



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:  
**Kirschten Roberts**  
 2026.02.02 14:16:38 -06'00'  
 PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.  
 GRESHAM SMITH  
 222 2ND AVE. SOUTH, SUITE 1400  
 NASHVILLE, TN 37201-2308  
 KIRSCHTEN ROBERTS, P.E. NO. 126215

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 SHEETS .....	ROADWAY-SIGN4
ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS.....	1A
ESTIMATED ROADWAY QUANTITIES.....	2

YEAR	PROJECT NO.	SHEET NO.
2026	38S180-S3-007	ROADWAY-SIGN 4
	38S180-M3-007	
	38S180-S3-008	

REV. 2-2-2026  
 ADDED SHEET TO PLANS.

**STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION**

**SIGNATURE  
 SHEET**

# ROADWAY INDEX

SHEET NAME	SHEET NO.
SIGNATURE SHEETS.....	ROADWAY-SIGN1
.....	ROADWAY-SIGN2
.....	ROADWAY-SIGN3
.....	ROADWAY-SIGN4
TITLE SHEET .....	1
ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS.....	1A
STANDARD STRUCTURE AND TRAFFIC OPERATIONS DRAWINGS.....	1A1
PROJECT COMMITMENTS.....	1B
ESTIMATED ROADWAY QUANTITIES.....	2
TYPICAL SECTIONS AND PAVEMENT SCHEDULE .....	2B, 2B1
GENERAL NOTES.....	2C
SPECIAL NOTES.....	2D
ENVIRONMENTAL NOTES.....	2E
TABULATED QUANTITIES .....	2F
RIGHT-OF-WAY NOTES, UTILITY NOTES, AND UTILITY OWNERS.....	3
PROPERTY MAP(S) AND RIGHT-OF-WAY ACQUISITION TABLE(S).....	3A – 3B
PRESENT LAYOUT(S).....	4 – 5
RIGHT-OF-WAY DETAILS .....	4A – 5A
PROPOSED LAYOUT(S) .....	4B – 5B
PROPOSED PROFILE(S) .....	4C – 5C
PRIVATE DRIVE, BUSINESS, AND FIELD ENTRANCE PROFILE(S).....	6
DRAINAGE MAP(S).....	7
EROSION PREVENTION AND SEDIMENT CONTROL PLANS.....	8 - 12
SIGNING AND PAVEMENT MARKING PLAN(S).....	13 – 14
SIGN SCHEDULE SHEET(S).....	15
ROADWAY CROSS SECTIONS .....	16 – 36
TRAFFIC CONTROL PLANS .....	T1 – T3, T3A
BRIDGE PLANS .....	B-1
STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PLANS .....	S-1

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

# STANDARD ROADWAY DRAWINGS

DWG.	REV.	DESCRIPTION
<b>10-100.00 STANDARD ROADWAY TITLE SHEET, ABBREVIATIONS, AND LEGENDS</b>		
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
<b>10-101.00 STANDARDS ROADWAY DRAWINGS</b>		
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-2		DESIGN STANDARDS FOR COLLECTORS, 2-LANE ROADS AND STREETS
RD11-LR-1		MINIMUM RUNOFF LENGTHS (LR) FOR URBAN HIGHWAYS
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-S-11B		DESIGN AND CONSTRUCTION DETAILS FOR ROCK CUT SLOPE AND CATCHMENT
<b>10-106.00 SAFETY DESIGN AND GUARDRAILS</b>		
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-6	07-30-24	SAFETY PLAN SAFETY HARDWARE PLACEMENT ON OUTSIDE EDGE
S-GR31-1	03-13-25	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-AGT-1		LONG SPAN APPROACH GUARDRAIL TRANSITION
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-GR28-1M	06-15-21	W-BEAM & THRIE BEAM BARRIER RAIL AND RUB RAIL DETAILS
S-GR28-2M	06-28-19	GUARDRAIL HARDWARE DETAILS

