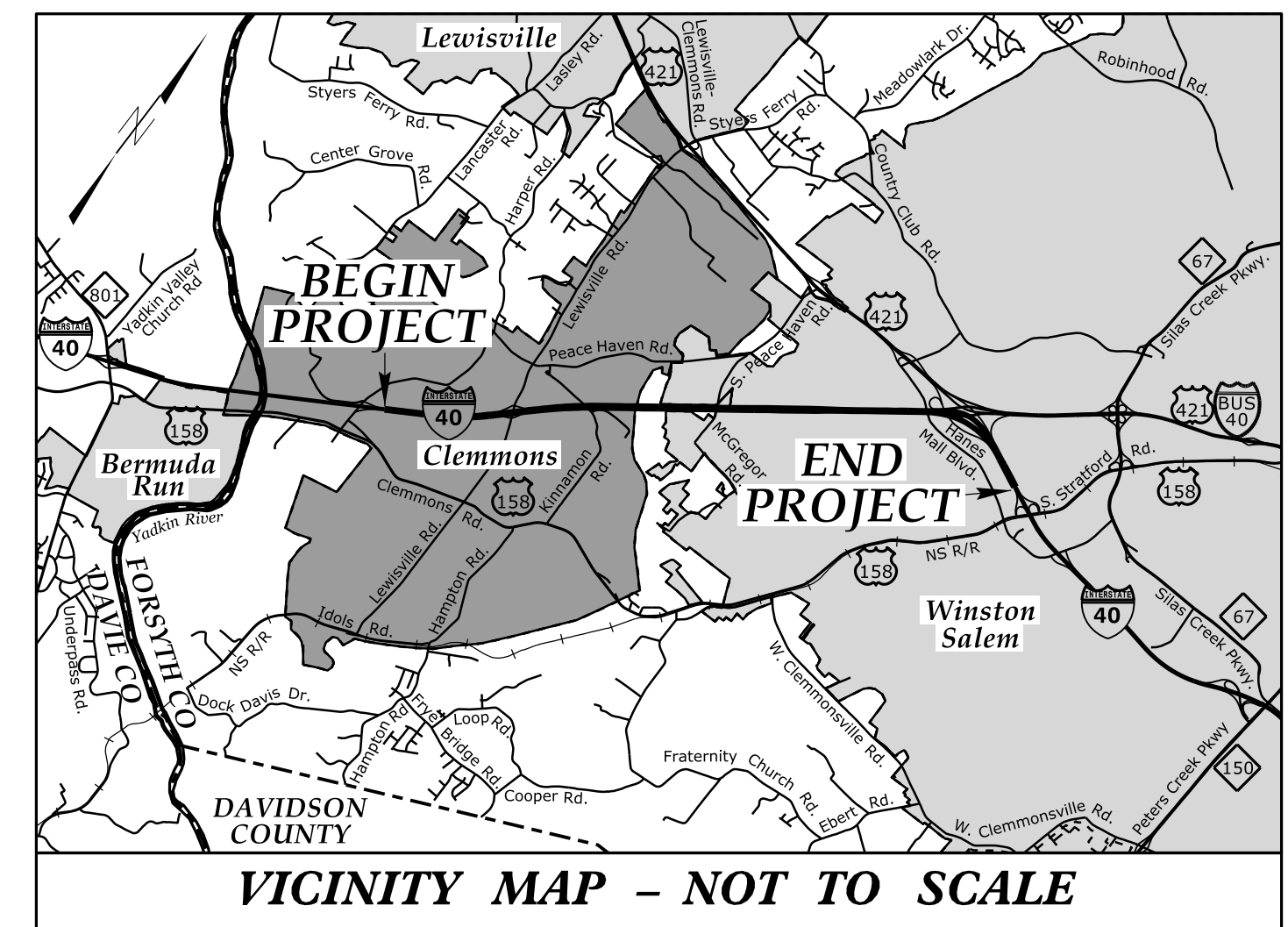


09.08/199

TIP PROJECT: I-5952

CONTRACT: C204175

See Sheet 1A For Index of Sheets



VICINITY MAP - NOT TO SCALE

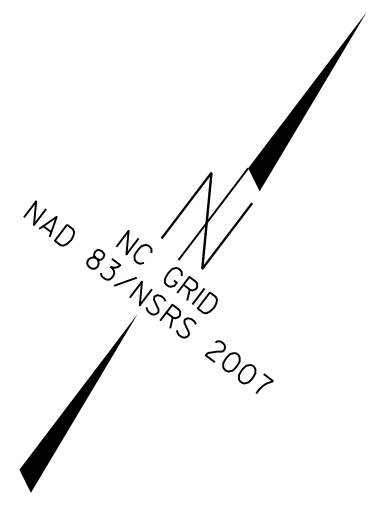
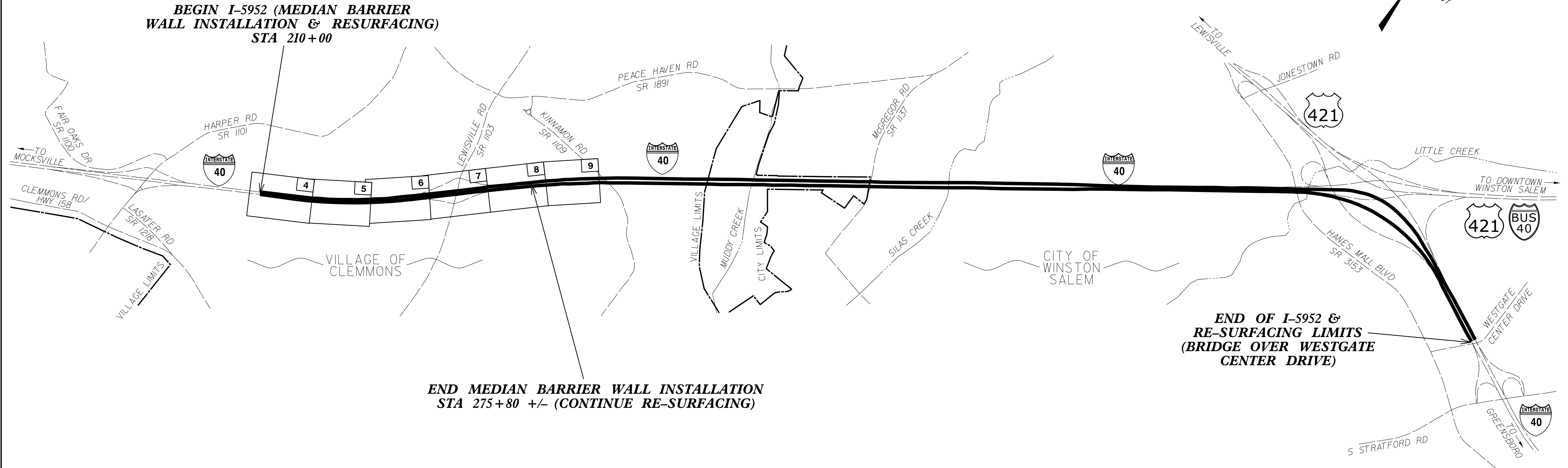
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

FORSYTH COUNTY

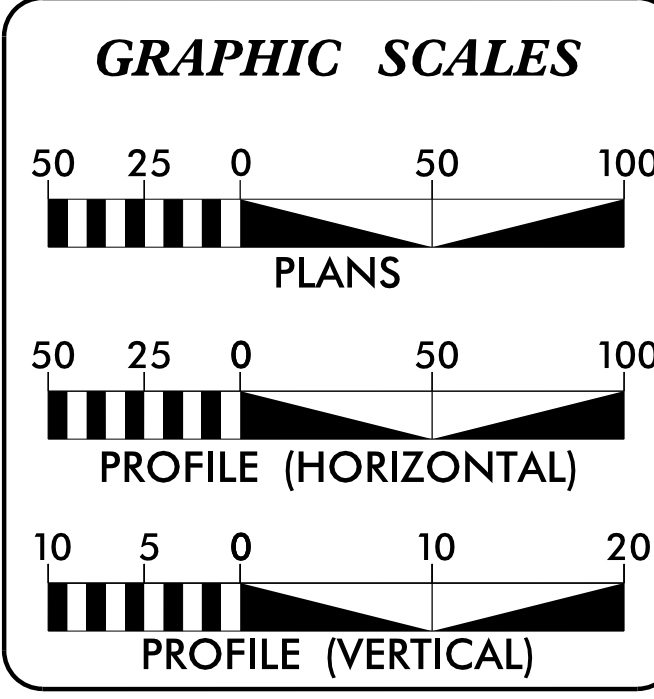
LOCATION: I-40 FROM HARPER RD (SR 1101)
TO EAST OF US 421/BUS I-40

TYPE OF WORK: DRAINAGE, CONCRETE MEDIAN BARRIER,
PAVEMENT REHABILITATION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5952	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45901.1.1		PE	
45901.3.1	NHPIM-0040(073)	CONSTRUCTION	



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2018 =	49,200
ADT 2030 =	78,600
K =	10 %
D =	60 %
T =	24 % *
V =	70 MPH
* TTST = 13 DUAL 4	
FUNC CLASS = INTERSTATE	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-5952 =	6.226 MILES
TOTAL LENGTH TIP PROJECT I-5952 =	6.226 MILES

Prepared in the Office of:

DIVISION OF HIGHWAYS
NINTH DIVISION DESIGN/CONSTRUCT
375 SILAS CREEK PARKWAY WINSTON-SALEM, N.C. 27127

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:	N/A
LETTING DATE:	NOVEMBER 20, 2018

W.A. BLANTON, PE, PLS
PROJECT ENGINEER

SCOTT JONES, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

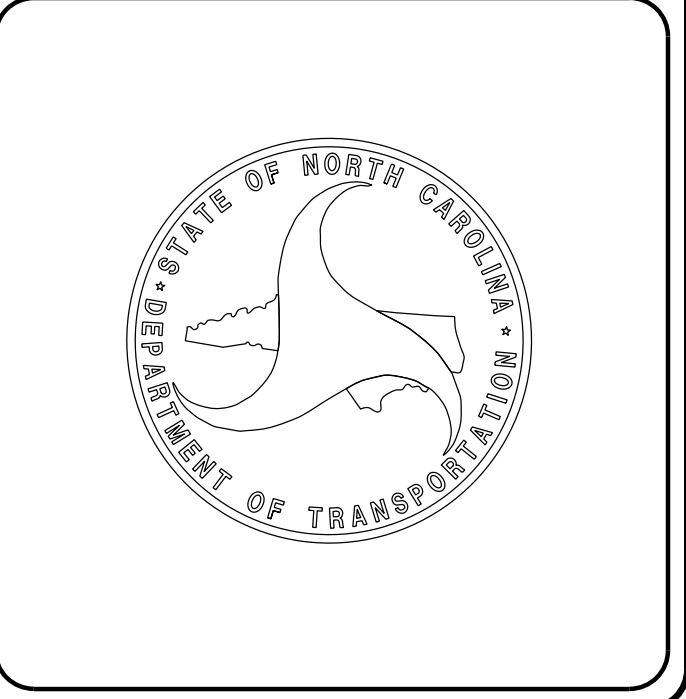
DocuSigned by:
W. Galen Cail
08F09706041140D5
9/25/2018

SEAL 022000
ENGINEER
WILLIAM G. CAIL
P.E.

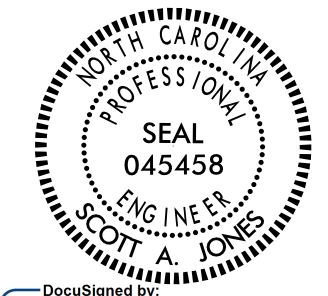
ROADWAY DESIGN ENGINEER

DocuSigned by:
Scott Jones
703888520244AC
9/19/2018

SEAL 045458
ENGINEER
SCOTT A. JONES
P.E.



19-SEP-2018 11:15
S:\Project_Development\TIP_Projects\Roadway\Design_Files\I-5952-I40-West_Forsyth\Roadway\Design_Files\I-5952-ddc_tsh.dgn
\$\$\$\$\$SERVNAME\$\$\$\$\$

PROJECT REFERENCE NO. <i>1-5952</i>	SHEET NO. <i>1A</i>
	ROADWAY DESIGN ENGINEER
	 SEAL 045458 SCOTT A. JONES NORTH CAROLINA PROFESSIONAL ENGINEER Registered Professional Engineer State of North Carolina License No. 045458 Documented by <i>Scott Jones</i> 10/2/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

INDEX OF SHEETS	
SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C	SURVEY CONTROL SHEET
2A-1	PAVEMENT SCHEDULE, TYPICAL SECTIONS AND SHOULDER DRAIN DETAIL
2C-1	MANHOLE ADJUSTMENT DETAIL AND SHOULDER WEDGE DETAIL
2C-2	GUARDRAIL INSTALLATION DETAILS
2D-1	BARRIER OVER TRAFFIC BEARING DOUBLE DROP INLET DETAIL
3B-1	SUMMARY OF EARTHWORK, PAVEMENT REMOVAL SUMMARY, SHOULDER DRAIN SUMMARY, CONCRETE BARRIER WALL SUMMARY, SUMMARY OF AGGREGATE SUBGRADE STABILIZATION AND GUARDRAIL SUMMARY
3B-2 THRU 3B-3	SUMMARY OF QUANTITIES
3B-4 THRU 3B-5	THERMOPLASTIC AND PAINT QUANTITIES
3D-1 THRU 3D-2	DRAINAGE SUMMARY
4-11	PLAN SHEETS
TMP-1 THRU TMP-11	TRAFFIC MANAGEMENT PLANS
EC-1 THRU EC-3	EROSION CONTROL DETAILS
X-1 THRU X-25	CROSS SECTIONS

GENERAL NOTES: 2018 SPECIFICATIONS

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

SHOULDER DRAINS:

SHOULDER DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 816.02 AND DETAILS IN PLANS AT LOCATIONS DIRECTED BY THE ENGINEER

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" HIGHWAY DESIGN BRANCH - N. C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N. C., DATED JANUARY, 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
225.01	GUIDE FOR GRADING SUBGRADE - INTERSTATE AND FREEWAY
225.05	METHOD OF OBTAINING SUPERELEVATION - DIVIDED HIGHWAYS
DIVISION 3 - PIPE CULVERTS	
300.01	METHOD OF PIPE INSTALLATION
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.02	METHOD OF SHOULDER CONSTRUCTION - HIGH SIDE OF SUPERELEVATED CURVE - METHOD II
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
610.01	GUIDE FOR PAVING SHOULDERS UNDER BRIDGES - METHOD I
665.01	ASPHALT SHOULDERS - MILLED RUMBLE STRIPS
DIVISION 8 - INCIDENTALS	
816.02	AGGREGATE SHOULDER DRAIN
816.04	MARKERS FOR DRAINAGE STRUCTURES & CONCRETE PAD
840.00	CONCRETE BASE PAD FOR DRAINAGE STRUCTURES
840.31	CONCRETE JUNCTION BOX - 12" THRU 66" PIPE
840.34	TRAFFIC BEARING JUNCTION BOX - FOR USE WITH PIPES 42" AND UNDER
840.35	TRAFFIC BEARING GRATED DROP INLET - FOR CAST IRON DOUBLE FRAME AND GRATES
840.36	TRAFFIC BEARING GRATED DROP INLET - FOR STEEL (840.37) DOUBLE FRAME AND GRATES
840.37	STEEL GRATE AND FRAME
840.46	TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE
854.02	DOUBLE FACED CONCRETE BARRIER - TYPES 'T', 'T1' AND 'T2'
854.05	CONCRETE MEDIAN TRANSITION BARRIER - LOCATION OF OVERHEAD ASSEMBLY
862.01	GUARDRAIL PLACEMENT
862.02	GUARDRAIL INSTALLATION (SPECIAL DETAIL FOR SHEET 6 OF 8)
862.04	ANCHORING END OF GUARDRAIL - B-77 AND B-83 ANCHOR UNITS

EFF. 01-16-2018
REV.

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale *S.U.E. = *Subsurface Utility Engineering*

04/06/15

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	① 23
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-WLB-
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Existing Historic Property Boundary	-HPB-
Known Contamination Area: Soil	☠ S ☠
Potential Contamination Area: Soil	☠ S ☠
Known Contamination Area: Water	☠ W ☠
Potential Contamination Area: Water	☠ W ☠
Contaminated Site: Known or Potential	☠ ☠

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	□

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	-----
Jurisdictional Stream	-JS-
Buffer Zone 1	-BZ 1-
Buffer Zone 2	-BZ 2-
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	-----
Proposed Lateral, Tail, Head Ditch	-----
False Sump	-----

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite RW Marker	-----
Proposed Control of Access Line with Concrete C/A Marker	-----
Existing Control of Access	-----
Proposed Control of Access	-----
Existing Easement Line	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	-----
Proposed Temporary Utility Easement	-----
Proposed Aerial Utility Easement	-----
Proposed Permanent Easement with Iron Pin and Cap Marker	-----

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-C-
Proposed Slope Stakes Fill	-F-
Proposed Curb Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	○
Pavement Removal	-----

VEGETATION:

Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----

Orchard	-----
Vineyard	-----

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	-----
MINOR:	
Head and End Wall	-----
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	-----
Paved Ditch Gutter	-----
Storm Sewer Manhole	-----
Storm Sewer	-----

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	○
Power Line Tower	□
Power Transformer	□
U/G Power Cable Hand Hole	-----
H-Frame Pole	●
U/G Power Line LOS B (S.U.E.*)	-----
U/G Power Line LOS C (S.U.E.*)	-----
U/G Power Line LOS D (S.U.E.*)	-----

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	○
Telephone Pedestal	□
Telephone Cell Tower	□
U/G Telephone Cable Hand Hole	-----
U/G Telephone Cable LOS B (S.U.E.*)	-----
U/G Telephone Cable LOS C (S.U.E.*)	-----
U/G Telephone Cable LOS D (S.U.E.*)	-----
U/G Telephone Conduit LOS B (S.U.E.*)	-----
U/G Telephone Conduit LOS C (S.U.E.*)	-----
U/G Telephone Conduit LOS D (S.U.E.*)	-----
U/G Fiber Optics Cable LOS B (S.U.E.*)	-----
U/G Fiber Optics Cable LOS C (S.U.E.*)	-----
U/G Fiber Optics Cable LOS D (S.U.E.*)	-----

WATER:

Water Manhole	○
Water Meter	○
Water Valve	⊗
Water Hydrant	○
U/G Water Line LOS B (S.U.E.*)	-----
U/G Water Line LOS C (S.U.E.*)	-----
U/G Water Line LOS D (S.U.E.*)	-----
Above Ground Water Line	-----

TV:

TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	-----
U/G TV Cable LOS B (S.U.E.*)	-----
U/G TV Cable LOS C (S.U.E.*)	-----
U/G TV Cable LOS D (S.U.E.*)	-----
U/G Fiber Optic Cable LOS B (S.U.E.*)	-----
U/G Fiber Optic Cable LOS C (S.U.E.*)	-----
U/G Fiber Optic Cable LOS D (S.U.E.*)	-----

GAS:

Gas Valve	◇
Gas Meter	◇
U/G Gas Line LOS B (S.U.E.*)	-----
U/G Gas Line LOS C (S.U.E.*)	-----
U/G Gas Line LOS D (S.U.E.*)	-----
Above Ground Gas Line	-----

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	-----
SS Forced Main Line LOS B (S.U.E.*)	-----
SS Forced Main Line LOS C (S.U.E.*)	-----
SS Forced Main Line LOS D (S.U.E.*)	-----

MISCELLANEOUS:

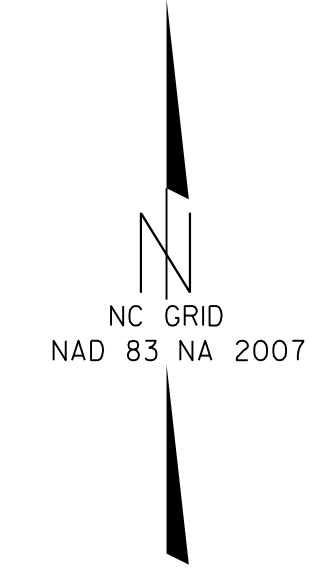
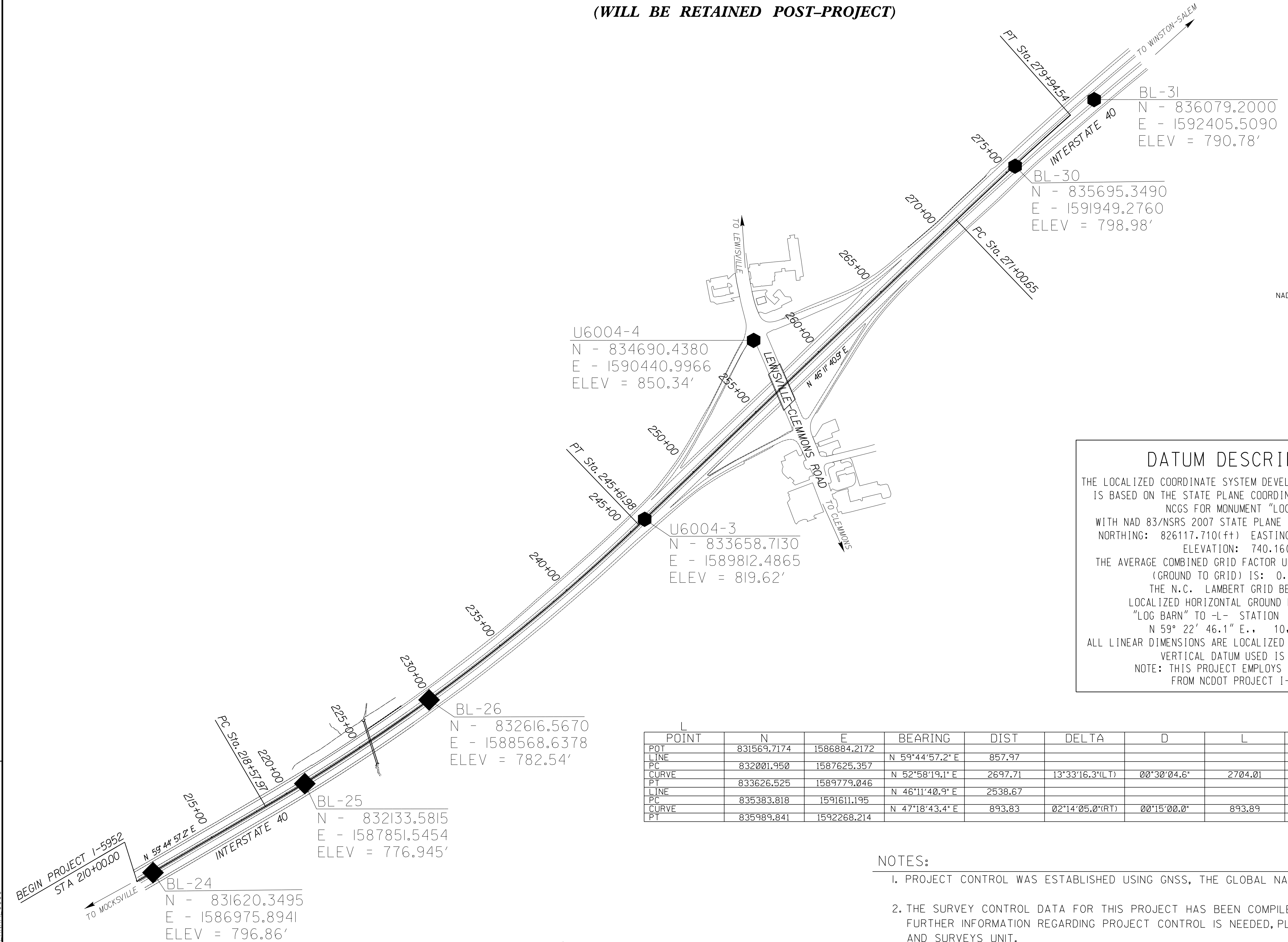
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	□
Utility Unknown U/G Line LOS B (S.U.E.*)	-----
U/G Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	-----
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	○
U/G Test Hole LOS A (S.U.E.*)	○
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

SURVEY CONTROL SHEET

**W/ EXISTING CENTERLINE ALIGNMENT
(WILL BE RETAINED POST-PROJECT)**

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REVISIONS



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "LOG BARN" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 826117.710(±) EASTING: 1577672.910(±) ELEVATION: 740.16(±)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999930099

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "LOG BARN" TO -L- STATION 210+00.00 IS N 59° 22' 46.1" E., 10,703.8575'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES

VERTICAL DATUM USED IS NAVD 88

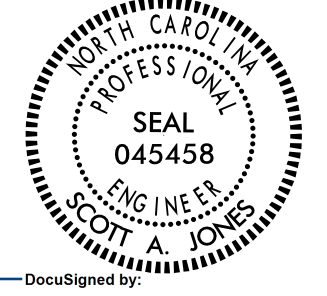

NOTE: THIS PROJECT EMPLOYS LOCALIZATION FROM NCDOT PROJECT 1-0911A

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	831569.7174	1586884.2172							
LINE			N 59°44'57.2" E	857.97					
PC	832001.950	1587625.357							
CURVE			N 52°58'19.1" E	2697.71	13°33'16.3(LT)	00°30'04.6"	2704.01	1358.34	11430.00
PT	833626.525	1589779.046							
LINE			N 46°11'40.9" E	2538.67					
PC	835383.818	1591611.195							
CURVE			N 47°18'43.4" E	893.83	02°14'05.0(RT)	00°15'00.0"	893.89	447.00	22918.31
PT	835989.841	1592268.214							

- NOTES:**
- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
 - THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

