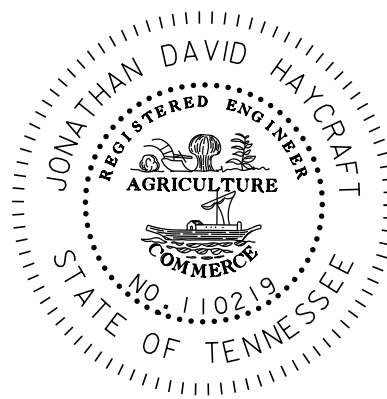


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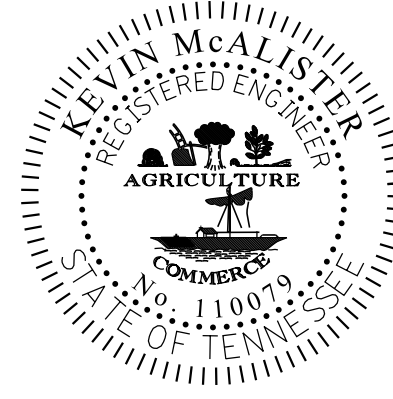
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BARGE DESIGN SOLUTIONS, INC.  
615 THIRD AVE. SOUTH, SUITE 700  
NASHVILLE, TN 37210  
JONATHAN D. HAYCRAFT, P.E. NO. 110219

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-SIGN1
REVISION SHEET .....	REV1
ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS.....	1A
ESTIMATED ROADWAY QUANTITIES.....	2A, 2A1
TABULATED QUANTITIES .....	2E2, 2E4, 2E5, 2E6, 2E8
PRESENT LAYOUT(S).....	12
PROPOSED LAYOUT(S) .....	12A
PROPOSED PROFILE(S).....	12B
MISCELLANEOUS SIGNING DETAILS.....	89
UTILITY RELOCATION .....	U-1, U-2
RETAINING WALL PLANS.....	R-00, R-05, R-05(1), R-18

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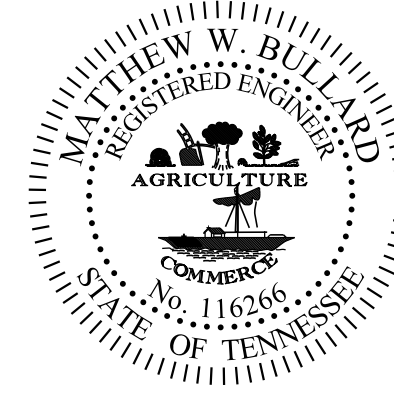
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BARGE DESIGN SOLUTIONS, INC.  
615 THIRD AVE. SOUTH, SUITE 700  
NASHVILLE, TN 37210  
KEVIN McALISTER, PE. NO. 110079

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-SIGN1
BRIDGE PLANS .....	U-91-42, U-91-67, U-91-84, U-91-85, U-91-127, U-91-128, U-91-168, U-91-169, U-91-189, U-91-239, U-91-259

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:



**Matthew W. Bullard**  
2020.08.28 12:31:24 -5'00'

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TTL, INC.  
5010 LINBAR DRIVE, SUITE 153  
NASHVILLE, TN 37211  
MATTHEW W. BULLARD, P.E. NO. 116266

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-SIGN1
RETAINING WALL PLANS .....	R-05A, R-05A1, R-05C, R-18A, R-18C

YEAR	PROJECT NO.	SHEET NO.
2020	IM/NH-757-1(131)	ROADWAY-SIGN1

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

SIGNATURE  
SHEET

12-17-2019  
SHEETS ADDED:  
REV1, 2D1, 2H, 2H1 - 2H3, U-91-42 - U-91-83, U-91-107 - U-91-188, U-91-238 - U-91-258

SHEET NO. 1A  
REV. 12-17-2019  
REVISED INDEX

SHEET NO. 2A  
REV. 12-17-2019  
REVISED EST. ROADWAY QUANTITY ITEMS:  
203-02.01, 209-09.43, 604-01.01, 604-01.02, 604-07.01, 604-07.03, 604-07.04, 607-03.02, 607-03.04, 607-05.02, 607-06.02, 607-10.02, 611-07.01, 611-07.02, 611-07.55, & 611-31.02;  
REMOVED ITEM NO. 611-31.04  
ADDED ITEM NO. 606-02.03.

SHEET NO. 2A1  
REV. 12-17-2019  
REVISED EST. ROADWAY QUANTITY ITEMS:  
611-46.02, 709-05.06 & 709-05.08.  
REMOVED ITEM 611-52.02

SHEET NO. 2A2  
REV. 12-17-2019  
REVISED EST. ROADWAY QUANTITY ITEMS:  
740-10.04 & 801-01.35.  
ADDED ITEM NO. 801-01.36  
ADDED FOOTNOTES NOS. 36, 37, 38  
& 40.

SHEET NO. 2E4  
REV. 12-17-2019  
REVISED CB-3B,  
CB-4, CB-21, AND CB-23  
REMOVED CB-2 & CB-7  
REMOVED ITEM NOS. 611-31.04 & 611-52.02

SHEET NO. 2E5  
REV. 12-17-2019  
REVISED CULVERTS INFORMATION  
BETWEEN CB-3B THROUGH CB-5;  
ADDED CULVERT 1B TO 1C, REMOVED PIPE FROM 7B TO 7C

SHEET NO. 2E6  
REV. 12-17-2019  
ADDED ENDWALL 1C;  
ADDED RIP-RAP FOR EW-1C, REMOVED ENDWALL 7C

SHEET NO. 9A  
REV. 12-17-2019  
REVISED GRADED SOLID ROCK AND CLASS "B" RIP-RAP LIMITS AT BRIDGE NOS. 7, 1SB, 1NB, 8, & 10.  
NOTE ADDED TO SHEET TO SEE BRIDGE SHEETS FOR RIP-RAP AND GRADED SOLID ROCK LOCATIONS.  
REVISED RETAINING WALL 2-1.

SHEET NO. 10A  
REV. 12-17-2019  
REVISED RETAINING WALL NOS. 2-1, 3-1, & 3-4.  
REMOVED CB-7B, CULVERT BETWEEN 7B & 7C, & AND ENDWALL 7-C FROM PLANS

SHEET NO. 10B  
REV. 12-17-2019;  
REMOVED DRAINAGE STRUCTURES 7B & 7C

SHEET NO. 11A  
REV. 12-17-2019  
REVISED WALL 3-4 & ADDED RELIEF SLAB OVER 54" RCP NEAR CB19;  
REVISED RCP SIZES BETWEEN CB- 4 & CB-5.

SHEET NO. 11B  
REV. 12-17-2019; REVISED STRM. DRAINAGE FROM CB-5 TO CB-23

SHEET NO. 11C  
REV. 12-17-2019; REVISED STRM. DRAINAGE FROM CB-5 TO CB-23

SHEET NO. 12A  
REV. 12-17-2019;  
REVISED CB-3C, CB-3, CB-3A, CB-3B;  
REMOVED CB-2 AND CULVERTS;  
ADDED ENDWALL 1C,  
A CULVERT FROM 1B TO 1C,  
AND RIP-RAP FOR EW-1C,  
REVISED CLASS "B" RIP-RAP LIMITS AT BRIDGE NO. 4.

SHEET NO. 12B  
REV. 12-17-2019;  
REVISED CB-3C, CB-3, CB-3A, CB-3B;  
DELETED CB-2 AND CULVERTS;  
ADDED ENDWALL 1C,  
A CULVERT FROM 1B TO 1C,  
AND RIP-RAP FOR EW-1C.

SHEET NO. 13A  
REV. 12-17-2019;  
REVISED CLASS "B" RIP-RAP LIMITS AT BRIDGE NO. 4.

SHEET NO. 19  
REV. 12-17-2019;  
REVISED ELEVATION LABEL AT STA. 205+00.

SHEET NO. 21  
REV. 12-17-2019;  
REVISED ELEVATION LABEL AT STA. 237+00.

SHEET NO. 22  
REV. 12-17-2019;  
REVISED ELEVATION LABEL AT STA. 243+50.

SHEET NO. 48  
REV. 12-17-2019;  
REVISED ITEM NO. 209-09.43.

SHEET NO. 50H  
REV. 12-17-2019;  
REMOVED DRAINAGE STRUCTURE CB-2

SHEET NO. 51F  
REV. 12-17-2019;  
REMOVED DRAINAGE STRUCTURES 7B & 7C.

SHEET NO. 51H  
REV. 12-17-2019;  
REMOVED DRAINAGE STRUCTURE CB-2.

SHEET NO. 52F  
REV. 12-17-2019;  
REMOVED DRAINAGE STRUCTURES 7B & 7C.

SHEET NO. 100  
REV. 12-17-2019;  
ADJUSTED CROSS SECTIONS TO MATCH SE TRANSITION SHOWN ON PROFILE.

SHEET NO. 101  
REV. 12-17-2019;  
ADJUSTED CROSS SECTIONS TO MATCH SE TRANSITION SHOWN ON PROFILE.

SHEET NO. 124  
REV. 12-17-2019  
REVISED TO SHOW BRIDGE APPROACH SLAB CROSS SLOPES.

SHEET NO. 129  
REV. 12-17-2019;  
REVISED SECTIONS 373+50 THRU 375+00 TO REFLECT CHANGES IN WALL 2-1.

SHEET NO. 130  
REV. 12-17-2019  
REVISED SECTIONS 373+50 THRU 375+00 TO REFLECT CHANGES IN WALL 2-1.

SHEET NO. 133  
REV. 12-17-2019  
SECTIONS 379+50, 380+00, AND 380+50 REVISED.

SHEET NO. 145  
REV. 12-17-2019  
REVISED TO SHOW PROPER LOCATION FOR LANE BREAK.

SHEET NO. 146  
REV. 12-17-2019  
REVISED TO SHOW PROPER LOCATION FOR LANE BREAK.

SHEET NO. 254  
REV. 12-17-2019  
REVISED TO SHOW BRIDGE APPROACH SLAB CROSS SLOPES.

SHEETS 281-292  
REV. 12-17-2019  
REVISED CROSS SECTIONS TO MATCH WITH PROFILE ELEVATIONS

SHEET NO. 282  
REV. 12-17-2019  
SECTIONS REVISED

SHEET NO. 329  
REV. 12-17-2019  
WALL 2-1 REVISED IN RAMP D CROSS SECTIONS.

SHEET NO. 351  
REV. 12-17-2019  
CORRECTED STATION LABELS.

SHEET NO. 353  
REV. 12-17-2019  
CORRECTED STATION LABELS.

SHEET NO. T4-N  
REV. 12-17-2019  
REVISED GUARDRAIL TRANSITION AT TEMPORARY BRIDGE.

SHEET NO. R-00  
REV. 12-17-2019  
REVISED ALIGNMENT AND CURVE DATA OF WALL NOS. 2-1, 3-1, AND 3-4.

SHEET NO. R-01  
REV. 12-17-2019  
REVISED WALL 2-1.

SHEET NO. R-03  
REV. 12-17-2019  
REVISED WALL NO. 3-1 TO TIE ABUTMENT #1 TO BRIDGE NO. 3. REVISED TABLE TO UPDATE STATIONS, OFFSETS, ELEVATIONS, AND WALL HEIGHTS DUE TO CHANGES TO WALL NO. 3-1.

SHEET NO. R-04  
REV. 12-17-2019  
REVISED WALL NO. 3-4 TO TIE ABUTMENT #2 TO BRIDGE NO. 3.

SHEET NO. R-04(1)  
REV. 12-17-2019  
REVISED TABLE TO UPDATE STATIONS, OFFSETS, ELEVATIONS, AND WALL HEIGHTS DUE TO CHANGES TO WALL NO. 3-4.

END OF REV. 12-17-2019

01-31-2020  
SHEETS ADDED:  
2A3, 2A4, U-91-189 - U-91-237, L-1 - L-14, ITS-1 - ITS-37

SHEET REV1  
REV. 1-31-2020  
REVISED REVISION SHEET

SHEET NO. 1A  
REV. 1-31-2020  
REVISED INDEX

SHEET NO. 2A  
REV. 01-31-2020;  
REVISED EST. ROADWAY QUANTITY ITEMS: 607-39.02, 611-07.01, & 611-07.02

SHEET NO. 2E  
REV. 01-31-2020;  
REVISED RAMP D/RAMP G SP. DITCH

SHEET NO. 2E2  
REV. 01-31-2020;  
REVISED SIDE DRAIN TABULATION

SHEET NO. 2E6  
REV. 01-31-2020;  
ADDED ENDWALLS 113 & 113A

SHEET NO. 7A  
REV. 01-31-2020:  
ADDED SIDE DRAIN TO RAMP G LT, REVISED SP. DITCH

SHEET NO. 7B  
REV. 01-31-2020:  
REVISED SP. DITCH I-75 RT. FROM APPROX. 347+00 TO 348+00

SHEET NO. 7C  
REV. 01-31-2020:  
REVISED SP. DITCH I-75 RT. FROM APPROX. 347+00 TO 348+00

SHEET NO. 8A  
REV. 01-31-2020:  
REVISED SP. DITCH I-75 FROM APPROX. 348+00 TO 350+00

SHEET NO. 8B  
REV. 01-31-2020:  
REVISED SP. DITCH I-75 RT FROM APPROX. 348+00 TO 350+00

SHEET NO. 8C  
REV. 01-31-2020:  
REVISED SP. DITCH I-75 RT FROM APPROX. 348+00 TO 350+00

SHEET NO. 50C  
REV. 01-31-2020:  
ADDED SIDE DRAIN TO RAMP G LT, REVISED SP. DITCH.

SHEET NO. 51C  
REV. 01-31-2020:  
ADDED SIDE DRAIN TO RAMP G LT, REVISED SP. DITCH

SHEET NO. 52C  
REV. 01-31-2020:  
ADDED SIDE DRAIN TO RAMP G LT, REVISED SP. DITCH

SHEET NO. 113  
REV. 01-31-2020:  
SECTIONS 347+00 AND 347+50 REVISED

SHEET NO. 114  
REV. 01-31-2020:  
SECTIONS REVISED

SHEET NO. 312  
REV. 01-31-2020:  
SECTION 2330+00 REVISED

SHEET NO. 313  
REV. 01-31-2020:  
SECTION 2330+50 REVISED

SHEET NO. 352  
REV. 01-31-2020:  
SECTIONS REVISED

SHEET NO. U-91-2  
REV. 01-31-2020:  
REVISED LOCATION OF CONSTRUCTION JOINT

SHEET NO. U-91-3  
REV. 01-31-2020:  
REVISED DRAWING REVISION DATES

SHEET NO. U-91-5  
REV. 01-31-2020:  
REVISED ESTIMATED QUANTITIES TABLE AND REMOVED FOOTNOTE FOR COUPLERS

SHEET NO. U-91-6  
REV. 01-31-2020:  
REVISED LOCATION OF CONSTRUCTION JOINT

SHEET NO. U-91-7  
REV. 01-31-2020:  
REVISED PHASE CONSTRUCTION LIMITS

SHEET NO. U-91-8  
REV. 01-31-2020:  
REVISED TYPICAL SECTION FOR NEW PHASE CONSTRUCTION JOINT LOCATION

SHEET NO. U-91-9 THRU U-91-11  
REV. 01-31-2020:  
REVISED PHASE CONSTRUCTION JOINT LOCATION

SHEET NO. U-91-13  
REV. 01-31-2020:  
REVISED PLAN AND ELEVATION FOR NEW CONSTRUCTION JOINT LOCATION

SHEET NO. U-91-14  
REV. 01-31-2020:  
REVISED SECTION C-C AND DETAIL A FOR NEW PHASE CONSTRUCTION JOINT LOCATION

SHEET NO. U-91-15  
REV. 01-31-2020:  
REMOVED COUPLER BAR DETAIL

SHEET NO. U-91-16  
REV. 01-31-2020:  
REVISED PLAN AND ELEVATION FOR NEW CONSTRUCTION JOINT LOCATION

SHEET NO. U-91-17  
REV. 01-31-2020:  
REVISED SECTION C-C AND DETAIL A FOR NEW PHASE CONSTRUCTION JOINT LOCATION

SHEET NO. U-91-18  
REV. 01-31-2020:  
REMOVED COUPLER BAR DETAIL

SHEET NO. U-91-20  
REV. 01-31-2020:  
REVISED SUPERSTRUCTURE AND ABUTMENT BILL OF STEEL

SHEET NO. U-91-21  
REV. 01-31-2020:  
REVISED ABUTMENT BILL OF STEEL

SHEET NO. U-91-22  
REV. 01-31-2020:  
REVISED LOCATION OF CONSTRUCTION JOINT & UPDATED DIMENSIONS THAT WERE AFFECTED BY THIS CHANGE

SHEET NO. U-91-23  
REV. 01-31-2020:  
UPDATED REVISION DATES UNDER LIST OF DRAWINGS

SHEET NO. U-91-25  
REV. 01-31-2020:  
REVISED ESTIMATED QUANTITIES TABLE AND REMOVED FOOTNOTE FOR COUPLERS.

SHEET NOS. U-91-26 THRU U-91-34  
REV. 01-31-2020:  
REVISED LOCATION OF CONSTRUCTION JOINT AND UPDATED DIMENSIONS THAT WERE AFFECTED BY THIS CHANGE.

SHEET NO. U-91-35  
REV. 01-31-2020:  
REMOVED COUPLER BAR DETAIL

SHEET NOS. U-91-36 THRU U-91-37  
REV. 01-31-2020:  
REVISED LOCATION OF CONSTRUCTION JOINT AND UPDATED DIMENSIONS THAT WERE AFFECTED BY THIS CHANGE.

SHEET NO. U-91-38  
REV. 01-31-2020:  
REMOVED COUPLER BAR DETAIL

SHEET NO. U-91-40  
REV. 01-31-2020:  
REVISED SUBSTRUCTURE AND ABUTMENT BILL OF STEEL LISTS

SHEET NO. U-91-41  
REV. 01-31-2020:  
REVISED ABUTMENT BILL OF STEEL LIST

SHEET NO. U-91-241  
REV. 01-31-2020:  
REVISED ESTIMATED QUANTITIES TABLE FOR ITEM NO. 604-03.02

SHEET NO. U-91-254  
REV. 01-31-2020:  
REVISED FOOTING REINFORCEMENT, COLUMN CALLOUTS, AND ESTIMATED QUANTITIES TABLE

SHEET NO. U-91-255  
REV. 01-31-2020:  
REVISED SECTION C-C AND PLAN OF FOOTING DETAIL

SHEET NO. U-91-256  
REV. 01-31-2020:  
REVISED FOOTING LAYOUT IN PLAN VIEW

SHEET NO. U-91-258  
REV. 01-31-2020:  
REVISED QUANTITIES FOR BENT NO. 1

END OF REV. 01-31-2020

02-14-2020  
SHEETS ADDED:  
2D2, 48A, 49-1 THRU 49P-1

SHEET REV1  
REV. 02-14-2020  
REVISED REVISION SHEET

SHEET NO. 1  
REV. 02-14-2020  
REVISED PROJECT DESCRIPTION

SHEET NO. 1A  
REV. 02-14-2020  
REVISED INDEX

END OF REV. 02-14-2020

SHEET NO. U-91-108  
REV. 03-27-2020  
REVISED DRAWING REVISION DATES

SHEET NO. U-91-120  
REV. 03-27-2020  
REVISED BACKWALL ELEVATION

SHEET NO. U-91-122  
REV. 03-27-2020  
REVISED BACKWALL ELEVATION

SHEET NO. U-91-123  
REV. 03-27-2020  
REVISED BACKWALL ELEVATION

SHEET NO. U-91-148  
REV. 03-27-2020  
REVISED DRAWING REVISION DATES

SHEET NO. U-91-160  
REV. 03-27-2020  
REVISED BACKWALL ELEVATIONS

SHEET NO. U-91-238  
REV. 03-27-2020  
MODIFIED TRANSECTION SKETCH

SHEET NO. U-91-239  
REV. 03-27-2020  
REVISED DRAWING REVISION DATES

SHEET NO. U-91-247  
REV. 03-27-2020  
SCREED ELEVATIONS REVISED

SHEET NO. U-91-250  
REV. 03-27-2020  
REVISED BACKWALL ELEVATIONS

SHEET NO. U-91-252  
REV. 03-27-2020  
REVISED BACKWALL ELEVATIONS

END OF REV. 03-27-2020

04-13-2020  
SHEETS ADDED:  
T-7 & T-7A

SHEET REV1  
REV. 04-13-2020  
REVISED REVISION SHEET

SHEET NO. 1A  
REV. 04-13-2020  
ADDED SHEETS T-7 AND T-7A

SHEET NO. 2A  
REV. 04-13-2020  
REVISED EST. ROADWAY QUANTITY ITEMS:  
209-09.43, 604-07.10, 604-07.11, & 607-03.03

SHEET NO. 2A1  
REV. 04-13-2020  
REVISED EST. ROADWAY QUANTITY ITEMS:  
611-51.02, 705-06.01, 705-06.10, 705-06.20, & 711-05.72

SHEET NO. 2B8  
REV. 04-13-2020  
ADDED NOTE REGARDING SIDE SLOPE OF 24E-75N STA. 912+25 TO 912+75

SHEET NO. 2E  
REV. 04-13-2020  
REVISED SLOPE LINES ALONG 24E-75N LT. SP. DITCH STATIONING

SHEET NO. 2E1  
REV. 04-13-2020  
REVISED PIPE LENGTH FOR 24E-75N STA. 909+00 CROSS DRAIN

SHEET NO. 2E3  
REV. 04-13-2020  
REVISED CB-41, CB-42, AND CB-41B

SHEET NO. 2E4  
REV. 04-13-2020  
ADDED CB-97, CB-98, AND CB-99

SHEET NO. 2E5  
REV. 04-13-2020  
REVISED PIPE LENGTH FROM DRAINAGE STRUCTURE 104 TO 104A  
ADDED CATCH BASIN NOS. 97, 98, AND 99.  
REVISED ELEVATIONS AND PIPE SLOPES AT CATCH BASIN NOS. 41, 41A, 41B, AND 42.

SHEET NO. 2E6  
REV. 04-13-2020  
REVISED ENDWALL 104 AND 104A OFFSETS

SHEET NO. 2E7  
REV. 04-13-2020  
REVISED SINGLE SLOPE HALF CONCRETE BARRIER WALL ALONG 75N-24W ON SHEET 17A

SHEET NO. 2E8  
REV. 04-13-2020  
REVISED GUARDRAIL ALONG 24E-75N AND 75N-24W ON SHEETS 16A AND 17A

SHEET NO. 6A  
REV. 04-13-2020  
REVISED IN. AND OUT. ELEVATIONS OF CB NOS. 41, 42, 41A, 41B

SHEET NO. 10  
REV. 04-13-2020  
REVISED 75S-24W SLOPE LINES

SHEET NO. 10A  
REV. 04-13-2020  
REVISED 75S-24W SP. DITCH LT. REVISED I-75 MEDIAN BARRIER WALL HEIGHT AROUND BRIDGES 2 & 3

SHEET NO. 16  
REV. 04-13-2020  
REVISED 24E-75S AND 24E-75N SLOPE LINES

SHEET NO. 16A  
REV. 04-13-2020  
REVISED 24E-75N LT. SP. DITCH & GUARDRAIL

SHEET NO. 17  
REV. 04-13-2020  
REVISED 24E-75N SLOPE LINES

SHEET NO. 17A  
REV. 04-13-2020  
REVISED 24E-75N LT. SP. DITCH  
REVISED GUARDRAIL ALONG 24E-75N & 75N-24W  
REVISED 75S-24W LT. SP. DITCH  
REVISED DRAINAGE STRUCTURES 104 AND 104A  
REVISED WALLS 6-1 AND 6-2

SHEET NO. 18  
REV. 04-13-2020  
REVISED 24E-75S SLOPE LINES

SHEET NO. 21  
REV. 04-13-2020  
REVISED PROFILE FROM STA. 224+65.00 TO STA. 233+30.00. ADDED CB-97, CB-98, & CB-99.

SHEET NO. 24  
REV. 04-13-2020  
REVISED SP. DITCH LEFT STA. 817+50 TO 824+00

SHEET NO. 26  
REV. 04-13-2020  
REVISED PROFILE FROM STA. 610+38.01 TO STA. 611+00.00. MIN. VERT. CLEARANCE LABEL MOVED TO CORRECT LOCATION.

SHEET NO. 27  
REV. 04-13-2020  
REVISED PROFILE FROM STA. 611+00.00 TO STA. 620+85.00

SHEET NO. 30  
REV. 04-13-2020  
REVISED PROFILE FROM STA. 901+00.00 TO STA. 910+50.00  
REVISED 24E-75N LT. SP. DITCH

SHEET NO. 31  
REV. 04-13-2020  
REVISED PROFILE FROM STA. 910+50.00 TO STA. 921+75.00

SHEET NO. 38  
REV. 04-13-2020  
REVISED MIN. VERT. CLEARANCE LABEL.

SHEET NO. 43  
REV. 04-13-2020  
REVISED MIN. VERT. CLEARANCE LABEL.

SHEET NOS. 47L & 47N  
REV. 04-13-2020  
CULVERT SECTIONS REVISED

SHEET NOS. 48  
REV. 04-13-2020  
REVISED QUANTITY FOR ITEM NO. 209-09.43

SHEET NOS. 49F, 49F-1, 50F, 51F, & 52F  
REV. 04-13-2020  
REVISED SLOPE LINES ALONG 75S-24W

SHEET NOS. 49M & 49M-1  
REV. 04-13-2020  
REVISED SLOPE LINES ALONG 24E-75N

SHEET NOS. 49N, 49P, 49N-1, & 49P-1  
REV. 04-13-2020  
REVISED SLOPE LINES ALONG 24E-75N AND 24E-75S

SHEET NOS. 50M, 51M, & 52M  
REV. 04-13-2020  
REVISED SLOPE LINES ALONG 24E-75N & REVISED RELATED EPSC MEASURES

SHEET NOS. 50N, 50P, 51N, 51P, 52N, & 52P  
REV. 04-13-2020  
REVISED SLOPE LINES ALONG 24E-75S AND 24E-75N & REVISED RELATED EPSC MEASURES

SHEET NOS. 103-105, 125-138, 188-198, 218-227, 240-245, & 263-280  
REV. 04-13-2020: CROSS SECTIONS REVISED

SHEET NO. T-2  
REV. 04-13-2020  
REMOVED TEMP. BRIDGE & REVISED CONST. LIMITS

SHEET NO. T-2A, T-2B  
REV. 04-13-2020  
REVISED CONST. LIMITS

SHEET NOS. T-3F, T-4F, & T-5F  
REV. 04-13-2020  
REVISED SLOPE LINES ALONG 24E-75N AND 75S-24W

SHEET NO. T-3M  
REV. 04-13-2020  
REVISED SLOPE LINES/CONST. LIMITS ALONG 24E-75N

SHEET NO. T-3N  
REV. 04-13-2020  
REMOVED TEMP. BRIDGE 6A & REVISED SLOPE LINES/CONST. LIMITS ALONG 24E-75N

SHEET NO. T-3P  
REV. 04-13-2020  
REVISED SLOPE LINES/CONST. LIMITS ALONG 24E-75S

SHEET NOS. T-4M, T-5M, & T-5N  
REV. 04-13-2020  
REVISED SLOPE LINES ALONG 24E-75N

SHEET NO. T-4N  
REV. 04-13-2020  
REMOVED TEMPORARY BRIDGE 6A & REVISED SLOPE LINES ALONG 24E-75N

SHEET NO. T-4P  
REV. 04-13-2020  
REVISED SLOPE LINES ALONG 24E-75S

SHEET NO. T-5P  
REV. 04-13-2020  
REVISED SLOPE LINES/CONST. LIMITS ALONG 24E-75S

SHEET U-91-67 - U-91-83  
REV. 04-13-2020  
REVISED ALL BRIDGE 6 SHEETS

SHEET U-91-211  
REV. 04-13-2020  
REVISED DECK DRAIN LOCATIONS

SHEET U-91-212  
REV. 04-13-2020  
EDITED LIST OF DRAWINGS

SHEET NO. R-10  
REV. 04-13-2020  
REVISED ALIGNMENT, PROFILE, TABLE AND QUANTITY OF WALL 6-1 DUE TO GRADE CHANGES.

SHEET NO. R-11  
REV. 04-13-2020  
REVISED ALIGNMENT, PROFILE, TABLE AND QUANTITY OF WALL 6-2 DUE TO GRADE CHANGES.

END OF REV. 04-13-2020

08-28-2020  
SHEETS ADDED:  
U-1 & U-2

08-28-2020  
SHEETS REMOVED:  
R-05D THRU R-05D(4) & R-18D THRU R-18D(3)

SHEET NO. 1A  
REV. 08-28-2020  
REVISED INDEX

SHEET NO. 2A  
REV. 08-28-2020  
REVISED EST. ROADWAY QUANTITY ITEMS: 604-07.05, 604-07.18, 607-03.02, 610-07.03 & 611-07.55

SHEET NO. 2A1  
REV. 08-28-2020  
REVISED EST. ROADWAY QUANTITY ITEMS: 705-06.01

SHEET NO. 2E2  
REV. 08-28-2020  
REVISED BRIDGE DRAIN TABLE

SHEET NO. 2E4  
REV. 08-28-2020  
REVISED CB-1, CB-1A, AND CB-1B DEPTH

SHEET NO. 2E5  
REV. 08-28-2020  
REMOVED PIPE FROM CB-1B TO CB-1C,  
REVISED SLOPE OF CB-1 TO CB-1A, AND CB-1B TO CB-1.

SHEET NO. 2E6  
REV. 08-28-2020  
REMOVED ENDWALL 1C

SHEET NO. 2E8  
REV. 08-28-2020  
REVISED GUARDRAIL ALONG I-75 ON SHEET NO. 12

SHEET NO. 12  
REV. 08-28-2020  
EXISTING OUTFALL UNDERNEATH EXISTING BRIDGE NO. 4 ADDED

SHEET NO. 12A  
REV. 08-28-2020  
OVERHEAD SIGN NO. 10 RELOCATED  
ENDWALL 1C REMOVED. CROSS DRAIN FROM STRUCTURE NO. 1B TO NO. 1C REMOVED.  
CCTV/RDS-75S-001.9 RELOCATED. REVISED GUARDRAIL.

SHEET NO. 12B  
REV. 08-28-2020  
REVISED 1 SERIES STORM DRAINAGE

SHEET NO. 89  
REV. 08-28-2020  
REVISED STATION

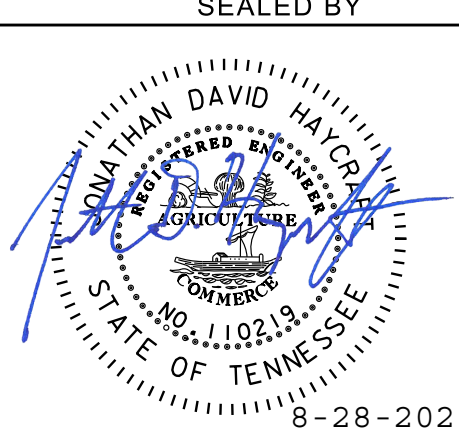
SHEET NOS. U-91-42, U-91-67, U-91-84, U-91-85, U-91-127, U-91-128, U-91-168, U-91-169, U-91-189, U-91-239 & U-91-259  
REV. 08-28-2020  
REVISED BRIDGE PLANS

SHEET NOS. R-00, R-05, R-05(1), R-05A, R-05A(1), R-05C, R-18, R-18A & R-18C  
REVISED RETAINING WALL PLANS

END OF REV. 08-28-2020

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	REV1

SEALED BY  8-28-2020
COORDINATES ARE NAD(83)(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.
<b>STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION</b>
<b>REVISION SHEET</b>

B:\2360\202008\36990800104\_CAD\TRNS\00REV SHEET 1.sht

# ROADWAY INDEX

SHEET NAME	SHEET NO.
SIGNATURE SHEETS.....	ROADWAY-SIGN1
REVISION SHEET.....	REV1
TITLE SHEET.....	1
ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS.....	1A
ESTIMATED ROADWAY QUANTITIES.....	2A, 2A1 – 2A4
TYPICAL SECTIONS.....	2B, 2B1 – 2B13
PAVEMENT SCHEDULE.....	2B14
PLANT RELOCATION.....	2D1
TEMPORARY WETLAND RESORATION NOTES.....	2D2
TABULATED QUANTITIES.....	2E, 2E1 – 2E9
GORE GRADING.....	2G, 2G1 – 2G6
RELIEF SLAB DETAILS.....	2H, 2H1 – 2H3
PRESENT LAYOUT(S).....	6,7,12, 16, 17
PROPOSED LAYOUT(S).....	4A – 18A
PROPOSED PROFILE(S).....	4B – 15B, 4C–11C
RAMP PROFILE(S).....	19 – 44
SIDE ROADS PROFILE(S).....	45
BUSINESS ENTRANCE PROFILE(S).....	45A
CULVERT SECTION(S).....	47A, 47B, 47D– 47H, 47K–47U
EROSION PREVENTION AND SEDIMENT CONTROL PLANS.....	48, 48A, 49F, 49M – 49P, 49-1 – 49P-1, 50 – 52P
SIGNING AND PAVEMENT MARKING PLAN(S).....	53 – 67
SIGN SCHEDULE SHEET(S).....	68 – 79
MISCELLANEOUS SIGNING DETAILS.....	80 – 93, 93A, 93B
ROADWAY CROSS SECTIONS.....	94 – 297
RAMP CROSS SECTIONS.....	298 - 357
SIDE ROAD CROSS SECTIONS.....	358 – 363
TRAFFIC CONTROL PLANS.....	T-1A, T-2 – T-2B, T-2F–T-2K, T-3F, T-3M – T-3P T-4 –T-4R, T-5 – T-5P, T-6, T-6A
EXISTING I-75N TO I-24W PLUG PLAN & PROFILE.....	T-7, T-7A
UTILITY RELOCATION.....	U-1, U-2
BRIDGE PLANS (2, 3, 4, 5A, 5B, 6, 7, 8, 9 &10).....	U-91-1 – U-91-259
GEOTECHNICAL PLANS.....	G1 – G37
ITS PLANS.....	ITS-1 – ITS-37
LIGHTING PLANS.....	L-1 – L-14
RETAINING WALL GEOMETRIC LAYOUT.....	R-00
RETAINING WALL PLANS.....	R-01 – R-05, R-06 – R-16, R-16(1), R-17 – R-19
RETAINING WALL FOUNDATION DATA.....	R-01A – R-14A, R-04A1, R-05A1 R-16A – R-16A1, R-17A – R-19A
RETAINING WALL SOIL PROFILES.....	R-01B – R-14B, R-16B, R-18B, R-19B – R-19B(2)
RETAINING WALL NOTES.....	R-01C – R-14C, R-06C1, R-08C1, R-09C1 R-16C – R-18C
NOISE WALL NOTES AND DETAILS.....	R-19D

GEOTECHNICAL TYPICAL DETAILS .....R-20  
 CAST-IN-PLACE WALL NOTES AND DETAILS .....R-12D – R-12D(2)

NOTES: THE ALPHABETICAL LETTERS “I”, “O” & “Q” AND SHEET NOS. R-19C ARE NOT USED IN NUMBERING OF SHEETS.

THE FOLLOWING SHEETS MAY BE FOUND IN THE RFC-2A PLANS AS THEY HAVE NOT BEEN REVISED: 1A2 – 1A4, 1B, 1B1, 2C, 2C1, 2C2, 2D, 2F, 3, 4, 5, 8 – 15, 18, 46 – 46A, 47, 47C, 47J, 49 – 49E, 49G – 49L, 49R, T1, T2C – T2E, AND T3 – T3R.

## ROADWAY DESIGN STANDARDS

DWG.	REV.	DESCRIPTION
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	09-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-3	03-16-17	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-4	07-16-18	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-5	05-01-08	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-6	03-30-10	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-7	05-24-12	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD01-TS-4	07-23-13	DESIGN STANDARDS 1 AND 2 LANE RAMPS
RD01-TS-5A	10-15-02	DESIGN STANDARDS FREEWAYS WITH INDEPENDENT ROADWAYS
RD01-TS-5B	10-15-02	DESIGN STANDARDS FREEWAYS WITH MEDIAN BARRIER
RD01-TS-6	01-07-19	TYPICAL CURB AND GUTTER SECTIONS WITH SHOULDERS
RD01-TS-6A	01-07-19	TYPICAL CURB AND GUTTER SECTIONS WITHOUT SHOULDERS
RD01-SE-3	10-15-02	RURAL SUPERELEVATION DETAILS
RD01-S-11	04-04-03	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD01-S-11A	10-15-02	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
RD01-SA-1	10-15-02	SAFETY APPROACH TO UNDERPASSES GRADING DESIGN AND SLOPE PROTECTION
RD-UD-3	09-05-96	UNDERDRAIN DETAILS
RD-UD-4	01-25-16	UNDERDRAIN LATERAL DETAILS
RD-UD-6	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 1:1 & 2:1 SLOPES
RD-UD-7	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 3:1 & 4:1 SLOPES
RD-UD-9	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 6:1 SLOPES

## PIPE CULVERTS AND ENDWALLS

DWG.	REV.	DESCRIPTION
D-PB-1	03-16-17	STANDARD DETAILS FOR CONCRETE PIPE INSTALLATION
D-PB-2	01-29-14	STANDARD DETAILS FOR FLEXIBLE PIPE INSTALLATION

# STANDARD ROADWAY DRAWINGS

DWG.	REV.	DESCRIPTION
D-PB-3		INDUCED TRENCH SOIL EMBANKMENT FOR PIPE CULVERT INSTALLATION
D-PG-3	04-15-97	FERROUS AND ALUMINUM CORRUGATED METAL PIPE
D-PE-18A	01-06-15	18" CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-18B		18" CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-24A	07-05-17	24" CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-24B		24" CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-36A	06-14-13	36" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-36B		36" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-1	02-12-76	TYPE "A" CONCRETE ENDWALL 2:1 SLOPE. 36" TO 78"
D-PE-4	10-10-16	STRAIGHT CONCRETE ENDWALL

## CATCH BASINS AND MANHOLES

DWG.	REV.	DESCRIPTION
D-CB-12LP	05-15-18	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 12LP CATCH BASIN (FOR USE WITH 6" NON-MOUNTABLE CURB)
D-CB-12P	05-15-18	STANDARD PRECAST RECTANGULAR CONCRETE NO.12 CATCH BASIN
D-CB-12RA	05-15-18	STANDARD PRECAST 48" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RB	05-15-18	STANDARD PRECAST 60" AND 72" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RC	05-15-18	STANDARD PRECAST 84" THRU 120" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12S	05-15-18	STANDARD RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-12SB	05-15-18	STANDARD 4' X 4' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SC	05-15-18	STANDARD 5' 2" X 5' 2" SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SD	05-15-18	STANDARD 7' X 7' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SE	05-15-18	STANDARD 9' X 9' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-31R	05-15-18	STANDARD PRECAST CIRCULAR NO. 31 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-31SD	05-15-18	STANDARD 7' X 7' SQUARE CONCRETE NO. 31 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-31SE	05-15-18	STANDARD 9' X 9' SQUARE CONCRETE NO. 31 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41LP	05-15-18	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41P	05-15-18	STANDARD 4' X 3' PRECAST RECTANGULAR CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)

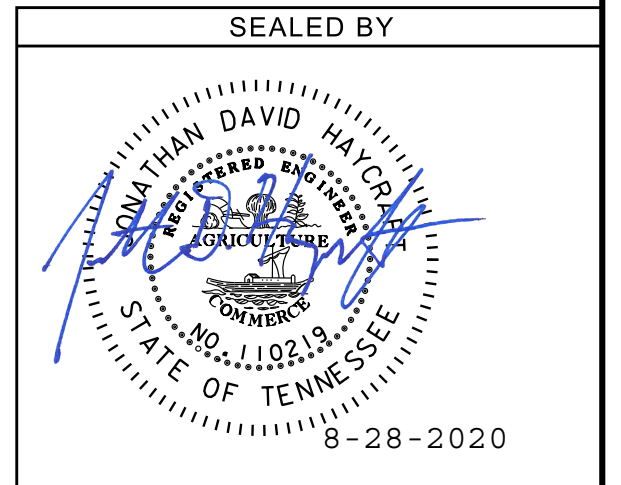
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	1A

REV. 12-17-2019  
REVISED INDEX

REV. 02-14-2020  
REVISED INDEX

REV. 04-13-2020  
ADDED SHEETS T-7 AND T-7A

REV. 08-28-2020  
ADDED SHEETS U-1 AND U-2  
REMOVED SHEETS R-05D THRU R-05D(4) & R-18D THRU R-18D(3)



STATE OF TENNESSEE  
DEPARTMENT OF  
TRANSPORTATION

ROADWAY INDEX  
AND  
STANDARD  
ROADWAY  
DRAWINGS

8/28/2020 F:\36136908\3690800104\_CAD\TRNS\Revision\_08-28-2020 (Bridge End Drain Removal & Overhead Sign Relocation)\001A - 001A2 (Index and Drawing Std. Drawings).sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	2A

REV. 12-17-2019  
 REVISED EST. ROADWAY QUANTITY ITEMS:  
 203-02.01, 209-09.43, 604-01.01, 604-01.02,  
 604-07.01, 604-07.03, 604-07.04, 607-03.02,  
 607-03.04, 607-05.02, 607-06.02, 607-10.02,  
 611-07.01, 611-07.02, 611-07.55, & 611-31.02;  
 REMOVED ITEM NO. 611-31.04  
 ADDED ITEM NO. 606-02.03.

REV. 01-31-2020  
 REVISED EST. ROADWAY QUANTITY ITEMS:  
 607-39.02, 611-07.01 & 611-07.02.

REV. 04-13-2020  
 REVISED EST. ROADWAY QUANTITY ITEMS:  
 209-09.43, 604-07.10, 604-07.11, 607-03.03,  
 & 607-03.04

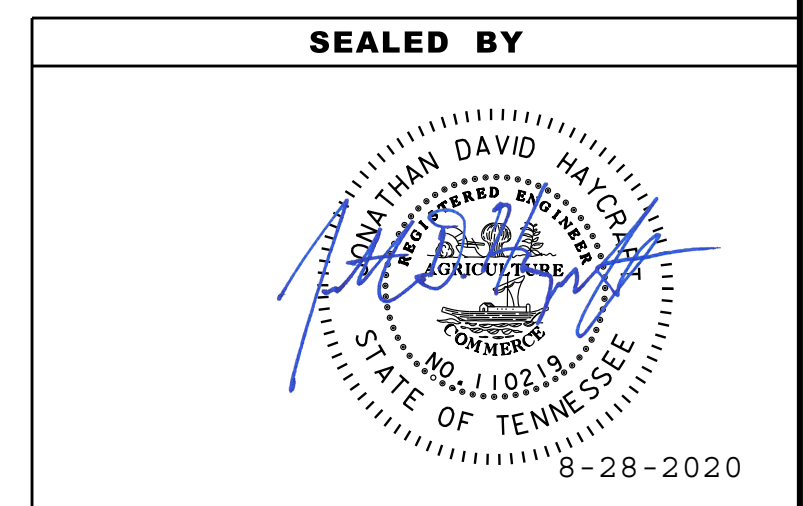
REV. 08-28-2020  
 REVISED EST. ROADWAY QUANTITY ITEMS:  
 604-07.05, 604-07.18, 607-03.02, 610-07.03  
 & 611-07.55

ESTIMATED ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY 33005-1185-44
105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
201-01	CLEARING AND GRUBBING	LS	1
(1)	202-01 REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1
	202-03.01 REMOVAL OF ASPHALT PAVEMENT	S.Y.	467
(2)	202-04.01 REMOVAL OF STRUCTURES (SIGN STRUCTURES)	LS	1
	202-04.02 REMOVAL OF STRUCTURES (BRIDGE MOUNTED SIGNS)	LS	1
	202-08.15 REMOVAL OF CURB AND GUTTER (RAMPS "F" AND "G")	L.F.	1600
	202-08.28 REMOVAL OF MEDIAN BARRIER (I-75)	L.F.	5850
(3)	203-01 ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	380
(32)	203-02.01 BORROW EXCAVATION (GRADED SOLID ROCK)	TON	8685
	203-04 PLACING AND SPREADING TOPSOIL	C.Y.	32500
	203-06 WATER	M.G.	3500
	203-10 EMBANKMENT (COMPACTED IN PLACE)	C.Y.	767058
(23)	204-02.10 DRILLED CAISSON - EARTH (30" DIA.)	L.F.	676
(23)	204-02.20 DRILLED CAISSON - ROCK (30" DIA.)	L.F.	8
(24)	204-08 FOUNDATION FILL MATERIAL	C.Y.	5
(3)	209-02.04 10" TEMPORARY SLOPE DRAIN	L.F.	1132
(3)	209-02.06 15" TEMPORARY SLOPE DRAIN	L.F.	104
(3)	209-02.07 18" TEMPORARY SLOPE DRAIN	L.F.	42
(3)	209-05 SEDIMENT REMOVAL	C.Y.	1237
(3)	209-08.02 TEMPORARY SILT FENCE (WITH BACKING)	L.F.	56433
(3)	209-08.03 TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	19062
(3)	209-08.05 ENHANCED SILT FENCE CHECK (V-DITCH)	EACH	67
(3)	209-08.06 ENHANCED SILT FENCE CHECK (TRAPEZOIDAL)	EACH	162
(3)	209-08.07 ROCK CHECK DAM PER	EACH	4
(3)	209-08.08 ENHANCED ROCK CHECK DAM	EACH	4
(3)	209-09.01 SANDBAGS	BAG	2724
(3)	209-09.03 SEDIMENT FILTER BAG (15' X 15')	EACH	10
(3)	209-09.43 CURB INLET PROTECTION (TYPE 4)	EACH	246
(3)	209-20.03 POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	42
(3)	209-40.34 CATCH BASIN PROTECTION (TYPE E)	EACH	38
(4)(26)	303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	216707
(24)	303-01.01 GRANULAR BACKFILL (ROADWAY)	TON	18
(3)(31)	303-10.01 MINERAL AGGREGATE (SIZE 57)	TON	513
(4)	307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	3348
(4)	307-01.22 ASP. CONC. MIX(PG76-22) (BPMB-HM) GR. A-S	TON	24565
(4)(27)	307-02.01 ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A	TON	1650
(4)(28)	307-02.08 ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2	TON	844
(4)	307-03.01 ASPHALT CONCRETE MIX (PG76-22) (BPMB-HM) GRADING A	TON	53716
(4)	307-03.08 ASPHALT CONCRETE MIX (PG76-22) (BPMB-HM) GRADING B-M2	TON	26564
(4)	313-03 TREATED PERMEABLE BASE	S.Y.	46429
(4)	402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	259
(4)(25)	402-02 AGGREGATE FOR COVER MATERIAL (PC)	TON	917
(4)	403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	121.5
(4)	411-01.07 ACS MIX (PG64-22) GRADING E SHOULDER	TON	2092
(4)	411-02.10 ACS MIX(PG70-22) GRADING D	TON	298
(4)	411-03.10 ACS MIX(PG76-22) GRADING D	TON	16603
(4)	415-01.01 COLD PLANING BITUMINOUS PAVEMENT	TON	4968

ESTIMATED ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY 33005-1185-44
(4)	501-01.03 PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 10"	S.Y.	25956
(4)	501-01.06 PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 13"	S.Y.	17558
(21)(38)	604-01.01 CLASS A CONCRETE (ROADWAY)	C.Y.	305
(22)(39)	604-01.02 STEEL BAR REINFORCEMENT (ROADWAY)	LB.	49161
(23)	604-04.01 APPLIED TEXTURE FINISH (NEW STRUCTURES)	S.Y.	2223
(5)	604-07.01 RETAINING WALL (WALL NO. 2-1)	S.F.	6922
(5)	604-07.02 RETAINING WALL (WALL NO. 2-3)	S.F.	4010
(5)	604-07.03 RETAINING WALL (WALL NO. 3-1)	S.F.	3707
(5)	604-07.04 RETAINING WALL (WALL NO. 3-4)	S.F.	13797
(5)	604-07.05 RETAINING WALL (WALL NO. 4-1)	S.F.	10335
(5)	604-07.06 RETAINING WALL (WALL NO. 5A-1)	S.F.	2893
(5)	604-07.07 RETAINING WALL (WALL NO. 5A-2)	S.F.	3026
(5)	604-07.08 RETAINING WALL (WALL NO. 5B-1)	S.F.	2591
(5)	604-07.09 RETAINING WALL (WALL NO. 5B-2)	S.F.	2951
(5)	604-07.10 RETAINING WALL (WALL NO. 6-1)	S.F.	5133
(5)	604-07.11 RETAINING WALL (WALL NO. 6-2)	S.F.	5565
(5)	604-07.12 RETAINING WALL (WALL NO. 7-1)	S.F.	2990
(5)	604-07.13 RETAINING WALL (WALL NO. 7-2)	S.F.	1781
(5)	604-07.14 RETAINING WALL (WALL NO. 8-2)	S.F.	8598
(5)	604-07.15 RETAINING WALL (WALL NO. 4-2)	S.F.	2621
(5)	604-07.16 RETAINING WALL (WALL NO. 10-1)	S.F.	19717
(5)	604-07.17 RETAINING WALL (WALL NO. 10-2)	S.F.	7976
(5)	604-07.18 RETAINING WALL (WALL NO. 11)	S.F.	2936
(40)	606-02.03 STEEL PILES (10 INCH)	L.F.	883
(6)	607-03.02 18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	5813
(6)	607-03.03 18" CONCRETE PIPE CULVERT (CLASS IV)	L.F.	146
(6)	607-03.04 18" CONCRETE PIPE CULVERT (CLASS V)	L.F.	329
(6)	607-05.02 24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	1610
(6)	607-05.04 24" CONCRETE PIPE CULVERT (CLASS V)	L.F.	358
(6)	607-06.02 30" CONCRETE PIPE CULVERT (CLASS III)	L.F.	624
(6)	607-07.02 36" CONCRETE PIPE CULVERT (CLASS III)	L.F.	126
(6)	607-08.02 42" CONCRETE PIPE CULVERT (CLASS III)	L.F.	36
(6)	607-10.02 54" CONCRETE PIPE CULVERT (CLASS III)	L.F.	93
(6)	607-10.03 54" CONCRETE PIPE CULVERT (CLASS IV)	L.F.	391
(6)	607-10.04 54" CONCRETE PIPE CULVERT (CLASS V)	L.F.	528
(6)	607-39.02 18" PIPE CULVERT (SIDE DRAIN)	L.F.	142
(16)	610-07.03 18" PIPE DRAIN (BRIDGE DRAIN)	L.F.	780
	611-01.01 MANHOLES, 0' - 4' DEPTH	EACH	1
	611-01.03 MANHOLES, 8'-12' DEPTH	EACH	3
	611-01.05 MANHOLES, > 16' - 20' DEPTH	EACH	2
	611-05.01 TRENCH DRAINS	L.F.	578
	611-05.02 12IN PVC PIPE FOR TRENCH DRAINS	L.F.	375
	611-07.01 CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	69
	611-07.02 STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	2445
	611-07.55 18IN ENDWALL (CROSS DRAIN) 4:1	EACH	1
	611-07.56 18IN ENDWALL (CROSS DRAIN) 6:1	EACH	2
	611-07.57 24IN ENDWALL (CROSS DRAIN) 3:1	EACH	1
	611-07.58 24IN ENDWALL (CROSS DRAIN) 4:1	EACH	1
	611-07.64 36IN ENDWALL (CROSS DRAIN) 4:1	EACH	1
	611-12.01 CATCH BASINS, TYPE 12, 0' - 4' DEPTH	EACH	6
	611-31.02 CATCH BASINS, TYPE 31, > 4' - 8' DEPTH	EACH	23
	611-31.03 CATCH BASINS, TYPE 31, > 8' - 12' DEPTH	EACH	4

NOTES:

- 1) SEE SHEET NO. 2A2 FOR FOOTNOTES.
- 2) SEE SHEET NOS. 2E-2E9 FOR TABULATED QUANTITIES.



STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

ESTIMATED  
 ROADWAY  
 QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	2A1

REV. 12-17-2019  
REVISED EST. ROADWAY QUANTITY ITEMS:  
611-46.02, 709-05.06 & 709-05.08;  
REMOVED ITEM NO: 611-52.02

REV. 04-13-2020  
REVISED EST. ROADWAY QUANTITY ITEMS:  
611-51.02, 705-06.01, 705-06.10, 705-06.20,  
& 711-05.72

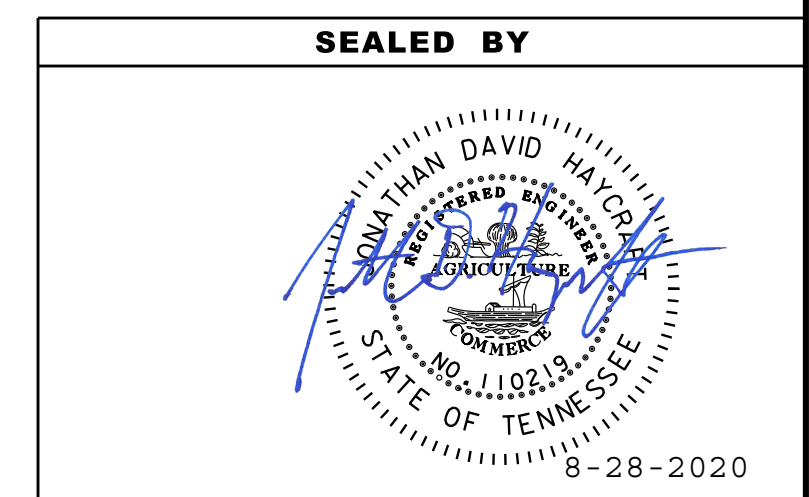
REV. 08-28-2020  
REVISED EST. ROADWAY QUANTITY ITEMS:  
705-06.01

ESTIMATED ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY 33005-1185-44
611-41.01	CATCH BASINS, TYPE 41, 0' - 4' DEPTH	EACH	1
611-41.02	CATCH BASINS, TYPE 41, > 4' - 8' DEPTH	EACH	21
611-41.03	CATCH BASINS, TYPE 41, > 8' - 12' DEPTH	EACH	4
611-41.04	CATCH BASINS, TYPE 41, > 12' - 16' DEPTH	EACH	3
611-41.05	CATCH BASINS, TYPE 41, > 16' - 20' DEPTH	EACH	1
611-42.01	CATCH BASINS, TYPE 42, 0' - 4' DEPTH	EACH	4
611-42.02	CATCH BASINS, TYPE 42, > 4' - 8' DEPTH	EACH	2
611-43.02	CATCH BASINS, TYPE 43, > 4' - 8' DEPTH	EACH	6
611-43.03	CATCH BASINS, TYPE 43, > 8' - 12' DEPTH	EACH	1
611-43.04	CATCH BASINS, TYPE 43, > 12' - 16' DEPTH	EACH	1
611-45.02	CATCH BASINS, TYPE 45, > 4' - 8' DEPTH	EACH	5
611-45.04	CATCH BASINS, TYPE 45, > 12' - 16' DEPTH	EACH	1
611-45.05	CATCH BASINS, TYPE 45, > 16' - 20' DEPTH	EACH	2
611-46.02	CATCH BASINS, TYPE 46, > 4' - 8' DEPTH	EACH	10
611-46.03	CATCH BASINS, TYPE 46, > 8' - 12' DEPTH	EACH	1
611-51.02	CATCH BASINS, TYPE 51, > 4' - 8' DEPTH	EACH	5
611-51.03	CATCH BASINS, TYPE 51, > 8' - 12' DEPTH	EACH	1
611-51.05	CATCH BASINS, TYPE 51, > 16' - 20' DEPTH	EACH	1
(9)(20) 620-05.01	CONC PARAPET SINGLE SLOPE (STD-1-1SS)	L.F.	5423
621-03.03	24" TEMPORARY DRAINAGE PIPE	L.F.	176
621-03.05	36" TEMPORARY DRAINAGE PIPE	L.F.	215
621-03.09	60" TEMPORARY DRAINAGE PIPE	L.F.	80
(29) 701-01.01	CONCRETE SIDEWALK (4 ")	S.F.	8567
701-02.03	CONCRETE CURB RAMP	S.F.	312
702-03	CONCRETE COMBINED CURB & GUTTER	C.Y.	67
705-01.01	GUARDRAIL AT BRIDGE ENDS	L.F.	1477
(30) 705-06.01	W BEAM GR (TYPE 2) MASH TL3	L.F.	24292
705-06.10	GR TERMINAL TRAILING END (TYPE 13) MASH TL3	EACH	17
705-06.20	TANGENT ENERGY ABSORBING TERM MASH TL-3	EACH	27
705-06.30	GR TERMINAL (ENERGY ABSORBING) MASH TL2	EACH	5
705-20.20	LOW MAINT CRASH CUSHN NARROW (MASH TL-3)	EACH	1
(7) 705-20.25	TEMPORARY CRASH CUSHION (MASH TL-3)	EACH	55
(1) 706-01	GUARDRAIL REMOVED	L.F.	22534
707-01.11	CHAIN LINK FENCE (6 FOOT)	L.F.	6789
707-01.12	END & CORNER POST ASSEMBLY(CHAIN-LINK FENCE 6')	EACH	14
707-01.13	GATE - CHAIN-LINK FENCE-6 FOOT (4' WIDE)	EACH	2
(1) 707-06.01	REMOVAL OF FENCE (6' CHAIN-LINK)	L.F.	6789
(1) 707-06.02	REMOVAL OF GATE (6' CHAIN-LINK - 4' WIDE)	EACH	2
707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	22913

ESTIMATED ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY 33005-1185-44
(16) (18) 709-01.01	RUBBLE STONE RIP-RAP	C.Y.	29
(3) 709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	1900
(8)(33) 709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	1445
(8)(34) 709-05.08	MACHINED RIP-RAP (CLASS B)	TON	3343
(8) 709-05.09	MACHINED RIP-RAP (CLASS C)	TON	100
710-02	AGGREGATE UNDERDRAINS (WITH PIPE)	L.F.	45123
710-05	LATERAL UNDERDRAIN	L.F.	6678
710-06.11	LATERAL UNDERDRAIN ENDWALL (2:1)	EACH	16
710-06.15	LATERAL UNDERDRAIN ENDWALL (6:1)	EACH	205
(9) 711-05.70	32IN SINGLE SLOPE CONCRETE BARRIER WALL	L.F.	1717
(9) 711-05.71	51IN SINGLE SLOPE CONCRETE BARRIER WALL	L.F.	8626
(9) 711-05.72	SINGLE SLOPE HALF CONCRETE BARRIER WALL	L.F.	4558
(9) 711-05.77	FLARED S/S CONCRETE MEDIAN BARRIER WALL	L.F.	666
(9) 711-05.78	GRADE SEPARATED SINGE SLOPE MEDIAN WALL	L.F.	1694
712-01	TRAFFIC CONTROL	LS	1
(10) 712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	81624
(10) 712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	1900
(10) 712-06	SIGNS (CONSTRUCTION)	S.F.	3028
(10) (17) 712-06.16	SIGNS (CONSTRUCTION)(REDUCED SPEED WARNING)	EACH	6
712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	223
712-08.03	ARROW BOARD (TYPE C)	EACH	3
713-01.01	CLASS A CONCRETE (FOUNDATION FOR SIGN SUPPORTS)	C.Y.	17
713-01.02	STEEL BAR REINFORCEMENT(FOUNDATION FOR SIGN SUPPORTS)	LB.	4530
713-02.04	DELINEATOR (MILE MARKER) & STEEL POST	EACH	4
713-02.14	FLEXIBLE DELINEATOR (WHITE)	EACH	201
713-02.15	FLEXIBLE DELINEATOR (YELLOW)	EACH	167
713-02.21	SIGN POST DELINEATION ENHANCEMENT	L.F.	28
(10) 713-02.26	CONCRETE BARRIER/PARAPET DELINEATOR	EACH	3700
713-06	STEEL I-BEAMS & WF-BEAMS(BREAKAWAY) SIGN SUPPORT	LB.	10300
713-09.01	STEEL OVERHEAD SIGN STRUCTURE (307+94.51, OH-2, SPAN 86')	EACH	1
713-09.02	STEEL OVERHEAD SIGN STRUCTURE (330+16.28, OH-3, SPAN 87.5')	EACH	1
713-09.03	STEEL OVERHEAD SIGN STRUCTURE (332+33.84, OH-4, SPAN 106')	EACH	1
713-09.04	STEEL OVERHEAD SIGN STRUCTURE (344+66.85, OH-5, SPAN 106')	EACH	1
713-09.05	STEEL OVERHEAD SIGN STRUCTURE (356+75.90, OH-6, SPAN 160')	EACH	1
713-09.06	STEEL OVERHEAD SIGN STRUCTURE (359+50.44, OH-7, SPAN 110')	EACH	1
713-09.07	STEEL OVERHEAD SIGN STRUCTURE (383+65.28, OH-8, SPAN 70')	EACH	1
713-09.08	STEEL OVERHEAD SIGN STRUCTURE (393+53.84, OH-9, SPAN 106')	EACH	1
713-09.09	STEEL OVERHEAD SIGN STRUCTURE (406+79.95, OH-10, SPAN 91')	EACH	1
713-09.10	STEEL OVERHEAD SIGN STRUCTURE (421+00.00, OH-11, SPAN 182')	EACH	1
713-09.11	STEEL OVERHEAD SIGN STRUCTURE (430+00.00, OH-12, SPAN 91')	EACH	1
713-09.12	STEEL OVERHEAD SIGN STRUCTURE (614+67.55, OH-13, SPAN 127')	EACH	1
713-09.13	STEEL OVERHEAD SIGN STRUCTURE (620+97.36, OH-14, SPAN 76')	EACH	1
713-09.14	STEEL OVERHEAD SIGN STRUCTURE (814+71.76, OH-15, SPAN 76')	EACH	1
(11) 713-11.01	"U" SECTION STEEL POSTS	LB.	228
(11) 713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	600
(11) 713-11.05	SQUARE TUBE SIGN SUPPORT	LB.	109
(11) 713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	427
(11) 713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	1178
(11) 713-14	EXTRUDED ALUMINUM PANEL SIGNS	S.F.	11372
713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	1
713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	8
(19) 713-16.20	SIGNS (PROTECTED AREA SIGN)	EACH	56
713-16.41	RELOCATE SIGN	LS	4
713-17.02	INSTALL AUXILIARY SUPPORT FOR EXIT NUMBER PANEL	EACH	22
713-17.30	MODIFY EXISTING OVERHEAD SIGN STRUCTURE	LS	1
713-30.09	BARRIER MOUNTED SIGN SUPPORT	EACH	22

NOTES:

- 1) SEE SHEET NO. 2A2 FOR FOOTNOTES.
- 2) SEE SHEET NOS. 2E-2E9 FOR TABULATED QUANTITIES.



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

ESTIMATED  
ROADWAY  
QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	2E2

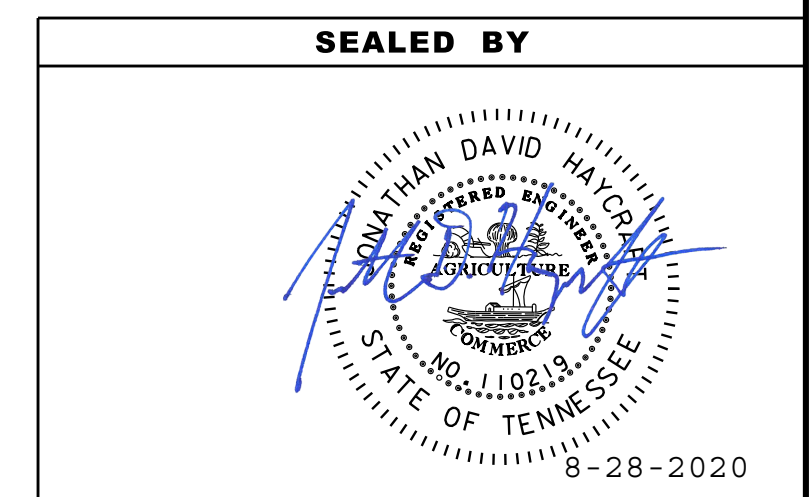
REV. 01-31-2020  
REVISED SIDE DRAIN TABULATION.  
REV. 08-28-2020  
REVISED BRIDGE DRAINS TABLE

BRIDGE DRAINS						
STATION	BRIDGE	LOCATION	SPILLWAY WIDTH	RUBBLE-STONE	18" PIPE DRAIN	REMARKS
				RIP-RAP 709-01.01 (CU. YD.)	(BRIDGE DRAIN) 610-07.03 (L.F.)	
365+52.33	1-NB	75	8	--	62	
634+19.84	7	24E-75S	8	--	56	
2330+27.77	9	RAMP D	8	2.6	57	
2327+95.37	9	RAMP D	8	2.6	85	
407+68.54	4	75	8	2.6	80	
407+68.54	4	75	8	2.6	80	
410+45.87	4	75	8	2.6	80	
410+45.87	4	75	8	2.6	80	
222+10.84	2	75N-24W	8	2.6	40	
219+55.37	2	75N-24W	8	2.6	40	
923+26.29	3	24E-75N	8	2.6	40	
927+53.88	3	24E-75N	8	2.6	40	
914+32.15	6	24E-75N	8	2.6	40	
<b>TOTALS</b>				<b>28.6</b>	<b>780</b>	

SIDE DRAIN TABULATION																
ROAD-STATION	LOCATION		DESCRIPTION	SURFACE WIDTH FT.	SKEW	RCP CLASS III OR CMP 16 GA OR PVC OR SRTRP OR HDPE OR PP (L.F.)						END TREATMENT		REMARKS		
	LT.	RT.				FILL HEIGHT ≤ 10 FT.						INLET			OUTLET	
						18"	24"	30"	36"	42"	48"	TYPE	DRAWING NO.		TYPE	DRAWING NO.
RAMP G	X		18" PIPE UNDER ABUTMENT SLOPE	NA	NA	112						ST	D-PE-4	ST	D-PE-4	
I-75 - 365+03		X	DRAIN FOR MEDIAN BERM	31	NA	30						N/A		N/A		
<b>TOTALS</b>						<b>142</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>					

BOX CULVERT \ BRIDGE TABULATION														
STATION	LOCATION	TYPE		SKEW	NO. BARRELS	WIDTH	HEIGHT	LENGTH	DRAINAGE AREA ACRES	STANDARD DRAWING NO.	CULVERT ≤ 20 FT.		STD. DWG. STD-17-17 & 18	
		BOX	SLAB								CLASS "A" CONCRETE	STEEL BAR REINF.	FOUNDATION FILL MATERIAL	GRANULAR BACKFILL
442+30	75	X		--	1	8	8	29	75	STD-17-53	604-01.01 CU. YD.	604-01.02 LB.	204-08 CU. YD.	303-01.01 TONS
<b>TOTALS</b>											<b>40.10</b>	<b>6293</b>	<b>5</b>	<b>18</b>

▲ ALL COST OF CULVERT EXCAVATION WILL BE INCLUDED IN THE COST OF OTHER ITEMS.



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

TABULATED  
QUANTITIES



STORM DRAINAGE PIPES											
SHEET NO.	FROM		TO		%	REINFORCED CONC. PIPE - CLASS III					
	CODE	OUTLET ELEV.	CODE	INLET ELEV.		SIZE & LENGTH (L.F.)					
						18"	24"	30"	36"	42"	54"
#4A	18	676.17	18A	675.57	1.30	46					
#4A	18B	677.86	18A	676.83	1.00	103					
#5A	17F	677.56	17D	674.92	1.03	257					
#5A	17C	673.09	17D	671.92	0.53		220				
#5A	17B	673.94	17C	673.09	0.52		163				
#5A	17	674.19	17B	673.94	0.50	50					
#5A	17A	674.44	17	674.19	0.50	50					
#5A	17E	676.05	17A	674.44	0.58	278					
#6A/#7A	110	668.45	110A	668.09	0.50	72					
#6A	16B	675.32	16	674.88	1.00	44					
#6A	16	674.88	16A	674.63	0.57	44					
#6A	16A	674.63	16C	674.15	0.56	86					
#6A	16E	674.63	16D	674.45	0.16	113					
#6A	42	675.44	41B	675.03	1.00	41					
#6A	41B	674.86	41	674.44	1.00	42					
#6A	41	674.27	41A	673.78	1.00	49					
#6A	41A	671.55	41C	670.68	1.58		55				
#6A/#7A	15D	670.55	39C	670.10	0.45		100				
#7A	15C	673.06	15D	670.55	2.76	91					
#7A	15	674.00	15B	673.60	0.61	66					
#7A	15B	673.60	15C	673.06	0.53	101					
#7A	39B	673.10	39	672.55	0.58	95					
#7A	39	672.55	39C	672.00	0.61	90					
#7A	15A	674.42	15	674.00	0.69	61					
#7A	39C	669.99	39D	669.40	1.02		58				
#7A	14A	674.61	14	674.25	0.95	38					
#7A	14	674.00	14B	673.00	2.27	44					
#7A	14C	666.64	14D	665.00	1.44	114					
#7A	111A	669.35	111	669.00	0.53		66				
#7A	14B	672.88	14C	666.65	5.51	113					
#8A	13	675.75	10B	674.70	0.65	161					
#8A	10B	674.68	10	674.07	1.39	44					
#8A	10A	673.47	10C	664.11	7.31		128				
#8A	11	675.32	10A	673.47	0.53	346					
#8A	10	674.07	10A	673.47	0.68		88				
#8A	91	673.55	90D	673.10	0.62	73					
#8A	32A	673.70	91	673.55	1.00	15					
#8A	90G	673.90	90D	673.25	0.58	112					
#8A	90D	673.10	90A	672.50	1.25	48					
#8A	90	674.06	90H	673.76	0.83	36					
#8A	90A	672.05	90J	671.96	1.29	7					
#8A	90H	673.76	90A	673.70	0.86	7					
#8A	90J	671.96	90B	671.20	1.46	52					
#8A	90B	666.50	90C	665.75	3.95		19				
#8A	90F	675.11	90E	674.38	0.82	89					
#8A	90E	674.38	32A	673.70	0.57	119					
#9A	38B	674.15	38	674.00	0.68	22					
#9A	38A	674.42	38	674.10	1.10	20					
#9A	31B	674.19	31D	673.99	1.05	19					
#9A	38C	674.25	38B	674.15	0.67	15					
#9A	38	674.00	31	673.74	1.00	26					
#9A	31A	674.20	31E	673.99	1.11	19					
#9A	31	666.69	31C	666.65	0.57		7				
#9A	47	674.60	47A	674.00	0.83	72					
#9A	37	672.95	37A	672.15	10.00	8					
#9A	12	676.94	12A	676.25	0.52	133					
#9A	34A	673.89	34	673.05	1.95	43					
#9A	31D	673.99	31	673.95	0.57	7					
#9A	31E	673.99	31	673.95	0.57	7					
10A	109	669.00	109A	666.65	2.70					87	
** 10A	107	668.51	107A	666.17	0.65					358	
10A	EXIST	664.41	108	664.34	1.40						5
<b>SUBTOTALS</b>						<b>3588</b>	<b>904</b>	<b>0</b>	<b>87</b>	<b>0</b>	<b>5</b>

\* DENOTES CLASS IV RCP  
 \*\* DENOTES CLASS V RCP

STORM DRAINAGE PIPES												
SHEET NO.	FROM		TO		%	REINFORCED CONC. PIPE - CLASS III						
	CODE	OUTLET ELEV.	CODE	INLET ELEV.		GRADE	SIZE & LENGTH (L.F.)					
							18"	24"	30"	36"	42"	54"
#10A	8B	675.77	8	673.70	3.09	67						
#10A	24	674.00	8	673.50	0.65	77						
#10A	8	673.50	8A	673.06	0.65		68					
#10A	8A	672.90	7	670.90	0.98		205					
#10A	7	670.96	7A	670.20	0.74		103					
#10A	9	677.73	9A	677.00	0.88	83						
#10A	34B	673.90	34	673.05	1.98	43						
#10A	34A	673.89	34	673.07	1.91	43						
#10A	34	673.00	34C	672.80	2.50	8						
#10A	IN-1	663.26	20	663.09	0.26						66	
** #10A/#11A	20	663.09	6B	662.58	0.24						209	
** #11A	6B	662.58	6	662.35	0.24						94	
#11A	6A	666.39	6	662.35	5.77						70	
#11A	5	666.50	6A	666.39	0.61						18	
#11A	23	670.47	5	669.52	0.50			189				
* #11A	21	672.47	23	670.47	0.51			391				
#11A	21A	678.41	21	675	6.09	56						
#11A	4	674.01	21	672.47	0.52		299					
#11A	48	676.79	48A	676.00	1.84	43						
** #11A	6	662.35	19	662.27	0.08						97	
** #11A	19	662.27	EX 54"	662.19	0.35						23	
** #11A	EX 54"	660.86	19A	660.75	0.28						39	
#11A/#12A	3B	675.34	4	674.01	0.55	241						
#12A	3	676.5	3B	675.34	2.64	44						
#12A	1B	676.60	1	676.22	0.76	50						
#12A	1	676.02	1A	675.84	0.36	50						
#12A	3A	677.46	3	676.50	1.78	54						
#11A	3C	676.75	3	676.50	0.52	48						
#13A	43	671.56	43A	671.54	0.67	3						
#13A	44	670.70	44A	670.68	0.67	3						
#15A	46B	668.45	46A	667.54	3.50	26						
#16A	52	681.11	52A	680.93	1.00	18						
#16A	53	679.98	53A	679.80	1.00	18						
#16A	51	684.01	51A	683.83	1.00	18						
#16A	50	682.14	50A	681.96	1.00	18						
#16A	69A	675.72	69	673.38	1.00	234						
16A	EXIST	665.30	102	665.11	0.61		31					
16A	69	664.84	69B	664.50	0.87			39				
16A	103	663.92	EXIST	663.82	0.50				20			
16A	EXIST	662.27	103A	662.17	0.63				16			
16A	EXIST	668.21	45	667.38	1.12			EXIST.				
17A	80	676.00	81	675.30	0.71	99						
16A	81	675.30	82	674.80	0.54	92						
16A	82	674.20	46	670.00	1.68	250						
16A	95	697.95	95A	697.77	1.00	18						
16A	96	697.93	96A	697.75	1.00	18						
17A	104	671.00	104A	670.00	0.68	146						
** 17A	105	677.03	99	673.63	2.93	116						
** 17A	99	673.63	105A	670.04	9.70	37						
** 17A	106	671.76	106A	670.10	0.94	176						
17A	97	675.03	98	674.59	0.51	87						
17A	98	674.59	99	674.15	0.51	87						
18A	EXIST	662.82	101	662.60	0.50					44		
<b>SUBTOTALS</b>						<b>2225</b>	<b>706</b>	<b>624</b>	<b>39</b>	<b>36</b>	<b>88</b>	
<b>SUBTOTALS PREVIOUS SHEET</b>						<b>3588</b>	<b>904</b>	<b>0</b>	<b>87</b>	<b>0</b>	<b>5</b>	
<b>CLASS III TOTALS</b>						<b>5813</b>	<b>1610</b>	<b>624</b>	<b>126</b>	<b>36</b>	<b>93</b>	
<b>CLASS IV TOTALS</b>						<b>146</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>391</b>	
<b>CLASS V TOTALS</b>						<b>329</b>	<b>358</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>528</b>	

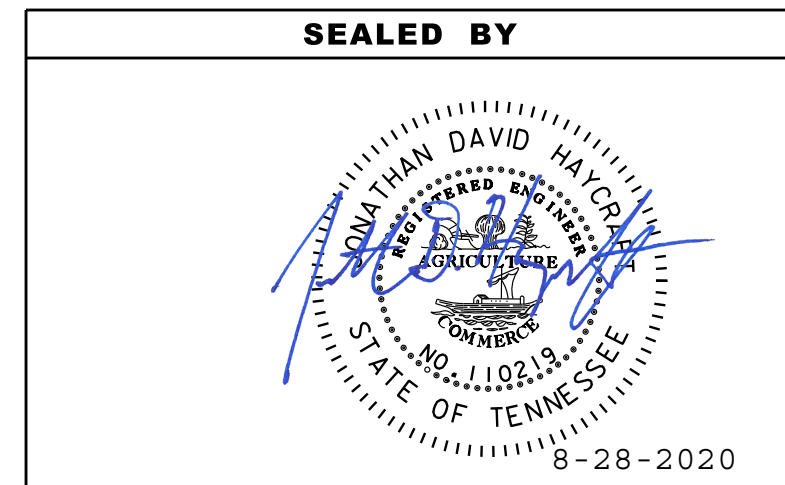
\* DENOTES CLASS IV RCP

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	2E5

REV. 12-17-2019  
 REVISED CULVERTS INFORMATION BETWEEN CB-3B THROUGH CB-5; ADDED CULVERT 1B TO 1C; REMOVED PIPE FROM 7B TO 7C

REV. 04-13-2020  
 REVISED PIPE LENGTH FROM DRAINAGE STRUCTURE 104 TO 104A. ADDED CATCH BASIN NOS. 97, 98, AND 99. REVISED PIPE LENGTH FROM DRAINAGE STRUCTURE 105 TO 99 AND 99 TO 105A. REVISED ELEVATIONS AND PIPE SLOPES AT CATCH BASIN NOS. 41, 41A, 41B, AND 42.

REV. 08-28-2020  
 REMOVED PIPE FROM CB-1B TO CB-1C. REVISED SLOPE OF CB-1A AND CB-1B TO CB-1.



STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	2E6

REV. 12-17-2019  
 ADDED ENDWALL 1C  
 ADDED RIP-RAP FOR EW-1C  
 REMOVED ENDWALL 7C

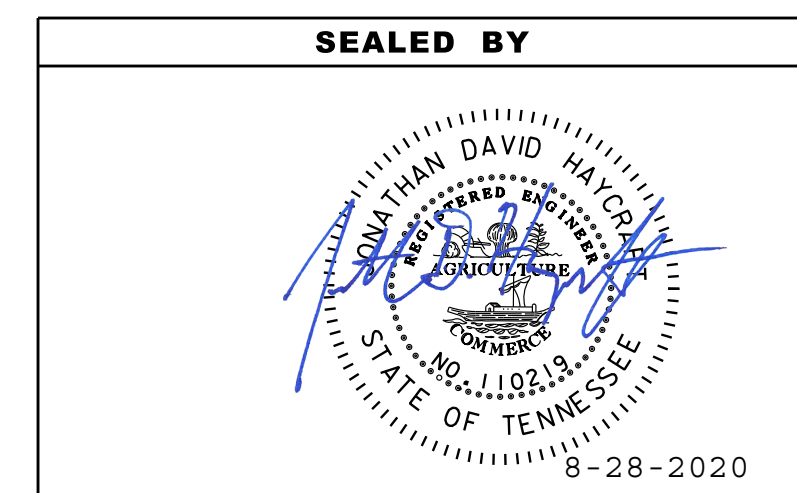
REV. 01-31-2020  
 ADDED ENDWALLS 113 & 113A

REV. 04-13-2020  
 REVISED ENDWALL 104, 104A, & 105A OFFSETS

REV. 08-28-2020  
 REMOVED ENDWALL 1C

PIPE ENDWALLS														
SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	STRUCTURE TYPE	STANDARD DRAWING	CLASS A CONC. 611-07.01 (C.Y.)	REINF. STEEL 611-07.02 (LB.)	ENDWALLS					
									18 IN. 4:1 611-07.55 (EACH)	18 IN. 6:1 611-07.56 (EACH)	24" IN. 3:1 611-07.57 (EACH)	24" IN. 4:1 611-07.58 (EACH)	36" IN. 4:1 611-07.64 (EACH)	
6A	75	328+19.36	92.29	16E	6:1 "U"	D-PE-18A				1				
6A	RAMP D	2311+04.84	36.60	41C	STRAIGHT	D-PE-4	1.5	70						
6A	RAMP F	2957+00.00	-45.96	110	STRAIGHT	D-PE-4	1.5	70						
6A	RAMP F	2957+78.47	-45.42	111	STRAIGHT	D-PE-4	2	93						
7A	RAMP F	2957+00.00	30.04	110A	STRAIGHT	D-PE-4	1.5	70						
7A	RAMP F	2957+78.47	30.65	111A	STRAIGHT	D-PE-4	2	93						
7A	RAMP F	2959+31.58	-42.93	112	STRAIGHT	D-PE-4	1.5	70						
7A	RAMP F	2959+31.58	29.07	112A	STRAIGHT	D-PE-4	1.5	70						
7A	RAMP G	2601+30.35	54.42	14D	STRAIGHT	D-PE-4	1.5	70						
7A	RAMP D	2318+50.38	35.06	39D	STRAIGHT	D-PE-4	1.5	70						
7A	RAMP G	2602+13.00	-44.50	113	STRAIGHT	D-PE-4	1.5	70						
7A	RAMP G	2603+01.73	-52.92	113A	STRAIGHT	D-PE-4	1.5	70						
8A	75	355+49.01	-132.00	10C	STRAIGHT	D-PE-4	1.5	70						
8A	RAMP D	2339+17.00	35.39	90C	STRAIGHT	D-PE-4	1.5	70						
9A	75	640+50.00	33.35	47A	STRAIGHT	D-PE-4	1	45						
9A	RAMP D	2349+38.47	-16.16	37A	STRAIGHT	D-PE-4	1	45						
10A	75	377+10.15	103.14	7A	4:1 "U"	D-PE-24A						1		
10A	75S - 24W	816+09.21	76.88	108	"A"	D-PE-1	7.26	105						
10A	24E - 75N	923+81.75	-176.49	107A	3:1 "U"	D-PE-24A				1				
10A	24E - 75N	921+71.57	113.47	107	STRAIGHT	D-PE-4	1.5	70						
10A	RAMP D	2357+07.54	-55.28	109	4:1 "U"	D-PE-36A							1	
10A	RAMP D	2357+07.54	31.82	109A	"A"	D-PE-1	3.89	73						
11A	RAMP D	2370+62.88	21.75	48A	6:1 "U"	D-PE-18A				1				
11A	RAMP D	2364+76.12	49.94	19A	"A"	D-PE-1	7.26	105						
14A	75	432+46.17	-109.90	60A	STRAIGHT	D-PE-4	1	45						
15A	75	440+48.02	-139.72	46A	STRAIGHT	D-PE-4	1	45						
16A	75 NB - 24 WB	242+55.13	82.26	102	STRAIGHT	D-PE-4	1.5	70						
16A	75 NB - 24 WB	244+63.47	82.15	69B	"A"	D-PE-1	4.00	73						
16A	SPRING CREEK	31+34.19	54.50	50A	STRAIGHT	D-PE-4	1	45						
16A	SPRING CREEK	31+73.54	-54.50	51A	STRAIGHT	D-PE-4	1	45						
16A	SPRING CREEK	39+05.62	-54.00	52A	STRAIGHT	D-PE-4	1	45						
16A	SPRING CREEK	39+25.00	54.63	53A	STRAIGHT	D-PE-4	1	45						
16A	SPRING CREEK	34+60.00	-54.00	95A	STRAIGHT	D-PE-4	1	45						
16A	SPRING CREEK	34+58.00	54.00	96A	STRAIGHT	D-PE-4	1	45						
16A	24E - 75N	902+32.20	-84.55	103	STRAIGHT	D-PE-1	1	45						
16A	24E-75N	902+65.49	81.46	103A	STRAIGHT	D-PE-1	1	45						
17A	75N - 24W	227+07.01	66.02	106A	STRAIGHT	D-PE-4	1	45						
17A	75N - 24W	227+83.46	-90.72	106	STRAIGHT	D-PE-4	1	45						
17A	75N - 24W	230+29.91	-75.65	105A	STRAIGHT	D-PE-4	1	45						
17A	75N - 24W	231+37.61	34.63	105	STRAIGHT	D-PE-4	1	45						
17A	24E - 75N	909+00.00	-92.01	104A	STRAIGHT	D-PE-4	1	45						
17A	24E - 75N	909+00.00	53.99	104	STRAIGHT	D-PE-4	1	45						
18A	24E - 75S	629+94.51	51.37	101	STRAIGHT	D-PE-4	2	93						
10A	RAMP D	2353+57.82	25.07	34C	STRAIGHT	D-PE-4	1	45						
9A	75	369+98.99	82.58	9A	4:1 "U"	D-PE-18A	1.1			1				
9A	75	363+53.73	84.72	12A	STRAIGHT	D-PE-4	1	45						
<b>TOTALS</b>							<b>69.01</b>	<b>2445</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

RIP RAP OUTLET PROTECTION						GEOTEXTILE		
LOCATION	STATION	LENGTH (FT.)	WIDTH (FT.)	CLASS	TOTAL (TONS)	LENGTH (FT.)	WIDTH (FT.)	AREA (SQ. YD.)
75	328+45	10	6	B	9.72	10	6	6.67
RAMP D	2318+50	4	4.5	B	2.92	4	4.5	2.00
75	355+49	13	6	B	12.64	13	6	8.67
RAMP D	2339+17	8	6	A-1	4.67	8	6	5.33
RAMP D	2343+52	8	4	A-1	3.11	8	4	3.56
RAMP D	2353+58	7	5	A-1	3.40	7	5	3.89
RAMP D	2357+08	20	10	C	45.37	20	10	22.22
75	377+10	10	6	B	9.72	10	6	6.67
24E-75N	923+82	10	8	B	12.96	10	8	8.89
RAMP D	2364+78	20	10	B	32.41	20	10	22.22
RAMP D	2371+12	14	6	A-1	8.17	14	6	9.33
75	413+50	24	6	A-1	14.00	24	6	16.00
75	417+48	33	6	A-1	19.25	33	6	22.00
75	432+48	10	6	B	9.72	10	6	6.67
75	440+48	10	6	B	9.72	10	6	6.67
SPRING CR.	31+34	63	6	A-1	36.75	63	6	42.00
SPRING CR.	31+74	56	6	A-1	32.67	56	6	37.33
SPRING CR.	31+58	63	6	A-1	36.75	63	6	42.00
SPRING CR.	34+60	50	6	A-1	29.17	50	6	33.33
24E-75S	613+48	20	12	C	54.44	20	12	26.67
75N-24W	242+53	12	6	B	11.67	12	6	8.00
75N-24W	244+52	18	9	B	26.25	8	9	8.00
24E-75N	909+00	6	6	B	5.83	6	6	4.00
75N-24W	227+38	8	6	B	7.78	8	6	5.33
75N-24W	230+30	10	6	B	9.72	10	6	6.67
24E-75S	629+92	10	8	B	12.96	10	8	8.89
<b>A-1 TOTAL</b>					<b>188</b>	<b>TOTALS</b>		<b>373</b>
<b>B TOTAL</b>					<b>174</b>			
<b>C TOTAL</b>					<b>100</b>			



STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

TABULATED  
 QUANTITIES

8/27/2020 F:\36\36908\3690800104\_CAD\TRNS\CONST\002E TabQuantities.sht

PROPOSED GUARDRAIL											
SHEET NO.	LOCATION	SIDE		STATION		GUARDRAIL		TERMINAL ANCHORS			REMARKS
		LT	RT	FROM	TO	BRIDGE ENDS	SINGLE	TYPE 13 705-06.10 (EACH)	TYPE 21 705-06.30 (EACH)	TYPE 38 705-06.20 (EACH)	
						705-01.01 (L.F.)	705-06.01 (L.F.)				
4A	75		X	306+62.87	308+04.78		96		1		
5A	75		X	317+65.05	318+38.80	26.9	0			1	
5A	75	X		320+56.59	321+30.36	26.9	0			1	
6A/7A	RAMP D		X	2305+88.24	2319+65.08		1325		1		
6A	RAMP D	X		2305+90.78	2309+00.00	26.9	237.5			1	
6A/7A	RAMP E/75		X	2407+75.09	336+52.86		850		1		
6A/7A	RAMP F	X		2952+34.20	2960+62.32		800		1	1	
7A	RAMP F/RAMP D		X	2952+34.20	2328+04.41	26.9	1343.2			1	LONG POST - STA. 2325+75.00 to 2327+75.00
7A	RAMP D	X		2318+23.00	2327+84.60	53.8	369				LONG POST - STA. 2322+25.00 to 2327+78.76
7A	75/RAMP G		X	339+35.62	2602+56.41		775		1		
7A/8A	RAMP D	X		2330+29.60	2337+74.07	26.9	25				LONG POST - STA. 2330+34.38 to 2337+50.00
7A/8A	RAMP D		X	2330+44.75	2333+95.16	53.8	300.00				
8A/9A	75	X		348+49.85	364+07.21	26.9	1139.75		1		LONG POST - STA. 360+09.41 to 364+07.21
8A	75		X	349+73.69	350+20.00	26.9	19.5			1	
9A	75N-24W	X		210+06.54	212+58.32	26.9	187.5			1	
9A/10A	75N-24W	X		214+22.46	219+48.32	53.8	475				
9A/10A	75N-24W		X	217+28.37	220+41.62	53.8	262.5				
9A	75N		X	995+77.77	998+43.12	26.9	200			1	
9A	75N		X	1003+42.02	1104+24.30	26.9	5			1	
9A	75	X		367+16.94	367+90.71	26.9	0			1	
9A	24E-75S	X		633+79.27	634+53.04	26.9	0			1	
9A/18A/16A	24E-75S		X	610+38.72	630+24.90	53.8	1937.5				
10A/11A	RAMP D		X	2357+45.00	2368+07.54	26.9	1037.5		1		
10A	75	X		376+16.83	376+76.25	26.9	0			1	
10A	75NB	X		1014+14.37	1014+88.12	26.9	0			1	
10A/11A	75	X		381+53.12	385+93.71	26.9	375			1	
10A/11A	24E-75N	X		927+38.34	933+17.61	26.9	562.5		1		
10A/11A	75S-24W	X		812+48.87	816+75.00		387.5		1	1	
10A/11A	75S-24W		X	812+49.05	817+25.00		437.5		1	1	
10A/17A	75N-24W	X		222+16.13	230+55.00	53.8	893.0				
10A/17A	75N-24W		X	222+72.94	228+49.51	53.8	525				
10A/17A	24E-75N	X		914+98.96	923+32.62	53.8	795				
10A/17A	24E-75N		X	915+94.45	923+19.45	53.8	668.3				
11A	75S-24W		X	802+46.57	804+81.01		187		1	1	
12A	75		X	404+63.88	407+62.47	26.9	225			1	
12A	75	X		403+87.42	407+62.47	26.9	348.1		1		
13A/14A/15A	75	X		410+43.18	443+55.00	26.9	3312		1		
15A	75	X		443+40.00	443+40.00				1		INSTALL AT END OF EXIST. GUARDRAIL
13A/14A/15A	75		X	420+25.00	443+84.93	26.9	1037.5				LONG POST - STA. 420+25.00 to 433+25.00
16A	24E-75S	X		607+75.45	608+60.43	26.9	12.5			1	
16A	24E-75S		X	607+76.44	608+73.54	26.9	15			1	
16A/17A	24E-75N	X		901+36.87	904+24.37		287.5		1	1	
16A	SPRINGCREEK		X	30+77.02	33+17.72	26.9	213.8				
16A	SPRINGCREEK	X		31+48.38	33+22.15	26.9	125			1	
16A	SPRINGCREEK		X	34+40.89	35+09.36	53.8	25				
16A	SPRINGCREEK	X		34+45.35	34+95.84	50.5	0				
16A	SPRINGCREEK	X		36+33.87	39+38.59	26.9	262.5			1	
16A	SPRINGCREEK		X	36+47.38	39+39.77	26.9	250			1	
16A/17A	75N-24W	X		240+35.00	245+82.47	53.8	550				
17A	24E-75N		X	911+30.85	914+45.25	26.9	287.5			1	
17A	24E-75N	X		910+32.11	913+46.51	26.9	287.5			1	
17A	75N-24W		X	230+98.19	232+11.41	26.9	100		1		
17A	75S-24W		X	830+01.23	830+62.97	26.9	0			1	
17A/18A	24E-75S	X		618+77.60	626+50.00		737.5		1	1	
<b>TOTALS</b>						<b>1476.2</b>	<b>24291.9</b>	<b>17</b>	<b>5</b>	<b>27</b>	

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	2E8

REV. 04-13-2020  
REVISED GUARDRAIL ALONG 24E-75N AND 75N-24W ON SHEETS 16A AND 17A

REV. 08-28-2020  
REVISED GUARDRAIL ALONG I-75 ON SHEET NO. 12

**SEALED BY**

**STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION**

**TABULATED  
QUANTITIES**

CONTROL POINTS						
POINT	NORTH	EAST	ELEV.	STATION	CENTERLINE	OFFSET
CP-S29	246146.5596	2206196.8982	677.61	401+76.96	75	125.92' (LT)

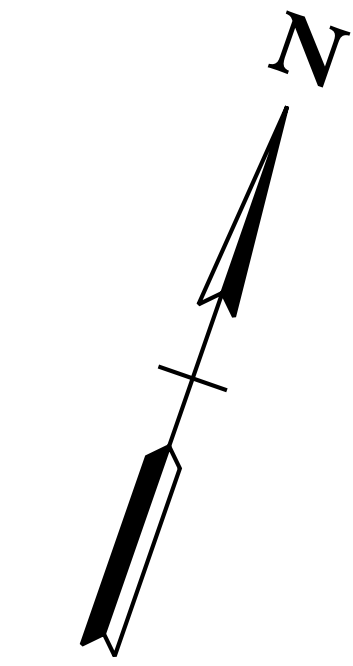
TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2019	IM/NH-75-1(131)	12
CONST.	2019	IM/NH-75-1(131)	12

REV. 08-28-2020:  
EXISTING OUTFALL UNDERNEATH EXISTING  
BRIDGE NO. 4 ADDED

BRIGHT PAR 3 ASSOCIATES, L.P.

CITY OF CHATTANOOGA

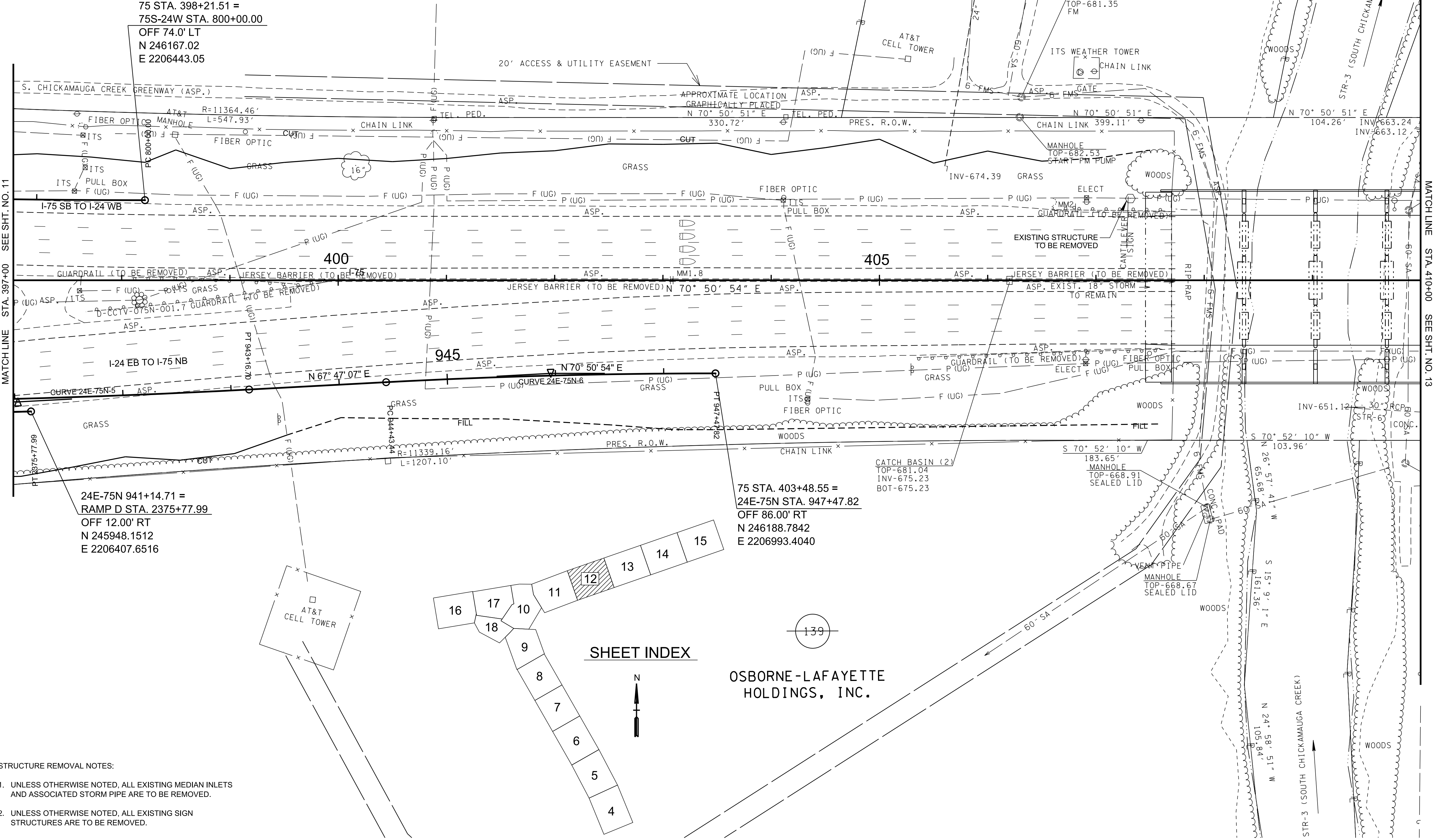
OSBORNE-LAFAYETTE HOLDINGS, INC.



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163

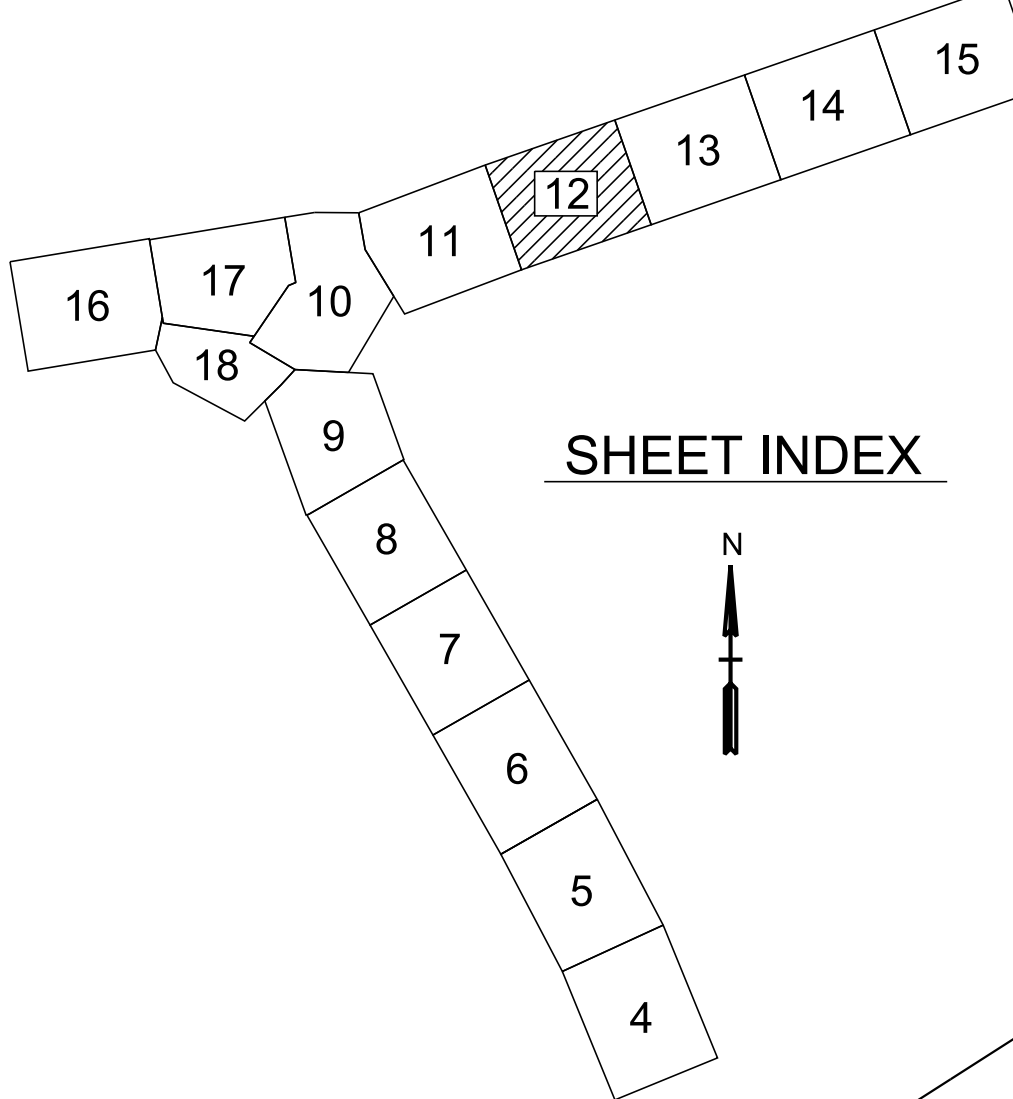
139



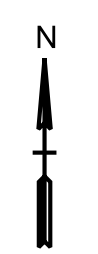
75 STA. 398+21.51 =  
75S-24W STA. 800+00.00  
OFF 74.0' LT  
N 246167.02  
E 2206443.05

24E-75N 941+14.71 =  
RAMP D STA. 2375+77.99  
OFF 12.00' RT  
N 245948.1512  
E 2206407.6516

75 STA. 403+48.55 =  
24E-75N STA. 947+47.82  
OFF 86.00' RT  
N 246188.7842  
E 2206993.4040



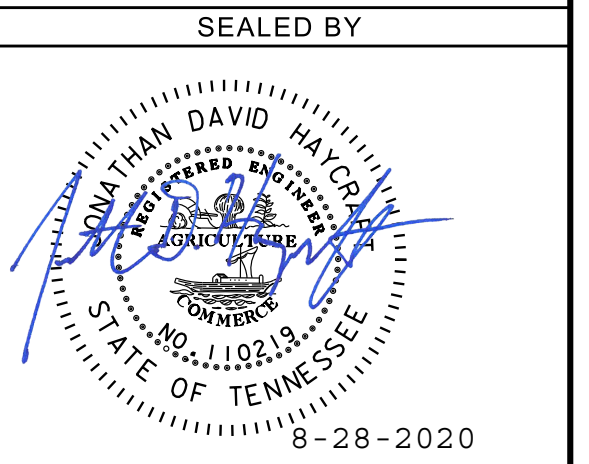
SHEET INDEX



MATCH LINE STA. 397+00 SEE SHT. NO. 11

MATCH LINE STA. 410+00 SEE SHT. NO. 13

- STRUCTURE REMOVAL NOTES:
- UNLESS OTHERWISE NOTED, ALL EXISTING MEDIAN INLETS AND ASSOCIATED STORM PIPE ARE TO BE REMOVED.
  - UNLESS OTHERWISE NOTED, ALL EXISTING SIGN STRUCTURES ARE TO BE REMOVED.