DWG.	REV.	DESCRIPTION
S-GRC-1M		GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL
<b>10-107.00 EROSION PREVENTION AND SEDIMENT CONTROL</b>		
EC-STR-3C	03-01-23	SILT FENCE WITH WIRE BACKING
EC-STR-34	05-04-22	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-6	11-30-20	ROCK CHECK DAM
EC-STR-6A	05-06-16	ENHANCED ROCK CHECK DAM
EC-STR-7	05-04-22	SEDIMENT TRAP WITH CHECK DAM

TYPE	YEAR	PROJECT NO.	SHEET NO.
FUNC.	2025	38S180-S2-007	NA
		38S180-M2-007	
		38S180-S2-008	
PIH	2025	38S180-S3-007	1A
		38S180-M3-007	
		38S180-S3-008	
PS&E	2026	38S180-S3-007	1A
		38S180-M3-007	
		38S180-S3-008	

REV. 12-17-2025  
ADDED ROADWAY-SIGN2 TO INDEX.  
REV. 1-22-2026  
ADDED ROADWAY-SIGN3 TO INDEX.  
REV. 2-2-2026  
ADDED ROADWAY-SIGN4 TO INDEX.

SEALED BY



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

ROADWAY INDEX  
AND  
STANDARD  
ROADWAY  
DRAWINGS

**ESTIMATED ROADWAY QUANTITIES**

ITEM NO.	DESCRIPTION	UNIT	38S180-S3-008 QUANTITY	38S180-S3-007 QUANTITY	38S180-M3-007 QUANTITY	TOTAL QUANTITY
(12) 105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	0.5	0.5		1
201-01	CLEARING AND GRUBBING	LS	0.5	0.5		1
(12) 203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	1251	968		2219
203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	1303	4201		5504
203-04	PLACING AND SPREADING TOPSOIL	C.Y.	330	378		708
(3) 203-06	WATER	M.G.	4	3		7
(1) (2) 209-05	SEDIMENT REMOVAL	C.Y.	63	63		126
(1) (2) 209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	3898	4600		8498
(1) (2) 209-08.07	ROCK CHECK DAM	EACH	4			4
(1) (2) 209-08.08	ENHANCED ROCK CHECK DAM	EACH	2			2
(1) (2) 209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.	192			192
(5) 303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	672	778		1450
(1) (2) (4) 303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	426	100	532	1058
(5) 307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	367	375		742
(5) 307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING BM-2	TON	240	302		542
(5) 402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	4	4		8
(1) (5) 402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	13	13		26
(5) 403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	2	2		4
(14) 407-20.05	SAW CUTTING OF ASPHALT PAVEMENT	L.F.	437	87		524
(5) 411-01.10	ACS MIX (PG64-22) GRADING D	TON	163	181		344
411-12.03	SCORING FOR RUMBLE STRIPE (NON-CONTINUOUS) (8" WIDTH)	L.M.	0.3	0.3		0.6
(5) 415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	341	68		409
705-06.01	W BEAM GR (TYPE 2) MASH TL-3	L.F.	175	175		350
705-06.20	TANGENT ENERGY ABSORBING TERM MASH TL-3	EACH	4	4		8
705-06.28	THREE BEAM AGT (LONG SPAN) MASH TL-3	EACH	4	4		8
706-01	GUARDRAIL REMOVED	L.F.	347	190		537
(1) (2) 707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	692	1038		1730
708-02.01	MARKERS (CONCRETE R.O.W. POSTS)	EACH	12	8		20
(1) (2) (6) 709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	100	100		200
(1) (7) 709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	503			503
(1) (8) 709-05.08	MACHINED RIP-RAP (CLASS B)	TON			975	975
712-01	TRAFFIC CONTROL	LS	0.5	0.5		1
(1) 712-05.01	WARNING LIGHTS (TYPE A)	EACH	3	3		6
(1) (9) 712-06	SIGNS (CONSTRUCTION)	S.F.	355	354		709
712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	40	40		80
713-01.01	CLASS A CONCRETE (FOUNDATION FOR SIGN SUPPORTS)	C.Y.	0.5	0.5		1
713-01.02	STEEL BAR REINFORCEMENT(FOUNDATION FOR SIGN SUPPORTS)	LB.	97	97		194
713-06	STEEL I-BEAMS & WF-BEAMS(BREAKAWAY) SIGN SUPPORT	LB.	204	204		408
713-11.02	PREFORATED/KNOCKOUT SQUARE TUBE POST	LBS	108	153		261
713-11.21	P POST SLIP BASE	EACH	2	3		5
713-13.02	FLAT SHEET ALUMINUM SIGN (0.080 THICK)	S.F.		3		3
713-13.03	FLAT SHEET ALUMINUM SIGN (0.100 THICK)	S.F.	56	60		116
713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	L.S.		1		1
(1) 713-16.01	CHANGEABLE MESSAGE UNIT SIGN	EACH	1	2		3
716-01.11	RAISED PVTM MARKERS (BI-DIRECTIONAL) (1 COLOR LENS)	EACH	16	13		29
(13) 716-01.30	REMOVAL OF SNOWPLOWABLE REFLECTIVE MARKER	EACH	5	2		7
716-12.02	ENHANCED FLATLINE THERMO PVTM MRKNG (6IN LINE)	L.M.	0.8	0.8		1.6
717-01	MOBILIZATION	LS	0.5	0.5		1
(11) 740-07.04	GEOGRID REINFORCEMENT TYPE 2	S.Y.	247		242	489
(1) (2) (15) 740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	342	172		514
(11) 740-10.04	GEOTEXTILE (TYPE IV) (STABILIZATION)	S.Y.	268		272	540
(1) (2) 801-01	SEEDING (WITH MULCH)	UNIT	39	45		84
(1) (2) 801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	39	45		84
(1) (2) 801-02.15	FERTILIZER	TON	1	1		2
(1) (2) 801-03	WATER (SEEDING & SODDING)	M.G.	27	32		59
(1) (2) 803-01	SODDING (NEW SOD)	S.Y.	1942	2224		4166
(1) (2) 805-12.01	EROSION CONTROL BLANKET (TYPE I)	S.Y.	100	100		200