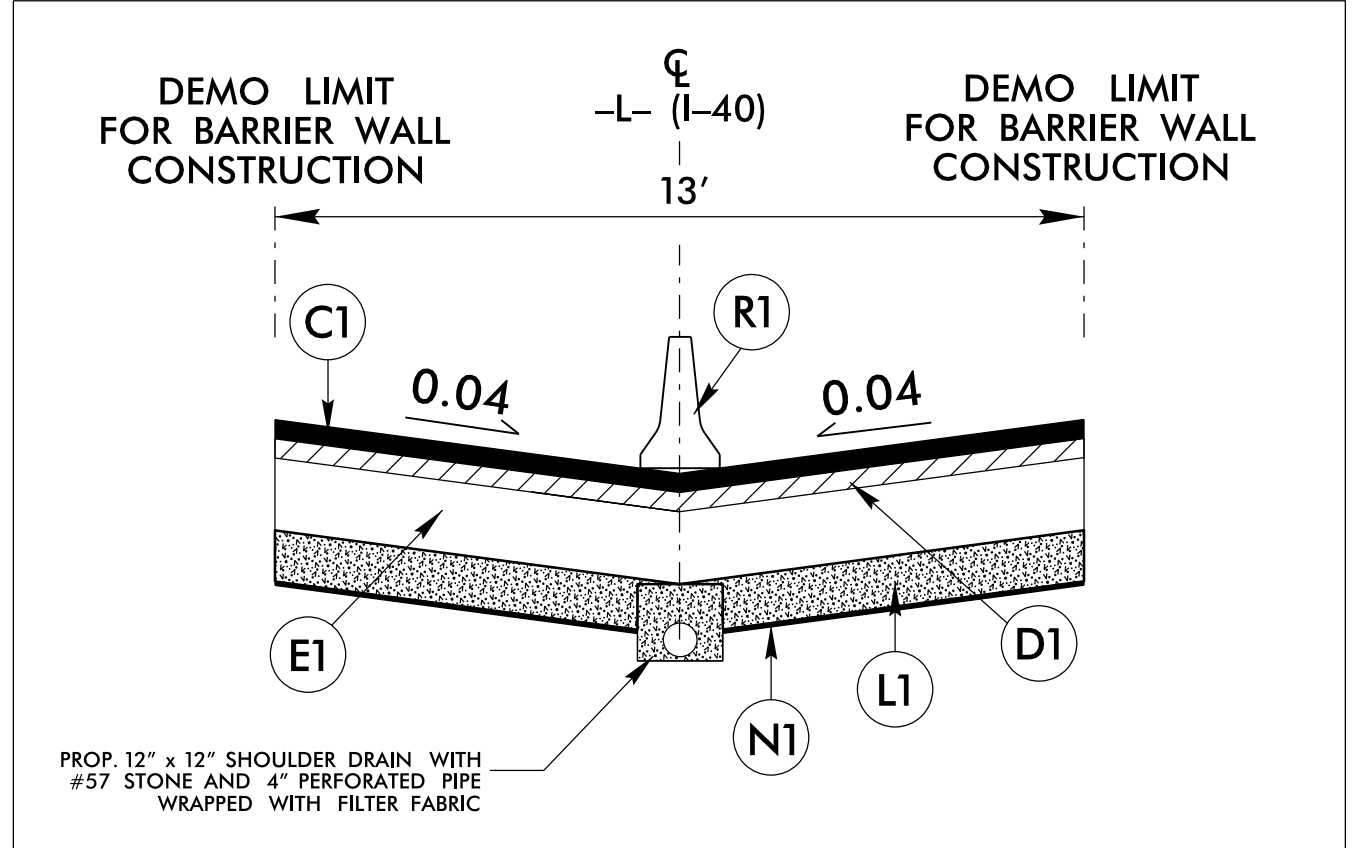
NOTE: DRAWING NOT TO SCALE

PAVEMENT SCHEDULE

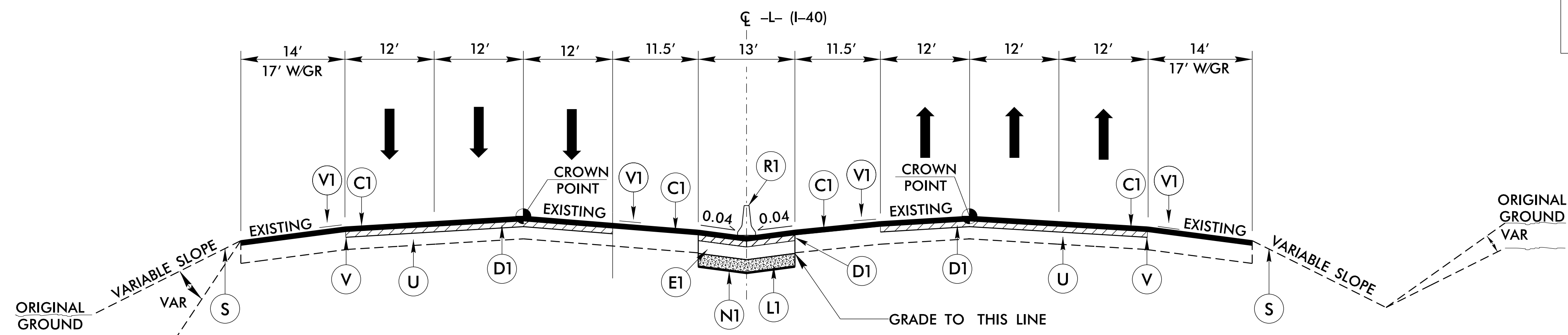
PROJECT REFERENCE NO. 1-5952	SHEET NO. 2A-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
Documented by: <u>Scott Jones</u> 10/4/2018 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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 8/14/19

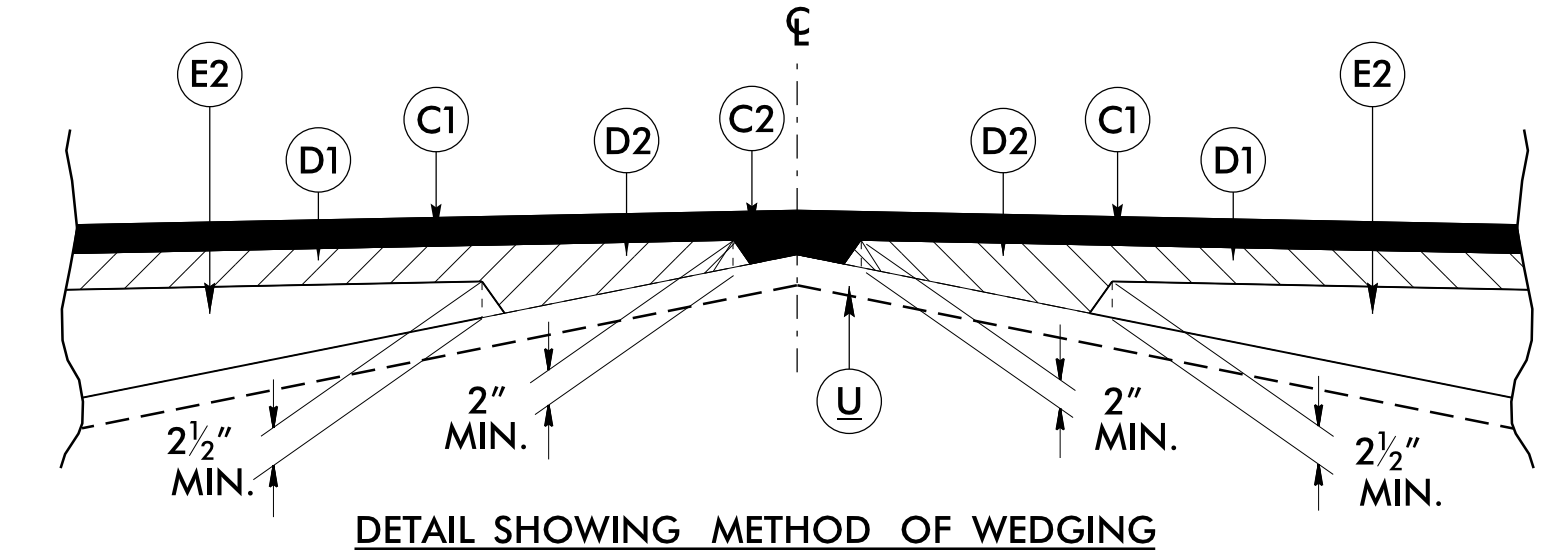
C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.	L1	12" CLASS IV SUBGRADE STABILIZATION
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. PER 1.5" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	N1	TYPE IV GEOTEXTILE FOR SOIL STABILIZATION
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	V	2.5" MILLING
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4.0" IN DEPTH.	V1	MILLED RUMBLE STRIPS
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 313.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	R1	DOUBLE FACED CONCRETE BARRIER (TYPE T, T1, T2)
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 4.0" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.	U	EXISTING PAVEMENT
S	SHOULDER RECONSTRUCTION	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAILS)



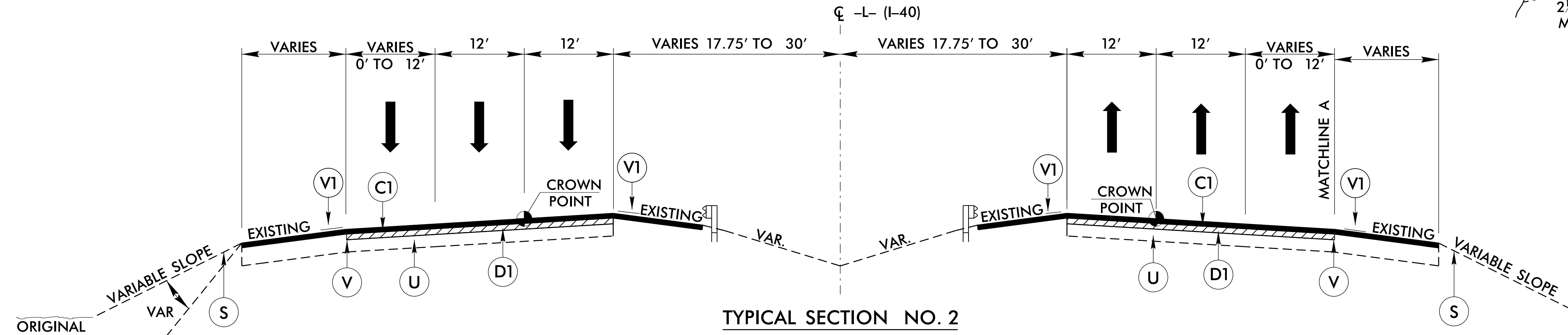
-L- MEDIAN SHOULDER DRAIN DETAIL
 -L- STA 220+00 TO 228+00
 -L- STA 272+00 TO 275+80



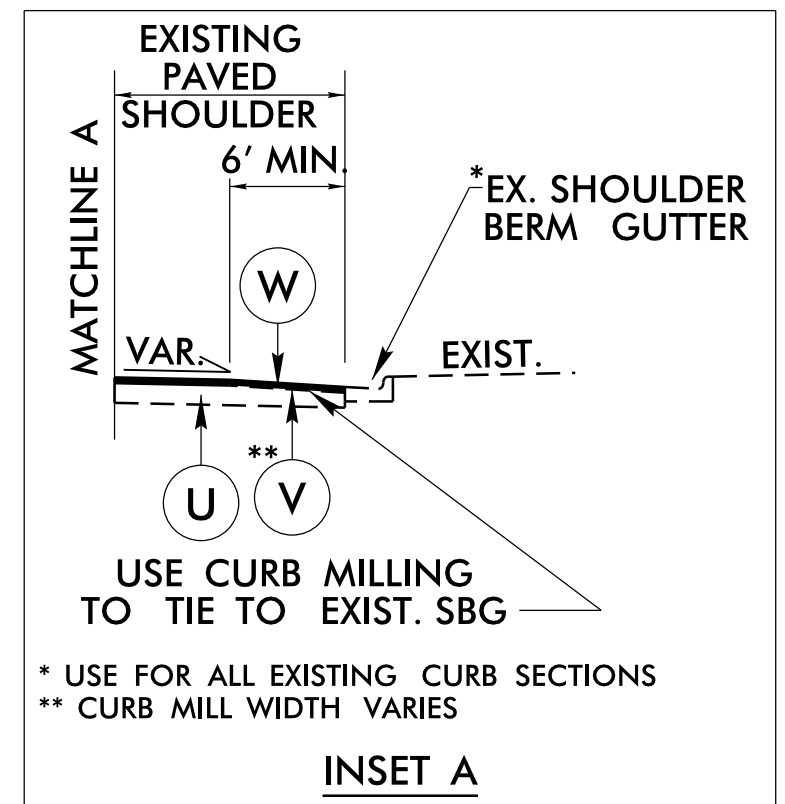
TYPICAL SECTION NO. 1
 USE TYPICAL SECTION NO. 1
 -L- STA. 210+00 TO STA. 275+80
 NOTE: EXISTING MEDIAN GUARDRAIL TO BE REMOVED IN THIS STATION RANGE



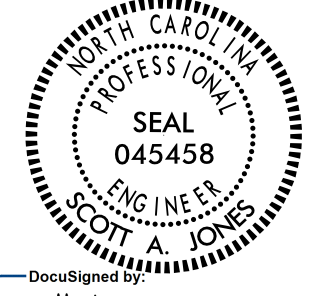
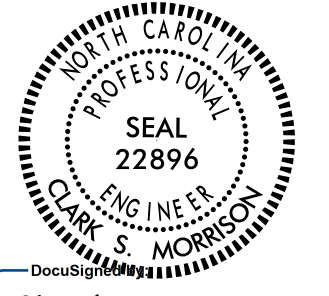
DETAIL SHOWING METHOD OF WEDGING



TYPICAL SECTION NO. 2
 USE TYPICAL SECTION NO. 2
 -L- STA. 275+80 TO WESTGATE CENTER DRIVE OVERPASS

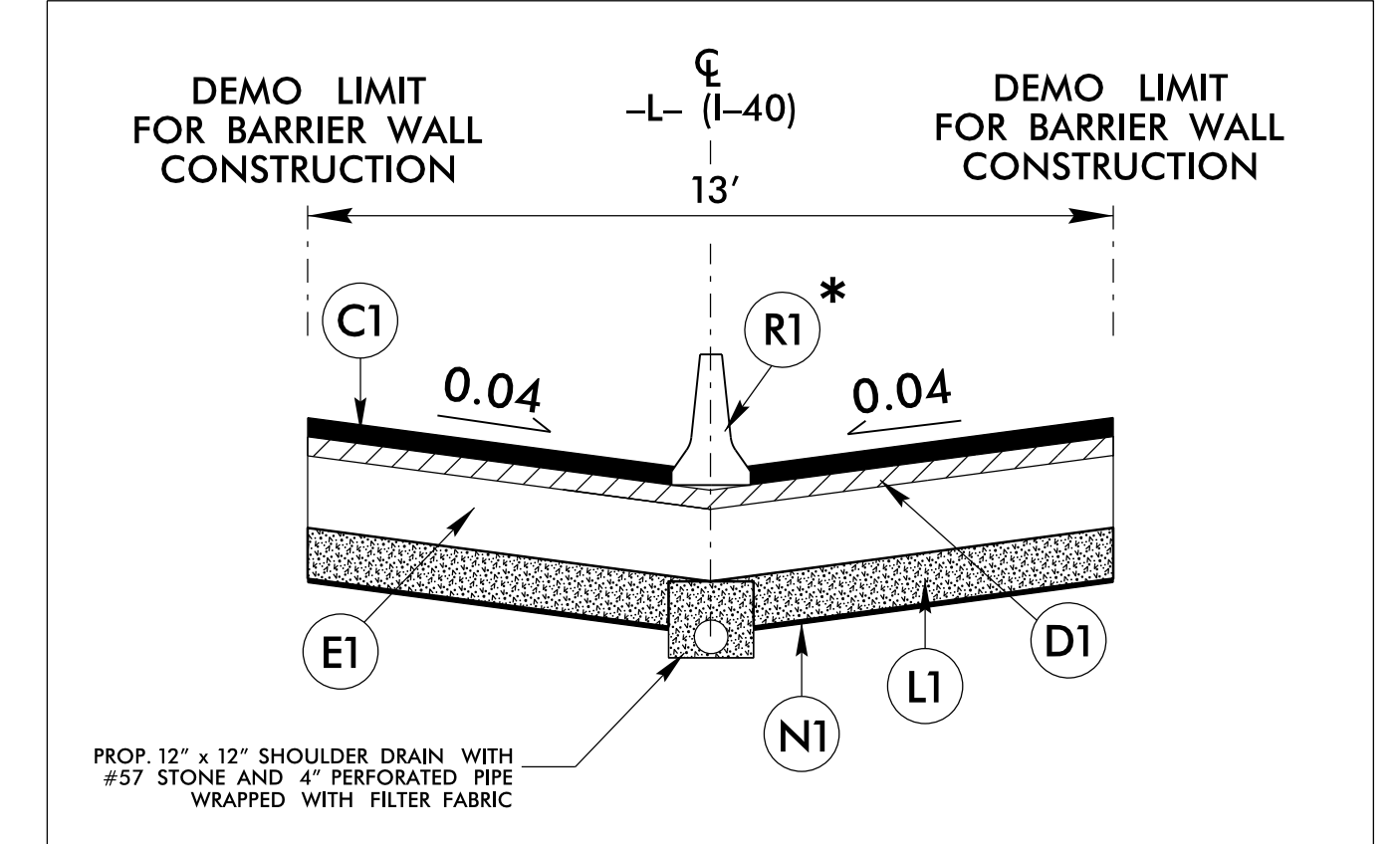


PAVEMENT SCHEDULE

PROJECT REFERENCE NO. 1-5952	SHEET NO. 2A-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
Scott Jones 11/8/2018	Clark Morrison 11/14/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

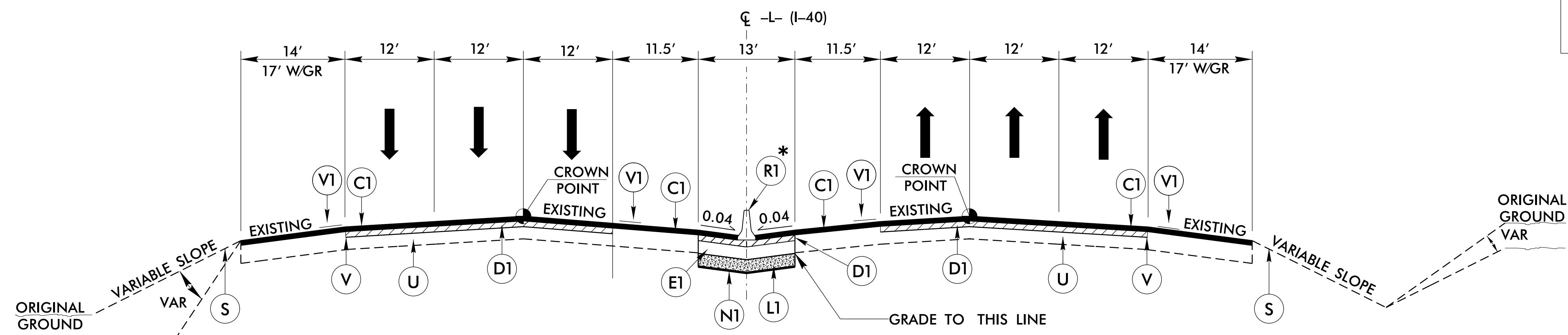
5/14/19

C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.	L1	12" CLASS IV SUBGRADE STABILIZATION
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E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 313.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	R1	DOUBLE FACED CONCRETE BARRIER (TYPE T AND T1)
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 4.0" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.	U	EXISTING PAVEMENT
S	SHOULDER RECONSTRUCTION	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAILS)



-L- MEDIAN SHOULDER DRAIN DETAIL
-L- STA 220+00 TO 228+00
-L- STA 272+00 TO 275+80

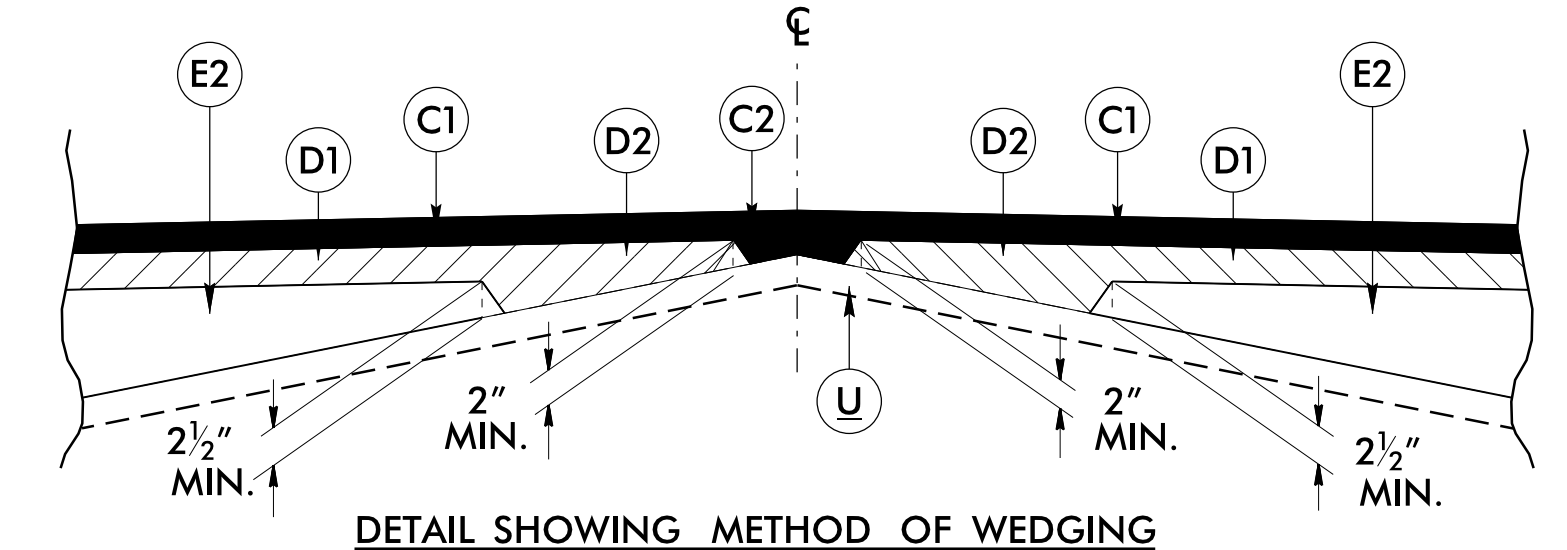
* NOTE: KEY-IN TYPE-T BARRIER WALL MINIMUM 2" & TYPE-T1 BARRIER MINIMUM 5"



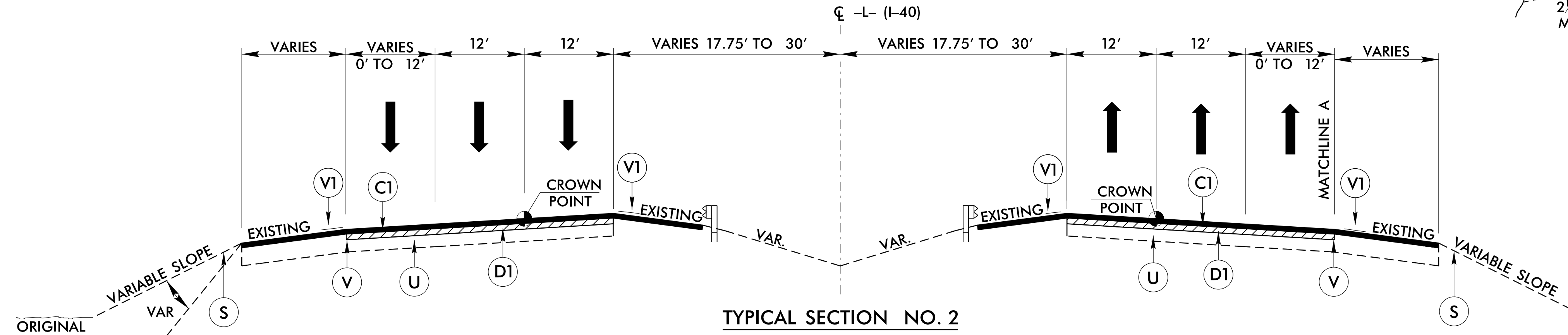
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
-L- STA. 210+00 TO STA. 275+80
NOTE: EXISTING MEDIAN GUARDRAIL TO BE REMOVED IN THIS STATION RANGE

* NOTE: KEY-IN TYPE-T BARRIER WALL MINIMUM 2" & TYPE-T1 BARRIER MINIMUM 5"

