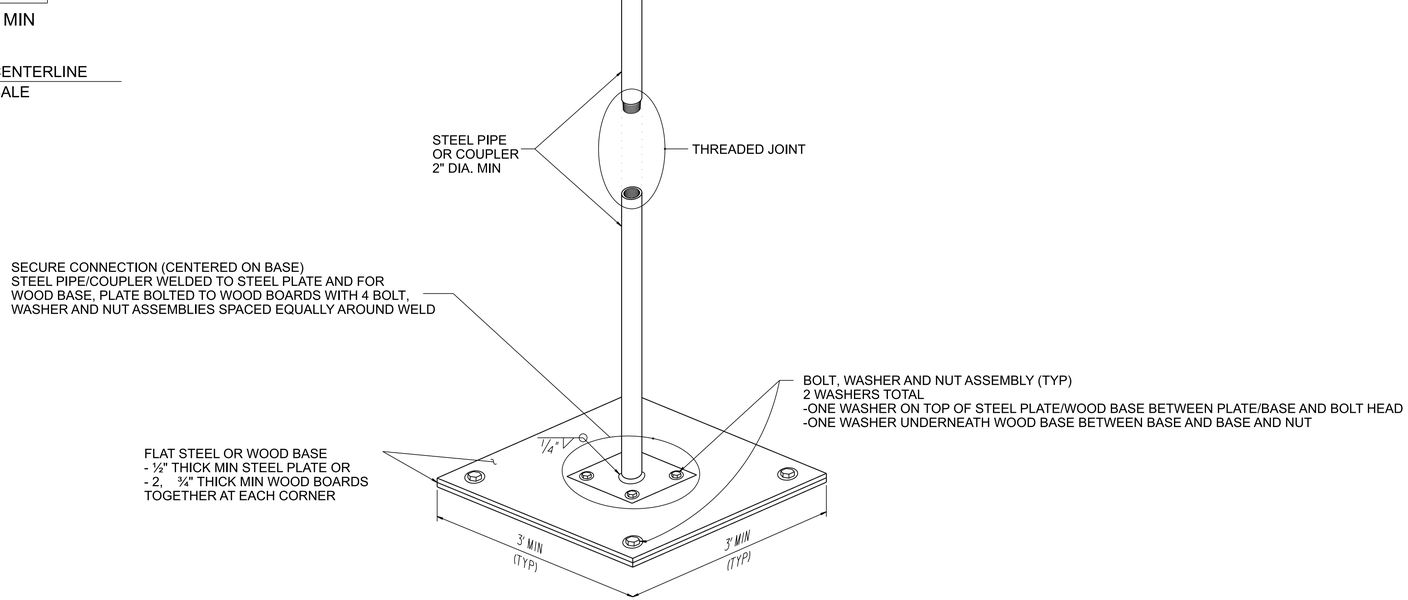
SETTLEMENT GAUGE LOCATIONS				
GAUGE NO.	ALIGNMENT	STATION (+/-)	OFFSET (+/-)	ESTIMATED WAITING PERIOD (MONTHS)
1	SR-70	118+05	17 FT, LT	1
2	SR-70	124+00	17 FT, LT	1

ESTIMATED QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
①	203-10.05	SETTLEMENT PLATE / MONITORING DEVICE	EACH	2

① FOR BIDDING PURPOSES, THESE QUANTITIES ARE INCLUDED IN THE SHEET 2 SERIES



SETTLEMENT GAUGE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

MSE RETAINING WALL SETTLEMENT MONITORING DETAILS

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	S-1

SWPPP INDEX OF SHEETS

DESCRIPTION	SHT.
1. SWPPP REQUIREMENTS (5.0.)	1
2. SITE DESCRIPTION (5.5.1.)	1
3. ORDER OF CONSTRUCTION ACTIVITIES (5.5.1.a)	1
4. STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION	1-2
5. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES (5.5.3.)	2-3
6. FLOCCULANTS (3.5.3.1.b)	3
7. UTILITY RELOCATION	3-4
8. MAINTENANCE AND INSPECTION	4
9. SITE ASSESSMENTS (5.5.3.8.)	4
10. STORMWATER MANAGEMENT (5.5.3.11.h)	4-5
11. NON-STORMWATER DISCHARGES (5.5.3.12.)	5
12. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (5.5.3.7.c, 6.1)	5-6
13. RECORD-KEEPING	5-7
14. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (8.7.5.)	7
15. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (8.7.6.)	7
16. ENVIRONMENTAL PERMITS (1.5.2.)	7
17. OUTFALL TABLE (5.5.1.c, 6.4.1.e, 6.4.1.f)	8

NOTE: CITATIONS IN PARENTHESIS INDICATE SECTIONS OF THE CURRENT CGP.

1. SWPPP REQUIREMENTS (5.0.)

1.1. HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING LICENSING AND/OR CERTIFICATIONS (5.2)?

☒ YES (CHECK ALL THAT APPLY BELOW) OR ☐ NO

- ☐ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC)
- ☒ A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
- ☒ HAS SUCCESSFULLY COMPLETED TDEC LEVEL II COURSE

1.2. DO THE EPSC PLANS INVOLVE STRUCTURAL DESIGN, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS FOR EPSC STRUCTURAL MEASURES (E.G. SEDIMENT BASINS) (5.2.)? YES ☐ NO ☒

IF YES, HAVE THE EPSC PLANS BEEN PREPARED, STAMPED AND CERTIFIED BY A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT? ☐ YES ☐ NO

1.3. DO THE PROJECT STORMWATER OUTFALLS DISCHARGE INTO THE FOLLOWING (6.4.1.)? ☐ YES (CHECK ALL THAT APPLY BELOW) ☒ NO

- ☐ WATERS WITH UNAVAILABLE PARAMETERS (303d FOR SILTATION)
- ☐ EXCEPTIONAL TENNESSEE WATERS (ETW)

2. SITE DESCRIPTION (5.5.1.)

2.1. PROJECT LIMITS (5.5.1.f): REFER TO TITLE SHEET

2.2. TOTAL PROJECT AREA (5.5.1.b): 3.003 ACRES

2.3. TOTAL AREA TO BE DISTURBED (5.5.1.b): 8.257 ACRES

2.4. PROJECT DESCRIPTION (5.5.1.a):

TITLE: SR-70, BRIDGE OVER NORFOLK SOUTHERN RAILROAD, LM 6.19
COUNTY: HAWKINS
PIN: 124383.00

2.5. SITE MAP(S) (3.2.2.): REFER TO TITLE SHEET

2.6. DESCRIPTION OF EXISTING SITE TOPOGRAPHY (5.5.1.c): REFER TO EXISTING CONTOURS SHEET(S) 14-14A, DRAINAGE MAP SHEET(S) 9, USGS QUAD MAP, AND THE OUTFALL TABLE IN SECTION 4.2.

2.7. MAJOR SOIL DISTURBING ACTIVITIES (5.5.1.a) (CHECK ALL THAT APPLY):

- ☒ CLEARING AND GRUBBING
- ☒ EXCAVATION
- ☒ CUTTING AND FILLING
- ☒ FINAL GRADING AND SHAPING
- ☒ UTILITIES
- ☐ OTHER (DESCRIBE): _____

2.8. NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION OF THE PROJECT.

2.9. ARE THERE ANY SEASONAL LIMITATIONS ON WORK? ☐ YES ☒ NO

IF YES, LIST THE CORRESPONDING PLAN SHEET: _____

2.10. WAS ROW FINALIZED PRIOR TO FEBRUARY 1, 2010 (4.1.2.2)?

☐ YES _____ (DATE) ☒ NO

IF ROW WAS FINALIZED PRIOR TO FEBRUARY 1, 2010, THIS PROJECT IS CONSIDERED A PRE-APPROVED SITE (4.1.2.2)

2.11. SOIL PROPERTIES (5.5.1.d, 5.5.3.3.d, 5.5.3.6.b).

SOIL PROPERTIES FOR THE PRIMARY SOILS ARE LISTED IN THE TABLE BELOW.

SOIL PROPERTIES

PRIMARY SOIL NAME	HSG	% OF SITE	ERODIBILITY (k value)
DaE - Dandridge shaly silty clay loam, 20 to 35 percent slopes	D	10.9	0.20
DaF - Dandridge shaly silty clay loam, 35 to 60 percent slopes	D	2.8	0.20
Gu - Guthrie silt loam	C/D	26.2	0.43
Ha - Hamblen silt loam, deep, 0 to 2 percent slopes, occasionally flooded	C	16.4	0.37
LaC - Leadvale silt loam, 5 to 12 percent slopes	C	4.2	0.43
LbD - Leesburg gravelly loam, 10 to 20 percent slopes	B	4.7	0.20
LzD - Litz shaly silt loam, 8 to 20 percent slopes (sil)	C	14.6	0.28
Ta - Taft silt loam	C/D	20.2	0.37

2.12. IS ACID PRODUCING ROCK (APR) (i.e. PYRITE) LOCATED WITHIN THE PROJECT LIMITS? ☐ YES ☒ NO

2.12.1. IF YES TO SECTION 2.13, HAVE APR LOCATIONS BEEN IDENTIFIED WITHIN THE CONSTRUCTION PLANS AND/OR THE GEOTECHNICAL REPORT? ☐ YES ☐ NO; AND

2.12.2. IF YES TO SECTION 2.12.1, HAS A SPECIAL HANDLING PLAN AND/OR ADAPTIVE MANAGEMENT PLAN (AMP) BEEN PREPARED FOR THE PROJECT? ☐YES ☐ NO ☐ N/A (TDOT SP107L WILL BE APPLIED.)

2.13. PROJECT RUNOFF COEFFICIENTS AND AREA PERCENTAGES (5.5.3.6.a).

RUNOFF COEFFICIENTS FOR EXISTING CONDITIONS

AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	2.820	34.2	98	
PERVIOUS	5.437	65.8	80	
WEIGHTED CURVE NUMBER OR C-FACTOR =			86.1	

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS

AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	2.950	35.7	98	
PERVIOUS	5.307	64.3	80	
WEIGHTED CURVE NUMBER OR C-FACTOR =			86.4	

3. ORDER OF CONSTRUCTION ACTIVITIES (5.5.1.a)

CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO: MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION. NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE ORDER OF CONSTRUCTION ACTIVITIES AND THE BASIC EPSC DEVICES DEPICTED ON THE EPSC PLAN CONTAINED WITHIN THE APPROVED SWPPP.

3.1. SPECIAL SEQUENCING REQUIREMENTS (SEE SHEETS _____)

3.2. INSTALL STABILIZED CONSTRUCTION EXITS.

3.3. INSTALL PERIMETER PROTECTION WHERE RUNOFF SHEET FLOWS FROM THE SITE.

3.4. INSTALL INITIAL EPSC MEASURES BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CULVERT OR BRIDGE CONSTRUCTION, CUTTING, FILLING, OR ANY OTHER EARTHWORK OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.

3.5. PERFORM CLEARING AND GRUBBING (NOT MORE THAN TWO WEEKS PRIOR TO GRADING OR EARTH-MOVING. REFER TO THE STABILIZATION PRACTICES BELOW.).

3.6. REMOVE AND STORE TOPSOIL.

3.7. STABILIZE DISTURBED AREAS WITHIN 2 WEEKS OF COMPLETING ANY STAGE AND/OR PHASE OF ACTIVITY (STEEP SLOPES SHALL BE STABILIZED WITHIN 1 WEEK AFTER CONSTRUCTION ACTIVITY HAS TEMPORARY OR PERMANENTLY CEASED).

3.8. INSTALL UTILITIES, STORM SEWERS, CULVERTS AND BRIDGE STRUCTURES.

3.9. INSTALL INLET AND CULVERT PROTECTION ONCE STRUCTURES ARE IN PLACE AND CAPABLE OF INTERCEPTING FLOW.

3.10. PERFORM FINAL GRADING AND INSTALL BASE STONE.

3.11. COMPLETE FINAL PAVING AND SEALING OF CONCRETE.

3.12. INSTALL TRAFFIC CONTROL AND PROTECTION DEVICES.

3.13. COMPLETE PERMANENT STABILIZATION (TOPSOIL, SEEDING, MULCH, EROSION CONTROL BLANKET, SOD, ETC.)

3.14. REMOVE TEMPORARY EROSION CONTROLS AND ACCUMULATED SEDIMENT FROM AREAS THAT HAVE ESTABLISHED AT LEAST 70 PERCENT UNIFORM PERMANENT VEGETATIVE COVER.

3.15. RE-STABILIZE AREAS DISTURBED BY REMOVAL ACTIVITIES.

4. STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION

4.1. STREAM INFORMATION (5.5.1.h, 5.5.1.i)

4.1.1. WILL CONSTRUCTION AND/OR EROSION PREVENTION AND SEDIMENT CONTROLS IMPACT ANY STREAMS WITHIN THE PROJECT LIMITS? ☒ YES ☐ NO

IF YES, THE IMPACT(S) HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE WATER QUALITY PERMITS.

4.1.2. HAVE ANY OF THE RECEIVING STATE WATERS LESS THAN OR EQUAL TO 1 FLOW MILE DOWN GRADIENT OF THE PROJECT LIMITS BEEN CLASSIFIED BY TDEC AS FOLLOWS (CHECK ALL THAT APPLY):

- ☐ 303d WITH UNAVAILABLE PARAMETERS FOR SILTATION
- ☐ EXCEPTIONAL TENNESSEE WATERS (ETW)

4.1.3. RECEIVING WATERS OF THE STATE (5.5.1.h, 5.5.1.j, 5.5.1.k).

RECEIVING WATERS OF THE STATE INFORMATION

TDOT STATE WATER LABEL FROM EBR	NAME OF RECEIVING STATE WATER	303d WITH UNAVAILABLE PARAMETERS FOR SILTATION (YES OR NO)	ETW (YES OR NO)	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)
STR-1	N/A	NO	NO	YES	YES
STR-2	Honeycutt Creek	NO	NO	YES	YES
N/A	Cherokee Lake	NO	NO	NO	YES

4.1.4. RECEIVING WATERS OF THE US (NON STATE WATERS) (4.1.2). LIST ANY FEATURE THAT IS IDENTIFIED AS A WET WEATHER CONVEYANCE (TDEC) AND IDENTIFIED AS WATERS OF THE US BY THE ARMY CORPS OF ENGINEERS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	S-2

WET WEATHER CONVEYANCES THAT ARE WATERS OF THE US		
TDOT STATE WATER LABEL FROM EBR	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)

4.1.5. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES REQUIRED FOR WATERS OF THE STATE? (5.5.1.l, 6.4.2.)

☐ YES ☒ NO

BUFFER ZONE REQUIREMENTS ARE NOT REQUIRED FOR PRE-APPROVED SITES (4.1.2.2.)

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____.

IF YES, CHECK THE APPROPRIATE BOX BELOW FOR SIZE OF BUFFER.

☐ 60-FEET FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS (ETW) (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 30-FEET).

A 60 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE STREAM WITH THIS DESIGNATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 30 FEET AT ANY MEASURED LOCATION. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

☐ 30-FEET FOR ALL OTHER STREAMS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 15-FEET).

A 30 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE STREAM SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 30 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 15 FEET AT ANY MEASURED LOCATION. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

☐ 15-FEET FOR ANY WET WEATHER CONVEYANCES IDENTIFIED AS WATERS OF THE US BY THE US ARMY CORPS OF ENGINEERS.

4.1.6. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES NOT REQUIRED FOR STATE WATERS DUE TO A TDEC ARAP? (1.5.2.)

☐ YES ☒ NO

4.1.7. ARE THERE WATER QUALITY RIPARIAN BUFFER ZONE EXEMPTIONS? (4.1.2.1.) ☐ YES ☒ NO

IF YES, EXISTING CONDITIONS DESCRIPTION:_____

4.1.8. EVERY ATTEMPT SHOULD BE MADE FOR CONSTRUCTION ACTIVITIES TO NOT TAKE PLACE WITHIN THE WATER QUALITY RIPARIAN BUFFER ZONE AND FOR EXISTING FORESTED AREAS TO BE PRESERVED. (4.1.2., 6.4.2.)

4.1.9. BECAUSE OF HEAVY SEDIMENT LOAD ASSOCIATED WITH CONSTRUCTION SITE RUNOFF, WATER QUALITY RIPARIAN BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE WATER QUALITY RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA.

4.1.10. WHERE IT IS NOT PRACTICABLE TO MAINTAIN A FULL WATER QUALITY RIPARIAN BUFFER, BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MUST BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CGP. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

4.2. OUTFALL INFORMATION

4.2.1. OUTFALL TABLE (5.5.1.c). SEE SWPPP SHEET S-8 FOR OUTFALL INFORMATION.

4.2.2. HAVE ALL OUTFALLS BEEN LABELED ON THE EPSC PLAN SHEETS (5.5.1.f)? ☒ YES ☐ NO

4.2.3. HAVE ALL OUTFALLS BEEN LABELED ON A USGS TOPOGRAPHIC MAP INCLUDED IN THE "DOCUMENTATION AND PERMITS" BINDER (3.2.2.)? ☒YES ☐ NO

4.2.4. WHERE POSSIBLE, HAS NON-PROJECT RUN-ON BEEN DIVERTED AROUND OR THROUGH THE PROJECT TO ELIMINATE CONTACT WITH DISTURBED AREAS OF THE PROJECT AND SEPARATE IT FROM PROJECT RUN-OFF THEREBY REDUCING THE DRAINAGE AREA OF TO THE OUTFALLS IN THIS AREA?

☐ YES ☐ NO ☒ N/A

4.2.5. ARE EQUIVALENT MEASURES BEING SUBSTITUTED FOR A SEDIMENT BASIN(S) OR SEDIMENT TRAP(S)? (5.5.3.5.)

☒ YES ☐ NO ☐ N/A

4.2.6. A SEDIMENT BASIN, OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:

OF TEN ACRES OR MORE FOR AN OUTFALL(S) THAT DOES NOT DISCHARGE TO A STATE STREAM WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS (ETW). A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL PERMANENT STABILIZATION OF THE SITE. (5.5.3.5)

OR

OF FIVE ACRES OR MORE FOR AN OUTFALL(S) THAT DISCHARGES TO A STATE STREAM WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS (ETW). A TEMPORARY (OR PERMANENT) SEDIMENT BASIN THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/ 24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL PERMANENT STABILIZATION OF THE SITE. (6.4.1.e).

ALL CALCULATIONS RELATED TO DRAINAGE AREAS, RUNOFF COEFFICIENTS, BASIN VOLUMES AND EQUIVALENT CONTROL MEASURES MUST BE PROVIDED IN THE SWPPP (5.5.3.5.)

4.2.7. A SEDIMENT TRAP, OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:

OF 3.5 - 4.9 ACRES FOR AN OUTFALL(S) THAT DISCHARGES TO A STATE STREAM WITH UNAVAILABLE PARAMETERS (303d SILTATION) OR EXCEPTIONAL TENNESSEE WATERS (ETW). A SEDIMENT TRAP THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL PERMANENT STABILIZATION OF THE SITE. (6.4.1.f).

IN BOTH INSTANCES, THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.

4.2.8. SEDIMENT STRUCTURES TREATING DRAINAGE AREAS IN EXCESS OF 25 ACRES REQUIRE A SITE-SPECIFIC DESIGN THAT ACCURATELY DEFINES THE SITE HYDROLOGY, SITE-SPECIFIC SEDIMENT LOADING, HYDRAULICS OF THE SITE, AND ADHERES TO ALL TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK DESIGN RECOMMENDATIONS FOR SEDIMENT BASINS. (5.5.3.5.)

4.3. WETLAND INFORMATION

WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WETLANDS? ☐ YES ☒ NO

IF YES, THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND IN THE WATER QUALITY PERMITS.

WETLAND INFORMATION				
TDOT WETLAND LABEL	FROM STATION LT OR RT	TO STATION LT OR RT	TEMPORARY IMPACTS (AC)	PERMANENT IMPACTS (AC)

4.4. TOTAL MAXIMUM DAILY LOADS (TMDL) INFORMATION (1.3.j)

4.4.1. IS THIS PROJECT LOCATED IN A HUC-8 WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION AND HABITAT ALTERATION?

☐YES ☒ NO

4.4.2. IF YES, IS THIS PROJECT LOCATED WITHIN A HUC-12 SUBWATERSHED WITH A WASTE LOAD ALLOCATION (WLA)?

☐ YES ☐ NO

4.4.3. IF YES, DOES THE PROJECT HAVE A DIRECT DISCHARGE TO A 303(d) LISTED STREAM FOR SILTATION?

☐ YES ☐ NO

IF YES, SWPPP INCORPORATES MEASURES OR CONTROLS CONSISTENT WITH THE ASSUMPTIONS AND REQUIREMENTS OF THE TMDL.

4.5. ECOLOGY INFORMATION (3.5.5.e)

DOES THE TDOT ENVIRONMENTAL BOUNDARIES REPORT SPECIFY SPECIAL NOTES TO BE ADDED TO THE PLAN SHEETS?

☐ YES ☒ NO

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____.

4.6. ENVIRONMENTAL COMMITMENTS

ARE THERE ANY NOTES ON THE ENVIRONMENTAL COMMITMENT SHEET?

☒ YES ☐ NO

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) 1B.

5. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES (5.5.3.)

5.1. EPSC MEASURES MUST BE DESIGNED, INSTALLED AND MAINTAINED TO CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE EROSION (4.1.1).

5.2. EPSC MEASURES MUST CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOWS AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS, STREAM CHANNELS, AND STREAM BANKS. (4.1.1)

5.3. HAVE THE CONTROL MEASURES BEEN DESIGNED PER THE SIZE AND SLOPE OF THE DISTURBED DRAINAGE AREA (5.5.3.5.)?

☒YES ☐ NO

5.4. THE CONTROL MEASURES HAVE, AT A MINIMUM, BEEN DESIGNED FOR THE 2-YEAR, 24 HOUR STORM EVENT (5.5.3.5., 6.4.1.b).

5.5. ARE THE LIMITS OF DISTURBANCE CLEARLY MARKED ON THE EPSC PLANS (5.5.1.f)? ☒ YES ☐ NO

5.6. AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.

5.7. UNLESS OTHERWISE NOTED IN THE PLANS, THE CONTRACTOR SHALL NOT CLEAR/DISTURB ANY AREA BEYOND 15 FEET FROM SLOPE LINES OR ROW/ EASEMENT LINE, WHICHEVER IS LESSER.

5.8. CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION, INCLUDING STREAM AND WETLAND BUFFERS (UNLESS PERMITTED), SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

5.9. HAS A THREE STAGED EPSC PLAN BEEN PREPARED FOR THE PROJECT (5.5.2.)?

YES ☒ NO ☐

PLEASE NOTE THAT A THREE STAGED EPSC PLAN IS REQUIRED FOR ALL TDOT PROJECTS FOR WHICH AN NPDES PERMIT IS REQUIRED.

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STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	S-3

5.10. STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR GREATER REGARDLESS OF HEIGHT. HAVE STEEP SLOPES BEEN MINIMALLY DISTURBED AND/OR PROTECTED BY CONVEYING RUNOFF NON-EROSIVELY AROUND OR OVER THE SLOPE (5.5.3.4.) (10. "STEEP SLOPE")? ☐ YES ☐ NO ☒ N/A

5.11. THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE AQUATIC RESOURCE ALTERATION (ARAP) PERMIT OR SECTION 401 CERTIFICATION (5.5.1.h). REFER TO THE LIST OF APPLICABLE ENVIRONMENTAL PERMITS LOCATED ON SWPPP SHEET S-7. ALL PERMITS WILL BE MAINTAINED ON SITE WITHIN THE "DOCUMENTATION AND PERMITS" BINDER.

5.12. THE EPSC CONTROL MEASURES LISTED IN THE QUANTITIES TABLE ON SHEET 13 HAVE BEEN SELECTED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES (5.1., 5.5.3.1.b, 5.5.3.5.).

5.13. EPSC MEASURES SHALL BE INSTALLED PER TDOT STANDARDS (i.e. STANDARD DRAWINGS) AND SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS.

5.14. EPSC MEASURES WILL NOT BE INSTALLED WITHIN A STREAM WITHOUT FIRST OBTAINING APPROVAL FROM THE PERMITS SECTION.

5.15. TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REINSTALLED AT THE END OF THE WORKDAY OR BEFORE A PRECIPITATION EVENT.

5.16. EPSC MEASURES LOCATED IN WOTUS (EPHEMERAL STREAMS) MUST BE CONSIDERED TEMPORARY AND SHALL BE REMOVED AT THE END OF CONSTRUCTION.

5.17. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT OFF THE PROJECT LIMITS (E.G. R.O.W., EASEMENTS, ETC.), INTO WATERS OF THE STATE/U.S., OR ONTO ROADWAYS USED BY THE PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED TO A LEVEL SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT. SEDIMENT THAT MIGRATES INTO WATERS OF THE STATE/US SHALL NOT BE REMOVED WITHOUT GUIDANCE FROM TDOT ENVIRONMENTAL PERSONNEL.