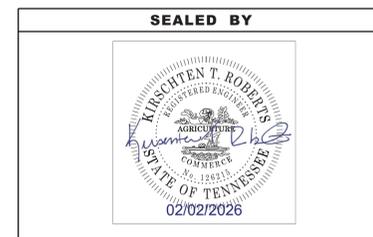
**FOOTNOTES:**

- (1) TO BE USED AS DIRECTED BY THE ENGINEER
- (2) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
- (3) ITEM TO BE USED FOR EMBANKMENTS AND BASE MATERIAL PURPOSES
- (4) ITEMS INCLUDES 858 TONS FOR PAVEMENT AT BRIDGE ENDS.
- (5) SEE TABULATED QUANTITIES FOR LOCATION AND DETAILS.
- (6) ITEM TO BE USED FOR TEMP. CONSTRUCTION EXITS.
- (7) ITEM INCLUDES 58 TONS FOR SPECIAL DITCHES AND 445 TONS FOR BRIDGE ABUTMENT SLOPE STABILIZATION.
- (8) ITEM INCLUDES 975 TONS FOR BRIDGE ABUTMENT SLOPE STABILIZATION.
- (9) SEE SHEET T2 FOR SCHEDULE, ADDITIONAL SIGNS INSTALLED AS DIRECTED BY THE ENGINEER. SHALL BE PAID FOR AT THE UNIT COST FOR THIS ITEM.
- (10) NOT USED
- (11) ITEM TO BE USED FOR PAVEMENT AT BRIDGE ENDS.
- (12) ITEM INCLUDES 15 C.Y. FOR EACH PROJECT NUMBER FOR EROSION CONTROL.
- (13) FOR REMOVAL OF RAISED PAVEMENT MARKERS OUTSIDE OF RESURFACING LIMITS.
- (14) ITEM TO BE USED FOR SAWCUTTING OF PAVEMENT THROUGH MILL AND OVERLAY SECTIONS.
- (15) ITEM INCLUDES 344 S.Y. FOR TEMP. CONSTRUCTION EXITS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
FUNC.	2025	38S180-S2-007	2
		38S180-M2-007	
		38S180-S2-008	
PIH	2025	38S180-S3-007	2
		38S180-M3-007	
		38S180-S3-008	
PS&E	2026	38S180-S3-007	2
		38S180-M3-007	
		38S180-S3-008	