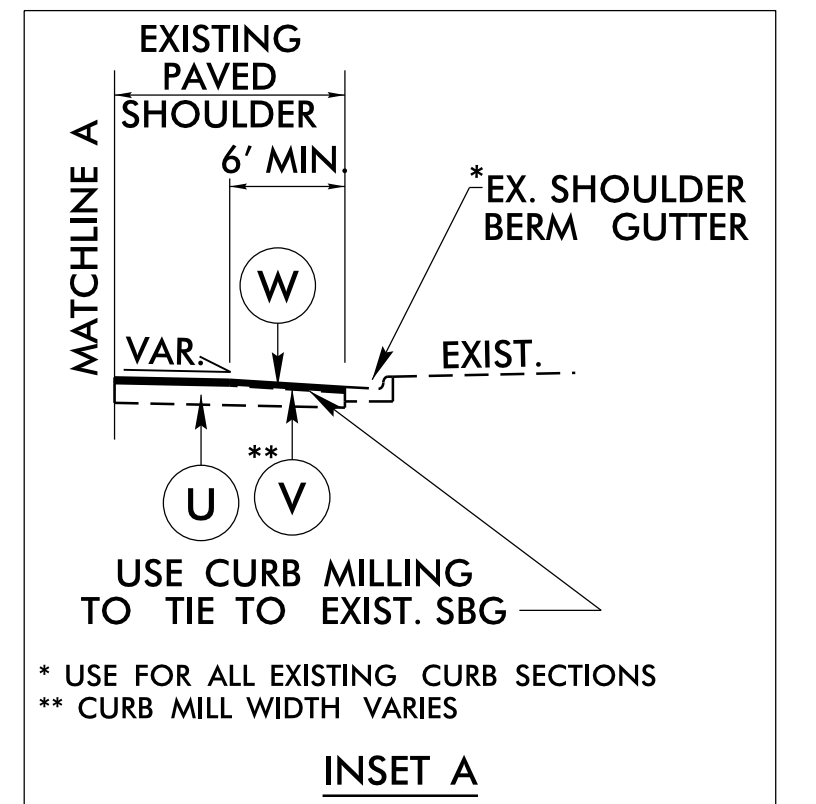


DETAIL SHOWING METHOD OF WEDGING



TYPICAL SECTION NO. 2

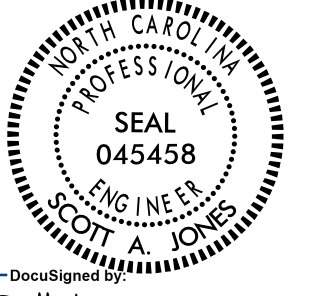
USE TYPICAL SECTION NO. 2
-L- STA. 275+80 TO WESTGATE CENTER DRIVE OVERPASS

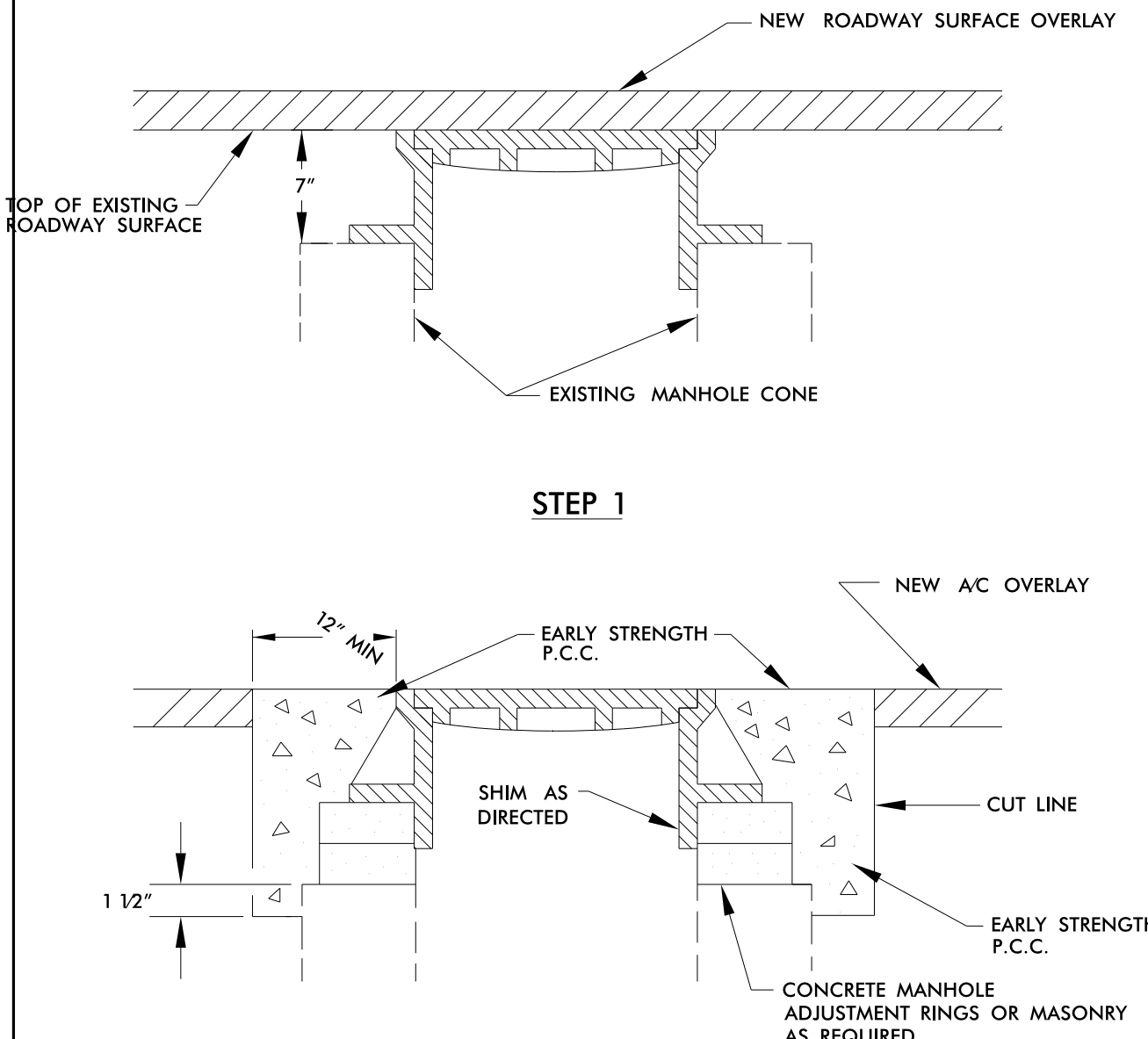


* USE FOR ALL EXISTING CURB SECTIONS
** CURB MILL WIDTH VARIES

INSET A

02-NOV-2018 14:52
Projects\1-5952\1-5952-1-10-West-Forsyth-Roadway\Design Files\1-5952.dwg, 2A-1.txd, dgn
0 Jones

PROJECT REFERENCE NO. 1-5952	SHEET NO. 2C-1
RW SHEET NO. N/A	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
 Scott A. Jones 9/19/2018	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



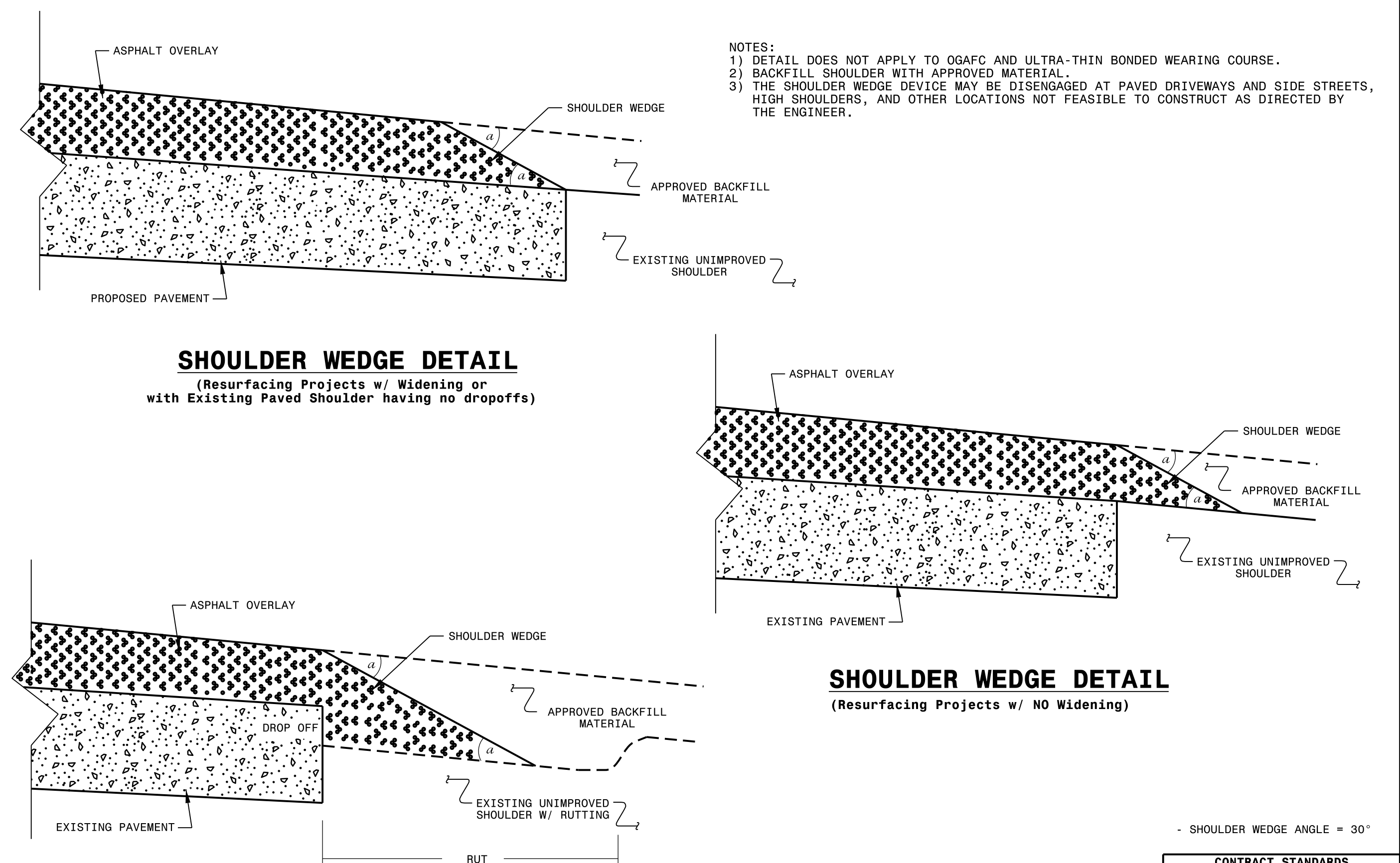
MANHOLE ADJUSTMENT DETAIL

CONSTRUCTION NOTES:

- ALL QUANTITIES ARE "ESTIMATED" AS INDICATED IN THE "SUMMARY OF QUANTITIES".
- CONSTRUCTION SHALL PROGRESS IN PHASES, IN THE ORDER INDICATED BELOW:
 - PHASE 1 - MILLING AND PATCHING (WHEN REQUIRED)
 - PHASE 2 - SURFACE OVERLAY
 - PHASE 3 - SHOULDER DROP-OFF REPAIR (AS NEEDED AND DIRECTED BY ENGINEER)
 - PHASE 4 - UTILITY ADJUSTMENTS (MANHOLE RING/COVER, VALVEMETER BOX RING/COVER, CATCH BASIN GRATE/COVER, DROP INLET GRATE/COVER, ETC.) WHEN REQUIRED.
- BRIDGES THAT HAVE FLOOR DRAINS, SHALL HAVE ALL FLOOR DRAINS LEFT OPEN. EXTRA CARE SHALL BE EXERCISED IN MILLING (IF REQUIRED) AND IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE.
- TEMPORARY ASPHALT WEDGING SHALL BE PLACED ON THE SAME DAY THAT BRIDGE AND/OR RAILROAD APPROACHES ARE MILLED (AND IF APPROACHES ARE MILLED PRIOR TO BRIDGE DECK).
- FOR TWO-LANE ROADWAYS - IT SHALL BE UNDERSTOOD THAT TYPICALLY ON A ROADWAY MEASURING 20 FEET OR LESS IN WIDTH, THE CENTER OF THE WHITE EDGELINE SHALL BE LOCATED SIX INCHES FROM THE EDGE OF PAVEMENT ON EITHER SIDE OF THE ROADWAY; ON A ROADWAY MEASURING 22 FEET IN WIDTH, TRAVEL LANES SHALL MEASURE 10 FEET AND THE WHITE EDGELINE SHALL BE LOCATED ONE FOOT FROM THE EDGE OF PAVEMENT ON EITHER SIDE; ON A ROADWAY MEASURING 24 FEET IN WIDTH, TRAVEL LANES SHALL MEASURE 11 FEET AND THE WHITE EDGELINE SHALL BE LOCATED ONE FOOT FROM THE EDGE OF PAVEMENT ON EITHER SIDE; ON A ROADWAY MEASURING 26 FEET OR MORE IN WIDTH, TRAVEL LANES SHALL MEASURE 12 FEET AND THE WHITE EDGELINE SHALL BE LOCATED NO LESS THAN ONE FOOT FROM THE EDGE OF PAVEMENT ON EITHER SIDE. THIS SHALL BE STANDARD PRACTICE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- PAPER JOINTS ARE TO BE PLACED BETWEEN DAYS OF PAVING OPERATIONS AS SPECIFIED IN THE STANDARD SPECIFICATIONS SECTION 610-11.
- ALL MILLED AREAS WILL BE PAVED WITHIN 72 HOURS UNLESS APPROVED BY THE ENGINEER.
- REPLACE ANY PORTION OF STOP BARS AND OTHER PAVEMENT MARKINGS AT ANY INTERSECTION INCLUDING Y-LINES NOT ACTUALLY BEING PAVED OVER THAT ARE OBLITERATED BY THE PAVING OPERATION EITHER BY HAULING WHEEL TRACKS OR TACK TRUCK BY THE END OF EACH RESURFACING OPERATION

STEPS 2,3, & 4

- COVER EXISTING MANHOLE WITH APPROVED MATERIAL AND CONSTRUCT OVERLAY ACROSS TOP OF MANHOLE
- SAW CUT EXCAVATION AROUND MANHOLE 12" MIN. FROM MANHOLE FRAME.
- RAISE MANHOLE FRAME RINGS TO FINISH PAVEMENT PROFILE AND CROSS SLOPE.
- BACKFILL WITH EARLY STRENGTH P.C.C. TO DEPTHS AS DIRECTED.



SHOULDER WEDGE DETAIL
(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)

SHOULDER WEDGE DETAIL
(Resurfacing Projects w/ NO Widening)

SHOULDER WEDGE DETAIL
(Resurfacing Adjacent to Rutted Shoulder)

NOTES:

- DETAIL DOES NOT APPLY TO OGAFC AND ULTRA-THIN BONDED WEARING COURSE.
- BACKFILL SHOULDER WITH APPROVED MATERIAL.
- THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS DIRECTED BY THE ENGINEER.

- SHOULDER WEDGE ANGLE = 30°

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SHOULDER WEDGE DETAILS

ORIGINAL BY: T. SPELL DATE: 2-18-15
 MODIFIED BY: DATE: 10-15-12
 CHECKED BY: DATE:
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STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

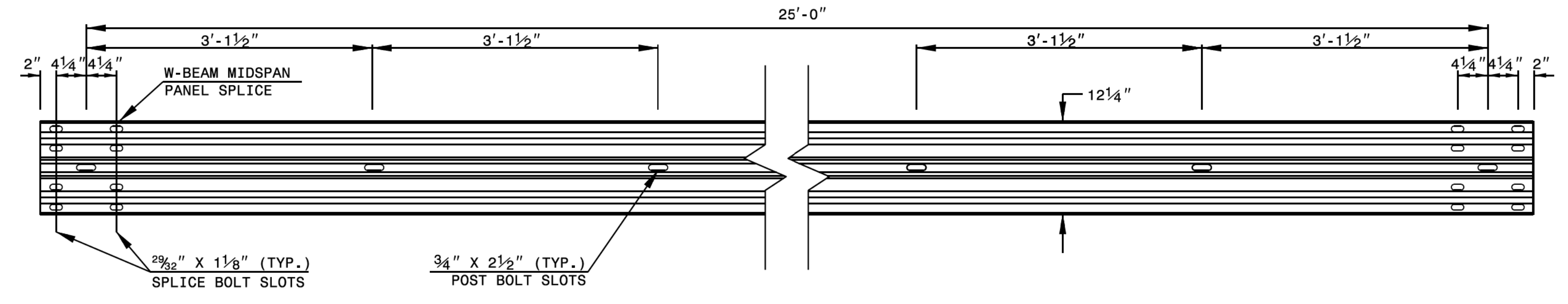
ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02

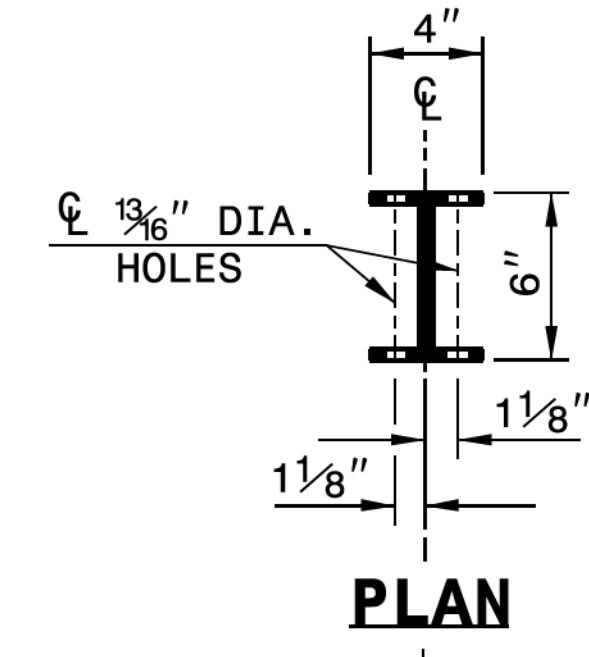
STATE OF
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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