5.18. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION EXIT (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.

5.19. THE QUANTITIES REQUIRED FOR STABILIZED CONSTRUCTION EXITS PER TDOT STANDARDS HAVE BEEN SPECIFIED ON SHEET 2 (5.5.3.1.j).

5.20. DISCHARGES FROM DEWATERING ACTIVITIES ARE PROHIBITED UNLESS MANAGED BY APPROPRIATE CONTROLS THAT PROVIDE THE LEVEL OF TREATMENT (FILTRATION) NECESSARY TO COMPLY WITH PERMIT REQUIREMENTS. (4.1.3.).

5.21. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED PER THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT.

5.22. DISCHARGES FROM SEDIMENT BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE, WELL- VEGETATED AND/OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. (5.5.3.5.).

5.23. THE DEWATERING OF WORK AREAS, TRENCHES, FOUNDATIONS, EXCAVATIONS, ETC. THAT HAVE COLLECTED STORMWATER, WATER FROM VEHICLE WASH AREAS, OR GROUNDWATER SHALL BE EITHER HELD IN SETTLING BASINS OR TREATED BY FILTRATION AND/OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE. ALL CHEMICAL TREATMENTS MUST BE APPLIED PER SECTION 6 FLOCCULANTS.

5.24. WATER DISCHARGED FROM DEWATERING ACTIVITIES SHALL NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITHIN THE RECEIVING NATURAL RESOURCE. WATER MUST BE HELD WITHIN SETTLING BASINS UNTIL IT IS AT LEAST AS CLEAR AS THE RECEIVING WATERS.

5.25. DEWATERING STRUCTURES, SEDIMENT FILTER BAGS, SEDIMENT BASINS AND TRAPS SHALL NOT BE LOCATED CLOSER THAN 30 FEET (60 FEET DESIRABLE VEGETATIVE BUFFER) FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS (ETW) AND 15 FEET (30 FEET DESIRABLE VEGETATIVE BUFFER) FOR ALL OTHER FEATURES FROM THE TOP BANK OF A STREAM, WOTUS (EPHEMERAL), WETLAND OR OTHER NATURAL RESOURCE AND SHALL BE PROPERLY DESIGNED PER THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED.

5.26. STABILIZATION PRACTICES: PRE-CONSTRUCTION VEGETATIVE COVER WILL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 2 WEEKS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA WILL BE SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED (5.5.3.5.f).

5.27. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS POSSIBLE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY OR PERMANENT STABILIZATION WILL BE COMPLETED WITHIN 2 WEEKS AFTER ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IN THAT AREA. PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE (5.5.3.4.).

5.28. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE

5.29. DELAYING THE PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.

5.30. STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 1 WEEK AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED. (5.5.3.4.).

6. FLOCCULANTS (3.5.3.1.b)

IS ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF NECESSARY (5.5.3.5.)? ☐ YES ☒ NO

IF YES, THE FOLLOWING NOTES APPLY:

6.1. ENSURE THE FLOCCULANT EMULSIONS AND POWDERS ARE OF THE ANIONIC TYPE (5.5.3.5.). AND MEET THE FOLLOWING REQUIREMENTS:

6.1.1. MEETS THE EPA AND FDA ACRYLAMIDE MONOMER LIMITS OF EQUAL TO OR GREATER THAN 0.005% ACRYLAMIDE MONOMER.

6.1.2. HAS A DENSITY OF 10% TO 55% BY WEIGHT AND A MOLECULAR WEIGHT OF 16 TO 24 MG/MOLE (MILLIGRAM PER MOLE).

6.1.3. MIXTURE IS NON-COMBUSTIBLE.

6.1.4. CONTAINS ONLY MANUFACTURER'S RECOMMENDED ADDITIVES.

6.2. FLOCCULANT SHALL BE MIXED AND APPLIED IN ACCORDANCE WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) MATERIAL SAFETY DATA SHEET REQUIREMENTS AND THE MANUFACTURER'S RECOMMENDATIONS FOR THE SPECIFIED USES CONFORMING TO ALL FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS.

6.3. ALL VENDORS AND SUPPLIERS OF FLOCCULANT BLENDS SHALL PRESENT OR SUPPLY A WRITTEN TOXICITY REPORT WHICH VERIFIES ACCEPTABLE TOXICITY PARAMETERS WHICH MEET OR EXCEED THE EPS REQUIREMENTS FOR THE STATE AND FEDERAL WATER QUALITY STANDARDS. WHOLE EFFLUENT TESTING DOES NOT MEET THIS REQUIREMENT AS PRIMARY REACTIONS HAVE OCCURRED AND TOXIC POTENTIALS HAVE BEEN REDUCED. CATIONIC FORMS OF FLOCCULANTS ARE NOT ALLOWED UNDER THIS SECTION DUE TO HIGH LEVELS OF TOXICITY TO AQUATIC ORGANISMS. FLOCCULANT EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER RUNOFF OR RIPARIAN WATERS DUE TO SURFACTANT TOXICITY. THE CONTRACTOR MUST SEEK THE APPROVAL OF THE EPSC DESIGN ENGINEER AND TDOT IF CHITOSAN IS PROPOSED FOR THIS PROJECT.

6.4. ALL VENDORS AND SUPPLIERS OF FLOCCULANT BLENDS SHALL SUPPLY WRITTEN "SITE SPECIFIC" TESTING RESULTS DEMONSTRATING A PERFORMANCE OF 95% OR GREATER REDUCTION OF NTU OR TSS FROM STORMWATER DISCHARGES.

6.5. EMULSION BATCHES SHALL BE MIXED FOLLOWING RECOMMENDATIONS OF THE TESTING LABORATORY THAT DETERMINES THE PROPER PRODUCT AND RATE TO MEET SITE REQUIREMENTS. APPLICATION METHODS SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA. EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER RUNOFF OR RIPARIAN BUFFERS.

6.6. FLOCCULANT POWDER MAY BE APPLIED BY A HAND OR MECHANICAL SPREADER. MIXING OF THE FLOCCULANT POWDER WITH DRY SILICA SAND WILL AID IN SPREADING.

6.7. PREMIXING OF FLOCCULANT POWDER INTO FERTILIZER, SEED, OR OTHER SOIL AMENDMENTS IS ALLOWED WHEN SPECIFIED IN THE DESIGN PLAN. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA.

6.8. FLOCCULANT LOGS OR BLOCKS SHALL BE APPLIED FOLLOWING SITE TESTING RESULTS TO ENSURE PROPER PLACEMENT AND PERFORMANCE AND SHALL MEET OR EXCEED STATE AND FEDERAL WATER QUALITY REQUIREMENTS.

6.9. DO NOT APPLY FLOCCULANTS DIRECTLY TO, OR WITHIN 60 FEET, OF ANY STREAMS, WETLANDS, OR OTHER NATURAL WATER RESOURCE LOCATED ON OR ADJACENT TO THE CONSTRUCTION SITE. DO NOT APPLY FLOCCULANTS DIRECTLY INTO WATERS CONTAINED WITHIN SEDIMENT PONDS OR TO SLOPES THAT PRODUCE RUNOFF DIRECTLY INTO A STREAM, WETLAND, OR OTHER NATURAL WATER RESOURCE. DO NOT APPLY FLOCCULANTS IMMEDIATELY AT A STORMWATER OUTFALL WHERE RUNOFF LEAVES THE PROJECT LIMITS.

7. UTILITY RELOCATION

ARE UTILITIES INCLUDED IN THE CONTRACT? ☒ YES ☐ NO

IF YES, THE FOLLOWING APPLY:

7.1. STORMWATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND TREATED PRIOR TO DISCHARGE.

7.2. SILT FENCE SHALL BE INSTALLED ON THE DOWNGRADIENT SIDE OF STOCKPILED SOIL. ANY TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING DRY CONDITIONS, REMOVED AND STABILIZED BY THE END OF THE WORK DAY.

7.3. UTILITY CROSSINGS IN ENVIRONMENTAL FEATURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. ENVIRONMENTAL PERMITS APPLY TO UTILITIES IN THIS PROJECT. THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE PERMITS.

7.4. IT IS THE RESPONSIBILITY OF THE STATE UTILITY CONTRACTOR TO PROTECT EXPOSED EARTH FROM EROSION AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE EPSC MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME, SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.

7.5. FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN FOURTEEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOILS OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDOT EPSC MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE STATE UTILITY CONTRACTOR UNTIL THE TRENCH IS BACKFILLED.

7.6. IN REGARDS TO EPSC, TDEC REGULATIONS APPLY TO THE STATE UTILITY CONTRACTORS ON THIS PROJECT. THE STATE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE STATE CONTRACT.

7.7. TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORMWATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EPSC MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE TDOT PROJECT ENGINEER.

7.8. FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE TDOT RIGHT-OF-WAY, EPSC MEASURES SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING AND ASSOCIATED BLASTING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EPSC MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH PERMANENT VEGETATIVE COVER.

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7.9. THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS AS APPROVED BY THE TDOT RESPONSIBLE PARTY.

7.10. THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EPSC MEASURES TO REPLACE ONSITE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE TDOT ENGINEER BEFORE COMMENCING WORK.

7.11. FOR UTILITY CROSSINGS THAT UTILIZE HORIZONTAL DIRECTIONAL DRILLING THE FOLLOWING SHALL APPLY:

7.11.1. THE ENTRY AND EXIT POINTS SHALL BE AT LEAST 50 FEET FROM THE STREAM BANK OR WETLAND BOUNDARY.

7.11.2. THE DEPTH OF BORE BELOW THE STREAMBED IS SUFFICIENT TO PREVENT RELEASE OF DRILLING FLUID, BASED ON THE PARENT MATERIAL.

7.11.3. A SITE-SPECIFIC CONTINGENCY AND CONTAINMENT PLAN FOR INADVERTENT RELEASE OF DRILLING FLUID SHALL BE ESTABLISHED PRIOR TO COMMENCEMENT OF WORK. THIS PLAN SHALL BE SUBMITTED TO THE TDOT PROJECT ENGINEER AND THE TDOT ENVIRONMENTAL DIVISION PERMITS AND/OR COMPLIANCE AND FIELD SERVICES OFFICE FOR REVIEW AND APPROVAL.

8. MAINTENANCE AND INSPECTION

8.1. INSPECTION PRACTICES (5.5.3.9.)

8.1.1. PROJECT EPSC INSPECTORS AND ENGINEERS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE INSPECTION, IMPLEMENTATION, MAINTENANCE. AND/OR REPAIR OF EPSC MEASURES SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS (5.5.3.10.):

8.1.1.1. SUCCESSFULLY COMPLETED THE TDOT EPSC INSPECTIONS TRAINING AND ANY RECERTIFICATION COURSE AS REQUIRED.

8.1.1.2. SUCCESSFULLY COMPLETED THE TDEC "LEVEL I - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL" COURSE AND ANY RECERTIFICATION COURSES AS REQUIRED.

8.1.1.3. BE A CURRENT TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT.

8.1.1.4. BE A CURRENT CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC).

8.1.1.5. SUCCESSFULLY COMPLETED TDEC "LEVEL II – DESIGN PRINCIPLES FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY RECERTIFICATION COURSE AS REQUIRED.

8.1.2. THE TDOT CONSTRUCTION ENGINEER (OR THEIR DULY AUTHORIZED REPRESENTATIVE) AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT CONSTRUCTION ENGINEER OR THEIR DULY AUTHORIZED REPRESENTATIVE SHALL COMPLETE THE EPSC INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

8.1.3. THE INSPECTOR SHALL CONDUCT PRE-CONSTRUCTION INSPECTIONS TO VERIFY AREAS THAT ARE NOT TO BE DISTURBED HAVE BEEN MARKED IN THE SWPPP AND IN THE FIELD BEFORE LAND DISTURBANCE ACTIVITIES BEGIN AND INITIAL MEASURES HAVE BEEN INSTALLED (10 "INSPECTOR") (5.5.1.f).

8.1.4. EPSC CONTROLS SHALL BE INSPECTED TO VERIFY MEASURES HAVE BEEN INSTALLED AND MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS, SPECIFICATIONS, AND GOOD ENGINEERING PRACTICES. EPSC INSPECTIONS SHALL BE DOCUMENTED ON THE TDOT EPSC INSPECTION REPORT FORM AND THE TDEC CONSTRUCTION STORMWATER INSPECTION CERTIFICATION (TWICE-WEEKLY INSPECTIONS) FORM.

8.1.5. OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING EROSION AND CONTROLLING SEDIMENT INCLUDING SIGNIFICANT IMPACTS TO SURROUNDING STATE WATERS, WOTUS (EPHEMERAL), WETLANDS, OTHER NATURAL RESOURCES AND ADJACENT PROPERTY OWNERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWN GRADIENT LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.

8.1.6. INSPECTIONS WILL BE CONDUCTED AT LEAST TWICE EVERY CALENDAR WEEK AND AT LEAST 72 HOURS APART (5.5.3.11.a). A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. QUALITY ASSURANCE INSPECTIONS OF TDOT EPSC, NPDES AND WATER QUALITY PERMIT REQUIREMENTS SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE.

8.1.7. THE FREQUENCY OF EPSC INSPECTIONS MAY BE REDUCED TO ONCE A MONTH WHERE SITES OR PORTIONS OF SITES HAVE BEEN TEMPORARILY STABILIZED UNTIL CONSTRUCTION ACTIVITIES RESUME WITH WRITTEN NOTIFICATION BY THE TDOT REGIONAL ENGINEER TO TDEC NASHVILLE CENTRAL OFFICE AND SUBSEQUENT TDEC APPROVAL. WRITTEN NOTIFICATION MUST INCLUDE THE INTENT TO CHANGE FREQUENCY AND JUSTIFICATION (5.5.3.11.a).

8.1.8. ALL DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN PERMANENTLY STABILIZED, AREAS USED FOR MATERIAL STORAGE THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND EACH OUTFALL WILL BE INSPECTED (5.5.3.11.b).

8.1.9. THE INSPECTOR WILL OVERSEE THE REQUIREMENTS OF OTHER CONSTRUCTION-RELATED WATER QUALITY PERMITS (I.E. TDEC ARAP, USACE SECTION 404, AND TVA SECTION 26a PERMITS) FOR CONSTRUCTION ACTIVITIES AROUND WATERS OF THE STATE (10 "INSPECTOR").

8.1.10. THE SWPPP WILL BE REVISED AS NECESSARY BASED ON THE RESULTS OF THE INSPECTION. REVISION(S) WILL BE RECORDED WITHIN 1 WEEK OF THE INSPECTION. REVISION(S) WILL BE IMPLEMENTED WITHIN 2 WEEKS OF THE INSPECTION (5.5.3.11.e AND 5.5.3.11.f).

8.1.11. DOCUMENTATION OF INSPECTIONS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER. REPORTS WILL BE SUBMITTED TO THE TDOT PROJECT ENGINEER PER THE CONTRACT.

8.1.12. THESE INSPECTION REQUIREMENTS DO NOT APPLY TO DEFINABLE AREAS OF THE SITE THAT HAVE MET PERMANENT STABILIZATION REQUIREMENTS AND HAVE BEEN NOTED IN THE SWPPP.

8.1.13. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES (5.5.3.11.h).

8.2. DULY AUTHORIZED REPRESENTATIVE (8.7.3.)

THE PROJECT ENGINEER MAY DELEGATE AN INDIVIDUAL AND/OR CONSULTANT TO SIGN EPSC INSPECTIONS REPORTS. FOR SATISFYING SIGNATORY REQUIREMENTS FOR EPSC INSPECTION REPORTS, THE PROJECT ENGINEER AND NEWLY AUTHORIZED INDIVIDUAL ACCEPTING RESPONSIBILITY MUST COMPLETE AND SIGN THE TDOT CONSTRUCTION DIVISION EPSC DELEGATION OF AUTHORITY.

8.3. MAINTENANCE PRACTICES (5.1 AND 8.13.)

8.3.1. ALL CONTROLS WILL BE MAINTAINED IN GOOD AND EFFECTIVE OPERATING ORDER AND IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES. (5.1. AND 5.5.3.1.b)

8.3.2. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

8.3.3. UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE, MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE 24-HOUR TIMEFRAME, WRITTEN DOCUMENTATION PROVIDED BY THE CONTRACTOR SHALL BE PLACED IN THE FIELD DIARY AND EPSC INSPECTION REPORT. AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION. (5.5.3.11.e).

8.3.4. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES (SEDIMENT TRAPS, SILT FENCE, SEDIMENT BASINS, OTHER CONTROLS, ETC.) WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). (5.5.3.1.d).

8.3.5. DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE STEPS TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE EPSC MEASURES AT THE CONTRACTOR'S OWN EXPENSE.

8.3.6. CHECK DAMS WILL BE INSPECTED FOR STABILITY. SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES ONE-HALF (½) THE HEIGHT OF THE DAM.

8.3.7. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS, DOES NOT MIGRATE INTO FEATURES REMOVED FROM, AND DOES NOT MIGRATE ONTO ADJACENT PROPERTIES AND/OR INTO WATERS OF THE STATE/U.S.

8.3.8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF THE SITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EROSION CONTROL WILL BE REMOVED (5.5.3.7.a).

8.3.9. ALL SEEDED AREAS WILL BE CHECKED FOR BARE SPOTS, EROSION WASHOUTS, AND VIGOROUS GROWTH FREE OF SIGNIFICANT WEED INFESTATIONS.

9. SITE ASSESSMENTS (5.5.3.8.)

QUALITY ASSURANCE SITE ASSESSMENTS OF EROSION PREVENTION AND SEDIMENT CONTROLS SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE GUIDELINES.

10. STORMWATER MANAGEMENT (5.5.3.11.h)

10.1. STORMWATER MANAGEMENT WILL BE HANDLED BY TEMPORARY CONTROLS OUTLINED IN THIS SWPPP AND ANY PERMANENT CONTROLS NEEDED TO MEET PERMANENT STORMWATER MANAGEMENT NEEDS IN THE POST CONSTRUCTION PERIOD. PERMANENT CONTROLS WILL BE DEPICTED ON THE PLANS AND NOTED AS PERMANENT.

10.2. DESCRIBE ANY SPECIFIC POST-CONSTRUCTION MEASURES THAT WILL CONTROL VELOCITY, POLLUTANTS, AND/OR EROSION (5.5.3.6.c): _____

10.3. OTHER ITEMS NEEDING CONTROL (5.5.3.7.)

CONSTRUCTION MATERIALS: THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

☒ LUMBER, GUARDRAIL, TRAFFIC CONTROL DEVICES
☒ CONCRETE WASHOUT
☒ PIPE CULVERTS (I.E. CONCRETE, CORRUGATED METAL, HDPE, ETC.)
☒ MINERAL AGGREGATES, ASPHALT
☒ EARTH
☒ LIQUID TRAFFIC STRIPING MATERIALS, PAINT
☒ ROCK
☒ CURING COMPOUND
☐ EXPLOSIVES
☐ OTHER _____

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

10.4. WASTE MATERIALS (5.5.3.7.c)

WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH THE TDOT CONSTRUCTION CONTRACT AND FEDERAL AND STATE REGULATIONS. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S) CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

10.5. HAZARDOUS WASTE (5.5.3.7.c) (8.8)

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S ON-SITE

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REPRESENTATIVE WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

10.6. SANITARY WASTE (5.5.3.7.b)

PORTABLE SANITARY FACILITIES WILL BE PROVIDED ON ALL CONSTRUCTION SITES. SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY LOCAL REGULATIONS. THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

10.7. OTHER MATERIALS

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

☒ FERTILIZERS AND LIME

☐ PESTICIDES AND/OR HERBICIDES

☒ DIESEL AND GASOLINE

☒ MACHINERY LUBRICANTS (OIL AND GREASE)

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

11. NON-STORMWATER DISCHARGES (5.5.3.12.)

11.1. THE FOLLOWING NON-STORMWATER DISCHARGES ARE ANTICIPATED DURING THE CONSTRUCTION OF THIS PROJECT (CHECK ALL THAT APPLY):

☒ DEWATERING OF WORK AREAS OF COLLECTED STORMWATER AND GROUND WATER.

☒ WATERS USED TO WASH VEHICLES (OF DUST AND SOIL) WHERE DETERGENTS ARE NOT USED AND DETENTION AND/OR FILTERING IS PROVIDED BEFORE THE WATER LEAVES THE SITE.

☒ WATER USED TO CONTROL DUST. (3.5.3.1.n)

☐ POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHING FROM WHICH CHLORINE HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE.

☐ UNCONTAMINATED GROUNDWATER OR SPRING WATER.

☐ FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH POLLUTANTS.

☐ OTHER: _____

11.2. ALL ALLOWABLE NON-STORMWATER DISCHARGES WILL BE DIRECTED TO STABLE DISCHARGE STRUCTURES PRIOR TO LEAVING THE SITE. FILTERING OR CHEMICAL TREATMENT MAY BE NECESSARY PRIOR TO DISCHARGE. ALL CHEMICAL TREATMENTS MUST BE APPLIED PER SECTION 6 FLOCCULANTS.

11.3. THE DESIGN OF ALL IMPACTED EPSC MEASURES RECEIVING FLOW FROM ALLOWABLE NON-STORMWATER DISCHARGES MUST BE DESIGNED TO HANDLE THE VOLUME OF THE NON-STORMWATER COMPONENT.

11.4. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS WILL NOT BE PERMITTED ON-SITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.

11.5. ARE ANY DISCHARGES ASSOCIATED WITH INDUSTRIAL (NON-CONSTRUCTION STORMWATER) ACTIVITY EXPECTED (5.5.1.g)?

☐ YES ☒ NO

IF YES, SPECIFY THE LOCATION OF THE ACTIVITY AND ITS PERMIT NUMBER: _____

12. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (5.5.3.7.c, 6.1)

12.1. SPILL PREVENTION (5.5.3.7.c)

12.1.1. CONTRACTOR'S BULK FUEL AND PETROLEUM PRODUCTS STORED ON-SITE OR ADJACENT TO THE R.O.W. IN ABOVE GROUND STORAGE TANKS WITH AGGREGATE STORAGE CAPACITY IN EXCESS OF 1,320 GALLONS SHALL HAVE SECONDARY CONTAINMENT.

12.1.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN AS REQUIRED BY TDOT SPECIAL PROVISION 107FP (REGARDING WATER QUALITY AND STORM WATER PERMITS) AND THE LAW PRIOR TO STORING 1320 GALLONS ON SITE.

12.1.3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ANY NECESSARY LOCAL, STATE, AND FEDERAL PERMITS. THE SPCC PLAN AND/OR PERMITS SHALL BE KEPT ON-SITE AND A COPY PROVIDED TO THE TDOT CONSTRUCTION ENGINEER.

12.2. MATERIAL MANAGEMENT

12.2.1. HOUSEKEEPING

ONLY CONSTRUCTION PRODUCTS NEEDED SHALL BE STORED ON-SITE BY THE CONTRACTOR. EXCEPT FOR BULK MATERIALS THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL. DUST GENERATED WILL BE CONTROLLED IN AN ENVIRONMENTALLY SAFE MANNER. VEGETATION AREAS NOT ESSENTIAL TO THE CONSTRUCTION PROJECT WILL BE PRESERVED AND MAINTAINED AS NOTED ON THE PLANS.

12.2.2. HAZARDOUS MATERIALS

PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS UNLESS THE CONTAINER IS NOT RE-SEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS WILL BE RETAINED IN A SAFE PLACE TO RELAY IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S LABEL DIRECTIONS FOR DISPOSAL WILL BE FOLLOWED. MAINTENANCE AND REPAIR OF ALL EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN THE ACCIDENTAL RELEASE OF CONTAMINANTS WILL BE CONDUCTED ON AN IMPERVIOUS SURFACE AND UNDER COVER DURING WET WEATHER TO PREVENT THE RELEASE OF CONTAMINANTS ONTO THE GROUND. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM. POTENTIAL pH-MODIFYING MATERIALS SUCH AS: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHINGS AND CURING WATERS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS WILL BE COLLECTED ON SITE AND MANAGED TO PREVENT CONTAMINATION OF STORMWATER RUNOFF.

12.3. PRODUCT SPECIFIC PRACTICES

12.3.1. PETROLEUM PRODUCTS: ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.

12.3.2. FERTILIZERS: FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED BY TDOT. ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER. FERTILIZERS WILL BE STORED IN AN ENCLOSED AREA UNDER COVER. THE CONTENTS OF PARTIALLY USED FERTILIZER BAGS WILL BE TRANSFERRED TO SEALABLE CONTAINERS TO AVOID SPILLS.