REV. 1-22-2026  
 REVISED QUANTITIES 303-10.01, 716-12.02, 740-07.04, AND 740-10.04. REMOVED QUANTITIES 716-08.30 AND 716-09.86. REVISED FOOTNOTES 4, 10 AND 13.

REV. 2-2-2026  
 CHANGED ITEM 411-12-03 QUANTITY BACK TO VALUE PRIOR TO 1-22-26 REVISION.



**STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION**

**ESTIMATED  
 ROADWAY  
 QUANTITIES**



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

**Gilreath, Corey** Digitally signed by Gilreath, Corey  
Date: 2026.02.02 12:25:28 -05'00'

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

AMERICAN STRUCTUREPOINT, INC.  
9025 RIVER ROAD, SUITE 200  
INDIANAPOLIS, IN 46240  
COREY D. GILREATH, P.E. NO. 132497

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 SHEETS .....	STRUCTURE-SIGN3
INDEX OF DRAWINGS .....	B-1
GENERAL NOTES AND ESTIMATED QUANTITIES .....	U-97-968

YEAR	PROJECT NO.	SHEET NO.
2026	38S180-S3-008	STRUCTURE-SIGN 3

REV. 02-02-2026  
ADDED SHEET TO PLANS.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

SIGNATURE  
SHEET

CONST. NO.:

PROJECT NO.	YEAR	SHEET NO.	
38S180-S3-008	2026	B-1	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	12/17/2025	CDG	Revised List of Drawings
2	02/02/2026	CDG	Revised List of Drawings
-	-	-	-
-	-	-	-

LIST OF DRAWINGS

TITLE	DWG. NO.	LAST REV. DATE
SIGNATURE SHEET	STRUCTURE-SIGN1	
SIGNATURE SHEET	STRUCTURE-SIGN2	12/17/2025
SIGNATURE SHEET	STRUCTURE-SIGN3	02/02/2026
INDEX OF DRAWINGS	B-1	02/02/2026
LAYOUT OF BRIDGE	U-97-967	
GENERAL NOTES AND ESTIMATED QUANTITIES	U-97-968	02/02/2026
FOUNDATION DATA	U-97-969	
SUPERSTRUCTURE	U-97-970	
SUPERSTRUCTURE DETAILS	U-97-971	
PRESTRESSED BOX BEAM DETAILS	U-97-972	
ABUTMENT NO. 1	U-97-973	
ABUTMENT NO. 1 DETAILS	U-97-974	
ABUTMENT NO. 1 DETAILS	U-97-975	
ABUTMENT NO. 2	U-97-976	
ABUTMENT NO. 2 DETAILS	U-97-977	
ABUTMENT NO. 2 DETAILS	U-97-978	
FINAL FOUNDATION DATA	U-97-979	
BILL OF STEEL	U-97-980	

LIST OF STANDARD DRAWINGS

TITLE	DWG. NO.	LAST REV. DATE
BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET	STD-1-ISS	7-24-24
REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS	STD-1-5	06-05-23
STANDARD PILE DETAILS	STD-5-1	2023
STANDARD SEISMIC DETAILS	STD-6-1	12-08-23
STANDARD REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS	STD-9-1	10-07-08
MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS	STD-10-1	06-05-23
MISC. ABUTMENT AND PAVEMENT AT BRIDGE ENDS BACKFILL DETAILS	STD-10-2	06-05-23
STANDARD DETAILS FOR PRESTRESSED BOX BEAMS	STD-14-3	06-06-24