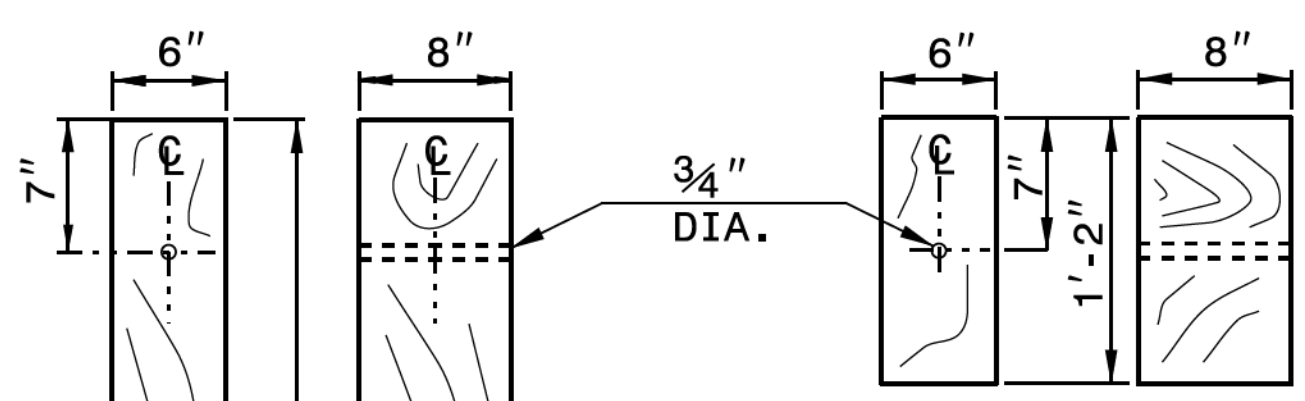
SHEET 6 OF 8
862D02



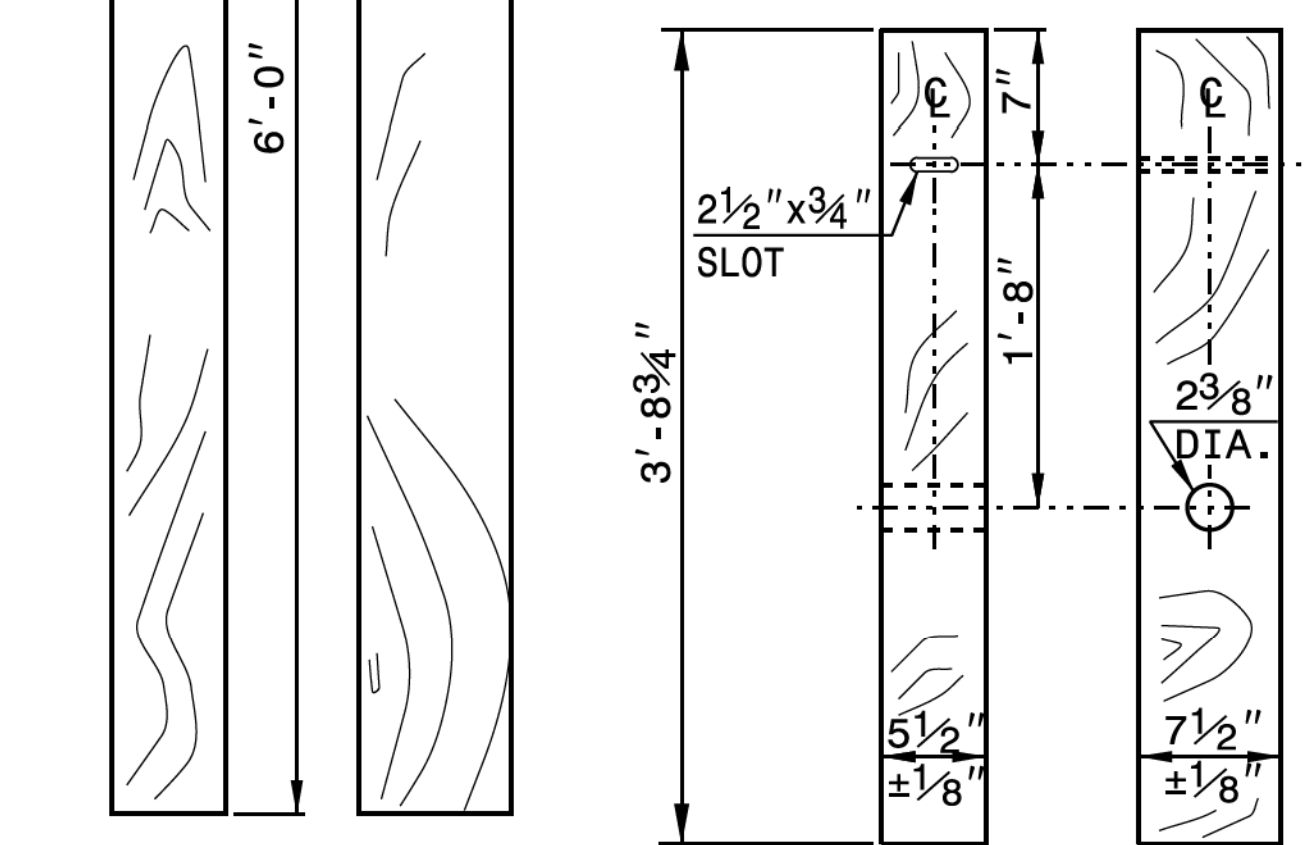
STANDARD W-BEAM GUARDRAIL



PLAN

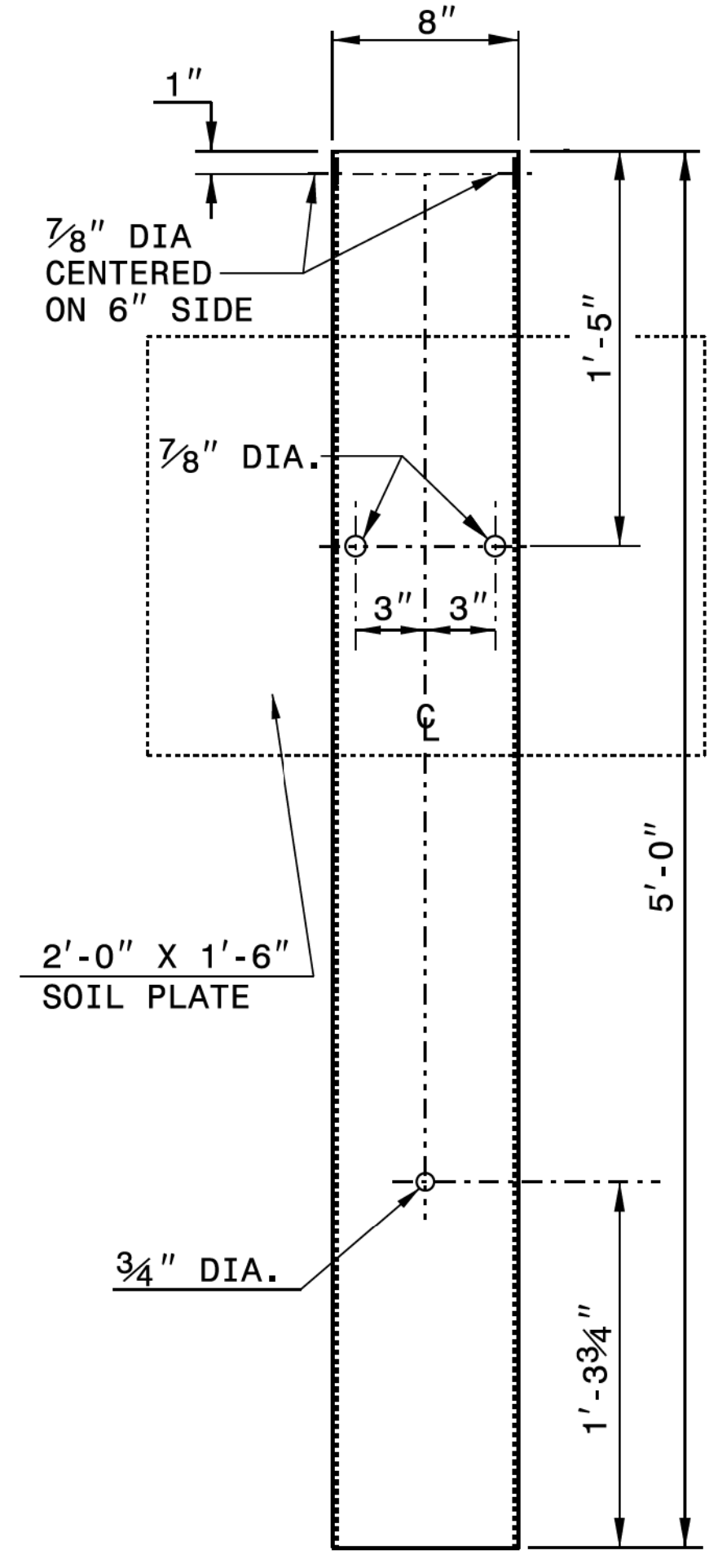


**WOOD OFFSET BLOCK
(FOR WOOD POSTS)**

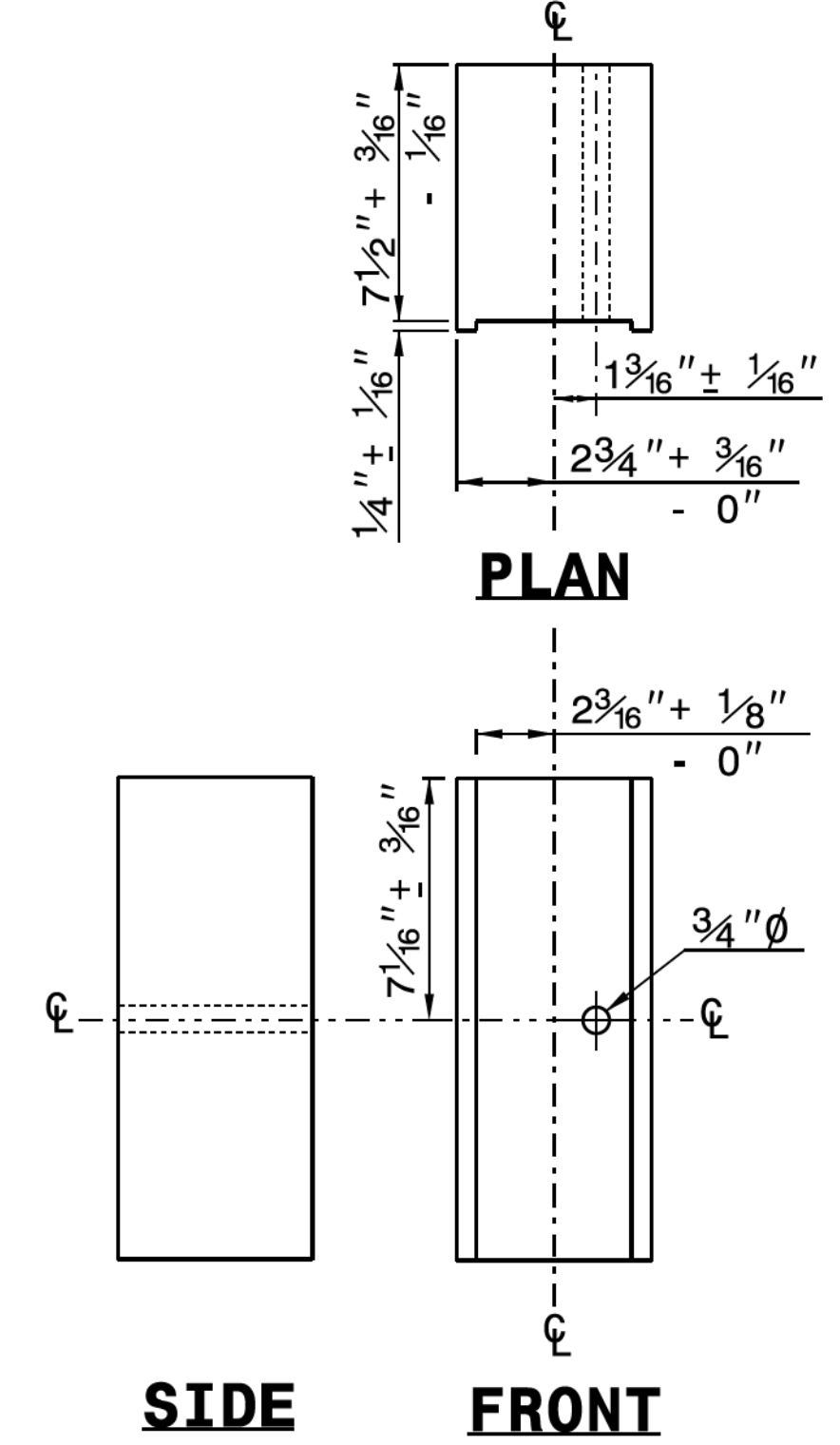


**STANDARD
LINE POST**

**SHORT WOOD
BREAKAWAY POST**



**STEEL TUBE
TS 6"x8"x0.1875"**

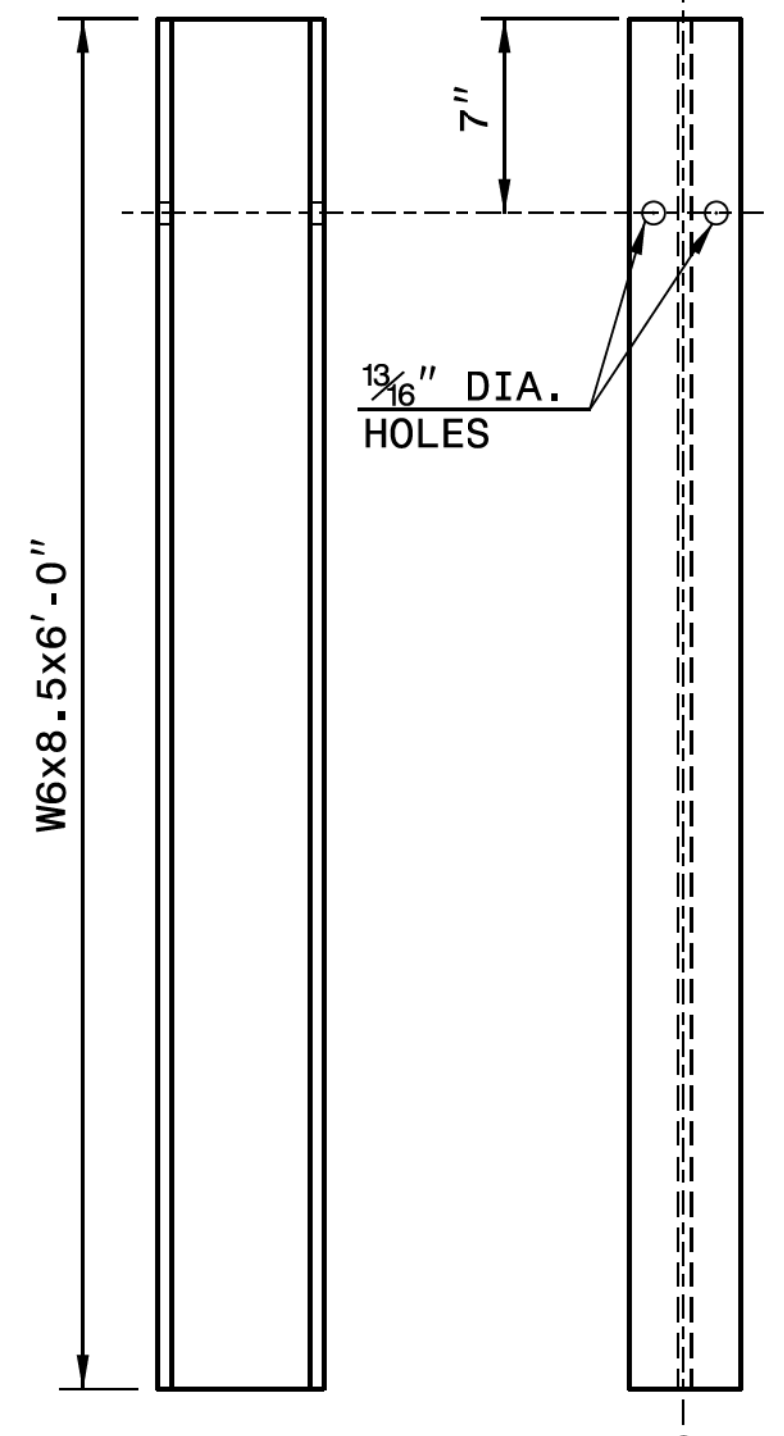


PLAN

SIDE

FRONT

**ROUTED
OFFSET BLOCK**



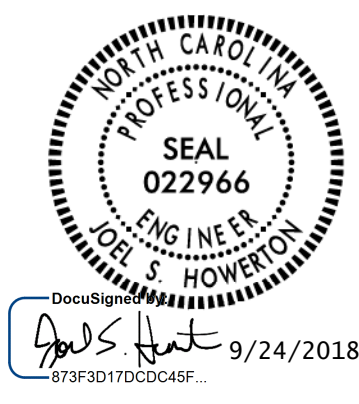
SIDE

FRONT

"W6" STEEL POST

SYSTEM PARTS

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19-SEP-2018 11:00
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862D02.dwg
J.S. HOWERTON

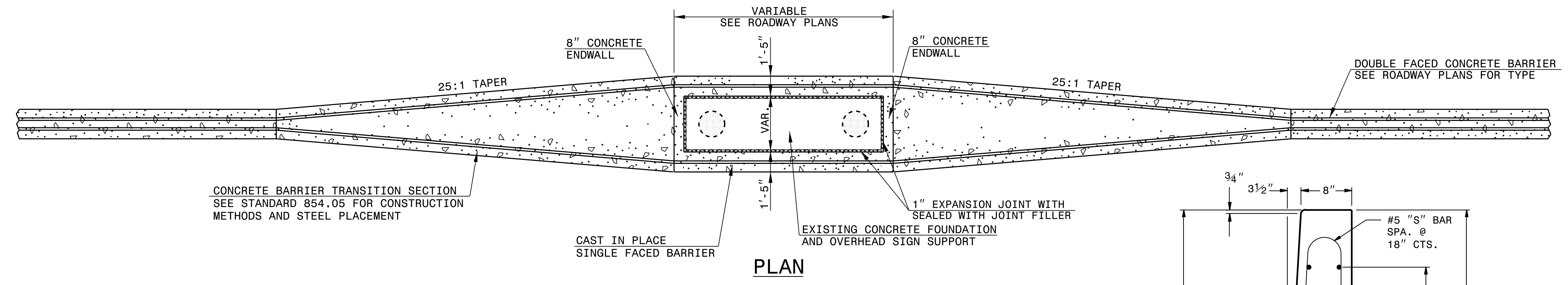


**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

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MODIFIED BY:	DATE:
CHECKED BY:	DATE:
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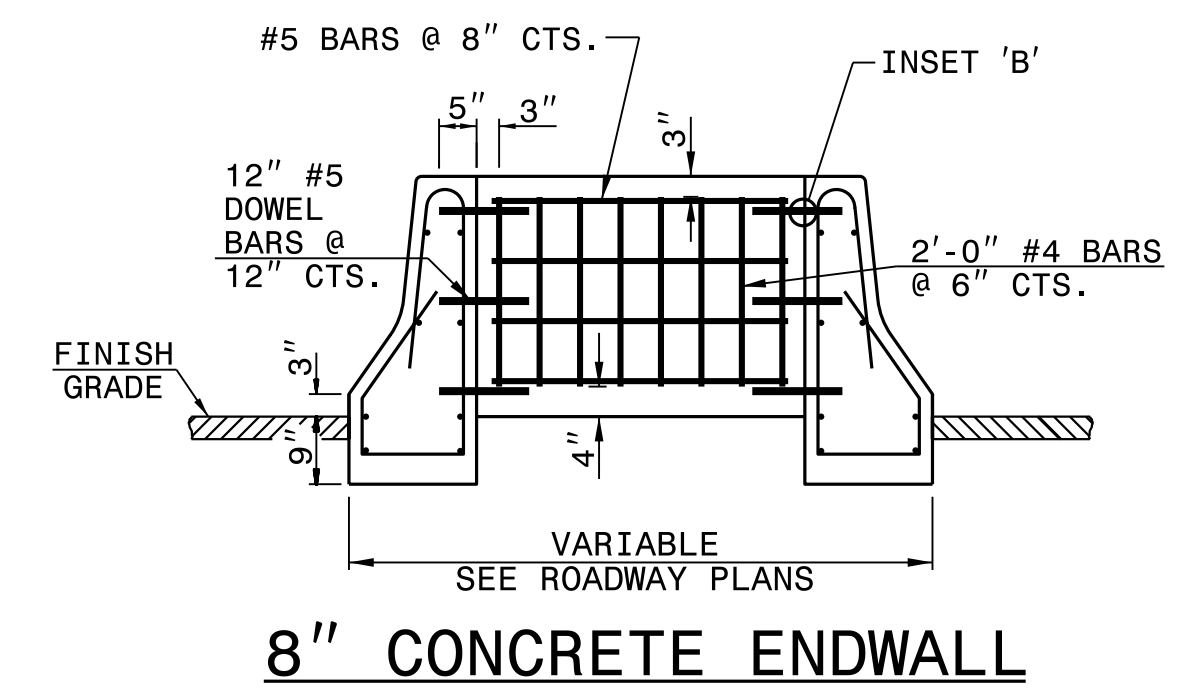
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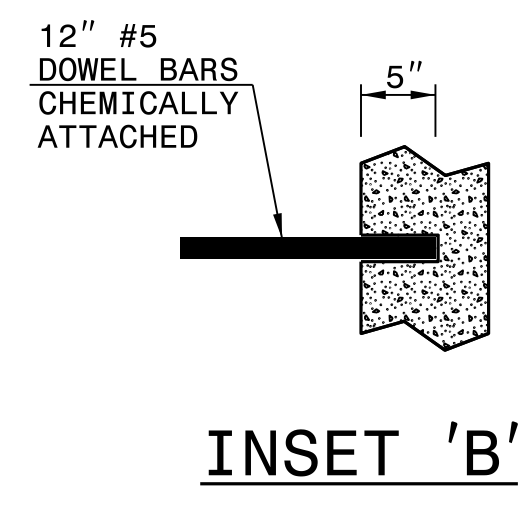
CONCRETE BARRIER TRANSITION SECTION
SEE STANDARD 854.05 FOR CONSTRUCTION
METHODS AND STEEL PLACEMENT

CAST IN PLACE
SINGLE FACED BARRIER

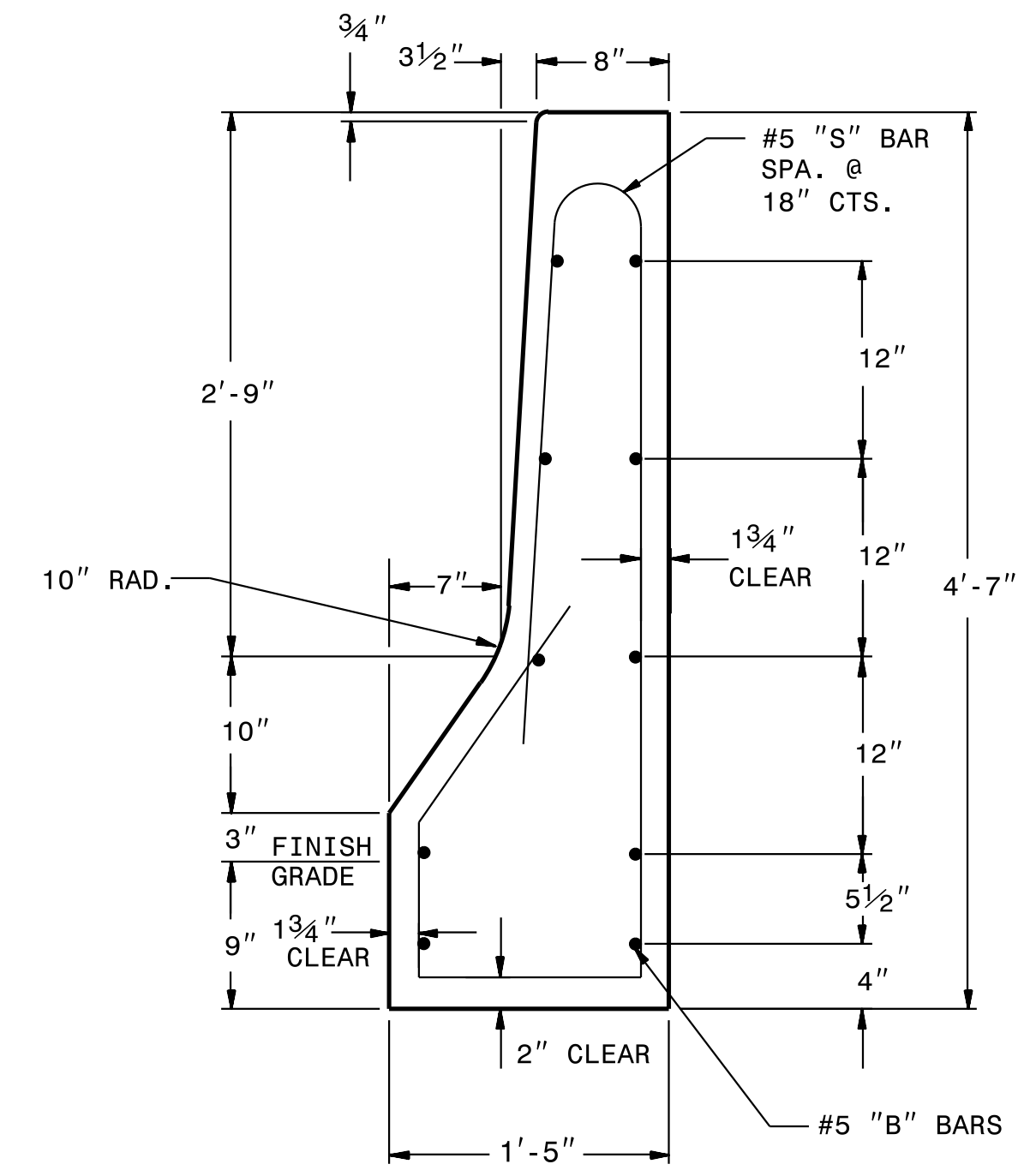
PLAN



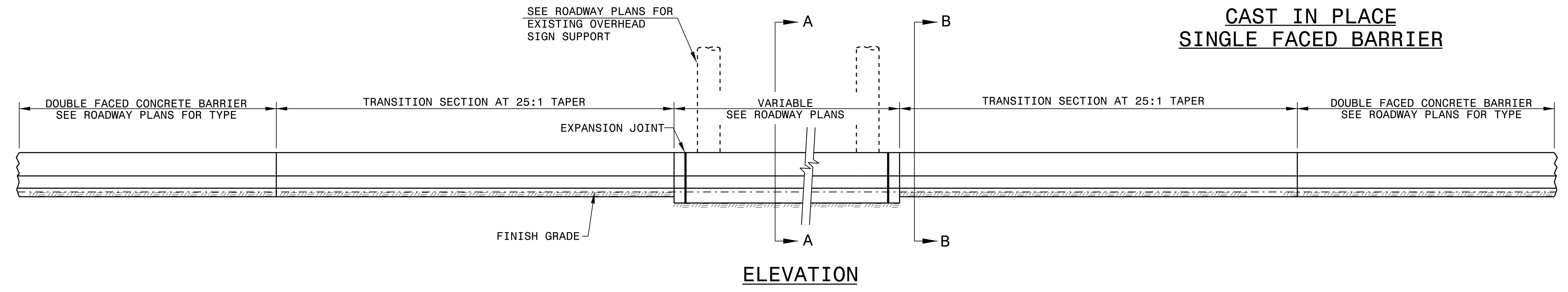
8" CONCRETE ENDWALL



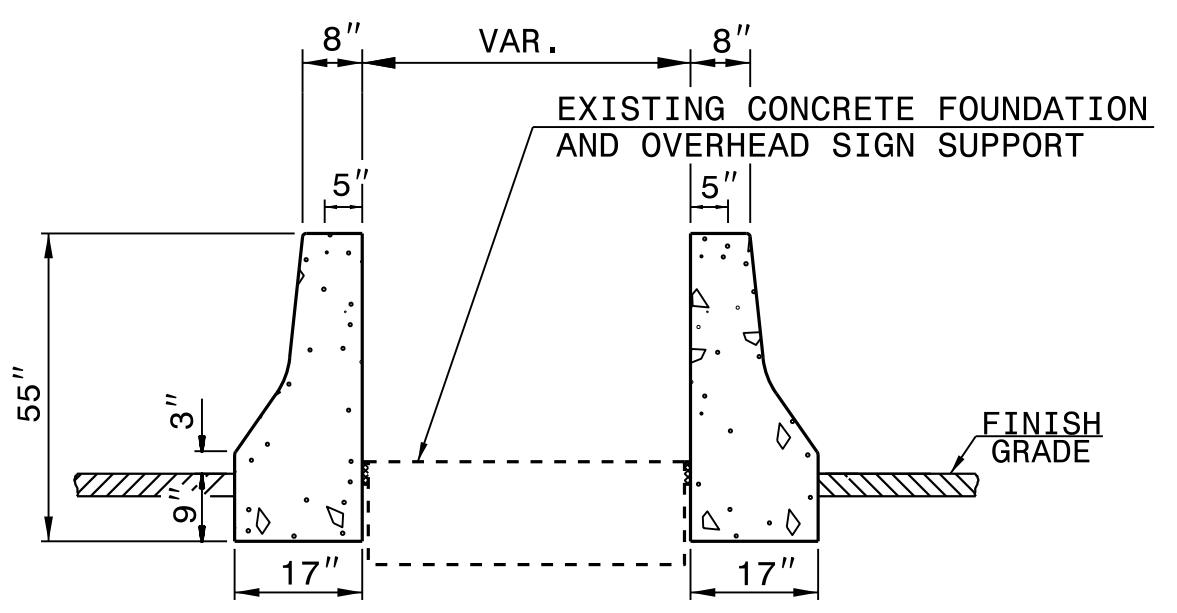
INSET 'B'



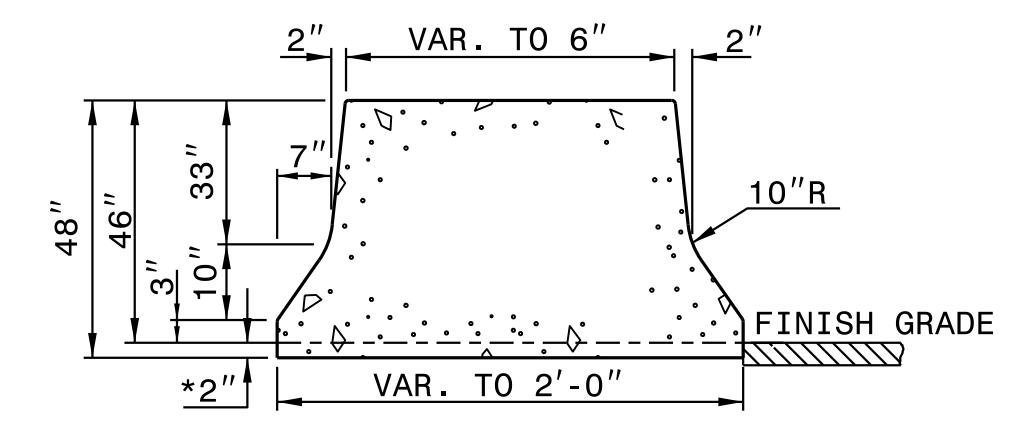
CAST IN PLACE
SINGLE FACED BARRIER



ELEVATION

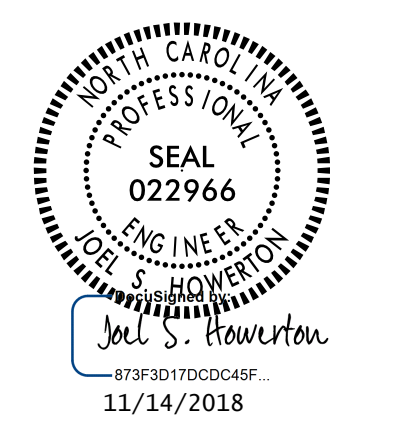


SECTION A-A



SECTION B-B

GENERAL NOTES:
 CONSTRUCT CONCRETE BARRIER WITH CLASS 'AA' CONCRETE. (SEE SPECIFICATIONS SECTION 854).
 CONSTRUCT EXPANSION AND CONTRACTION JOINTS AS SHOWN IN STANDARD DRAWING 854.01.
 SEAL EXPANSION JOINTS WITH JOINT FILLER. (SEE SECTION 1028 OF THE SPECIFICATIONS).
 SUBMIT ALTERNATIVE METHODS FOR STEEL FABRICATION PLACEMENT FOR REVIEW AND APPROVAL.
 SEE STANDARD DRAWING 854.05 FOR STEEL LAYOUT OF TRANSITION BARRIER.
 *THE 2" DIMENSION FROM FINISH GRADE TO THE BASE IS A MINIMUM DIMENSION.
 INSET FIRST 1" DIA. GALVANIZED BAR 12'-6" AND SPACE THE REMAINING 1' BARS AT 25'-0".



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

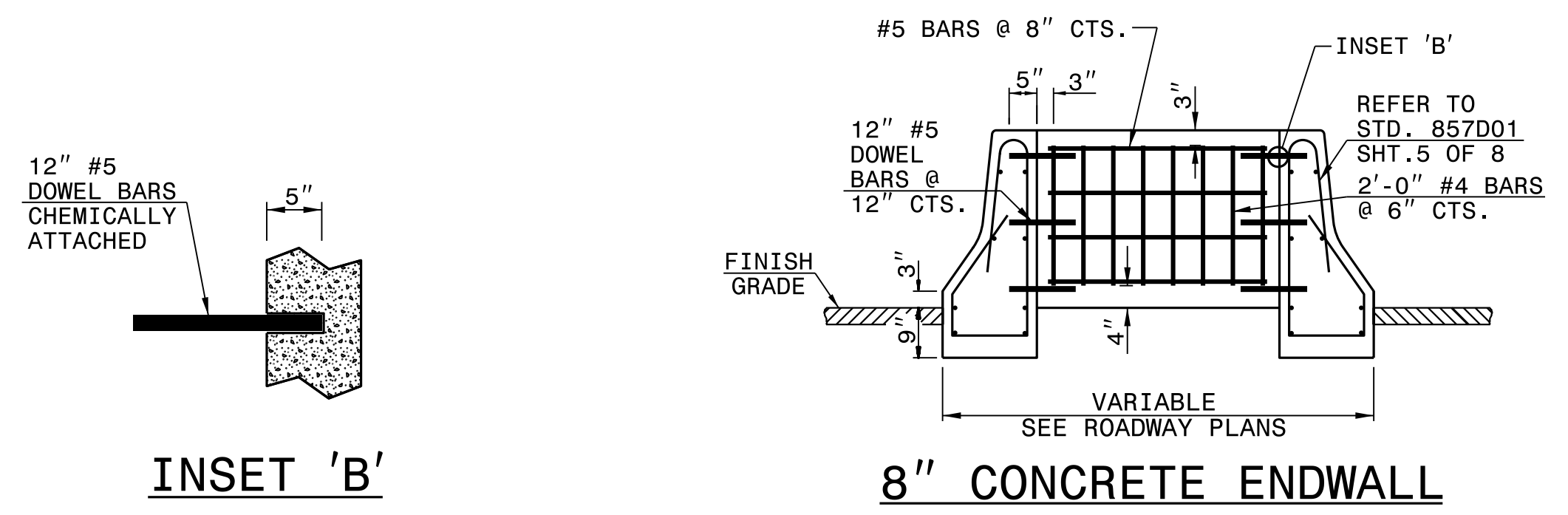
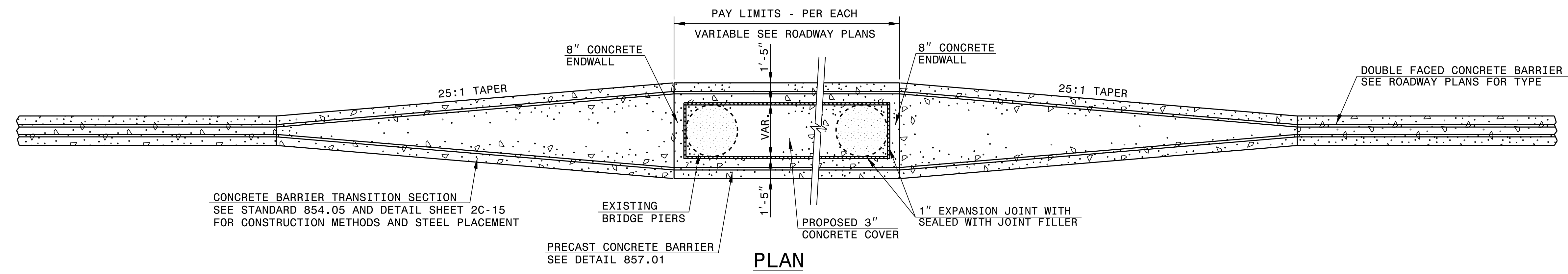
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**DETAIL OF CONCRETE
BARRIER TRANSITION**

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MODIFIED BY: K.A. KEMPF	DATE: 11-02-18
CHECKED BY:	DATE:
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02-NOV-2018 15:04
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 K Kempf AT CSD-292596

*** DRAWING NOT TO SCALE**



GENERAL NOTES:

CONSTRUCT CONCRETE BARRIER WITH CLASS 'AA' CONCRETE. (SEE SPECIFICATIONS SECTION 854).