12.3.3. PAINTS: ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. THE EXCESS WILL BE DISPOSED OF PER THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.

12.3.4. CONCRETE TRUCKS: CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE, AND PROPERLY SIGNED. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED.

12.4. SPILL MANAGEMENT

IN ADDITION TO THE PREVIOUS HOUSEKEEPING AND MANAGEMENT PRACTICES, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP IF NECESSARY:

12.4.1. ALL ONSITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANGE OF LEAKAGE AND SPILLS.

12.4.2. FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.

12.4.3. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. SPILL RESPONSE EQUIPMENT SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.

12.4.4. ALL SPILLS SHALL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

12.4.5. THE CONTRACTOR'S RESPONSIBLE PARTY WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.

12.4.6. IF SPILLS REPRESENT AN IMMINENT THREAT OF ESCAPING THE SITE AND ENTERING RECEIVING WATERS, PERSONNEL WILL RESPOND IMMEDIATELY TO CONTAIN THE RELEASE AND NOTIFY THE SUPERINTENDENT AFTER THE SITUATION HAS BEEN STABILIZED.

12.4.7. IF AN OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.

12.4.8. IF A SPILL OCCURS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM AND FOR REPORTING THE SPILL TO THE TDOT PROJECT RESPONSIBLE PARTY. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

12.5. SPILL NOTIFICATION (6.1)

WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO, OR MORE THAN A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD:

12.5.1. THE TDOT PROJECT ENGINEER IS RESPONSIBLE FOR NOTIFYING THE REGIONAL PROJECT DEVELOPMENT OFFICE (E.G. TRANSPORTATION ENVIRONMENTAL STUDIES SPECIALIST) AS SOON AS HE OR SHE HAS KNOWLEDGE OF THE DISCHARGE.

12.5.2. THE TDOT REGIONAL PROJECT DEVELOPMENT OFFICE WILL NOTIFY THE LOCAL TDEC ENVIRONMENTAL FIELD OFFICE AND ANY OTHER APPLICABLE REGULATORY AGENCIES WITHIN 24 HOURS OF THE SPILL.

12.5.3. IN ADDITION TO ANY FOLLOW UP NOTIFICATIONS REQUIRED BY FEDERAL LAW, A WRITTEN DESCRIPTION OF THE RELEASE, DATE OF RELEASE AND CIRCUMSTANCES LEADING TO THE RELEASE, WHAT ACTIONS WERE TAKEN TO MITIGATE EFFECTS OF THE RELEASE, AND STEPS TAKEN TO MINIMIZE THE CHANCE OF FUTURE OCCURRENCES WILL BE SUBMITTED TO THE APPROPRIATE TDEC ENVIRONMENTAL FIELD OFFICE WITHIN 2 WEEKS OF KNOWLEDGE OF THE RELEASE.

12.5.4. THE SWPPP MUST BE MODIFIED WITHIN 2 WEEKS OF KNOWLEDGE OF THE RELEASE PROVIDING A DESCRIPTION OF THE RELEASE, CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF RELEASE. THE SWPPP WILL BE REVIEWED AND MODIFIED AS NECESSARY TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES.

13. RECORD-KEEPING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	S-6

13.1. REQUIRED RECORDS

TDOT OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MAINTAIN AT THE SITE THE FOLLOWING RECORDS OF CONSTRUCTION ACTIVITIES (7.2.1.) (7.2.1.):

13.1.1. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR.

13.1.2. THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.

13.1.3. THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

13.1.4. RECORDS EPSC INSPECTION REPORTS AND CORRECTIVE MEASURES.

13.1.5. RECORDS OF QUALITY ASSURANCE SITE ASSESSMENTS.

13.1.6. COPY OF SITE EPSC INSPECTOR'S CERTIFICATION AND/OR LICENSING

13.1.7. A COPY OF ANY REGULATORY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE SWPPP OR EPSC CONTROLS.

13.2. RAINFALL MONITORING PLAN (7.2.1.):

13.2.1. EQUIPMENT
AT A MINIMUM, THE CONTRACTOR WILL INSTALL A FENCE POST TYPE RAIN GAUGE TO MEASURE RAINFALL. THE STANDARD FENCE POST RAIN GAUGE WILL BE A WEDGE-SHAPED GAUGE THAT MEASURES UP TO 6 INCHES OF RAINFALL. AN ENGLISH SCALE WILL BE PROVIDED ON ONE FACE, WITH A METRIC SCALE ON THE OTHER FACE. GRADUATION WILL BE PERMANENTLY MOLDED IN DURABLE WEATHER-RESISTANT PLASTIC. THE MINIMUM GRADUATION WILL BE 0.01 INCH (OR 0.1MM). AN ALUMINUM BRACKET WITH SCREWS MAY BE USED TO MOUNT THE GAUGE ON A WOODEN SUPPORT.

13.2.2. LOCATION
THE RAIN GAUGE WILL BE LOCATED AT OR ALONG THE PROJECT SITE, AS DEFINED IN THE NOI OF THE NPDES PERMIT, IN AN OPEN AREA SUCH THAT THE MEASUREMENT WILL NOT BE INFLUENCED BY OUTSIDE FACTORS (I.E. OVERHANGS, GUTTER, TREES, ETC.). AT LEAST ONE RAIN GAUGE PER LINEAR MILE IS REQUIRED ALONG (AS MEASURED ALONG THE CENTERLINE OF THE PRIMARY ALIGNMENT) THE PROJECT WHERE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING IS ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED.

13.2.3. METHODS
RAINFALL MONITORING WILL BE INITIATED PRIOR TO CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING, OR FILLING, EXCEPT AS SUCH MINIMAL CLEARING MAY BE NECESSARY TO INSTALL A RAIN GAUGE IN AN OPEN AREA. THE RAIN GAUGE WILL BE CHECKED FOR OPERATIONAL SOUNDNESS DAILY (DURING NORMAL BUSINESS HOURS) IN WET TIMES AND WEEKLY IN DRY TIMES. GAUGES WILL BE REPAIRED OR REPLACED ON THE SAME DAY IF FOUND TO BE NON-OPERATIONAL OR MISSING.

13.2.4. EACH RAIN GAUGE WILL BE READ (FOR DETAILED RECORDS OF RAINFALL) AND EMPTIED AFTER EVERY RAINFALL EVENT OCCURRING ON THE PROJECT SITE AT APPROXIMATELY THE SAME TIME OF THE DAY (DURING NORMAL BUSINESS HOURS). DURING PERIODS OF DRY CONDITIONS, IT WILL NOT BE NECESSARY TO READ THE RAIN GAUGE EVERY DAY. IN LIEU OF THIS REQUIREMENT ON WEEKENDS AND ON STATE HOLIDAYS, THE RAIN GAUGES CAN BE EMPTIED THE NEXT BUSINESS DAY AND A REFERENCE SITE USED FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION FOR THOSE DAYS. A REFERENCE SITE IS THE DOCUMENTATION FROM THE CLOSEST GAUGE WITHIN PROXIMITY OF THE PROJECT FROM A RECOGNIZED SOURCE SUCH AS THE NOAA NATIONAL WEATHER SERVICE.

13.2.5. DETAILED RECORDS WILL BE RECORDED OF RAINFALL EVENTS INCLUDE DATES, AMOUNTS OF RAINFALL, AND THE APPROXIMATE DURATION (OR THE STARTING AND ENDING TIMES). THE RAINFALL RECORDS SHALL BE RECORDED ON THE TDOT RAINFALL RECORD SHEET AND SHALL BE MAINTAINED IN THE "DOCUMENTATION AND PERMITS" BINDER.

13.2.6. IF THE RAINFALL EVENT IS STILL IN PROGRESS AT THE DAILY RECORDING TIME, THE GAUGE WILL BE EMPTIED AND THE RECORD WILL INDICATE THAT THE STORM EVENT WAS STILL IN PROGRESS.

13.2.7. RAIN GAUGE INFORMATION (DETAILED RECORDS), INCLUDING THE LOCATION OF THE NEAREST OUTFALL, WILL BE RECORDED ON THE EPSC INSPECTION REPORT FORMS AT THE TIME OF MEASUREMENT.

13.3. KEEPING PLANS CURRENT (5.4.)

13.3.1. THE EPSC PLAN IS TO SERVE AS AN INITIAL GUIDE FOR SITE PERSONNEL AS THE CONSTRUCTION PROCESS DEVELOPS. IT MUST BE AMENDED, MODIFIED, AND UPDATED WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL REGULATORY OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY.

13.3.2. THE STAGES DEPICTED WITHIN THE EPSC PLANS MAY NOT COINCIDE WITH THE ACTUAL STAGES OF CONSTRUCTION ESTABLISHED BY THE CONTRACTOR DURING CONSTRUCTION, THUS MODIFICATIONS WILL BE REQUIRED TO ENSURE THE EPSC PLAN IS MAINTAINED TO DEPICT CURRENT SITE CONDITIONS. IT SHOULD BE MAINTAINED SUCH THAT IT WILL ALWAYS REFLECT THE MEASURES THAT ARE INSTALLED DURING THE VARIOUS STAGES OF CONSTRUCTION. IT IS IMPRACTICAL TO DETERMINE ALL THE INTERMEDIATE STAGES OF CONSTRUCTION THAT WILL OCCUR, THUS THESE DOCUMENTS MUST BE UPDATED THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT.

13.3.3. THE TDOT EPSC INSPECTOR OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MODIFY AND UPDATE THE SWPPP WHEN ANY OF THE FOLLOWING CONDITIONS APPLY:

13.3.3.1. WHENEVER THERE IS A CHANGE IN THE SCOPE OF THE PROJECT THAT WOULD BE EXPECTED TO HAVE A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE SWPPP;

13.3.3.2. WHENEVER INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE, OR FEDERAL OFFICIALS INDICATE THE SWPPP IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM CONSTRUCTION ACTIVITY SOURCES, OR IS OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY; WHERE LOCAL, STATE, OR FEDERAL OFFICIALS DETERMINE THAT THE SWPPP IS INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES, A COPY OF ANY CORRESPONDENCE TO THAT EFFECT MUST BE RETAINED IN THE SWPPP;

13.3.3.3. WHEN ANY NEW OPERATOR AND/OR SUB-OPERATOR IS ASSIGNED OR RELIEVED OF THEIR RESPONSIBILITY TO IMPLEMENT A PORTION OF THE SWPPP;

13.3.3.4. TO PREVENT A NEGATIVE IMPACT TO LEGALLY PROTECTED STATE OR FEDERALLY LISTED OR PROPOSED THREATENED OR ENDANGERED AQUATIC FAUNA;

13.3.3.5. WHEN THERE IS A CHANGE IN CHEMICAL TREATMENT METHODS INCLUDING: USE OF DIFFERENT TREATMENT CHEMICALS, DIFFERENT DOSAGE OR APPLICATION RATES OR A DIFFERENT AREA OF APPLICATION NOT SPECIFIED ON THE EPSC PLANS.

13.3.3.6. ALL SWPPP REVISION(S) SHALL BE RECORDED WITHIN 1 WEEK BY THE PROJECT EPSC INSPECTOR.

13.3.3.7. WHEN A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION), CONSTRUCTION SHALL NOTIFY THE PERMITS SECTION FOR PROPER COORDINATION.

13.4. MAKING PLANS ACCESSIBLE

13.4.1. TDOT WILL RETAIN A COPY OF THIS SWPPP (INCLUDING A COPY OF THE "DOCUMENTATION AND PERMITS" BINDER AT THE CONSTRUCTION SITE (OR OTHER LOCATION ACCESSIBLE TO TDEC AND THE PUBLIC) FROM THE DATE CONSTRUCTION COMMENCES TO THE DATE OF PERMANENT STABILIZATION. TDOT WILL HAVE A COPY OF THE SWPPP AVAILABLE AT THE LOCATION WHERE WORK IS OCCURRING ON-SITE FOR THE USE OF OPERATORS AND THOSE IDENTIFIED AS HAVING RESPONSIBILITIES UNDER THE SWPPP WHENEVER THEY ARE ON THE CONSTRUCTION SITE (7.2.).

13.4.2. PRIOR TO THE INITIATION OF LAND DISTURBING ACTIVITIES AND UNTIL THE SITE HAS MET THE PERMANENT STABILIZATION CRITERIA, TDOT OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL POST A NOTICE NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE WITH THE FOLLOWING INFORMATION (5.3.4.) (7.2.1.):

13.4.2.1. A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT NUMBER FOR THE PROJECT;

13.4.2.2. THE INDIVIDUAL NAME, COMPANY NAME, E-MAIL ADDRESS (IF APPLICABLE) AND TELEPHONE NUMBER OF THE LOCAL PROJECT SITE OWNER AND OPERATOR CONTACT;

13.4.2.3. A BRIEF DESCRIPTION OF THE PROJECT; AND

13.4.2.4. THE LOCATION OF THE SWPPP.

13.4.3. ALL INFORMATION DESCRIBED IN SECTION 13.4.2 MUST BE MAINTAINED IN LEGIBLE CONDITION. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE DUE TO SAFETY CONCERNS, THE NOTICE SHALL BE POSTED IN A LOCAL BUILDING. THE NOTICE MUST BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION WHERE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY.

13.5. NOTICE OF TERMINATION (9.0.)

13.5.1. WHEN ALL STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE AUTHORIZED BY THE PERMIT ARE ELIMINATED BY PERMANENT STABILIZATION, THE TDOT REGIONAL ENGINEER WILL SUBMIT A NOTICE OF TERMINATION (NOT) THAT IS SIGNED IN ACCORDANCE WITH THE PERMIT TO THE TDEC CENTRAL OFFICE IN NASHVILLE, TN.

13.5.2. FOR THE PURPOSES OF THE CERTIFICATION REQUIRED BY THE NOT, THE ELIMINATION OF STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY MEANS THE

13.5.2.1. ALL EARTH-DISTURBING ACTIVITIES ON THE SITE ARE COMPLETED AND ALL DISTURBED SOILS AT THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL HAVE BEEN PERMANENTLY STABILIZED; AND

13.5.2.2. ALL CONSTRUCTION MATERIALS, WASTE AND WASTE HANDLING DEVICES, AND ALL EQUIPMENT, AND VEHICLES THAT WERE USED DURING CONSTRUCTION HAVE BEEN REMOVED AND PROPERLY DISPOSED; AND

13.5.2.3. ALL STORMWATER CONTROLS THAT WERE INSTALLED AND MAINTAINED DURING CONSTRUCTION, EXCEPT THOSE THAT ARE INTENDED FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE, HAVE BEEN REMOVED; AND

13.5.2.4. ALL POTENTIAL POLLUTANTS AND POLLUTANT GENERATING ACTIVITIES ASSOCIATED WITH CONSTRUCTION HAVE BEEN REMOVED; AND

13.5.2.5. THE PERMITTEE HAS IDENTIFIED WHO IS RESPONSIBLE FOR ONGOING MAINTENANCE OF ANY STORMWATER CONTROLS LEFT ON THE SITE FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE; AND

13.5.2.6. TEMPORARY EPSC MEASURES HAVE BEEN OR WILL BE REMOVED AT AN APPROPRIATE TIME TO ENSURE PERMANENT STABILIZATION IS MAINTAINED; AND

13.5.2.7. ALL STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDENTIFIED SITE THAT ARE AUTHORIZED BY A NPDES GENERAL PERMIT HAVE OTHERWISE BEEN ELIMINATED FROM THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL.

13.6. RETENTION OF RECORDS (7.1.)

TDOT WILL RETAIN COPIES OF THE SWPPP, ALL REPORTS REQUIRED BY THE PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT FOR THE PROJECT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THE NOT WAS FILED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	S-7

14. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (8.7.5.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED BY ME, OR UNDER MY DIRECTION OR SUPERVISION. THE SUBMITTED INFORMATION IS TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

AUTHORIZED TDOT PERSONNEL SIGNATURE (5.3.3.)

Mark Doty
PRINTED NAME

TDOT Manager
TITLE

2/9/24
DATE

15. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (8.7.6.)

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE REVIEWED THIS DOCUMENT, ANY ATTACHMENTS, AND THE SWPPP REFERENCED ABOVE. BASED ON MY INQUIRY OF THE CONSTRUCTION SITE OWNER/DEVELOPER IDENTIFIED ABOVE AND/OR MY INQUIRY OF THE PERSON DIRECTLY RESPONSIBLE FOR ASSEMBLING THIS NOI AND SWPPP, I BELIEVE THE INFORMATION SUBMITTED IS ACCURATE. I AM AWARE THAT THIS NOI, IF APPROVED, MAKES THE ABOVE-DESCRIBED CONSTRUCTION ACTIVITY SUBJECT TO NPDES PERMIT NUMBER TNR100000, AND THAT CERTAIN OF MY ACTIVITIES ONSITE ARE THEREBY REGULATED. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS, AND FOR FAILURE TO COMPLY WITH THESE PERMIT REQUIREMENTS. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

AUTHORIZED CONTRACTOR PERSONNEL SIGNATURE (5.3.3.)

PRINTED NAME

TITLE

DATE

16. ENVIRONMENTAL PERMITS (1.5.2.)

LIST ALL ENVIRONMENTAL PERMITS AND EXPIRATION DATES FOR PROJECT **(TO BE COMPLETED AT THE ENVIRONMENTAL PRECONSTRUCTION MEETING BY TDOT CONSTRUCTION OR THEIR DULY AUTHORIZED REPRESENTATIVE)**:

ENVIRONMENTAL PERMITS			
PERMIT	**YES OR NO**	**PERMIT OR TRACKING NO.**	**EXPIRATION DATE***
TDEC ARAP	YES	NRS23.293	
CORPS OF ENGINEERS (USACE)	NO		
TVA 26A	NO		
TDEC CGP	NO		
OTHER:			

*THE TDOT ENVIRONMENTAL DIVISION MUST BE NOTIFIED SIX MONTHS PRIOR TO PERMIT EXPIRATION DATE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	S-8

17. OUTFALL TABLE (5.5.1.c, 6.4.1.e, 6.4.1.f)

OUTFALL LABEL	SUB OUT-FALL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	STAGE 1 DRAINAGE AREA (AC)	STAGE 2 DRAINAGE AREA (AC)	STAGE 3 DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	SEDIMENT TRAP OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING RESOURCE (TDOT EBR LABEL) OR OTHER	COMMENTS
1		SR-70 114+20 RT	7.0	0.7	0.7				Honeycutt Creek	
2		SR-70 116+20 RT	15.0	0.4	0.4				Honeycutt Creek	
3		SR-70 116+50 LT	13.0	0.5	0.4				Honeycutt Creek	
4		SR-70 122+00 RT	8.0	1.2	1.0				Honeycutt Creek	
5		SR-70 113+50 LT	8.0		0.8				Honeycutt Creek	

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	S-7

14. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (8.7.5.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED BY ME, OR UNDER MY DIRECTION OR SUPERVISION. THE SUBMITTED INFORMATION IS TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

AUTHORIZED TDOT PERSONNEL SIGNATURE (5.3.3.)

Mark Doty
PRINTED NAME

TDOT Manager
TITLE

2/9/24
DATE

15. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (8.7.6.)

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE REVIEWED THIS DOCUMENT, ANY ATTACHMENTS, AND THE SWPPP REFERENCED ABOVE. BASED ON MY INQUIRY OF THE CONSTRUCTION SITE OWNER/DEVELOPER IDENTIFIED ABOVE AND/OR MY INQUIRY OF THE PERSON DIRECTLY RESPONSIBLE FOR ASSEMBLING THIS NOI AND SWPPP, I BELIEVE THE INFORMATION SUBMITTED IS ACCURATE. I AM AWARE THAT THIS NOI, IF APPROVED, MAKES THE ABOVE-DESCRIBED CONSTRUCTION ACTIVITY SUBJECT TO NPDES PERMIT NUMBER TNR100000, AND THAT CERTAIN OF MY ACTIVITIES ONSITE ARE THEREBY REGULATED. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS, AND FOR FAILURE TO COMPLY WITH THESE PERMIT REQUIREMENTS. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

AUTHORIZED CONTRACTOR PERSONNEL SIGNATURE (5.3.3.)

PRINTED NAME

TITLE

DATE

16. ENVIRONMENTAL PERMITS (1.5.2.)

LIST ALL ENVIRONMENTAL PERMITS AND EXPIRATION DATES FOR PROJECT **(TO BE COMPLETED AT THE ENVIRONMENTAL PRECONSTRUCTION MEETING BY TDOT CONSTRUCTION OR THEIR DULY AUTHORIZED REPRESENTATIVE)**:

ENVIRONMENTAL PERMITS			
PERMIT	**YES OR NO**	**PERMIT OR TRACKING NO.**	**EXPIRATION DATE***
TDEC ARAP	YES	NRS23.293	
CORPS OF ENGINEERS (USACE)	NO		
TVA 26A	NO		
TDEC CGP	NO		
OTHER:			

*THE TDOT ENVIRONMENTAL DIVISION MUST BE NOTIFIED SIX MONTHS PRIOR TO PERMIT EXPIRATION DATE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	S-8

17. OUTFALL TABLE (5.5.1.c, 6.4.1.e, 6.4.1.f)

OUTFALL LABEL	SUB OUT-FALL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	STAGE 1 DRAINAGE AREA (AC)	STAGE 2 DRAINAGE AREA (AC)	STAGE 3 DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	SEDIMENT TRAP OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING RESOURCE (TDOT EBR LABEL) OR OTHER	COMMENTS
1		SR-70 114+20 RT	7.0	0.7	0.7				Honeycutt Creek	
2		SR-70 116+20 RT	15.0	0.4	0.4				Honeycutt Creek	
3		SR-70 116+50 LT	13.0	0.5	0.4				Honeycutt Creek	
4		SR-70 122+00 RT	8.0	1.2	1.0				Honeycutt Creek	
5		SR-70 113+50 LT	8.0		0.8				Honeycutt Creek	

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TENN.	YEAR	SHEET NO.
	2025	U1-1
FED. AID PROJ. NO.	BR-STP-70(24)	
STATE PROJ. NO.	37011-3237-94	

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HAWKINS COUNTY

SR-70;
BRIDGE OVER NORFOLK SOUTHERN RAILROAD
L.M. 6.19 (IA)

PS&E

GRADE, DRAIN, BRIDGE, PAVE, AND SIGN

STATE HIGHWAY NO. 70 F.A.H.S. ROUTE NO. NA

UTILITIES INDEX

SHEET NAME	SHEET NUMBER
UTILITY INDEX, UTILITY OWNERS	U1 SERIES
HOLSTON ELECTRIC COOPERATIVE	U2 SERIES
AT&T	U3 SERIES
HAWKINS COUNTY GAS UTILITY DISTRICT	U4 SERIES

UTILITIES IN ROADWAY CONTRACT

ELEC: HOSLTON ELECTRIC COOPERATIVE P.O. BOX 190 1200 WEST MAIN ST. ROGERSVILLE, TN 37857 JASON MONTGOMERY 423-677-2743 (MOVE-IN-STATE)	GAS: HAWKINS COUNTY GAS UTILITY DISTRICT 202 PARK BLVD. ROGERSVILLE, TN 37857 PATRICK LUND 423-358-0339 (MOVE-IN-STATE)
COMM: AT&T 9733 PARKSIDE DR. KNOXVILLE, TN 37922 JAY FRAZIER 865-387-2685 (NO COST)	

UTILITIES NOT IN ROADWAY CONTRACT

COMM: CHARTER COMMUNICATIONS 1774 HENRY G. LANE ST MARYVILLE, TN 37801 BILLY CLICK 865-388-7524 (NO-CONFLICT)	WATER: PERSIA UTILITY DISTRICT 206 HWY 70 SOUTH ROGERSVILLE, TN 37860 ANTHONY RICHARDS (423) 748-5689 (NO-CONFLICT)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITY INDEX,
UTILITY OWNERS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U2-1

S.R. 70 BRIDGE OVER HAWKINS CO.
NORFOLK SOUTHERN RR
37011-3237-94
BR-STP-70(24)
PIN #124383.00

UTILITIES INDEX

SHEET NAME	SHEET NUMBER
ESTIMATED UTILITY QUANTITIES	U2-1
SPECIAL CONDITIONS	U2-2
UTILITY RELOCATION STA. 113+00 TO STA. 123+00	U2-3
UTILITY RELOCATION STA. 123+00 TO STA. 135+00	U2-4
UTILITY RELOCATION DETAILS	U2-5
UTILITY RELOCATION DETAILS	U2-6
UTILITY RELOCATION DETAILS	U2-7
UTILITY RELOCATION DETAILS	U2-8