COORDINATES ARE NAD/83(1995),  
ARE DATUM ADJUSTED BY THE  
FACTOR OF 0.99998 AND TIED TO  
THE TGRN. ALL ELEVATIONS ARE  
REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE  
DEPARTMENT OF  
TRANSPORTATION

PRESENT  
LAYOUT

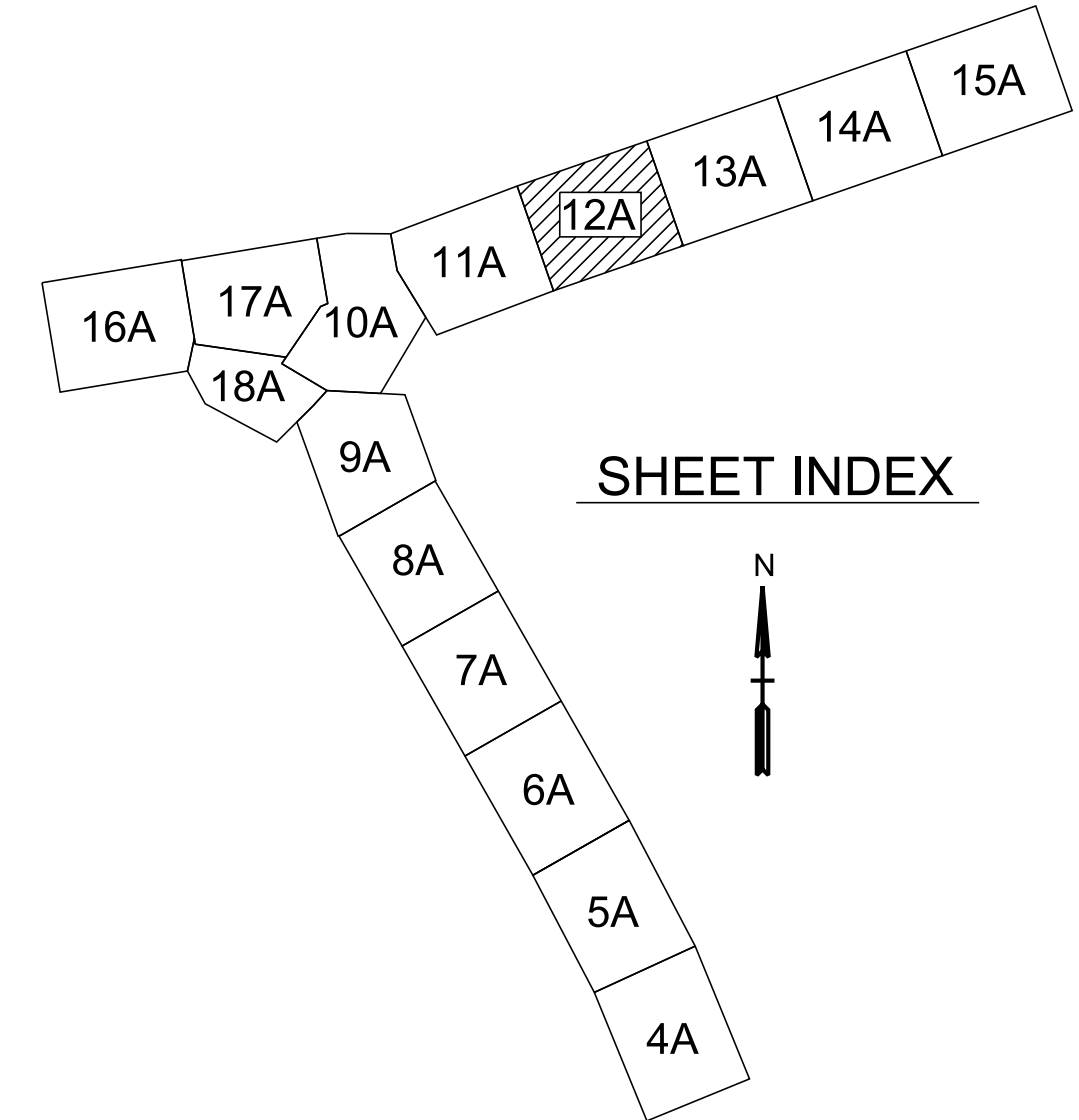
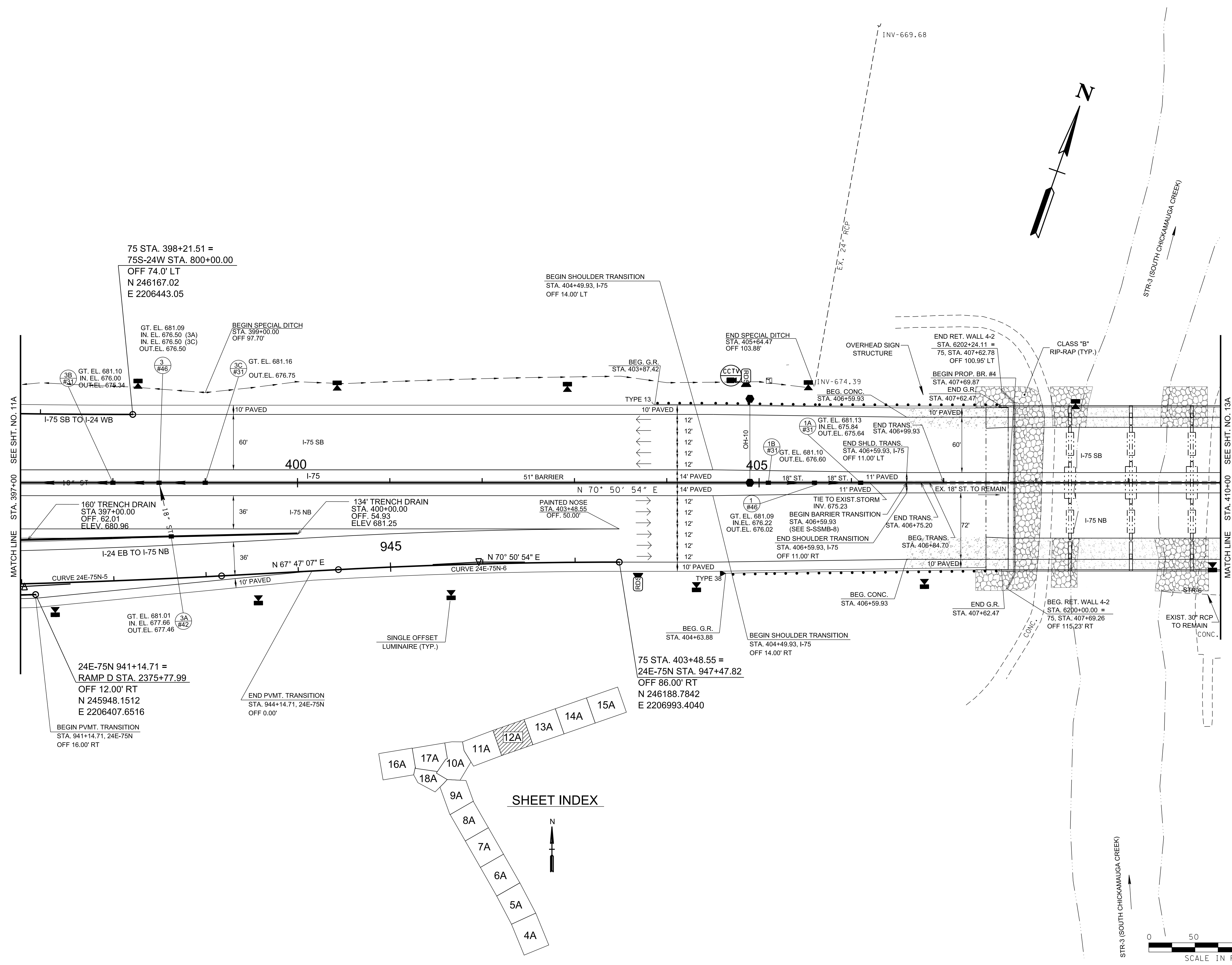
STA. 397+00 TO STA. 410+00

SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2019	IM/NH-75-1(131)	12A
CONST.	2019	IM/NH-75-1(131)	12A

REV. 12-17-2019:  
 REVISED CB-3C, CB-3, CB-3A, CB-3B;  
 REMOVED CB-2 AND CULVERTS;  
 ADDED ENDWALL 1C,  
 A CULVERT FROM 1B TO 1C,  
 AND RIP-RAP FOR EW-1C.  
 REVISED CLASS "B" RIP-RAP  
 LIMITS AT BRIDGE NO. 4.

REV. 08-28-2020:  
 OVERHEAD SIGN NO. 10 RELOCATED.  
 ENDWALL 1C REMOVED. CROSS DRAIN FROM  
 STRUCTURE NO. 1B TO NO. 1C REMOVED.  
 CCTV/RDS-75S-001.9 RELOCATED.



SEALED BY

8-28-2020

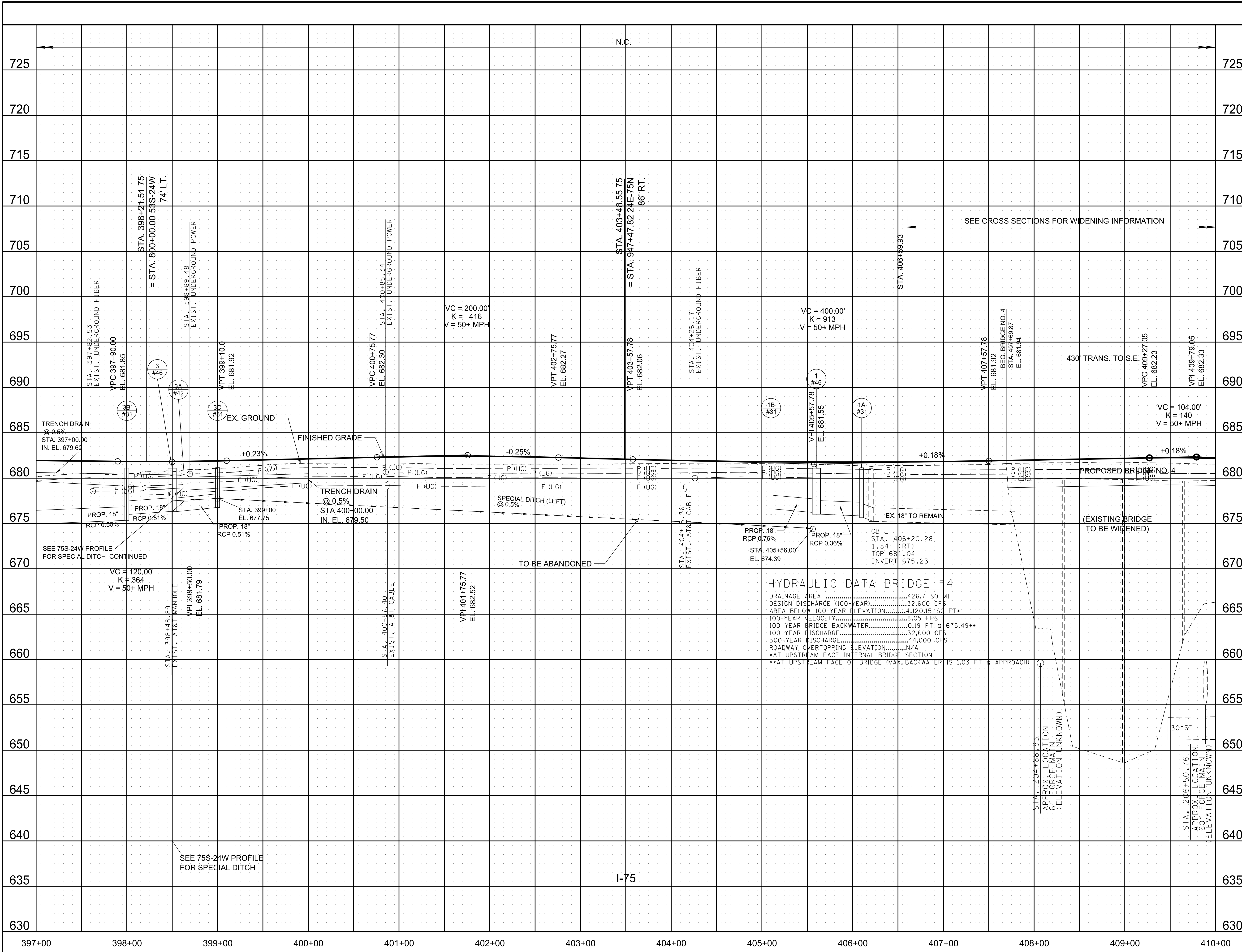
COORDINATES ARE NAD83(1995),  
 ARE DATUM ADJUSTED BY THE  
 FACTOR OF 0.99998 AND TIED TO  
 ALL ELEVATIONS ARE  
 REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE  
 DEPARTMENT OF  
 TRANSPORTATION

PROPOSED  
 LAYOUT  
 STA. 397+00 TO STA. 410+00  
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2019	IM/NH-75-1(131)	12B
CONST.	2019	IM/NH-75-1(131)	12B

REV. 12-17-2019: REVISED STORM DRAINAGE  
REV. 08-28-2020: REVISED 1 SERIES STORM DRAINAGE



SEE CROSS SECTIONS FOR WIDENING INFORMATION

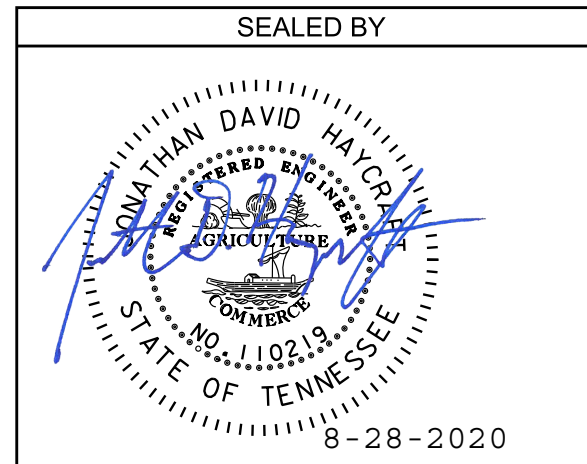
430' TRANS. TO S.E.

PROPOSED BRIDGE NO. 4

(EXISTING BRIDGE TO BE WIDENED)

**HYDRAULIC DATA BRIDGE #4**

DRAINAGE AREA	426.7 SQ MI
DESIGN DISCHARGE (100-YEAR)	32,600 CFS
AREA BELOW 100-YEAR ELEVATION	4,120.15 SQ FT
100-YEAR VELOCITY	8.05 FPS
100 YEAR BRIDGE BACKWATER	0.19 FT @ 675.49'
100 YEAR DISCHARGE	32,600 CFS
500-YEAR DISCHARGE	44,000 CFS
ROADWAY OVERTOPPING ELEVATION	N/A
*AT UPSTREAM FACE INTERNAL BRIDGE SECTION	
**AT UPSTREAM FACE OF BRIDGE (MAX. BACKWATER IS 1.03 FT @ APPROACH)	



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

**STATE OF TENNESSEE**  
**DEPARTMENT OF**  
**TRANSPORTATION**

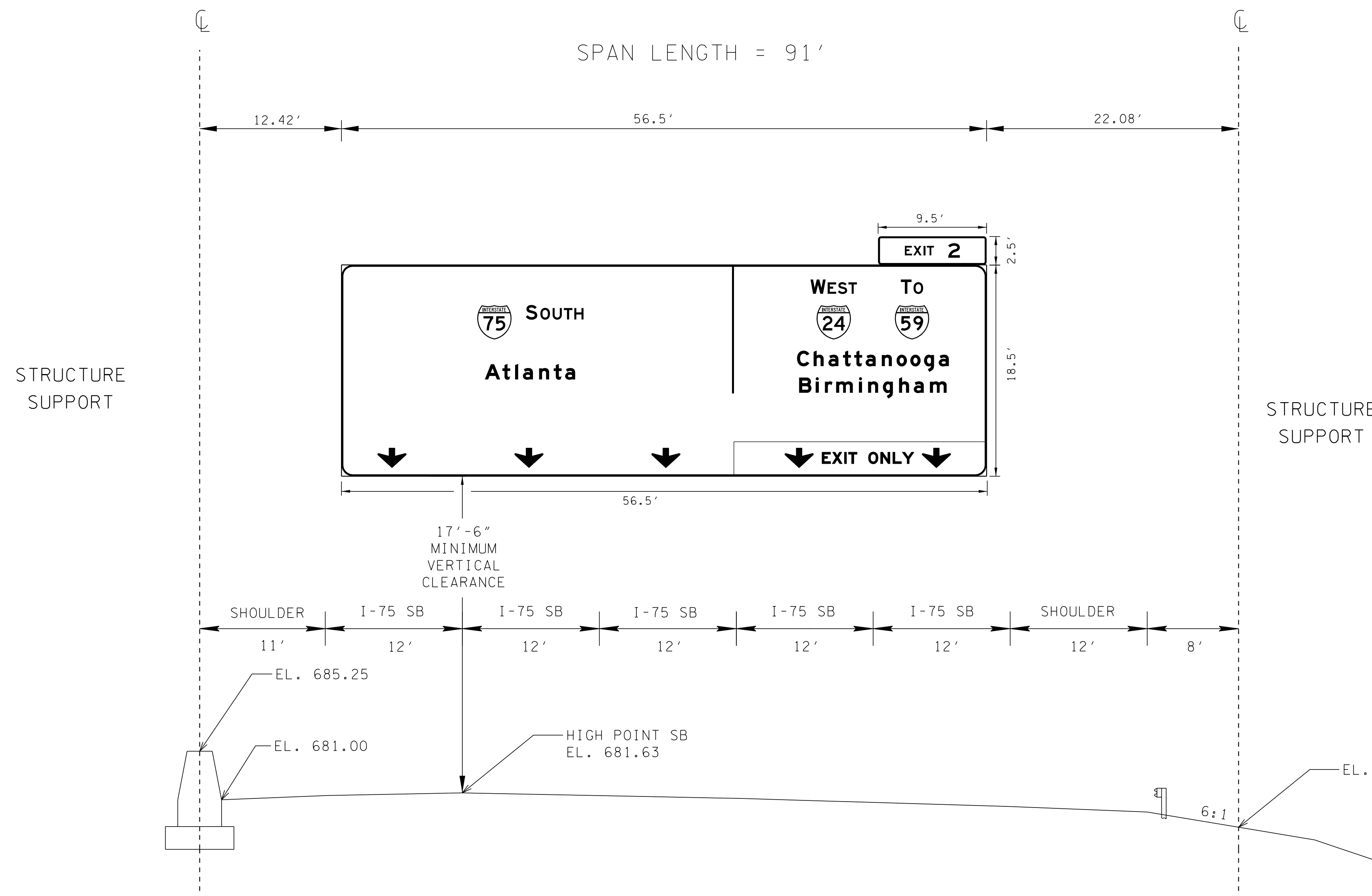
**PROFILE**

STA. 397+00 TO STA. 410+00  
SCALE: 1" = 50' HORIZ.  
1" = 5' VERT.

PROJECT NO.	YEAR	SHEET NO.
IM/NH-75-1(131)	2019	89

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	08-28-2020	JW	REVISED STATION



OVERHEAD STRUCTURE

SIGN NO. OH-10  
STA. 404+90.00

DESIGN DATA

SIGN DESIGN AREA = 1110 S.F.  
WIND VELOCITY = 90 MPH

NOTES:  
PRIOR TO ORDERING ANY MATERIAL, THE CONTRACTOR SHALL FIELD MEASURE THE SIGN STRUCTURE TO VERIFY THE SPAN LENGTH.

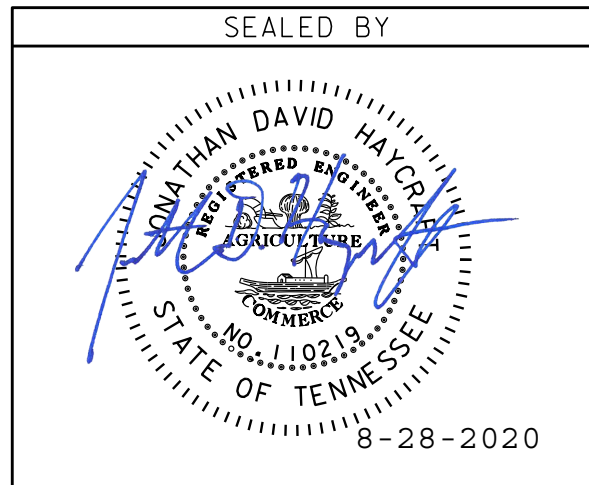
THE CONTRACTOR SHALL REFER TO "STANDARD STRUCTURE DRAWING" "STD-8-4". IF THIS DRAWING IS NOT IN THE PLANS THE CONTRACTOR CAN FIND THIS STANDARD DRAWING ON THE "T.D.O.T." WEBSITE.

THE COST OF THE FOOTINGS ARE TO BE INCLUDED IN THE BID ITEM FOR THIS SIGN STRUCTURE.

CENTER EACH PROPOSED SIGN OVER THE CENTER OF EACH APPROPRIATE LANE.

THE LENGTH OF THIS STRUCTURE MAY BE INCREASED OR DECREASED TO MISS UNDERGROUND UTILITIES AS DIRECTED BY THE ENGINEERS.

SIGN STRUCTURE I.D. NO.  
33SNU0752463



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
HAMILTON COUNTY  
I-75 SOUTHBOUND  
SIGN NO. OH-10

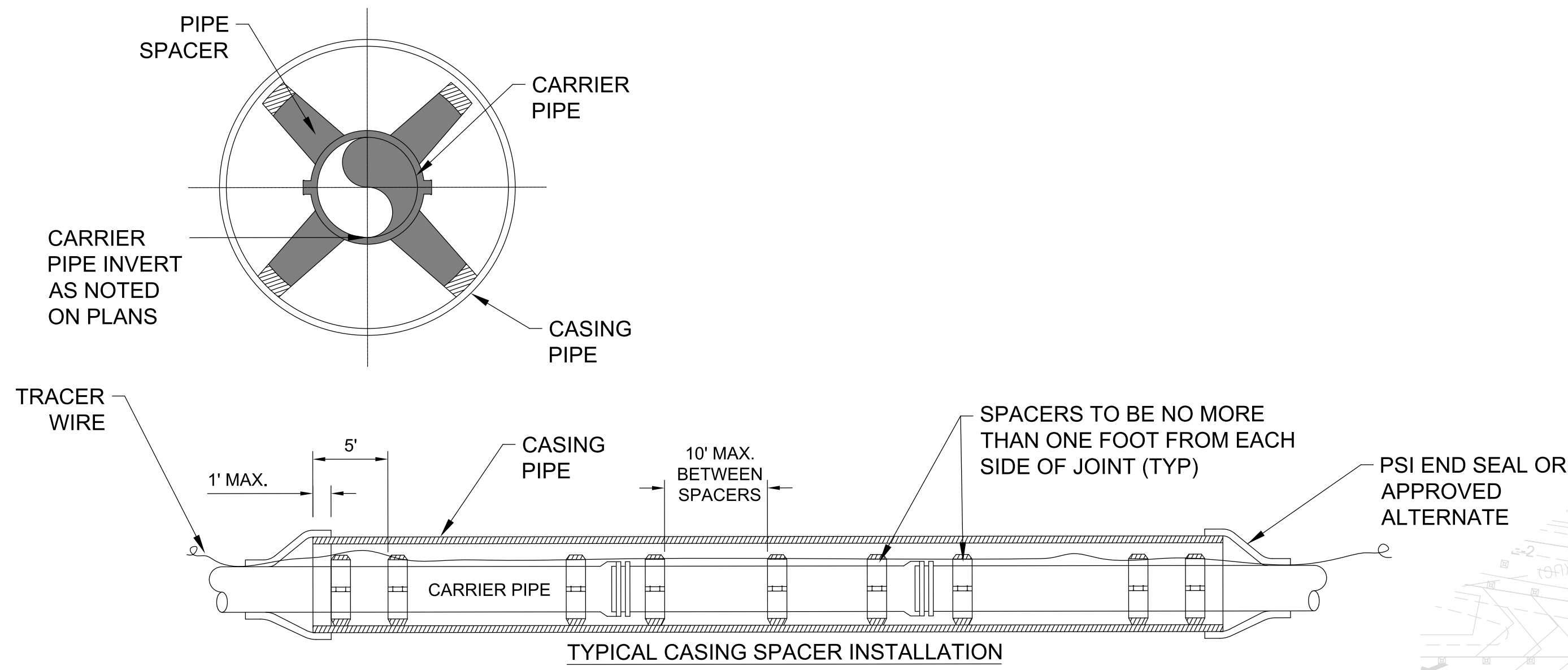
CORRECT \_\_\_\_\_  
ENGINEER OF STRUCTURES

APPROVED \_\_\_\_\_  
DIRECTOR OF HIGHWAYS

8/27/2020 F:\36136908\3690800104\_CAD\TRNS\CONSTR\HT075\_OverheadSign\Sections.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	U-1

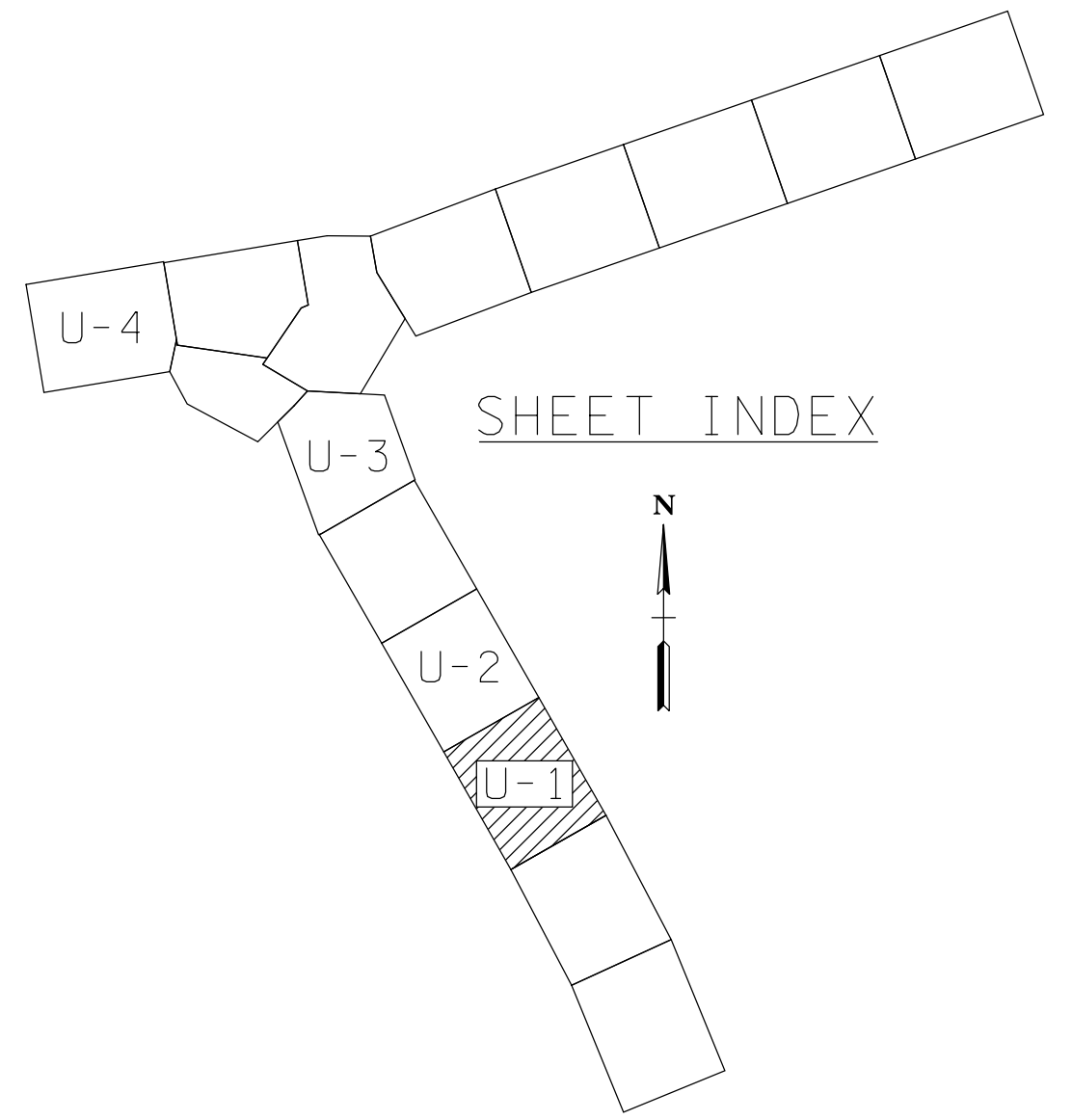
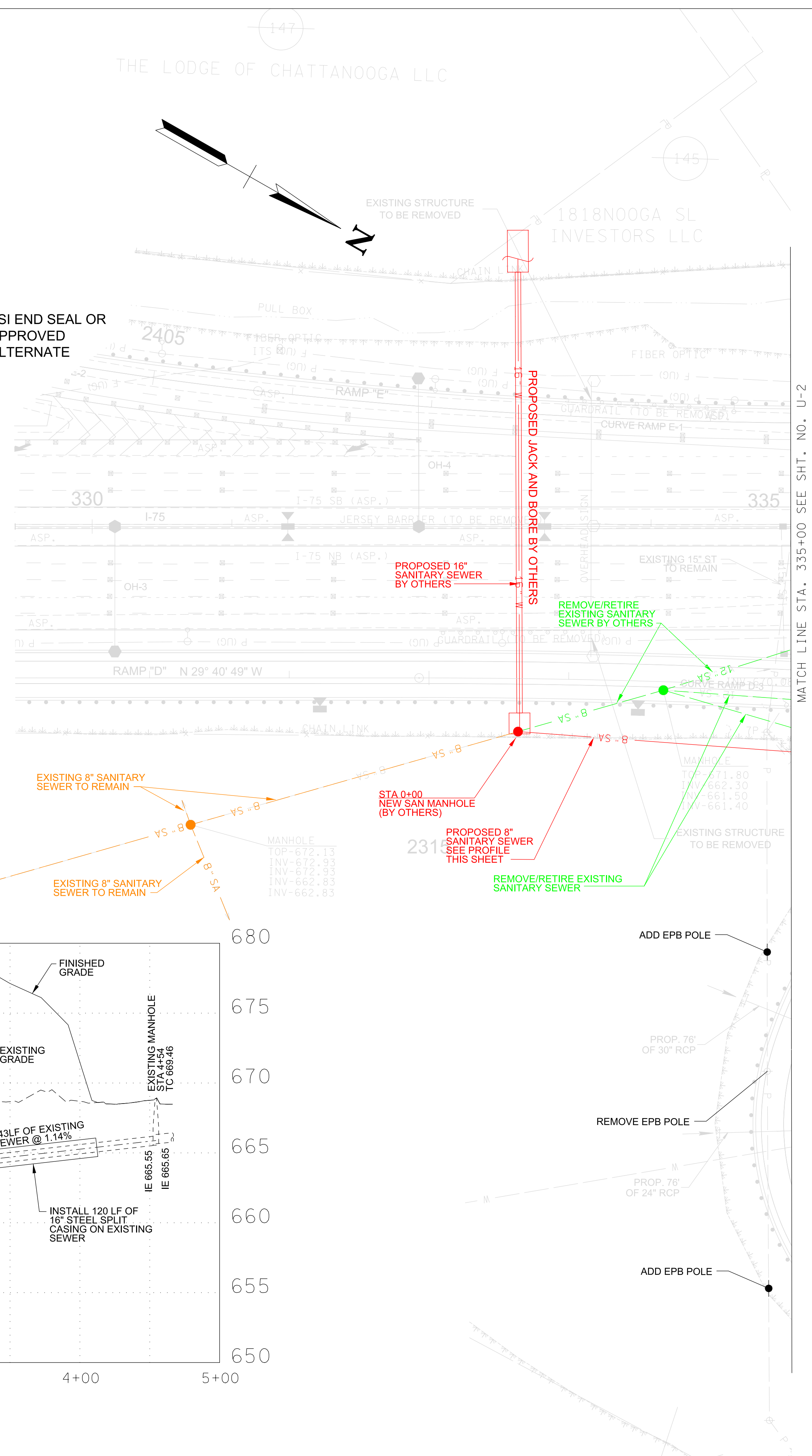
REV 07-28-2020: WELCOME CENTER SEWER ADDITION



NOTES:

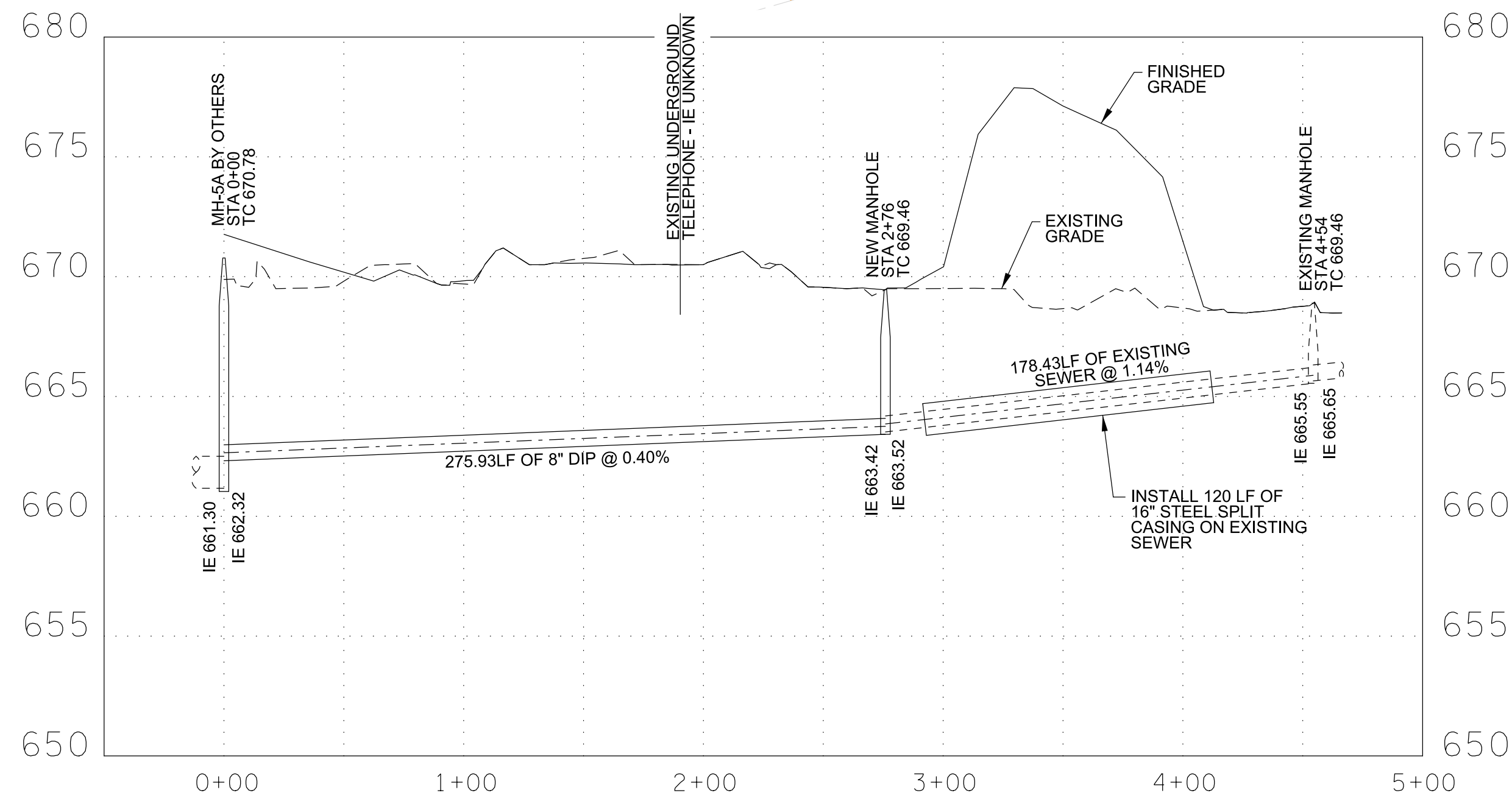
- CASING PIPE SHALL BE CARBON STEEL WITH A MINIMUM SPECIFIED YIELD STRENGTH OF 35,000 PSI.
- CASINGS ARE TO BE SIZED TO PROVIDE A MINIMUM OF 2" ANNULAR SPACE BETWEEN THE OUTSIDE OF THE CARRIER PIPE AND THE INTERIOR OF THE CASING PIPE.
- MINIMUM CASING SIZES DO NOT ACCOUNT FOR LONGITUDINAL SLOPE OF GRAVITY PIPES.
- CASING SPACERS SHALL BE BOLTED CIRCULAR STAINLESS STEEL BANDS AND MADE BY PIPELINE SEAL AND INSULATOR, INC.
- RUNNERS SHALL BE GLASS FILLED POLYMER WITH BEVELED ENDS.

1 UTILITY CASING DETAIL  
U-1 N.T.S.



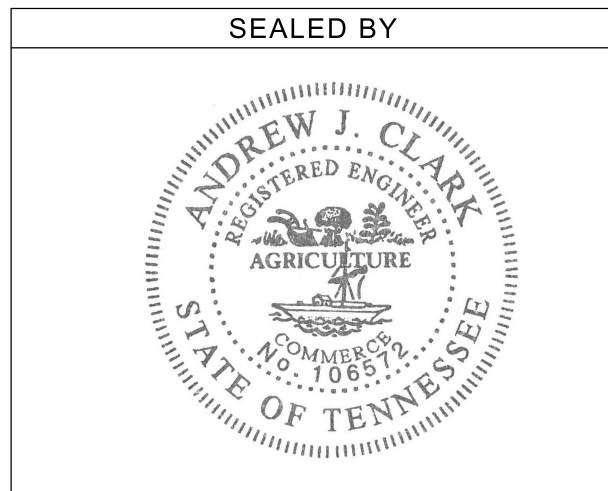
NOTES:

- PROPOSED 8" SANITARY SEWER SHALL BE DUCTILE IRON WITH PROTECTO 401 INTERIOR COATING.
- CONTRACTOR TO VERIFY EXISTING 8" AND 12" SANITARY SEWER IS NOT ACTIVE BEFORE RETIREMENT.
- THE 16" SANITARY SEWER LINE AND ITS UPSTREAM MANHOLE BY OTHERS THAT CROSSES THE INTERSTATE MUST BE OPERATIONAL BEFORE FINAL MANHOLE CONNECTIONS CAN BE MADE FOR THE WELCOME CENTER SANITARY SEWER AT STA 0+00 AND STA 2+76.
- AFTER THE PROPOSED SANITARY SEWER IS OPERATIONAL, THE SANITARY SEWER TO BE RETIRED IN PLACE SHALL BE PLUGGED AND FILLED WITH GROUT. PAYMENT SHALL BE MADE UNDER ITEM 797-11.31.



PROPOSED SANITARY SEWER PROFILE

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



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE  
DEPARTMENT OF  
TRANSPORTATION

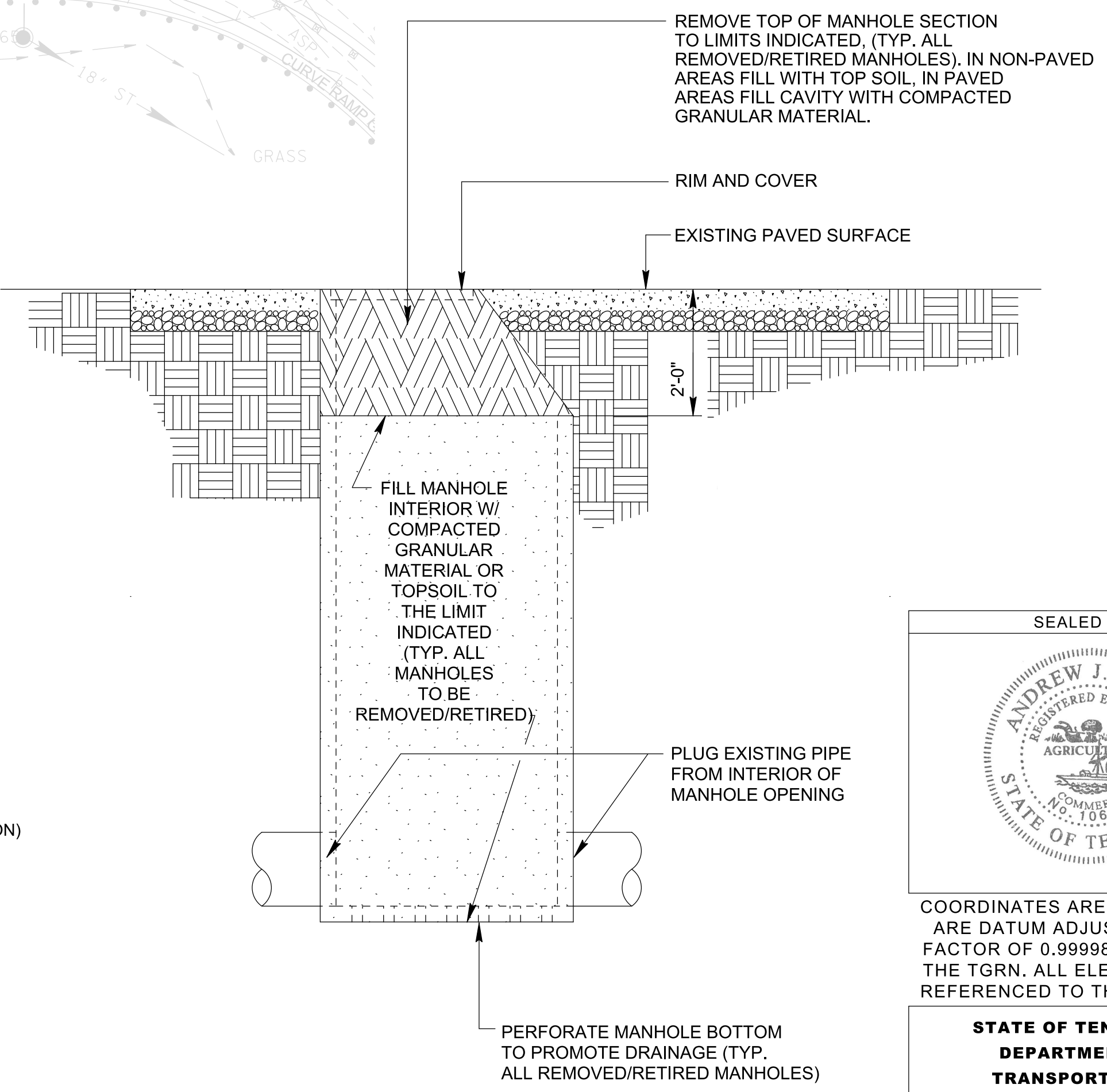
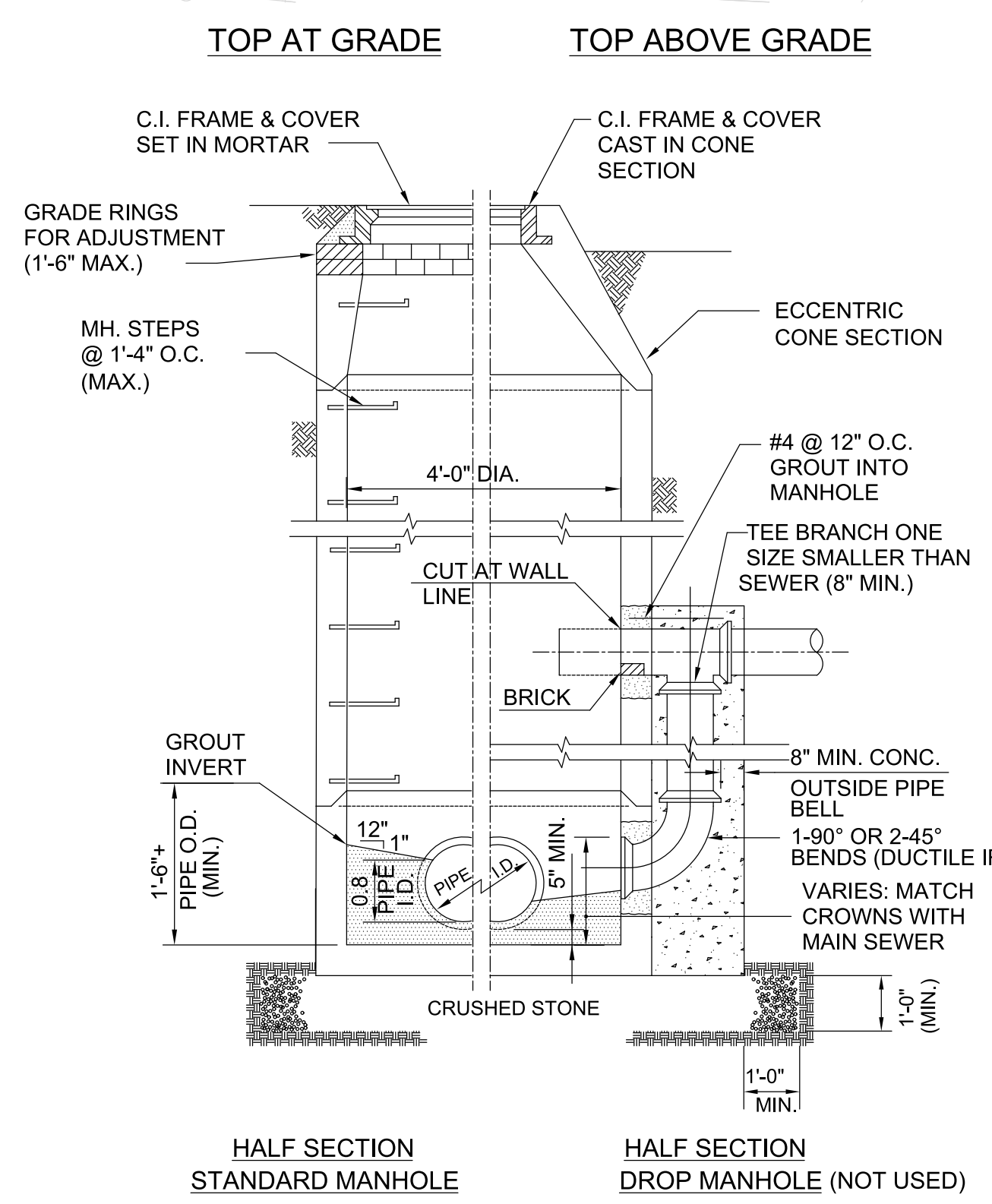
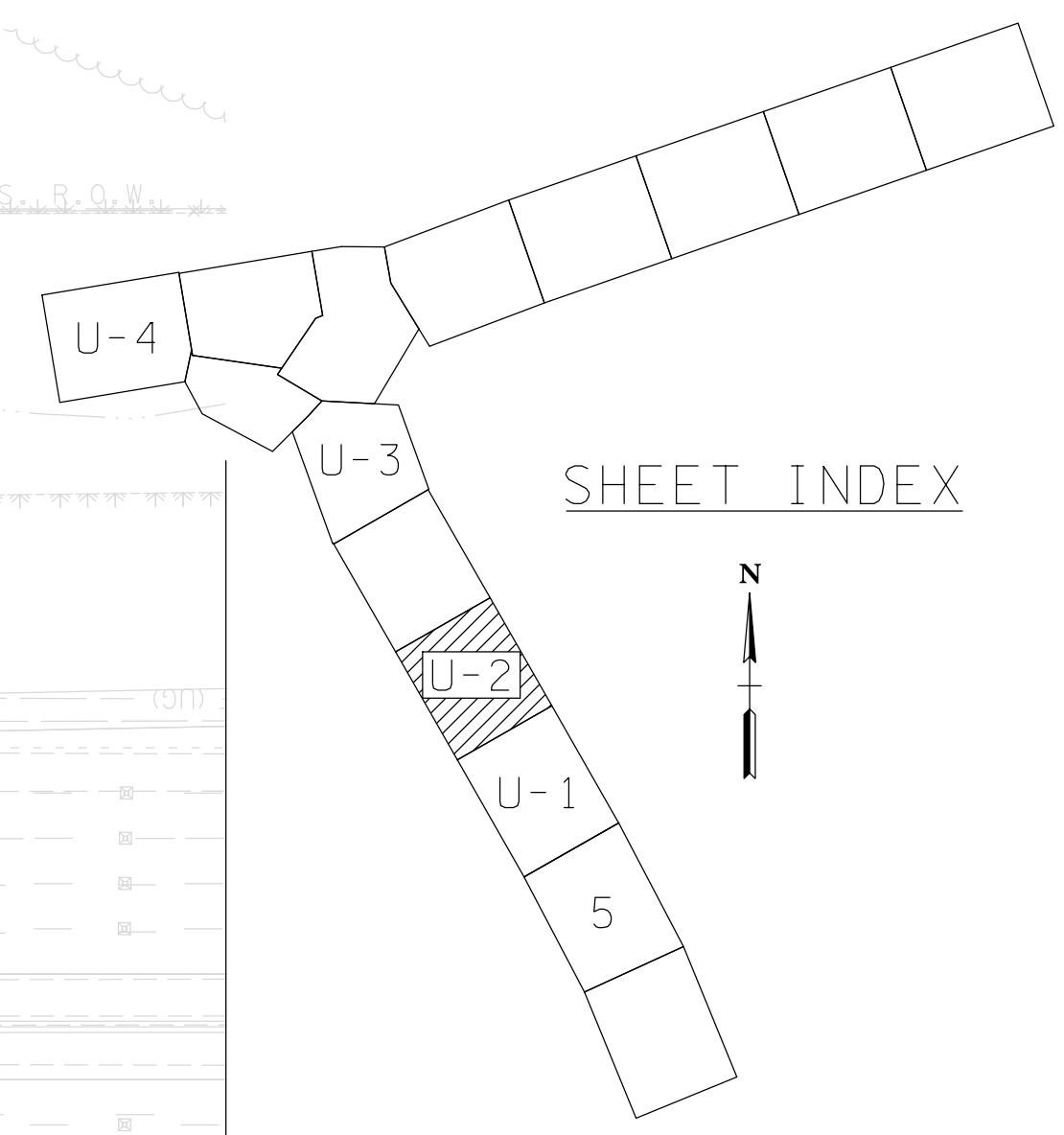
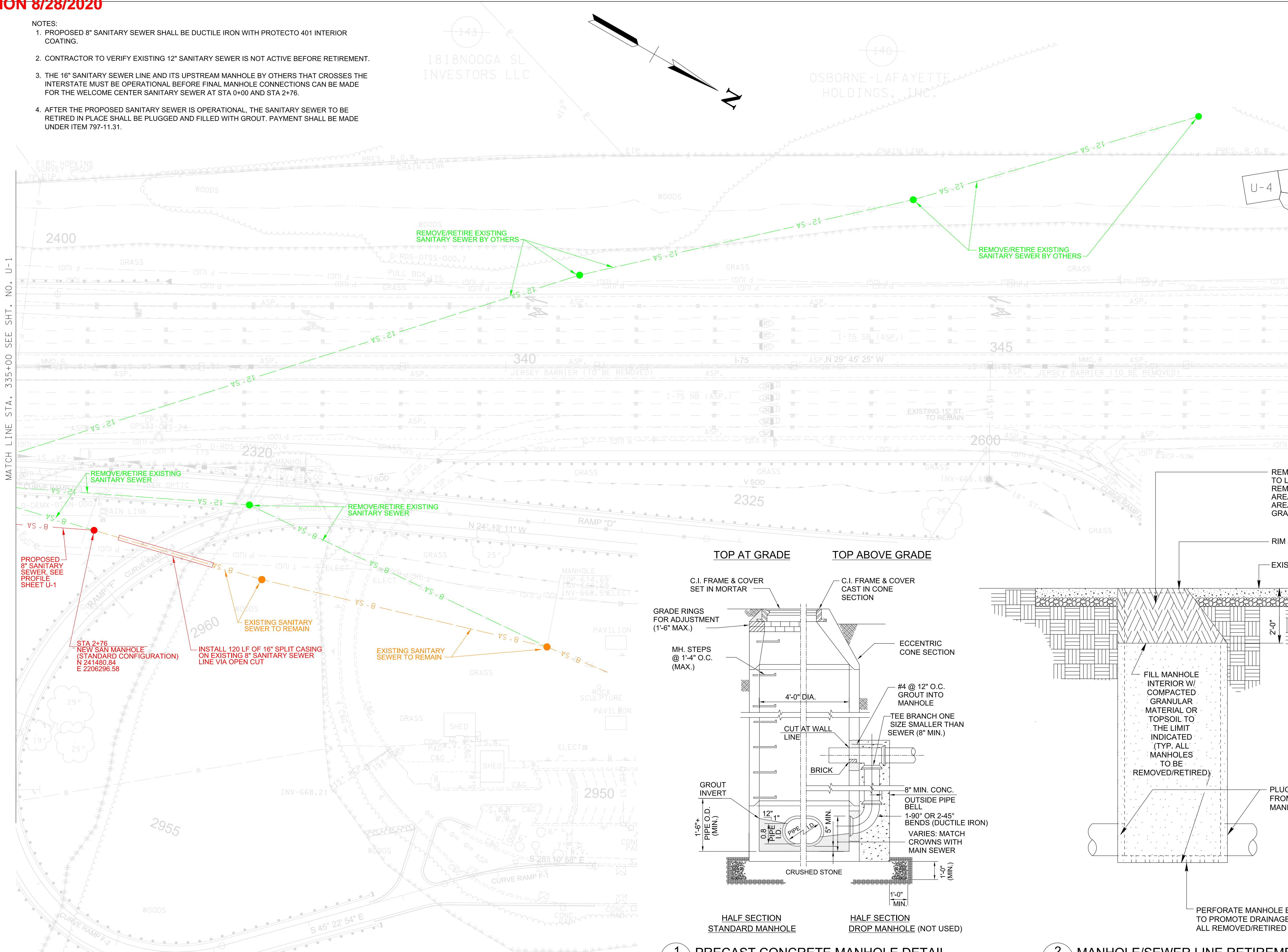
UTILITY  
RELOCATION

STA. 323+00 TO STA. 335+00

- NOTES:
1. PROPOSED 8" SANITARY SEWER SHALL BE DUCTILE IRON WITH PROTECTO 401 INTERIOR COATING.
  2. CONTRACTOR TO VERIFY EXISTING 12" SANITARY SEWER IS NOT ACTIVE BEFORE RETIREMENT.
  3. THE 16" SANITARY SEWER LINE AND ITS UPSTREAM MANHOLE BY OTHERS THAT CROSSES THE INTERSTATE MUST BE OPERATIONAL BEFORE FINAL MANHOLE CONNECTIONS CAN BE MADE FOR THE WELCOME CENTER SANITARY SEWER AT STA 0+00 AND STA 2+76.
  4. AFTER THE PROPOSED SANITARY SEWER IS OPERATIONAL, THE SANITARY SEWER TO BE RETIRED IN PLACE SHALL BE PLUGGED AND FILLED WITH GROUT. PAYMENT SHALL BE MADE UNDER ITEM 797-11.31.