CONSTRUCT EXPANSION AND CONTRACTION JOINTS AS SHOWN IN STANDARD DRAWING 854.01.

SEAL EXPANSION JOINTS WITH JOINT FILLER. (SEE SECTION 1028 OF THE SPECIFICATIONS).

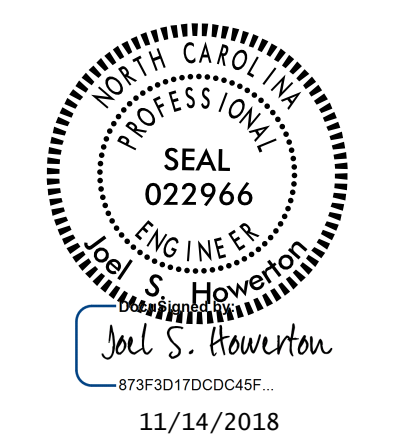
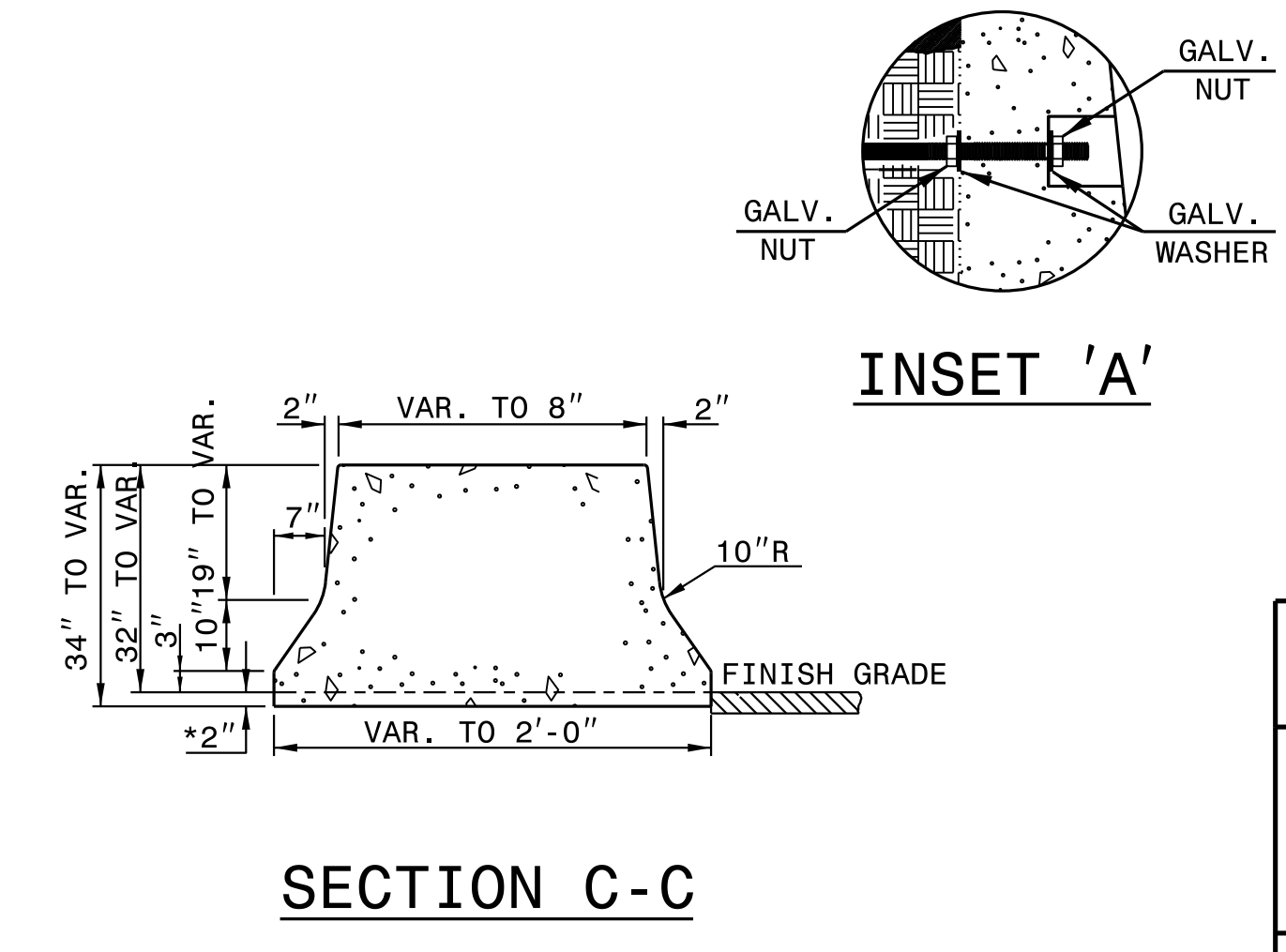
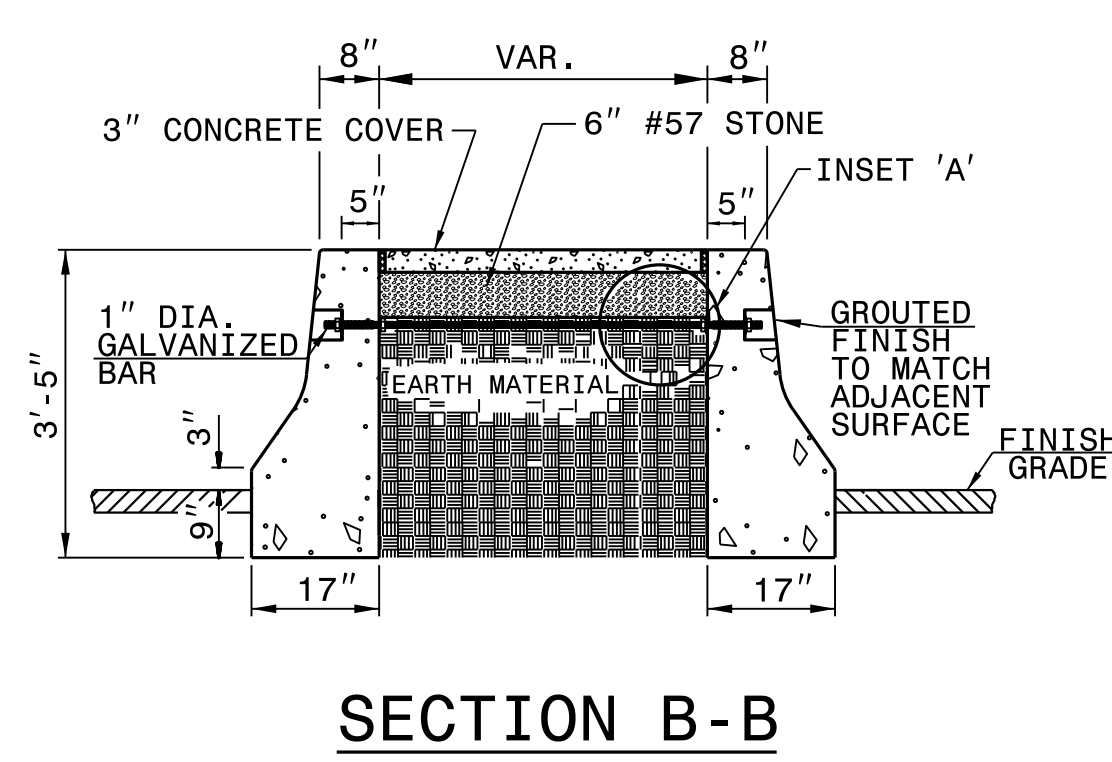
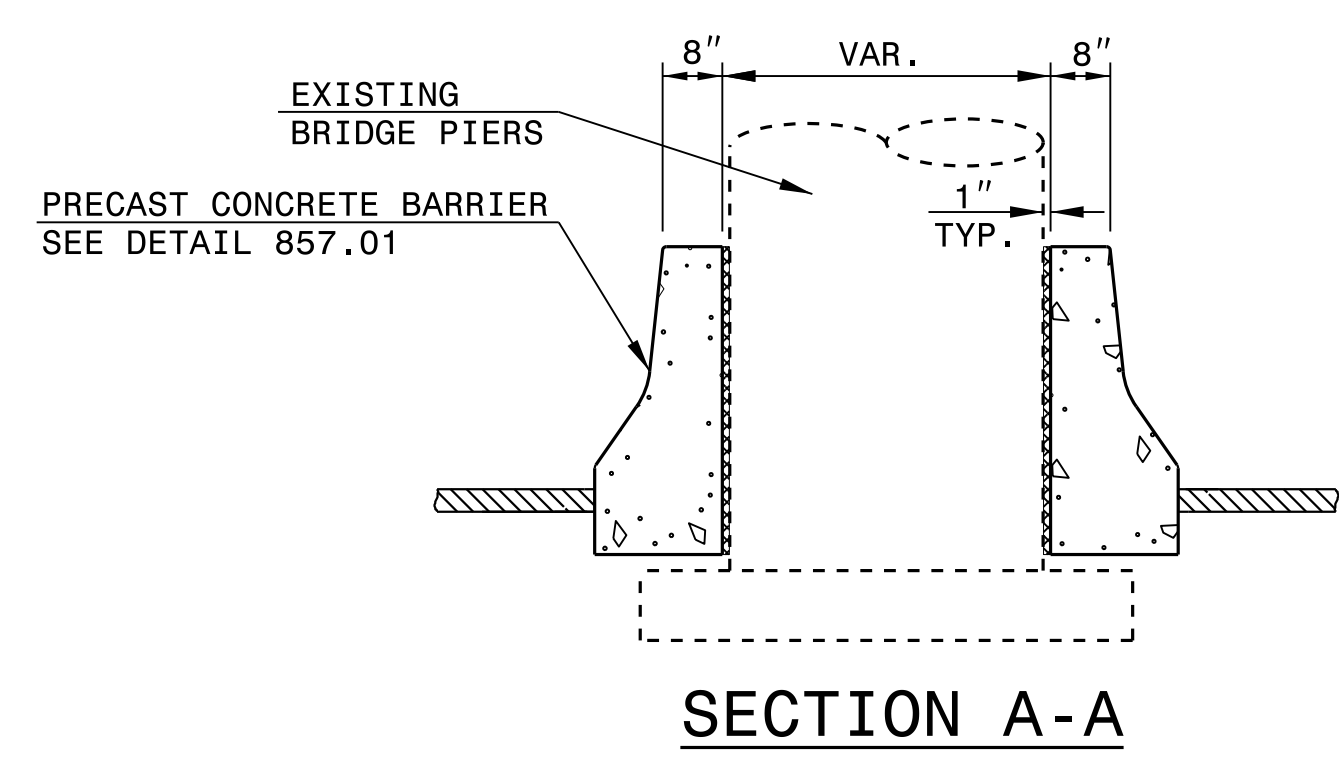
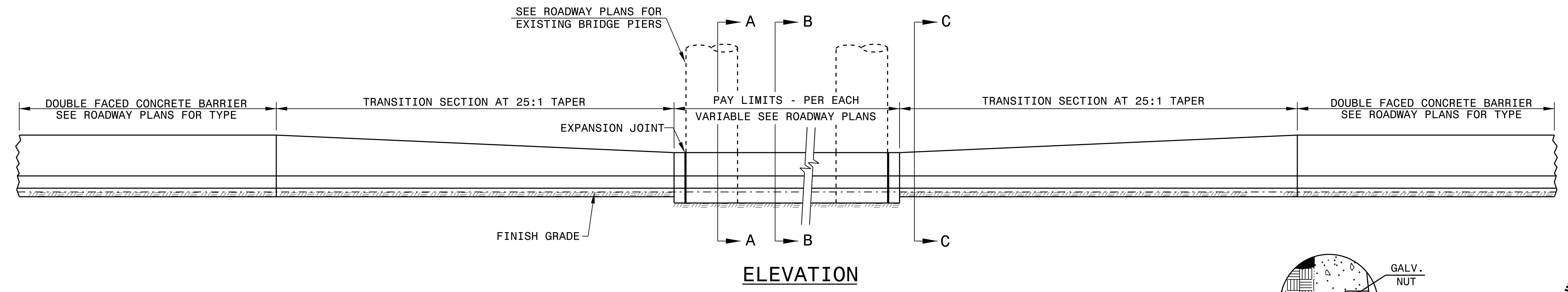
SUBMIT ALTERNATIVE METHODS FOR STEEL FABRICATION PLACEMENT FOR REVIEW AND APPROVAL.

SEE STANDARD DRAWING 854.05 FOR STEEL LAYOUT OF TRANSITION BARRIER.

*THE 2" DIMENSION FROM FINISH GRADE TO THE BASE IS A MINIMUM DIMENSION.

INSET FIRST 1" DIA. GALVANIZED BAR 12'-6" AND SPACE THE REMAINING 1' BARS AT 25'-0".

USE AN APPROVED BONDING SYSTEM IN ACCORDANCE WITH SECTION 1081 OF THE STANDARD SPECIFICATIONS.



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MEDIAN HAZARD PIER PROTECTION

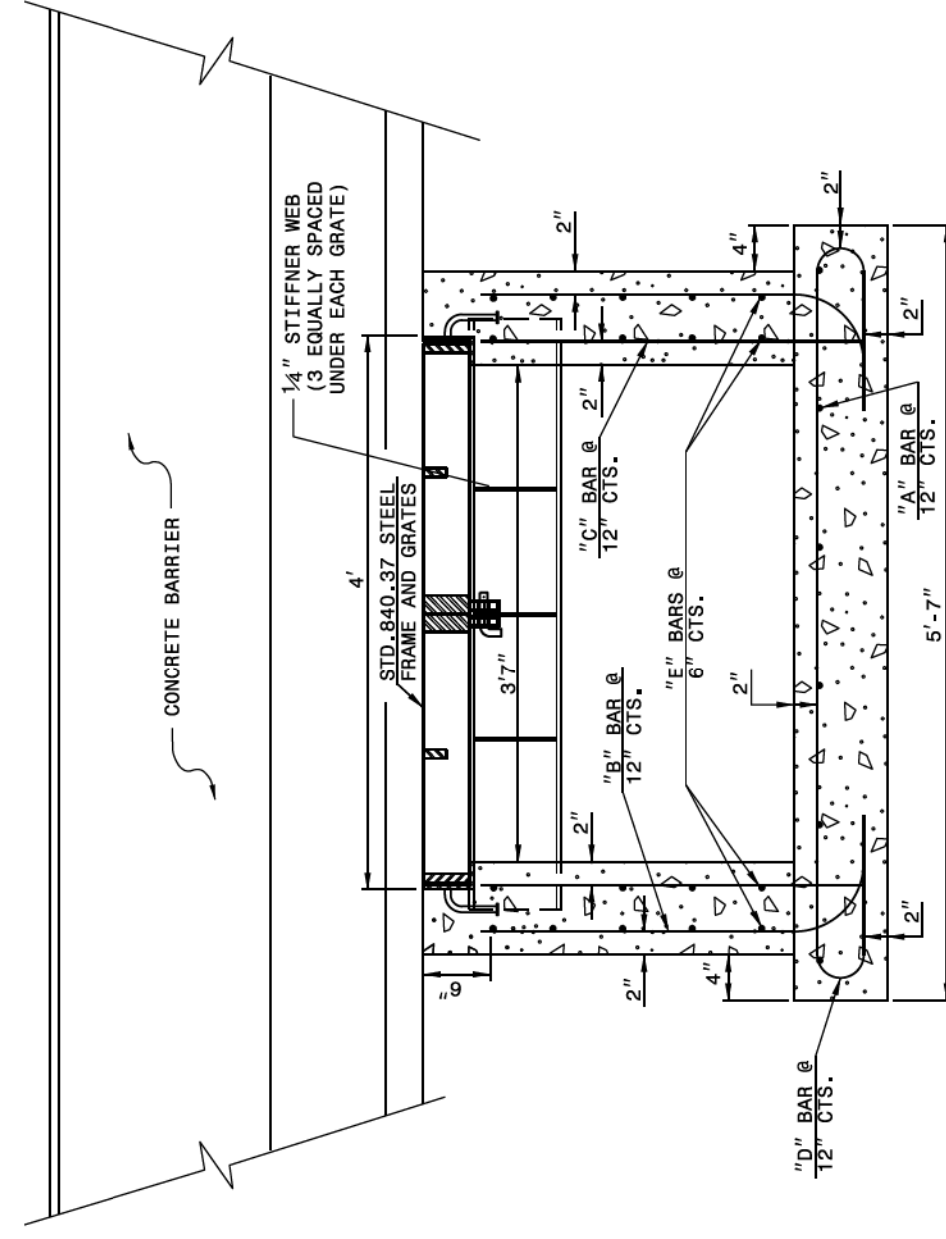
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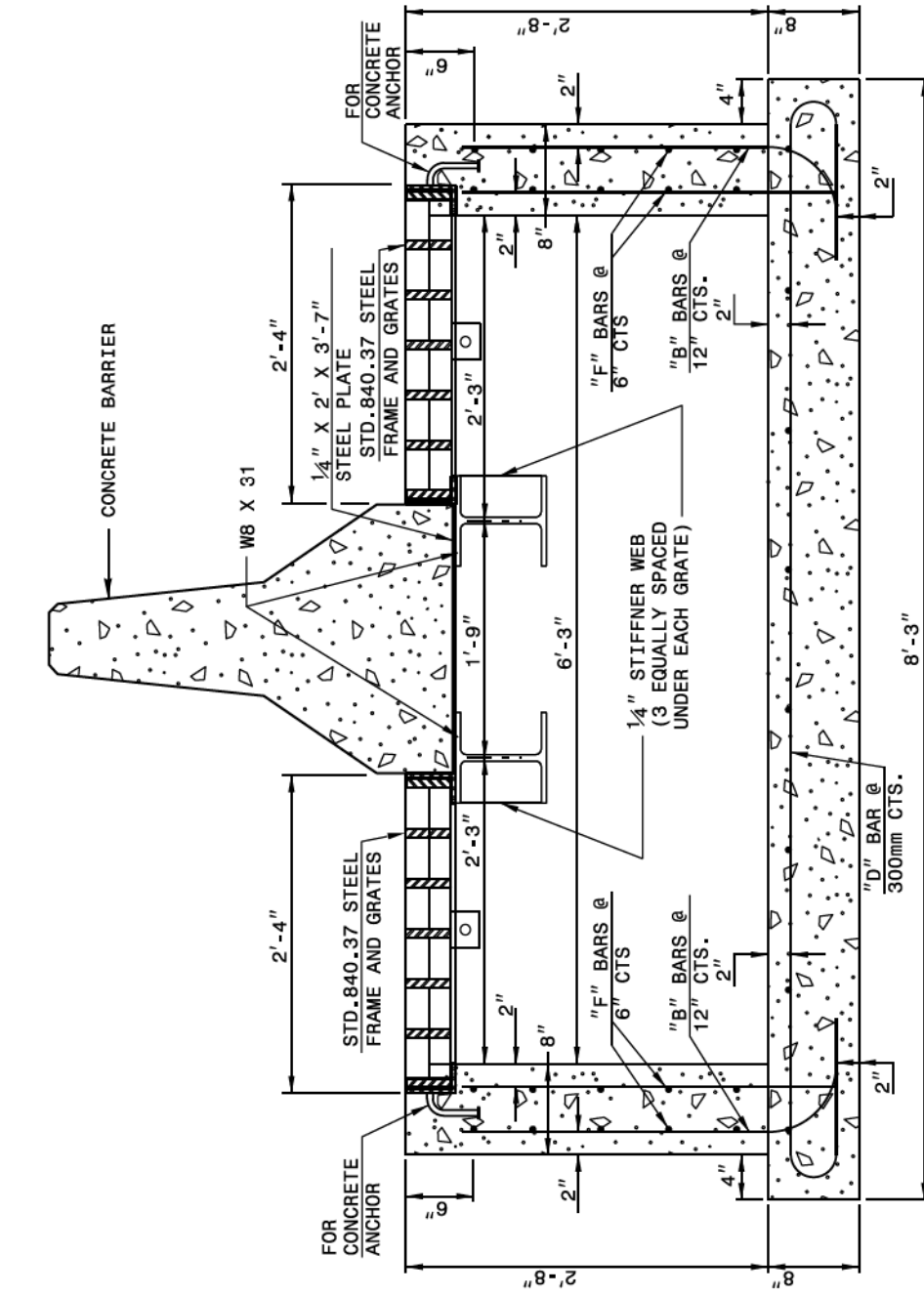
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR BARRIER OVER TRAFFIC BEARING DOUBLE DROP INLET

SHEET 1 OF 2 BARDDI



SECTION Y-Y



SECTION X-X

TRAFFIC BEARING DROP INLET

- NOTES:
- HORIZONTAL AND VERTICAL DIMENSIONS MAY BE ADJUSTED AS THE FIELD CONDITIONS AND/OR ALTERNATE DESIGN REQUIRE.
 - MAXIMUM HEIGHT FOR THIS STRUCTURE IS 14".
 - MAKE ALL ADJUSTMENTS AS DIRECTED BY THE ENGINEER.
 - ANCHOR STEEL FRAME AND GRATES IN ACCORDANCE WITH DETAILS SHOWN.
 - NO BRICK RISERS ARE PERMITTED ON ANY PART OF THIS DRAINAGE STRUCTURE.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR BARRIER OVER TRAFFIC BEARING DOUBLE DROP INLET

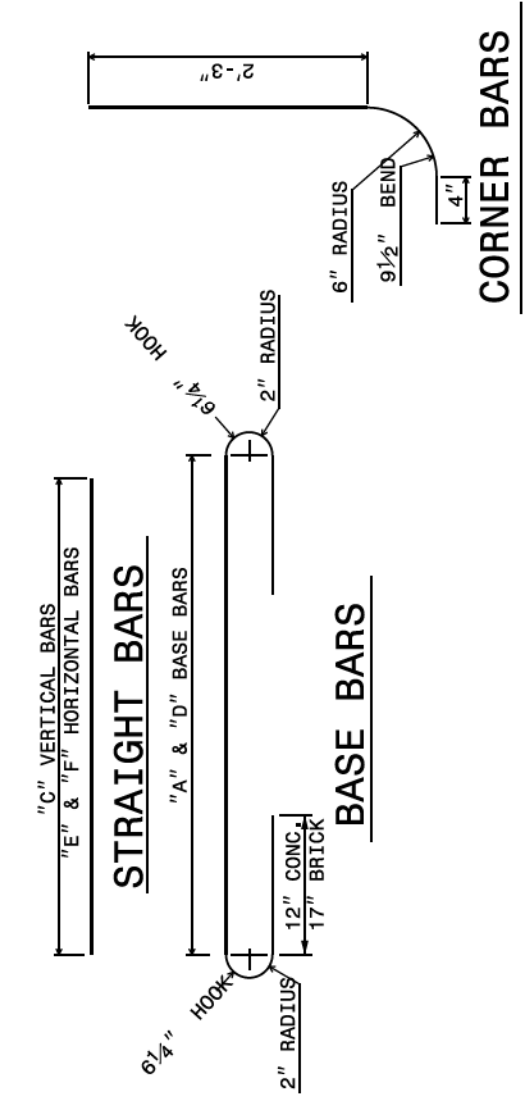
SHEET 1 OF 2 BARDDI

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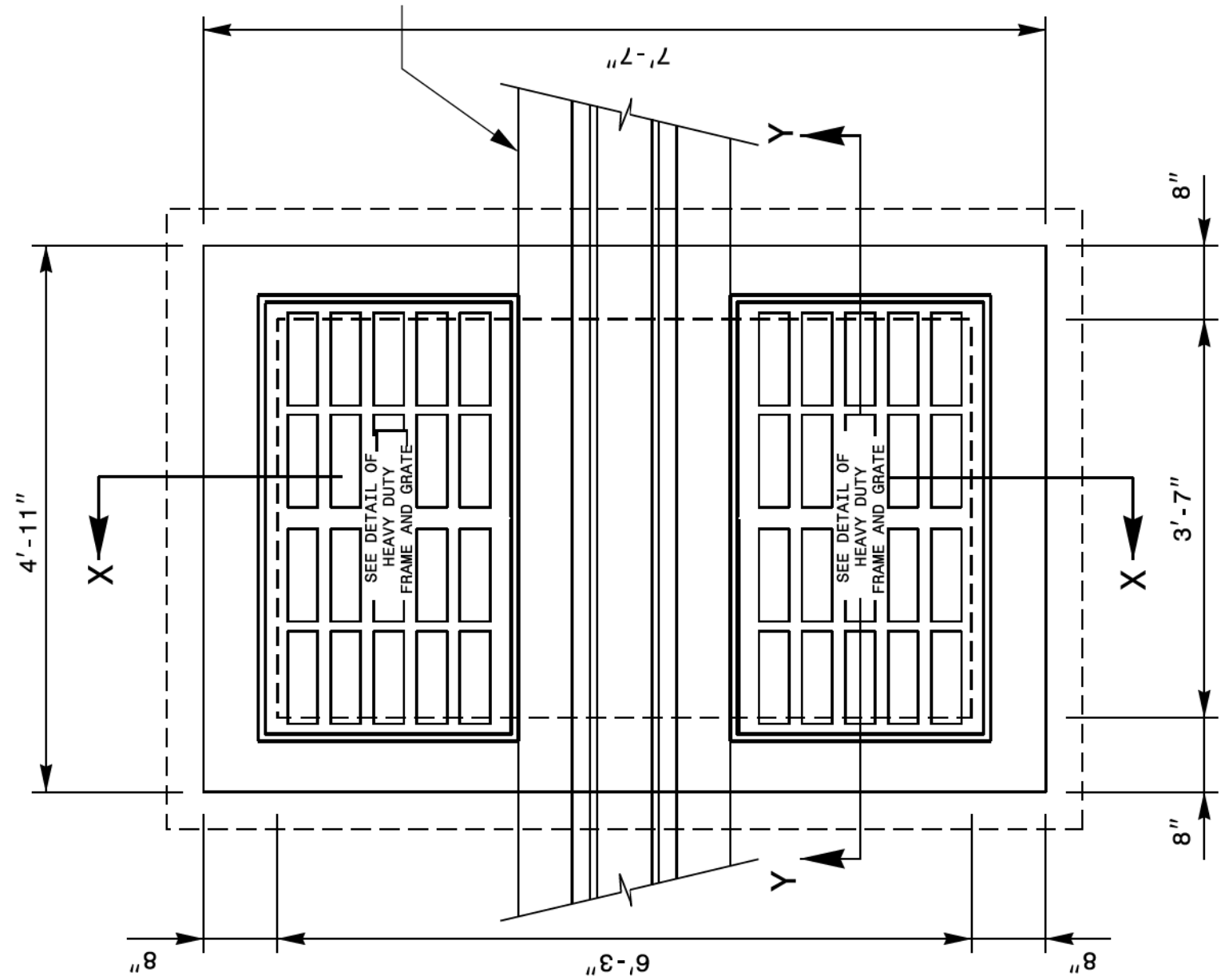
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR BARRIER OVER TRAFFIC BEARING DOUBLE DROP INLET

SHEET 2 OF 2 BARDDI



- GENERAL NOTES:
- ALL EXPOSED CONCRETE CORNERS TO BE CHAMFERED 1 INCH. FORMS SHALL BE USED TO CONSTRUCT THE BOTTOM SLAB.
 - IF PIPES ARE SET IN THE BASE OF THE BOTTOM SLAB, ADD ADDITIONAL CONCRETE TO THE BASE AS SHOWN ON STD. DWG. NO. 840 WHEN REINFORCED CONCRETE PIPE IS USED.
 - INCLUDE THE NUMBER OF REINFORCING STEEL BARS IN EACH UNIT PER REINFORCING AND/OR LINER FOOT "MASONRY DRAINAGE STRUCTURE".
 - CLASS "B" CONCRETE IS TO BE USED FOR CONSTRUCTION.
 - GRATES AND FRAME SHALL BE SEPARATE CONTRACT ITEMS. SEE STANDARD 840.25 FOR ANCHOR UNIT SPECIFICATIONS.
 - CONCRETE BRICK, JUMBO BRICK AND 4" SOLID CONCRETE BLOCK SHALL BE FOR DRAINAGE INLETS OVER 3'-6" IN DEPTH AND FOR DRAINAGE INLETS OVER 3'-6" IN DEPTH ON 1'-2" CENTERS AS DIRECTED BY STD. DWG. NO. 840.66. THE REINFORCING STEEL AT ALL INTERSECTING AND LAP LOCATIONS OR AS DIRECTED BY THE ENGINEER.