ESTIMATED UTILITY QUANTITIES

	ITEM NO.	DESCRIPTION	HEC Standard drawings	UNIT	Project No. 1: 37011-2237-94 QUANTITY	% Utility Betterment	%Project Public	%Project Private	Amount Betterment
1	760-15.17	GUY MARKER	E3-10	EA	5		95.00%	5.00%	$0.00
1	790-04.02	POLE 45FT CLASS 2 WOOD		EA	7		95.00%	5.00%	$0.00
1	790-04.03	POLE 45FT CLASS 3 WOOD		EA	2		95.00%	5.00%	$0.00
2	790-05.01	POLE 50FT CLASS 1 WOOD		EA	1		95.00%	5.00%	$0.00
2	790-21.09	1-PH PRIMARY TAP 15KV	A5-2	EA	1		95.00%	5.00%	$0.00
2	790-25.11	3Ph CROSSARM DBL PRIM SUP LRG COND 15KV (C1-3, C1-3D)	C1-3-D	EA	5		95.00%	5.00%	$0.00
2	790-25.42	3PH CROSSARM DOUBLE SMALL ANGLE 15KV (C2)	C2-2-D	EA	3		95.00%	5.00%	$0.00
2	790-25.24	3PH CROSSARM DDE LRG COND 15KV	C8, C8-1	EA	5		95.00%	5.00%	$0.00
2	790-32.01	DOWN GUY - THROUGH BOLT TYPE	E3-6	EA	8		95.00%	5.00%	$0.00
	790-32.21	OH GUY HVY CONST - THROUGH BOLT TYPE	E4-6	EA	2		95.00%	5.00%	$0.00
	790-36.02	TRANSFER CAPACITOR BANK	M9-13S	EA	1		95.00%	5.00%	$0.00
	790-40.05	OH COND 3/0 6/1 ACSR PIGEON		L.F.	1452		95.00%	5.00%	$0.00
	790-40.42	OH COND 336.4 19 ACC ULIP		L.F.	403		95.00%	5.00%	$0.00
	790-40.46	OH COND 556.5 19 AAC DAHLIA		L.F.	1209		95.00%	5.00%	$0.00
	790-40.49	OH COND 795 37 AAC ARBUTUS		L.F.	4356		95.00%	5.00%	$0.00
	790-58.03	CUTOUT KNIFE SWITCH, SNGL LOADBREAK 15KV	M5-9	EA	1		95.00%	5.00%	$0.00
	790-68.01	POLE GROUND ROD TYPE	M2-11	EA	10		95.00%	5.00%	$0.00
	790-72.01	ANCHOR POWER SCREW	F1-5S	EA	5		95.00%	5.00%	$0.00
	790-98.01	REMOVE WIRE		L.F.	7950		95.00%	5.00%	$0.00
3	790-98.02	REMOVE POLES		EA	9		95.00%	5.00%	$0.00
4	790-98.03	REMOVE FRAMING/ASSOCIATED APPARATUS		EA	20		95.00%	5.00%	$0.00
5	793-98.08	REMOVE ANCHOR (ANY SIZE)		EA	3		95.00%	5.00%	$0.00
	793-98.09	REMOVE DOWN GUY		EA	3		95.00%	5.00%	$0.00
	790-74.31	SECONDARY ASSEMBLIES MISC	F1	EA	6		95.00%	5.00%	#REF!
6	790-74.33	FIBER DOUBLE DEADEND ASSEMBLY	DDE-S	EA	7		95.00%	5.00%	$0.00
7	793-04.08	TRANSFER AERIAL CABLE	CFO(12)(144)	EA	9		95.00%	5.00%	$0.00
8	793-04.07	AERIAL SPLICE CLOSURE (FIBER)	G6 NAP	EA	1		95.00%	5.00%	$0.00

FOOTNOTES:

1. INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO SETUP, TRAFFIC CONTROL, DIGGING HOLE, FILLING HOLE, BLASTING, BUTT SINGLE GROUND ROD, MGNV, NUMBERING POLE WRAP OR
2. ASSEMBLIES OF SIMILAR CONSTRUCTION BUT DIFFERING ONLY IN USE OF EPOXY VS. PORCELAIN INSULATORS OR FIBERGLASS VS. WOOD CROSSARMS OR LACK OF NEUTRAL ASSEMBLY SHOULD BE GROUPED WITHIN THE SAME ITEM.
3. INCLUDES DROP WIRE, OH GUYS, MAIN LINE WIRE
4. INCLUDES MAINLINE POLES, SERVICE POLES,STUB POLES
5. INCLUDES CROSSARMS, TRANSFORMERS, SWITCHES, ETC.
6. INCLUDES MOUNTING HARDWARE, BONDING/GROUNDING, STRAND
7. NCLUDES ALL MATERIALS AND EQUIPMENT INCLUDING BUT NOT LIMITED TO MOUNTING HARDWARE, BONDING/GROUNDING, STRAND SIZE AS INDICATED IN SPECS., AND LOOPS.
8. INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO SETUP, TRAFFIC CONTROL, MOUNTING HARDWARE, BONDING/GROUNDING AND SPLICING.

UTILITY COMPANY CONTACT

JASON MONTGOMERY
HOLSTON ELECTRIC COOPERATIVE
DIRECTOR OF ENGINEERING
1200 WEST MAIN ST.
ROGERSVILLE, TN. 37857
423-272-8821
EMAIL: JMONTGOMERY@HOLSTONELECTRIC.COM

SEALED BY

DERICK WILLIAMS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 134898
6/5/2025
STATE OF TENNESSEE

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

Holston Electric Cooperative
A Touchstone Energy® Cooperative

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED UTILITY QUANTITIES

SCALE: N.T.S.

6/5/2025
Z:\01370-0008\03-Drawings\03-Utilities\U2-1.SHT

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U2-2

S.R. 70 BRIDGE OVER NORFOLK SOUTHERN RR — HAWKINS CO.
37011-3237-94
BR-STP-70(24)
PIN #124383.00

GENERAL NOTES:

1. THE TOPOGRAPHIC & BOUNDARY DATA WAS TAKEN FROM A SURVEY RECEIVED FROM TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT).
2. ALL CONTRACTOR INSTALLATIONS MUST BE INSPECTED BY HEC. CONTACT HEC ENGINEERING AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION.
3. LOCATE EXISTING UTILITIES. CALL THE TENNESSEE ONE CALL SYSTEM AT 1-800-351-1111.
4. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS TO NOTIFY THEM OF WORK IN THE AREA AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY. NOTIFICATION SHALL BE GIVEN AT LEAST THREE BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
5. THE LOCATIONS OF THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY POTHOLING AND BY CONTACTING THE UTILITY COMPANIES INVOLVED.
6. PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING THE CONSTRUCTION OF THIS PROJECT. FURNISH ANY SPECIAL EQUIPMENT REQUIRED TO WORK OVER AND AROUND THE UTILITIES AT NO ADDITIONAL COST.
7. TRENCH DESIGN AND SAFETY FOR UNDERGROUND CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
8. THE PROPOSED SITE LAYOUT SHOWN ON THESE DRAWINGS IS APPROXIMATE. REFER TO ROADWAY PLANS FOR ACTUAL DIMENSIONS. COORDINATE WITH ON-SITE SURVEYOR TO MARK PROPOSED FACILITIES, PROPOSED GRADE CHANGE, AND RIGHT-OF-WAY BEFORE SETTING POLES. ALL INSTALLATIONS SHALL BE LOCATED OUTSIDE OF PAVED AREAS UNLESS OTHERWISE NOTED.
9. TDOT WILL IMPLEMENT AND MAINTAIN TRAFFIC CONTROL AS SHOWN ON PLANS. THIS DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES TO THE SAFETY OF THE TRAVELING PUBLIC. CONTRACTOR IS RESPONSIBLE FOR INCLUDING ANY ADDITIONAL TRAFFIC CONTROL DEEMED NECESSARY IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
10. EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH TDEC'S EROSION AND SEDIMENT CONTROL HANDBOOK. DAMAGES TO ADJACENT PROPERTY AND/OR THE CONSTRUCTION SITE CAUSED BY THE CONTRACTOR'S FAILURE TO PROVIDE AND MAINTAIN ADEQUATE DRAINAGE AND EROSION/SEDIMENT CONTROL FOR THE CONSTRUCTION AREA SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
11. QUANTITIES SHOWN ON MATERIAL LISTS ARE NOT INTENDED TO BE CONTRACTUAL LIMITS. BIDDER SHALL EXAMINE JOB SITE, PLANS, SPECIFICATIONS, AND STANDARDS AND SHALL INCLUDE ALL INCIDENTAL MATERIALS AND QUANTITIES NEEDED FOR A COMPLETE INSTALLATION.

TDOT STANDARD UTILITY NOTES

1. EXCEPT FOR EROSION SEDIMENT CONTROL ITEMS, NO ROADWAY OR BRIDGE ITEMS SHALL BE UTILIZED TO COMPENSATE FOR WORK METHODS OR MATERIALS ASSOCIATED WITH AND/OR SPECIFIED FOR THE UTILITY INSTALLATION, EVEN THOUGH THE SAME OR SIMILAR ROADWAY OR BRIDGE MATERIALS MAY HAVE BEEN CALLED FOR IN THE UTILITY SPECIFICATIONS OR DRAWINGS.
2. ALL MATERIALS, METHODS, AND/OR INTEGRAL MATERIALS OUTLINED IN THE UTILITY SPECIFICATIONS OR DRAWINGS NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL INSTALLATION MUST BE INCLUDED IN THE UNIT PRICE FOR THE ASSOCIATED UTILITY WORK ITEM.
3. THE CONTRACTOR MUST MAINTAIN ALL SERVICES DURING THE CONSTRUCTION OF THE RELOCATED FACILITY. ANY COSTS ASSOCIATED WITH INSTALLATION OF REQUIRED TEMPORARY SERVICE LINES DUE TO THE ROADWAY CONSTRUCTION SEQUENCE OF WORK (I.E., CUTS, FILLS, PHASING, ETC.) SHALL BE INCLUDED IN THE COST OF THE PERMANENT UTILITY ITEMS.
4. IT SHALL BE THE RESPONSIBILITY OF THE PRIME CONTRACTOR'S SURVEYOR TO LAY OUT ALL THE FACILITIES BEING RELOCATED WITHIN THE CONTRACT.
5. FOR BURIED UTILITIES, THE PRIME CONTRACTOR OR SUBCONTRACTOR SHALL BE REQUIRED TO PROVIDE TO THE UTILITY, UPON COMPLETION OF THE UTILITY'S RELOCATION WORK, A SET OF AS-BUILT DRAWINGS FOR THEIR RECORDS. THESE AS-BUILT DRAWINGS SHALL BE PREPARED AS THE JOB PROGRESSES TO ENSURE THEIR ACCURACY.
6. WHERE EROSION CONTROL MEASURES ARE NEEDED FOR THE UTILITY RELOCATION WORK OCCURRING INSIDE OR OUTSIDE STATE RIGHT-OF-WAY, THE CONTRACTOR SHALL SUBMIT TO THE TDOT PROJECT SUPERVISOR FOR APPROVAL A PROPOSED EROSION AND SEDIMENT CONTROL PLAN PRIOR TO BEGINNING THE WORK. TDOT APPROVAL MUST BE RECEIVED BEFORE THE EROSION CONTROL PAY ITEMS FOR ROADWAY CONSTRUCTION CAN BE USED FOR ANY ADDITIONAL EROSION CONTROL MEASURES REQUIRED FOR THE UTILITY RELOCATION WORK.
7. DRIVEWAY, SIDEWALK, AND ROADWAY TEMPORARY RESTORATION SHALL BE PART OF THE IN-PLACE COST OF PLACING THE UTILITY ITEM WITHIN THE RIGHT-OF-WAY.

ELECTRIC UTILITY NOTES:

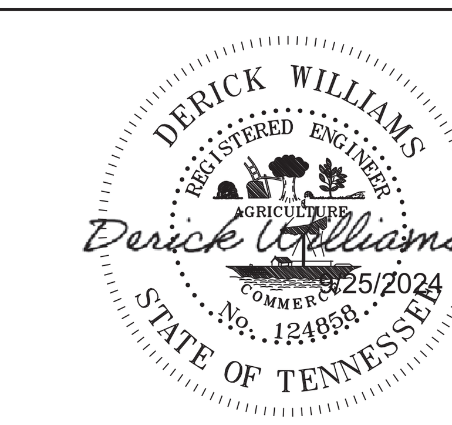
1. WORK SHALL CONFORM TO NATIONAL, STATE, & LOCAL CODES AS WELL AS TO HOLSTON ELECTRIC COOPERATIVE (HEC) STANDARD DRAWINGS, SPECIFICATIONS, & CONTRACT DOCUMENTS. WHERE A CONFLICT EXISTS BETWEEN APPLICABLE CODES, THE MOST CONSERVATIVE OR STRINGENT VERSION SHALL BE APPLIED.
2. CONTRACTOR SHALL OBTAIN LATEST COPY OF STANDARD DRAWINGS AND SPECIFICATIONS FROM TDOT PRIOR TO PLACING MATERIAL ORDER OR BEGINNING WORK.
3. POLE NUMBERS REFERENCED ON PLANS ARE FOR LOCATION REFERENCE ONLY. CONTRACTOR TO LABEL EQUIPMENT PER CURRENT HEC SPECIFICATIONS. ANY BLANK NUMBERS (I.E., #____) SHOWN ON PLANS SHALL BE OBTAINED FROM HEC PROJECT REPRESENTATIVE. COORDINATE WITH HEC PROJECT MANAGER (JASON MONTGOMERY, 423-677-2743) FOR FINAL POLE NUMBERS WHERE APPLICABLE.
4. HEC WILL FURNISH PROPOSED TRANSFORMERS. COORDINATE WITH HEC PROJECT MANAGER PRIOR TO INSTALLING NEW OR TRANSFERRED TRANSFORMERS TO CONFIRM TRANSFORMER SIZE AND LOADING REQUIREMENTS. TRANSFORMERS THAT ARE REMOVED SHALL BE RETURNED TO HEC. ALL OTHER MATERIAL TO BE RETURNED TO HEC UNLESS OTHERWISE NOTED.
5. HEC WILL PROVIDE TRANSFORMER INFORMATION SHEETS AND CONTRACTOR WILL BE REQUIRED TO COMPLETE AND RETURN A TRANSFORMER INFORMATION SHEET FOR EACH TRANSFORMER UNIT REMOVED AND INSTALLED ON THE PROJECT.
6. RE-ATTACH ALL TAP AND TRANSFORMER CONNECTIONS AS NEEDED TO MAINTAIN EXISTING PHASE CONNECTIONS. COORDINATE ANY NEW CONNECTIONS WITH HEC DISPATCH OR HEC PROJECT MANAGER.
7. POLE LOCATION COORDINATES ARE FOR GENERAL LOCATION REFERENCE. CONTRACTOR SHALL ADJUST TANGENT POLES WHERE POSSIBLE TO ELIMINATE UNNECESSARY LINE ANGLES.
8. SPAN LENGTHS ARE APPROXIMATE AND MEASURED FROM CENTER OF POLE TO CENTER OF POLE.
9. PRIOR TO PULLING CONDUCTORS, CONTRACTOR SHALL REQUEST APPROPRIATE SAG CHARTS TO ENSURE CORRECT INSTALLATION TENSIONS.
10. EXISTING CONDUCTORS SHALL BE TRANSFERRED TO NEW POLES EXCEPT WHERE NOTED TO BE REMOVED. IF EXISTING CONDUCTORS ARE FOUND TO BE IN POOR CONDITION, COORDINATE WITH HEC FOR REPLACEMENT. LABOR FOR CONDUCTOR TRANSFER FROM OLD POLES TO NEW POLES SHALL BE INCLUDED IN THE COST OF INSTALLATION AND REMOVAL OF POLE FRAMING'S. WHERE APPLICABLE, SPLICE AND SLEEVE CONDUCTORS PER HEC STANDARDS AND SPECIFICATIONS.
11. COORDINATE ALL TRANSFORMER AND SERVICE OUTAGES WITH HEC A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO OUTAGE.
12. CONDUCTOR SIZES SHOWN ON PLANS ARE ESTIMATED FROM RECORD DRAWINGS AND GROUND-LEVEL FIELD OBSERVATIONS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT INSULATORS, CLAMPS, OR OTHER HARDWARE ITEMS ARE SIZED APPROPRIATELY.
13. INSTALL FIBERGLASS STRAIN INSULATORS WHERE DOWNGUY PASSES WITHIN 12-INCHES OF ENERGIZED CONDUCTOR.
14. INSTALL YELLOW PLASTIC, FULL-ROUND, SLIT-SPIRAL GUYGUARDS ON THE TOP MOST DOWNGUY AT EACH ANCHOR.
15. UNLESS OTHERWISE NOTED, POLE EMBEDMENT SHALL BE A MINIMUM OF 6 FEET OR 10% OF TOTAL POLE HEIGHT PLUS 2 FEET, WHICHEVER IS GREATER. FOR POLES INSTALLED PRIOR TO FINAL GRADING, POLE EMBEDMENT DEPTHS SHALL BE MEASURED FROM FINAL GRADE FOR PROPOSED CUT AREAS AND EXISTING GRADE FOR PROPOSED FILL AREAS.
16. POLE HEIGHTS HAVE BEEN SELECTED PER FINAL GRADE. IF GRADING CANNOT BE COMPLETED PRIOR TO POLE INSTALLATION, COORDINATE WITH GRADING CONTRACTOR, HEC PROJECT REPRESENTATIVE, AND HEC PROJECT MANAGER TO DETERMINE BEST COURSE OF ACTION.
17. BACKFILL MATERIAL SHALL BE CLEAN, COMPACTABLE SOIL OR CLEAN, DAMP CRUSHER RUN UNLESS OTHERWISE NOTED. TRANSMISSION POLES SHALL ALWAYS BE BACKFILLED WITH CLEAN, DAMP CRUSHER RUN. PROPERLY DISPOSE OF UNSUITABLE BACKFILL MATERIAL SUCH AS ROCKS, SAND, SWAMPY, OR MUCKY SOIL IF FOUND DURING EXCAVATION.
18. TREE TRIMMING FOR PROPOSED ELECTRICAL LINES MAY BE OUTSIDE OF PROPOSED ROADWAY CLEARING. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH PRIME CONTRACTOR TO ENSURE THAT ALL TREE TRIMMING WITHIN ELECTRICAL RIGHT-OF-WAY HAS BEEN ACCOUNTED FOR WITH THE APPROPRIATE BID ITEM. COORDINATE WITH HEC AND PROPERTY OWNER(S) PRIOR TO ANY TREE-TRIMMING OR CLEARING OUTSIDE THE RIGHT-OF-WAY.
19. HEC FIBER SHALL BE TOP ATTACHMENT IN THE COMMUNICATION SPACE.
20. HOLSTON FIBER SHALL BE TRANSFERRED FROM OLD POLES TO NEW POLES. CONTRACTO R TO BE SOLEY RESPONSIBLE FOR EXISTING FIBER LINE TO THE NEW POLE LINES.

LEGEND:

- EXISTING PRIMARY CONDUCTOR(S) TO REMAIN
- EXISTING PRIMARY CONDUCTOR(S) TO BE REMOVED
- PROPOSED PRIMARY CONDUCTOR(S) TO BE INSTALLED
- EXISTING SECONDARY DUPLEX OR SERVICE CONDUCTOR(S) TO REMAIN
- EXISTING SECONDARY DUPLEX OR SERVICE CONDUCTOR(S) TO BE REMOVED
- PROPOSED SECONDARY DUPLEX OR SERVICE CONDUCTOR(S) TO BE INSTALLED
- EXISTING SECONDARY TRIPLEX OR SERVICE CONDUCTOR(S) TO REMAIN
- EXISTING SECONDARY TRIPLEX OR SERVICE CONDUCTOR(S) TO BE REMOVED
- PROPOSED SECONDARY TRIPLEX OR SERVICE CONDUCTOR(S) TO BE INSTALLED
- EXISTING SECONDARY UNDERGROUND OR SERVICE CONDUCTOR(S) TO REMAIN
- EXISTING SECONDARY UNDERGROUND OR SERVICE CONDUCTOR(S) TO BE REMOVED
- PROPOSED SECONDARY UNDERGROUND OR SERVICE CONDUCTOR(S) TO BE INSTALLED
- EXISTING OH FIBER TO REMAIN
- EXISTING OH FIBER TO BE TRANSFERRED
- EXISTING HEADGUY(S) TO REMAIN
- EXISTING HEADGUY(S) TO BE REMOVED
- PROPOSED HEADGUY(S) TO BE INSTALLED
- EXISTING POWER UTILITY POLE TO REMAIN
- EXISTING POWER UTILITY POLE TO BE REMOVED
- PROPOSED POWER UTILITY POLE TO BE INSTALLED
- EXISTING COMMUNICATIONS UTILITY POLE TO REMAIN
- EXISTING COMMUNICATIONS UTILITY POLE TO BE REMOVED
- PROPOSED COMMUNICATIONS UTILITY POLE
- EXISTING POWER UTILITY ANCHOR & DOWNGUY(S) TO REMAIN
- EXISTING POWER UTILITY ANCHOR & DOWNGUY(S) TO BE REMOVED
- PROPOSED POWER UTILITY ANCHOR & DOWNGUY(S) TO BE INSTALLED
- EXISTING FIBER SLACK LOOP (FSSL)
- EXISTING OVERHEAD TRANSFORMER(S) TO REMAIN OR TO BE TRANSFERRED TO NEW POLE
- EXISTING OVERHEAD TRANSFORMER(S) TO BE REMOVED
- PROPOSED OVERHEAD TRANSFORMER(S) TO BE INSTALLED
- WORK OFF OF TDOT ROW
- 110 — PROPOSED ROADWAY CENTERLINE & STATION IDENTIFICATION
- 15° — PROPOSED LINE ANGLE

AA	ALL ALUMINUM CONDUCTOR
ACSR	ALUMINUM CONDUCTOR STEEL REINFORCED
CU	COPPER
DI	DUCTILE IRON
DX	DUPLEX CABLE
EXST.	EXISTING
NEU	NEUTRAL
OWS	OPEN WIRE SECONDARY
PRI	PRIMARY
PVT LT	PRIVATE LIGHT (OWNED BY HEC)
QX	QUADRUPLEX CABLE
RR	RAILROAD
SEC	SECONDARY
STLT	STREET LIGHT (OWNED BY OTHERS)
TX	TRIPLEX CABLE
TYP.	TYPICAL
UG	UNDERGROUND
WP	WOOD POLE

SEALED BY



COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION NOTES & LEGEND

SCALE: N.T.S.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U2-3

S.R. 70 BRIDGE OVER NORFOLK SOUTHERN RR
37011-3237-94
BR-STP-70(24)
PIN #124383.00
HAWKINS CO.

TRACT NO. 12
HAGAN L. REYNOLDS

TRACT NO. 16
NORFOLK SOUTHERN RAILWAY COMPANY

TRACT NO. 17
HARRIETT REYNOLDS

TRACT NO. 2
HAGAN L. REYNOLDS

TRACT NO. 13
JUANITA TRAHAN AND HUSBAND, RAYMOND TRAHAN

TRACT NO. 14
RAYMOND TRAHAN AND WIFE, JUANITA TRAHAN

TRACT NO. 10
PERSIA UTILITY DISTRICT

37011-2237-94
BEGIN PROJ. NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178
E 2849102.7649

37011-3237-94
BEGIN PROJ. NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327
E 2849172.2221

STA. 110+94.34 SR-70 =
STA. 10+00.00 REYNOLDS HILL RD.
N 748328.1762
E 2849377.1130

STA. 19+38.47 HAGAN REYNOLDS RD. =
STA. 25+00.00 HAUL RD. 1
N 748242.0782
E 2849074.1422

STA. 117+11.58 SR-70 L.M. 6.19 =
STA. 30+00.00 C.L.
NORFOLK SOUTHERN RAILWAY
DOT CROSSING NO. 730216V
R.R. MILEPOST 77.84
N 748274.9228
E 2848762.1753

110 115 120

N

SEE SHEET NO. U2-4

MATCH LINE STA. 123+00

STA. 21+00.00 CORAN RD. =
STA. 30+00.00 HAUL RD. 2
N 748394.7717
E 2849020.3922

TRACT NO. 15
DAVID HAMMOND SR

NOTE:
TRM = TURF REINFORCED MAT.