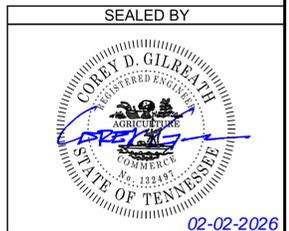
LIST OF SPECIAL PROVISIONS

TITLE	SPEC. PROV. NO.	REV. DATE
REMOVAL OF ASBESTOS CONTAINING MATERIAL (ACM)	202ACM	07-07-14

LIST OF REFERENCE DRAWINGS

(TO BE PRINTED WITH PLANS)

TITLE	DWG. NO.
LAYOUT OF BRIDGE LOST CREEK	K-04-03
PRECAST SLAB BRIDGE	F-10-31
STANDARD TIMBER PILE BENTS WITH TIMBER CAP	
€ CONCRETE CAP FOR PRECST CONCRETE DECK	F-10-32



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

INDEX OF DRAWINGS  
STATE ROUTE 180 OVER OVERFLOW  
BRIDGE I.D NO. 38S80510007  
STATION 105+91.00  
LOG MILE 4.57  
HAYWOOD COUNTY  
2026

PIN NO.: 136185.06  
DESIGN BY: CDG DATE: 06/10/2025  
DRAWN BY: TMT DATE: 06/13/2025  
SUPERVISED BY: MAH DATE: 06/13/2025  
CHECKED BY: CDG DATE: 06/16/2025



2/2/2026 9:41:30 AM C:\TMP\PW\ISE\CGILREATH@STRUCTUREPOINT.COM\ID0160786\38S80510007-SHT-IND.DGN

**GENERAL NOTES:**

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

DESIGN SPECIFICATIONS: 10TH EDITION (2024) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND THE 2ND EDITION (2011) AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN WITH INTERIMS.

LOADING: HL-93 LIVE LOAD INCREASED BY 10% (MULTIPLIED BY 1.1) IN ADDITION TO ALL LOAD FACTORS SPECIFIED BY AASHTO FOR ALL APPLICABLE LOAD COMBINATIONS SEISMIC DESIGN CATEGORY C WITH AS=0.54, SDS=1.087, SDI=0.467, (1000 YEAR RETURN PERIOD) 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.

FOUNDATION PREPARATION: SEE SECTION 204 OF THE STANDARD SPECIFICATIONS. IF IT IS DETERMINED THAT COFFERDAMS ARE REQUIRED, THEY SHALL BE IN ACCORDANCE WITH SECTION 204.09 OF THE STANDARD SPECIFICATIONS.

ABUTMENTS ON FILL: THE FILLS AT THE ENDS OF THE BRIDGE SHALL BE IN PLACE AND THOROUGHLY COMPACTED BEFORE ANY ABUTMENT PILES ARE DRIVEN.