PLAN OF BASE

BILL OF MATERIALS

COMMON BAR #5	CONCRETE ALT. LENGTH	QUANTITY	WEIGHT	BRICK ALT. LENGTH	QUANTITY	WEIGHT
A	10'-7 1/4"	28	28	11'-10 1/4"	7	86.7
B	3'-4 1/2"	28	86.6	3'-4 1/2"	28	86.6
C	7'-11 1/2"	9	74.7	9'-2 1/2"	9	86.4
D	7'-3 3/4"	20	156.2	7'-1 1/2"	10	74.3
E	4'-7 1/4"	20	96.6	4'-5 1/2"	10	46.5
REFIN. STEEL (TOTAL WEIGHT (LBS.))			974.8	392.5		
CONCRETE IN BASE (CUBIC YARDS)			1.2	1.2		
CONCRETE IN WALLS (CUBIC YARDS)			-0-	-0-		
BRICK IN WALLS (CUBIC YARDS)			-0-	-0-		
CONCRETE TOTAL (CUBIC YARDS)			2.6	2.6		
CONCRETE TOTAL (CUBIC FEET)			22.0	22.0		
CONC. CUBIC YARDS IN WALL/FOOT OF HEIGHT			0.6	0.6		
REIN. STEEL IN WALL/FOOT OF HEIGHT			0.8	0.8		
LBS. OF REINFC. STEEL IN WALL/FOOT OF HEIGHT			107.0	77.8		

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SEE PLATE FOR TITLE

ORIGINAL BY: _____ DATE: _____
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 CHECKED BY: _____ DATE: _____
 FILE SPEC.: _____

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK
IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	EMBT + %	BORROW	WASTE
REMOVE EXISTING DRAINAGE STRUCTURES -L- 275+80 TO -L- 279+00	24	180	180	
SUBTOTAL		180	180	
SAY	24	200	200	

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STATION	END STATION	LOCATION	LENGTH		ANCHORS				REMOVE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	TYPE 350	CAT-1	B-77	M-350		
L	210+00	275+70	LT.							6570	REMOVE
L	210+00	279+00	RT.							6900	REMOVE
L	275+70	279+00	LT.	330			1			330	REMOVE & REPLACE AT EXISTING LOCATION
L	275+80	279+00	RT.	320				1			TIE FROM CMB TO EXISTING GUARDRAIL
			SUBTOTAL	650			1	1		13800	
ANCHOR DEDUCTIONS											
			CAT-1 (1 x 6.25')		-6.25						
			B-77 (1 x 22.88')		-22.88						
			TOTAL	620.87			1	1		13800	
			SAY	630			1	1		13850	

**SUMMARY OF ASPHALT
PAVEMENT REMOVAL**
IN SQUARE YARDS

LINE	STA TO STA	LOCATION	SQ. YDS.
L	210+00 TO 275+80	MEDIAN	9504
		TOTAL	9504
		SAY	9510

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

SURVEY LINE	BEG. STATION	END STATION	AGGREGATE TYPE ASU/AST	AGGREGATE THICKNESS (INCHES)	SHALLOW UNDERCUT (CUBIC YARDS)	CLASS IV SUBGRADE STABILIZATION (TONS)	GEOTEXTILE FOR SOIL STABILIZATION (SQUARE YARDS)	STABILIZER AGGREGATE (TONS)	CLASS IV AGGREGATE STABILIZATION (TONS)
L	210+00	275+80	ASU		5650	11450	9510		
			TOTALS		5650	11450	9510		

*ASU = AGGREGATE SUBGRADE
*AST = AGGREGATE STABILIZATION
**TOTAL SQUARE YARDS OF "GEOTEXTILE FOR SOIL STABILIZATION" IS ONLY THE ESTIMATED QUANTITY FOR ASU/AST AND MAY ONLY REPRESENT A PORTION OF THE GEOTEXTILE QUANTITY SHOWN IN THE ITEM SHEETS OF THE PROPOSAL
NOTE: UNDERCUT QUANTITY APPROXIMATES 1' DEPTH OF MATERIAL REMOVAL BELOW EXISTING DITCH LINE

CONCRETE BARRIER WALL SUMMARY

SURVEY LINE	BEG. STATION	END STATION	LOCATION	TRANSITION SECTION (EA)	LENGTH
					DOUBLE FACED
L	210+00	214+36	CL		436
L	214+36	216+86	LT	1	
L	214+36	216+86	RT	1	
L	216+86	238+37	CL		2151
L	238+37	240+87	LT	1	
L	238+37	240+87	RT	1	
L	240+87	255+40	CL		1453
L	255+40	258+85	LT	1	
L	255+40	258+85	RT	1	
L	258+85	275+80	CL		1695
SUBTOTAL					
SAY					6
SAY					5735

SHOULDER DRAIN SUMMARY

SURVEY LINE	STA. TO STA.	LOCATION	4" PERFOR. PIPE (FT.)	SHOULDER DRAINS (FT)	OUTLET STRUCTURE		
					4" PIPE (FT.)	DRAINAGE STRUCTURE	CONCRETE PAD
-L-	220+00 TO 228+00	MEDIAN	800	800	24	DI	
-L-	272+00 TO 275+80	MEDIAN	380	380	24	DI	
		TOTALS	1180	1180	48		
		SAY	1180	1180	50		

PROJECT NO. I-5952_Resurfacing Forsyth	SHEET NO. 38-2	TOTAL NO.
--	-------------------	-----------

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	000400000-N	002200000-E	010600000-E	015600000-E	019600000-E	044820000-E	044830000-E	044840000-E	109950000-E	109970000-E	122000000-E	124500000-E	129700000-E	130800000-E	133000000-E	149100000-E	150300000-E	152420000-E	157500000-E		
										MI	FT	LS	CY	CY	SY	SY	LF	LF	LF	CY	TONS	TONS	SMI	SY	SY	SY	TONS	TONS	TONS	TONS		
I-5952_Resurfacing	Forsyth	1	I-40 EAST BOUND SURFACE ALL LANES INCLUDES SHOULDERS AND RAMP AT LEWISVILLE-CLEMMONS RD. SR 1103	BEGIN APPROXIMATELY 1770' EAST OF HARPER RD. SR 1101 EASTERN RAMP GORE TO BRIDGE NO.448 APPROACH OVER WESTGATE CENTER DR.	1,2	3	MD	NO	NO	6.225	38			689																		
TOTAL FOR MAP NO. 1										6.225				689								20	5.74		17,479	1,111				28,007		
I-5952_Resurfacing	Forsyth	2	I-40 EAST BOUND TRAVEL LANES ONLY I19.0C	BEGIN APPROXIMATELY 1770' EAST OF HARPER RD. SR 1101 EASTERN RAMP GORE TO BRIDGE NO.448 APPROACH OVER WESTGATE CENTER DR.	1,2	3	MD	NO	NO	6.225	24																					
TOTAL FOR MAP NO. 2										6.225														138,960				21,186		1,017		
I-5952_Resurfacing	Forsyth	3	I-40 WEST BOUND SURFACE ALL LANES INCLUDES SHOULDERS AND RAMP AT LEWISVILLE-CLEMMONS RD. SR 1103	BEGIN BRIDGE NO.449 OVER WESTGATE CENTER DR. TO APPROXIMATELY 1770' EAST OF EASTERN RAMP GORE TO HARPER RD. SR 1101	1,2	3	MD	NO	NO	6.226	44			556																		
TOTAL FOR MAP NO. 3										6.226				556									20	4.64		13,226	1,000			31,911		
I-5952_Resurfacing	Forsyth	4	I-40 WEST BOUND TRAVEL LANES ONLY I19.0C	BEGIN BRIDGE NO.449 OVER WESTGATE CENTER DR. TO APPROXIMATELY 1770' EAST OF EASTERN RAMP GORE TO HARPER RD. SR 1101	1,2	3	MD	NO	NO	6.226	24																					
TOTAL FOR PROJ NO. I-5952_Resurfacing_FORSYTH										6.226		1	24	200	9,510	9,510	516	28	8	5,650	11,450				144,813			21,898	1,080	236		
MEDIAN			MEDIAN WORK	MEDIAN	1	0	MD	NO	NO	1.246	13	1	24	200	9,510	9,510	516	28	8	5,650	11,450	40	10.38	283,773	30,705	2,111	2,410	44,464	60,998	2,304		
GRAND TOTAL										6.226		1	24	1,445	9,510	9,510	516	28	8	5,650	11,450	40	10.38	283,773	30,705	2,111	2,410	44,464	60,998	2,304		

NOTE: All Quantities listed include turn lanes and are estimates; Payment will be based on actual field measurements and quantities received.

PROJECT NO.	SHEET NO.	TOTAL NO.
I-5952_Resurfacing_FORSYTH	3B-3	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH		1577000000-E	1840000000-E	2099000000-E	2110000000-E	2121000000-E	2286000000-N	2308000000-E	2407000000-N	2703000000-E	2710000000-N	2830000000-N	2845000000-N	2905000000-N	2910000000-N	3030000000-E	3210000000-N	3317000000-N	3360000000-E	6000000000-E	6071010000-E									
										MI	FT	TONS	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
I-5952_Resurfacing	Forsyth	1	I-40 EAST BOUND SURFACE ALL LANES INCLUDES SHOULDERS AND RAMPS AT LEWISVILLE-CLEMMONS RD. SR 1103	BEGIN APPROXIMATELY 1770' EAST OF HARPER RD. SR 1101 EASTERN RAMP GORE TO BRIDGE NO.448 APPROACH OVER WESTGATE CENTER DR.	1,2	3	MD	NO	NO	6.225	38	1,596	68,855																							2,296	230			
TOTAL FOR MAP NO. 1										6.225		1,596	68,855																								2,296	230		
I-5952_Resurfacing	Forsyth	2	I-40 EAST BOUND TRAVEL LANES ONLY I19.0C	BEGIN APPROXIMATELY 1770' EAST OF HARPER RD. SR 1101 EASTERN RAMP GORE TO BRIDGE NO.448 APPROACH OVER WESTGATE CENTER DR.	1,2	3	MD	NO	NO	6.225	24																													
TOTAL FOR MAP NO. 2										6.225																														
I-5952_Resurfacing	Forsyth	3	I-40 WEST BOUND SURFACE ALL LANES INCLUDES SHOULDERS AND RAMPS AT LEWISVILLE-CLEMMONS RD. SR 1103	BEGIN BRIDGE NO.449 OVER WESTGATE CENTER DR. TO APPROXIMATELY 1770' EAST OF EASTERN RAMP GORE TO HARPER RD. SR 1101	1,2	3	MD	NO	NO	6.226	44	1,819	65,685																									1,855	186	
TOTAL FOR MAP NO. 3										6.226		1,819	65,685																										1,855	186
I-5952_Resurfacing	Forsyth	4	I-40 WEST BOUND TRAVEL LANES ONLY I19.0C	BEGIN BRIDGE NO.449 OVER WESTGATE CENTER DR. TO APPROXIMATELY 1770' EAST OF EASTERN RAMP GORE TO HARPER RD. SR 1101	1,2	3	MD	NO	NO	6.226	24																													
MEDIAN	Forsyth	5	MEDIAN WORK	MEDIAN	1	0	MD	NO	NO	1.246	13																													
TOTAL FOR PROJ NO. I-5952_Resurfacing_FORSYTH												3,415	134,540	1,180	1,180	50	35	22	67	5,735	6	2	1	1	1	1	630	1	1	13,850	200							4,351	416	
GRAND TOTAL										6.226		3,415	134,540	1,180	1,180	50	35	22	67	5,735	6	2	1	1	1	630	1	1	13,850	200							4,351	416		

NOTE: All Quantities listed include turn lanes and are estimates; Payment will be based on actual field measurements and quantities received.

4/10/16

COMPUTED BY: DATE:
CHECKED BY: DATE:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO.
1-5952 3D-1

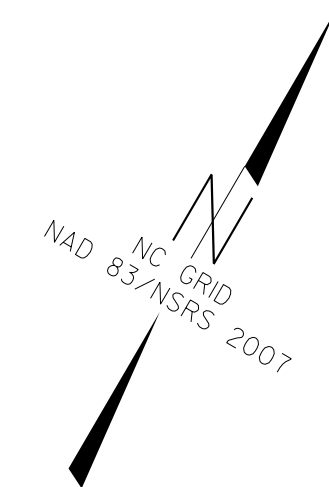
NOTE: Top and Invert Elevations are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

Main data table with columns for Station, Location, Structure No., Top Elevation, Invert Elevation, Slope Critical, Pipe Classifications (Class IV R.C. Pipe, Bituminous Coated C.S. Pipe Type B), Endwalls, Quantities, Frame, Grates, and Hood, Type of Grate, and Remarks.

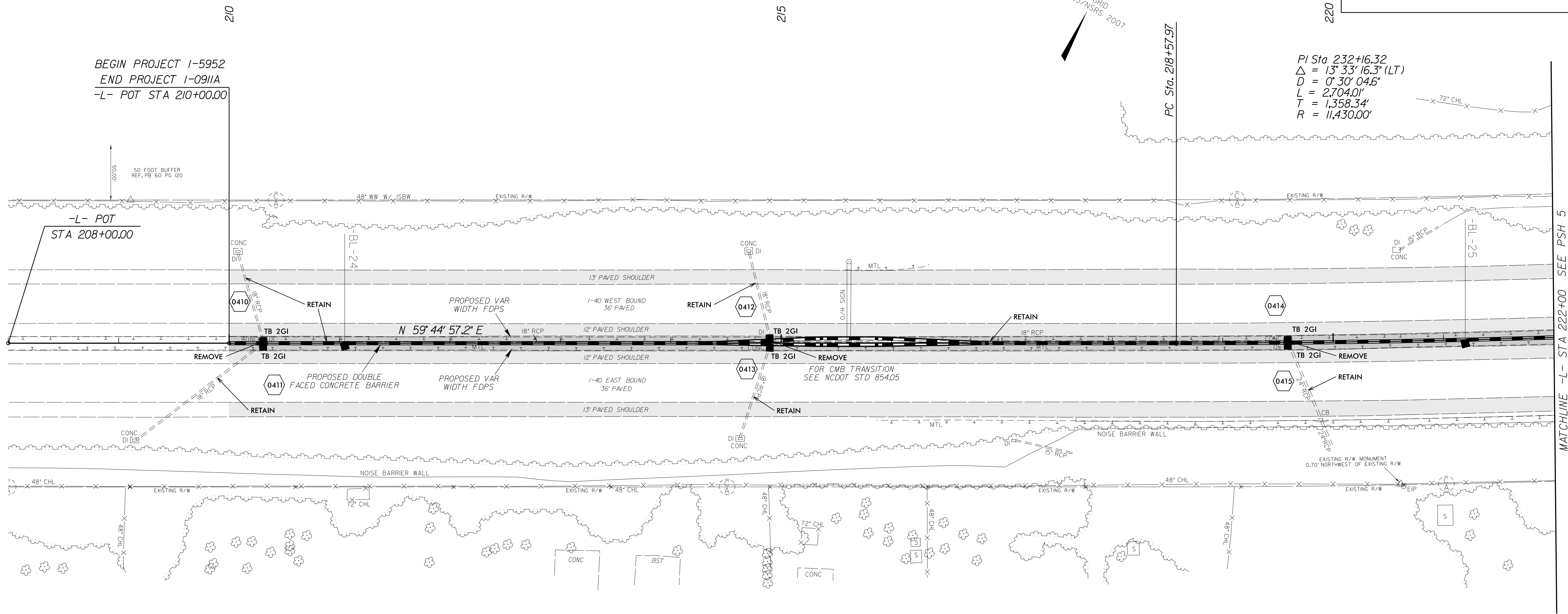
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PROJECT REFERENCE NO. 1-5952	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SCOTT A. JONES SEAL 045458 NORTH CAROLINA PROFESSIONAL ENGINEER	HYDRAULICS ENGINEER W. CALVIN BATES SEAL 022000 NORTH CAROLINA PROFESSIONAL ENGINEER
DocuSigned by: Scott Jones 9/19/2018	DocuSigned by: W. Calvin Bates 9/19/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



BEGIN PROJECT 1-5952
END PROJECT 1-0911A
-L- POT STA 210+00.00

PI Sta 232+16.32
Δ = 13° 33' 16.3" (LT)
D = 0' 30' 04.6"
L = 2,704.01'
T = 1,358.34'
R = 11,430.00'



REVISIONS

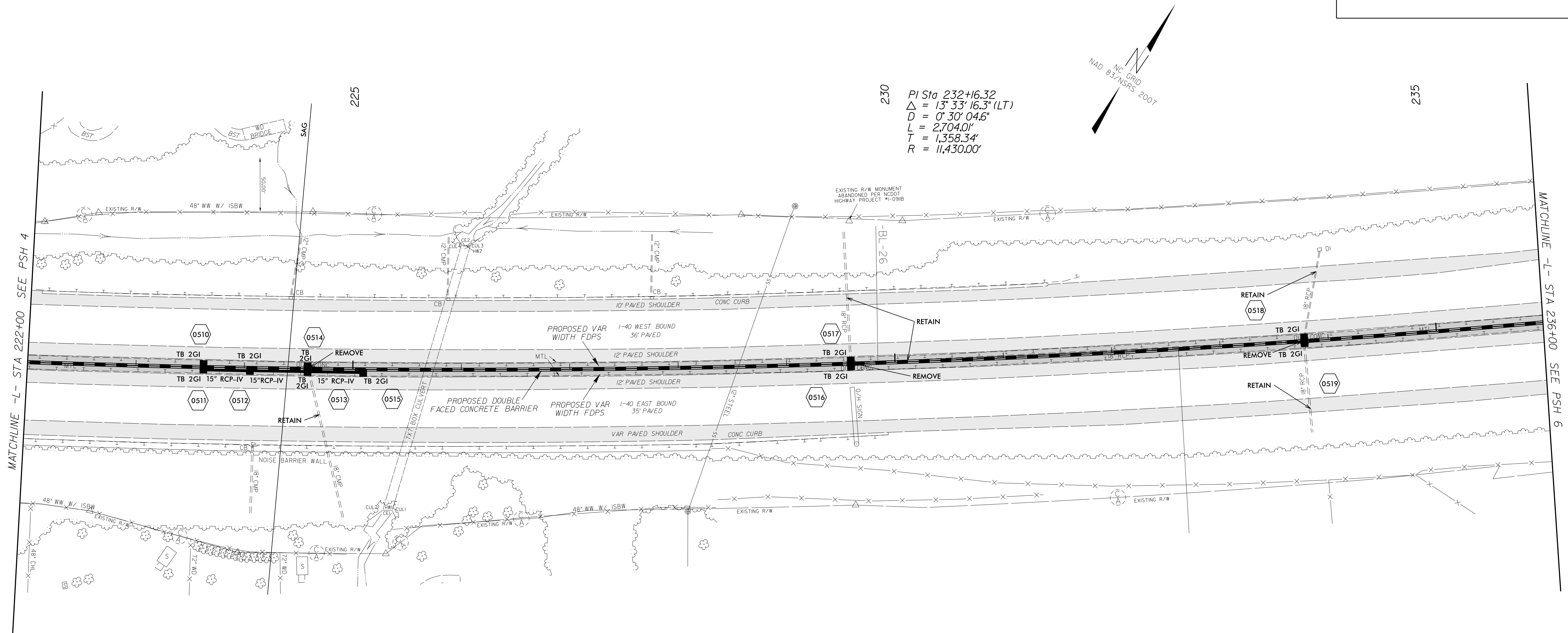
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8/17/99
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PROJECT REFERENCE NO. 1-5952	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SCOTT A. JONES SEAL 045458 NORTH CAROLINA PROFESSIONAL ENGINEER	HYDRAULICS ENGINEER W. COLIN GIBBS SEAL 022000 NORTH CAROLINA PROFESSIONAL ENGINEER
Scott Jones 9/19/2018	W. Colin Gibbs 9/19/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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REVISIONS



230
 PI Sta 232+16.32
 $\Delta = 13^\circ 33' 16.3''$ (LT)
 $D = 0^\circ 30' 04.6''$
 $L = 2,704.01'$
 $T = 1,358.34'$
 $R = 11,430.00'$

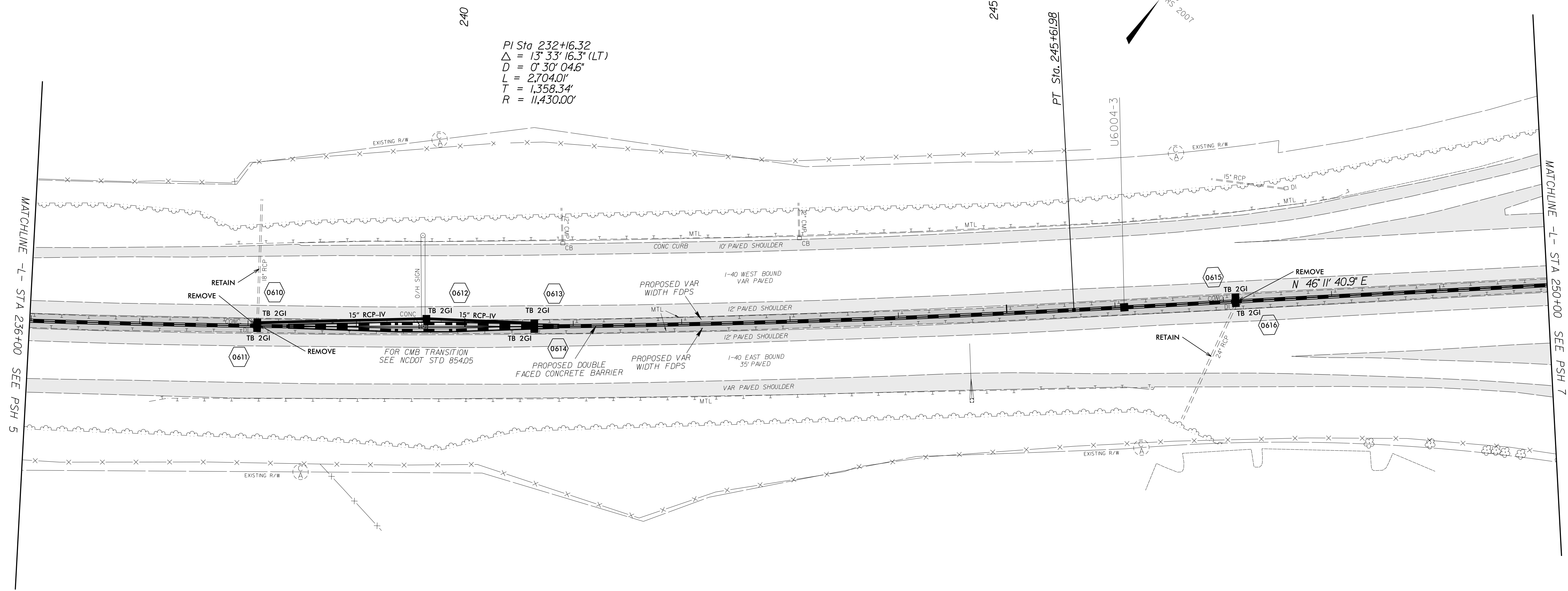
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MATCHLINE -L- STA 236+00 SEE PSH 6