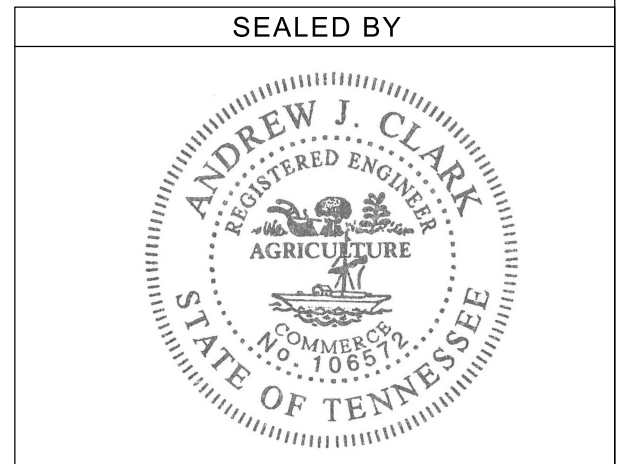
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	U-2

REV 07-28-2020: WELCOME CENTER SEWER ADDITION



1 PRECAST CONCRETE MANHOLE DETAIL  
U-2 N.T.S.

2 MANHOLE/SEWER LINE RETIREMENT DETAIL  
U-2 N.T.S.



COORDINATES ARE NAD83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE  
DEPARTMENT OF  
TRANSPORTATION

UTILITY  
RELOCATION

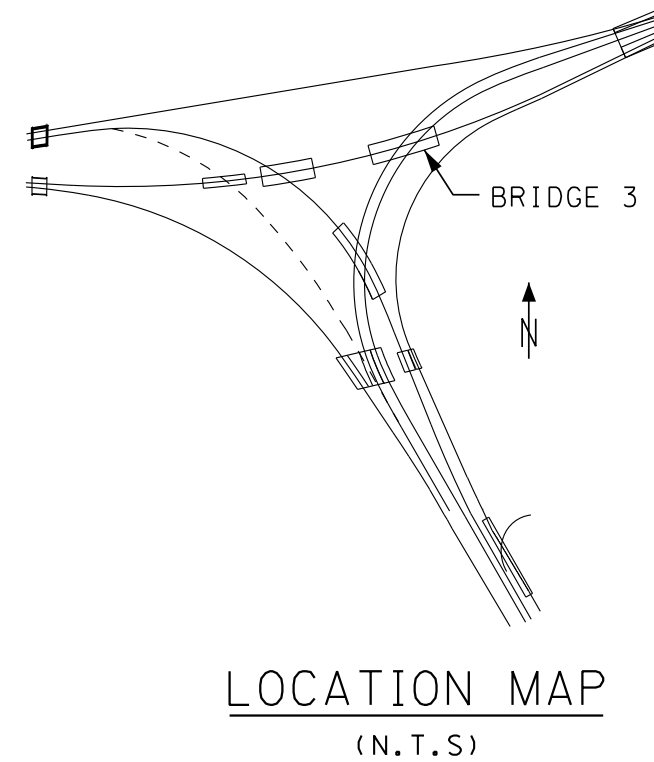
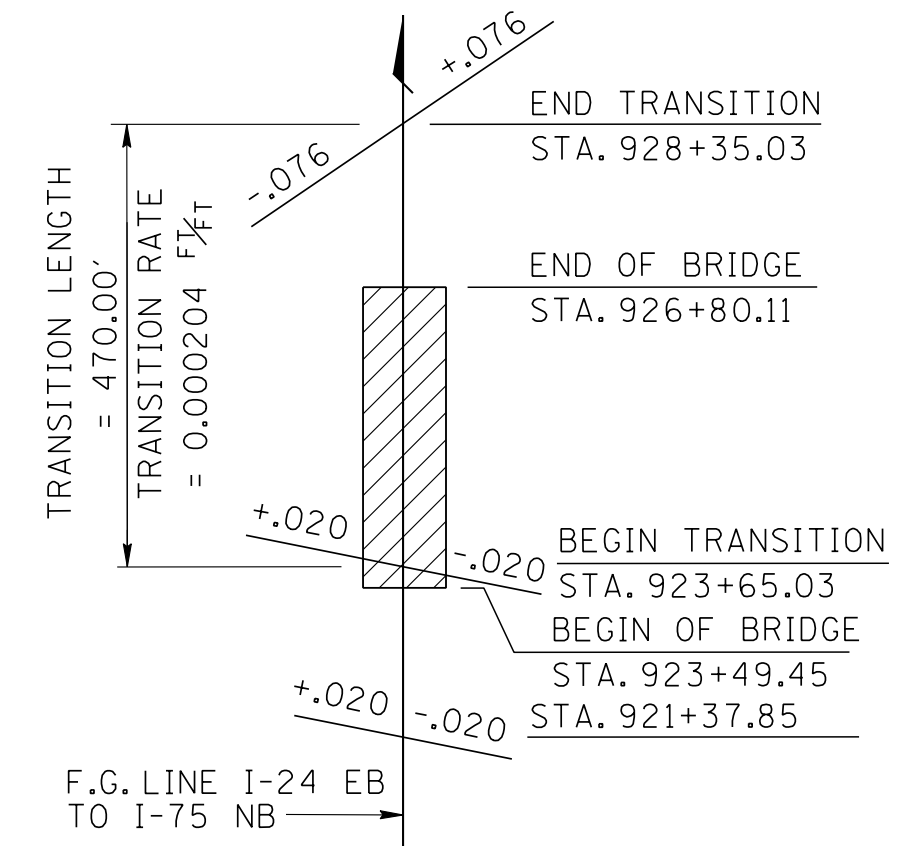
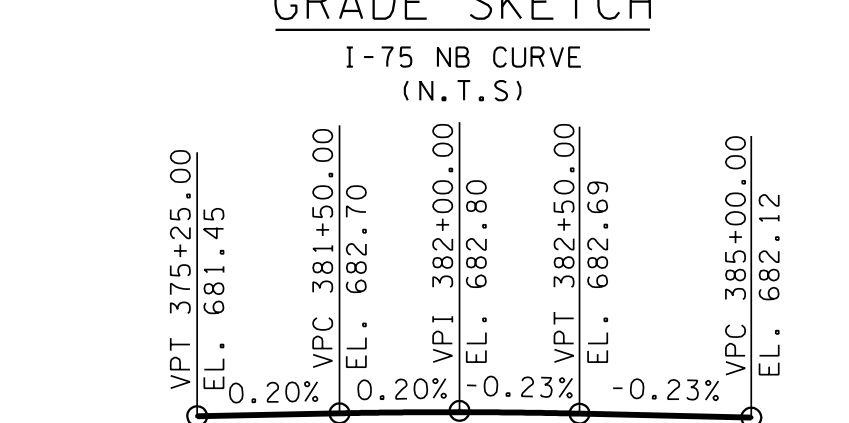
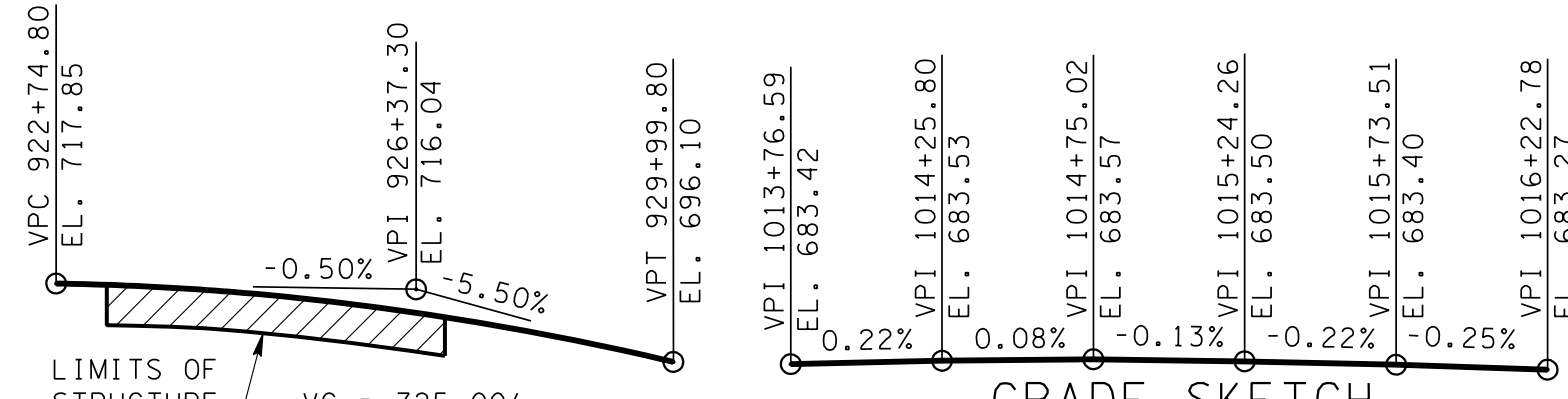
STA. 335+00 TO STA. 348+00

SCALE: 1"= 50'

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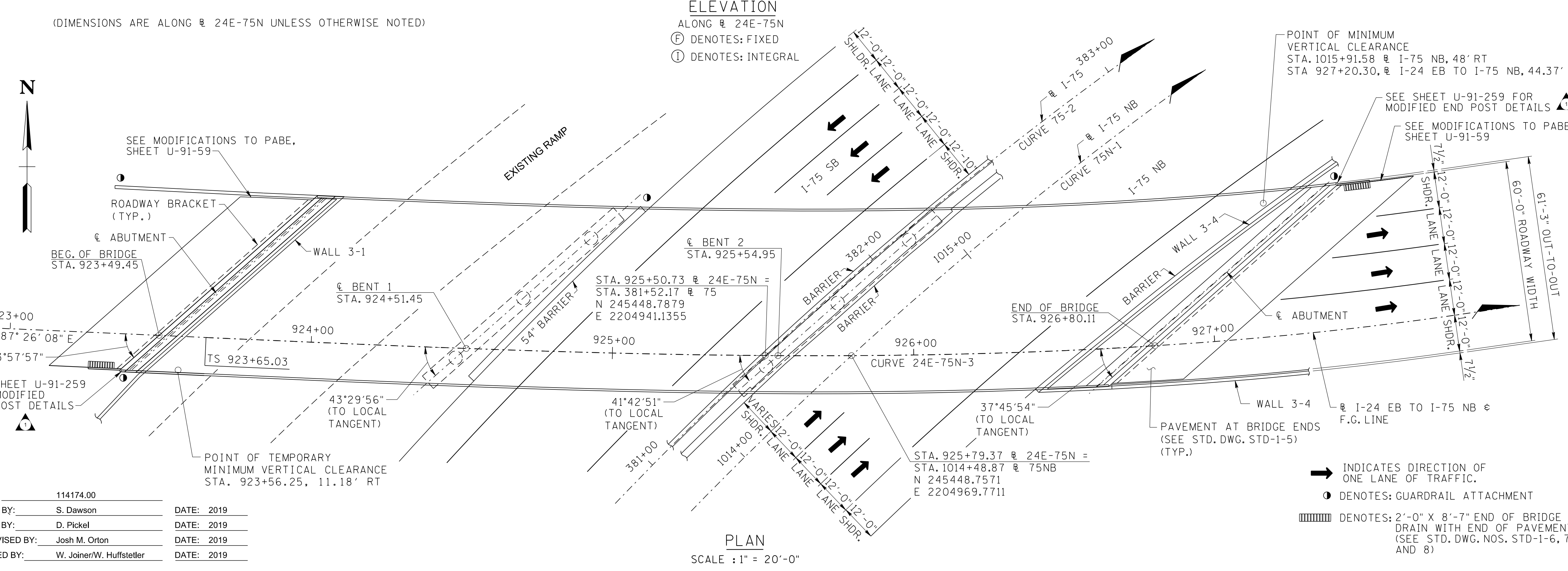
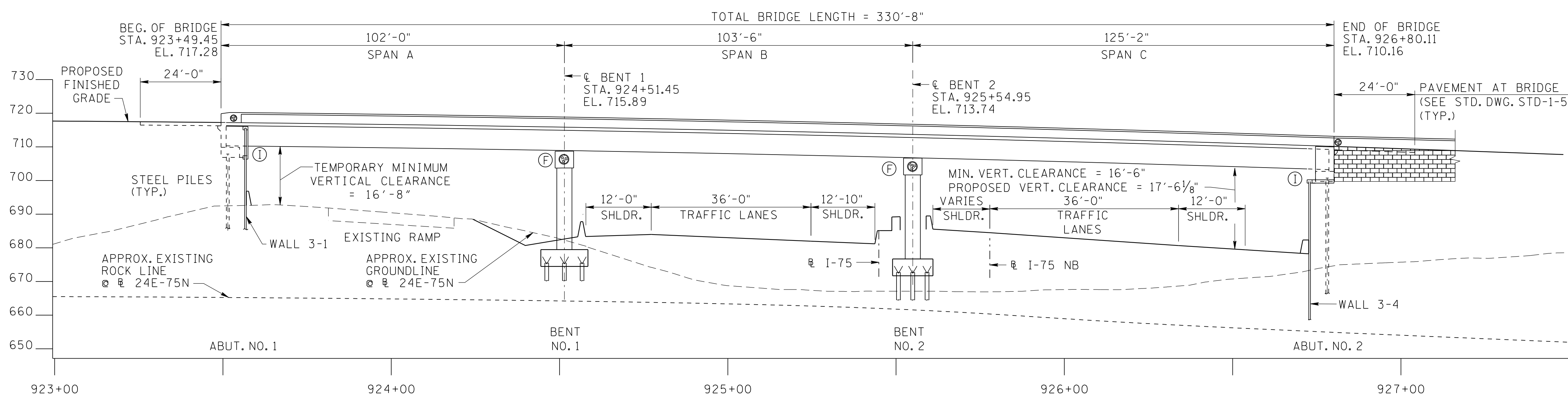
CURVE 24E-75N-3	CURVE 75N-1	CURVE 75-2
PI 928+71.10	PI 1004+16.79	PI 379+91.83
N 245,432.1282	N 244,473.1693	N 245,224.9318
E 2,205,261.1004	E 2,204,404.1699	E 2,203,955.9341
Δs 30' 48' 37" (LT)	Δs 54' 43' 40" (RT)	Δs 100' 44' 14" (RT)
Θs 13' 47' 44"	Θs 10' 06' 02"	Θs 9' 56' 04"
Δc 3' 13' 08" (LT)	Δc 34' 31' 36" (RT)	Δc 80' 52' 06" (RT)
Dc 5' 52' 14"	Dc 4' 41' 52"	Dc 4' 37' 14"
Rc 976.00	Rc 1,219.60	Rc 1,240.00
Lc 54.83	Lc 734.94	Lc 1,750.16
Ts 506.07	Ts 1N 849.25	Ts 1,719.51
Ls 470.00	Ls 1N 430.00	Ls 430.00
SE 0.076 FT/FT	SE 0.068 FT/FT	SE 0.068 FT/FT
DESIGN SPEED 50 MPH	DESIGN SPEED 50 MPH	DESIGN SPEED 50 MPH
TRANS. LENGTH 470'	TRANS. LENGTH 430'	TRANS. LENGTH 430'



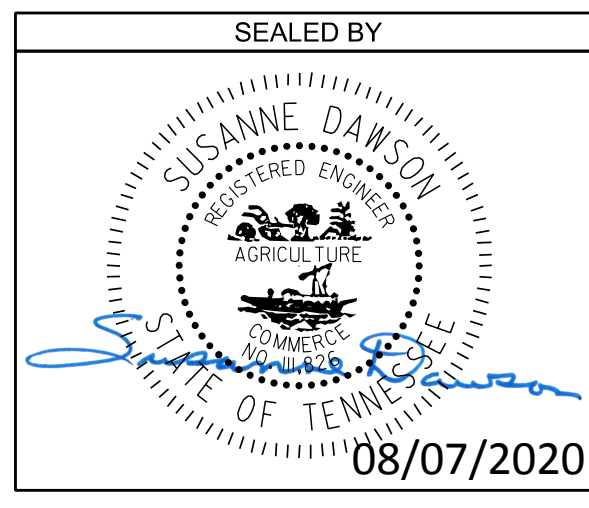
PROJECT NO.	YEAR	SHEET NO.
IM/NH-75-1(131)	2019	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	08-06-2020	DPP	ADDED END POST LABELS, UPDATED RW 3-1



2041 ADT (I-24 EB TO I-75 NB) = 127,360  
 2041 ADT (I-75) = 127,360  
 DESIGN SPEED (I-24 EB TO I-75 SB) = 50 MPH  
 DESIGN SPEED (I-75) = 50 MPH  
 60'-0" ROADWAY WITH STD-1-1SS PARAPET



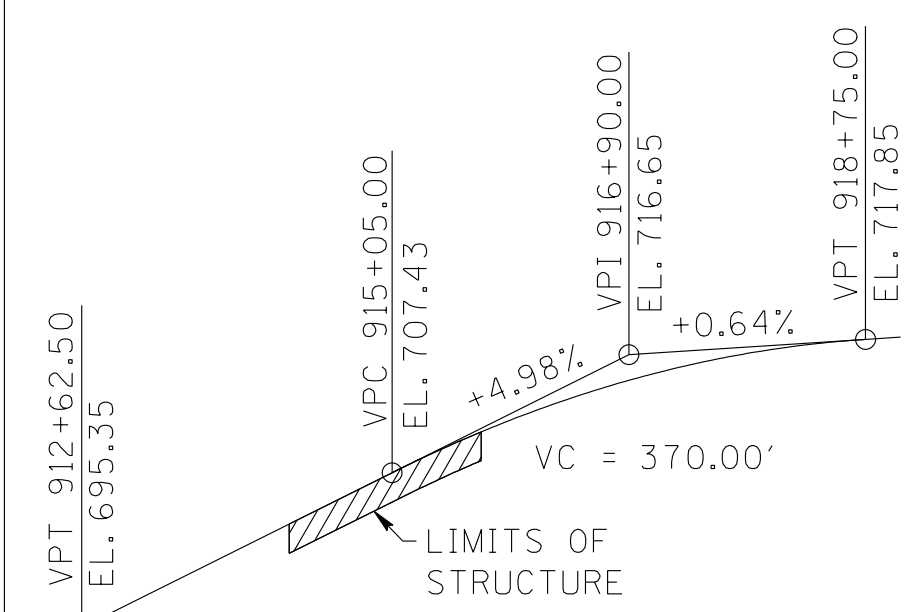
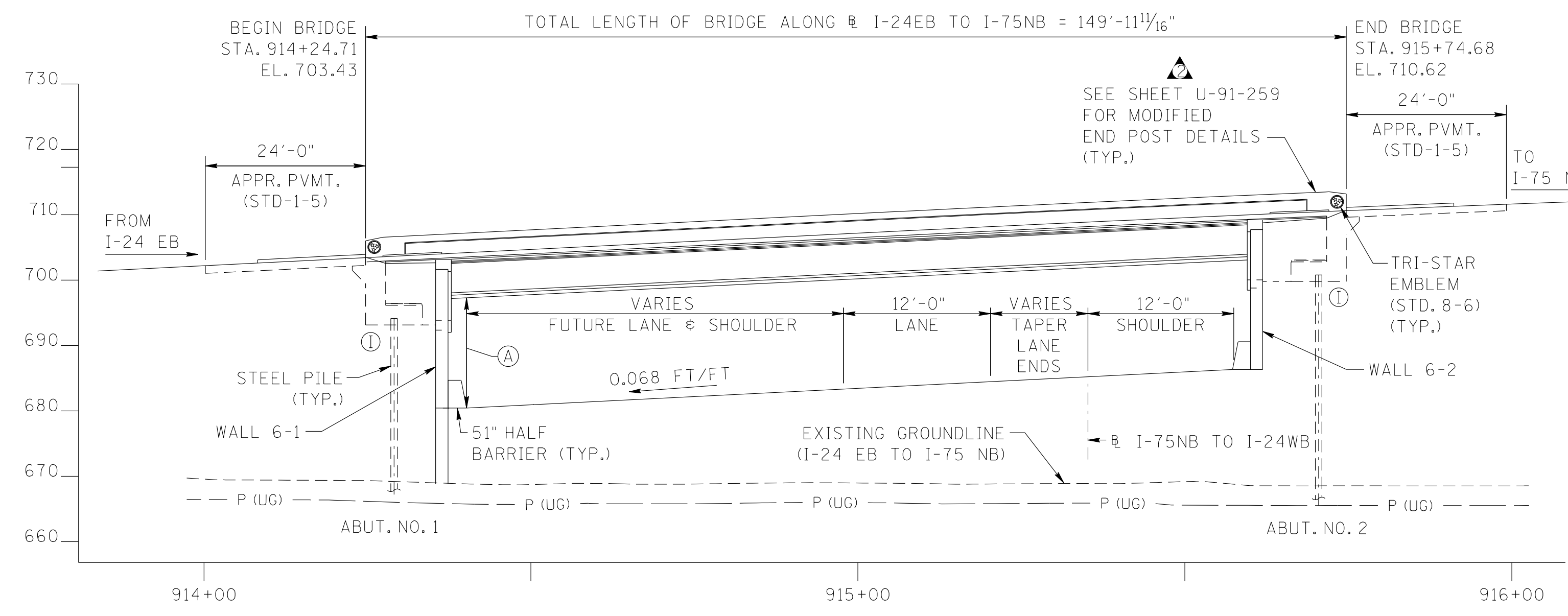
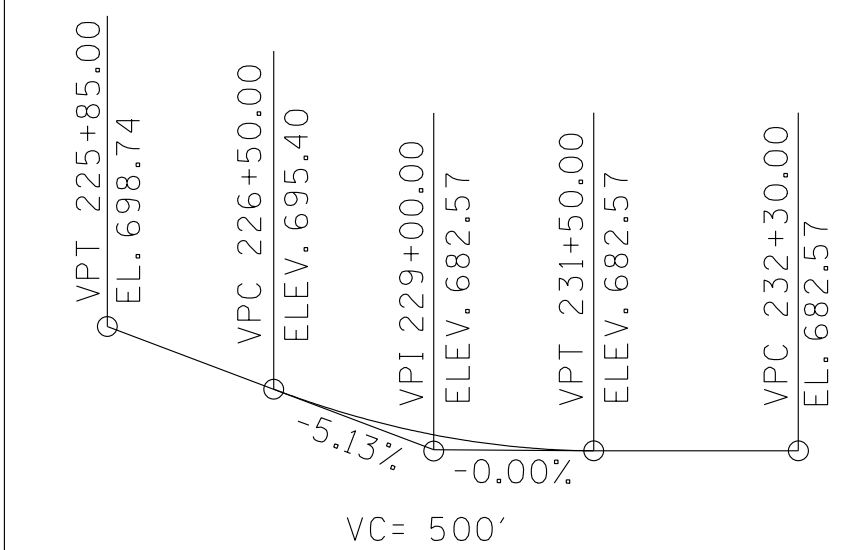
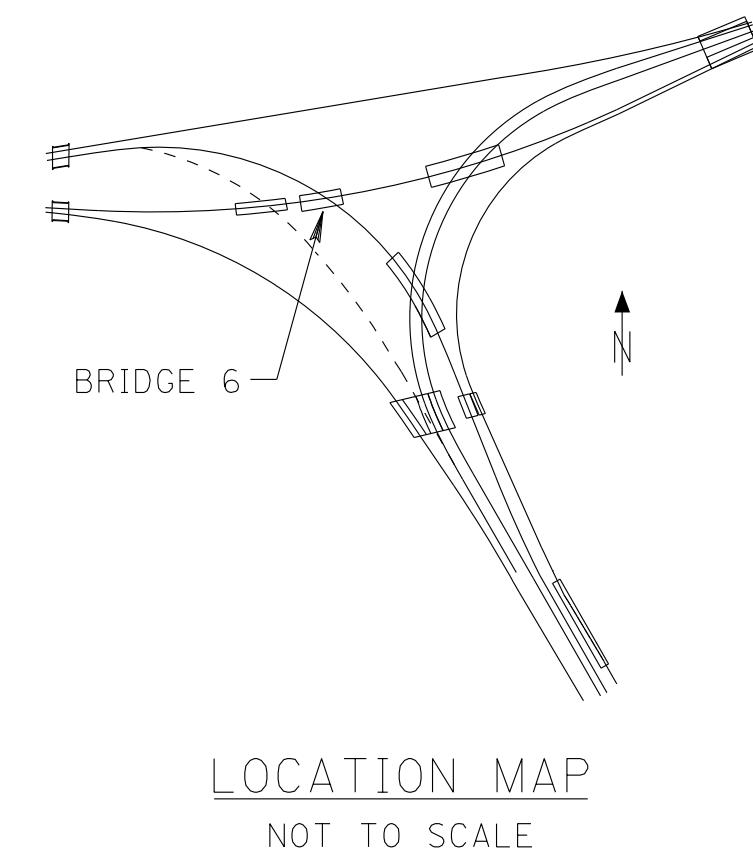
STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 3  
 LAYOUT AND ELEVATION  
 I-24 EB TO I-75  
 OVER I-75 NB TO I-24 WB  
 BRIDGE NO. 33-I0024-14.55  
 FED. ID NO. 33I00240089  
 HAMILTON COUNTY  
 2019

8/7/2020 1:44:12 PM  
 c:\pwworking\pickel\14174-00-U-91-42-Layout.dgn

PIN NO.:	114174.00
DESIGN BY:	S. Dawson
DRAWN BY:	D. Pickel
SUPERVISED BY:	Josh M. Orton
CHECKED BY:	W. Joiner/W. Huffstetter
DATE:	2019
DATE:	2019
DATE:	2019
DATE:	2019

PROJECT NO.	YEAR	SHEET NO.	
IM/NH-75-1(131)	2019	U-91-67	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	03-13-2020	DPP	REVISED VERTICAL DATA & S.E. DATA
2	08-06-2020	DPP	ADDED MODIFIED END POST DETAIL LABELS

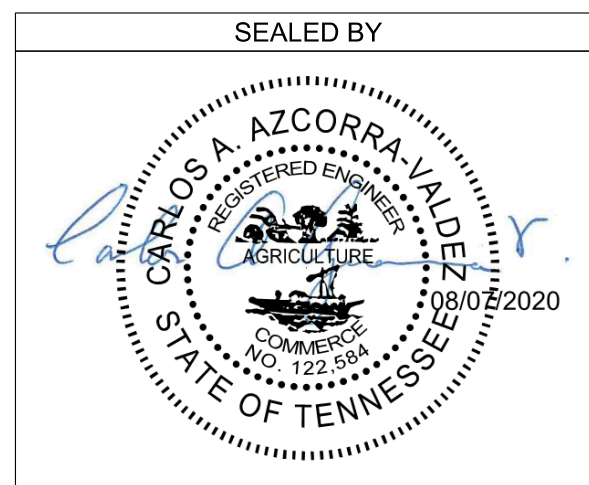
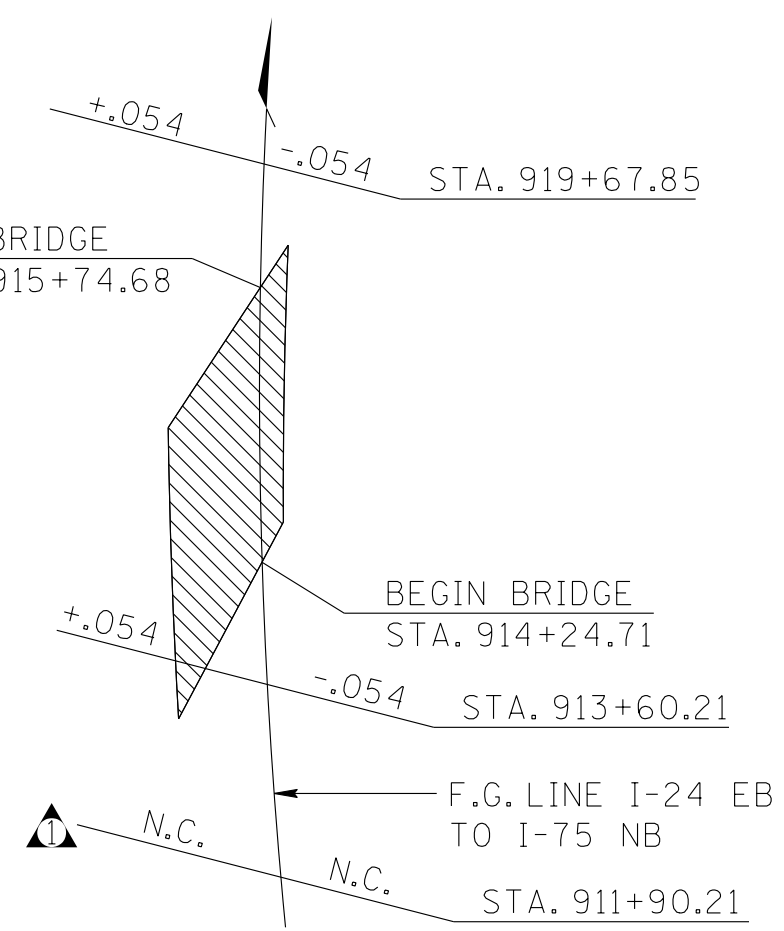
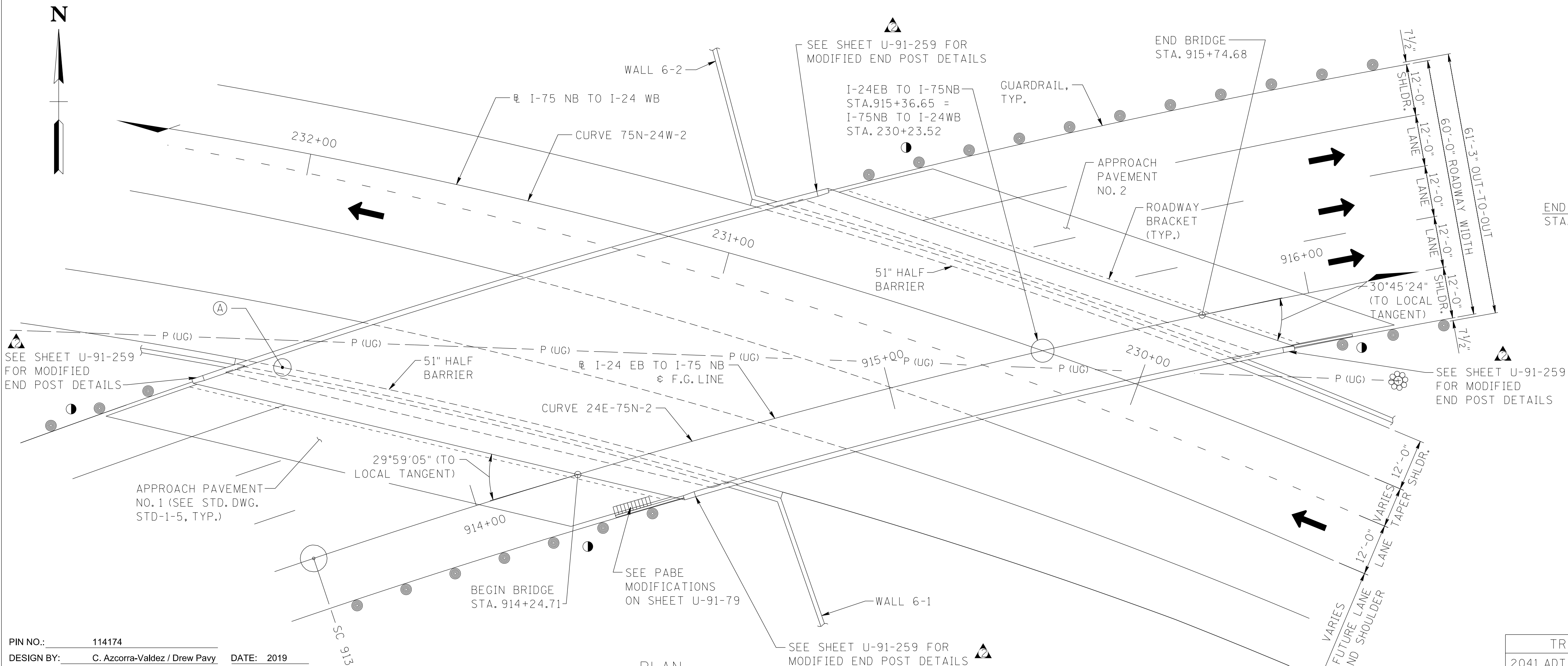


(A) MIN. REQUIRED VERTICAL CLEARANCE = 16'-6"  
PROPOSED VERTICAL CLEARANCE = 16'-8"  
STA. 232+01.73, 50' LT. I-75 NB TO I-24 WB  
STA. 913+63.39, 46.77' LT. I-24 EB TO I-75 NB

NOTES:  
ALL UTILITIES IN CONFLICT WITH NEW BRIDGE STRUCTURE ARE TO BE RELOCATED BY OTHERS.  
① - DENOTES INTEGRAL  
➡ - INDICATES DIRECTION OF ONE LANE OF TRAFFIC  
▨ DENOTES: 2'-0" X 8'-7" END OF BRIDGE DRAIN WITH END OF BRIDGE PAVEMENT (SEE STD. DWG. NOS. STD-1-6, 1-7 AND 1-8)

DESIGN SPEED (I-75 NB TO I-24 WB) = 50 M.P.H.  
DESIGN SPEED (I-24 EB TO I-75 NB) = 50 M.P.H.  
60'-0" ROADWAY WITH STD-1-ISS PARAPET.  
FOR ROADWAY DATA NOT SHOWN, SEE ROADWAY PLANS.

CURVE	PI	N	E	Δs	Θs	Δc	Dc	Rc	Lc	Ts	Ls	SE	DESIGN SPEED	TRANS. LENGTH
24E-75N-2	916+69.84	245,486.3968	2,204,049.4421	23° 46' 32" (RT)	2° 35' 56"	18° 34' 41" (RT)	3° 03' 27"	1,874.00	607.64	479.63	170.00	0.054 FT/FT	50 MPH	170'
75N-24W-2	229+41.98	245,666.2130	2,204,453.3489	85° 07' 27" (LT)	9° 53' 11"	65° 21' 04" (LT)	4° 35' 54"	1,246.00	1,421.18	1,364.69	430.00	0.068 FT/FT	50 MPH	430'



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BRIDGE NO. 6  
LAYOUT OF BRIDGE  
I-24 EAST TO I-75 NORTH  
OVER I-75 NORTH TO I-24 WEST  
BRIDGE NO. 33-I0024-14.38  
FED. ID NO. 33I00240085  
HAMILTON COUNTY  
2019

TRAFFIC DATA

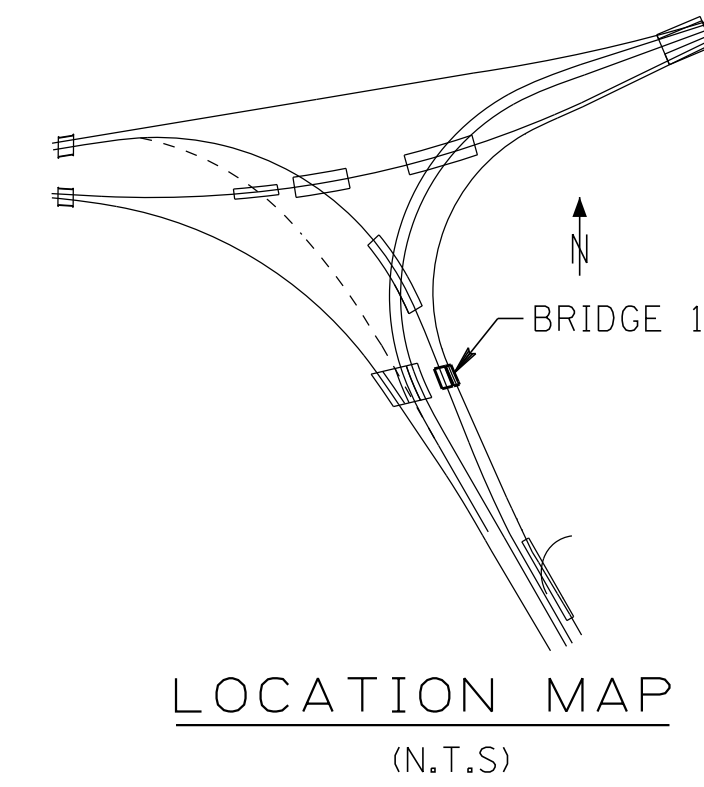
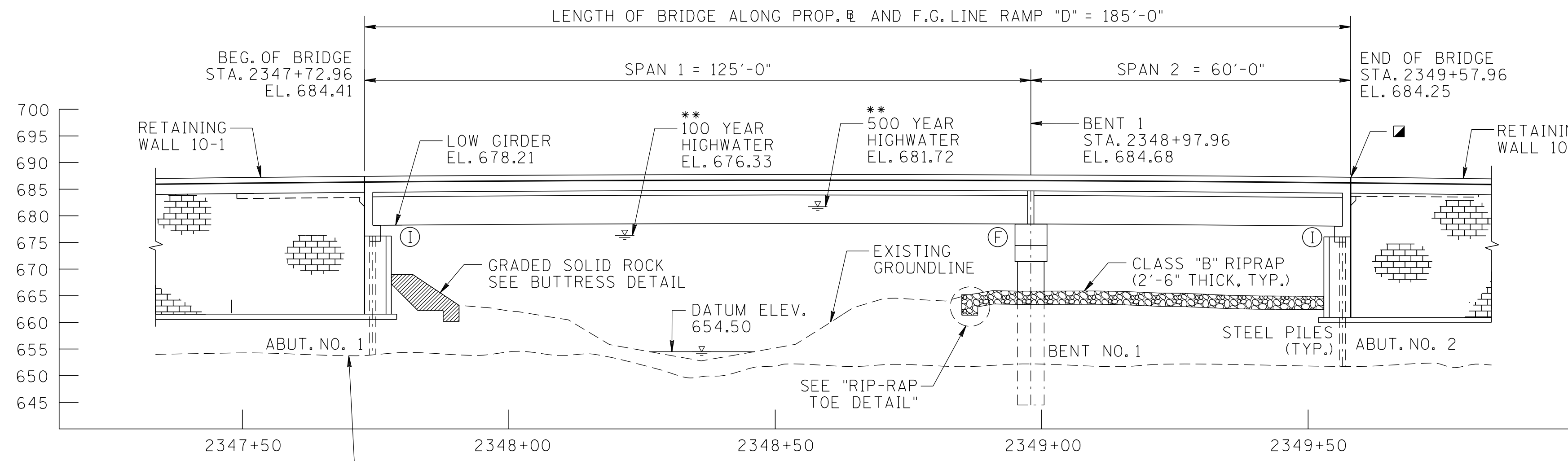
2041 ADT (I-75 NB)	= 40,000
2041 ADT (I-24 EB)	= 80,680

8/6/2020 6:09:52 PM  
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PIN NO.: 114174

DESIGN BY:	C. Azcorra-Valdez / Drew Pavy	DATE:	2019
DRAWN BY:	Hank Padgett	DATE:	2019
SUPERVISED BY:	Josh M. Orton	DATE:	2019
CHECKED BY:	Frank Bale / William Hufstetter	DATE:	2019

PROJECT NO.	YEAR	SHEET NO.	
IM/NH-75-1(131)	2019	U-91-84	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	08-28-20	PMD	REMOVED END OF BRIDGE DRAINS