FRICTION PILES: TO BE 14" Ø PIPE PILES, 0.500" WALL THICKNESS. AFTER EXCAVATION TO THE PROPOSED FOOTING ELEVATIONS, A TEST PILE SHALL BE DRIVEN AT EACH SUBSTRUCTURE AT THE LOCATION DESIGNATED ON DRAWING NO. U-97-979. A LOAD TEST WILL THEN BE APPLIED TO THE TEST PILE IN ABUT. NO. 1. FROM THE RESULTS OF THE LOAD TEST, THE ENGINEER OF STRUCTURES WILL DETERMINE THE REQUIRED LENGTH OF THE PRODUCTION PILES AND MINIMUM REQUIRED BEARING. FOR PILE DESIGN LOADS AND CUT-OFF ELEVATIONS, SEE TABLE ON DRAWING NO. U97-968. THE CONTRACTOR SHALL INSTALL PILING SUCH THAT ALL THE FOLLOWING REQUIREMENTS ARE MET. THE TIP ELEVATION FOR ALL TEST PILES AND PRODUCTION PILES SHALL BE EQUAL TO OR BELOW THE MINIMUM PILE TIP ELEVATION SHOWN ON THE PLANS. IN ADDITION, TEST PILES TO BE LOAD TESTED SHALL BE INSTALLED TO AT LEAST THE SPECIFIED BEARING SHOWN ON THE PLANS OR FULL LENGTH, WHICHEVER OCCURS FIRST. ALL OTHER TEST PILES SHALL BE INSTALLED TO AT LEAST 1.5 TIMES THE SPECIFIED BEARING SHOWN ON THE PLANS OR FULL LENGTH, WHICHEVER OCCURS FIRST. ALL PRODUCTION PILES SHALL BE INSTALLED FULL LENGTH UNLESS EXCESSIVELY HARD DRIVING WHICH MIGHT DAMAGE THE PILES IS ENCOUNTERED. IF THE PRODUCTION PILES DO NOT ACHIEVE THE MINIMUM REQUIRED BEARING, THE ENGINEER OF STRUCTURES WILL DETERMINE IF ADDITIONAL PILES ARE REQUIRED. IN THE EVENT THAT DRIVING THE TEST PILE TO AT LEAST THE MINIMUM TIP ELEVATION OR DRIVING THE PRODUCTION PILE FULL LENGTH MIGHT DAMAGE THE PILE BECAUSE OF EXCESSIVELY HARD DRIVING, THE CONTRACTOR SHALL USE OTHER METHODS APPROVED BY THE ENGINEER FOR INSTALLING THE PILES SUCH AS JETTING OR PRE-DRILLING HOLES. HOWEVER, ALL PILES MUST BE DRIVEN BY HAMMER FOR THE LAST FEW FEET OF PENETRATION. NO MEASUREMENT FOR PAYMENT WILL BE MADE FOR PRE-DRILLING HOLES OR FOR JETTING PILING TO OBTAIN THE REQUIRED PILE PENETRATION. THE PILE LOAD TEST SHALL BE A QUICK LOAD TEST CONDUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE PILE LOAD TEST APPARATUS FOR APPLYING LOADS AND MEASURING MOVEMENT SHALL MEET THE REQUIREMENTS OF ASTM D1143, STANDARD TEST METHODS FOR DEEP FOUNDATION ELEMENTS UNDER STATIC AXIAL COMPRESSIVE LOAD. WHEN INSUFFICIENT CLEARANCE IS AVAILABLE WITHIN AN EXCAVATION, THE CLEARANCE REQUIREMENTS IN ARTICLE 9.1.1 MAY BE REDUCED, BUT ONLY WITH PRIOR APPROVAL OF THE ENGINEER.

PIPE PILES: SHALL BE STEEL PIPE PILES (14-INCH), GRADE 3 MODIFIED WITH A MINIMUM YIELD STRESS OF 50 KSI IN ACCORDANCE WITH ASTM A252. WEATHERING STEEL WILL NOT BE ALLOWED FOR PIPE PILES. ANY PIPE PILE HAVING BENDS, KINKS OR OTHER DEFORMATIONS DURING THE PROCESS OF DRIVING THAT WOULD IMPAIR THE STRENGTH (10% REDUCTION AS DETERMINED BY THE ENGINEER) EFFICIENCY OF THE COMPLETED PILE SHALL BE EITHER REMOVED AND REPLACED OR REPAIRED BY THE CONTRACTOR IN A MANNER SATISFACTORY TO THE ENGINEER. THE CONTRACTOR WILL NOT BE REIMBURSED FOR ANY SUCH PIPE PILE ORDERED REMOVED OR REPLACED BY THE ENGINEER.