PROJECT REFERENCE NO. 1-5952	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SCOTT A. JONES SEAL 045458 NORTH CAROLINA PROFESSIONAL ENGINEER	HYDRAULICS ENGINEER W. GALEN JONES SEAL 022000 NORTH CAROLINA PROFESSIONAL ENGINEER
DocuSigned by: Scott Jones 9/19/2018	DocuSigned by: W. Galen Jones 9/19/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

8/17/99
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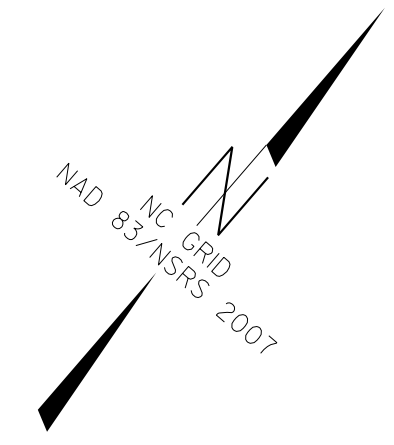
REVISIONS



MATCHLINE -L- STA 236+00 SEE PSH 5

MATCHLINE -L- STA 250+00 SEE PSH 7

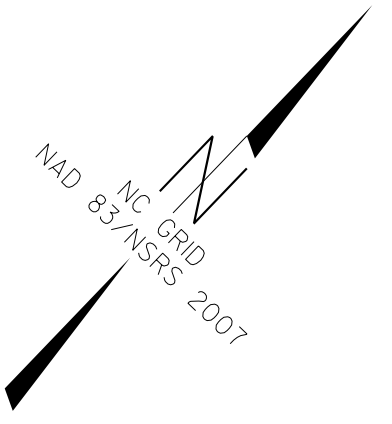
PI Sta 232+16.32
 $\Delta = 13^\circ 33' 16.3" (LT)$
 $D = 0' 30" 04.6"$
 $L = 2,704.01'$
 $T = 1,358.34'$
 $R = 11,430.00'$



PT Sta. 245+61.98

U6004-3

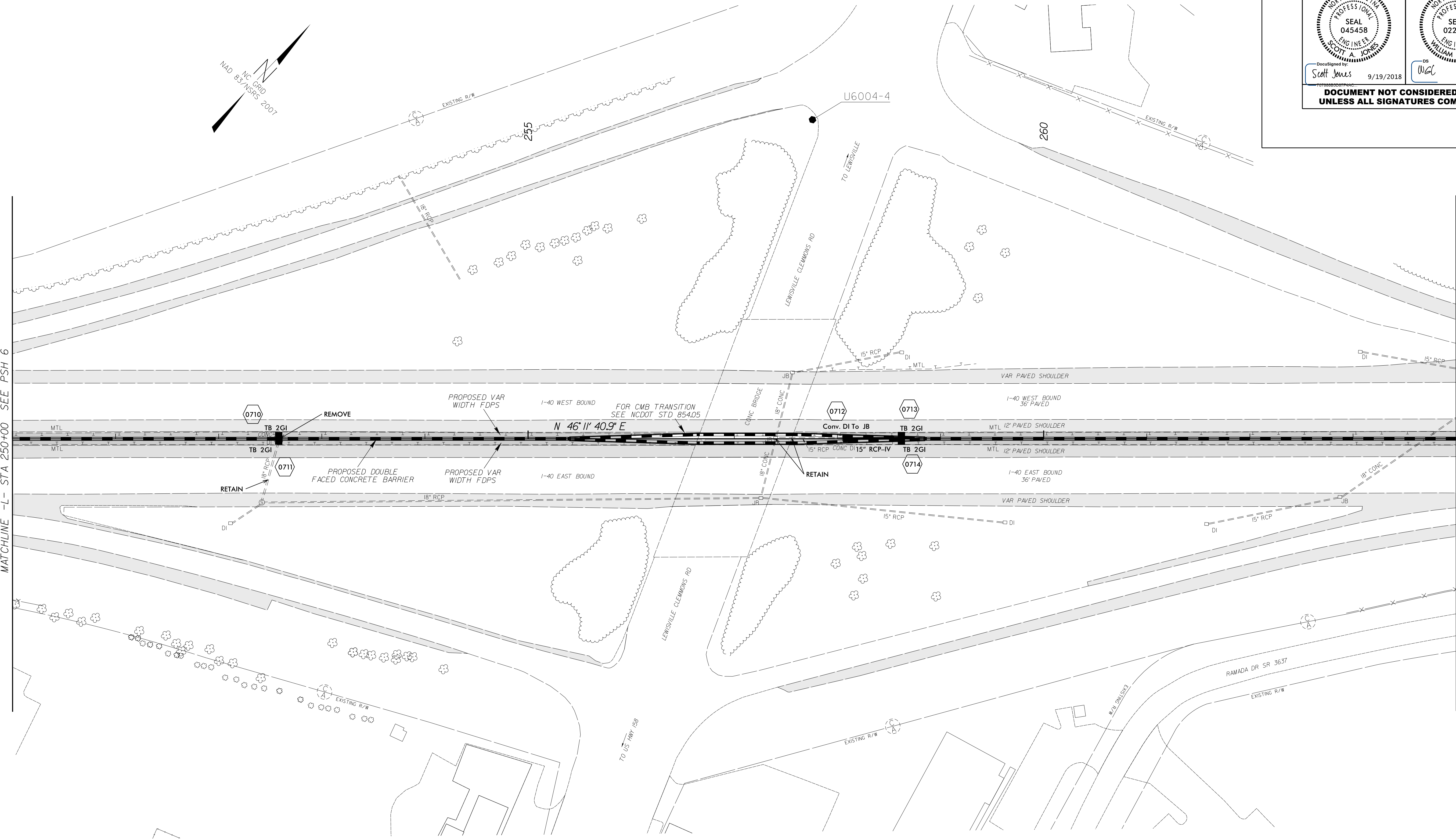
PROJECT REFERENCE NO. 1-5952		SHEET NO. 7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
Designated By: Scott Jones 9/19/2018		DS: WGC 9/25/2018	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



REVISIONS

MATCHLINE -L- STA 250+00 SEE PSH 6

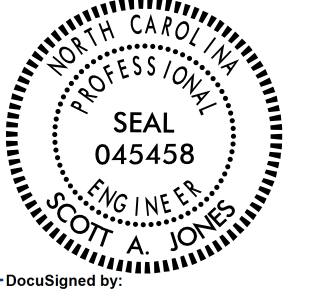
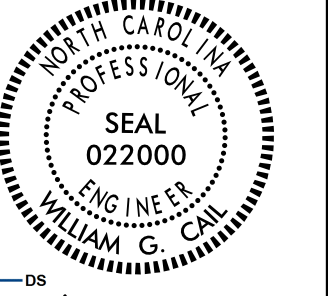
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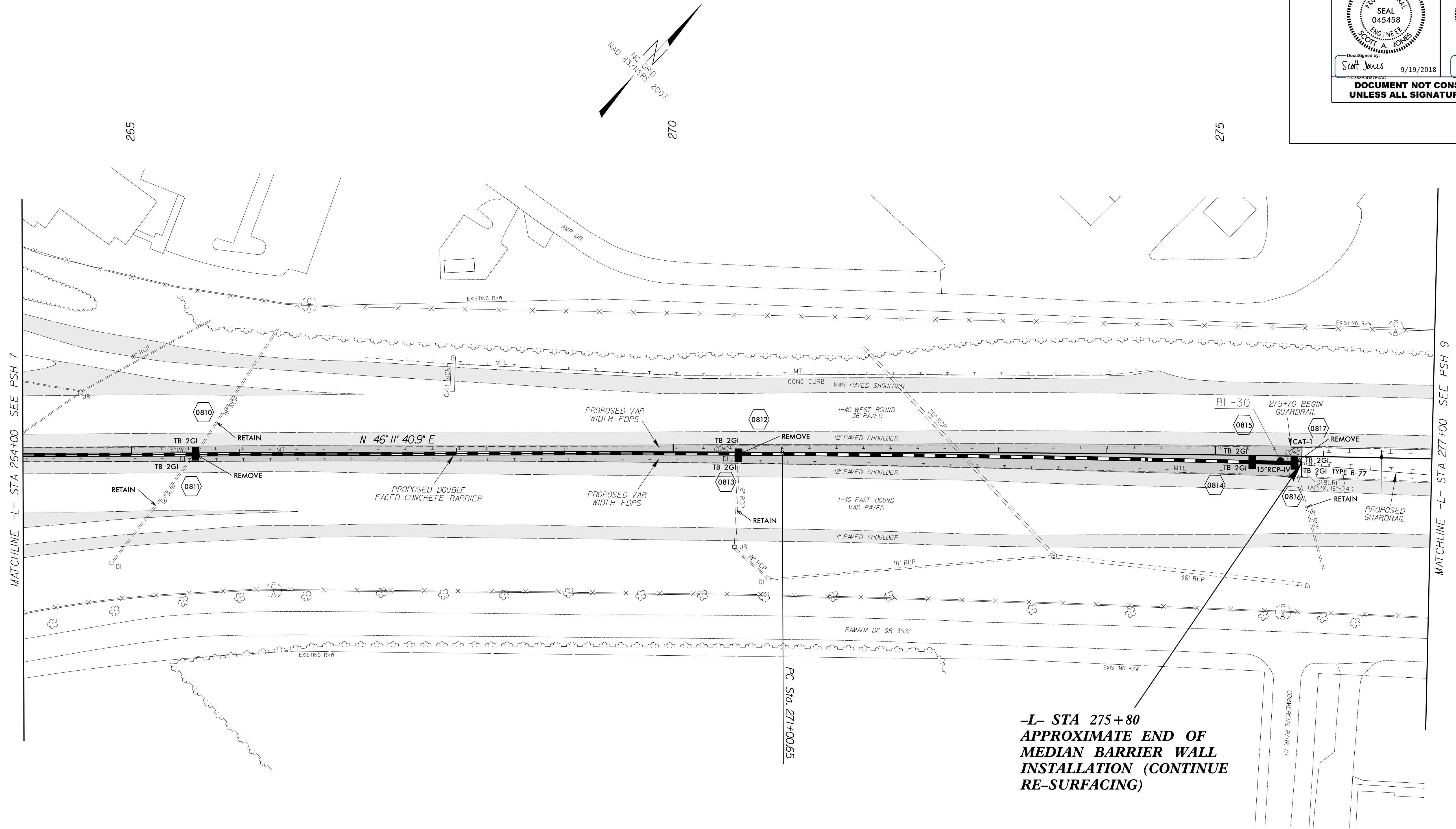


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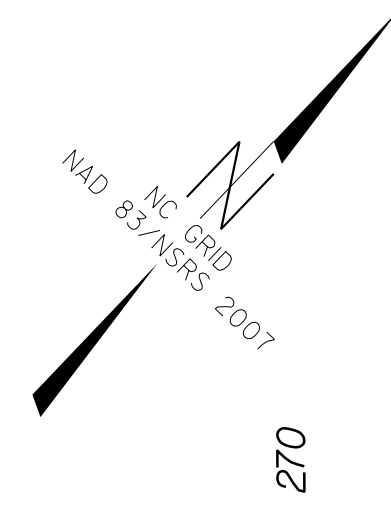
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 USER: JONES

REVISIONS

PROJECT REFERENCE NO. 1-5952		SHEET NO. 8	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 Scott Jones 9/19/2018		 WGC 9/25/2018	
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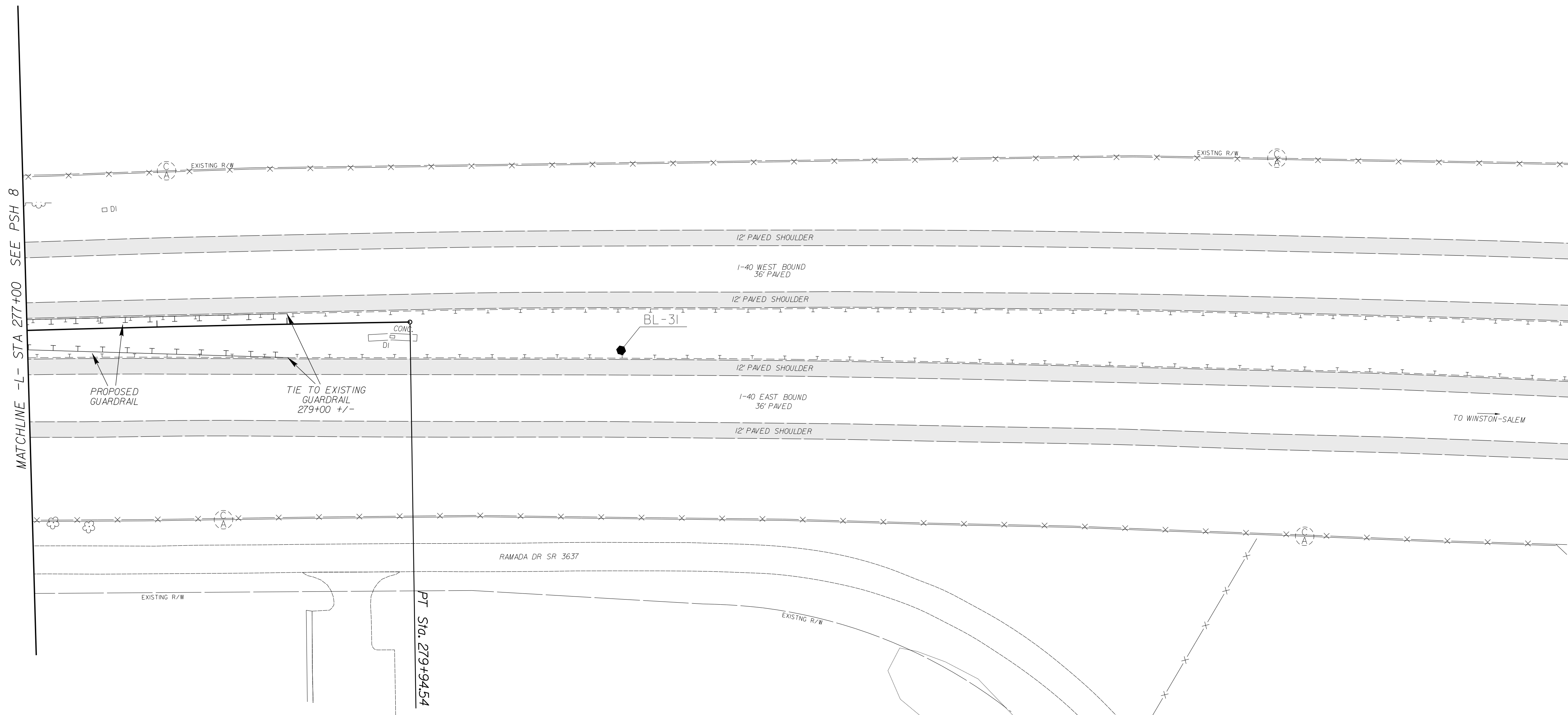
**-L- STA 275+80
 APPROXIMATE END OF
 MEDIAN BARRIER WALL
 INSTALLATION (CONTINUE
 RE-SURFACING)**



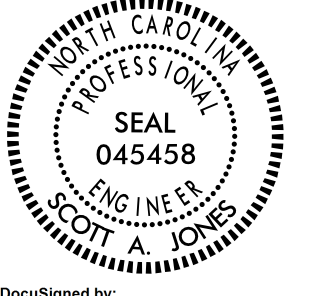
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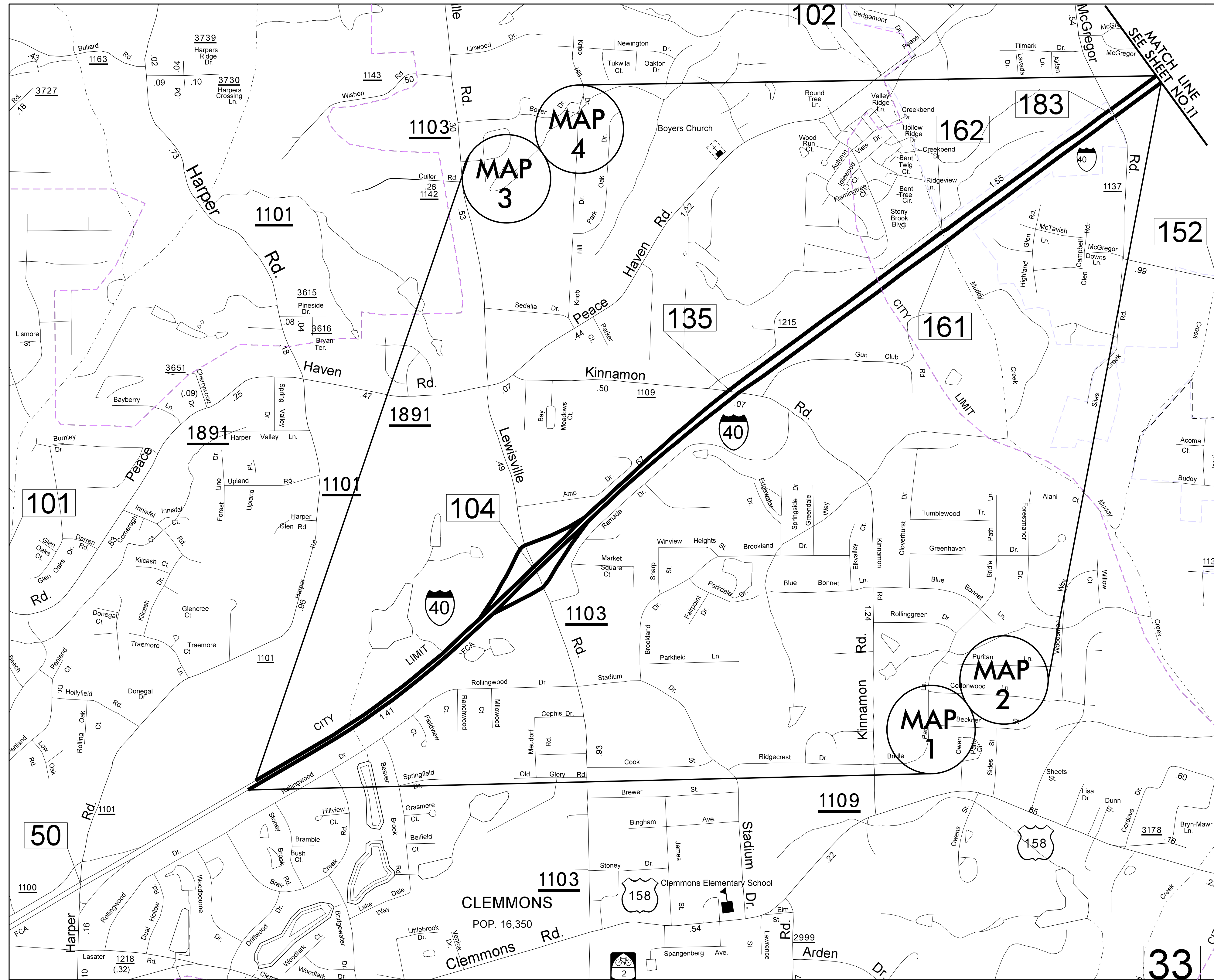
REVISIONS

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PROJECT REFERENCE NO. 1-5952	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SCOTT A. JONES SEAL 045458 NORTH CAROLINA PROFESSIONAL ENGINEER	HYDRAULICS ENGINEER WILLIAM G. CAIN SEAL 022000 NORTH CAROLINA PROFESSIONAL ENGINEER
DocuSigned by: Scott Jones 9/19/2018	DocuSigned by: WGC 9/25/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PROJECT REFERENCE NO. 1-5952	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 Sealed by: Scott Jones 9/19/2018	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



Map 1
Map 2
I-40 East Bound
Mill Travel lanes only a 2½" depth
Pave back with 2½" I19.0C.
Overlay entire width with 2" S9.5D.
Overlay Ramps at Lewisville-Clemmons Rd. SR 1103
entire width with 2" S9.5D
MAINTAIN EXISTING BRIDGE
CLEARANCE AT BRIDGE NO.135 OVER
KINNAMON RD. SR 1109

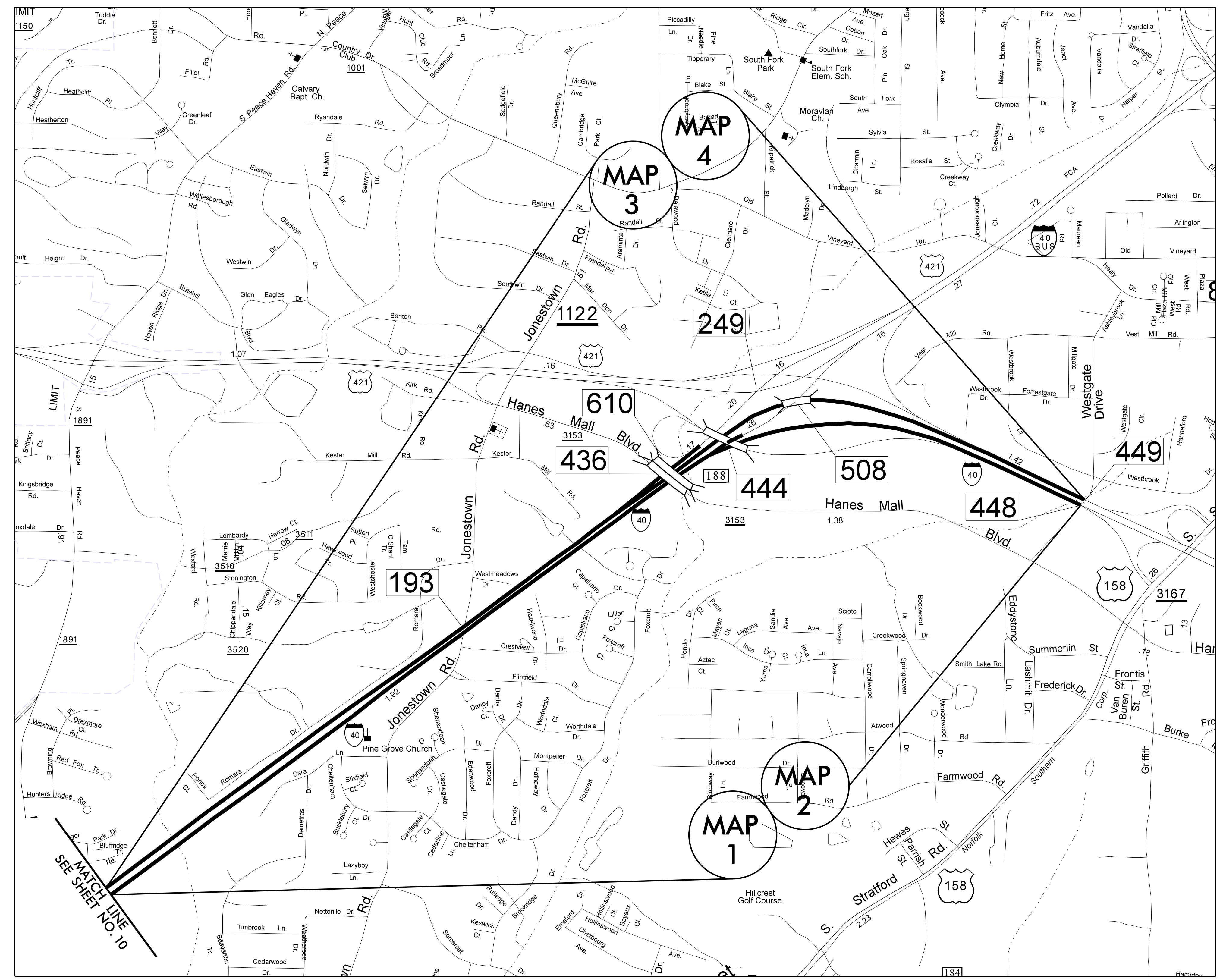
Map 3
Map 4
I-40 West Bound
Mill Travel lanes only 2½" depth
Pave back with 2½" I19.0C.
Overlay entire width with 2" S9.5D.
Overlay Ramps at Lewisville-Clemmons Rd. SR 1103
entire width with 2" S9.5D.
MAINTAIN EXISTING BRIDGE
CLEARANCE AT BRIDGE NO.135 OVER
KINNAMON RD. SR 1109

FORSYTH COUNTY
NORTH CAROLINA

5/14/09
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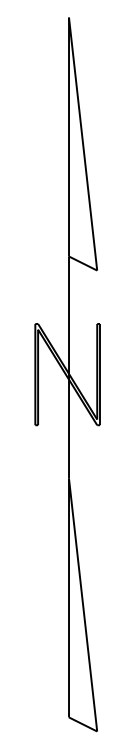
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PROJECT REFERENCE NO. 1-5952	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Designed by: <i>Scott Jones</i> 9/19/2018 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



Map 1
 Map 2
 I-40 East Bound
 Mill Travel lanes only 2 1/2" depth
 Pave back with 2 1/2" 119.0C.
 Overlay entire width with 2" S9.5D.

Map 3
 Map 4
 I-40 West Bound
 Mill Travel lanes only 2 1/2" depth
 Pave back with 2 1/2" 119.0C.
 Overlay entire width with 2" S9.5D.