STA. 114+18.72 SR-70 =
STA. 20+00.00 HAGAN REYNOLDS RD. LT
N 748300.1898
E 2849053.9432
(SEE SHEET 6 FOR PROFILE)

STA. 114+20.18 SR-70 =
STA. 20+00.00 CORAN RD RT.
N 748300.0643
E 2849052.4935
(SEE SHEET 6 FOR PROFILE)

TRACT NO. 8
LAWRENCE S. WHEELER III AND WIFE, JANIE J. WHEELER

TRACT NO. 11
MICHAEL T. HUGHES AND WIFE, CATHY HUGHES

TRACT NO. 7
MICHAEL HUGHES AND WIFE, KATHY HUGHES

TRACT NO. 9
MICHAEL T. HUGHES AND WIFE, CATHY A. HUGHES

TRACT NO. 6
JUDY HUGHES ESTATE
MARAGARET HUGHES TRUSTEE

TRACT NO. 18
JOHN W. REYNOLDS & DAVID H. REYNOLDS

37011-2237-94
END PROJ. NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660
E 2848244.1958

MAKE NOTE:
STATIONS AND OFFSETS ARE REFERENCED

SEALED BY

DERICK WILLIAMS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 124898
STATE OF TENNESSEE
Derick Williams
9/25/2024

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA.113+00 TO STA.123+00
SCALE: 1"=50'

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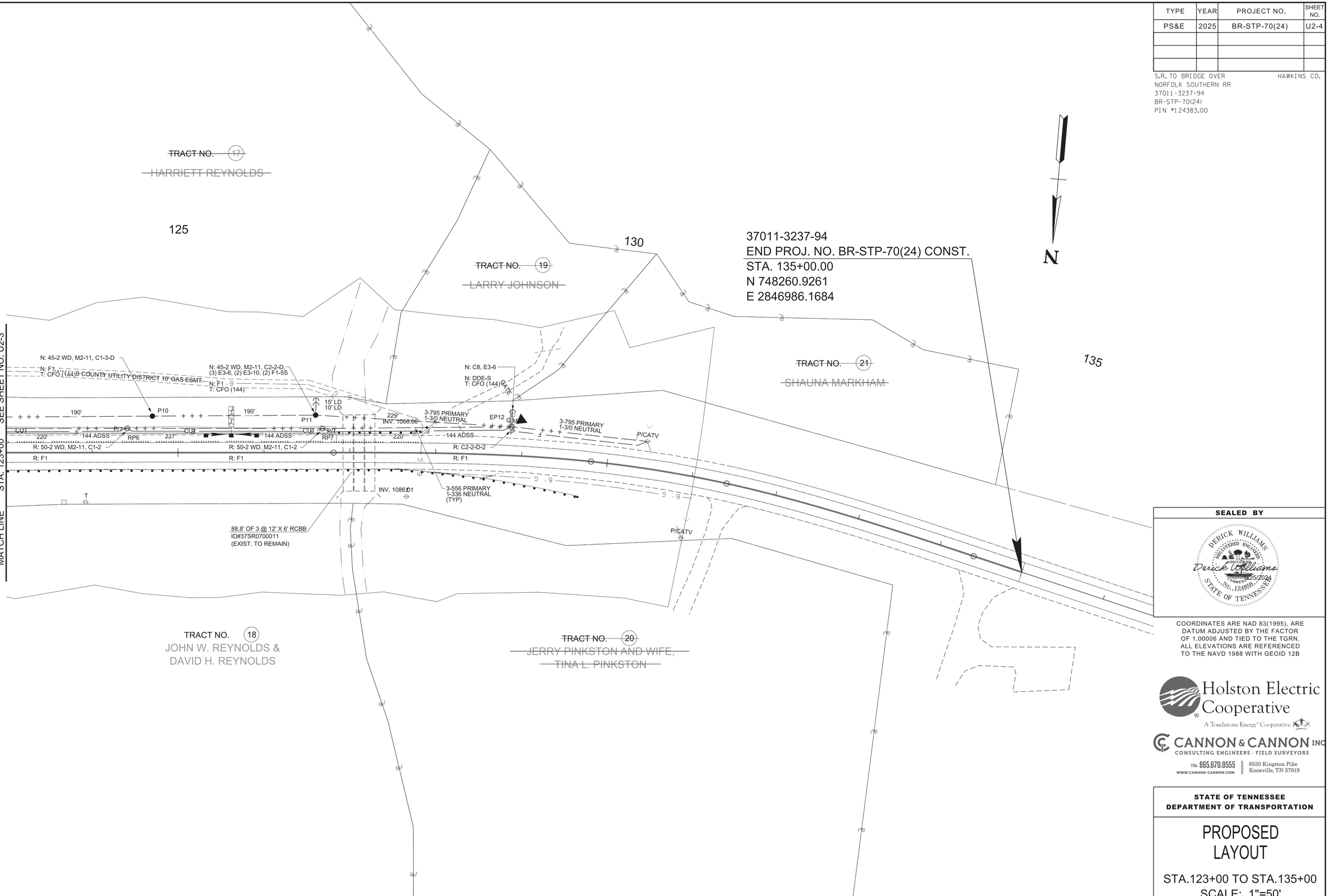
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U2-4

S.R. 70 BRIDGE OVER NORFOLK SOUTHERN RR
37011-3237-94
BR-STP-70(24)
PIN #124383.00
HAWKINS CO.



SEALED BY

DERICK WILLIAMS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 124698
STATE OF TENNESSEE
Derick Williams
9/25/2024

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

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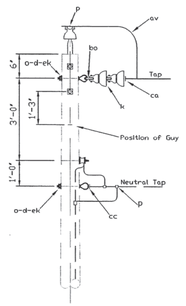
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

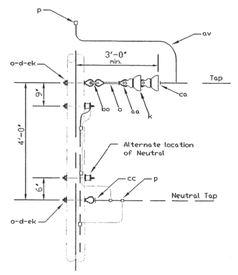
STA.123+00 TO STA.135+00
SCALE: 1"=50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U2-5

S.R. 70 BRIDGE OVER HAWKINS CO.
NORFOLK SOUTHERN RR
37011-3237-94
BR-STP-70(24)
PIN #124383.00



A5-1



A5-2

NOTES:
1- Details for primary and neutral deadend assemblies may be found on drawings M10-6 and M10-10
2- A5-1 assembly may be used with drawings such as: A1, A1-1, A2
3- A5-1 assembly may be used with drawings such as: B1, B2, B7, C1, C1-2, C1-3, C1-4, C2-1, C2-2

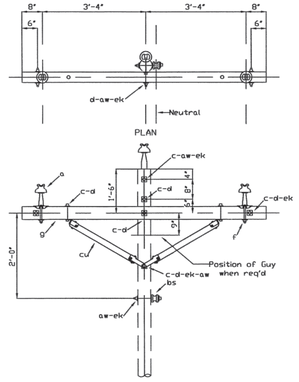
ITEM	HEC NO.	DESCRIPTION	NUMBER REQUIRED A5-1	A5-2
d	610	washer, square, curved, 3"	2	2
k	1110	suspension insulator	2	2
o	315	bolts, eye, 5/8" x 10"	2	3
p		connectors, as required		
aa	640	nuts, oval eye		1
ov		jumpers and leads, as required		
ca		deadend assembly, primary	1	1
cc		deadend assembly, neutral	1	1
bo	1360	anchor shackle		1
ek	655	locknuts, 5/8"	2	2

HOLSTON ELECTRIC

SINGLE PHASE PRIMARY
SINGLE PHASE TAP

DATE: 6-1-99

STANDARD NUMBER
A5-1
A5-2



NOTES:
1- This construction required for all conductors having a breaking strength of more than 4500 pounds.
2- Maximum transverse load 500 lbs per conductor
3- Maximum line angle within load limits: 2°

-A for 1/0ACSR or 2/0ACSR primary
-B for 4/0ACSR or 266ACSR primary
-C for 336ACSR primary
-D for 556AAC or 795AAC primary

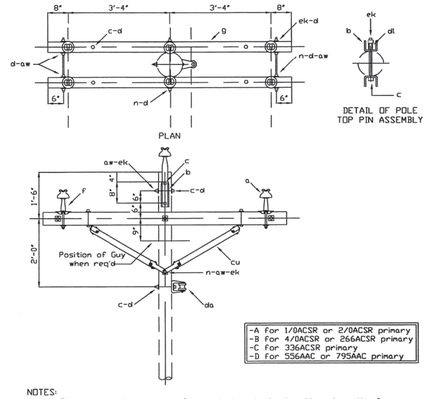
ITEM	HEC NO.	DESCRIPTION	C1-2-A QTY	C1-2-B QTY	C1-2-C QTY	C1-2-D QTY
a	1040-6R	insulator, pin type	3	3	3	
a	1040-9R	insulator, pin type				3
b	900	pin, pole top	1	1	1	1
c	358	machine bolt, 5/8" x 10"	6	6	6	6
c	351	bolt, machine, 1/2" x 6"	2	2	2	2
d	605	square washer, 2 1/4"	10	10	10	10
d	600	washer, round, 1 3/8", 13/16" hole	2	2	2	2
f	910	pins, steel wide base	2	2	2	2
g	710	crossarms, 3 3/4 x 4 3/4 x 8'	1	1	1	1
bs	425	bolt, single upset, 10"	1	1	1	1
cu	830	wood crossarm brace 60"	1	1	1	1
ek	650,655	locknuts, as required				
cm	1030	insulator, spool type	1	1	1	1

HOLSTON ELECTRIC

THREE PHASE PRIMARY
CROSSARM CONSTRUCTION
SINGLE PRIMARY SUPPORT
LARGE CONDUCTORS

DATE: 3-18-02

STANDARD NUMBER
C1-2
(A-D)



-A for 1/0ACSR or 2/0ACSR primary
-B for 4/0ACSR or 266ACSR primary
-C for 336ACSR primary
-D for 556AAC or 795AAC primary

NOTES:
1- This construction required for conductors having breaking strength of more than 4500 pounds.
2- Maximun transverse load 1000 lbs. per conductor
3- Maximun line angle within load limits - 5°

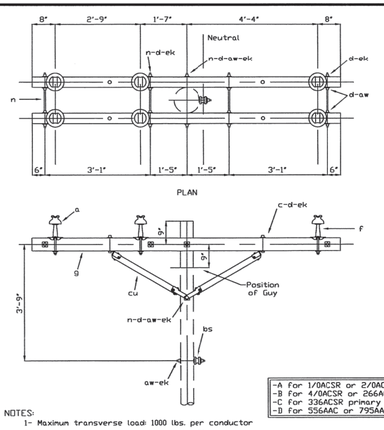
ITEM	HEC NO.	QTY	DESCRIPTION	C1-3-A QTY	C1-3-B QTY	C1-3-C QTY	C1-3-D QTY
a	1040-5R	1	insulator, pin type	6	6	6	
a	1040-6R	1	insulator, pin type				6
b	900	1	pin, pole top	2	2	2	2
c	358	1	machine bolt, 5/8" x 10"	4	4	4	4
c	351	1	bolt, machine, 1/2" x 6"	4	4	4	4
d	605	1	square washer, 2 1/4"	13	13	13	13
d	600	1	washer, round, 1 3/8", 13/16" hole	4	4	4	4
f	910	1	pins, steel wide base	4	4	4	4
g	710	1	crossarms, 3 3/4 x 4 3/4 x 8'	2	2	2	2
n	256	1	bolts, D.A., 18"	4	4	4	4
cu	810	1	wood crossarm brace, 28"	2	2	2	2
da	1820	1	rigid clevis	1	1	1	1
dl		1	pipe spacer	2	2	2	2
ek	650,655	1	locknuts as required				

HOLSTON ELECTRIC

THREE PHASE PRIMARY
CROSSARM CONSTRUCTION
DOUBLE PRIMARY SUPPORT
LARGE CONDUCTORS

DATE: 3-18-02

STANDARD NUMBER
C1-3
(A-D)



-A for 1/0ACSR or 2/0ACSR primary
-B for 4/0ACSR or 266ACSR primary
-C for 336ACSR primary
-D for 556AAC or 795AAC primary

NOTES:
1- Maximun transverse load 1000 lbs. per conductor
2- Maximun line angle within load limits 5°

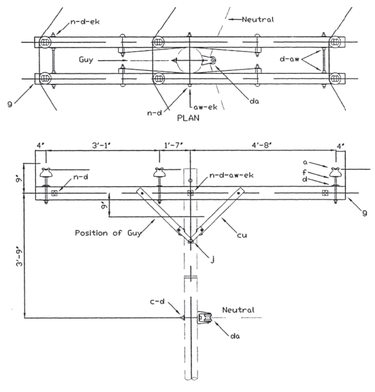
ITEM	HEC NO.	DESCRIPTION	C1-7-A QTY	C1-7-B QTY	C1-7-C QTY	C1-7-D QTY
a	1040-6R	insulator, pin type	3	3	3	
a	1040-9R	insulator, pin type				3
c	358	machine bolt, 5/8" x 10"	3	3	3	3
c	351	bolt, machine, 1/2" x 6"	4	4	4	4
d	605	square washer, 2 1/4"	4	4	4	4
d	600	washer, round, 1 3/8", 13/16" hole	4	4	4	4
f	910	pins, steel wide base	6	6	6	6
g	730	crossarms 3 3/4" x 4 3/4" x 10'	2	2	2	2
bs	425	bolt, single upset, 10"	1	1	1	1
cu	830	wood crossarm brace 60"	2	2	2	2
ek	650,655	locknuts, as required				
cm	1030	insulator, spool type	1	1	1	1
da	1820	rigid clevis	1	1	1	1
n	256	bolts, D.A., 18"	5	5	5	5

HOLSTON ELECTRIC

THREE PHASE PRIMARY
CROSSARM CONSTRUCTION
UNDERBUILD STRUCTURE - DOUBLE PRIMARY SUPPORT
LARGE CONDUCTORS - ALL PHASES ON CROSSARM

DATE: 3-18-02

STANDARD NUMBER
C1-8
(A-D)



NOTES:
1- Center phase wire or neutral wire may be located on the opposite side of the pole where necessary to avoid crossing of wires in midspan.
2- Maximun transverse load 1000 lbs. per conductor

ITEM	HEC NO.	QTY	DESCRIPTION
a	1040-5R	6	insulator, pin type
c	358	2	machine bolt, 5/8" x 10"
c	351	4	bolt, machine, 1/2" x 6"
d	605	15	square washer, 2 1/4"
d	600	4	washer, round, 1 3/8", 13/16" hole
f	915	6	pins, steel bolt shanks

ITEM	HEC NO.	QTY	DESCRIPTION
g	730	2	crossarms, 3 3/4 x 4 3/4 x 10'
n	256	3	bolts, D.A., 18"
cu	830	2	wood crossarm base, 60"
da	1820	1	rigid clevis
ek	650,655		locknuts, as required
cm	1030	1	insulator, spool type

HOLSTON ELECTRIC

THREE PHASE PRIMARY
CROSSARM CONSTRUCTION
MEDIUM ANGLE STRUCTURE

DATE: 6-1-99

STANDARD NUMBER
C2-1

SEALED BY

DERICK WILLIAMS
REGISTERED ENGINEER
AGRICULTURE & ENVIRONMENT
Derick Williams
COMMISSION NO. 124383
5/25/2024
STATE OF TENNESSEE

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

Holston Electric Cooperative
A Touchstone Energy® Cooperative

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8550 Kingston Pike
Knoxville, TN 37919

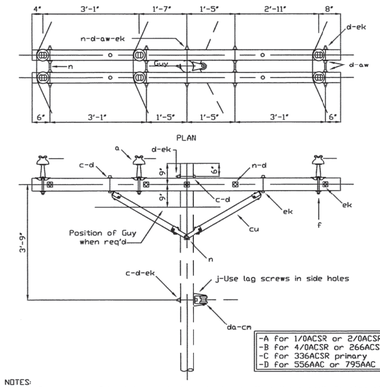
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETAILS

SCALE: N.T.S.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U2-6

S.R. 70 BRIDGE OVER HAWKINS CO.
NORFOLK SOUTHERN RR
37011-3237-94
BR-STP-70(24)
PIN #124383.00



NOTES:
1- Side groove of insulator must always be larger than the overall diameter of conductor including armor rods when required.
2- Center phase wire or neutral wire may be located on the opposite side of the pole where necessary to avoid crossing of wires in midspan.
3- This construction required for all conductors having a breaking strength of more than 4500 pounds.

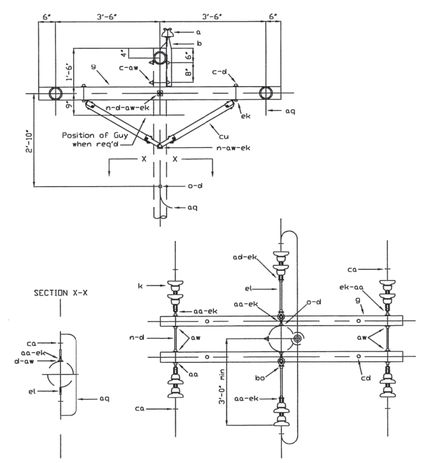
ITEM	HEC NO.	QTY	DESCRIPTION	C2-2-A QTY	C2-2-B QTY	C2-2-C QTY	C2-2-D QTY
a	1040-5R	1	insulator, pin type	6	6	6	
a	1040-5R	1	insulator, pin type				6
c	358	1	machine bolt, 5/8" x 10"	2	2	2	2
c	351	1	bolt, machine, 1/2" x 6"	4	4	4	4
d	605	1	square washer, 2 1/4"	21	21	21	21
d	600	1	washer, round, 1 3/8", 13/16" hole	4	4	4	4
f	910	6	pins, wide base	6	6	6	6
g	730	2	crossarms, 3 3/4 x 4 3/4 x 10'	2	2	2	2
n	256	1	bolts, D.A., 18"	6	6	6	6
da	1820	1	rigid clevis	1	1	1	1
cu	830	2	wood crossarm base, 60"	2	2	2	2
ek	650,655	1	locknuts, as required				
j	550	1	screw, lag, 1/2" x 4"	2	2	2	2
cm	1030	1	insulator, large spool	1	1	1	1

HOLSTON ELECTRIC

THREE PHASE PRIMARY
CROSSARM CONSTRUCTION
MEDIUM ANGLE STRUCTURE
LARGE CONDUCTORS

DATE: 6-1-99

STANDARD NUMBER
C2-2
(A-D)



NOTES:
1- Maximum unbalance tension not to exceed 1000 lbs per conductor.
2- Details for primary and neutral deadend assemblies may be found on drawings M10-6 and M10-10

ITEM	HEC NO.	QTY	DESCRIPTION
a	1040-5R	1	insulator, pin type
b	900	1	pin, pole top
c	351	1	bolt, machine, 1/2" x 6"
c	358	4	machine bolt, 5/8" x 10"
d	605	14	square washer, 2 1/4"
d	600	4	washer, round, 1 3/8", 13/16" hole
g	710	2	crossarms, 3 3/4 x 4 3/4 x 8'
k	1110	12	suspension insulator
n	256	4	bolts, D.A., 18"
ek	655	1	locknuts, 5/8", as required

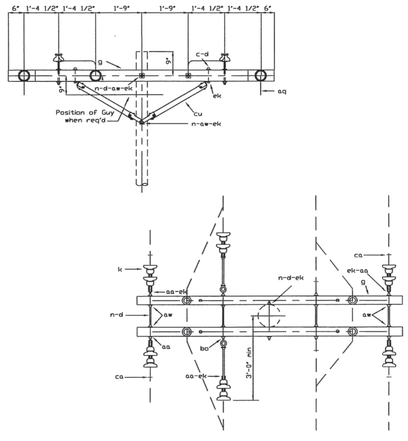
ITEM	HEC NO.	QTY	DESCRIPTION
o	315	4	bolts, eye, 5/8" x 10"
p			connectors, as required
aa	640	8	nuts, oval eye
av			jumpers and leads, as required
bo	1360	2	anchor shackle
ca	1940	6	deadend clamp #4 – 2/0
el	1130	2	insulated extension link
cu	830	2	wood crossarm brace, 60"

HOLSTON ELECTRIC

THREE PHASE PRIMARY
CROSSARM CONSTRUCTION
DEAD END (DOUBLE)

DATE: 3-18-02

STANDARD NUMBER
C8



Notes
1-Details for primary and neutral deadend assemblies may be found on drawings M10-6 and M10-10

ITEM	HEC NO.	QTY	DESCRIPTION
a	1040-5R	4	insulator, pin type
f	915	4	pins, steel bolt shanks
c	351	4	bolt, machine, 1/2" x 6"
c	358	1	machine bolt, 5/8" x 10"
d	605	18	square washer, 2 1/4"
d	600	4	washer, round, 1 3/8", 13/16" hole
g	730	2	crossarms, 3 3/4 x 4 3/4 x 10'
k	1110	12	suspension insulator
n	256	5	bolts, D.A., 18"
ek	655	1	locknuts, 5/8", as required

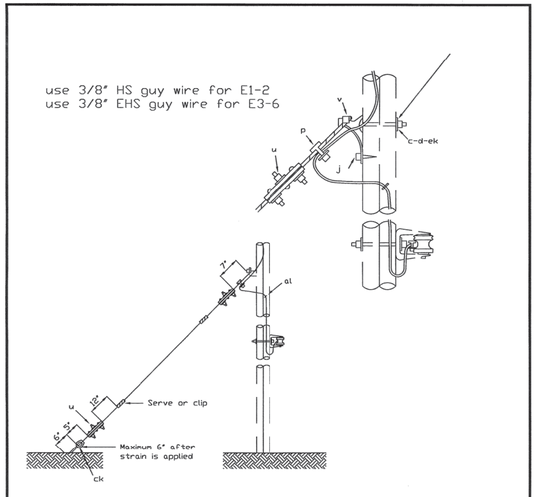
ITEM	HEC NO.	QTY	DESCRIPTION
o	315	4	bolts, eye, 5/8" x 10"
p			connectors, as required
aa	640	8	nuts, oval eye
av			jumpers and leads, as required
bo	1360	2	anchor shackle
ca	1940	6	deadend clamp #4 – 2/0
el	1130	2	insulated extension link
cu	830	2	wood crossarm brace, 60"

HOLSTON ELECTRIC

THREE PHASE PRIMARY
CROSSARM CONSTRUCTION
DEAD END (DOUBLE)
NEUTRAL DEAD END ON CROSSARM

DATE: 3-18-02

STANDARD NUMBER
C8-1



NOTES:
1- Three bolt clamps may be substituted for guy grips

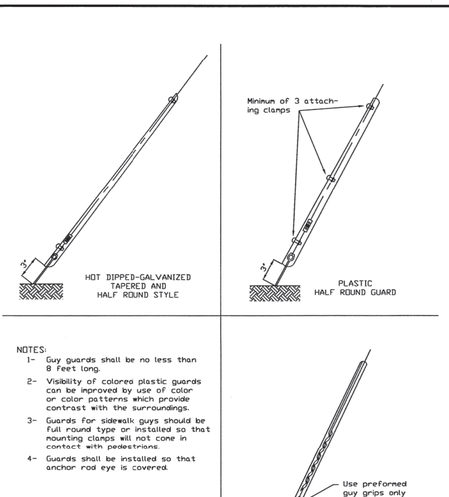
ITEM	HEC NO.	DESCRIPTION	E1-2 QTY	E3-5 QTY
c	358	bolt, machine 5/8" x 10"	1	
c	358	bolt, machine 3/4" x 10"		1
d	610	washer, curved	1	1
u	1462	guy grips	2	2
v	1467	guy attachment, goathead	1	1
p	3024	connector, al-cu par.	1	1
p	3026	connector, al-cu over armor	1	1

HOLSTON ELECTRIC

SINGLE DOWN GUY
THROUGH BOLT TYPE

DATE: 3-18-02

STANDARD NUMBER
E1-2
E3-6



NOTES:
1- Guy guards shall be no less than 8 feet long.
2- Visibility of colored plastic guards can be improved by use of color or color patterns which provide contrast with the surroundings.
3- Guards for sidewalk guys should be full round type or installed so that mounting clamps will not come in contact with pedestrians.
4- Guards shall be installed so that anchor rod eye is covered.

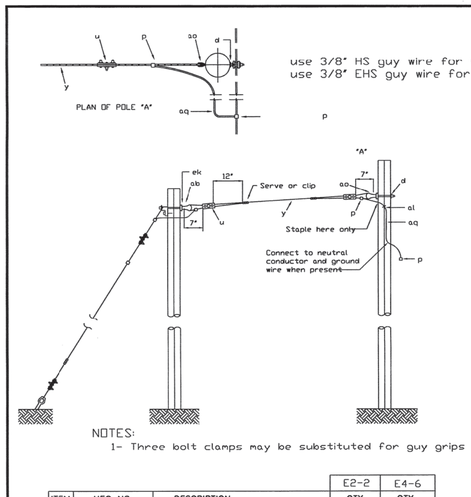
DESIGNATE
E3-10G (Galvanized)
E3-10P (Plastic)

HOLSTON ELECTRIC

GUY MARKER

DATE: 3-18-02

STANDARD NUMBER
E3-10



NOTES:
1- Three bolt clamps may be substituted for guy grips

ITEM	HEC NO.	DESCRIPTION	E2-2 QTY	E4-6 QTY
oo	346	bolt, thimble eye, 5/8" x 10"	1	
oo	346	bolt, thimble eye, 3/4" x 10"		1
d	610	washer, curved	1	1
ab	660	nuts, thimble eye	1	1
u	1462	guy grips	2	2
v	1467	guy attachment, goathead	1	1
p	3024	connector, al-cu par.	1	1
p	3026	connector, al-cu over armor	1	1

HOLSTON ELECTRIC

SINGLE OVERHEAD GUY
THROUGH BOLT TYPE

DATE: 3-18-02

STANDARD NUMBER
E2-2
E4-6

SEALED BY

DERICK WILLIAMS
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Derick Williams
COMMERCE
9/25/2024
No. 124383
STATE OF TENNESSEE

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETAILS

SCALE: N.T.S.