PIPE PILE SPLICES: FULL LENGTH PILES SHALL BE USED WHERE PRACTICAL. PILES MAY BE SPLICED WITH THE PRIOR APPROVAL OF THE ENGINEER. SPLICES SHALL USE FULL PENETRATION WELDS DESIGNED TO DEVELOP THE FULL STRENGTH OF THE PILE CROSS-SECTION IN TENSION AND COMPRESSION. ONLY ONE SPLICE PER 40 LINEAR FEET OF PILE WILL BE ALLOWED. DRIVE-ON SPLICES SHALL NOT BE USED AND ONLY COMMERCIAL MANUFACTURED SPLICES WILL BE ALLOWED. SPLICING DETAILS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL. COST TO BE INCLUDED IN THE COST OF PILES ITEM NO. 606-18.03.

STREAM CHANNEL: ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G. PIER/BENT FOOTING, RIP-RAP PLACEMENT, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS. THIS NOTE EXCLUDES ANY ITEMS SPECIFIED IN THE PLANS FOR TEMPORARY DIVERSION CHANNELS (EC-STR-31).

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.

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.

RIP-RAP: MACHINED RIP-RAP SHALL BE CLASS "A-1" IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS AND SHALL BE MEASURED AND PAID FOR UNDER ROADWAY ITEM NO 709-05.06.

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.

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	ABUTMENT 2
202-01.02	REMOVAL OF ASBESTOS	L.S.	0.5			
202-04.02	REMOVAL OF STRUCTURES (EXIST. BRIDGE NO. 38-SR180-0457)	L.S.	1			
204-02.01	DRY EXCAVATION (BRIDGES)	C.Y.	148		74	74
303-01.02	GRANULAR BACKFILL (BRIDGES)	TON	50		25	25
604-02.03	EPOXY COATED REINFORCING STEEL	LB.	15223	12609	1307	1307
604-03.01	CLASS "A" CONCRETE (BRIDGES)	C.Y.	48		24	24
604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LB.	10234		5117	5117
604-03.04	PAVEMENT @ BRIDGE ENDS	S.Y.	140			
604-03.09	CLASS D CONCRETE (BRIDGE DECK)	C.Y.	88	54	17	17
604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURES)	S.Y.	330	238	46	46
604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	S.Y.	352			
606-18.01	TEST PILES (STEEL PIPE PILES, 14-INCH)	L.F.	179		83	96
606-18.02	LOADING TEST (STEEL PIPE PILES, 14-INCH)	EACH	1		1	
606-18.03	STEEL PIPE PILES (14-INCH)	L.F.	1113		511	602
615-01.20	ERECTION OF BRIDGE BEAMS	L.S.	0.5	0.5		
620-05.01	CONCRETE PARAPET SINGLE SLOPE (STD-1-1SS)	L.F.	212			
710-09.01	6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	130		65	65
710-09.02	6" PIPE UNDERDRAIN	L.F.	48		24	24

NOTE: PRIOR TO CONSTRUCTION OF THE PAVEMENT AT BRIDGE ENDS, THE CONTRACTOR SHALL SUBMIT A PROPOSED BILL OF STEEL TO THE ENGINEER FOR APPROVAL.

NOTE: LUMP SUM: TO INCLUDE COMPLETE REMOVAL OF EXISTING BRIDGE NO. 38-SR180-04.57 AND APPROACHES TO NATURAL GROUND. LENGTH OF 57' AND WIDTH OF 24'-11" CONSISTS OF 3 SPANS OF CONCRETE CHANNEL SLAB SUPPORTED ON A TIMBER PILE SUBSTRUCTURE.

NOTE: EXCAVATION BASED ON FINAL PROFILE AT ABUTMENTS.

NOTE: THE COST OF BITUMINOUS-FIBERBOARD, AND ALL MISCELLANEOUS JOINT MATERIAL TO BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.

NOTE: THE DEPARTMENT PROCURED THE BEAMS AHEAD OF LETTING THIS JOB, WHICH INCLUDES DELIVERY TO THE PROJECT SITE. THE UNIT PRICE BID FOR THE ERECTION OF BRIDGE BEAMS SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO ERECT THE BEAMS. THIS INCLUDES ALL WORK NECESSARY TO COORDINATE BEAM DELIVERY, OFFLOAD THE BEAMS, AND SET THE BEAMS INTO FINAL POSITION. THE COST OF ELASTOMERIC PADS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE UNIT PRICE BID FOR THE ERECTION OF BRIDGE BEAMS.