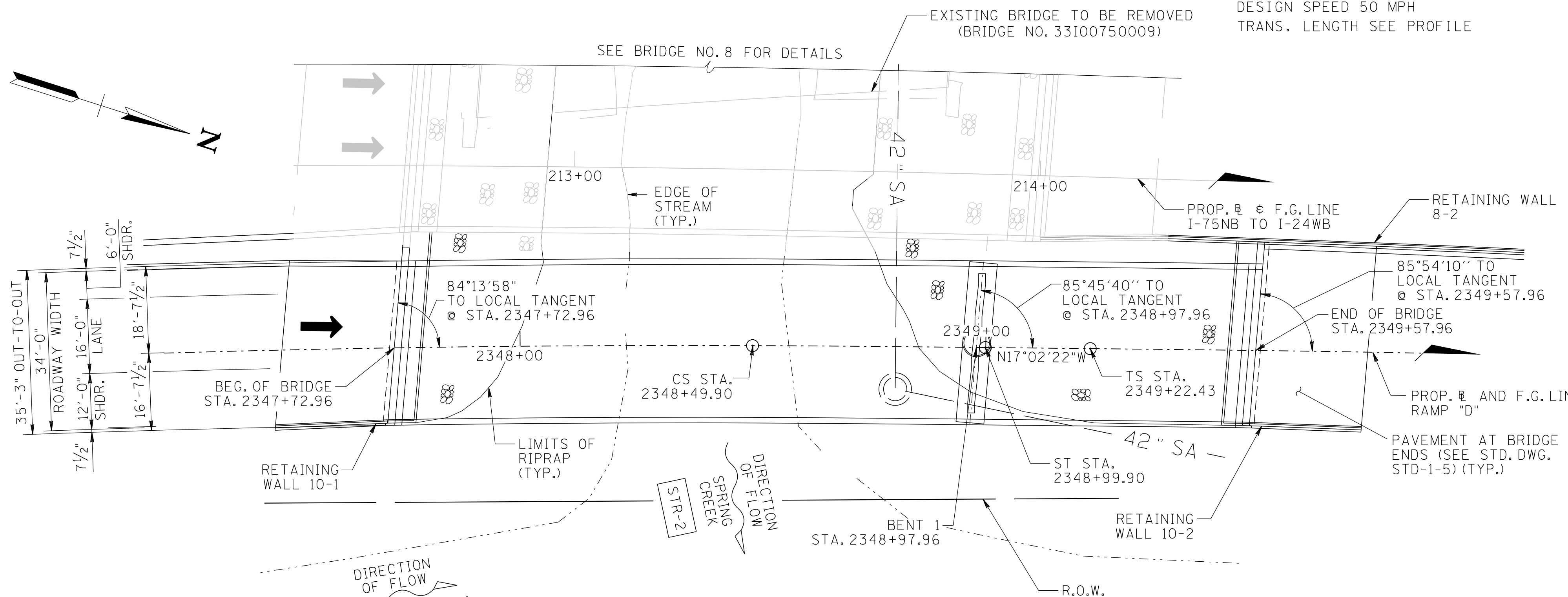
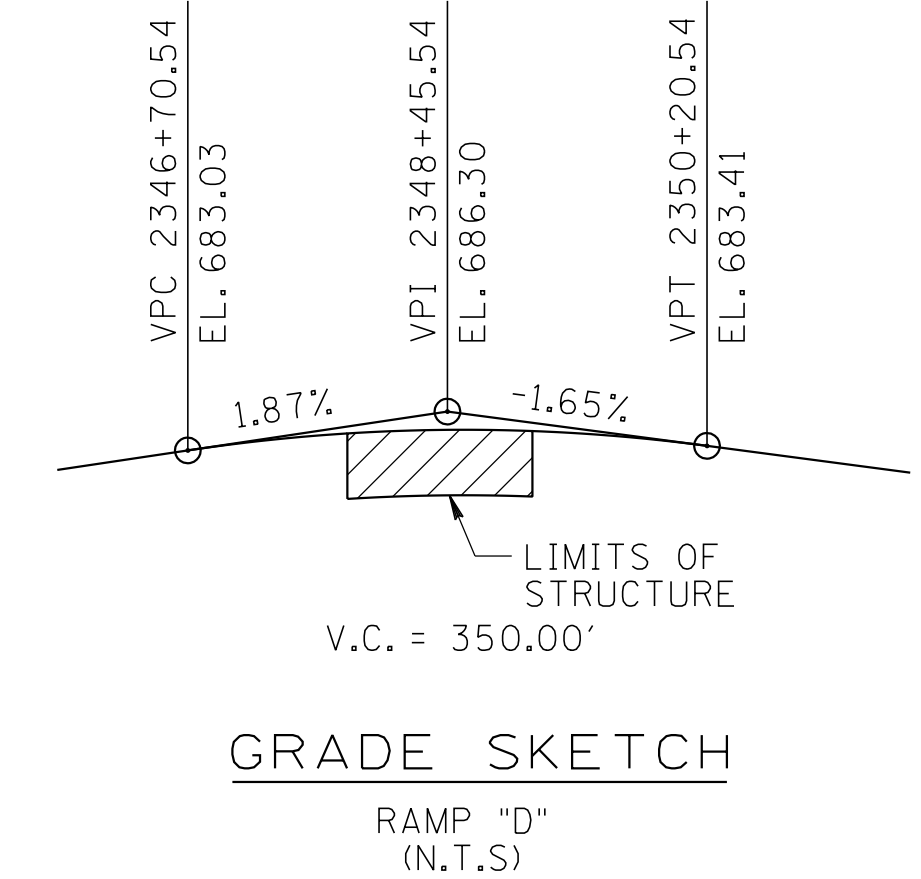
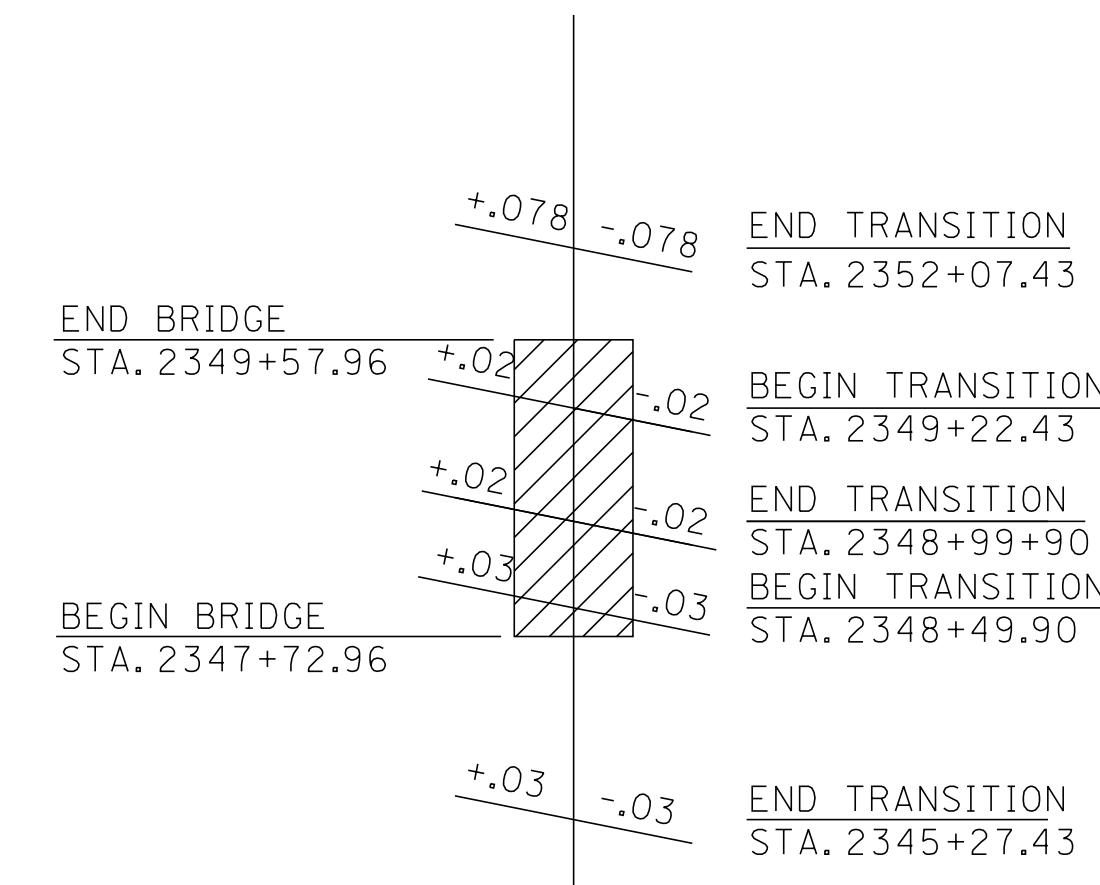
**HYDRAULIC DATA**

DRAINAGE AREA .....19.5 SQ MI  
 DESIGN DISCHARGE (100 YEAR).....10,450 CFS  
 AREA BELOW 100-YEAR ELEVATION.....1,907.59 SQ FT\*  
 100-YEAR VELOCITY.....5.48 FPS  
 100 YEAR BRIDGE BACKWATER.....0.27 FT @ 676.77\*\*  
 100 YEAR DISCHARGE.....10,450 CFS  
 500-YEAR DISCHARGE.....12,450 CFS  
 ROADWAY OVERTOPPING ELEVATION.....N/A  
 \*AT UPSTREAM INTERNAL BRIDGE SECTION  
 \*\*AT UPSTREAM FACE OF BRIDGE 8

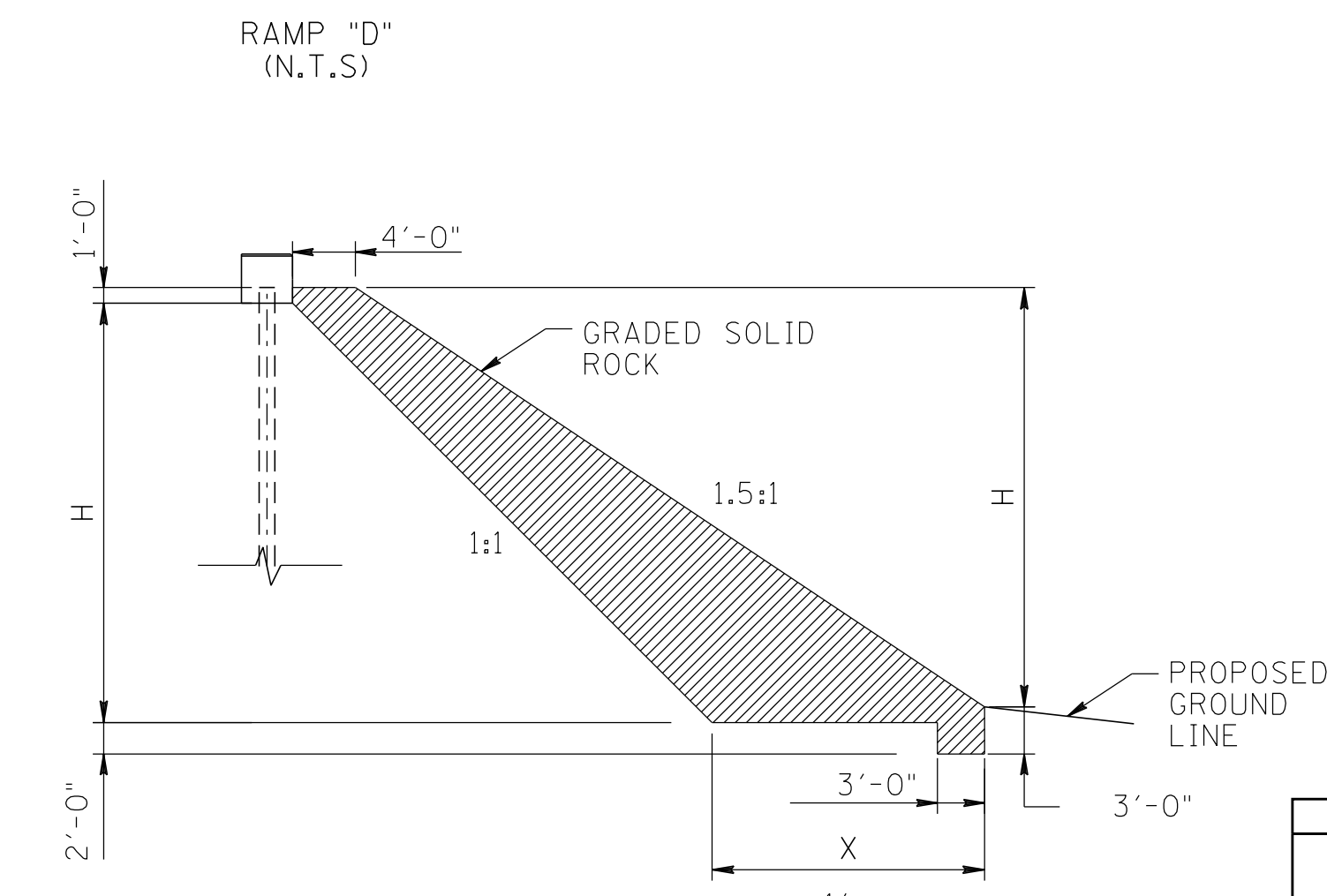
**ELEVATION**

SCALE: 1" = 16'-0"  
 (I) DENOTES: INTEGRAL  
 (F) DENOTES: FIXED  
 [BRICK] DENOTES: RETAINING WALL  
 [SQUARE] DENOTES: 1" EXPANSION JOINT FULL HEIGHT OF WALL AND PARAPET RAIL. JOINT MATERIAL SHALL BE APPROVED BY THE ENGINEER. (TYP. BOTH ENDS OF BRIDGE)  
 NOTE: FOR ALL SLOPES 1.5:1 USE GRADED SOLID ROCK BUTTRESS DETAIL FOR SLOPE STABILIZATION. FOR ALL OTHER SLOPES AND SCOUR GROUND PROTECTION USE CLASS "B" RIPRAP.

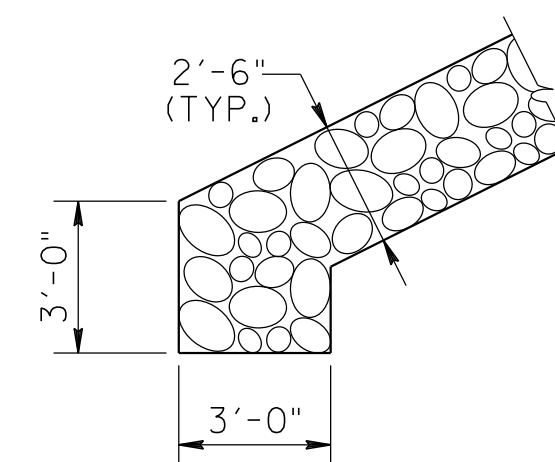
CURVE RAMP\_D-6  
 PI 2346+88.81  
 N 243,970.4348  
 E 2,204,937.1586  
 Δs 5° 35' 12" (RT)  
 θs 0° 22' 30"  
 Δc 4° 50' 12" (RT)  
 Dc 1° 30' 00"  
 Rc 3,820.00  
 Lc 322.47  
 Ts 211.39  
 Ls 50.00  
 SE 0.030 FT/FT  
 DESIGN SPEED 50 MPH  
 TRANS. LENGTH SEE PROFILE



**TRANSITION SKETCH**



**ROCK BUTTRESS DETAIL**  
 TYPICAL FOR ALL SLOPES 1.5:1  
 SEE RETAINING WALL PLANS FOR APPROX. FINISH GRADE (N.T.S.)

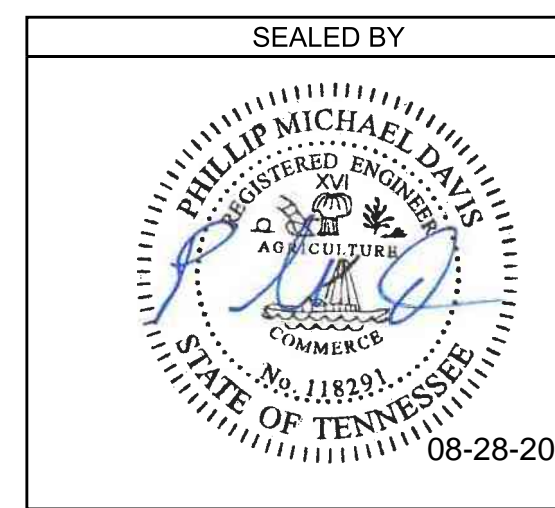


**RIP-RAP TOE DETAIL**  
 TYPICAL FOR ALL SLOPES LESS THAN 1.5:1 (N.T.S.)

**PLAN**

SCALE: 1" = 16'-0"  
 [ARROW] DENOTES: DIRECTION OF ONE LANE OF TRAFFIC  
 NOTE: ANY WORK WITHIN THE STREAM CHANNEL AREA SHALL BE SEPARATED FROM FLOWING WATER OR CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL BE PAID 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 AND TEMPORARY DIVERSION CULVERTS.  
 [SPECIAL NOTE] SPECIAL NOTE TO CONTRACTOR: USE EXTREME CARE TO PREVENT DAMAGE TO THE EXISTING 42" SEWER LINE RUNNING ADJACENT TO AND BENEATH BRIDGE 10.

PIN NO.:	114174.00	DATE:	07/2019
DESIGN BY:	M. DAVIS	DATE:	07/2019
DRAWN BY:	L. WEBSTER/G. NEAL	DATE:	07/2019
SUPERVISED BY:	K. McALISTER	DATE:	07/2019
CHECKED BY:	A. MOORE	DATE:	07/2019



STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BRIDGE NO. 10  
 LAYOUT  
 RAMP D  
 OVER SPRING CREEK  
 BRIDGE NO. 33-10075-01.19  
 FED. I.D. NO. 33100750093  
 HAMILTON COUNTY  
 2019

2041 ADT (RAMP "D") = 4945  
 DESIGN SPEED (RAMP "D") = 50 MPH  
 34'-0" ROADWAY WITH STD-1-ISS PARAPET  
 CLASS "B" RIP RAP = 343 TONS  
 GRADED SOLID ROCK = 590 TONS  
 TYPE IV GEOTEXTILE FABRIC = 259 S.Y.

PROJECT NO.	YEAR	SHEET NO.	
IM/NH-75-1(131)	2019	U-91-85	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	08-28-20	PMD	UPDATED LAST REVISION DATE AND LIST OF STANDARD DRAWINGS

LIST OF DRAWINGS ▲

DRAWING	DWG. NO.	LAST REV. DATE
LAYOUT	U-91-84	08-28-20
LIST OF DRAWINGS	U-91-85	08-28-20
GENERAL NOTES	U-91-86	
ESTIMATED QUANTITIES	U-91-87	
FOUNDATION DATA	U-91-88	
PHASING AND DEMOLITION PLAN	U-91-89	
SUPERSTRUCTURE	U-91-90	
SUPERSTRUCTURE DETAILS	U-91-91	
SUPERSTRUCTURE DETAILS	U-91-92	
SUPERSTRUCTURE DETAILS	U-91-93	
SCREED PLAN	U-91-94	
STAKEOUT PLAN	U-91-95	
PRESTRESSED BULB-TEE (BT-63) DETAILS (SPAN 1)	U-91-96	
PRESTRESSED BULB-TEE (BT-63) DETAILS (SPAN 2)	U-91-97	
ABUTMENT NO. 1	U-91-98	
ABUTMENT NO. 1 DETAILS	U-91-99	
ABUTMENT NO. 2	U-91-100	
ABUTMENT NO. 2 DETAILS	U-91-101	
BENT NO. 1	U-91-102	
BENT NO. 1 DETAILS	U-91-103	
FINAL FOUNDATION DATA	U-91-104	
BILL OF STEEL	U-91-105	
BILL OF STEEL	U-91-106	

LIST OF STANDARD DRAWINGS

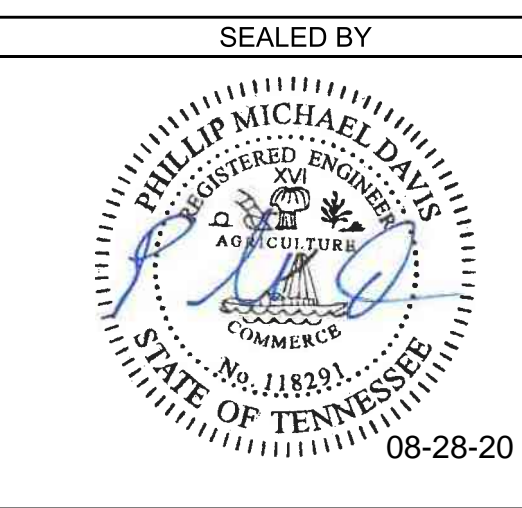
DRAWING	DWG. NO.	LAST REV. DATE
BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET	STD-1-ISS	05-01-14
REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS	STD-1-5	3-26-14
BRIDGE MOUNTED INTERCONNECTED PORTABLE BARRIER RAIL	STD-2-1	11-01-10
BRIDGE MOUNTED INTERCONNECTED PORTABLE BARRIER RAIL ALTERNATE CONNECTION DETAIL	STD-2-3	
STANDARD PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	STD-4-1	4-08-05
STANDARD PRECAST PRESTRESSED BRIDGE DECK PANELS DESIGN CRITERIA	STD-4-2	4-08-05
STANDARD PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	STD-4-3	3-02-02
STANDARD PRECAST PRESTRESSED BRIDGE DECK PANELS CONSTRUCTION DETAILS	STD-4-4	6-10-96
STD. PILE DETAILS	STD-5-1	10-25-93
STD. PILE DETAILS	STD-5-2	5-01-14
STANDARD SEISMIC DETAILS	STD-6-1	11-01-10
TRI-STAR STATE EMBLEM FINISH DETAILS	STD-8-6	10-03-18
REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS	STD-9-1	10-07-08
MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS	STD-10-1	4-08-05
STD. DETAILS AND INT. DIAPH. DETAILS FOR BULB-TEE BEAMS	STD-14-1	5-01-14

LIST OF SPECIAL PROVISION

SPECIAL PROVISION	PROV. NO.	LAST REV. DATE
DRILLED SHAFT SPECIFICATIONS	SP625	05-18-2017

REFERENCE DRAWINGS

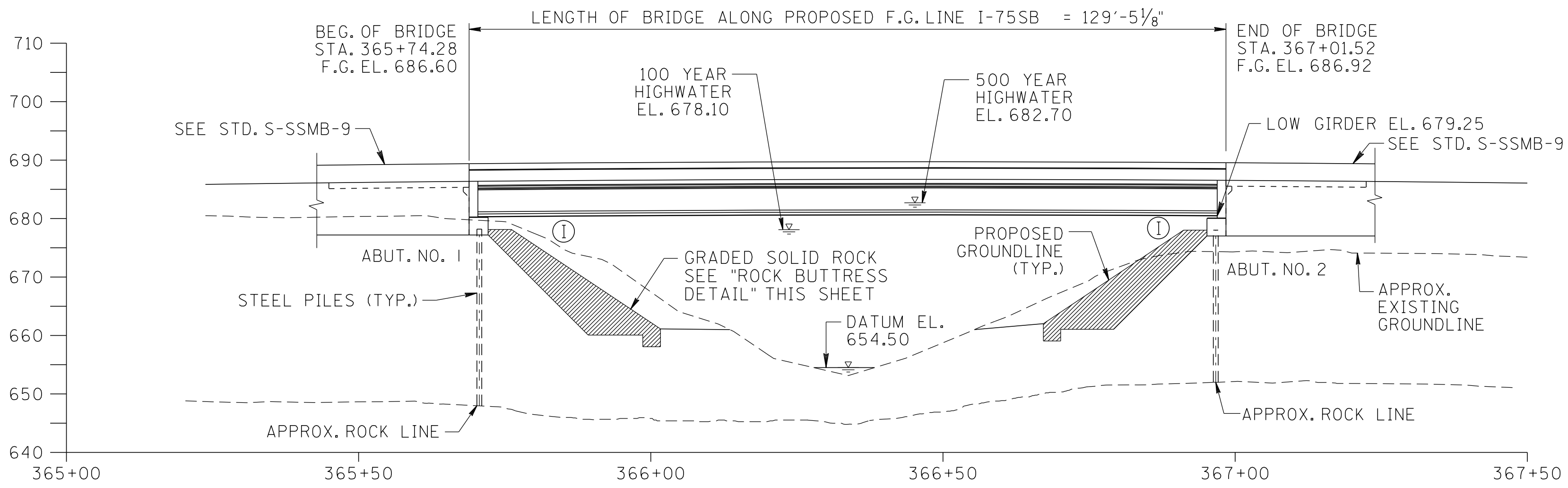
\*\* NO REFERENCE DRAWINGS



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BRIDGE NO. 10  
LIST OF DRAWINGS  
RAMP D  
OVER SPRING CREEK  
HAMILTON COUNTY  
2019

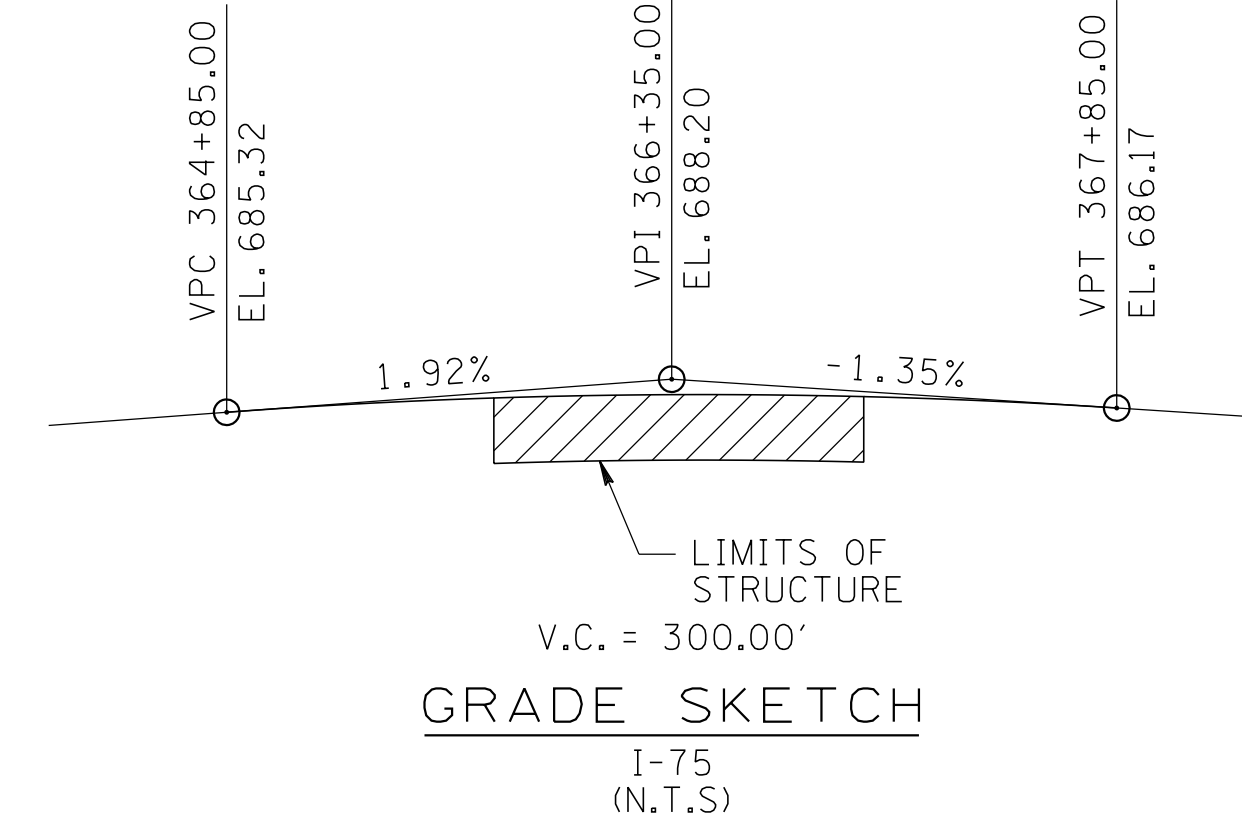
PIN NO.: 114174.00  
DESIGN BY: M. DAVIS DATE: 07/2019  
DRAWN BY: L. WEBSTER/G. NEAL DATE: 07/2019  
SUPERVISED BY: K. McALISTER DATE: 07/2019  
CHECKED BY: A. MOORE DATE: 07/2019

8/27/2020 F:\36\36908\3690800\04\_CAD\TRNS\Bridg\10IDGN\3690800\_BRIDGE-10\_LOD001.dgn



ELEVATION

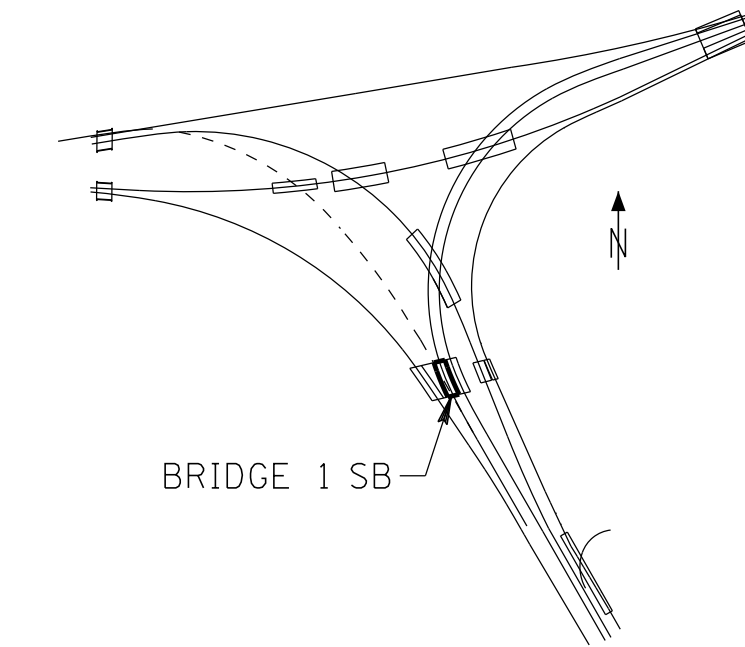
SCALE: 1" = 16'-0"  
 (I) DENOTES: INTEGRAL



GRADE SKETCH

I-75 (N.T.S.)

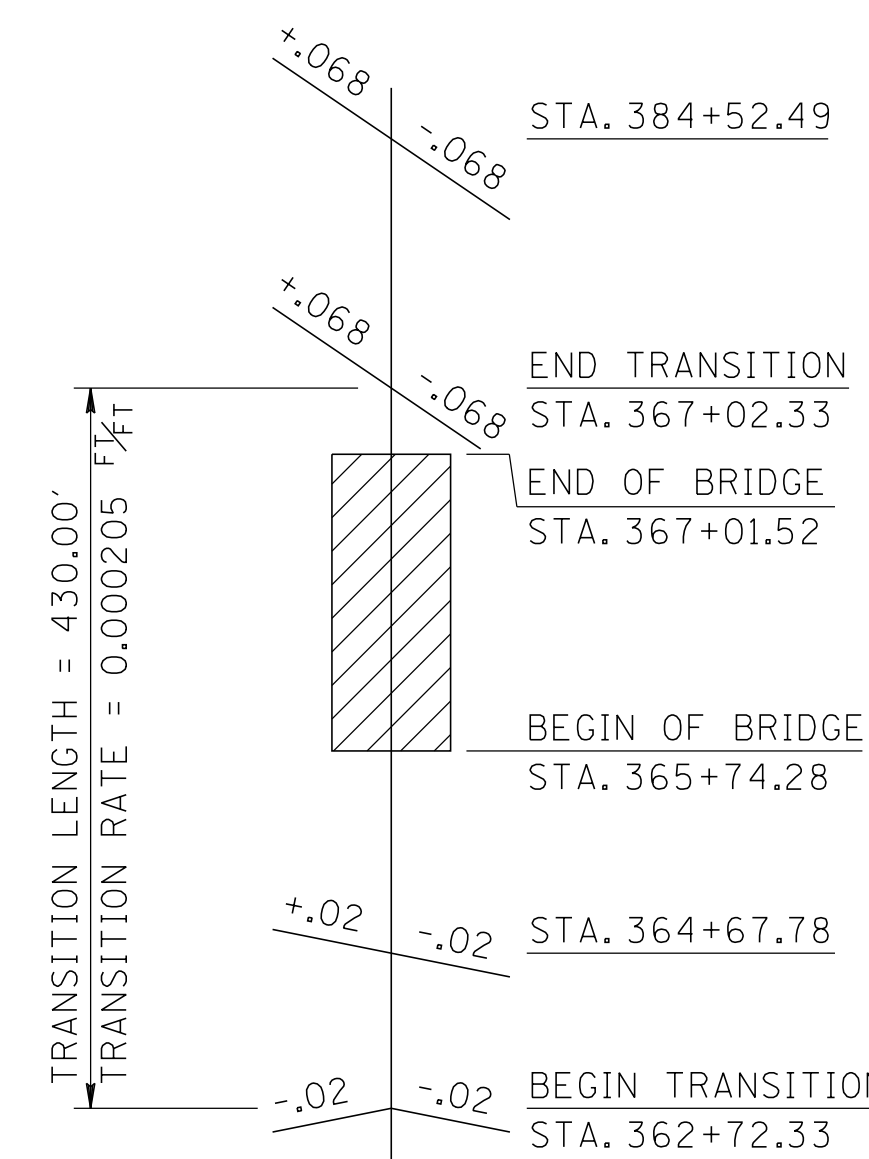
CONST. NO.:			
PROJECT NO.	YEAR	SHEET NO.	
- -	2019	U-91-127	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	08-28-2020	KSM	REMOVED END OF BRIDGE DRAINS



LOCATION MAP

(N.T.S.)

CURVE 75-2  
 PI 379+91.83  
 N 245,224.9318  
 E 2,203,955.9341  
 Δs 100° 44' 14" (RT)  
 Θs 9° 56' 04"  
 Δc 80° 52' 06" (RT)  
 Dc 4° 37' 14"  
 Rc 1,240.00  
 Lc 1,750.16  
 Ts 1,719.51  
 Ls 430.00  
 SE 0.068 FT/FT  
 DESIGN SPEED 50 MPH  
 TRANS. LENGTH 430'

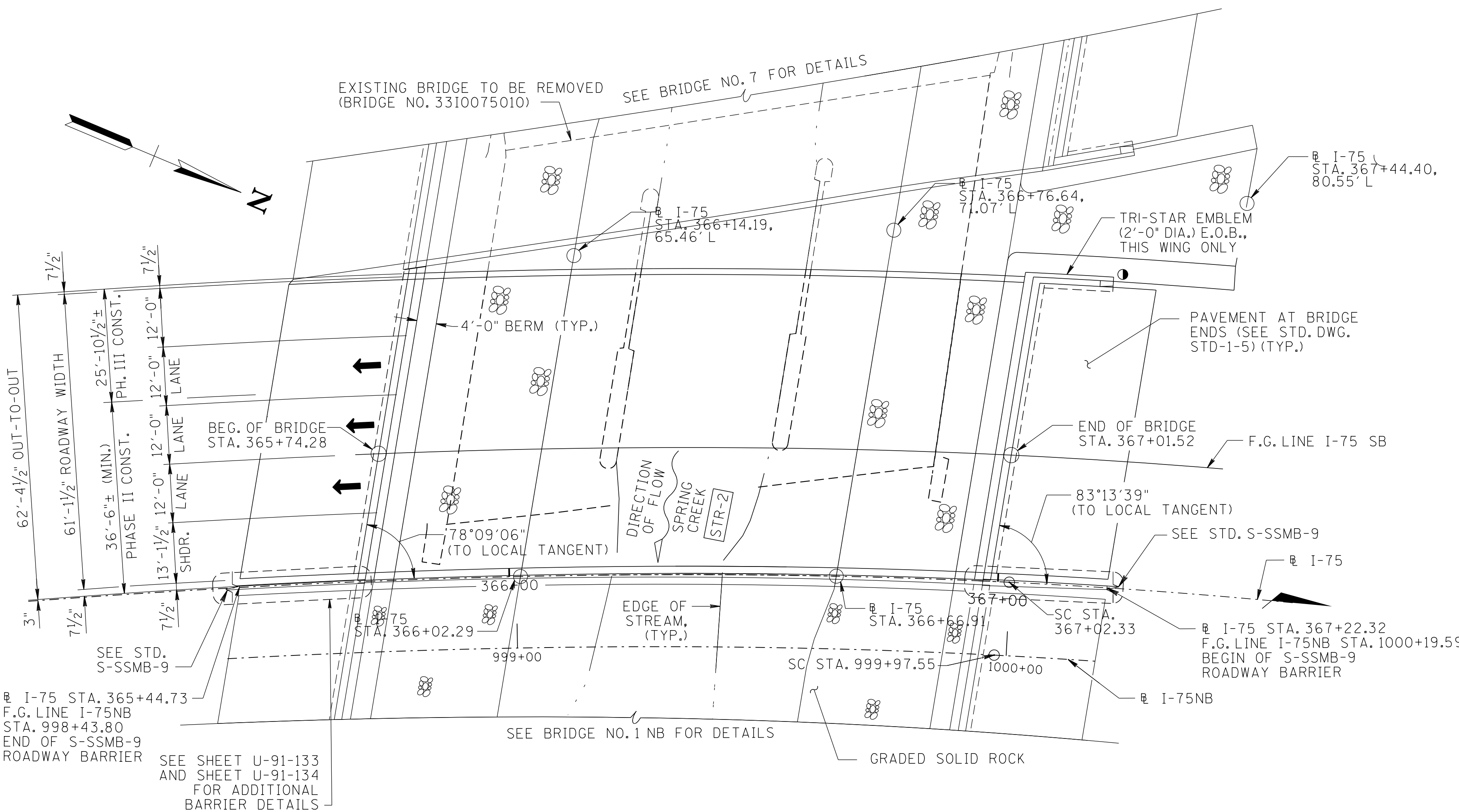


TRANSITION SKETCH

I-75 (N.T.S.)

HYDRAULIC DATA

DRAINAGE AREA .....19.50 SQ MI  
 DESIGN DISCHARGE (100 YEAR).....10,450 CFS  
 AREA BELOW 100-YEAR ELEVATION.....1,673.68 SQ FT\*  
 100-YEAR VELOCITY.....6.75 FPS  
 100 YEAR BRIDGE BACKWATER.....1.19 FT @ 677.70\*\*  
 100 YEAR DISCHARGE.....10,450 CFS  
 500-YEAR DISCHARGE.....12,450 CFS  
 ROADWAY OVERTOPPING ELEVATION.....N/A  
 \*AT UPSTREAM INTERNAL BRIDGE SECTION  
 \*\*AT UPSTREAM FACE OF BRIDGE 7

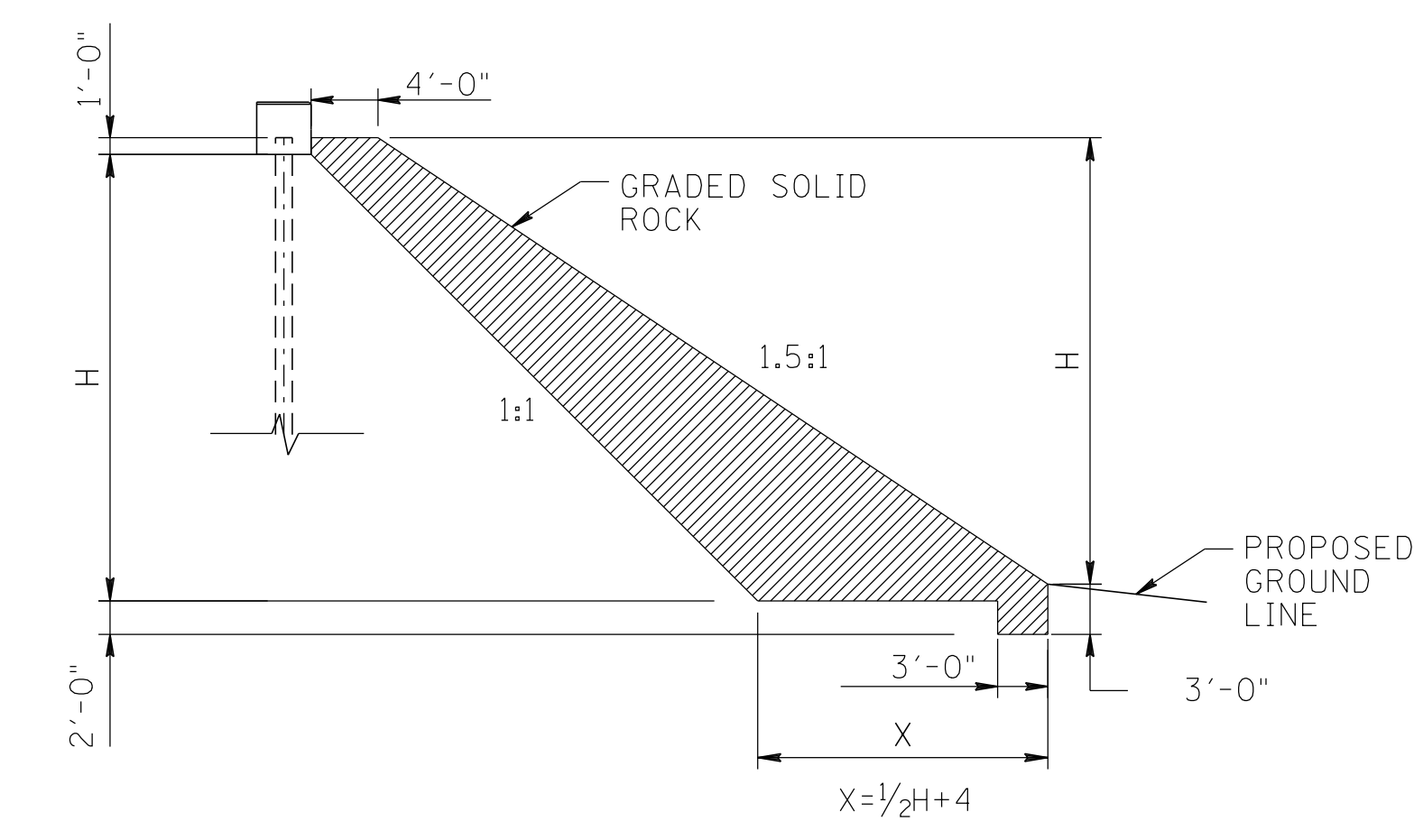


PLAN

SCALE: 1" = 16'-0"

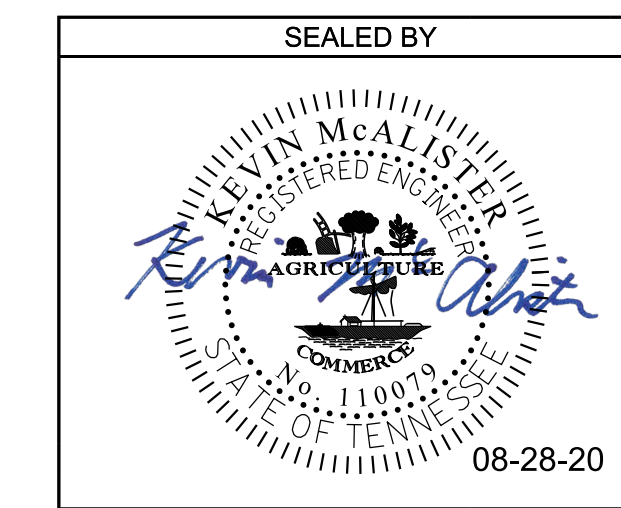
● DENOTES: GUARDRAIL ATTACHMENT  
 → DENOTES: DIRECTION OF ONE LANE OF TRAFFIC

NOTE: ANY WORK WITHIN THE STREAM CHANNEL AREA SHALL BE SEPARATED FROM FLOWING WATER OR CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL BE PAID 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 AND TEMPORARY DIVERSION CULVERTS.



ROCK BUTTRESS DETAIL

TYPICAL BOTH ABUTMENTS (N.T.S.)



STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BRIDGE NO. 1 SB  
 LAYOUT  
 I-75 SB  
 OVER SPRING CREEK  
 BRIDGE NO. 33-10075-01.17L  
 FED. I.D. NO. 33100750090  
 HAMILTON COUNTY  
 2019

2041 ADT (I-75SB) = 127,360  
 DESIGN SPEED (I-75SB) = 50 MPH  
 61'-1 1/2" ROADWAY WITH STD-1-1SS & STD-1-1SS (51"MOD)  
 GRADED SOLID ROCK = 1,409 TONS  
 GEOTEXTILE FABRIC = 605 SY

PIN NO.:	114174.00
DESIGN BY:	J. LEADERS
DATE:	10/2019
DRAWN BY:	K. SWANK
DATE:	10/2019
SUPERVISED BY:	K. McALISTER
DATE:	10/2019
CHECKED BY:	A. MOORE
DATE:	10/2019

PROJECT NO.	YEAR	SHEET NO.
- -	2019	U-91-128

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	08-28-20	KSM	UPDATED LAST REVISION DATE AND LIST OF STANDARD DRAWINGS

LIST OF DRAWINGS 

DRAWING	DWG. NO.	LAST REV. DATE
LAYOUT	U-91-127	08-28-20
LIST OF DRAWINGS	U-91-128	08-28-20
GENERAL NOTES	U-91-129	
ESTIMATED QUANTITIES	U-91-130	
FOUNDATION DATA	U-91-131	
PHASING AND DEMOLITION PLAN	U-91-132	
SUPERSTRUCTURE	U-91-133	
SUPERSTRUCTURE DETAILS	U-91-134	
SUPERSTRUCTURE DETAILS	U-91-135	
SUPERSTRUCTURE DETAILS	U-91-136	
SCREED PLAN	U-91-137	
STAKE-OUT PLANS	U-91-138	
PRESTRESSED BULB-TEE (BT-63) DETAILS	U-91-139	
ABUTMENT NO. 1	U-91-140	
ABUTMENT NO. 1 DETAILS	U-91-141	
ABUTMENT NO. 2	U-91-142	
ABUTMENT NO. 2 DETAILS	U-91-143	
ABUTMENT NO. 2 DETAILS	U-91-144	
FINAL FOUNDATION DATA	U-91-145	
BILL OF STEEL	U-91-146	

LIST OF STANDARD DRAWINGS

DRAWING	DWG. NO.	LAST REV. DATE
BRIDGE RAILING SINGLE SLOPE	STD-1-1SS	5-01-14
CONCRETE PARAPET		
STD. SINGLE SLOPE CONCRETE	STD-1-3SS	11-01-10
MEDIAN BARRIER		
REINFORCED CONCRETE PAVEMENT	STD-1-5	3-26-14
AT BRIDGE ENDS		
BRIDGE MOUNTED INTERCONNECTED	STD-2-1	11-01-10
PORTABLE BARRIER RAIL		
BRIDGE MOUNTED INTERCONNECTED PORTABLE	STD-2-3	
BARRIER RAIL ALTERNATIVE CONNECTION DETAIL		
STD. PRECAST PRESTRESSED BRIDGE	STD-4-1	4-08-05
DECK PANELS GENERAL DETAILS		
STD. PRECAST PRESTRESSED BRIDGE	STD-4-2	4-08-05
DECK PANELS DESIGN CRITERIA		
STD. PRECAST PRESTRESSED BRIDGE	STD-4-3	3-02-02
DECK PANELS GENERAL DETAILS		
STD. PRECAST PRESTRESSED BRIDGE	STD-4-4	6-10-96
DECK PANELS CONSTRUCTION DETAILS		
STD. PILE DETAILS	STD-5-1	10-25-93
STD. PILE DETAILS	STD-5-2	5-01-14
STANDARD SEISMIC DETAILS	STD-6-1	11-01-10
TRI-STAR STATE EMBLEM FINISH DETAILS	STD-8-6	10-03-18
REINFORCING BAR SUPPORT DETAILS	STD-9-1	10-07-08
FOR CONCRETE SLABS		
MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS	STD-10-1	4-08-05
STD. DETAILS AND INT. DIAPH. DETAILS FOR BULB-TEE BEAMS	STD-14-1	5-01-14

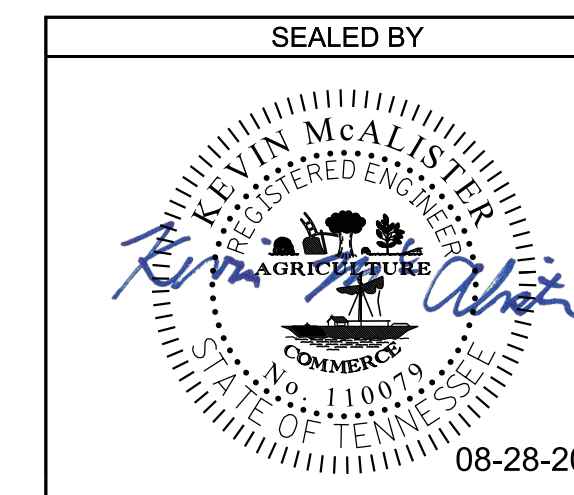
\* REFERENCE DRAWINGS

DWG. NO.	DRAWING
H-2-44 - H-2-51	EXISTING BRIDGE PLANS (1959)
M-202-74 - M-202-91A	BRIDGE WIDENING PLANS (1988)

\* DENOTES: THESE DRAWINGS TO BE PRINTED WITH PLANS.