9/25/2024 7:37:35 AM
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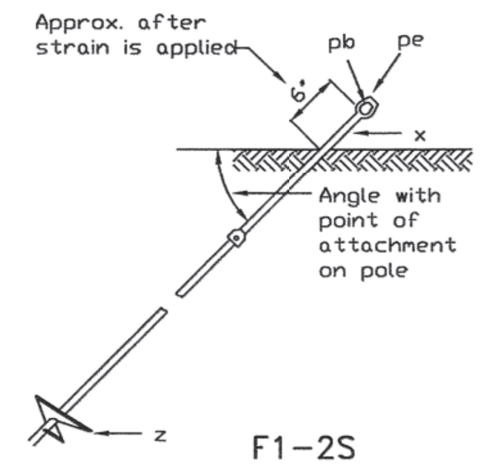
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U2-7

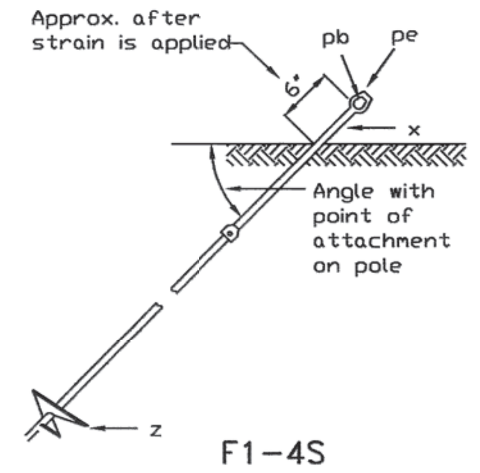
S.R. 70 BRIDGE OVER NORFOLK SOUTHERN RR HAWKINS CO.
37011-3237-94
BR-STP-70(24)
PIN #124383.00



F1-2S

ULTIMATE HOLDING STRENGTH = 8,000 LB

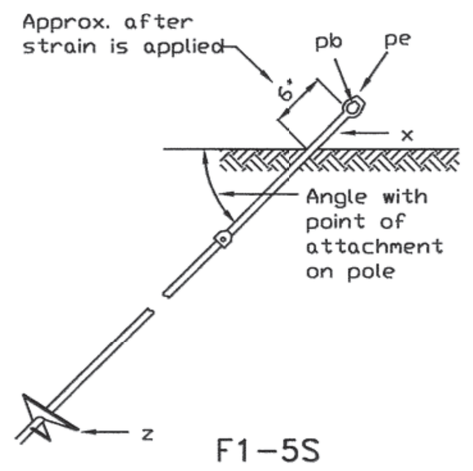
ITEM	HEC NO.	QTY	DESCRIPTION
pn	665	1	PISA nut 5/8"
pb	1456	1	PISA bonder 5/8"
x	1357	1	PISA 5/8" x 7' rod
z	1300	1	PISA 8" anchor



F1-4S

ULTIMATE HOLDING STRENGTH = 12,000 LB

ITEM	HEC NO.	QTY	DESCRIPTION
pn	666	1	PISA nut 3/4"
pb	1457	1	PISA bonder 3/4"
x	1358	1	PISA 3/4" x 7' rod
z	1305	1	PISA 10" anchor



F1-5S

ULTIMATE HOLDING STRENGTH = 20,000 LB

ITEM	HEC NO.	QTY	DESCRIPTION
pn	666	1	PISA nut 1"
pb	1457	1	PISA bonder 1"
x	1358	1	PISA 1" x 7' rod
z	1305	1	PISA 12" anchor

NOTES:
1- the ultimate holding strength is obtained only when the anchor is installed to the manufacturers specified torque.

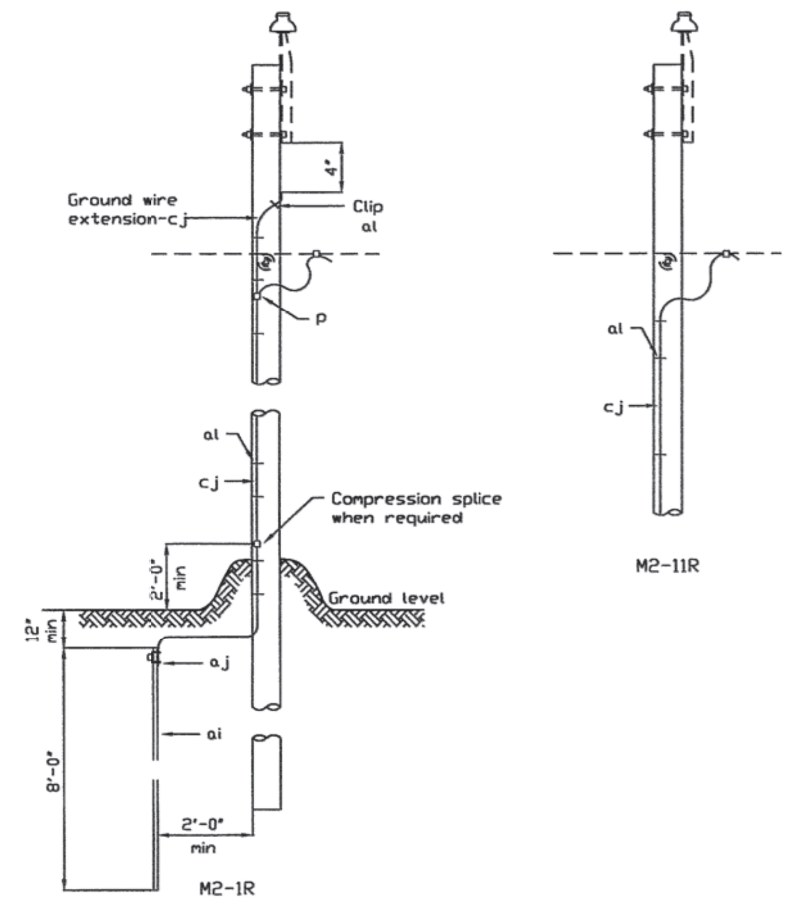
HOLSTON ELECTRIC

POWER INSTALLED SCREW ANCHORS

DATE: 3-18-02

STANDARD NUMBER

F1-2S, F1-4S
F1-5S



NOTES:
1- Ground wire to be located on same side as neutral conductor and in quadrant opposite climbing space or pole top pin.

2- Staples on ground wire shall be 2'-0" apart. Except for a distance of 8'-0" above ground and 8'-0" from top of pole, where they shall be 6" apart.

3- Ground wire to clear all hardware by 2" minimum, and shall be stapled to maintain this position.

4- Ground wire moulding may be installed at discretion of owner.

ITEM	HEC NO.	QTY	DESCRIPTION
ai	1730	1	ground rod
aj	2020	1	ground rod clamps
p	3000	2	connectors – #6 copper
p	3026	1	connectors – al-cu over armor

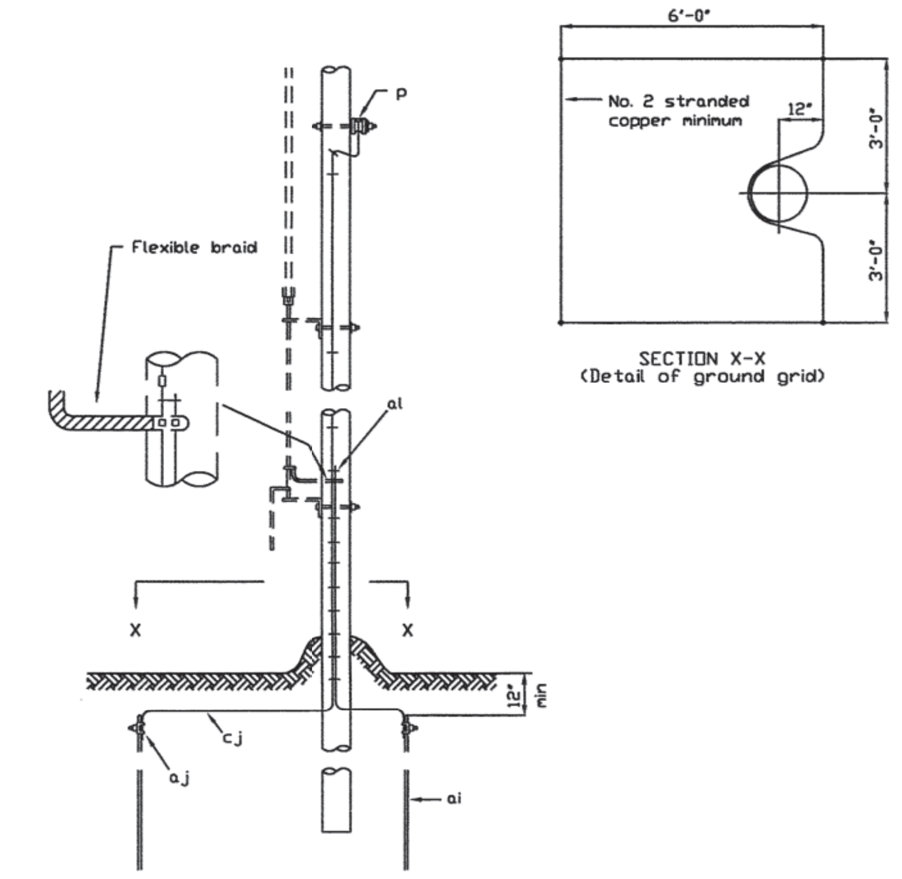
HOLSTON ELECTRIC

POLE GROUNDING ASSEMBLY
GROUND ROD TYPE

DATE: 3-18-02

STANDARD NUMBER

M2-11



NOTES:

1- Use on 15 kV only.

ITEM	HEC NO.	QTY	DESCRIPTION
ai	1730	4	ground rods
aj	2020	4	ground rod clamps
p	3002	4	connectors – #2 copper

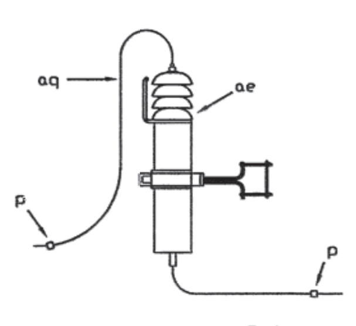
HOLSTON ELECTRIC

GROUNDING ASSEMBLE
FOR SECTIONALIZING AIR BREAK SWITCH
GROUND ROD TYPE

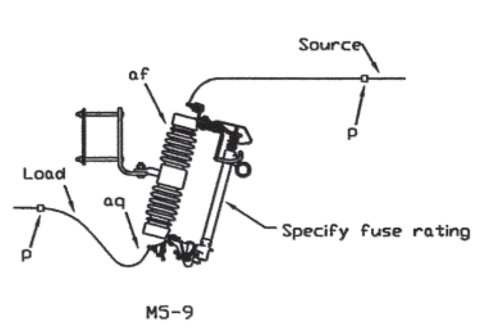
DATE: 3-18-02

STANDARD NUMBER

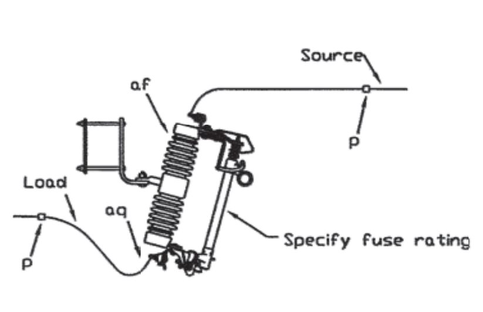
M2-15



ITEM	HEC NO.	QTY	DESCRIPTION
p	3000	2	connectors – #6 copper
as	5015	1	lightning arrestors



ITEM	HEC NO.	QTY	DESCRIPTION
j	550	1	lag screw
eq	880	1	C5A type metal pole bracket
hl	2000	1	hot line clamp
af	5120	1	disconnect



ITEM	HEC NO.	QTY	DESCRIPTION
j	550	1	lag screw
eq	880	1	C5A type metal pole bracket
hl	2000	1	hot line clamp
af	5125	1	load break disconnect

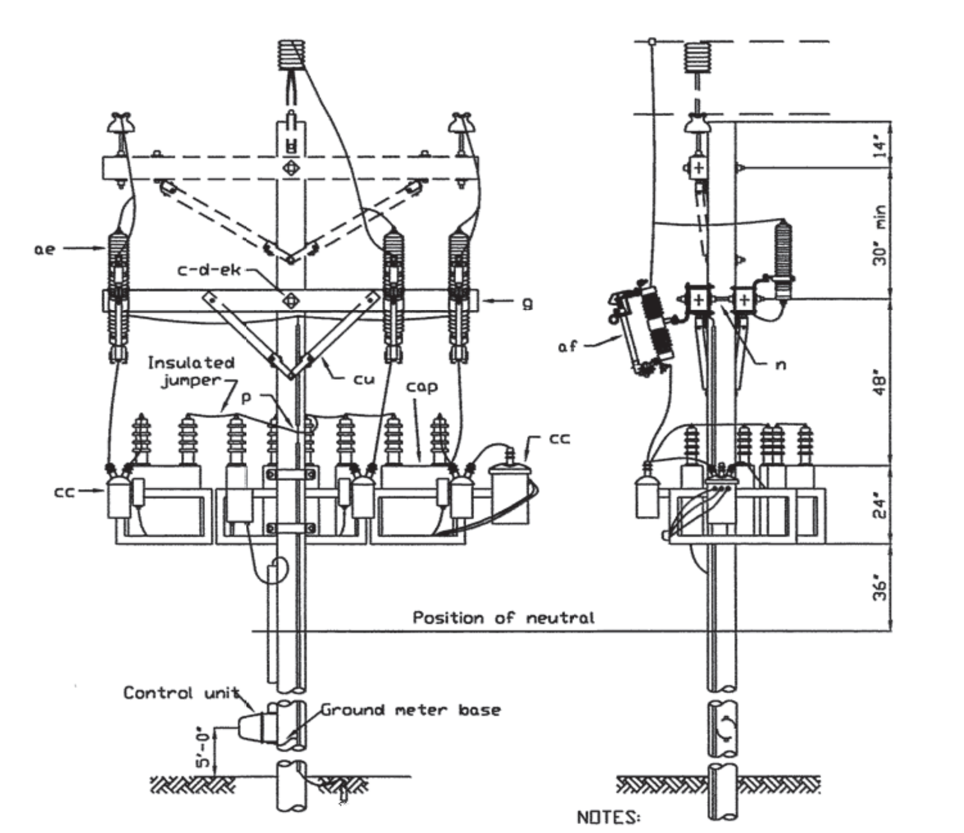
HOLSTON ELECTRIC

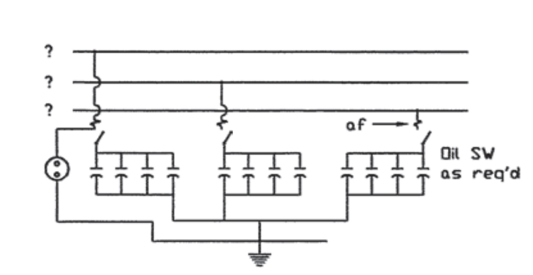
MISCELLANEOUS PRIMARY
ASSEMBLY UNITS

DATE: 3-18-02

STANDARD NUMBER

M5-6 TO
M5-9LB





WIRING SCHEMATIC

NOTES:
1- Alternate framing - mount disconnects and arrestors on large equipment mount bracket (HEC item number 885)
2- Tie neutral bushings of all capacitors in series together & tie to system pole ground.
3- ground capacitor rack to pole ground in at least two places.
4- Specify insulating caps for primary terminal bushings.
5- For temperature switched bank delete current sensor
6- See wiring diagram M9-13T for control wiring for temperature switched banks and M9-13K for reactive load switched banks
7- Transformer and current sensor must be connected to the same phase

ITEM	HEC NO.	QTY	DESCRIPTION
i	210	4	carriage bolts
n	258	4	bolts, D.A. 5/8: x 20"
j	550	10	lag screw
c	359	2	machine bolt, 5/8" x 12"
d	605	12	square washer, 2 1/4"
g	710	2	crossarms, 3 3/4 x 4 3/4 x 8'
cu	810	2	wood crossarm brace, 28"

ITEM	HEC NO.	QTY	DESCRIPTION
cp	895	1	pole top bracket
hl	2000	3	hot line clamp
p	3000	4	#6 copper connectors
p	3026	2	connector, al-cu over armor
af	5125	3	load break disconnect
fc	CAP	1	3 single phase capacitor cans
cc	CAP-CONT	1	control, switches, sensors, etc

HOLSTON ELECTRIC

THREE PHASE PRIMARY
SWITCHED CAPACITOR ASSEMBLY

DATE: 3-18-02

STANDARD NUMBER

M9-13S

SEALED BY

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STATE OF TENNESSEE
Derick Williams
9/25/2024

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

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Knoxville, TN 37919

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETAILS

SCALE: N.T.S.

9/25/2024 7:38:36 AM
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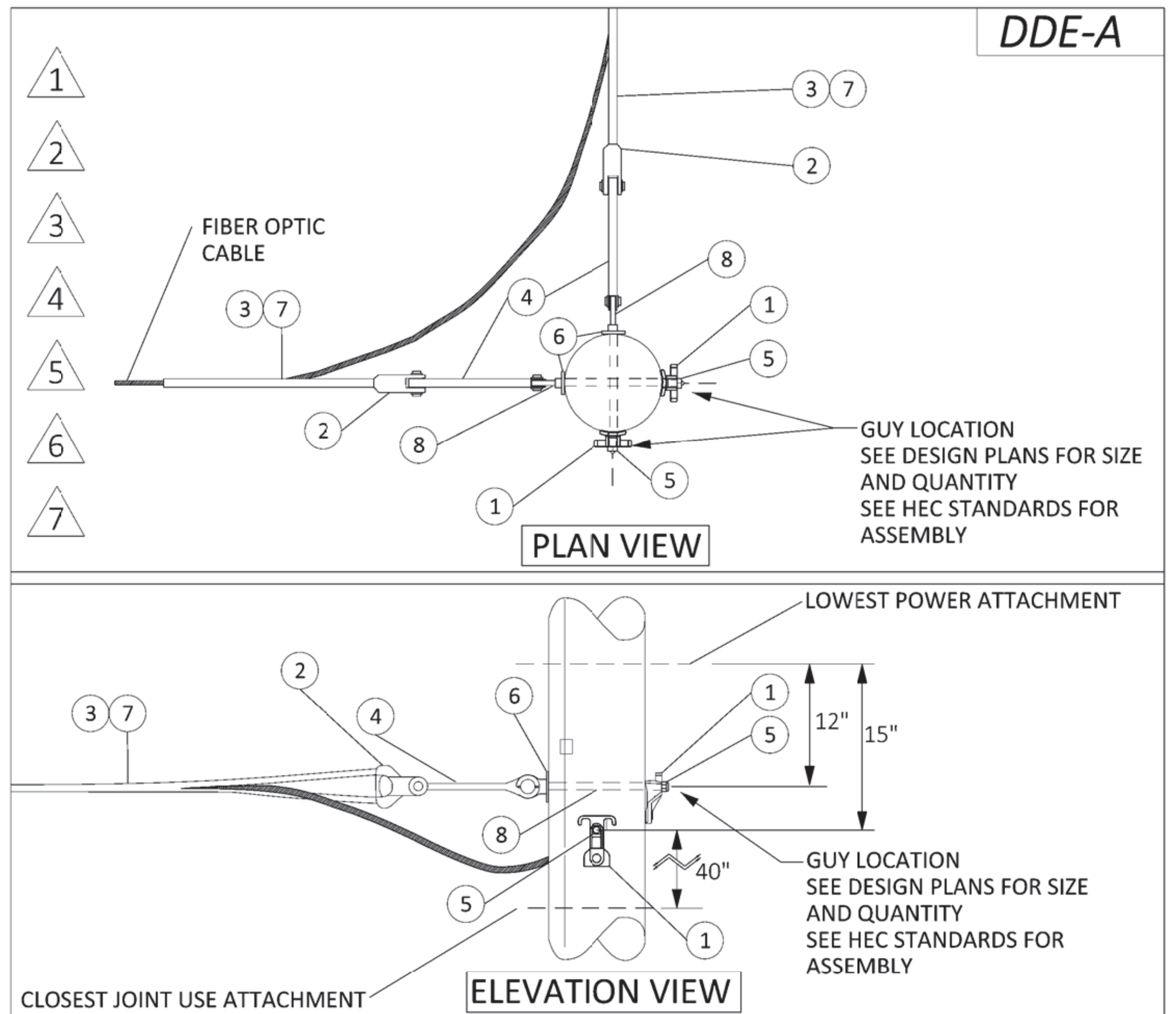
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U2-8

S.R. 70 BRIDGE OVER NORFOLK SOUTHERN RR — HAWKINS CO.
37011-3237-94
BR-STP-70(24)
PIN #124383.00

DDE-A



MATERIAL LIST

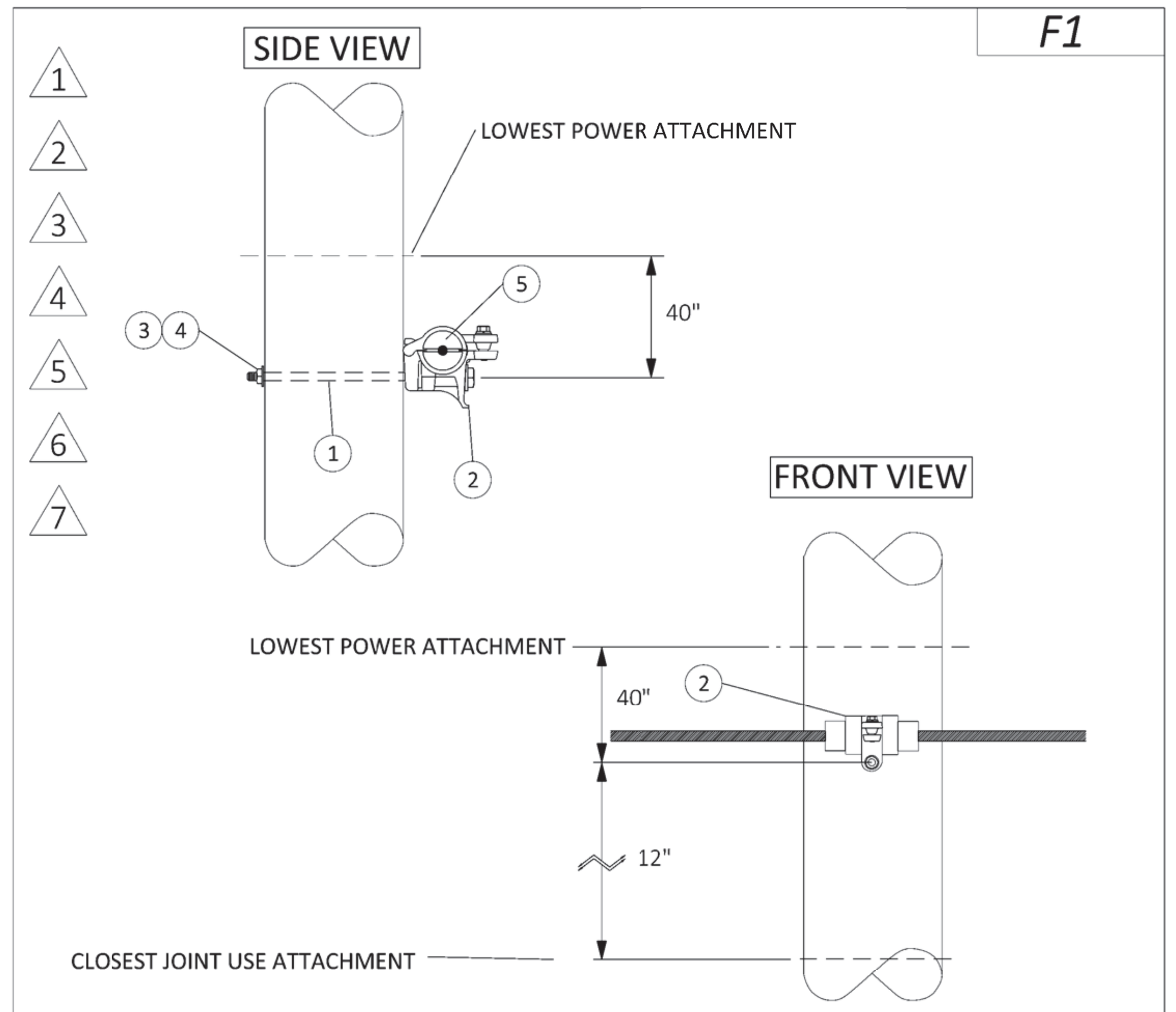
○	QTY.	NAME/DESCRIPTION	STOCK NO.	○	QTY.	NAME/DESCRIPTION	STOCK NO.
1	2	GUY HOOK (GOAT HEADS)	GH5				
2	2	CLEVIS, THIMBLE	0000				
3	2	DEAD END,PREFORMED FOR ADSS	VARIES				
4	2	EXTENSION LINK	0000				
5	2	5/8" SQUARE NUT	J8563				
6	4	11/16" SQUARE WASHER	0000				
7	2	STRUCTURAL REINFORCEMENT RODS	VARIES				
8	2	5/8" EYE BOLT	0000				

GENERAL NOTES

1. APPLICABLE FOR LOCATION ON 15KV POLES
2. ONLY QUALIFIED PERSONNEL SHALL PERFORM WORK IN THE POWER SUPPLY ZONE. SEE NESC FOR POWER SUPPLY ZONE DEFINITION.
3. GROUNDING IN COMPLIANCE WITH NESC/HEC STANDARDS
4. DO NOT EXCEED O.D. BEND RADIUS OF FIBER OPTIC CABLE
5. CORONA COILS TO BE USED WHERE INDICATED ON DESIGN
6. STAINLESS STEEL BANDS TO BE USED ON DUCTILE IRON, STEEL AND CONCRETE POLES
7. DESIGN DRAWINGS TAKE PRECEDENCE OVER STANDARD CONCERNING ATTACHMENT LOCATION ON THE POLE.