NOTE: COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN THE UNIT PRICE BID FOR PERFORATED PIPE.

NOTE: GRANULAR BACKFILL SHALL BE TYPE "A" GRADING "D" MATERIAL. SEE STANDARD DRAWING STD-10-1

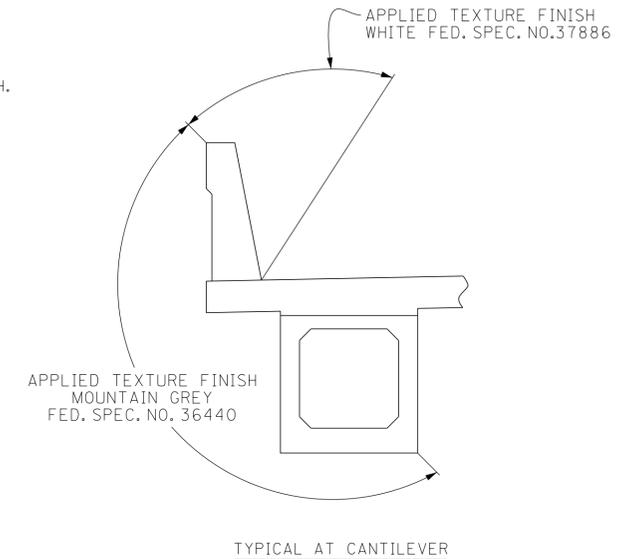
NOTE: SEE PROJECT COMMITMENTS AND SPECIAL PROVISION 202ACM.

**PILE DATA TABLE**

LOCATION	DESIGN LOADS (TONS)	TEST PILE CUT-OFF EL. (FT.)	ESTIMATED PILE LENGTH (FT.)	TEST PILE LENGTH (FT.)	MINIMUM PILE TIP ELEVATION
ABUTMENT 1	115	322.70	73	83	250.00
ABUTMENT 2	115	322.74	86	96	237.00

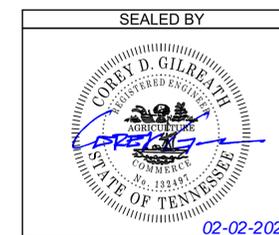
CONST. NO.:

PROJECT NO.	YEAR	SHEET NO.	
38S180-S3-008	2026		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	12/17/2025	CDG	Revised quantity for Item No. 202-01.02, 606-18.01, & 606-18.03. Updated Item No. 202-04.01 to Item No. 202-04.02
2	02/02/2026	CDG	Steel pile tip note removed. Changed item 615-02.17 to 615-01.20.
-	-	-	



**APPLIED TEXTURE FINISH SKETCH**

NOTE: IN ADDITION TO THE SURFACES SHOWN IN THE APPLIED TEXTURE FINISH SKETCH ALL EXPOSED SURFACES OF THE WINGWALLS, ABUTMENT BEAMS, AND EXTERIOR PORTIONS OF ENDWALL ARE TO RECEIVE AN APPLIED TEXTURE FINISH MOUNTAIN GREY, FED. SPEC. NO. 36440.



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
**GENERAL NOTES AND  
ESTIMATED QUANTITIES**  
STATE ROUTE 180 OVER FLOW  
BRIDGE I.D NO. 38S80510007  
STATION 105+91.00  
LOG MILE 4.57  
HAYWOOD COUNTY  
2026

U-97-968

2/2/2026 12:17:02 PM C:\TMP\PWSE\CGILREATH@STRUCTUREPOINT.COM\160785\38S80510007-SHT-GN.DGN

PIN NO.: 136185.06  
DESIGN BY: CDG DATE: 06/10/2025  
DRAWN BY: TMT DATE: 06/13/2025  
SUPERVISED BY: MAH DATE: 06/13/2025  
CHECKED BY: CDG DATE: 06/16/2025