LIST OF SPECIAL PROVISIONS

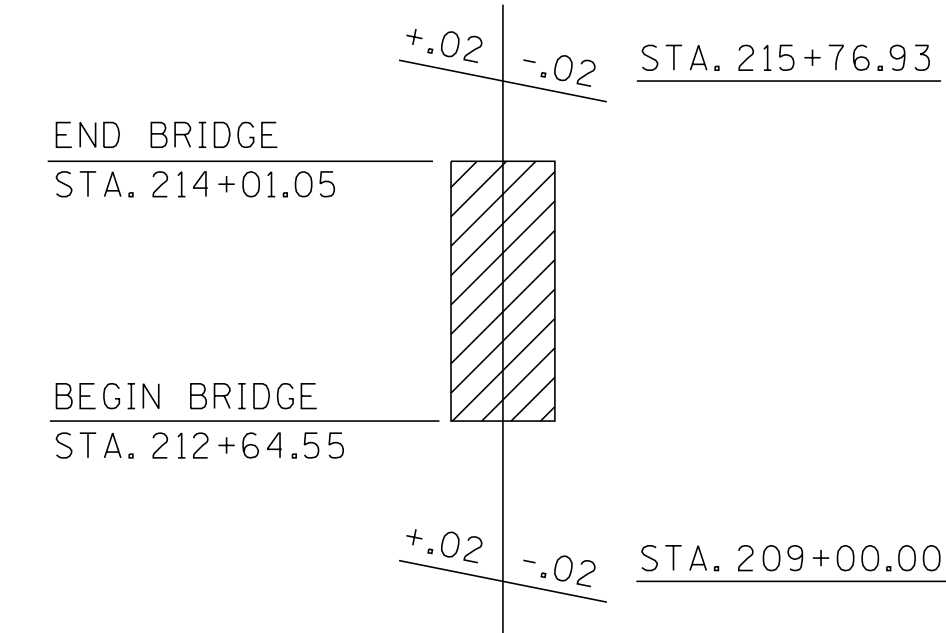
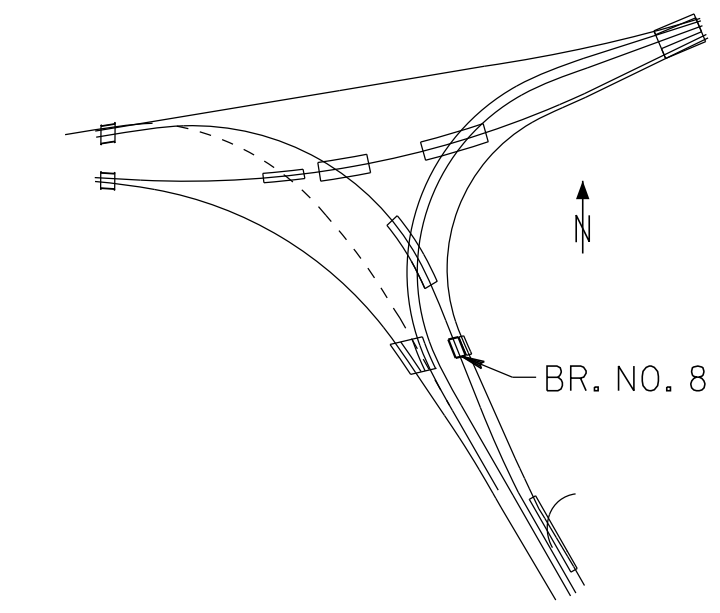
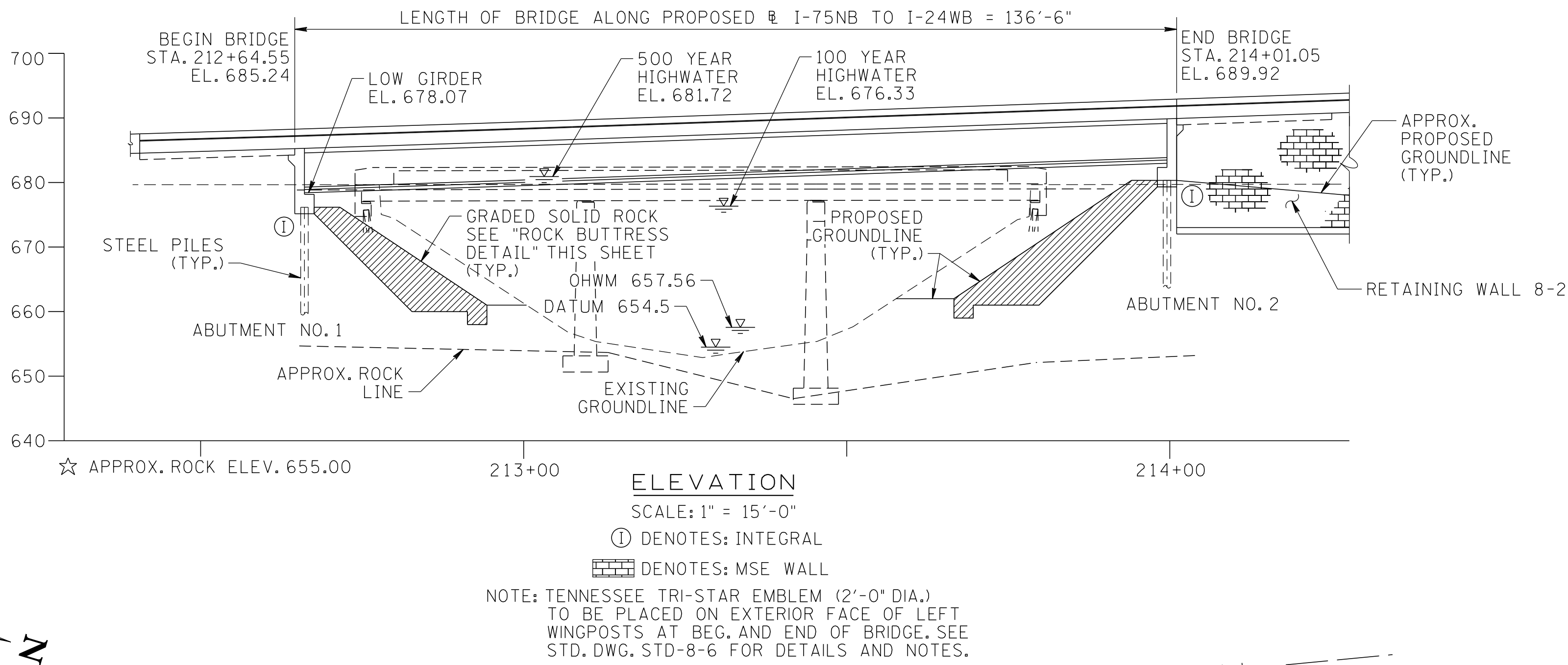
SPECIAL PROVISION	PROV. NO.	LAST REV. DATE
REPAIR OF BRIDGE DECK CRACKS	604CR	02-19-1996



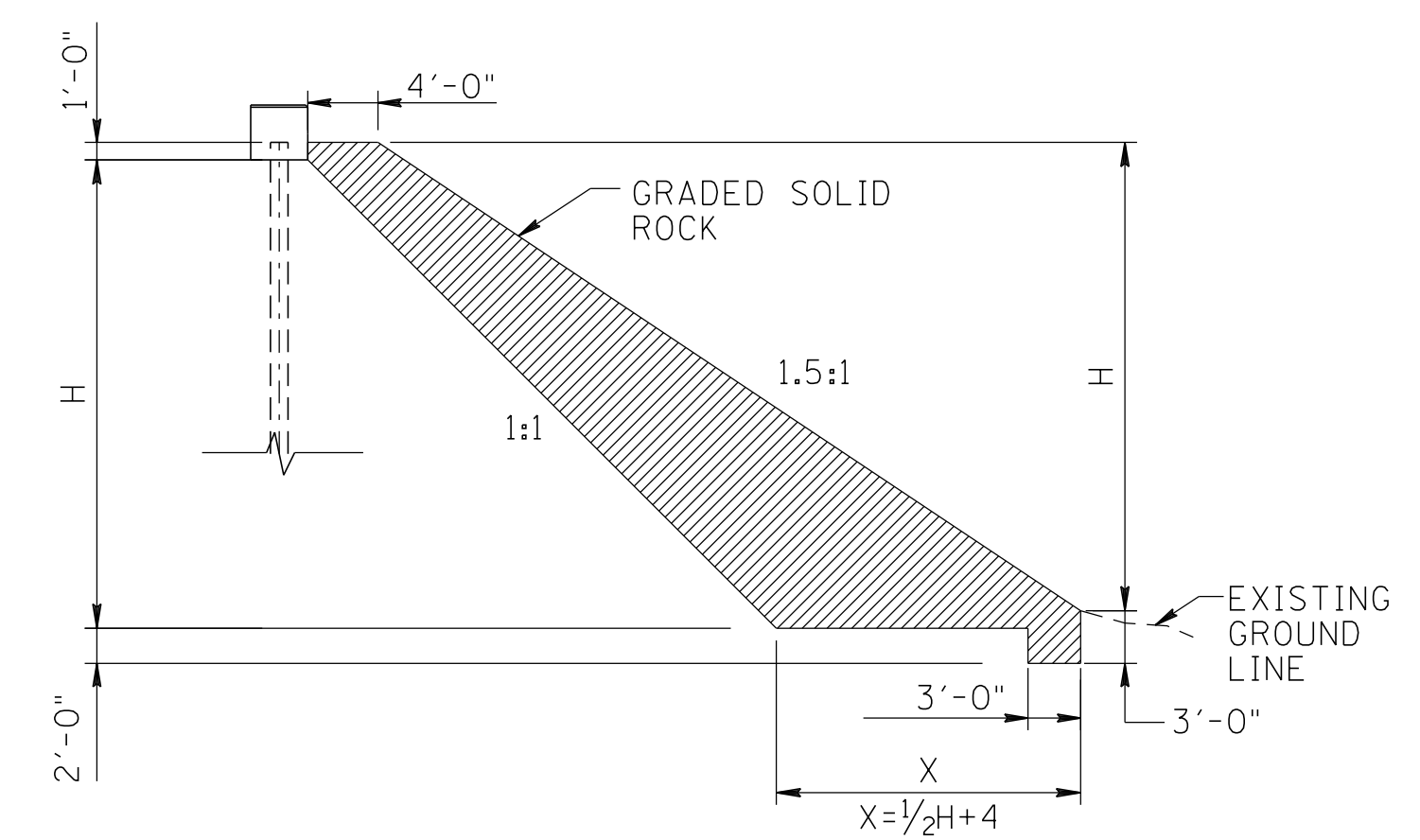
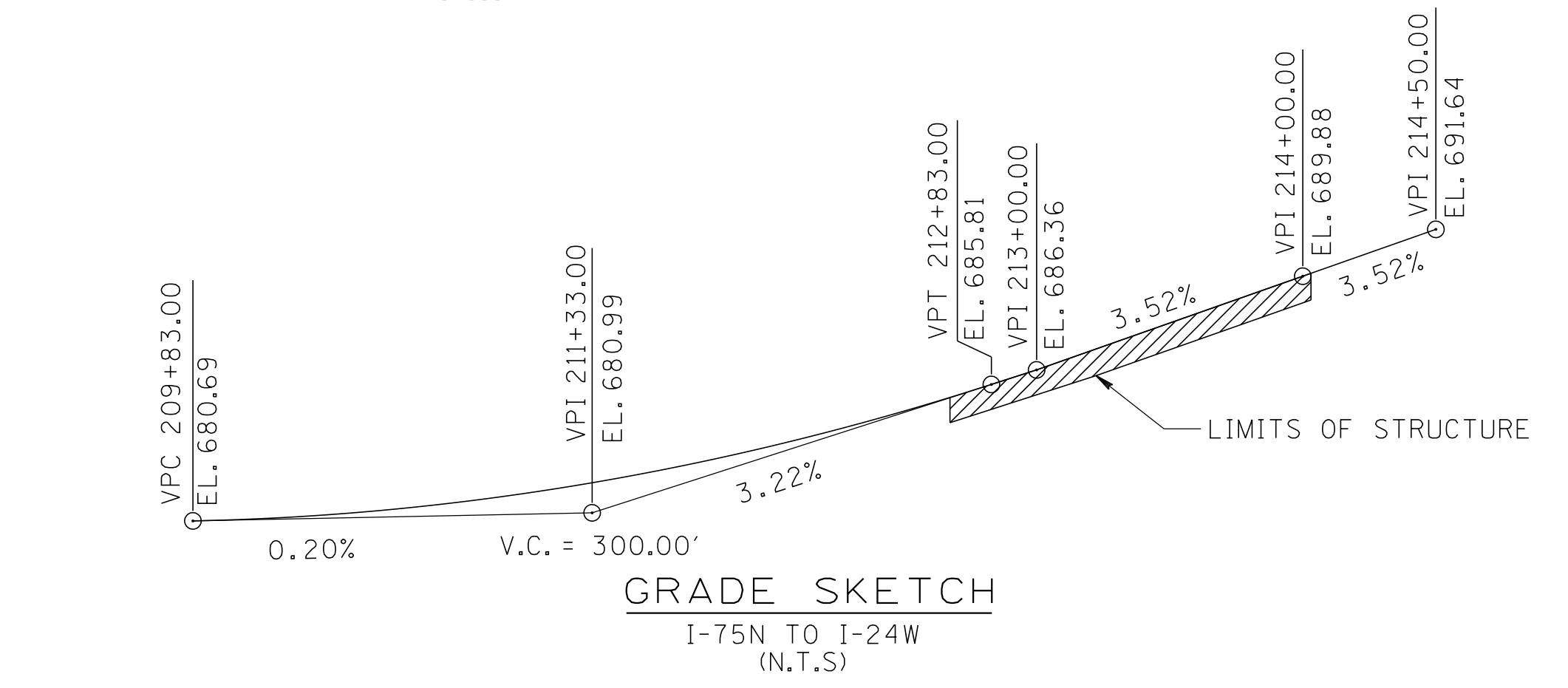
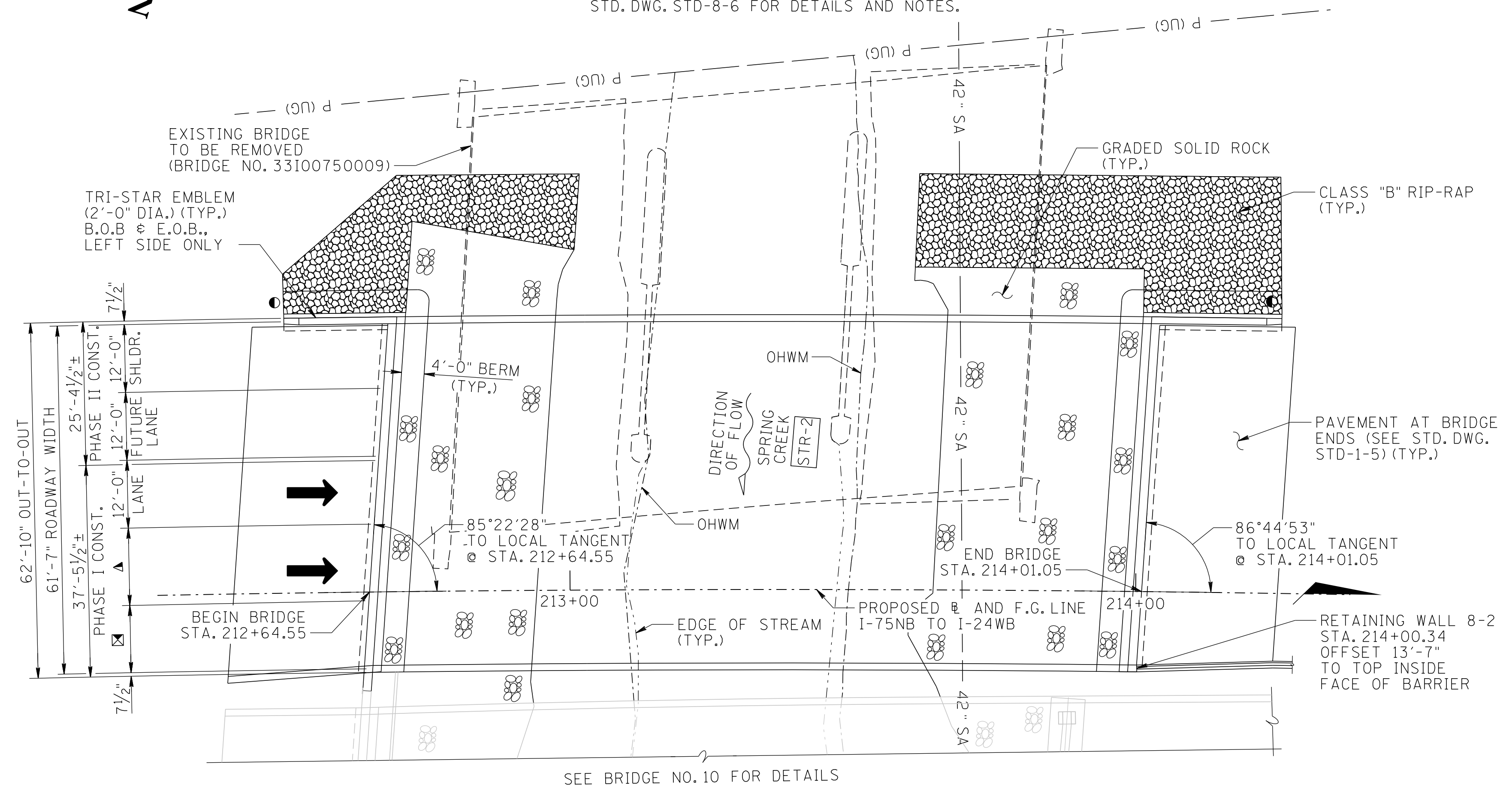
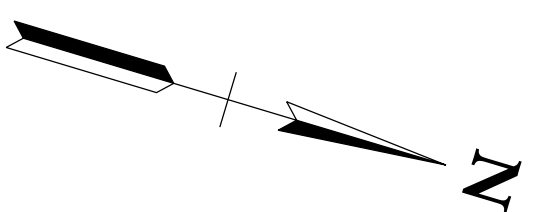
STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BRIDGE NO. 1SB  
 LIST OF DRAWINGS  
 I-75 SB  
 OVER SPRING CREEK  
 HAMILTON COUNTY  
 2019

PIN NO.: 114174.00  
 DESIGN BY: J. LEADERS DATE: 10/2019  
 DRAWN BY: K. SWANK DATE: 10/2019  
 SUPERVISED BY: K. McALISTER DATE: 10/2019  
 CHECKED BY: A. MOORE DATE: 10/2019

PROJECT NO.	YEAR	SHEET NO.	
IM/NH-75-1(131)	2019	U-91-168	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	08-28-20	KSM	REMOVED END OF BRIDGE DRAINS



CURVE 75N-24W-1  
PI 208+09.97  
N 243,590.8785  
E 2,204,981.7017  
Δ 15° 31' 51" (RT)  
D 1° 00' 22"  
R 5,694.00  
L 1,543.45  
T 776.48  
SE 0.020 FT/FT  
DESIGN SPEED 50 MPH  
TRANS. LENGTH N/A

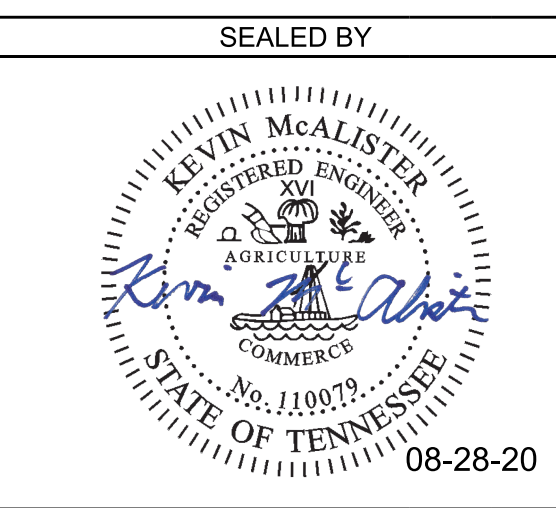


**HYDRAULIC DATA**

DRAINAGE AREA	20.8 SQ MI
DESIGN DISCHARGE (100 YEAR)	10,450 CFS
AREA BELOW 100-YEAR ELEVATION	1,529.81 SQ FT*
100-YEAR VELOCITY	6.83 FPS
100 YEAR BRIDGE BACKWATER	0.00 FT @ 676.33**
100 YEAR DISCHARGE	10,450 CFS
500-YEAR DISCHARGE	12,450 CFS
ROADWAY OVERTOPPING ELEVATION	N/A
*AT UPSTREAM INTERNAL BRIDGE SECTION	
**AT UPSTREAM FACE OF BRIDGE (MAX. BACKWATER IS 0.31 FT @ APPROACH)	

2041 ADT (I-75NB TO I-24WB) = 27,670  
DESIGN SPEED (I-75NB TO I-24WB) = 50 MPH  
61'-7" ROADWAY WIDTH WITH STD-1-1SS PARAPET  
INTERCONNECTED PORTABLE BARRIER RAIL = 185 L.F.  
CLASS "B" RIP-RAP = 326 TONS  
GRADED SOLID ROCK = 1,568 TONS  
TYPE IV GEOTEXTILE FABRIC = 678 S.Y.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BRIDGE NO. 8  
LAYOUT  
I-75 NB TO I-24 WB OVER  
SPRING CREEK  
BRIDGE NO. 33-10024-01.18  
FED. I.D. NO. 33100750091  
HAMILTON COUNTY  
2019



NOTE: ANY WORK WITHIN THE STREAM CHANNEL AREA SHALL BE SEPARATE FROM FLOWING WATER OR CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL BE PAID 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 AND TEMPORARY DIVERSION CULVERTS.

PIN NO.:	114174.00	DATE:	10/2019
DESIGN BY:	B. GARRISON	DATE:	10/2019
DRAWN BY:	B. GARRISON	DATE:	10/2019
SUPERVISED BY:	K. McALISTER	DATE:	10/2019
CHECKED BY:	A. MOORE	DATE:	10/2019

PROJECT NO.	YEAR	SHEET NO.	
IM/NH-75-1(131)	2019	U-91-169	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	08-28-20	KSM	UPDATED LAST REVISION DATES
			UPDATED LAST REVISION DATES

LIST OF DRAWINGS 

DRAWING	DWG. NO.	LAST REV. DATE
LAYOUT	U-91-168	08-28-20
LIST OF DRAWINGS	U-91-169	08-28-20
GENERAL NOTES	U-91-170	
ESTIMATED QUANTITIES	U-91-171	
FOUNDATION DATA	U-91-172	
PHASING AND DEMOLITION PLAN	U-91-173	
SUPERSTRUCTURE	U-91-174	
SUPERSTRUCTURE DETAILS	U-91-175	
SUPERSTRUCTURE DETAILS	U-91-176	
SUPERSTRUCTURE DETAILS	U-91-177	
SCREED PLAN	U-91-178	
STAKE-OUT PLAN	U-91-179	
PRESTRESSED BULB-TEE (BT-72) DETAILS	U-91-180	
ABUTMENT NO. 1	U-91-181	
ABUTMENT NO. 1 DETAILS	U-91-182	
ABUTMENT NO. 1 DETAILS	U-91-183	
ABUTMENT NO. 2	U-91-184	
ABUTMENT NO. 2 DETAILS	U-91-185	
ABUTMENT NO. 2 DETAILS	U-91-186	
FINAL FOUNDATION DATA	U-91-187	
BILL OF STEEL	U-91-188	

LIST OF STANDARD DRAWINGS

DRAWING	DWG. NO.	LAST REV. DATE
BRIDGE RAILING SINGLE SLOPE	STD-1-ISS	5-01-14
CONCRETE PARAPET		
REINFORCED CONCRETE PAVEMENT	STD-1-5	3-26-14
AT BRIDGE ENDS		
BRIDGE MOUNTED INTERCONNECTED PORTABLE	STD-2-1	11-01-10
BARRIER RAIL		
VERTICAL PANEL DETAILS	STD-2-2	
BRIDGE MOUNTED INTERCONNECTED PORTABLE	STD-2-3	
BARRIER RAIL ALTERNATE CONNECTION DETAIL		
STANDARD PRECAST PRESTRESSED BRIDGE	STD-4-1	4-08-05
DECK PANELS GENERAL DETAILS		
STANDARD PRECAST PRESTRESSED BRIDGE	STD-4-2	4-08-05
DECK PANELS DESIGN CRITERIA		
STANDARD PRECAST PRESTRESSED BRIDGE	STD-4-3	3-02-02
DECK PANELS GENERAL DETAILS		
STANDARD PRECAST PRESTRESSED BRIDGE	STD-4-4	6-10-96
DECK PANELS CONSTRUCTION DETAILS		
STD. PILE DETAILS	STD-5-1	10-25-93
STD. PILE DETAILS	STD-5-2	5-01-14
STANDARD SEISMIC DETAILS	STD-6-1	11-01-10
TRI-STAR STATE EMBLEM FINISH DETAILS	STD-8-6	10-03-18
REINFORCING BAR SUPPORT DETAILS	STD-9-1	10-07-08
FOR CONCRETE SLABS		
MISCELLANEOUS ABUTMENT AND	STD-10-1	4-08-05
DRAINAGE DETAILS		
STD. DETAILS AND INT. DIAPH. DETAILS FOR	STD-14-1	5-01-14
BULB-TEE BEAMS		

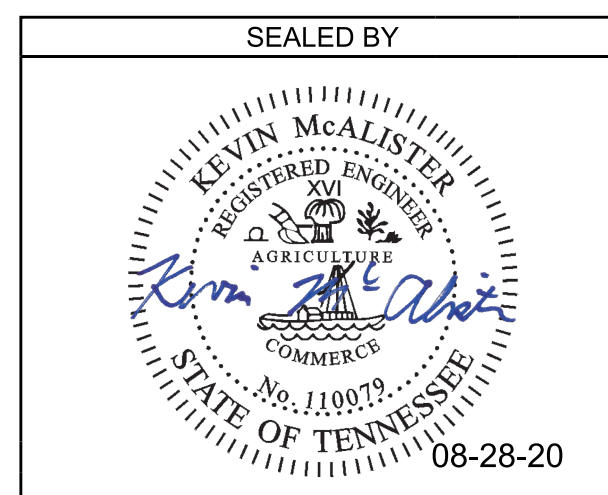
LIST OF SPECIAL PROVISIONS

NO.	LAST REV. DATE	DRAWING
604CR	2-19-96	REPAIR OF BRIDGE DECK CRACKS

\* REFERENCE DRAWINGS

DWG. NO.	DRAWING
H-2-48 THRU H-2-51	EXISTING BRIDGE PLANS (1959)
M-202-83 THRU M-202-91A	EXISTING WIDENING PLANS (1988)
BR-101-23 THRU BR-101-28	EXISTING REPAIR PLANS (2010)

\* DENOTES: THESE DRAWINGS TO BE PRINTED WITH PLANS.

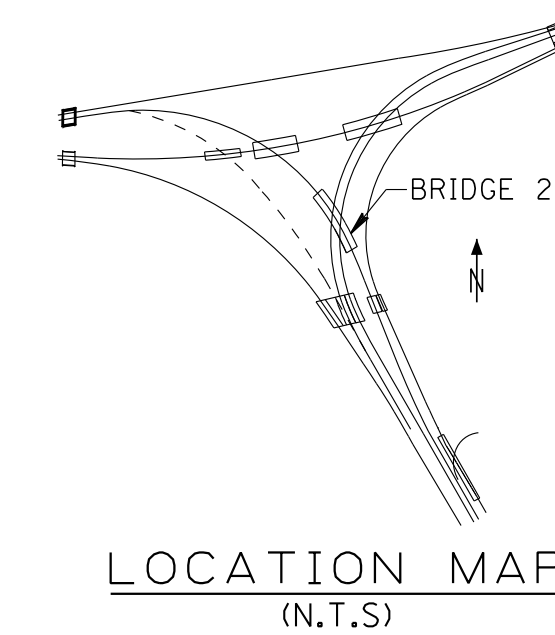
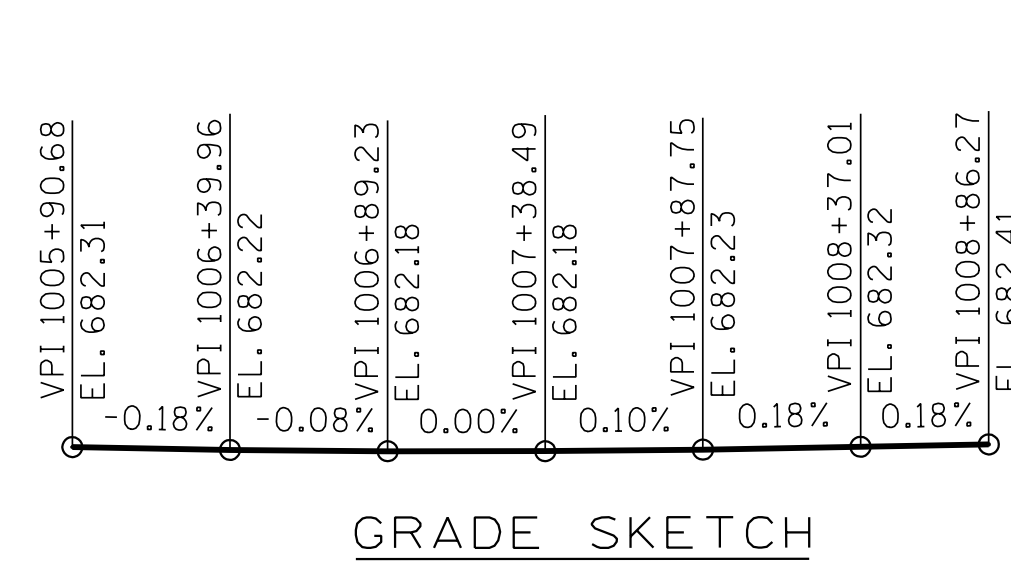
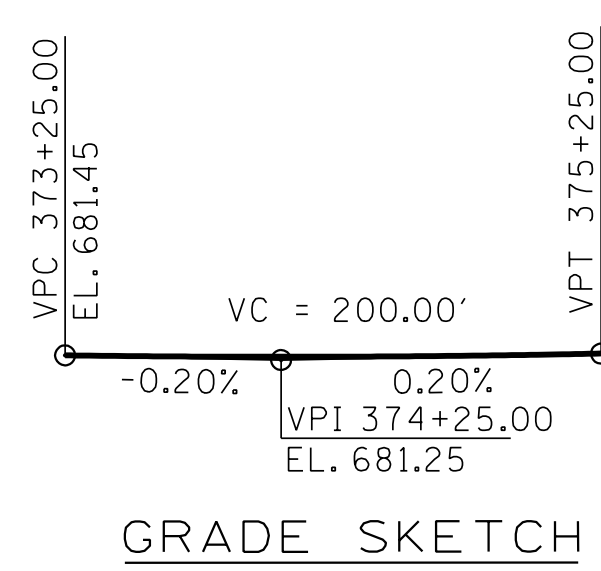
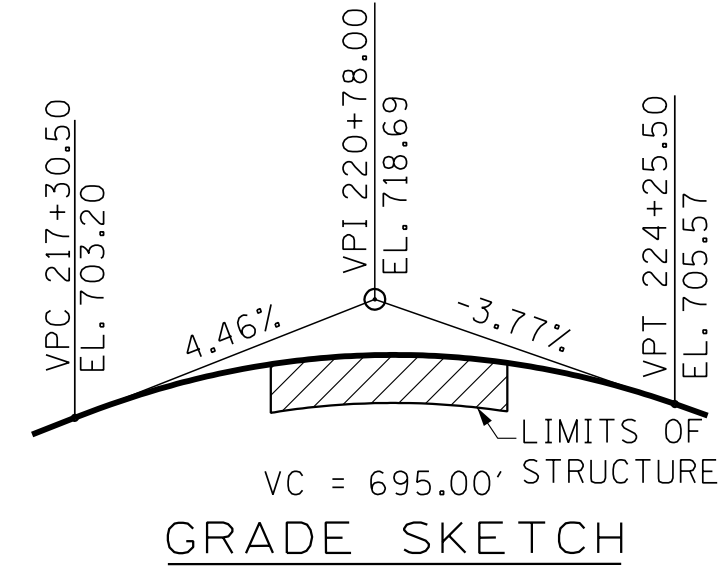


STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BRIDGE NO. 8  
 LIST OF DRAWINGS  
 I-75 NB TO I-24 WB OVER  
 SPRING CREEK  
 HAMILTON COUNTY  
 2019

PIN NO.: 114174.00  
 DESIGN BY: B. GARRISON DATE: 10/2019  
 DRAWN BY: B. GARRISON DATE: 10/2019  
 SUPERVISED BY: K. McALISTER DATE: 10/2019  
 CHECKED BY: A. MOORE DATE: 10/2019



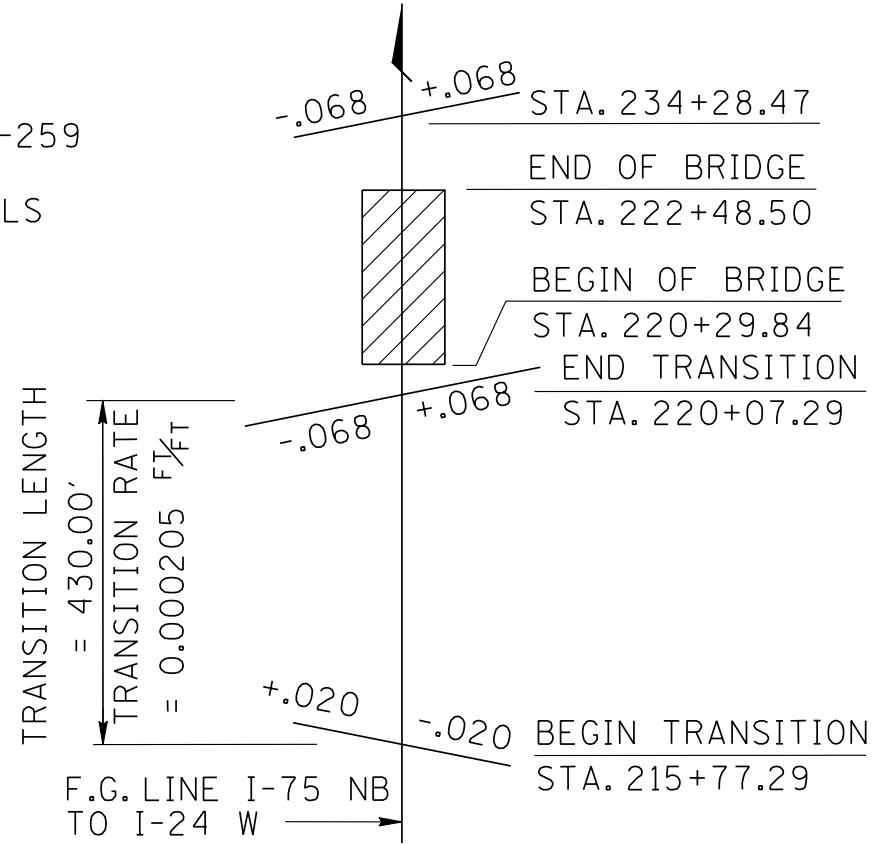
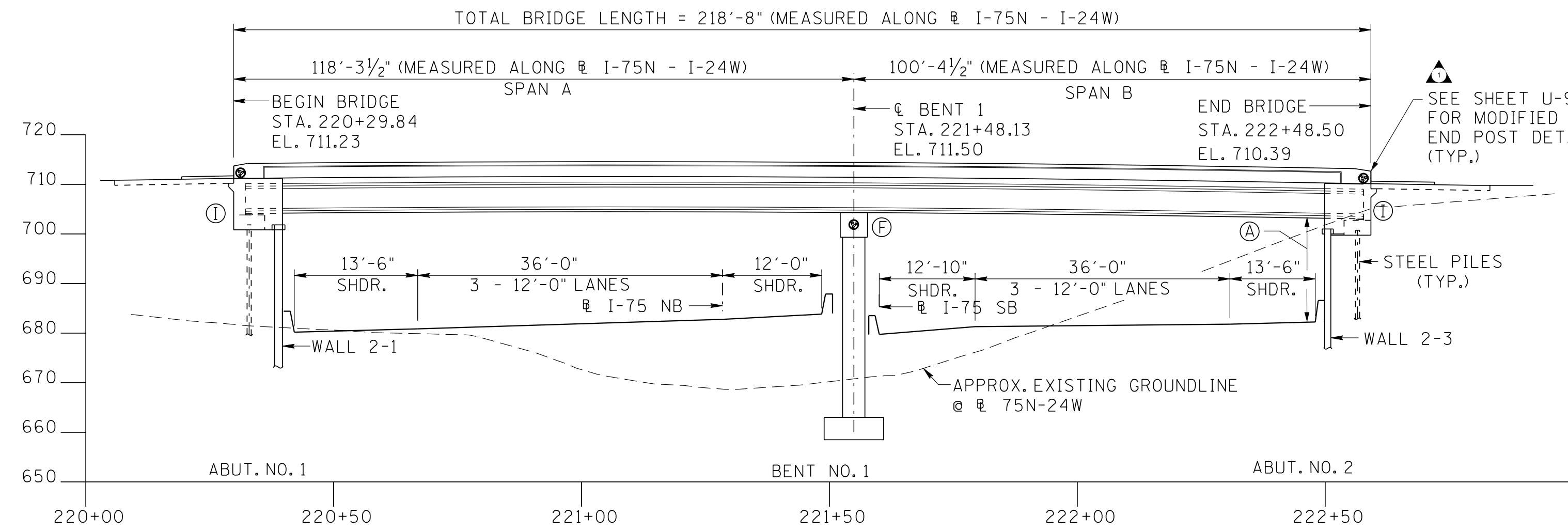
CURVE 75N-1	CURVE 75-2	CURVE 75N-24W-2
PI 1004+16.79	PI 379+91.83	PI 229+41.98
N 244,473.1693	N 245,224.9318	N 245,666.2130
E 2,204,404.1699	E 2,203,955.9341	E 2,204,453.3489
Δs 54° 43' 40" (RT)	Δs 100° 44' 14" (RT)	Δs 85° 07' 27" (LT)
Θs IN 10° 06' 02"	Θs 9° 56' 04"	Θs 9° 53' 11"
Δc 34° 31' 36" (RT)	Δc 80° 52' 06" (RT)	Δc 65° 21' 04" (LT)
Dc 4° 41' 52"	Dc 4° 37' 14"	Dc 4° 35' 54"
Rc 1,219.60	Rc 1,240.00	Rc 1,246.00
Lc 734.94	Lc 1,750.16	Lc 1,421.18
Ts IN 849.25	Ts 1,719.51	Ts 1,364.69
Ls IN 430.00	Ls 430.00	Ls 430.00
SE 0.068 FT/FT	SE 0.068 FT/FT	SE 0.068 FT/FT
DESIGN SPEED 50 MPH	DESIGN SPEED 50 MPH	DESIGN SPEED 50 MPH
TRANS. LENGTH 430	TRANS. LENGTH 430'	TRANS. LENGTH 430'



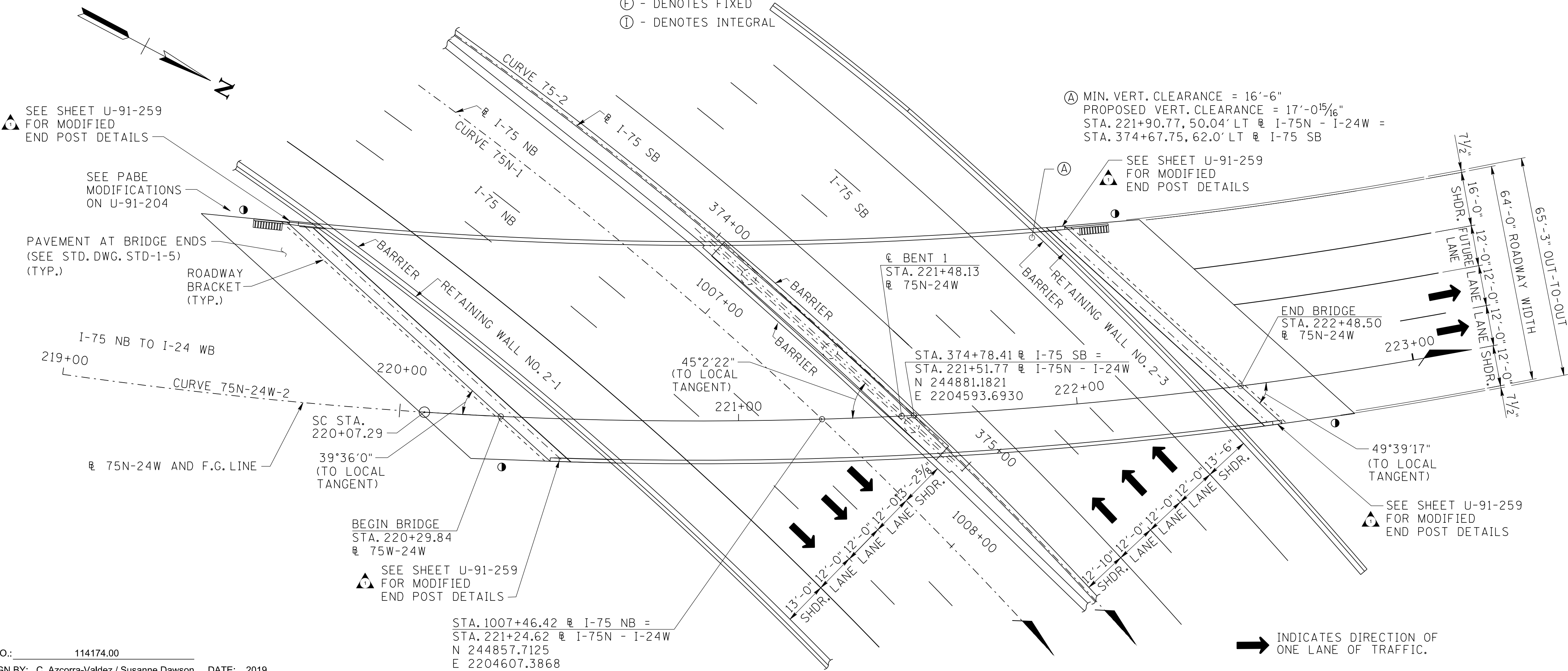
PROJECT NO.		YEAR	SHEET NO.
IM/NH-75-1(131)		2019	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	08-06-2020	DPP	ADDED MODIFIED END POST DETAIL LABELS



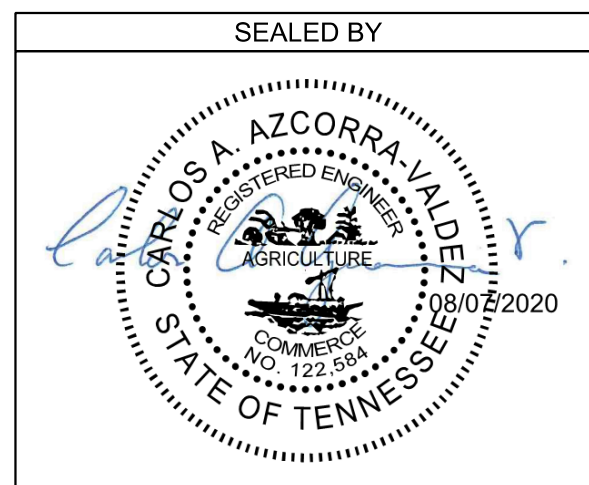
**ELEVATION**  
 (F) - DENOTES FIXED  
 (I) - DENOTES INTEGRAL



**PLAN**  
 SCALE : 1" = 20'-0"

- ➔ INDICATES DIRECTION OF ONE LANE OF TRAFFIC.
- DENOTES: GUARDRAIL ATTACHMENT
- ▤ DENOTES: 2'-0" X 8'-7" END OF BRIDGE DRAIN WITH END OF PAVEMENT. (SEE STD. DWG. NOS. STD-1-6, 7, AND 8). ALSO SEE PABE MODIFICATIONS ON DWG. NO. U-91-184.

2041 ADT (I-75 NB TO I-24 WB) = 36,380  
 2041 ADT (I-75) = 127,360  
 DESIGN SPEED (I-75 NB TO I-24 WB) = 50 MPH  
 DESIGN SPEED (I-75) = 50 MPH  
 64'-0" ROADWAY WITH STD-1-1SS PARAPET



DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 2  
 LAYOUT AND ELEVATION  
 I-75 NB TO I-24 WB  
 OVER I-75  
 BRIDGE NO. 33-10075-01.32  
 FED. ID NO. 33100750095  
 HAMILTON COUNTY  
 2019

8/6/2020 5:56:30 PM c:\pwworking\p1\pickeid\1474605\BR2-114174-00-Structures-001-Layout.dgn

PIN NO.: 114174.00	DATE: 2019
DESIGN BY: C. Azcorra-Valdez / Susanne Dawson	DATE: 2019
DRAWN BY: Edward M. Dunne	DATE: 2019
SUPERVISED BY: Josh M. Orton	DATE: 2019
CHECKED BY: Frank G. Bale / William Huffstetter	DATE: 2019

PROJECT NO.	YEAR	SHEET NO.	
IM/NH-75-1(131)	2019	U-91-239	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	1-31-2020	KSM	REVISED DRAWING REVISION DATES
2	3-27-2020	KSM	REVISED DRAWING REVISION DATES
3	8-28-2020	KSM	REVISED DRAWING REVISION DATES
-	-	-	AND ADDED SHEET U-91-259
-	-	-	

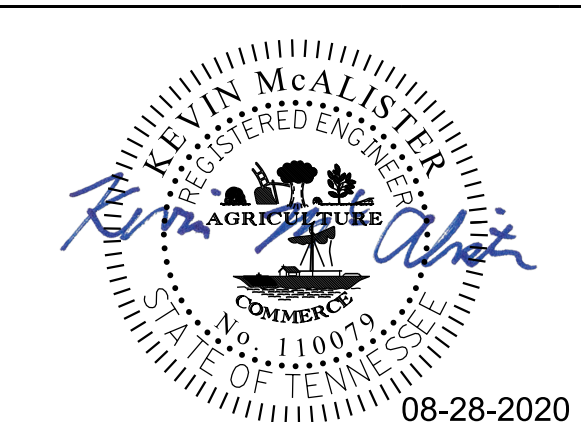
LIST OF DRAWINGS 

DRAWING	DWG. NO.	LAST REV. DATE
LAYOUT	U-91-238	3-27-20
LIST OF DRAWINGS	U-91-239	8-28-20
GENERAL NOTES	U-91-240	
ESTIMATED QUANTITIES	U-91-241	1-31-20
FOUNDATION DATA	U-91-242	
SUPERSTRUCTURE (TYPICAL SECTION)	U-91-243	
SUPERSTRUCTURE DETAILS (PLAN OF MAIN REINFORCEMENT)	U-91-244	
SUPERSTRUCTURE DETAILS (SLAB PLAN)	U-91-245	
SUPERSTRUCTURE DETAILS (FRAMING PLAN)	U-91-246	
SCREED PLAN	U-91-247	3-27-20
STAKEOUT PLAN	U-91-248	
PRESTRESSED BULB-TEE (BT-54) DETAILS	U-91-249	
ABUTMENT NO. 1	U-91-250	3-27-20
ABUTMENT NO. 1 DETAILS	U-91-251	
ABUTMENT NO. 2	U-91-252	3-27-20
ABUTMENT NO. 2 DETAILS	U-91-253	
BENT NO. 1	U-91-254	1-31-20
BENT NO. 1 DETAILS	U-91-255	1-31-20
FINAL FOUNDATION DATA	U-91-256	1-31-20
BILL OF STEEL (SHEET 1 OF 2)	U-91-257	
BILL OF STEEL (SHEET 2 OF 2)	U-91-258	1-31-20
STD-1-ISS MODIFIED ENDPOST DETAILS	U-91-259	8-28-20

LIST OF STANDARD DRAWINGS

DRAWING	DWG. NO.	LAST REV. DATE
BRIDGE RAILING SINGLE SLOPE	STD-1-ISS	5-01-14
CONCRETE PARAPET		
REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS	STD-1-5	3-26-14
BRIDGE END DRAIN DETAILS 2'X8'-7" $\phi$ 4'X8'-7" WITH PAVEMENT AT BRIDGE ENDS	STD-1-6	4-28-97
BRIDGE END DRAIN DETAILS 2'X8'-7" $\phi$ 4'X8'-7" WITH PAVEMENT AT BRIDGE ENDS	STD-1-7	8-24-11
BRIDGE END DRAIN DETAILS 2'X8'-7" WITH PAVEMENT AT BRIDGE ENDS	STD-1-8	5-1-95
BRIDGE MOUNTED INTERCONNECTED PORTABLE BARRIER RAIL	STD-2-1	11-01-10
BRIDGE MOUNTED INTERCONNECTED PORTABLE BARRIER RAIL ALTERNATE CONNECTION DETAIL	STD-2-3	
STANDARD PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	STD-4-1	4-08-05
STANDARD PRECAST PRESTRESSED BRIDGE DECK PANELS DESIGN CRITERIA	STD-4-2	4-08-05
STANDARD PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	STD-4-3	3-02-02
STANDARD PRECAST PRESTRESSED BRIDGE DECK PANELS CONSTRUCTION DETAILS	STD-4-4	6-10-96
STD. PILE DETAILS	STD-5-1	10-25-93
STD. PILE DETAILS	STD-5-2	5-01-14
STANDARD SEISMIC DETAILS	STD-6-1	11-01-10
STANDARD SEISMIC DETAILS	STD-6-2	11-07-94
SINGLE SLOPE PARAPET STANDARD LIGHT SUPPORT DETAILS	STD-8-2SS	
TRI-STAR STATE EMBLEM FINISH DETAILS	STD-8-6	10-03-18
REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS	STD-9-1	10-07-08
MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS	STD-10-1	4-08-05
STD. DETAILS AND INT. DIAPH. DETAILS FOR BULB-TEE BEAMS	STD-14-1	5-01-14
SAFETY APPROACH TO UNDERPASSES GRADING DESIGN $\phi$ SLOPE PROTECTION	RD01-SA-1	10-15-02

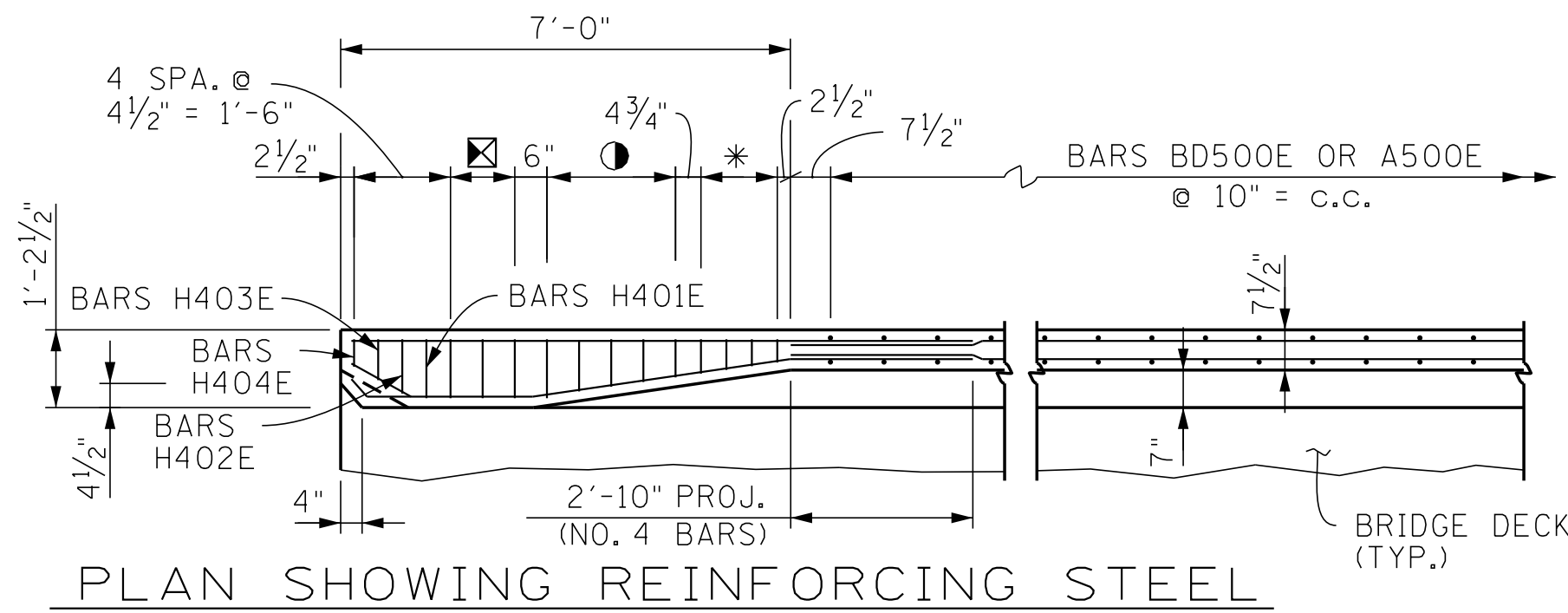
SEALED BY



STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BRIDGE NO. 9  
 LIST OF DRAWINGS  
 RAMP "D"  
 OVER RAMP "G"  
 HAMILTON COUNTY  
 2019

PIN NO.: 114174.00  
 DESIGN BY: M. DAVIS DATE: 12/2019  
 DRAWN BY: G. NEAL/L. WEBSTER DATE: 12/2019  
 SUPERVISED BY: K. McALISTER DATE: 12/2019  
 CHECKED BY: A. MOORE DATE: 12/2019

PROJECT NO.	YEAR	SHEET NO.	
IM/NH-75-1(131)	2019		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	8-28-20	KSM	ADDED SHEET
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-



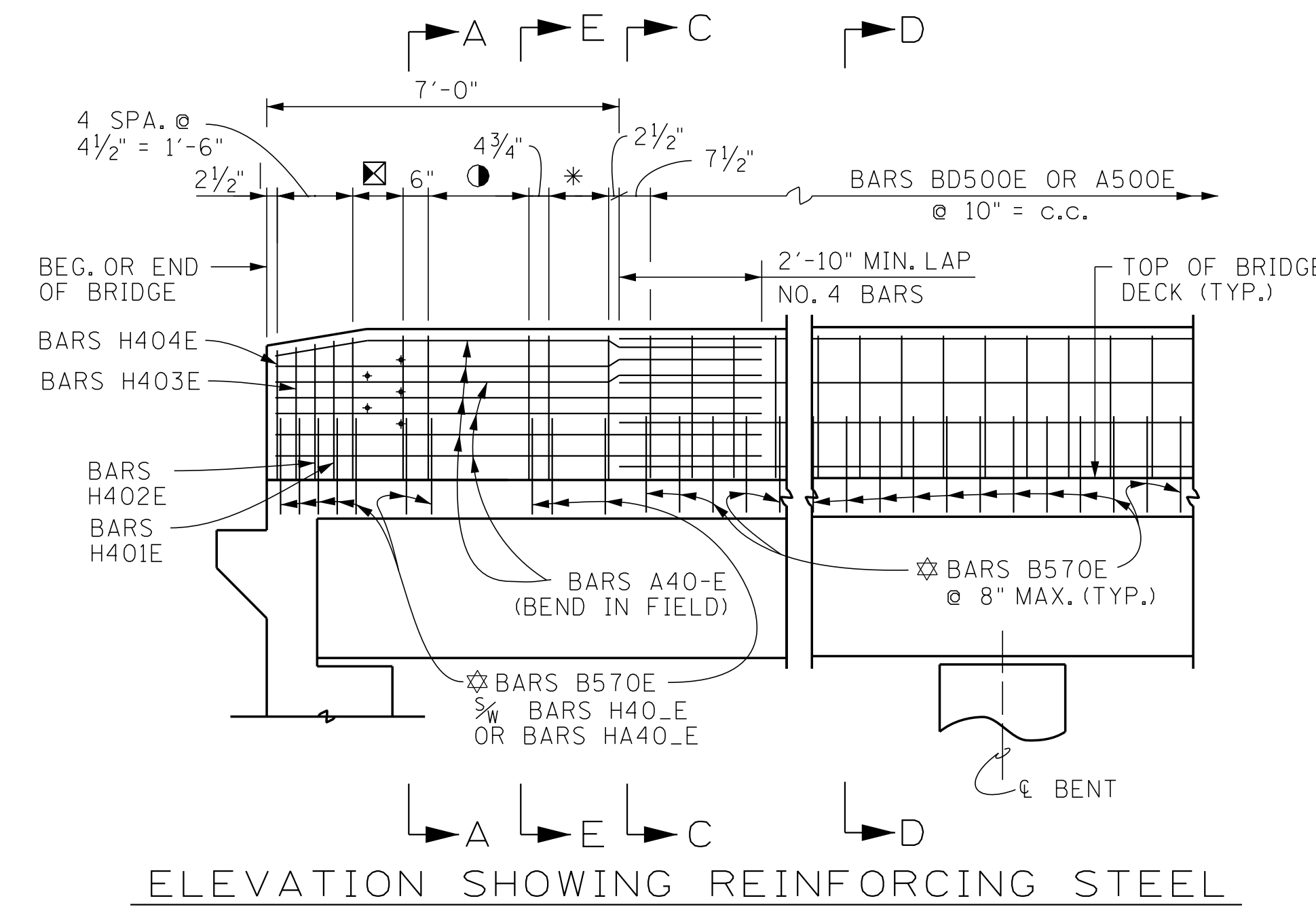
PLAN SHOWING REINFORCING STEEL

☆ DENOTES: BARS B570E IN SLAB TO BE INCLUDED IN EPOXY COATED REINFORCING QUANTITIES AND BILL OF STEEL FOR SUPERSTRUCTURE.