HOLSTON ELECTRIC COOPERATIVE FRAMING SPECIFICATIONS
DRAWN BY: D.S.W — REV BY: K.C.B. — FILE: DDE-A.DGN — APPROVED:
ADSS FIBER ANGLED DOUBLE DEAD-ENDS 21°-90°
REVISED: 12/01/2023 — SHEET 1 OF 1 — STD. NO: DDE-A

F1



MATERIAL LIST

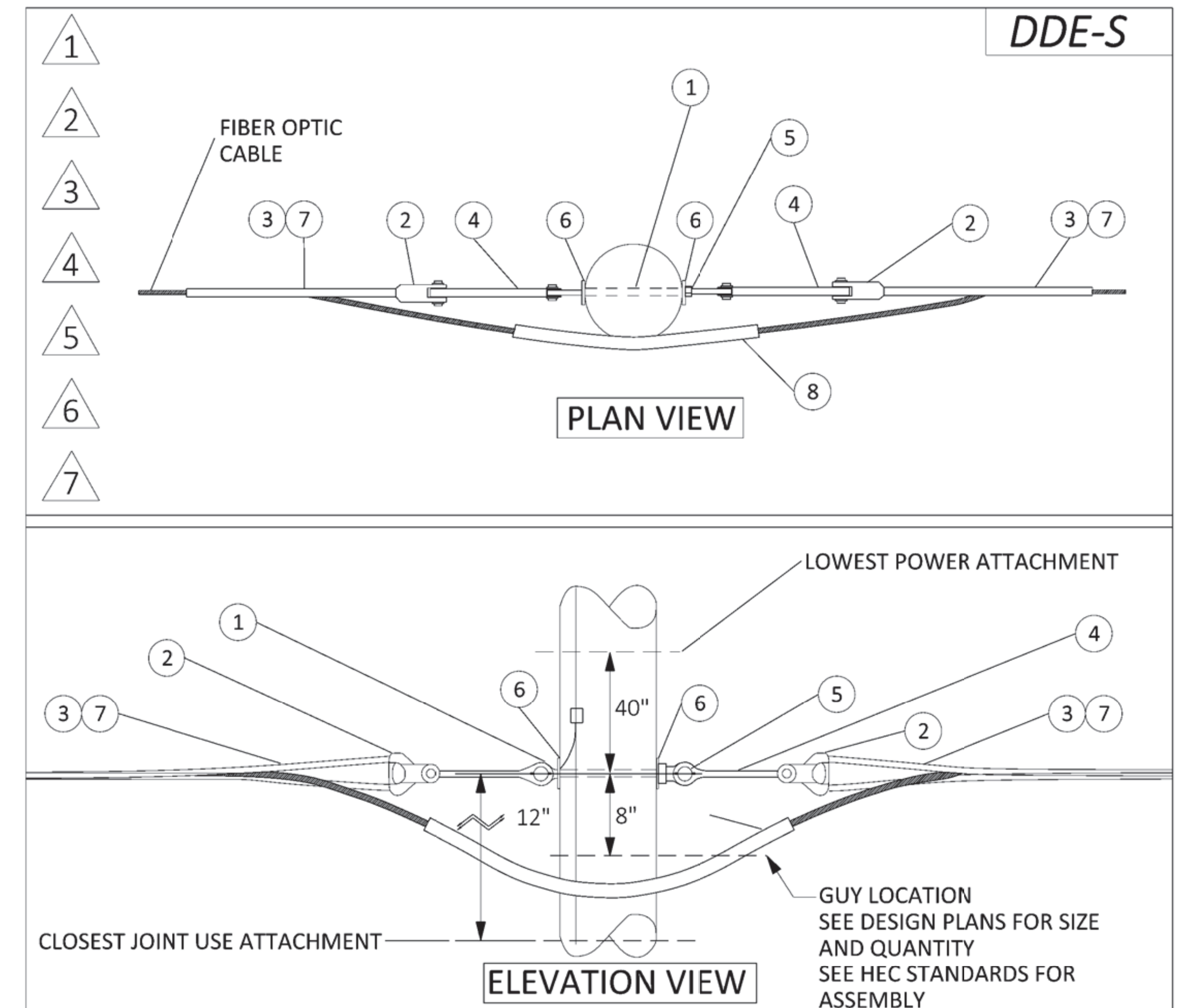
○	QTY.	NAME/DESCRIPTION	STOCK NO.	○	QTY.	NAME/DESCRIPTION	STOCK NO.
1	1	5/8" MACHINE BOLT (SIZE AS REQ'D)	VARIES				
2	1	FIBERLIGN DIELECTRIC SUPPORT	0000				
3	1	5/8" SQUARE NUT	J8563				
4	1	11/16" SQUARE WASHER	0000				
5	2	CUSHION INSERT HALF, (2) PER O.D.	VARIES				
6							
7							
8							

GENERAL NOTES

1. APPLICABLE FOR LOCATION ON 15KV POLES
2. ONLY QUALIFIED PERSONNEL SHALL PERFORM WORK IN THE POWER SUPPLY ZONE. SEE NESC FOR POWER SUPPLY ZONE DEFINITION.
3. GROUNDING IN COMPLIANCE WITH NESC/HEC STANDARDS
4. DO NOT EXCEED O.D. BEND RADIUS OF FIBER OPTIC CABLE
5. CORONA COILS TO BE USED WHERE INDICATED ON DESIGN
6. STAINLESS STEEL BANDS TO BE USED ON DUCTILE IRON, STEEL AND CONCRETE POLES
7. DESIGN DRAWINGS TAKE PRECEDENCE OVER STANDARD CONCERNING ATTACHMENT LOCATION ON THE POLE.

HOLSTON ELECTRIC COOPERATIVE FRAMING SPECIFICATIONS
DRAWN BY: D.S.W — REV BY: K.C.B. — FILE: F1.DGN — APPROVED:
ADSS FIBER ALUMINUM SUPPORT 0-20°
REVISED: 12/01/2023 — SHEET 1 OF 1 — STD. NO: F1

DDE-S



MATERIAL LIST

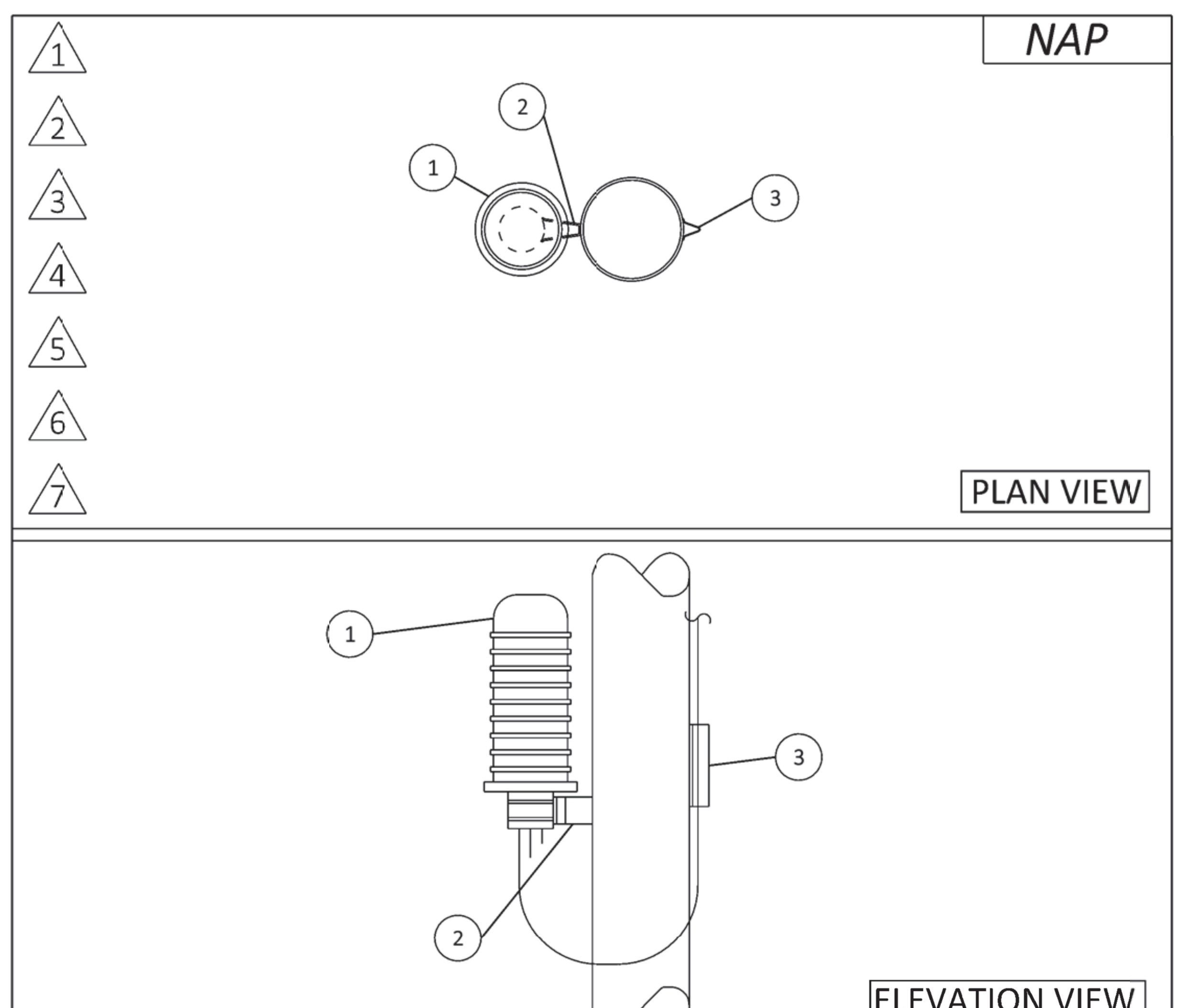
○	QTY.	NAME/DESCRIPTION	STOCK NO.	○	QTY.	NAME/DESCRIPTION	STOCK NO.
1	1	5/8" EYE BOLT, (SIZE AS REQ'D)	VARIES				
2	2	CLEVIS, THIMBLE	0000				
3	2	DEAD END,PREFORMED FOR ADSS	VARIES				
4	2	EXTENSION LINK	0000				
5	1	5/8" EYE NUT	0000				
6	2	11/16" SQUARE WASHER	0000				
7	2	STRUCTURAL REINFORCEMENT RODS	VARIES				
8	1	ABRASION PROTECTION DEVICE	0000				

GENERAL NOTES

1. APPLICABLE FOR LOCATION ON 15KV POLES
2. ONLY QUALIFIED PERSONNEL SHALL PERFORM WORK IN THE POWER SUPPLY ZONE. SEE NESC FOR POWER SUPPLY ZONE DEFINITION.
3. GROUNDING IN COMPLIANCE WITH NESC/HEC STANDARDS
4. DO NOT EXCEED O.D. BEND RADIUS OF FIBER OPTIC CABLE
5. CORONA COILS TO BE USED WHERE INDICATED ON DESIGN
6. STAINLESS STEEL BANDS TO BE USED ON DUCTILE IRON, STEEL AND CONCRETE POLES
7. DESIGN DRAWINGS TAKE PRECEDENCE OVER STANDARD CONCERNING ATTACHMENT LOCATION ON THE POLE.

HOLSTON ELECTRIC COOPERATIVE FRAMING SPECIFICATIONS
DRAWN BY: D.S.W — REV BY: K.C.B. — FILE: DDE-S.DGN — APPROVED:
ADSS FIBER STRAIGHT DOUBLE DEAD-ENDS 0°-20°
REVISED: 12/01/2023 — SHEET 1 OF 1 — STD. NO: DDE-S

NAP



MATERIAL LIST

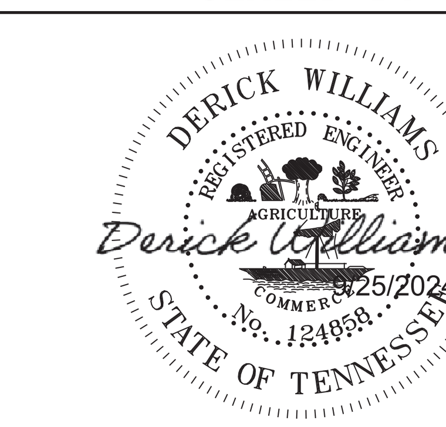
○	QTY.	NAME/DESCRIPTION	STOCK NO.
1	1	CHANNELL G6NX	G6NSBA1DA0NN0NNN
2	1	GREEN HORNET G6 POLE MOUNT BRACKET	BR06018090 (12 PER PACK)
3	1	VARIABLE LENGTH U-GUARD POLY	#####
4	1	MAINLINE CABLE GROMMET DROP GROMMET	GR03106407-49
5	4	DROP GROMMET	GR160001596
	1	GREEN HORNET G6 CABLE SLACK STORAGE BRACKET	BR02474PK (12 PER PACK)

GENERAL NOTES

1. APPLICABLE FOR 15KV POWER SPACE OR LESS
2. ONLY QUALIFIED PERSONNEL SHALL PERFORM WORK IN THE POWER SUPPLY ZONE. SEE FIBER GENERAL NOTES (xxxxxxxx) FOR POWER SUPPLY ZONE DEFINITION.
3. GROUNDING IN COMPLIANCE WITH NESC/HEC FIBER STANDARDS
4. DO NOT EXCEED O.D. BEND RADIUS OF FIBER OPTIC CABLE
5. CORONA COILS TO BE USED WHERE INDICATED ON DESIGN
6. ABRASION PROTECTION DEVICES TO BE USED WHERE DESIGN CALLS FOR THEM
7. DESIGN DRAWINGS TAKE PRECEDENCE OVER STANDARD CONCERNING ATTACHMENT LOCATION ON THE POLE.

HOLSTON ELECTRIC COOPERATIVE FRAMING SPECIFICATIONS
DRAWN BY: K.C.B. — REV BY: — FILE: G6 NAP.DGN — APPROVED:
ADSS FIBER NAP
REVISED: 11/17/2023 — SHEET 1 OF 1 — STD. NO: G6 NAP

SEALED BY



COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B

Holston Electric Cooperative
A Touchstone Energy® Cooperative

CANNON & CANNON INC.
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETAILS

SCALE: N.T.S.

9/25/2024 7:39:23 AM
Z:\01370-0008\03-Drawings\03-Utilities\U2-8.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U3-1

SR-70 BRIDGE OVER
NORFOLK SOUTHERN RAILROAD
HAWKINS
37011-3237-94
PIN # 124383.00

UTILITIES INDEX

SHEET NAME	SHEET NUMBER
ESTIMATED UTILITY QUANTITIES	U3-1
SPECIAL CONDITIONS	U3-2
TDOT STANDARD UTILITY NOTES	U3-3
UTILITY RELOCATION STA. 113+00 TO STA. 123+00	U3-4
UTILITY RELOCATION STA. 123+00 TO STA. 135+00	U3-5
UTILITY RELOCATION DETAILS	U3-6

ESTIMATED UTILITY QUANTITIES

				Project No. 1: 37011-3237-94			
	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	% Utility Betterment	%Project Public	%Project Private
1	793-01.12	POLE 40FT CLASS 4 WOOD	EACH	1	0.00%	75.00%	0.00%
2	793-01.41	ANCHOR 1 IN	EACH	10	0.00%	75.00%	0.00%
3	793-12.01	DIG SPLICE PIT 80CF	EACH	2	0.00%	75.00%	0.00%
16	793-13.12	1 DUCT FORMATION @ 36IN DEPTH	L.F.	30	0.00%	75.00%	0.00%
4	793-98.04	REMOVE POLES ALL SIZES	EACH	2	0.00%	75.00%	0.00%

1 INCLUDES ALL MATERIALS, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION INCLUDING, BUT NOT LIMITED TO BUTT WRAP, MGNV, GROUND ROD, DIG HOLE, TAMP, BLASTING AND NUMBER POLE.

2 INCLUDES ALL MATERIALS, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO DIGGING HOLE, BLASTING OR MECHANICALLY INSERTING INTO GROUND, BONDING/GROUNDING.

3 INCLUDES SETUP, BACKFILL, FACILITY LOCATE

4 INCLUDES TRAFFIC CONTROL, LABOR AND EQUIPMENT

16 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO SPACERS, COUPLINGS, BENDS, OPENING TRENCH, BACKFILL PER SPECS, SURFACE RESTORATION OF ALL CROSSINGS TO TDOT STANDARDS, SETUP, TRAFFIC CONTROL.

GENERAL NOTES:

1. ALL PLACEMENT OF DUCT BANKS TO BE AT 36" DEPTH TO FINAL GRADE IN CUTS, 36" DEPTH TO CURRENT GRADE IN FILLS.
2. PROVIDE CABLE MARKERS EVERY 500' AND IN-LINE OF SIGHT FROM EACH MARKER. ADD MARKERS AT ALL ROAD CROSSINGS.
3. SEE DETAIL SHEETS FOR MANHOLE SPECIFICATIONS.
4. RETURN TO AT&T EXISTING MANHOLE FRAME/COVERS REMOVED. BACKFILL MANHOLES ACCORDING TO T.D.O.T. REQUIREMENTS.
5. COORDINATE CROSSINGS WITH EXISTING AND PROPOSED UTILITIES TO SET FINAL GRADE FOR DUCT BANKS.
6. GROUND BED LOCATIONS AS SPECIFIED.
7. SURVEY INFORMATION IN THESE DRAWINGS ARE FROM OTHERS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES. ANY UTILITIES NOT SHOWN ON THESE DRAWINGS ARE ALSO THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO, AND FOR PROTECTION OF ALL EXISTING UTILITIES.

LEGEND:

▬▬▬▬	TEMPORARY LOCATION (BLUE)
▬▬▬▬	EXISTING TO REMAIN (ORANGE)
▬▬▬▬	EXISTING TO BE REMOVED OR RETIRED (GREEN)
▬▬▬▬	NEW INSTALLATION (RED)
—— T (UG) ——	NEW AT&T UNDERGROUND CABLE (DIRECT BURIED)
—— T ——	NEW AT&T OVERHEAD LINE
----- T-----	NEW AT&T SERVICE DROP
—— OHG ——	NEW OVERHEAD GUY
— — T (UG) — —	EXISTING AT&T UNDERGROUND CABLE TO REMAIN
— —— T —— —	EXISTING AT&T OVERHEAD LINE TO REMAIN
----- T-----	EXISTING AT&T SERVICE DROP TO REMAIN
---- OHG-----·	EXISTING OVERHEAD GUY TO REMAIN
— — T (UG) — —	EXISTING AT&T UNDERGROUND CABLE TO BE REMOVED OR RETIRED
— —— T —— —	EXISTING AT&T OVERHEAD LINE TO BE REMOVED OR RETIRED
----- T-----	EXISTING AT&T SERVICE DROP TO BE REMOVED OR RETIRED
---- OHG-----·	EXISTING OVERHEAD GUY TO BE REMOVED/RETIRED
●	EXISTING AT&T POLE TO REMAIN
●	EXISTING AT&T POLE TO BE REMOVED OR RETIRED
●	NEW INSTALLATION OF AT&T POLE
●—<	NEW INSTALLATION OF AT&T POLE WITH GUY WIRE
—<	EXISTING AT&T GUY WIRE TO REMAIN
—<	EXISTING AT&T GUY WIRE TO BE REMOVED
—<	NEW INSTALLATION OF AT&T GUY WIRE
✖	EXISTING ELECTRIC UTILITY POLE TO REMAIN
✖	EXISTING ELECTRIC UTILITY POLE TO BE REMOVED OR RETIRED
✖	NEW INSTALLATION OF ELECTRIC UTILITY POLE
—▶—	EXISTING AT&T PUSH BRACING TO REMAIN
—▶—	EXISTING AT&T PUSH BRACING TO BE REMOVED
—▶—	NEW AT&T PUSH BRACING
▭ TELE	EXISTING AT&T PULL BOX TO REMAIN
▭ TELE	EXISTING AT&T PULL BOX TO BE REMOVED OR RETIRED
▭ TELE	NEW INSTALLATION OF AT&T PULL BOX
▭	NEW INSTALLATION OF AT&T MANHOLE
▬	NEW INSTALLATION OF AT&T HANDHOLE

UTILITY COMPANY CONTACT

AT&T TENNESSEE
9733 PARKSIDE DRIVE
KNOXVILLE, TN 37922
JAY FRAZIER
865-387-2685
EMAIL: jf092g@att.com

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9-24-2024
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BARGE
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PHONE (865) 637-2810 // FAX (865) 673-8554
BARGE DESIGN PROJECT NO. 32119-92

AT&T
TENNESSEE

ESTIMATED
UTILITY
QUANTITIES

SCALE: NONE

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U3-2

SR-70 BRIDGE OVER
NORFOLK SOUTHERN RAILROAD
HAWKINS
37011-3237-94
PIN # 124383.00

AT&T SPECIAL CONDITIONS AND ADDITIONAL BREAKDOWN OF TIME

1. IF ALL OTHER SECTIONS OF AT&T'S WORK IS READY AT THE SAME TIME, THEN 180 DAYS IS NEEDED TO COMPLETE THE PROJECT. TO HELP KEEP THE PROJECT MOVING FORWARD, AT&T AGREES TO WORK SECTIONS OF PLACEMENT AND CUTOVER AS THEY BECOME AVAILABLE AS LONG AS THEY CAN LOGISTICALLY BE WORKED, AND DO NOT PLACE ADDITIONAL COSTS ON AT&T OR CAUSE ANY SAFETY CONCERNS. AT&T ALSO AGREES TO EVALUATE AND WORK WITH THE STATE CONTRACTOR IF THERE ARE TEMPORARY RELOCATIONS THAT ARE NEEDED. THESE TEMPORARY RELOCATIONS WILL HAVE THEIR OWN SCHEDULE OF CALENDAR DAYS AND MAY BE 100% REIMBURSABLE IN ADDITION TO ANY CHAPTER 86 REIMBURSEMENTS.

2. BY BREAKING IT DOWN INTO SECTIONS, EACH SECTION HAS ITS OWN MOBILIZATION AND MATERIAL ORDERING TIME. THE SPECIAL CONDITIONS APPLY TO EACH SECTION INDIVIDUALLY; HOWEVER, ADDITIONAL CLARIFICATION WILL BE INCLUDED IN EACH SECTION.

3. THE CONSTRUCTION SCHEDULE LISTED INCLUDES STANDARD MATERIAL ORDERING INTERVALS, PROJECTED WORKLOADS AT THE TIME OF CONSTRUCTION, ESTIMATED WORK CONTENT, AND LIMITED DELAYS DUE TO WEATHER OR CUSTOMER RELEASES FOR SCHEDULED SERVICE INTERRUPTIONS. COMPLETION OF WORK IS ALSO CONTINGENT ON NATIONAL OR STATE EMERGENCY ORDERS WHICH CAN RESTRICT TELECOMMUNICATIONS WORK.

4. THE CONSTRUCTION SCHEDULE LISTED CANNOT BE IMPLEMENTED UNTIL AT&T HAS BEEN NOTIFIED IN WRITING BY TDOT AND/OR THE STATE CONTRACTOR THAT ALL AT&T ITEMS INCLUDED IN THE STATE CONTRACT HAVE BEEN PLACED, ALL POWER COMPANY POLES HAVE BEEN SET, AND ALL OTHER OVERHEAD UTILITIES HAVE BEEN TRANSFERRED DUE TO SAFETY REGULATIONS AND POTENTIAL CONSTRUCTION CONFLICTS.