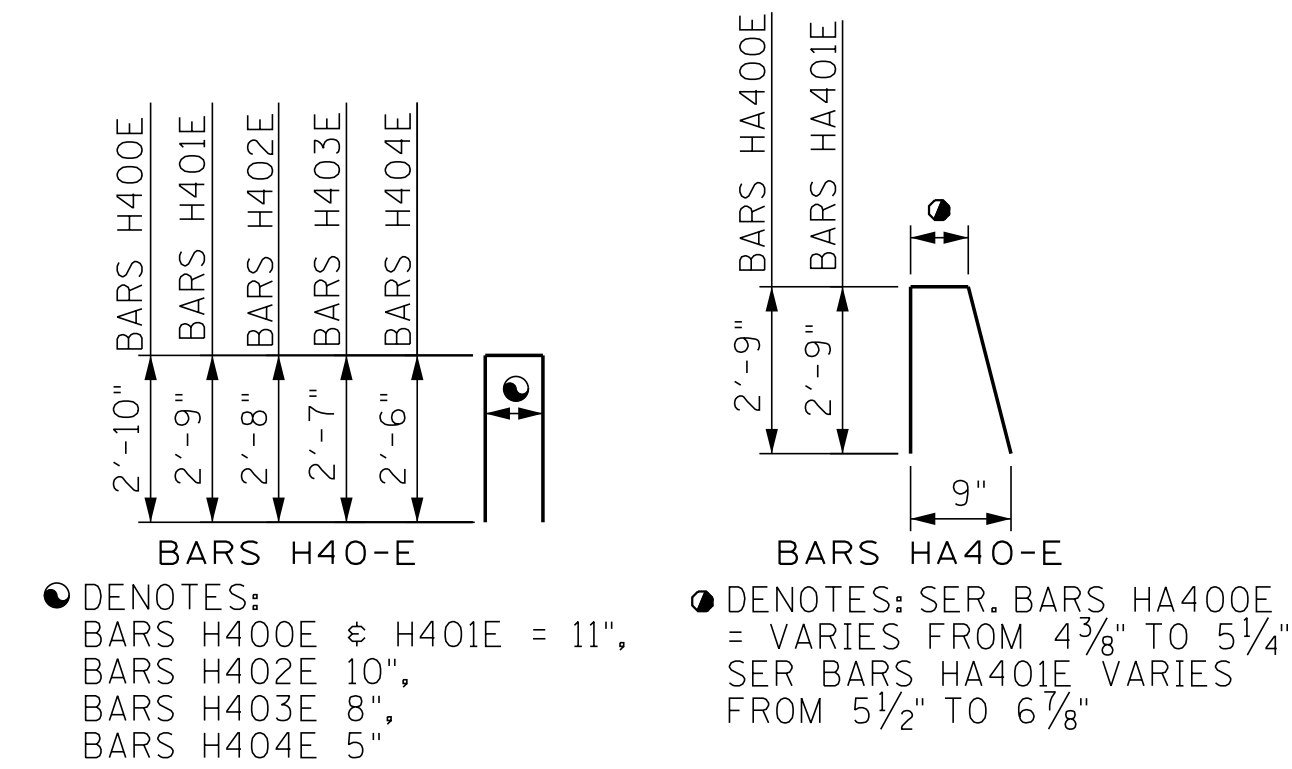
☒ DENOTES: BARS H400E - 2 SPA. @ 6" = 1'-0"

● DENOTES: SERIES BARS HA401E - 4 SPA. @ 6" = 2'-0"

\* DENOTES: SERIES BARS HA400E - 3 SPA. @ 4 3/4" = 1'-2 1/4"



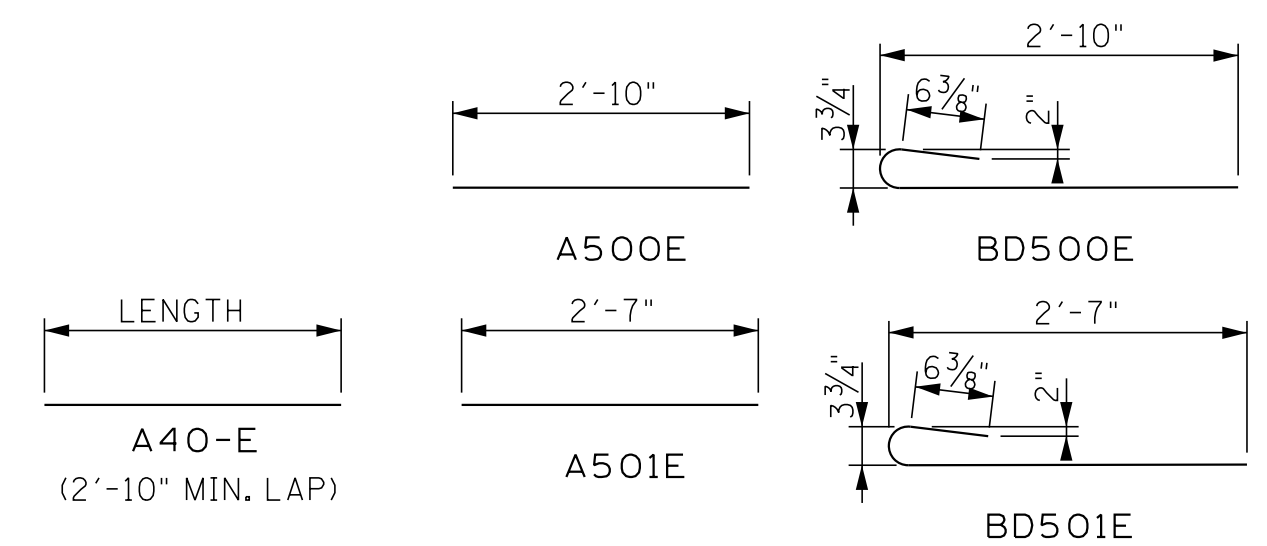
ELEVATION SHOWING REINFORCING STEEL



GENERAL NOTES:

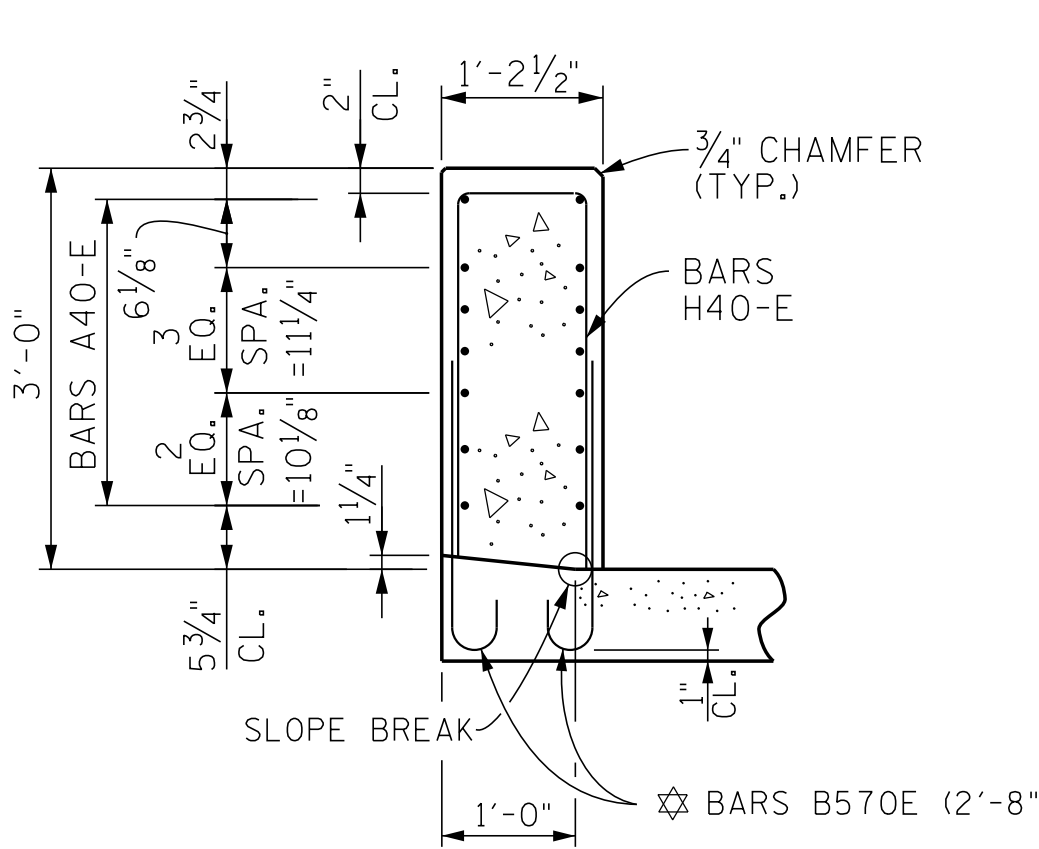
THESE NOTES AND DETAILS ARE FOR MODIFICATION OF THE WINGPOST TO TERMINATE AT THE ENDS OF THE BRIDGE. THEY ARE TO BE USED AT BRIDGES 2, 3, AND 6, AS WELL AS OTHER LOCATIONS ON THE PROJECT SITE, AS NECESSARY, WHERE THE WINGPOST NEEDS TO TERMINATE AT THE ENDS OF THE BRIDGE.

FOR GENERAL AND FABRICATION NOTES, DELINEATORS, GUARDRAIL INSERT ASSEMBLY, DIMENSIONS, AND DETAILS REGARDING THE CONSTRUCTION OF THE STD-1-1SS PARAPET NOT SHOWN HERE, SEE TDOT STANDARD DRAWING STD-1-1SS, (REV. 10-15-19).

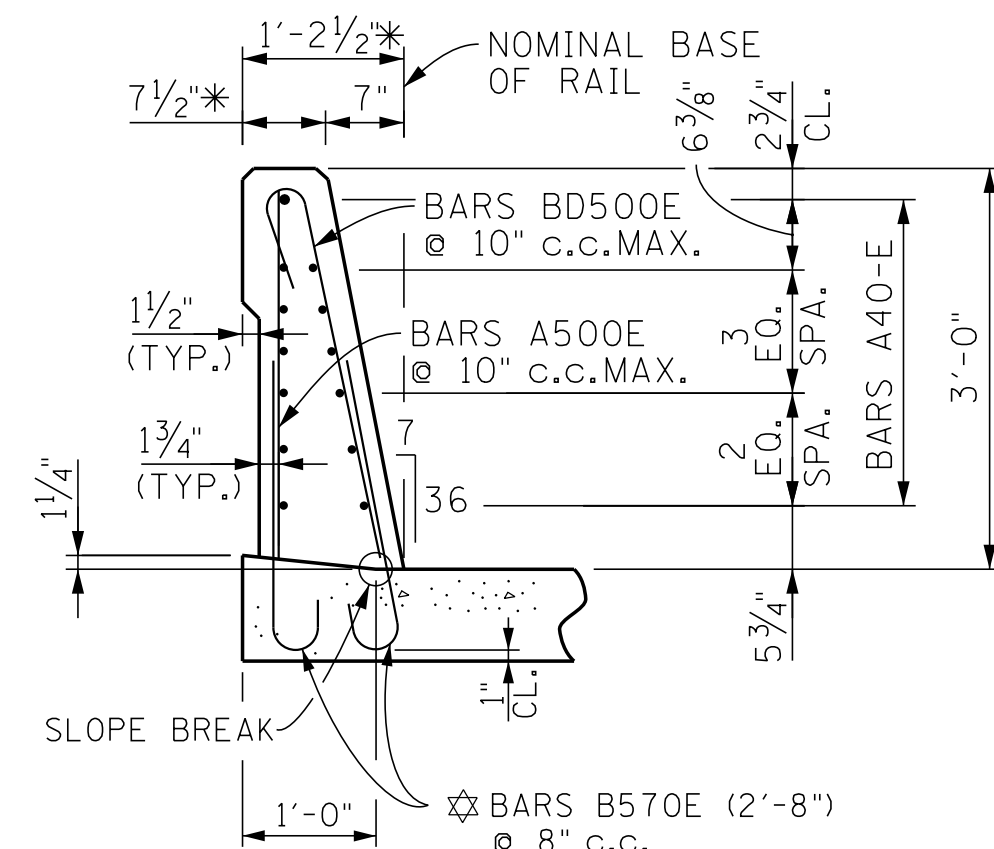


REINFORCING NOTES:

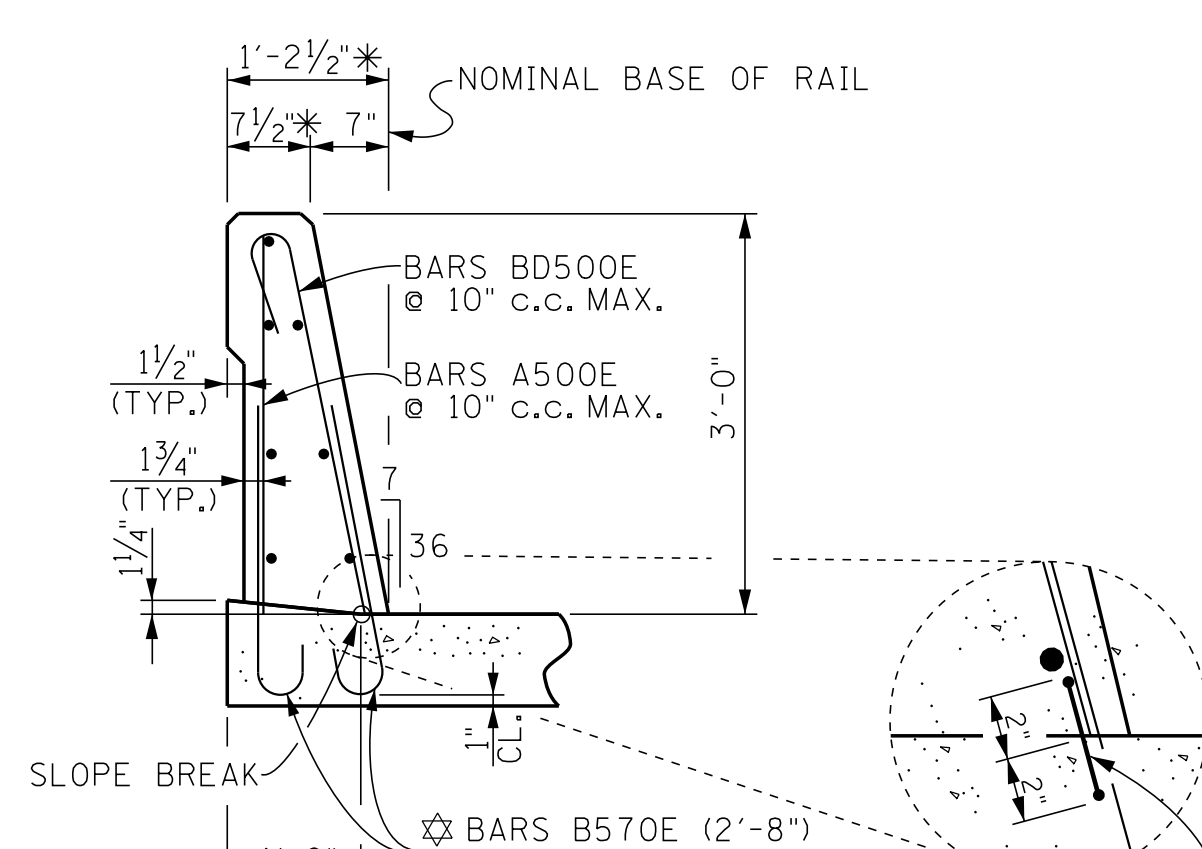
1. BAR DIMENSIONS ARE OUT TO OUT. FIRST DIGIT OF THE NUMBER INDICATES SIZE.
2. LONGITUDINAL BARS SHALL BE FULL LENGTH OF PARAPET EXCEPT THAT NO BAR WILL PASS THROUGH OPEN JOINTS.



SECTION "A"-"A"

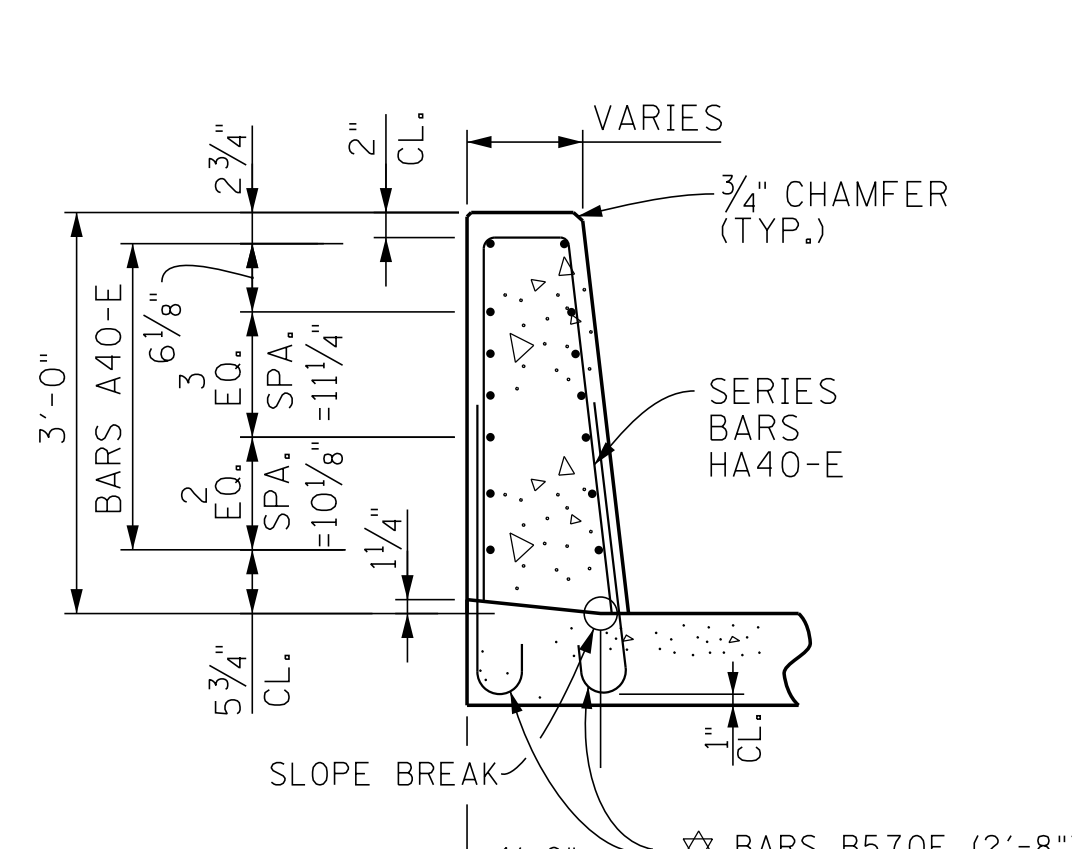


SECTION "C"-"C"

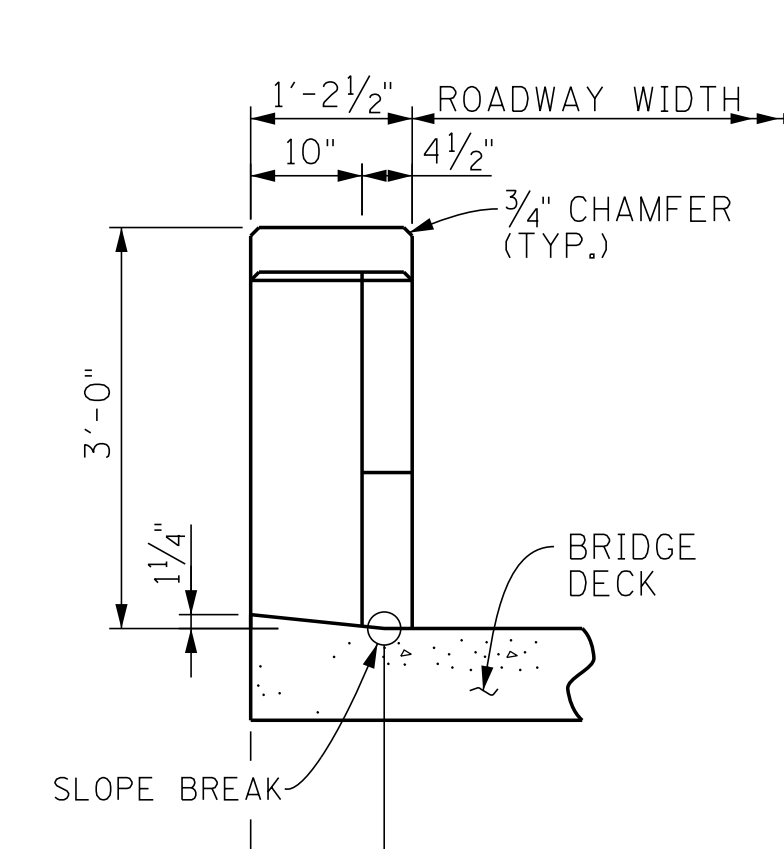


SECTION D - D

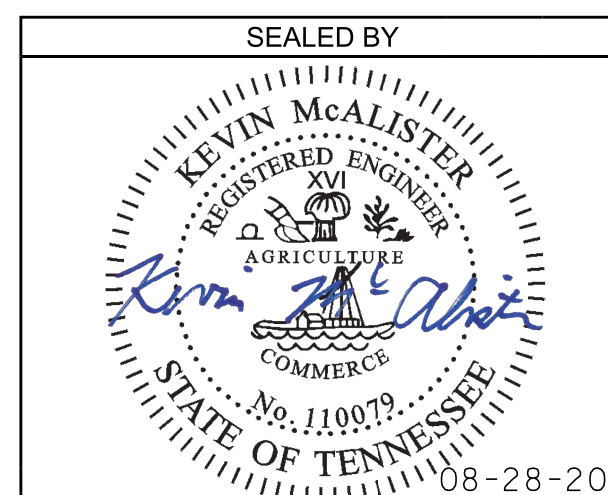
P.V.C. (POLYVINYL CHLORIDE) WATERSTOP. SEE FABRICATION NOTE 6 ON STD-1-1SS.



SECTION "E"-"E"



END ELEVATION



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

STD-1-1SS MODIFIED ENDPOST DETAILS  
I-75/I-24 DESIGN BUILD  
HAMILTON COUNTY  
2019

PIN NO.:	114174.00	DATE:	08/2020
DESIGN BY:	K. McALISTER	DATE:	08/2020
DRAWN BY:	M. JONES	DATE:	08/2020
SUPERVISED BY:	K. McALISTER	DATE:	08/2020
CHECKED BY:	M. DAVIS	DATE:	08/2020

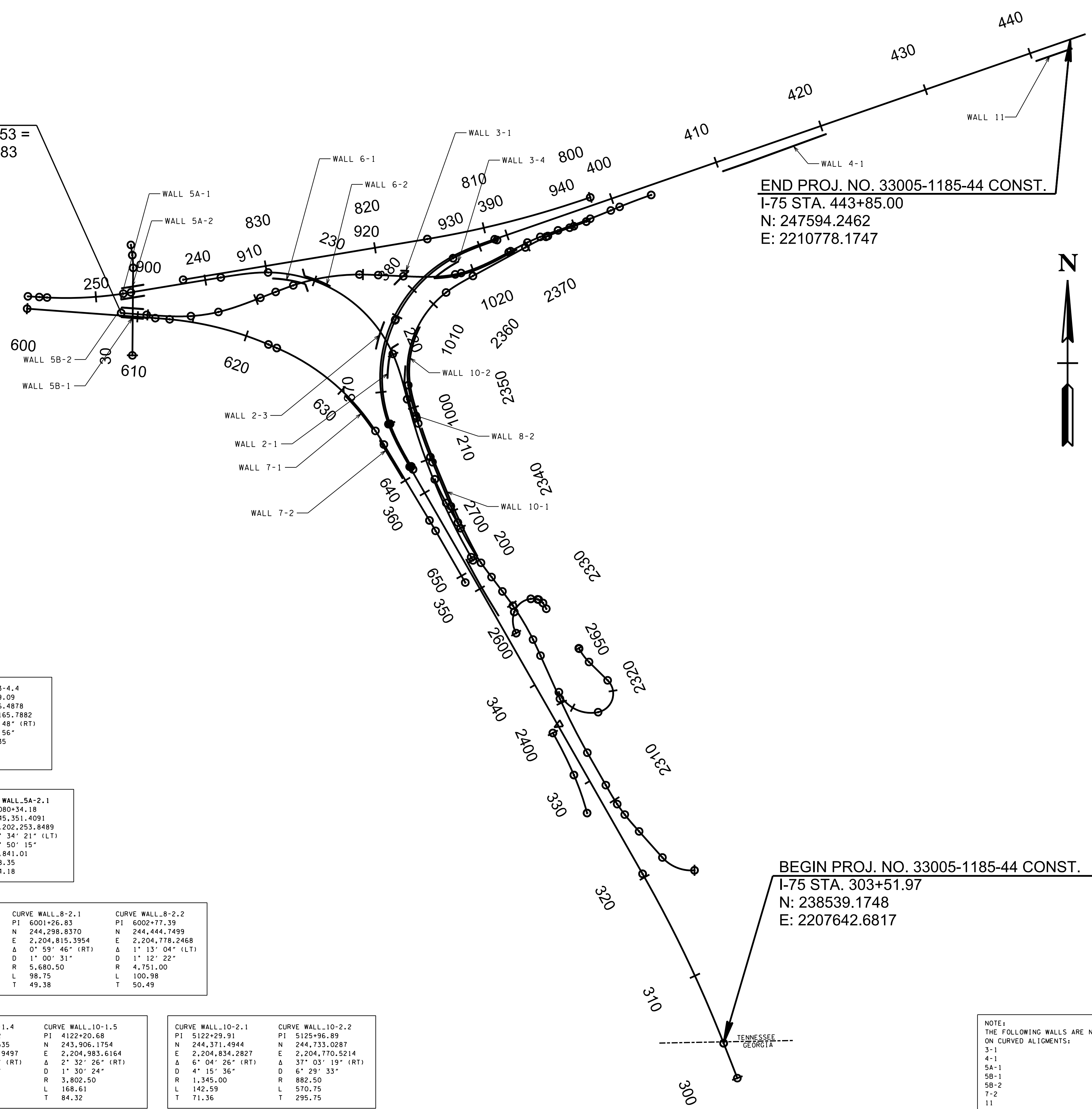


TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2019	IM/NH-75-1(131)	R-00
CONST.	2019	IM/NH-75-1(131)	R-00

REV. 12-17-2019  
REVISED WALLS 2-1, 3-1, AND 3-4  
REV. 08-28-2020  
REVISED WALLS 4-1 AND REMOVED WALL 4-2

**LIMIT OF CONST.**  
24E-75S STA. 608+49.53 =  
24E-75N STA. 897+59.83  
N 245122.9291  
E 2202207.3590

**END PROJ. NO. 33005-1185-44 CONST.**  
I-75 STA. 443+85.00  
N: 247594.2462  
E: 2210778.1747



**WALL ALIGNMENT DATA**  
SEE WALL SHEETS FOR LENGTH OF WALLS

CURVE WALL 2-1	CURVE WALL 2-3.1	CURVE WALL 2-3.2
PI 5010+81.72	PI 2090+25.19	PI 2091+58.78
N 244,621.0052	N 244,812.9623	N 244,943.1685
E 2,204,614.4789	E 2,204,509.9484	E 2,204,539.8852
Δ 7° 59' 48" (RT)	Δ 3° 51' 45" (RT)	Δ 9° 30' 25" (RT)
D 4° 54' 03"	D 7° 42' 02"	D 4° 23' 26"
R 1,169.10	R 744.04	R 1,305.00
L 163.17	L 50.16	L 216.54
T 81.72	T 25.09	T 108.52

CURVE WALL 3-4.1	CURVE WALL 3-4.2	CURVE WALL 3-4.3	CURVE WALL 3-4.4
PI 6301+84.09	PI 6304+33.49	PI 6305+79.32	PI 6306+59.09
N 245,608.8405	N 245,501.3155	N 245,463.5656	N 245,446.4878
E 2,205,620.5162	E 2,205,395.4468	E 2,205,253.9346	E 2,205,165.7882
Δ 2° 51' 21" (RT)	Δ 10° 15' 20" (RT)	Δ 3° 13' 09" (RT)	Δ 5° 42' 48" (RT)
D 1° 20' 59"	D 4° 20' 04"	D 5° 47' 25"	D 4° 36' 56"
R 4,245.25	R 1,321.84	R 989.50	R 1,241.35
L 211.60	L 236.60	L 55.59	L 123.78
T 105.82	T 118.62	T 27.80	T 61.94

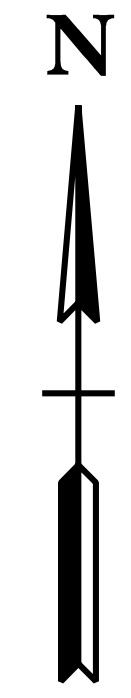
CURVE WALL 3-4.6	CURVE WALL 3-4.7	CURVE WALL 3-4.8	CURVE WALL 5A-2.1
PI 6309+27.50	PI 6309+90.69	PI 6310+37.82	PI 2080+34.18
N 245,525.2500	N 245,559.0256	N 245,581.9114	N 245,351.4091
E 2,205,147.6515	E 2,205,201.0742	E 2,205,242.2890	E 2,202,253.8489
Δ 2° 59' 49" (RT)	Δ 3° 01' 26" (RT)	Δ 1° 25' 58" (RT)	Δ 0° 34' 21" (LT)
D 4° 44' 12"	D 4° 47' 30"	D 4° 35' 54"	D 0° 50' 15"
R 1,209.66	R 1,195.75	R 1,245.98	R 6,841.01
L 63.27	L 63.11	L 31.16	L 68.35
T 31.64	T 31.56	T 15.58	T 34.18

\* CURVE WALL 3-4.5 NOT USED.

CURVE WALL 6-1	CURVE WALL 6-2.1	CURVE WALL 7-1.1	CURVE WALL 8-2.1	CURVE WALL 8-2.2
PI 5042+31.19	PI 2031+26.10	PI 3051+78.33	PI 6001+26.83	PI 6002+77.39
N 245,431.7128	N 245,421.5768	N 244,272.2486	N 244,298.8370	N 244,444.7499
E 2,203,719.6159	E 2,203,985.1154	E 2,204,335.2791	E 2,204,815.3954	E 2,204,778.2468
Δ 15° 01' 41" (LT)	Δ 11° 26' 06" (LT)	Δ 10° 15' 34" (RT)	Δ 0° 59' 46" (RT)	Δ 1° 13' 04" (LT)
D 4° 47' 48"	D 4° 32' 57"	D 2° 53' 03"	D 1° 00' 31"	D 1° 12' 22"
R 1,194.50	R 1,259.50	R 1,986.50	R 5,680.50	R 4,751.00
L 313.31	L 251.37	L 355.71	L 98.75	L 100.98
T 157.56	T 126.10	T 178.33	T 49.38	T 50.49

CURVE WALL 10-1.1	CURVE WALL 10-1.2	CURVE WALL 10-1.3	CURVE WALL 10-1.4	CURVE WALL 10-1.5	CURVE WALL 10-2.1	CURVE WALL 10-2.2
PI 4110+36.87	PI 4112+87.58	PI 4115+82.46	PI 4121+06.42	PI 4122+20.68	PI 5122+29.91	PI 5125+96.89
N 242,842.2779	N 243,047.2208	N 243,316.6917	N 243,800.4535	N 243,906.1754	N 244,371.4944	N 244,733.0287
E 2,205,495.2340	E 2,205,350.8112	E 2,205,228.2223	E 2,205,026.9497	E 2,204,983.6164	E 2,204,834.2827	E 2,204,770.5214
Δ 0° 59' 55" (RT)	Δ 10° 29' 34" (RT)	Δ 1° 38' 18" (RT)	Δ 0° 14' 35" (RT)	Δ 2° 32' 26" (RT)	Δ 6° 04' 26" (RT)	Δ 37° 03' 19" (RT)
D 1° 51' 30"	D 2° 31' 09"	D 1° 08' 04"	D 0° 36' 33"	D 1° 30' 24"	D 4° 15' 36"	D 6° 29' 33"
R 3,083.00	R 2,274.50	R 5,050.00	R 9,405.00	R 3,802.50	R 1,345.00	R 882.50
L 53.73	L 416.54	L 144.40	L 39.89	L 168.61	L 142.59	L 570.75
T 26.87	T 208.85	T 72.20	T 19.94	T 84.32	T 71.36	T 295.75

**BEGIN PROJ. NO. 33005-1185-44 CONST.**  
I-75 STA. 303+51.97  
N: 238539.1748  
E: 2207642.6817



SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

**STATE OF TENNESSEE**  
**DEPARTMENT OF**  
**TRANSPORTATION**

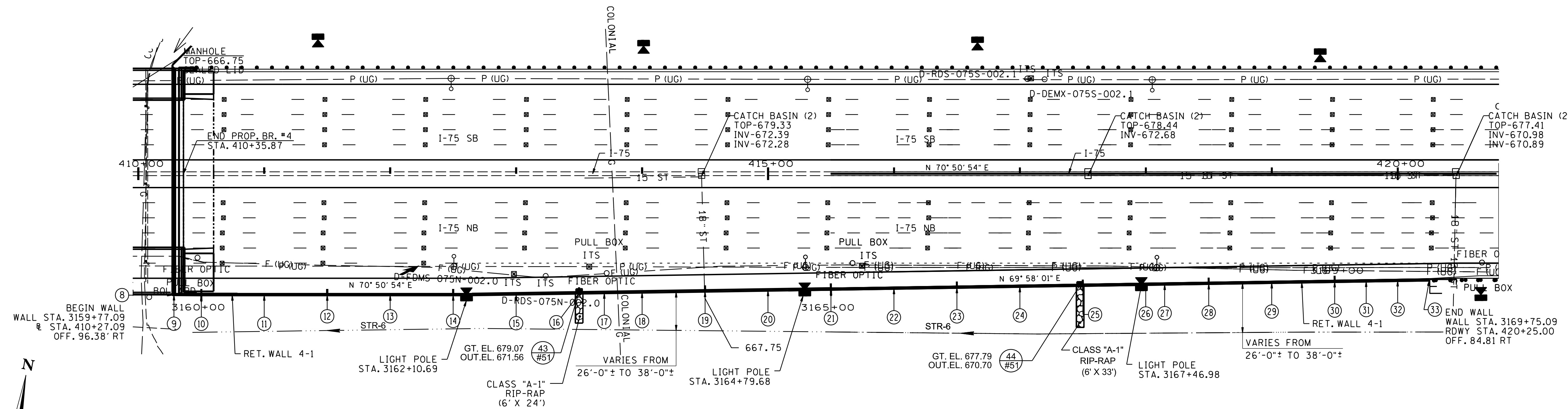
**RETAINING WALLS**  
**GEOMETRIC**  
**LAYOUT**

SCALE: 1"=500'

NOTE:  
THE FOLLOWING WALLS ARE NOT ON CURVED ALIGNMENTS:  
3-1  
4-1  
5A-1  
5B-1  
5B-2  
7-2  
11  
NOISEWALL

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2019	IM/NH-75-1(131)	R-05
CONST.	2019	IM/NH-75-1(131)	R-05

REV. 8-28-20: REVISED TOP OF FOOTING ELEVATIONS, ADDED TYP. SECTION DETAIL, REVISED QTY. OF 604-07.05, DELETED POINTS 1 THROUGH 7.



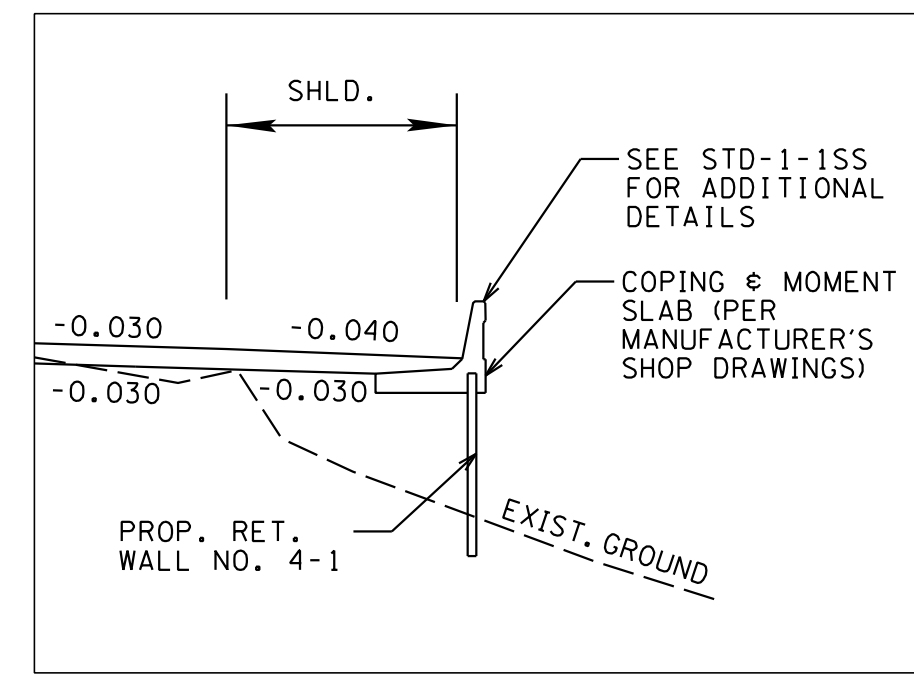
**RETAINING WALL NO. 4-1 ALIGNMENT**

▲ DENOTES: LOCATION OF LIGHT POLE. WALL MANUFACTURER IS RESPONSIBLE FOR DESIGNING AND DETAILING THE WALL TO INCLUDE THE LIGHT POLE FOUNDATIONS, ATTACHMENT HARDWARE, CONDUIT, PULL BOXES, AND ANY OTHER MISCELLANEOUS MATERIALS AS NECESSARY. SEE STANDARD DRAWING STD-8-2SS FOR TYPICAL SINGLE SLOPE RAIL MOUNTING DETAILS.

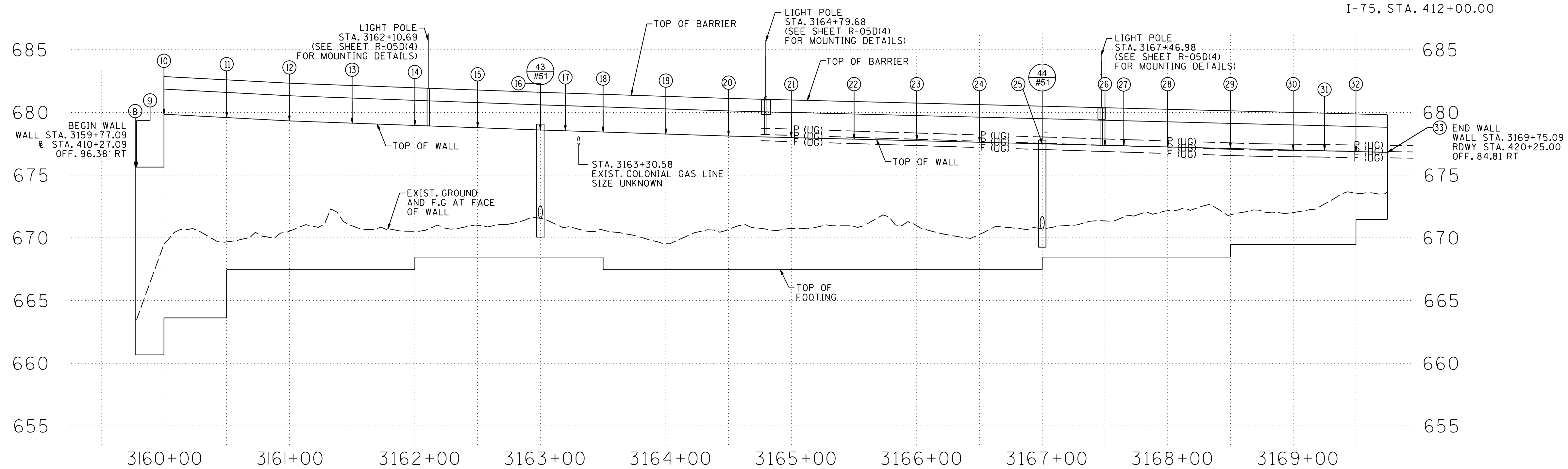
NOTE: OFFSETS SHOWN ARE TO EXPOSED FACE OF WALL.

NOTE: TOP OF FOOTING (T.O.F.) ELEVATIONS SHOWN ARE TO TOP OF STEP.

ESTIMATED QUANTITIES		
ITEM NO.	604-07.05	620-05.01
DESCRIPTION	RETAINING WALL NO. 4-1 SQ. FT	CONC. PARAPET SINGLE SLOPE (STD-1-1SS)
QUANTITY	10,335	977

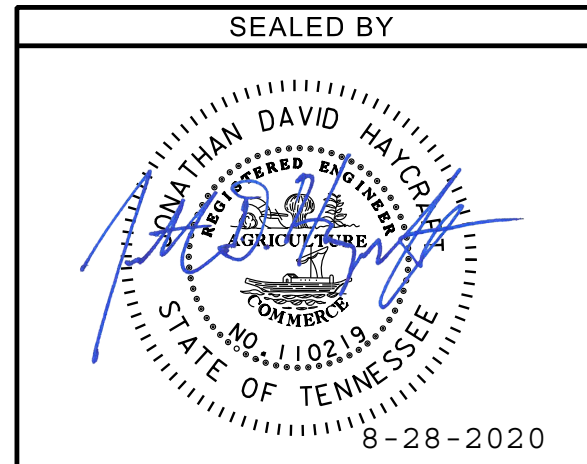


TYPICAL SECTION OF RETAINING WALL  
I-75, STA. 412+00.00



**RETAINING WALL NO. 4-1 ELEVATION**

VIEW LOOKING AT EXPOSED FACE OF WALL  
SCALE = 1H:10V



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE  
DEPARTMENT OF  
TRANSPORTATION

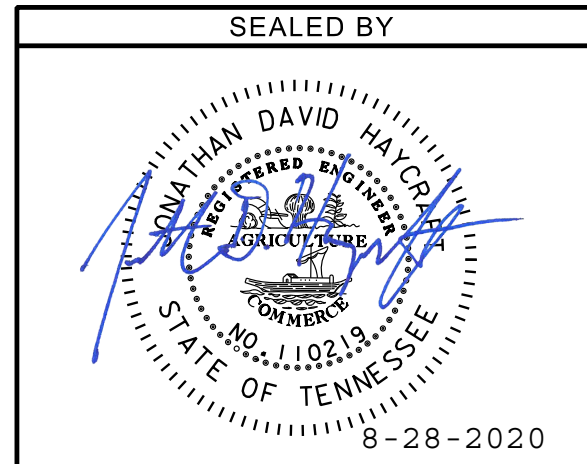
RETAINING WALL  
NO. 4-1  
SCALE: 1"= 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2019	IM/NH-75-1(131)	R-05
CONST.	2019	IM/NH-75-1(131)	R-05(1)

REV. 8-28-20: REVISED TOP OF FOOTING ELEVATIONS AND WALL HEIGHTS. DELETED POINTS 1 THROUGH 7.

	POINT	WALL STATION	BASELINE	BASELINE STATION	OFFSET	T.O.W ELEV.	EXIST. GROUND AND F.G AT FACE OF WALL	T.O.F ELEV.	WALL HEIGHT
BEGIN WALL	8	3159+77.09	I-75	410+27.09	96.38'R	675.64	663.56	660.07	15.57'
	9	3159+78.30	I-75	410+28.10	96.38'R	675.64	663.50	660.07	15.57'
	10	3160+00.00	I-75	410+50.00	96.50'R	679.86	669.56	663.62	16.24'
	11	3160+50.00	I-75	411+00.00	96.50'R	679.56	669.68	667.47	12.09'
	12	3161+00.00	I-75	411+50.00	96.50'R	679.33	670.53	667.47	11.86'
	13	3161+50.00	I-75	412+00.00	96.50'R	679.15	670.96	667.47	11.68'
	14	3162+00.00	I-75	412+50.00	96.50'R	678.97	670.53	668.47	10.50'
	15	3162+50.00	I-75	413+00.00	95.96'R	678.78	671.00	668.47	10.32'
	16	3163+00.00	I-75	413+50.00	95.19'R	678.60	671.56	668.47	10.13'
	17	3163+20.00	I-75	413+70.00	94.88'R	678.54	670.79	668.47	10.07'
	18	3163+50.00	I-75	414+00.00	94.42'R	678.44	670.62	668.47	9.97'
	19	3164+00.00	I-75	414+50.00	93.65'R	678.28	669.48	667.47	10.81'
	20	3164+50.00	I-75	415+00.00	92.88'R	678.12	670.68	667.47	10.65'
	21	3165+00.00	I-75	415+50.00	92.12'R	678.00	670.75	667.47	10.53'
	22	3165+50.00	I-75	416+00.00	91.35'R	677.87	670.91	667.47	10.40'
	23	3166+00.00	I-75	416+49.95	90.58'R	677.75	670.96	667.47	10.28'
	24	3166+50.00	I-75	416+99.95	89.81'R	677.63	670.27	667.47	10.16'
	25	3167+00.00	I-75	417+49.94	89.03'R	677.50	670.69	668.47	9.03'
	26	3167+50.00	I-75	417+99.94	88.27'R	677.38	671.36	668.47	8.91'
	27	3167+65.00	I-75	418+14.93	88.04'R	677.34	671.68	668.47	8.87'
	28	3168+00.00	I-75	418+49.93	87.50'R	677.25	672.16	668.47	8.78'
	29	3168+50.00	I-75	418+99.92	86.73'R	677.13	671.83	669.47	7.66'
	30	3169+00.00	I-75	419+49.92	85.96'R	677.00	672.02	669.47	7.53'
	31	3169+25.00	I-75	419+74.92	85.58'R	676.94	672.71	669.47	7.47'
	32	3169+50.00	I-75	419+99.91	85.19'R	676.88	673.57	671.47	5.41'
END WALL	33	3169+75.09	I-75	420+25.00	84.81'R	676.82	673.66	671.47	5.35'

8/27/2020 F:\366\36908\3690800\04\_CAD\TRNS\Bridg\Wall\CI\14-114-1\_MSE\_LAYOUT\_1.1.dgn



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

**STATE OF TENNESSEE  
DEPARTMENT OF  
TRANSPORTATION**

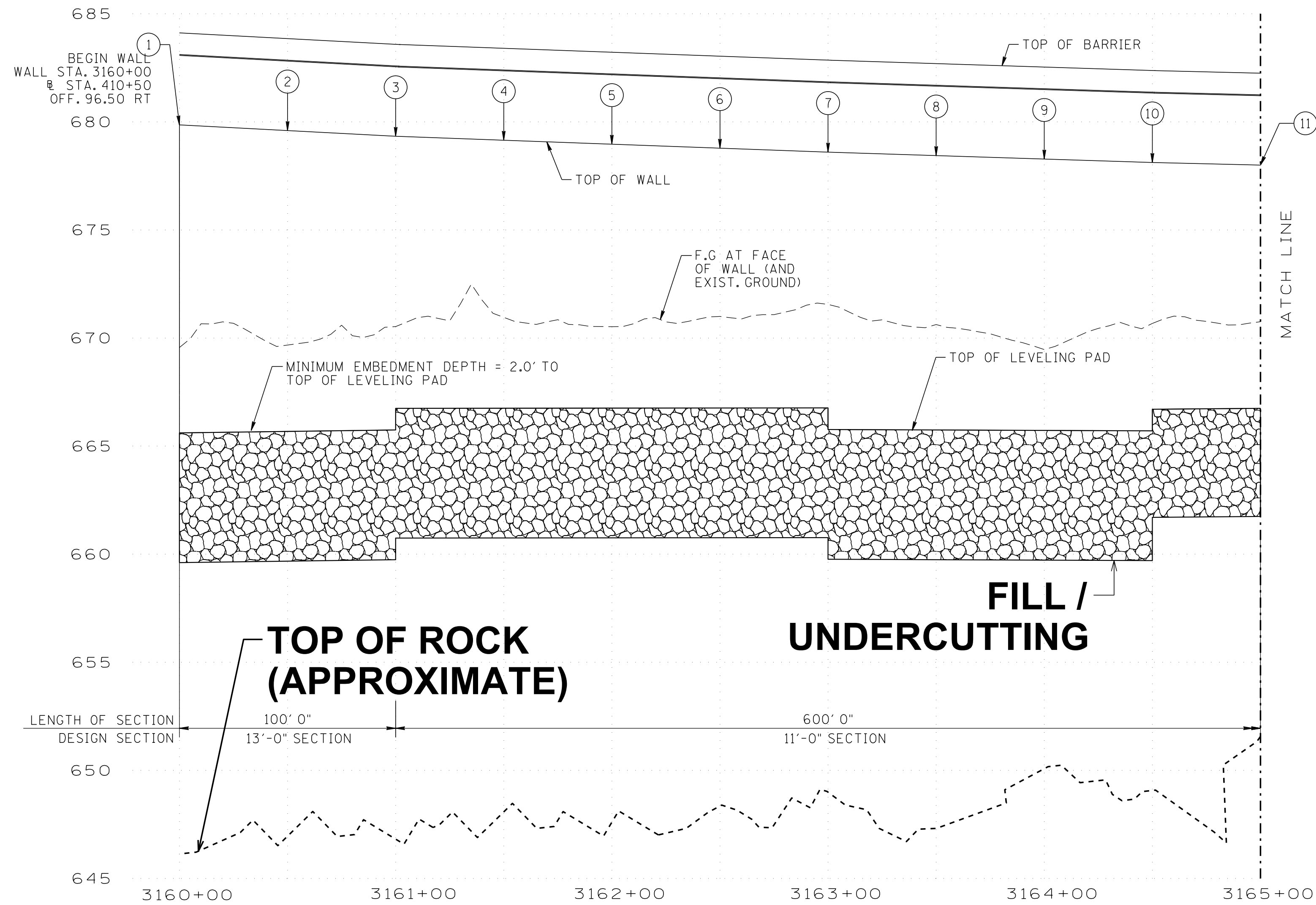
**RETAINING WALL  
NO. 4-1**  
SCALE: 1"= 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	R-05A

REV. 08-28-2020: REVISED WALL TYPE OF WALL NO. 4-1 TO MSE

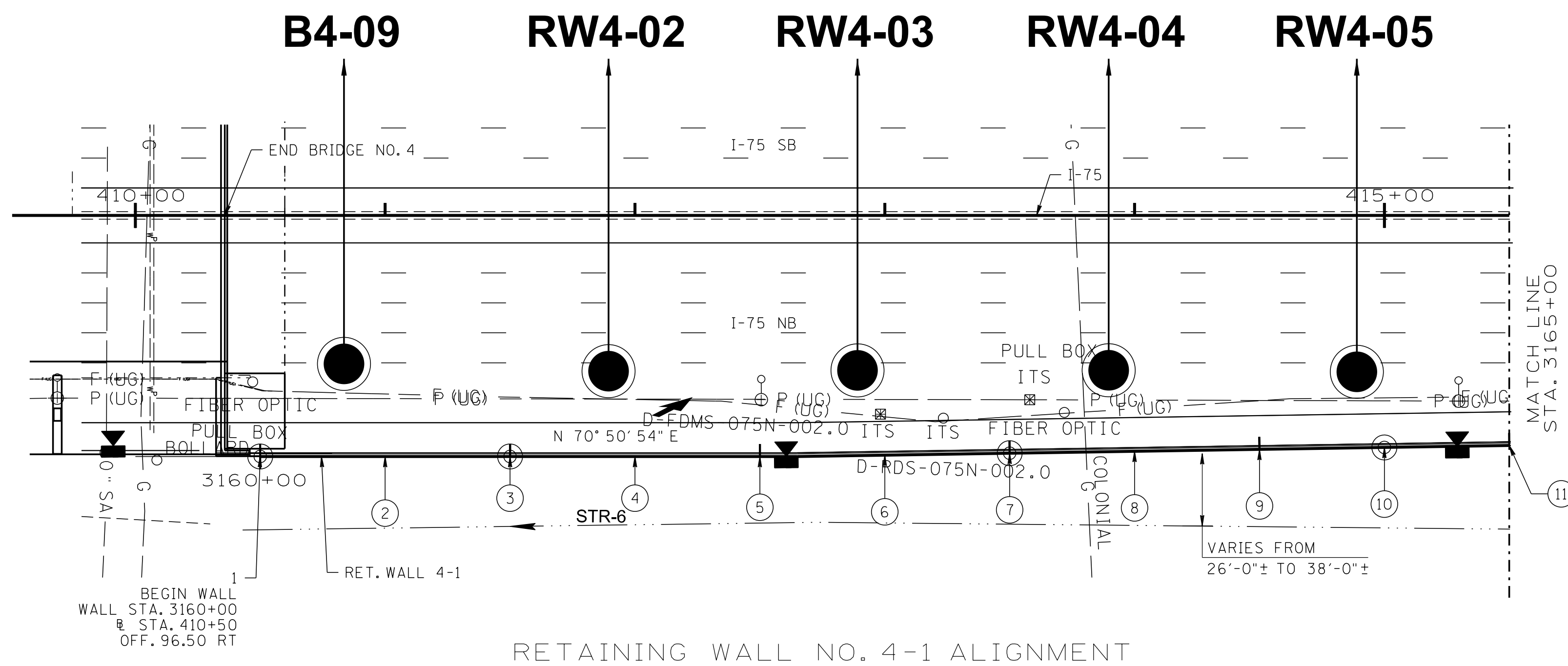
**NOTES**

VERTICAL DIMENSIONS OF UNDERCUT AND REPLACE DEPTHS SHOWN ARE MINIMUM VALUES MEASURED FROM THE BOTTOM OF FOUNDATION (LEVELING PAD). LEVELING PAD THICKNESS VARY IN ORDER TO CREATE A LEVEL WORKING SURFACE. THEREFORE, LEVELING PADS ARE NOT ILLUSTRATED HERE BUT DETAILED IN THE SHOP DRAWINGS PROVIDED BY THE WALL DESIGNER.

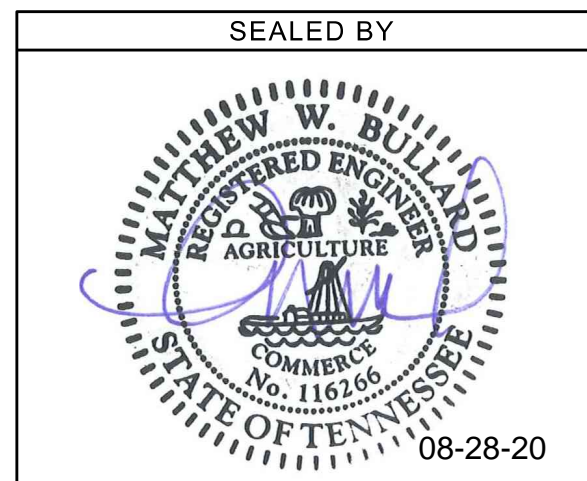


**RETAINING WALL NO. 4-1 ELEVATION**

SEE STD. DWG. W-MSE-1 FOR ADDITIONAL DETAILS  
VIEW LOOKING AT EXPOSED FACE OF WALL  
SCALE = 1H:10V



**RETAINING WALL NO. 4-1 ALIGNMENT**



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE  
DEPARTMENT OF  
TRANSPORTATION

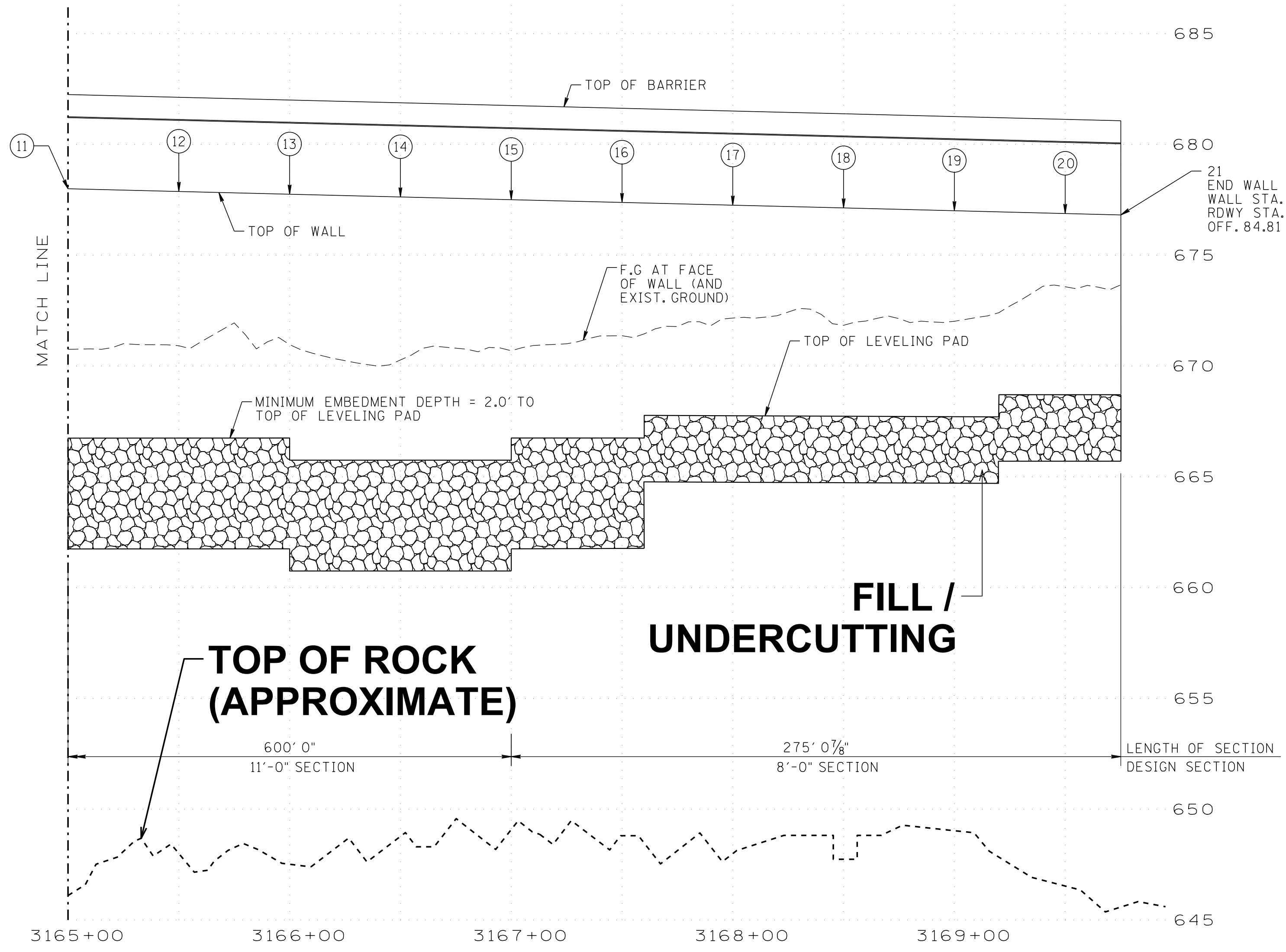
RETAINING WALL  
NO. 4-1  
FOUNDATION DATA

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	R-05A1

REV. 08-28-2020: REVISED WALL TYPE OF WALL NO. 4-1 TO MSE

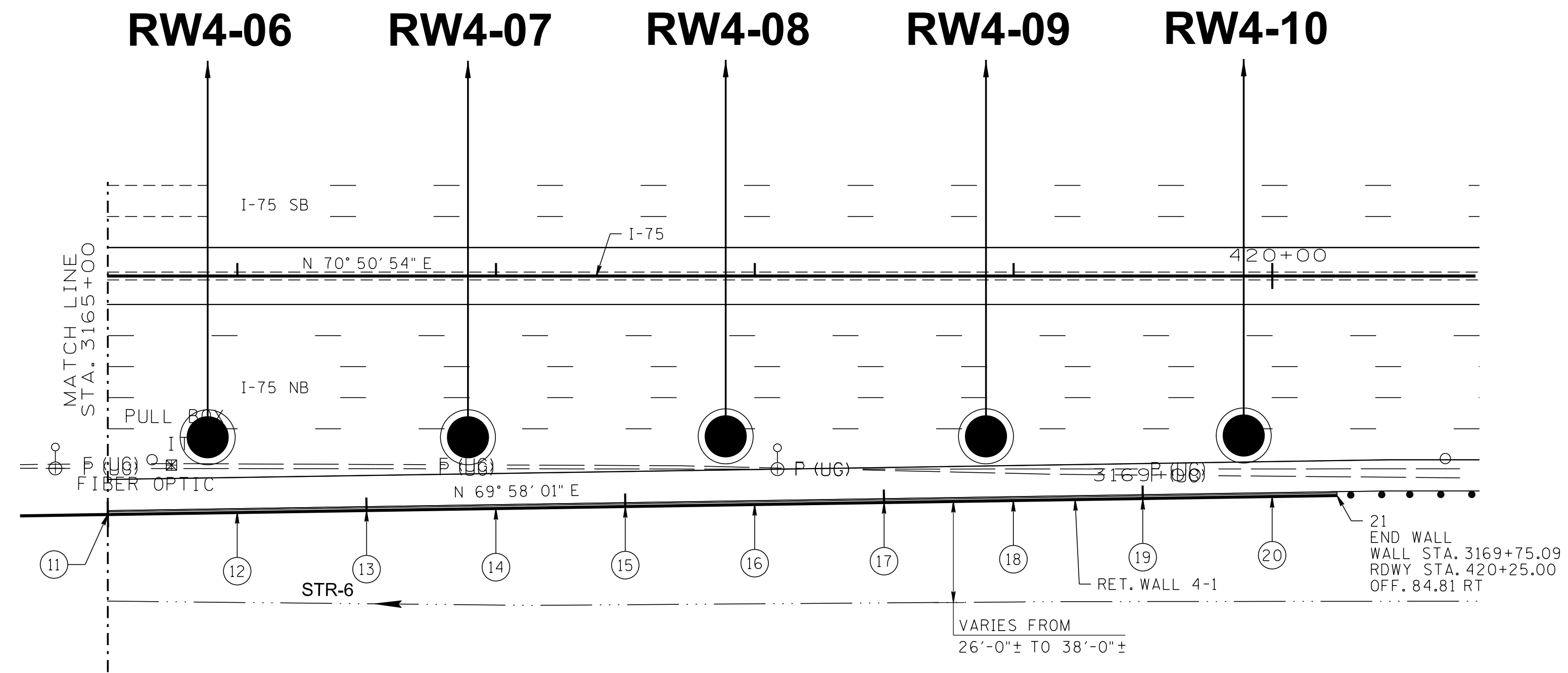
**NOTES**

VERTICAL DIMENSIONS OF UNDERCUT AND REPLACE DEPTHS SHOWN ARE MINIMUM VALUES MEASURED FROM THE BOTTOM OF FOUNDATION (LEVELING PAD). LEVELING PAD THICKNESS VARY IN ORDER TO CREATE A LEVEL WORKING SURFACE. THEREFORE, LEVELING PADS ARE NOT ILLUSTRATED HERE BUT DETAILED IN THE SHOP DRAWINGS PROVIDED BY THE WALL DESIGNER.

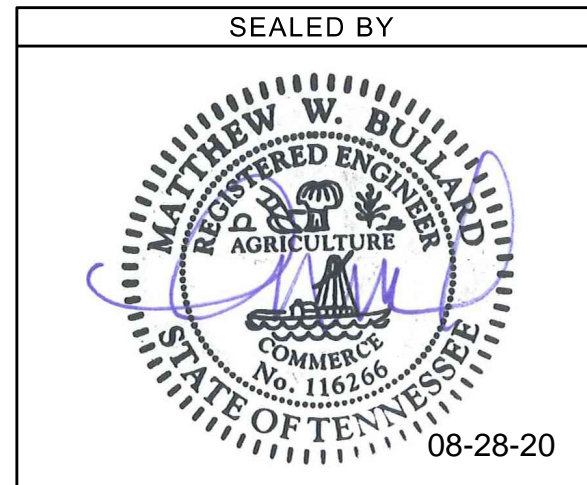
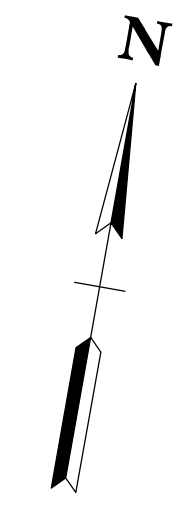


**RETAINING WALL NO. 4-1 ELEVATION**

SEE STD. DWG. W-MSE-1 FOR ADDITIONAL DETAILS  
VIEW LOOKING AT EXPOSED FACE OF WALL  
SCALE = 1H:10V



**RETAINING WALL NO. 4-1 ALIGNMENT**



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99988 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

**STATE OF TENNESSEE  
DEPARTMENT OF  
TRANSPORTATION**

**RETAINING WALL  
NO. 4-1  
FOUNDATION DATA**

8/27/2020 F:\36136908\3690800104\_CAD\TRNS\Geotech\08-20-2019\05A1\_Wall 4-1 (2of2) (Foundation Data for TTL).sht



WALL TYPE

MECHANICALLY STABILIZED EARTH (MSE) WALL - SEGMENTAL PRECAST

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 SHOULD BE LISTED AS PRE-APPROVED IN OPL 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, 2017 AND INTERIMS

FOR PROPRIETARY WALL SYSTEMS THAT HAVE BEEN APPROVED AS SHOWN IN OPL 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, 2017 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. 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, 2017 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.

TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION	MSE WALLS	NOTE
DESIGN LIFE	75 YEARS	
<b>SEISMIC ACCELERATION COEFFICIENTS</b>		
A <sub>s</sub>	0.171g	
S <sub>DS</sub>	0.313g	
S <sub>D1</sub>	0.118g	
<b>EFFECTIVE (DRAINED) FRICTION ANGLE</b>		
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL	30°	
RETAINED BACKFILL-SELECT BACKFILL	34° TO MAX 40°	1
REINFORCED BACKFILL	34° TO MAX 40°	1
<b>UNIT WEIGHT</b>		
UNCLASSIFIED SITE OR BORROW SOIL	120 POUNDS PER CUBIC FOOT	
SELECT BACKFILL MATERIAL	VARIES	1A
<b>DESIGN BASIS</b>		
COEFFICIENT OF SLIDING FRICTION	SEE TABLE 2	3
NOMINAL BEARING RESISTANCE	SEE TABLE 2	3
MINIMUM LENGTH OF SOIL REINFORCEMENT, L	GREATER OF 8-FT OR 0.7H OR AS SPECIFIED ON THE PLANS	2,2A,2B
LIMITING ECCENTRICITY	L/4 (SOIL), 3L/8 (ROCK)	
<b>RESISTANCE FACTORS</b>		
SLIDING-STATIC	1.0	4
SLIDING-COMBINED STATIC+EARTHQUAKE	1.0	4
BEARING-STATIC	0.65	5
BEARING-COMBINED STATIC+EARTHQUAKE	0.9	5
<b>PULLOUT RESISTANCE</b>		
STATIC	0.90	6
COMBINED STATIC/EARTHQUAKE	1.20	6
<b>TENSILE RESISTANCE OF METALLIC REINFORCEMENTS AND CONNECTORS</b>		
STATIC		
-STRIP REINFORCEMENT	0.75	7
-GRID REINFORCEMENT	0.65	7,8
COMBINED STATIC/EARTHQUAKE		
-STRIP REINFORCEMENT	1.00	7
-GRID REINFORCEMENT	0.85	7,8
<b>TENSILE RESISTANCE OF GEOSYNTHETIC REINFORCEMENTS AND CONNECTORS</b>		
STATIC	0.90	
COMBINED STATIC/EARTHQUAKE	1.20	

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, B <sub>r</sub> 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 MSE RETAINING WALL SYSTEM SHALL NOT EXCEED THE FACTORED GENERAL AND LOCAL BEARING RESISTANCE SPECIFIED IN TABLES 2 OR 3.
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 LRFD BRIDGE DESIGN SPECIFICATIONS (2017) 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.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-76-1(131)	R-65C
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.	.	.	.
.	.	.	.

REV. 08-28-2020: REVISED TABLE 1

TABLE 2-FOUNDATION PARAMETERS AND REQUIREMENTS

STATION LIMITS	FOUNDATION (REINFORCED ZONE) BEARING CONDITION REQUIREMENT	NOMINAL BEARING RESISTANCE (psf)	COEFFICIENT OF SLIDING FRICTION
3160+00 TO 3164+50	UNDERCUT AND REPLACE WITH 6 FEET OF SELECT GRANULAR MATERIAL	7750	0.60
3164+50 TO 3167+60	UNDERCUT AND REPLACE WITH 5 FEET OF SELECT GRANULAR MATERIAL	7500	0.60
3167+60 TO 3169+75	UNDERCUT AND REPLACE WITH 3 FEET OF SELECT GRANULAR MATERIAL	7000	0.60

OTHER DESIGN REQUIREMENTS

THE WALL SHALL HAVE A DRAINAGE GUTTER AT THE TOP DESIGNED TO CARRY SURFACE RUNOFF TO EITHER OR BOTH ENDS OF WALLS. DETAILS OF THIS DRAINAGE FEATURE SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS.

ANY SHIMMING PLATES MUST BE PERMANENT (NO ASPHALT SHIMS).

IF REQUIRED, THE RETAINING WALL FOOTING HEEL OR REINFORCED ZONE MUST BE CONSTRUCTED WITH ALLOWANCES MADE TO ENABLE THE PILES FOR THE ABUTMENTS TO BE INSTALLED.

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.

FOR FOUNDATION IMPROVEMENT AND EXCAVATION ZONE DETAILS, SEE TYPICAL DETAIL FOR UNDERCUTTING AND BACKFILLING DETAIL ON SHEET R-20.

WHERE A PROPOSED RETAINING WALL MEETS AN EXISTING RETAINING WALL 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.

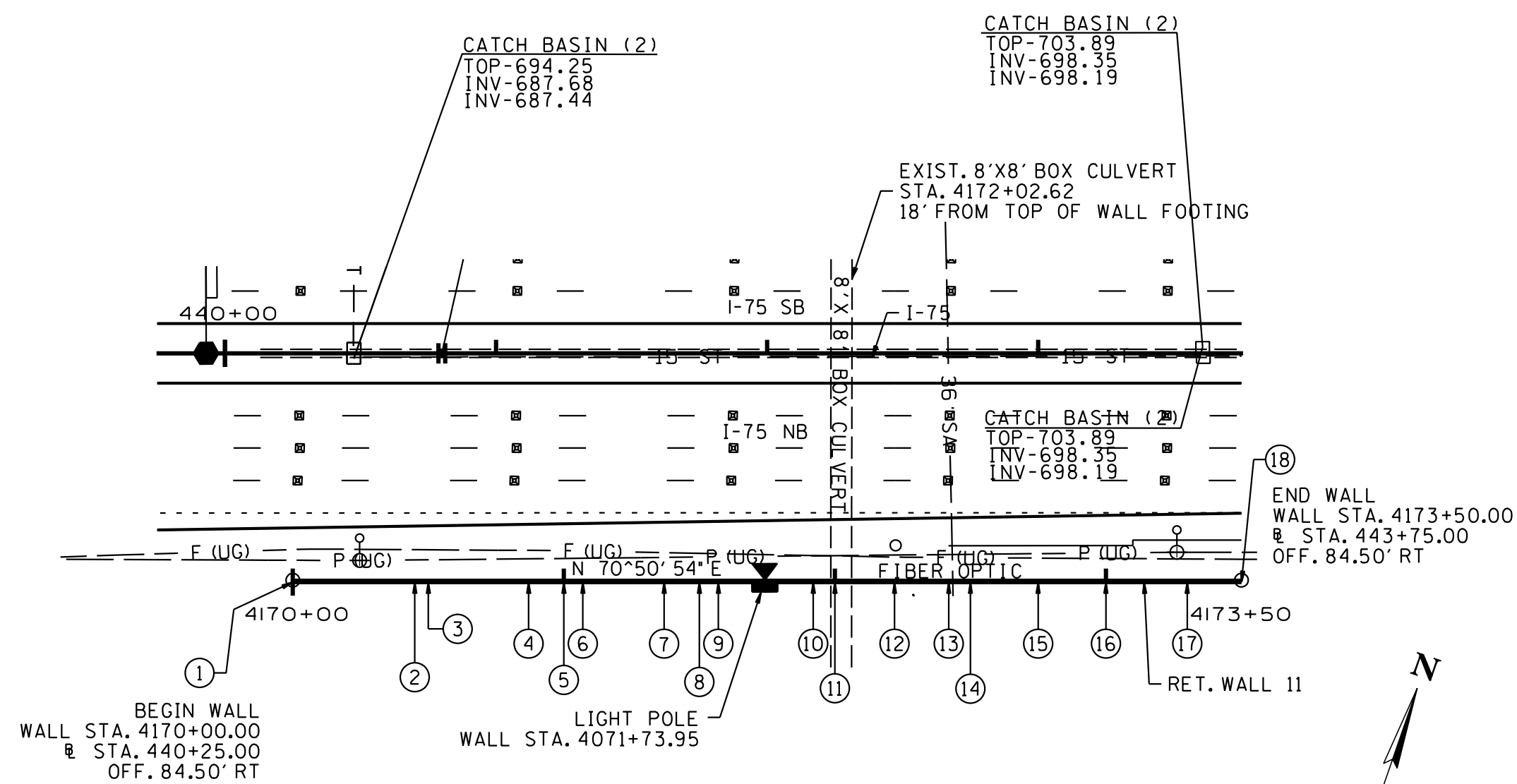


STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

RETAINING WALL  
DETAIL (4-1) -  
GEOTECHNICAL  
DESIGN NOTES &  
REQUIREMENTS

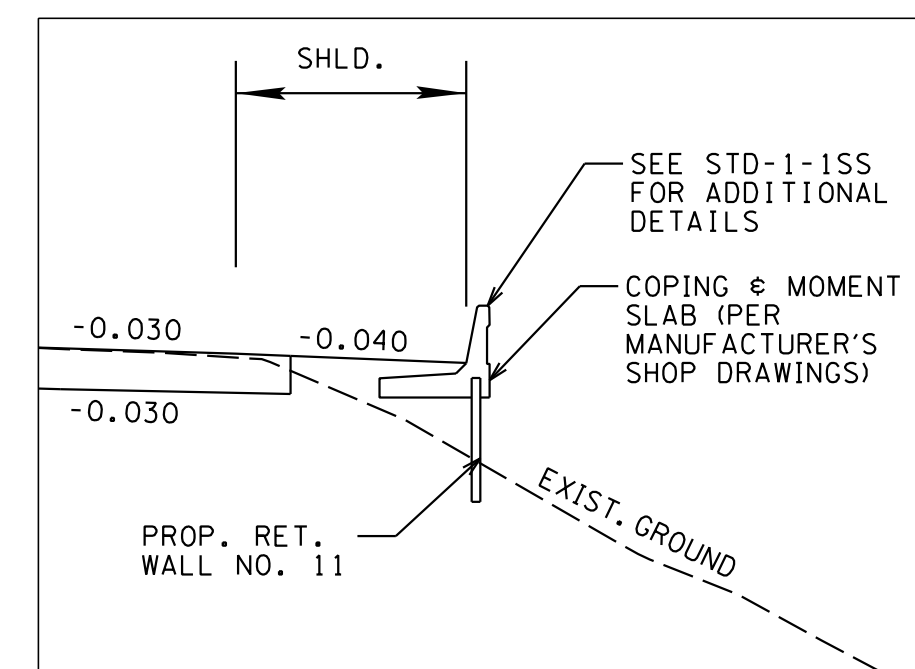
TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2019	IM/NH-75-1(131)	R-18
CONST.	2019	IM/NH-75-1(131)	R-18

REV. 8-28-20: REVISED TOP OF FOOTING ELEVATIONS, ADDED TYP. SECTION DETAIL, REVISED QTY. OF 604-07.18.



**RETAINING WALL NO. 11 ALIGNMENT**

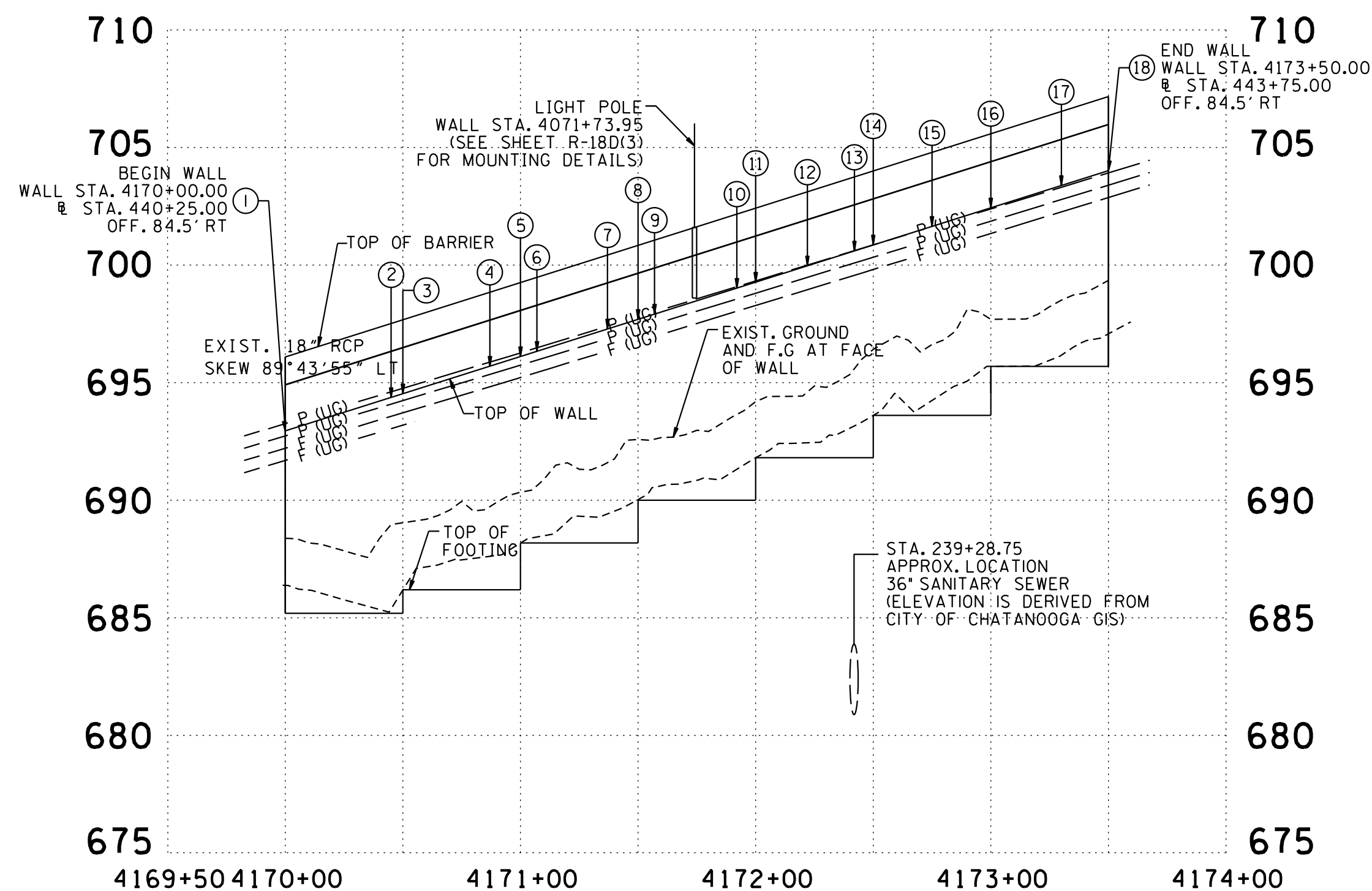
⚡ DENOTES: LOCATION OF LIGHT POLE. WALL MANUFACTURER IS RESPONSIBLE FOR DESIGNING AND DETAILING THE WALL TO INCLUDE THE LIGHT POLE FOUNDATIONS, ATTACHMENT HARDWARE, CONDUIT, PULL BOXES, AND ANY OTHER MISCELLANEOUS MATERIALS AS NECESSARY. SEE STANDARD DRAWING STD-8-2SS FOR TYPICAL SINGLE SLOPE RAIL MOUNTING DETAILS.



**TYPICAL SECTION OF RETAINING WALL**

I-75N, STA. 442+00.00

ESTIMATED QUANTITIES		
ITEM NO.	604-07.18	620-05.01
DESCRIPTION	RETAINING WALL NO. 11 SQ. FT	CONC. PARAPET SINGLE SLOPE (STD-1-1SS) (LF)
QUANTITY	2,936	351

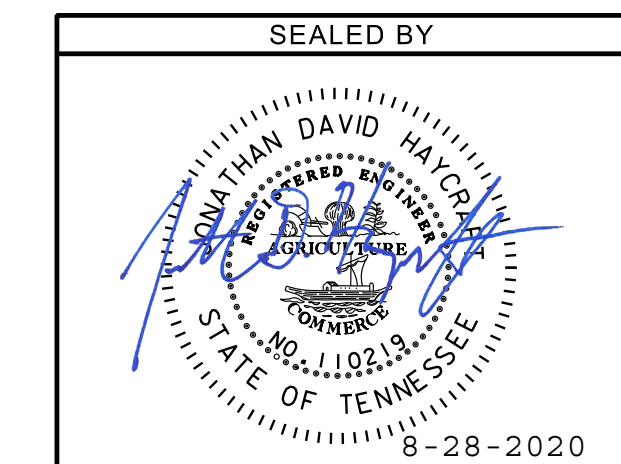


**RETAINING WALL NO. 11 ELEVATION**

VIEW LOOKING AT EXPOSED FACE OF WALL  
SCALE = 1H:10V

POINT	WALL STATION	BASELINE	BASELINE STATION	OFFSET	T.O.W ELEV.	EXIST. GROUND AND F.G AT FACE OF WALL	T.O.F ELEV.	WALL HEIGHT
1	4170+00.00	I-75	440+25.00	84.5'R	692.95	688.35	685.19	7.76'
2	4170+45.00	I-75	440+70.00	84.5'R	694.37	689.04	685.19	9.18'
3	4170+50.00	I-75	440+75.00	84.5'R	694.53	689.12	686.19	8.34'
4	4170+87.00	I-75	441+12.00	84.5'R	695.70	690.04	686.19	9.51'
5	4171+00.00	I-75	441+25.00	84.5'R	696.11	690.46	688.18	7.93'
6	4171+07.00	I-75	441+32.00	84.5'R	696.33	691.16	688.18	8.15'
7	4171+37.00	I-75	441+62.00	84.5'R	697.28	692.11	688.18	9.10'
8	4171+50.00	I-75	441+75.00	84.5'R	697.69	692.56	690.00	7.69'
9	4171+57.00	I-75	441+82.00	84.5'R	697.91	692.67	690.00	7.91'
10	4171+92.00	I-75	442+17.00	84.5'R	699.02	693.98	690.00	9.02'
11	4172+00.00	I-75	442+25.00	84.5'R	699.27	694.41	691.81	7.46'
12	4172+22.00	I-75	442+47.00	84.5'R	699.97	694.83	691.81	8.16'
13	4172+42.00	I-75	442+67.00	84.5'R	700.60	696.18	691.81	8.79'
14	4172+50.00	I-75	442+75.00	84.5'R	700.86	696.71	693.61	7.25'
15	4172+75.00	I-75	443+00.00	84.5'R	701.65	696.84	693.61	8.04'
16	4173+00.00	I-75	443+25.00	84.5'R	702.44	697.70	695.69	6.75'
17	4173+30.00	I-75	443+55.00	84.5'R	703.39	698.73	695.69	7.70'
18	4173+50.00	I-75	443+75.00	84.5'R	704.02	699.64	695.69	8.33'

NOTE: OFFSETS SHOWN ARE TO EXPOSED FACE OF WALL.  
NOTE: TOP OF FOOTING (T.O.F) ELEVATIONS SHOWN ARE TO TOP OF STEP.



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99988 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE  
DEPARTMENT OF  
TRANSPORTATION

**RETAINING WALL NO. 11**

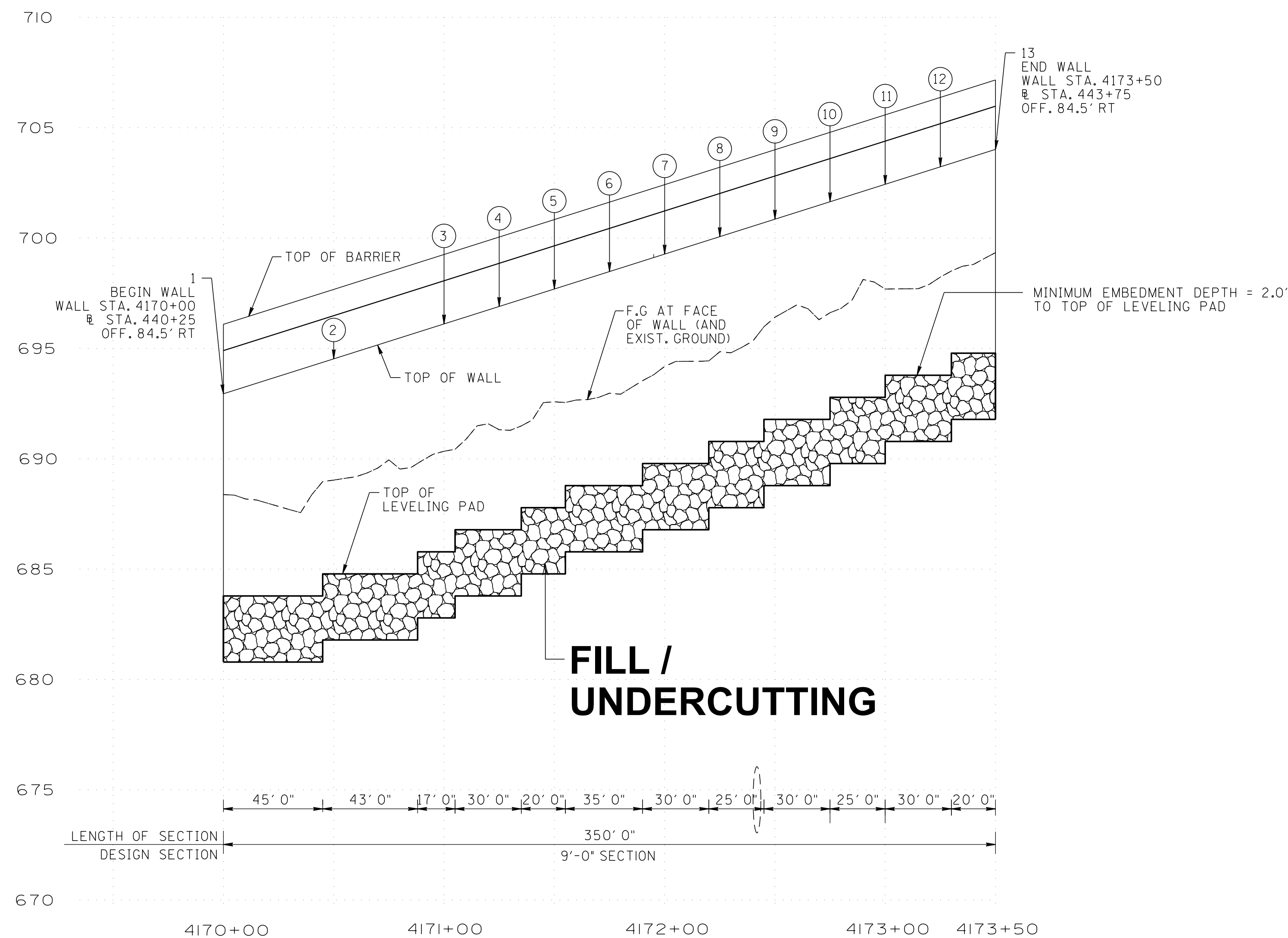
SCALE: 1"= 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	R-18A

REV. 08-28-2020: REVISED WALL TYPE OF WALL NO. 11 TO MSE

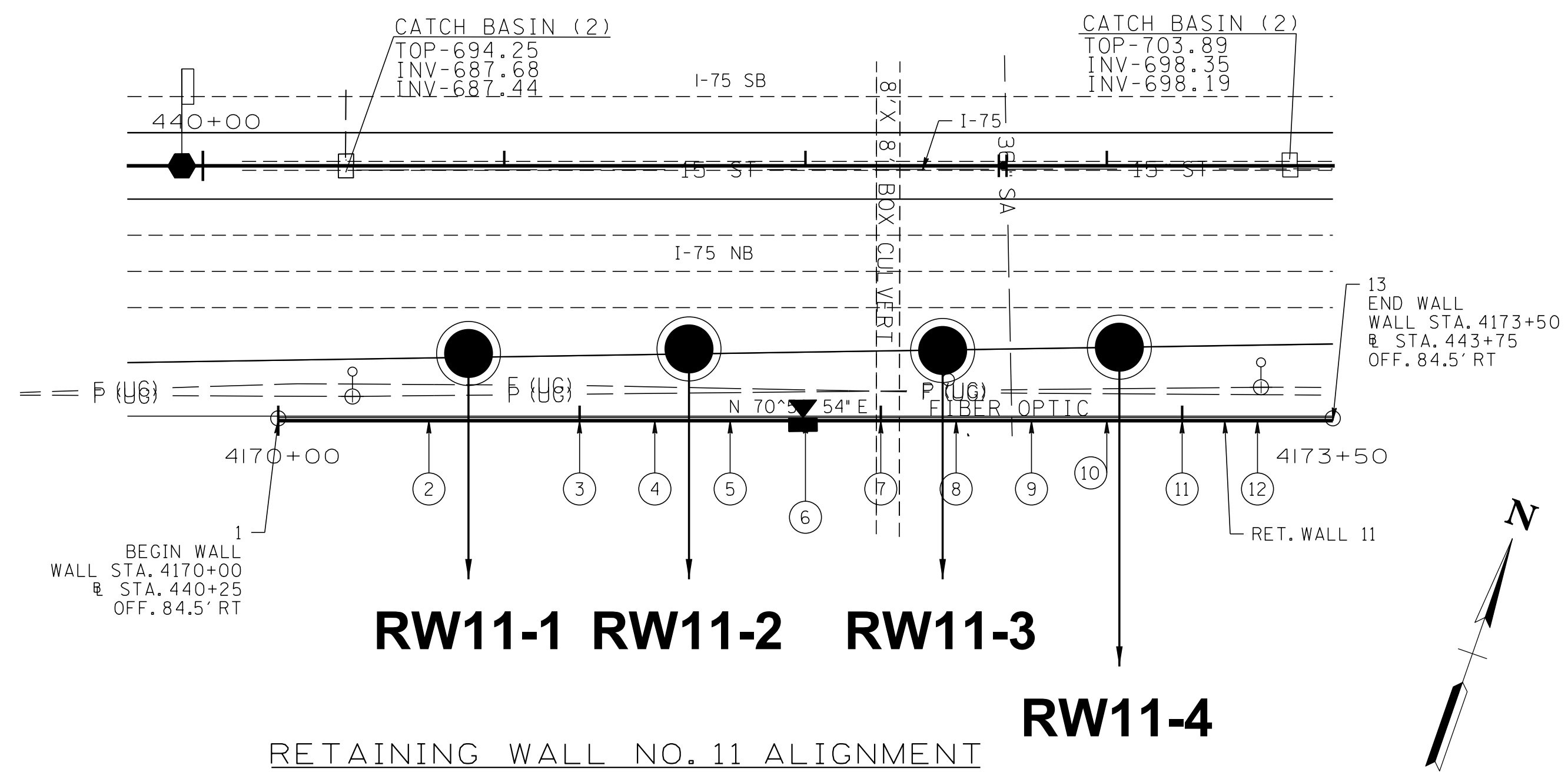
**NOTES**

VERTICAL DIMENSIONS OF UNDERCUT AND REPLACE DEPTHS SHOWN ARE MINIMUM VALUES MEASURED FROM THE BOTTOM OF FOUNDATION (LEVELING PAD). LEVELING PAD THICKNESS VARY IN ORDER TO CREATE A LEVEL WORKING SURFACE. THEREFORE, LEVELING PADS ARE NOT ILLUSTRATED HERE BUT DETAILED IN THE SHOP DRAWINGS PROVIDED BY THE WALL DESIGNER.



**RETAINING WALL NO. 11 ELEVATION**

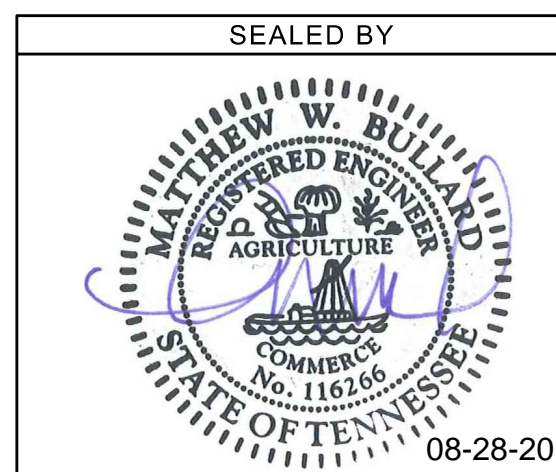
VIEW LOOKING AT EXPOSED FACE OF WALL  
SCALE = 1H:10V



**RW11-1 RW11-2 RW11-3**

**RW11-4**

RETAINING WALL NO. 11 ALIGNMENT



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE  
DEPARTMENT OF  
TRANSPORTATION

RETAINING WALL  
NO. 11  
FOUNDATION DATA

**WALL TYPE**

**MACHANICALLY STABILIZED EARTH (MSE) WALL - SEGMENTAL PRECAST**

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 SHOULD BE LISTED AS PRE-APPROVED IN OPL 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, 2017 AND INTERIMS

FOR PROPRIETARY WALL SYSTEMS THAT HAVE BEEN APPROVED AS SHOWN IN OPL 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, 2017 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. 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, 2017 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.

**TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS**

DESCRIPTION	MSE WALLS	NOTE
DESIGN LIFE	75 YEARS	
<b>SEISMIC ACCELERATION COEFFICIENTS</b>		
A <sub>s</sub>	0.171g	
S <sub>0s</sub>	0.313g	
S <sub>0l</sub>	0.118g	
<b>EFFECTIVE (DRAINED) FRICTION ANGLE</b>		
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL	30°	
RETAINED BACKFILL-SELECT BACKFILL	34° TO MAX 40°	1
REINFORCED BACKFILL	34° TO MAX 40°	1
<b>UNIT WEIGHT</b>		
UNCLASSIFIED SITE OR BORROW SOIL	120 POUNDS PER CUBIC FOOT	
SELECT BACKFILL MATERIAL	VARIES	1A
<b>DESIGN BASIS</b>		
COEFFICIENT OF SLIDING FRICTION	SEE TABLE 2	3
NOMINAL BEARING RESISTANCE	SEE TABLE 2	3
MINIMUM LENGTH OF SOIL REINFORCEMENT, L	GREATER OF 8-FT OR 0.7H OR AS SPECIFIED ON THE PLANS	2,2A,2B
LIMITING ECCENTRICITY	L/4 (SOIL), 3L/8 (ROCK)	
<b>RESISTANCE FACTORS</b>		
SLIDING-STATIC	1.0	4
SLIDING-COMBINED STATIC+EARTHQUAKE	1.0	4
BEARING-STATIC	0.65	5
BEARING-COMBINED STATIC+EARTHQUAKE	0.9	5
<b>PULLOUT RESISTANCE</b>		
STATIC	0.90	6
COMBINED STATIC/EARTHQUAKE	1.20	6
<b>TENSILE RESISTANCE OF METALLIC REINFORCEMENTS AND CONNECTORS</b>		
STATIC		
-STRIP REINFORCEMENT	0.75	7
-GRID REINFORCEMENT	0.65	7,8
COMBINED STATIC/EARTHQUAKE		
-STRIP REINFORCEMENT	1.00	7
-GRID REINFORCEMENT	0.85	7,8
<b>TENSILE RESISTANCE OF GEOSYNTHETIC REINFORCEMENTS AND CONNECTORS</b>		
STATIC	0.90	
COMBINED STATIC/EARTHQUAKE	1.20	

**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 MSE RETAINING WALL SYSTEM SHALL NOT EXCEED THE FACTORED GENERAL AND LOCAL BEARING RESISTANCE SPECIFIED IN TABLES 2 OR 3.
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 LRFD BRIDGE DESIGN SPECIFICATIONS (2017) 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.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2019	IM/NH-75-1(131)	R-18C

REV. 08-28-2020: TABLE 1 REVISED

**TABLE 2-FOUNDATION PARAMETERS AND REQUIREMENTS**

STATION LIMITS	FOUNDATION (REINFORCED ZONE) BEARING CONDITION REQUIREMENT	NOMINAL BEARING RESISTANCE (psf)	COEFFICIENT OF SLIDING FRICTION
4170+00 TO 4173+50	UNDERCUT AND REPLACE WITH 3 FEET OF SELECT GRANULAR MATERIAL	7700	0.60

**OTHER DESIGN REQUIREMENTS**

THE WALL SHALL HAVE A DRAINAGE GUTTER AT THE TOP DESIGNED TO CARRY SURFACE RUNOFF TO EITHER OR BOTH ENDS OF WALLS. DETAILS OF THIS DRAINAGE FEATURE SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS.

ANY SHIMMING PLATES MUST BE PERMANENT (NO ASPHALT SHIMS).

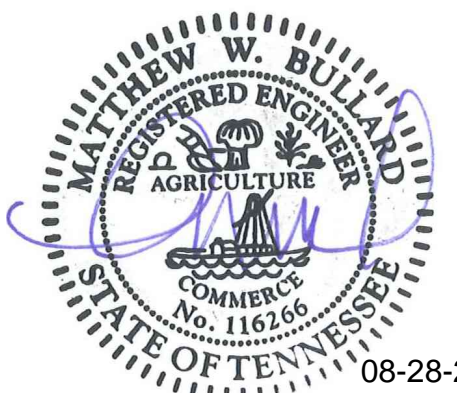
IF REQUIRED, THE RETAINING WALL FOOTING HEEL OR REINFORCED ZONE MUST BE CONSTRUCTED WITH ALLOWANCES MADE TO ENABLE THE PILES FOR THE ABUTMENTS TO BE INSTALLED.

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.

FOR FOUNDATION IMPROVEMENT AND EXCAVATION ZONE DETAILS, SEE TYPICAL DETAIL FOR UNDERCUTTING AND BACKFILLING DETAIL ON SHEET R-20.

WHERE A PROPOSED RETAINING WALL MEETS AN EXISTING RETAINING WALL 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.



8/27/2020 F:\36\36908\3690800\04\_CAD\TNS\Geotech\08-20\09\BCL-Retaining WallNotes 11-1.dgn

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

**RETAINING WALL  
DETAIL (11) -  
GEOTECHNICAL  
DESIGN NOTES &  
REQUIREMENTS**