5. ALL SCHEDULES/SECTIONS ARE BASED ON AT&T BEING ABLE TO GET APPROVAL FROM TDOT FOR USE OF THE DIMINIMIS FOR THOSE ITEMS THAT CANNOT BE OBTAINED USING FHWA/BUY AMERICA APPROVED STEEL. ANY DELAYS ON APPROVAL OF THESE ITEMS WILL CAUSE AN EQUAL DELAY ON AT&T'S SCHEDULE.

6. ANY CHANGES THAT THE STATE'S CONTRACTOR MAKES TO THE PLANS PROVIDED TO THEM BY TDOT MAY CAUSE A REDESIGN TO AT&T'S PLANS. AT&T WILL REQUIRE TIME TO EVALUATE AND MAKE CHANGES IF NECESSARY. THESE CHANGES WILL HAVE TO BE APPROVED BY TDOT THROUGH A FORMAL STAMPED REDESIGN AND WILL REQUIRE ADDITIONAL TIME ON THE SCHEDULE. AT&T'S TIME WILL NOT START UNTIL AFTER THE DESIGN CHANGES AND ALL OTHER SPECIAL CONDITIONS HAVE BEEN APPROVED/COMPLETED.

7. AT&T CAN MOVE OVERHEAD LINES IN SOME INSTANCES BEFORE OTHER COMMUNICATION COMPANIES; HOWEVER, THIS COULD CAUSE ADDITIONAL TIME DELAYS AND COSTS TO AT&T AND TO THOSE OTHER COMPANIES. THESE COSTS MAY BE SUBJECT TO THE PARAGRAPH ABOVE.

8. WHEN REFERRING TO "ALL" POWER COMPANY POLES OR "ALL" OTHER OVERHEAD UTILITIES, IT IS ONLY REFERRING TO THOSE POLES THAT HAVE AN IMPACT ON AT&T'S RELOCATION.

9. THIS SCHEDULE IS ALSO DEPENDENT ON AT&T HAVING ACCESS TO ALL OF ITS EXISTING FACILITIES UNTIL SUCH TIME AS THEY ARE NO LONGER IN SERVICE AND ARE READY TO BE RETIRED. EXISTING MANHOLE LIDS MAY REQUIRE RAISING TO MAINTAIN ACCESSIBILITY UNTIL IT CAN BE RETIRED.

10. AT&T MUST BE CONSULTED PRIOR TO CONTRACTOR REVISING SUGGESTED TDOT TRAFFIC CONTROL PHASING.

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BARGE DESIGN PROJECT NO. 32119-92

AT&T
TENNESSEE

SPECIAL
CONDITIONS

SCALE: NONE

`$$$$SYTIME$$$$$$$`
`$$$$DGNSPEC$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$`

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U3-3

SR-70 BRIDGE OVER HAWKINS
NORFOLK SOUTHERN RAILROAD
37011-3237-94
PIN # 124383.00

TDOT STANDARD GENERAL NOTES:

1. EXCEPT FOR EROSION SEDIMENT CONTROL ITEMS, NO ROADWAY OR BRIDGE ITEMS SHALL BE UTILIZED TO COMPENSATE FOR WORK METHODS OR MATERIALS ASSOCIATED WITH AND/OR SPECIFIED FOR THE UTILITY INSTALLATION, EVEN THOUGH THE SAME OR SIMILAR ROADWAY OR BRIDGE MATERIALS MAY HAVE BEEN CALLED FOR IN THE UTILITY SPECIFICATIONS OR DRAWINGS.

2. ALL MATERIALS, METHODS, AND/OR INTEGRAL MATERIALS OUTLINED IN THE UTILITY SPECIFICATIONS OR DRAWINGS NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL INSTALLATION MUST BE INCLUDED IN THE UNIT PRICE FOR THE ASSOCIATED UTILITY WORK ITEM.

3. THE CONTRACTOR MUST MAINTAIN ALL SERVICES DURING THE CONSTRUCTION OF THE RELOCATED FACILITY. ANY COSTS ASSOCIATED WITH INSTALLATION OF REQUIRED TEMPORARY SERVICE LINES DUE TO THE ROADWAY CONSTRUCTION SEQUENCE OF WORK (I.E., CUTS, FILLS, PHASING, ETC.) SHALL BE INCLUDED IN THE COST OF THE PERMANENT UTILITY ITEMS.

4. IT SHALL BE THE RESPONSIBILITY OF THE PRIME CONTRACTOR'S SURVEYOR TO LAY OUT ALL THE FACILITIES BEING RELOCATED WITHIN THE CONTRACT.

5. FOR BURIED UTILITIES, THE PRIME CONTRACTOR OR SUBCONTRACTOR SHALL BE REQUIRED TO PROVIDE TO THE UTILITY UPON COMPLETION OF THE UTILITY'S RELOCATION WORK A SET OF AS-BUILT DRAWINGS FOR THEIR RECORDS. THESE AS-BUILT DRAWINGS SHOULD BE PREPARED AS THE JOB PROGRESSES TO ENSURE THEIR ACCURACY.

6. WHERE EROSION CONTROL MEASURES ARE NEEDED FOR THE UTILITY RELOCATION WORK OCCURRING INSIDE OR OUTSIDE STATE RIGHT-OF-WAY, THE CONTRACTOR SHALL SUBMIT TO THE TDOT PROJECT SUPERVISOR FOR APPROVAL A PROPOSED EROSION AND SEDIMENT CONTROL PLAN PRIOR TO BEGINNING THE WORK. TDOT APPROVAL MUST BE RECEIVED BEFORE THE EROSION CONTROL PAY ITEMS FOR ROADWAY CONSTRUCTION CAN BE USED FOR ANY ADDITIONAL EROSION CONTROL MEASURES REQUIRED FOR THE UTILITY RELOCATION WORK.

7. DRIVEWAY, SIDEWALK AND ROADWAY TEMPORARY RESTORATION SHALL BE PART OF THE IN-PLACE COST OF PLACING THE UTILITY ITEM WITHIN THE ROW.

8. ANY EXCAVATION OF THE STREAM CHANNEL AREA SHALL BE SEPARATED FROM FLOWING WATER AND ACCOMPLISHED DURING LOW FLOW CONDITIONS. THIS SHALL BE ACCOMPLISHED BY THE USE OF FLUMES, LINED DIVERSION CHANNEL WITH SANDBAG BERM, DIVERSION PIPE WITH SANDBAG DAM AT PIPE INLET, OR IN SOME CASES COFFERDAMS. ALTERNATIVELY, BASED ON FIELD CONDITIONS AND CONTRACTOR SELECTION, THE UTILITY RELOCATION MAY BE ACCOMPLISHED USING BORE TECHNOLOGY WITH NO STREAM CHANNEL IMPACTS.

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AT&T
TENNESSEE

TDOT STANDARD
UTILITY NOTES

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U3-4

SR-70 BRIDGE OVER NORFOLK SOUTHERN RAILROAD — HAWKINS
37011-3237-94
PIN # 124383.00

CONTROL POINTS

POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S04	748323.9310	2849614.3750	1169.56	108+58.33	24.70' (LT)
S05	748346.7700	2849136.4990	1154.95	113+32.45	39.28' (RT)
S06	748228.7600	2848504.1050	1121.89	119+72.67	23.73' (LT)

NOTE: STATIONS AND OFFSETS ARE REFERENCED TO SR-70

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BARGE DESIGN PROJECT NO. 32119-92

AT&T
TENNESSEE

UTILITY RELOCATION

STA. 113+00 TO STA. 123+00

SCALE: 1"= 50'

$$$SYTIME$$$$$
$$$DGNSPEC$$$

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U3-5

SR-70 BRIDGE OVER NORFOLK SOUTHERN RAILROAD HAWKINS
37011-3237-94
PIN # 124383.00

CONTROL POINTS					
POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S07	748190.7590	2848063.7690	1105.81	124+14.65	23.59' (LT)

NOTE: STATIONS AND OFFSETS ARE REFERENCED TO SR-70

SEALED BY

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BARGE DESIGN PROJECT NO. 32119-92

AT&T
TENNESSEE

UTILITY
RELOCATION

STA. 123+00 TO STA. 135+00

SCALE: 1"= 50'

$$$$SYTIME$$$$$$
$$$DGNSPEC$$

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U3-6

SR-70 BRIDGE OVER NORFOLK SOUTHERN RAILROAD HAWKINS
37011-3237-94
PIN # 124383.00

1 RISER POLE
U3-6
SCALE: N.T.S.

NOTE:
A MAXIMUM OF FOUR (4) CONDUITS PER RISER POLE

2 CONDUIT ARRANGEMENT
U3-6
SCALE: N.T.S.

SEALED BY

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BARGE DESIGN PROJECT NO. 32119-92

AT&T
TENNESSEE

UTILITY
RELOCATION
DETAILS

SCALE: NONE

`$$$$SYTIME$$$$$$$`
`$$$DGNSPEC$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$`

ESTIMATED UTILITY QUANTITIES

				Project No. 1:			
	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	% Utility	%Project	Footnotes
	791-02.02	2 IN MDPE GAS MAIN	LF	153		100.00%	1
	791-02.05	6 IN MDPE GAS MAIN	LF	390		100.00%	1
	791-04.02	HDD 2 IN PE PIPE – UNCONSOLIDATED	LF	100		100.00%	1
	791-04.05	HDD 6 IN PE PIPE – UNCONSOLIDATED	LF	60		100.00%	1
	791-06.02	CONNECT TO 2 IN EX. PE PIPE	EACH	2		100.00%	1
	791-06.04	CONNECT TO 6 IN EX. PE PIPE	EACH	2		100.00%	1

TDOT GENERAL NOTES:

1. Except for erosion sediment control items, no Roadway or Bridge Items shall be utilized to compensate for work methods or materials associated with and/or specified for the utility installation, even though the same or similar roadway or bridge materials may have been called for in the Utility Specifications or drawings.

2. All materials, methods, and/or integral materials outlined in the utility specifications or drawings necessary to provide a complete and functional installation must be included in the Unit Price for the associated Utility Work Item.

3. The contractor must maintain all services during the construction of the relocated facility. Any costs associated with installation of required temporary service lines due to the roadway construction sequence of work (i.e., cuts, fills, phasing, etc.) shall be included in the cost of the permanent utility items. (Note to Utility: The utility relocation plans shall provide to the contractor the Utility's requirements for temporary tie-ins (including necessary testing and sterilization to accomplish the tie-in) and also any restrictions for taking lines out of service. If a temporary line will be a major item of work, a specific temporization plan and item must be included in the Utility's plans.)

4. It shall be the responsibility of the Prime Contractor's surveyor to lay out all the facilities being relocated within the contract.

5. For buried utilities, the Prime contractor or subcontractor shall be required to provide to the Utility upon completion of the Utility's relocation work a set of as-built drawings for their records. These as-built drawings should be prepared as the job progresses to ensure their accuracy.

6. Where erosion control measures are needed for the utility relocation work occurring inside or outside State right-of-way, the contractor shall submit to the TDOT Project Supervisor for approval a proposed erosion and sediment control plan prior to beginning the work. TDOT approval must be received before the erosion control pay items for roadway construction can be used for any additional erosion control measures required for the utility relocation work.

7. Driveway, sidewalk and roadway temporary restoration shall be part of the in-place cost of placing the utility item within the ROW. When applicable, the utility relocation plans will show any stream crossings and cross-sections of the streams crossings with the following note:

8. Any excavation of the stream channel area shall be separated from flowing water and accomplished during low flow conditions. This shall be accomplished by the use of flumes, lined diversion channel with sandbag berm, diversion pipe with sandbag dam at pipe inlet, or in some cases cofferdams. Alternatively, based on field conditions and contractor selection, the utility relocation may be accomplished using bore technology with no stream channel impacts.

FOOTNOTE 1:
INCLUDES ALL MATERIALS INCLUDING SAND/STONE BEDDING, FLOWABLE FILL, TEMPORARY PAVEMENT IN OR OUT OF ROW, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION OF PIPE INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, EXCAVATION INCLUDING DIRT/ROCK, BACKFILLING, CREEK CROSSINGS PER SWPPP,COUPLINGS, FITTINGS, PIPE FUSION, APPURTENANCES, MAINTAINING THE TRENCH, PURGE POINT INSTALLATION, TESTING BY UTILITY SPECIFICATIONS TO INCLUDE BUT NOT LIMITED TO AIR, NITROGEN, HYDROSTATIC OR X-RAY, DEW POINT OR DRYING , AND ANY OTHER LABOR OR MATERIAL REQUIRED TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS.

SHEET #	DESCRIPTION
U4-1	INDEX SHEET
U4-2	SHEET 2 (SR 70)
U4-3	SHEET 3 (SR 70)

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U4-1
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.	.	.	.
.	.	.	.

S.R. 70 HAWKINS COUNTY
37011-3237-94

NOTE:
HAWKINS COUNTY GAS GAS TO COORDINATE WITH CUSTOMERS AFFECTED BY GAS OUTAGE TO MINIMIZE DURATION OF OUTAGE.

GENERAL NOTES:

1. All Roads and drives (Asphalt, Concrete) to be open cut unless otherwise specified.
2. All gravel drives are to be open cut unless otherwise specified.
3. Excavate trench in a manner to allow (24") twenty-four inches clearance between other underground structures unless otherwise specified.
4. Location of utilities and structures shown are approximate, and those shown are not necessarily all of the existing utilities and structures. It is the contractors responsibility to determine the exact location and existence of all utilities and underground structures.
5. For General Highway Construction Legend see Tennessee Department of Transportation Bureau of Planning & Development Standard Legend.

SEALED BY

RICHARD W. YARBROUGH
No. 16993

COORDINATES ARE NAD 83(1995), ARE
DATUM ADJUSTED BY THE FACTOR
OF 1.00006 AND TIED TO THE TGRN.
ALL ELEVATIONS ARE REFERENCED
TO THE NAVD 1988 WITH GEOID 12B

HAWKINS COUNTY UTILITY DISTRICT
UTILITY CONTACT:
PATRICK LUND, GENERAL MANAGER
202 PARK BLVD
ROGERSVILLE, TN 37857
423-272-8841

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GAS LINE RELOCATION

SR 70
SCALE: 1"=50'

CONTROL POINTS					
POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S04	748323.9310	2849614.3750	1169.56	108+58.33	24.70' (LT)
S05	748346.7700	2849136.4990	1154.95	113+32.45	39.28' (RT)
S06	748228.7600	2848504.1050	1121.89	119+72.67	23.73' (LT)

NOTE: STATIONS AND OFFSETS ARE REFERENCED TO SR-70

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U4-2

S.R. 70 HAWKINS COUNTY
37011-3237-94

NOTE:
HAWKINS COUNTY GAS TO COORDINATE WITH CUSTOMERS AFFECTED BY GAS OUTAGE TO MINIMIZE DURATION OF OUTAGE.

37011-2237-94
BEGIN PROJ. NO. BR-STP-70(24) R.O.W.
STA. 113+69.72
N 748304.4178
E 2849102.7649

37011-3237-94
BEGIN PROJ. NO. BR-STP-70(24) CONST.
STA. 113+00.00
N 748310.4327
E 2849172.2221

STA. 110+94.34 SR-70 =
STA. 10+00.00 REYNOLDS HILL RD.
N 748328.1762
E 2849377.1130

STA. 117+11.58 SR-70 L.M. 6.19 =
STA. 30+00.00 C.L.
NORFOLK SOUTHERN RAILWAY
DOT CROSSING NO. 730216V
R.R. MILEPOST 77.84
N 748274.9228
E 2848762.1753

37011-2237-94
END PROJ. NO. BR-STP-70(24) R.O.W.
STA. 122+31.50
N 748230.0660
E 2848244.1958

STA. 114+18.72 SR-70 =
STA. 20+00.00 HAGAN REYNOLDS RD. LT
N 748300.1898
E 2849053.9432
(SEE SHEET 6 FOR PROFILE)

STA. 114+20.18 SR-70 =
STA. 20+00.00 CORAN RD RT.
N 748300.0643
E 2849052.4935
(SEE SHEET 6 FOR PROFILE)

STA. 114+54 (37.77' LT)
TIE-IN NEW 2" MDPE GAS MAIN TO EXISTING 6" PE GAS MAIN BY SQUEEZE OFF CONNECTION.

STA. 114+54
HDD 100'± OF 2" MDPE GAS MAIN UNDER SR70.

STA. 114+83.97 (210.08' RT)
STA. 22+19.24 (11.95' LT)
TIE-IN NEW 2" MDPE GAS MAIN TO EXISTING 2"PE GAS MAIN BY SQUEEZE OFF CONNECTION.

EXISTING GAS MAIN TO BE ABANDONED IN PLACE

NO U.G. TEL. ESMT. PER ATT

HAWKINS COUNTY UTILITY DISTRICT 10' GAS ESMT.

EX. 6" GAS MAIN

NEW 2" PE GAS MAIN

LIMIT OF CONST. 17+85.00

LIMIT OF CONST. 113+00.00

LIMIT OF CONST. 21+55.00

200' RAILROAD R.O.W.

NORFOLK SOUTHERN RAILWAY

HAGAN REYNOLDS RD. (ASP)

CORAN RD (ASP)

S.R. 70 (ASP) S 85° 03' 02" W

REYNOLDS HILL RD (ASP) N 5° 36' 47" W

N 19° 10' 01" W

S 39° 40' 20" E

S 8° 23' 05" E

TDOT GPS #37-070-05 CP-S05

TDOT GPS #37-070-06 CP-S06

SEE SHEET NO. 5

MATCH LINE STA. 123+00

SEALED BY

RICHARD W. YARBROUGH
REGISTERED ENGINEER
AGRICULTURE
No. 109[illegible]
STATE OF TENNESSEE

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GAS LINE RELOCATION

SR 70
SCALE: 1"=50'

$$$$SYTM$$$$
$$$$LOGNSPEC$$$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	BR-STP-70(24)	U4-3
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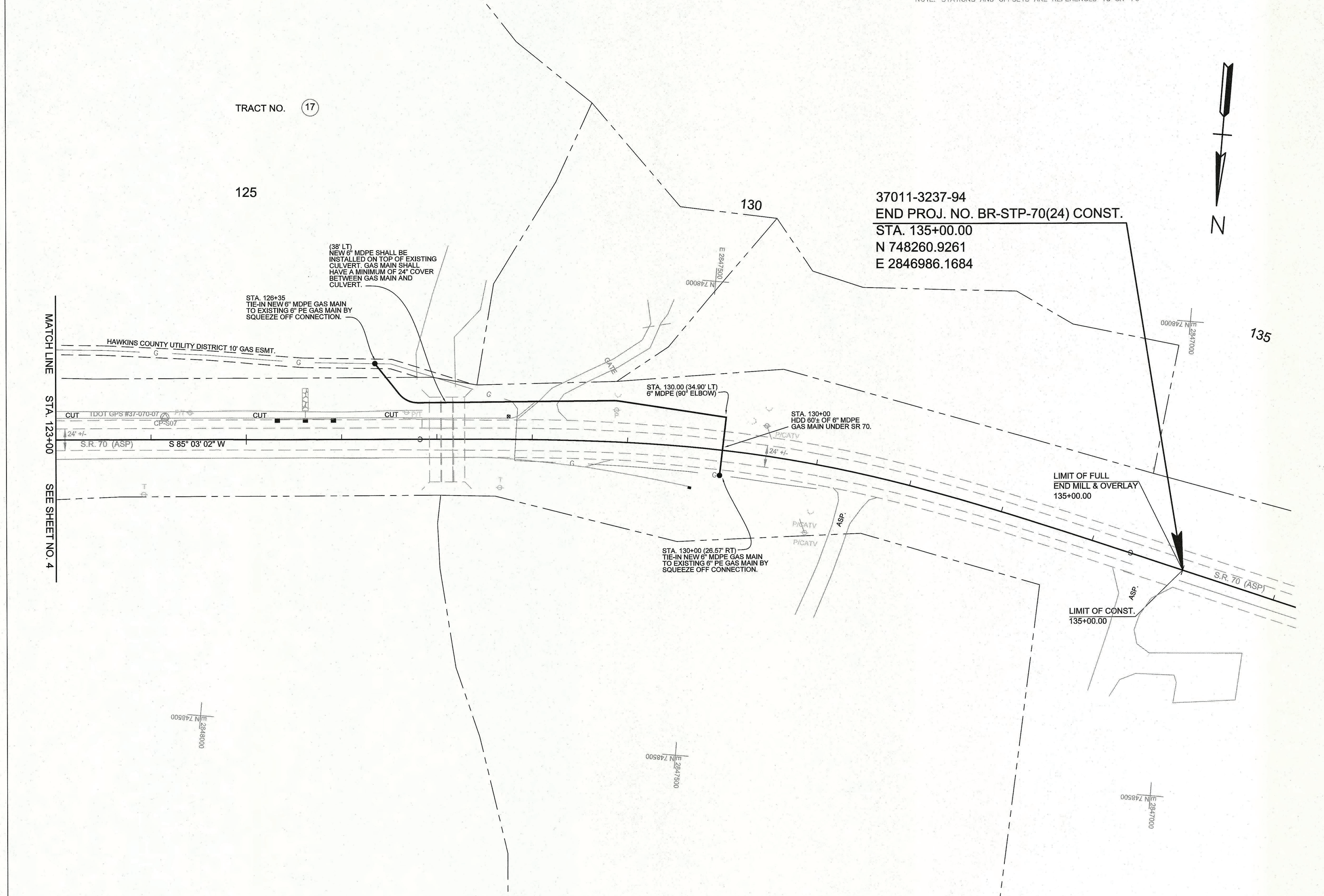
.	.	.	.
.	.	.	.

S.R. 70 HAWKINS COUNTY
37011-3237-94

NOTE:
HAWKINS COUNTY GAS TO COORDINATE WITH CUSTOMERS AFFECTED BY GAS OUTAGE TO MINIMIZE DURATION OF OUTAGE.

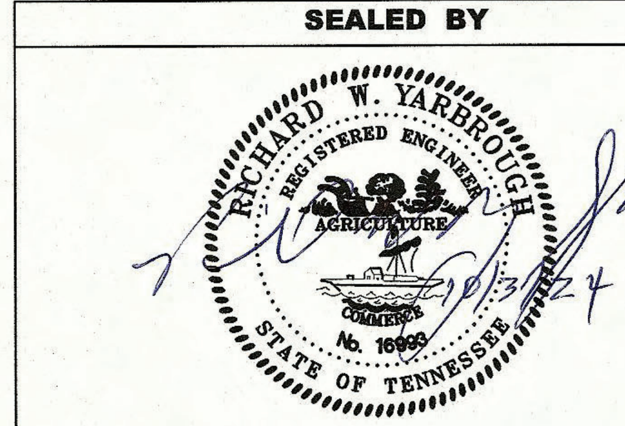
CONTROL POINTS					
POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S07	748190.7590	2848063.7690	1105.81	124+14.65	23.59' (LT)

NOTE: STATIONS AND OFFSETS ARE REFERENCED TO SR-70



TRACT NO. 17
125
130
135
37011-3237-94
END PROJ. NO. BR-STP-70(24) CONST.
STA. 135+00.00
N 748260.9261
E 2846986.1684
N
(38' LT)
NEW 6" MDPE SHALL BE INSTALLED ON TOP OF EXISTING CULVERT. GAS MAIN SHALL HAVE A MINIMUM OF 24" COVER BETWEEN GAS MAIN AND CULVERT.
STA. 126+35
TIE-IN NEW 6" MDPE GAS MAIN TO EXISTING 6" PE GAS MAIN BY SQUEEZE OFF CONNECTION.
HAWKINS COUNTY UTILITY DISTRICT 10' GAS ESMT.
MATCH LINE STA. 123+00 SEE SHEET NO. 4
CUT
TDOT GPS #37-070-07
CP-S07
24' +/-
S.R. 70 (ASP)
S 85° 03' 02" W
GATE
STA. 130.00 (34.90' LT)
6" MDPE (90° ELBOW)
STA. 130+00
HDD 60'± OF 6" MDPE GAS MAIN UNDER SR 70.
P/CATV
STA. 130+00 (26.57' RT)
TIE-IN NEW 6" MDPE GAS MAIN TO EXISTING 6" PE GAS MAIN BY SQUEEZE OFF CONNECTION.
ASP.
LIMIT OF FULL END MILL & OVERLAY
135+00.00
LIMIT OF CONST.
135+00.00
S.R. 70 (ASP)
N 748000
E 2847500
E 2847000
N 748500
E 2848000

SEALED BY



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GAS LINE RELOCATION

SR 70
SCALE: 1"=50'