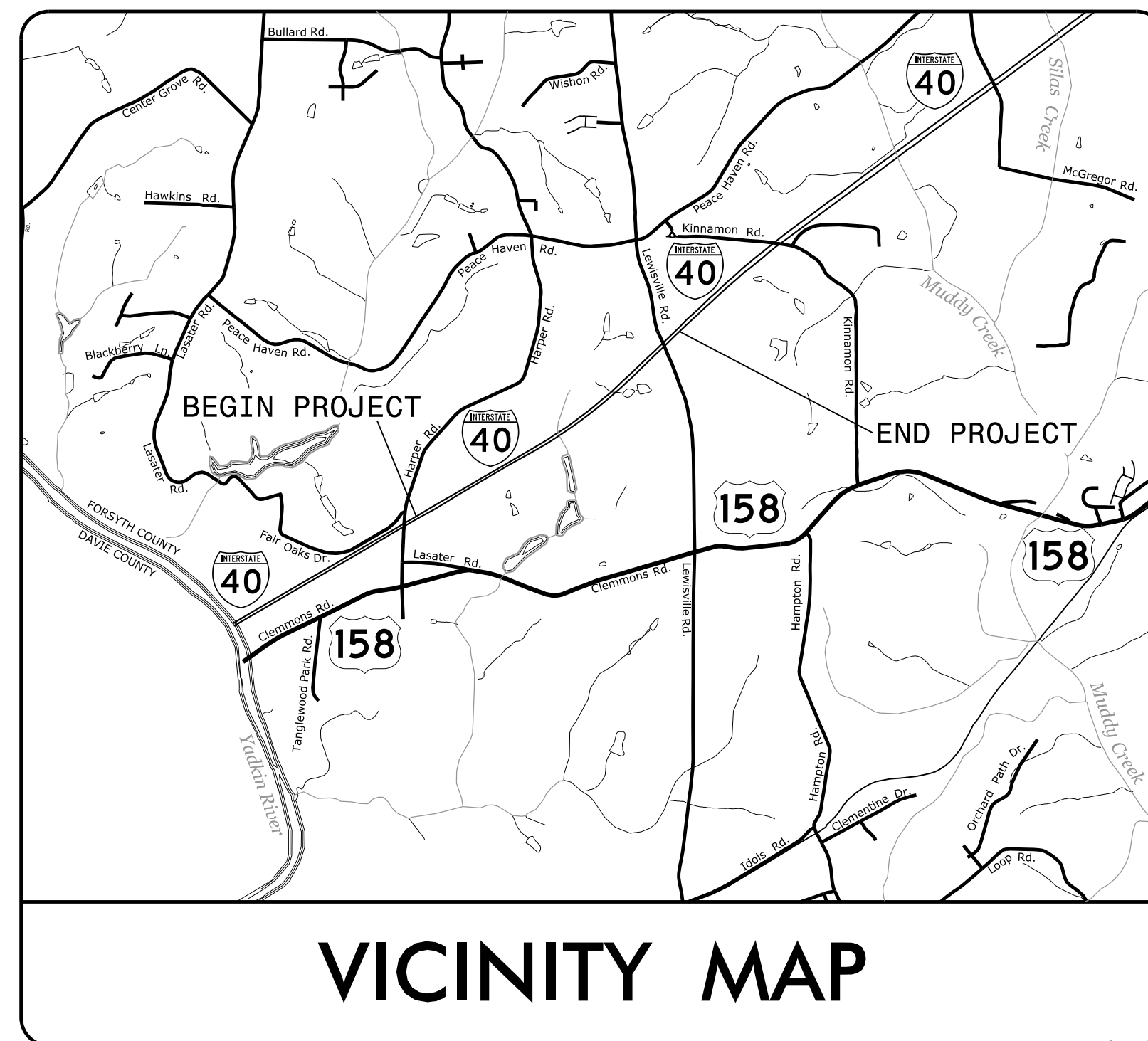
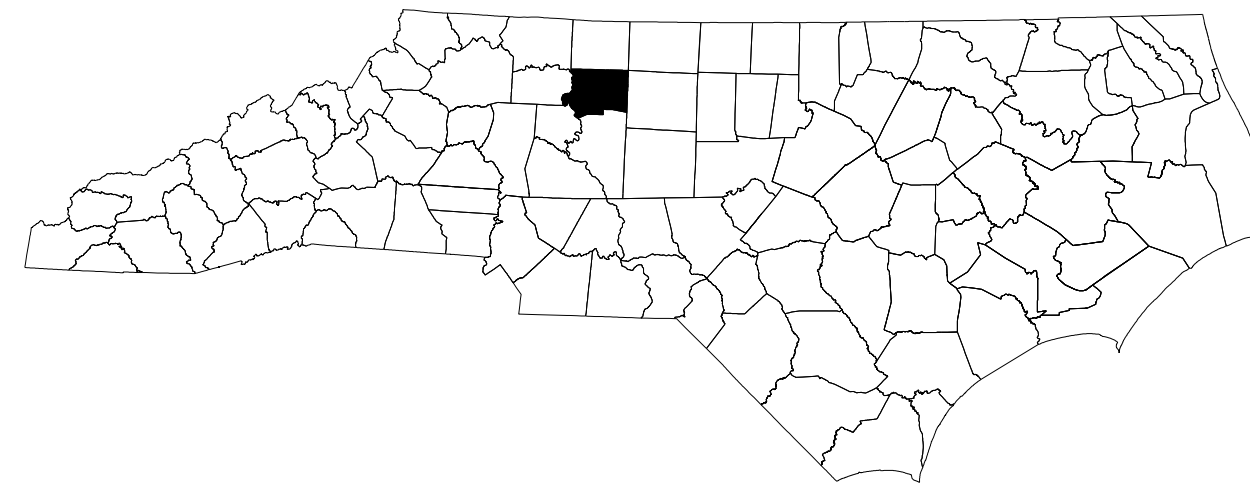
FORSYTH COUNTY
 NORTH CAROLINA

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

FORSYTH COUNTY

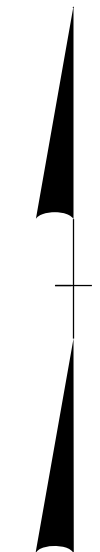


VICINITY MAP

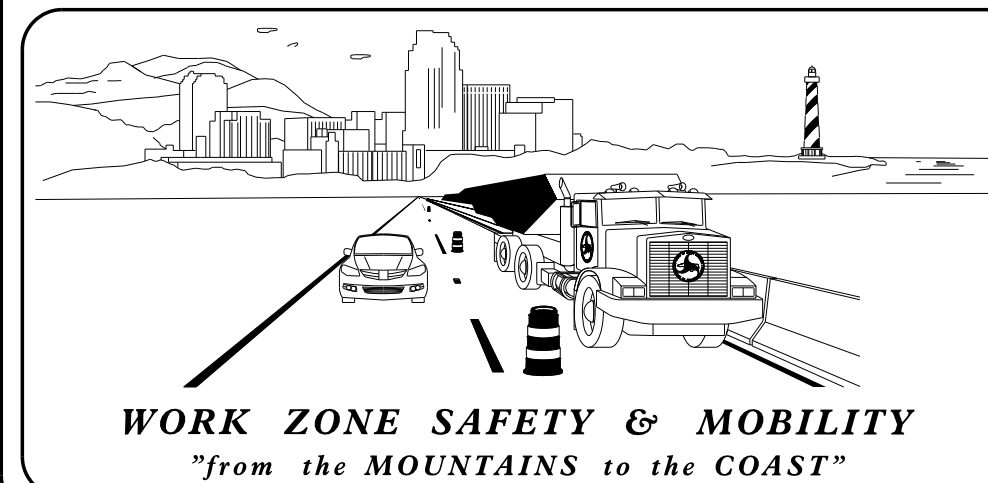
INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-2 THRU TMP-2B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES)
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4 THRU TMP-11	PHASE I TEMPORARY TRAFFIC CONTROL DETAILS

SHEET NO.
TMP-1



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



PLANS PREPARED BY:

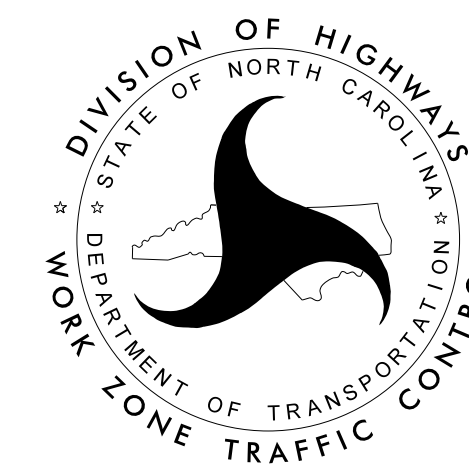
J. TODD BROOKS, PE
PROJECT ENGINEER

J. ABRAHAM WILES
PROJECT DESIGN ENGINEER

NCDOT CONTACTS:

KENNETH C. THORNWELL, PE
PROJECT ENGINEER

MIKE STEELMAN
PROJECT DESIGN ENGINEER



PLAN PREPARED FOR N.C.D.O.T. BY:

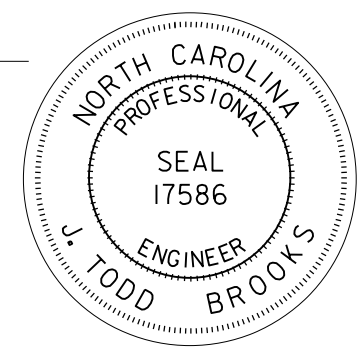
Dewberry

2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: *J. Todd Brooks*

DATE: 9/18/2018

SEAL



PROJECT: I-5952

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1160.01	TEMPORARY CRASH CUSHION - REFLECTIVE END TREATMENT
1165.01	TRUCK MOUNTED ATTENUATOR - DELINEATION
1170.01	POSITIVE PROTECTION - PORTABLE CONCRETE BARRIER
1180.01	SKINNY DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.03	PAVEMENT MARKINGS - INTERCHANGES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)

WORK AREA

REMOVAL

TEMPORARY PAVEMENT

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- PORTABLE CONCRETE BARRIER (P.C.B.)
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

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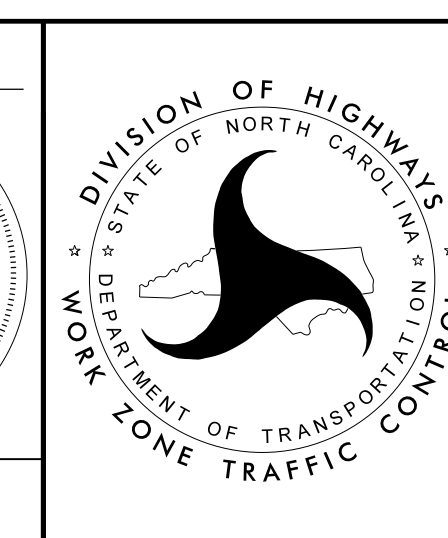
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NC COA No. F-0929

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ROADWAY STANDARD
DRAWINGS & LEGEND

MANAGEMENT STRATEGIES

THE PURPOSE OF THIS PROJECT IS TWO-FOLD:

1. TO CONSTRUCT A CONCRETE MEDIAN BARRIER IN THE MEDIAN OF I-40 FROM APPROXIMATELY 2,700' EAST OF HARPER ROAD TO APPROXIMATELY 1,790' EAST OF LEWISVILLE CLEMMONS ROAD.
2. MILL AND RESURFACE APPROXIMATELY 5.8 MILES OF THE EXISTING I-40 PAVEMENT, INCLUDING OVERLAY OF THE EXISTING PAVED SHOULDERS, FROM APPROXIMATELY 2,700' EAST OF HARPER ROAD TO THE WESTGATE CENTER DRIVE OVERPASS.

PHASE I OF THE TRANSPORTATION MANAGEMENT PLAN IS THE MEDIAN CONSTRUCTION ON I-40 FROM EAST OF HARPER ROAD TO EAST OF LEWISVILLE CLEMMONS ROAD. USING NIGHTTIME TEMPORARY LANE CLOSURES, PORTABLE CONCRETE BARRIER (P.C.B.) WILL BE INSTALLED ALONG BOTH SIDES OF THE MEDIAN ON THE PAVED SHOULDERS. ALL LANES OF I-40 WILL BE MAINTAINED IN THEIR EXISTING PATTERN THROUGHOUT MEDIAN CONSTRUCTION AND THE FOLLOWING WORK WILL BE PERFORMED BEHIND THE P.C.B.: REMOVAL OF EXISTING MEDIAN GUARDRAILS; MODIFICATION OF MEDIAN DRAINAGE STRUCTURES; PAVING THE REMAINDER OF THE MEDIAN BETWEEN THE EXISTING PAVED SHOULDERS; AND CONSTRUCTION OF THE PROPOSED CONCRETE MEDIAN BARRIER. FOLLOWING COMPLETION OF THE MEDIAN CONSTRUCTION, THE P.C.B. WILL BE REMOVED FROM THE MEDIAN SHOULDER.

PHASE II CONSISTS OF MILLING AND RESURFACING THE EXISTING I-40 PAVEMENT THROUGHOUT THE ENTIRE PROJECT LIMITS AND PLACEMENT OF PERMANENT PAVEMENT MARKINGS AND MARKERS. THIS WORK WILL BE PERFORMED DURING SUCCESSIVE OVERNIGHT WORK PERIODS BEHIND TEMPORARY LANE CLOSURES ON I-40.

WORK ZONE PRESENCE LIGHTING, SEQUENTIAL FLASHING WARNING LIGHTS, AND LAW ENFORCEMENT WILL BE USED FOR ALL LANE CLOSURES ON THIS PROJECT. IN ADDITION, DIGITAL SPEED LIMIT SIGNS (DSL) WILL BE USED TO PERMIT THE USE OF WORK ZONE VARIABLE SPEED LIMITS DURING LANE CLOSURES AS DIRECTED BY THE ENGINEER.

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER. THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-40 EASTBOUND, INCLUDING ANY RAMP AND/OR LOOP	MONDAY THROUGH SUNDAY FROM 5:00 A.M. TO 6:00 P.M.
I-40 WESTBOUND, INCLUDING ANY RAMP AND/OR LOOP	MONDAY THROUGH SUNDAY FROM 7:00 A.M. TO 7:00 P.M.

B) DO NOT CLOSE OR NARROW TWO (2) LANES OF TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-40 EASTBOUND	MONDAY THROUGH SUNDAY FROM 5:00 A.M. TO 8:00 P.M.
I-40 WESTBOUND	MONDAY THROUGH SUNDAY FROM 7:00 A.M. TO 9:00 P.M.

C) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-40 EASTBOUND, INCLUDING ANY RAMP AND/OR LOOP	MONDAY THROUGH SUNDAY FROM 5:00 A.M. TO 6:00 P.M.
I-40 WESTBOUND, INCLUDING ANY RAMP AND/OR LOOP	MONDAY THROUGH SUNDAY FROM 7:00 A.M. TO 7:00 P.M.

HOLIDAY, HOLIDAY WEEKEND AND SPECIAL EVENT

1. FOR UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR EASTER, BETWEEN THE HOURS OF 5:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
3. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 5:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.

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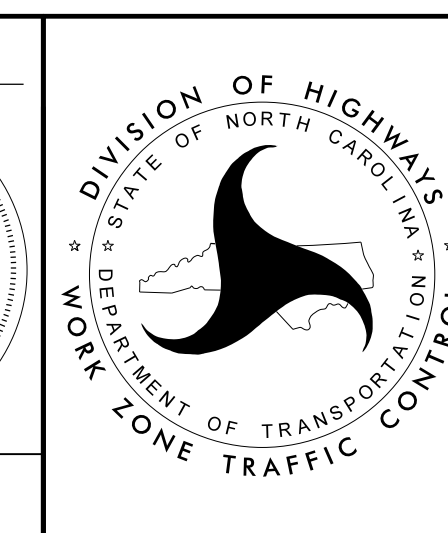
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OPERATIONS
PLAN

GENERAL NOTES

PROJ. REFERENCE NO. I-5952	SHEET NO. TMP-2A
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(CONTINUED FROM TMP-2)

HOLIDAY, HOLIDAY WEEKEND AND SPECIAL EVENT - (CONT.)

4. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 5:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY, THEN BETWEEN THE HOURS OF 5:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.

5. FOR LABOR DAY, BETWEEN THE HOURS OF 5:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.

6. FOR TANGLEWOOD FESTIVAL OF LIGHTS, BETWEEN THE HOURS OF 5:00 A.M. THE FRIDAY BEFORE THE WEEK OF THANKSGIVING AND 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.

HOLIDAYS AND HOLIDAY WEEKENDS SHALL INCLUDE NEW YEAR'S, EASTER, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING, AND CHRISTMAS. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO THAT LANE CLOSURES WILL NOT BE REQUIRED DURING THESE PERIODS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

SINGLE VEHICLE HAULING

D) DO NOT CONDUCT SINGLE VEHICLE HAULING AS FOLLOWS:

<u>ROAD NAME</u>	<u>DAY AND TIME RESTRICTIONS</u>
I-40 EASTBOUND, INCLUDING ANY RAMP AND/OR LOOP	MONDAY THROUGH FRIDAY FROM 5:00 A.M. TO 9:00 A.M. & FROM 4:00 P.M. TO 7:00 P.M.
I-40 WESTBOUND, INCLUDING ANY RAMP AND/OR LOOP	MONDAY THROUGH FRIDAY FROM 7:00 A.M. TO 9:00 A.M. & FROM 4:00 P.M. TO 7:00 P.M.

MULTI-VEHICLE HAULING

E) DO NOT CONDUCT MULTI-VEHICLE HAULING AS FOLLOWS:

<u>ROAD NAME</u>	<u>DAY AND TIME RESTRICTIONS</u>
I-40 EASTBOUND, INCLUDING ANY RAMP AND/OR LOOP	MONDAY THROUGH SUNDAY FROM 5:00 A.M. TO 7:00 P.M.
I-40 WESTBOUND, INCLUDING ANY RAMP AND/OR LOOP	MONDAY THROUGH SUNDAY FROM 7:00 A.M. TO 7:00 P.M.

LANE AND SHOULDER CLOSED REQUIREMENTS

- F) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC MANAGEMENT PLANS, ROADWAYS STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- J) DO NOT WORK SIMULTANEOUSLY WITHIN 15FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- K) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- L) BACKFILL AT 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:
 - BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.
 - BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH
 - BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- M) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING 'UNEVEN LANES' SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.
- N) FOR PAVING OVERLAYS OF 3" OR GREATER THAT CREATE A DROP-OFF ADJACENT TO THE MEDIAN SHOULDER, INSTALL "LOW/SOFT SHOULDER" (SP 13107) SIGNS ON THE MEDIAN SHOULDER. PLACE INITIALLY AT THE CONSTRUCTION LIMITS, AND THEN SPACE 1 MILE THEREAFTER. NO SIGNING REQUIRED FOR THE OUTSIDE SHOULDER.

TRAFFIC PATTERN ALTERATIONS

- O) NOTIFY THE ENGINEER TWENTY-ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

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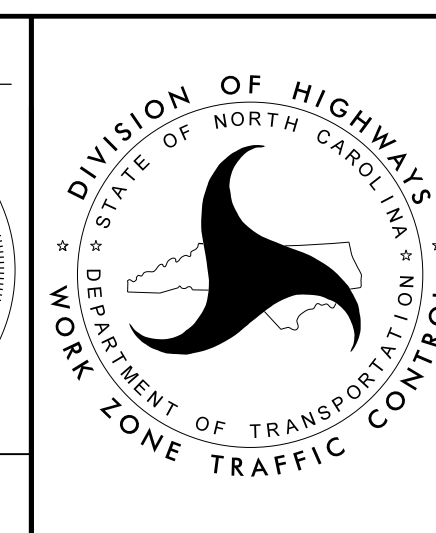
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TRANSPORTATION
OPERATIONS
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PROJ. REFERENCE NO. I - 5952	SHEET NO. TMP - 2B
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(CONTINUED FROM TMP-2A)

SIGNING

- P) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- Q) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERNS.
- R) INSTALL BLACK ON ORANGE 'DIP' SIGNS (W8-2) AND/OR BUMP SIGNS (W8-1) 500 FT IN ADVANCE OF THE UNEVEN AREA OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

- S) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOACTAION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

- T) PROTECT THE APPROACH END OF MOVEABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVEABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45-50	20 FT
55	25 FT
60 MPH OR HIGHER	30 FT

TRAFFIC CONTROL DEVICES

- U) WHEN LANE CLOSURES ARE NOT IN EFFECT, SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES), AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- V) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

- W) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE. REVIEW AND RECORD THE EXISTING PAVEMENT MARKINGS AND MARKERS BEFORE OBLITERATION. RE-ESTABLISH THE NEW PAVEMENT MARKINGS AND MARKERS USING THE RECORD OF EXISTING MARKINGS IN CONJUNCTION WITH THE 2018 ROADWAY STANDARD DRAWINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SUBMIT THE RECORD OF THE EXISTING PAVEMENT MARKINGS SEVEN CALENDAR DAYS BEFORE THE OBLITERATION OF ANY PAVEMENT MARKINGS.

- X) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKERS	MARKINGS/SYMBOLS
I-40	TEMPORARY RAISED	PAINT

- Y) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

- Z) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

- AA) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATIONS.

WORK ZONE PRESENCE AND SEQUENTIAL FLASHING LIGHTING

- BB) PROVIDE THE FOLLOWING FOR NIGHTTIME LANE CLOSURES:

1. FURNISH AND INSTALL WORK ZONE "PRESENCE LIGHTING" TO SUPPLEMENT PORTABLE CONSTRUCTION AND EQUIPMENT LIGHTING FOR THE PURPOSE OF ALERTING MOTORIST TO THE EXISTENCE OF AN ACTIVE WORK ZONE AND TO ENCOURAGE COMPLIANCE WITH THE REDUCED WORK ZONE SPEED LIMIT. (SEE PROJECT SPECIAL PROVISIONS.)
2. TO ASSIST MOTORIST IN DETERMINING WHICH DIRECTION TO MERGE AND TO DECREASE LATE LANE MERGING, FURNISH AND INSTALL SEQUENTIAL FLASHING WARNING LIGHTS ON DRUMS USED FOR MERGING TAPERS. (SEE PROJECT SPECIAL PROVISIONS.)
3. FURNISH AND INSTALL DIGITAL SPEED LIMIT SIGNS TO PERMIT USE OF WORK ZONE VARIABLE SPEED LIMIT AS APPROVED BY THE ENGINEER. (SEE PROJECT SPECIAL PROVISIONS)

MISCELLANEOUS

- CC) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER. PROVIDE 2 LAW ENFORCEMENT OFFICERS DURING MAINLINE LANE CLOSURE OPERATIONS. USE LAW ENFORCEMENT OFFICERS TO ASSIST IN SHADOWING OF WORKERS DURING THE INSTALLATION AND REMOVAL OF LANE CLOSURES.
- DD) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER.

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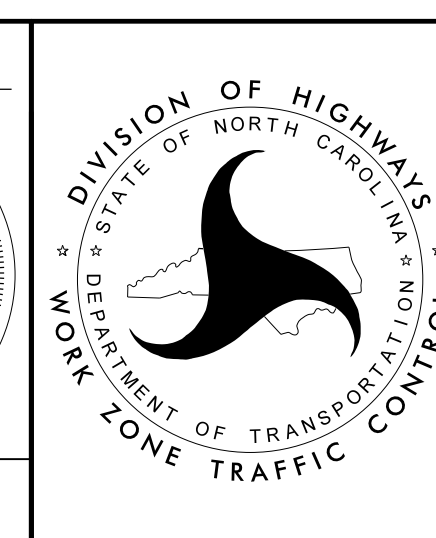
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**TRANSPORTATION
OPERATIONS
PLAN**

PHASING

PHASE I

- STEP 1: USING RSD 1101.01, SHEET 1, INSTALL WORK ZONE ADVANCE WARNING SIGNS ON I-40, SR 1101 (HARPER RD) EB ENTRANCE RAMP, AND NC 801 (LEWISVILLE CLEMMONS RD) ENTRANCE RAMPS.
- STEP 2: USING RSD 1101.02, SHEET 4 TO TEMPORARILY CLOSE THE LEFT LANE OF I-40, INSTALL PORTABLE CONCRETE BARRIER (P.C.B.) ALONG LEFT SIDE (MEDIAN SIDE) OF I-40 EB AND WB AS SHOWN ON TMP-5 THRU TMP-10.
- STEP 3: WORKING BEHIND P.C.B., REMOVE EXISTING GUARDRAIL, PAVE MEDIAN UP TO BUT NOT INCLUDING SURFACE COURSE AND CONSTRUCT PROPOSED CONCRETE MEDIAN BARRIER AND DRAINAGE FROM STA 210+00 -L- TO STA 275+44 -L- AS SHOWN ON TMP-5 THRU TMP-9.

REFER TO RSD 1101.05, SHEET 2 FOR WORK ZONE VEHICLE INGRESS/EGRESS THROUGH P.C.B. COORDINATE WITH AND OBTAIN ENGINEER'S APPROVAL OF ACCESS POINTS TO/FROM MEDIAN WORK AREA. THERE SHALL BE NO MORE THAN ONE WORK ZONE VEHICLE ACCESS THROUGH P.C.B. PER TRAVEL DIRECTION WEST OF LEWISVILLE CLEMMONS ROAD AND NO MORE THAN ONE WORK ZONE VEHICLE ACCESS THROUGH P.C.B. PER TRAVEL DIRECTION EAST OF LEWISVILLE CLEMMONS ROAD.

- STEP 4: USING RSD 1101.02, SHEET 4 TO TEMPORARILY CLOSE THE LEFT LANE OF I-40, REMOVE P.C.B. ALONG I-40 MEDIAN AND REPLACE P.C.B. WITH DRUMS SPACED 100 FT C-C.

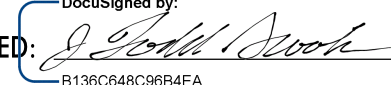
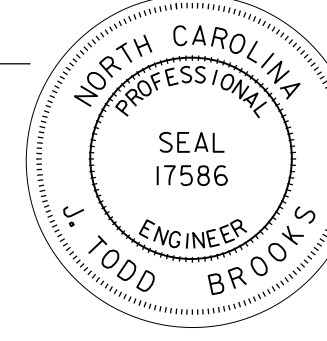

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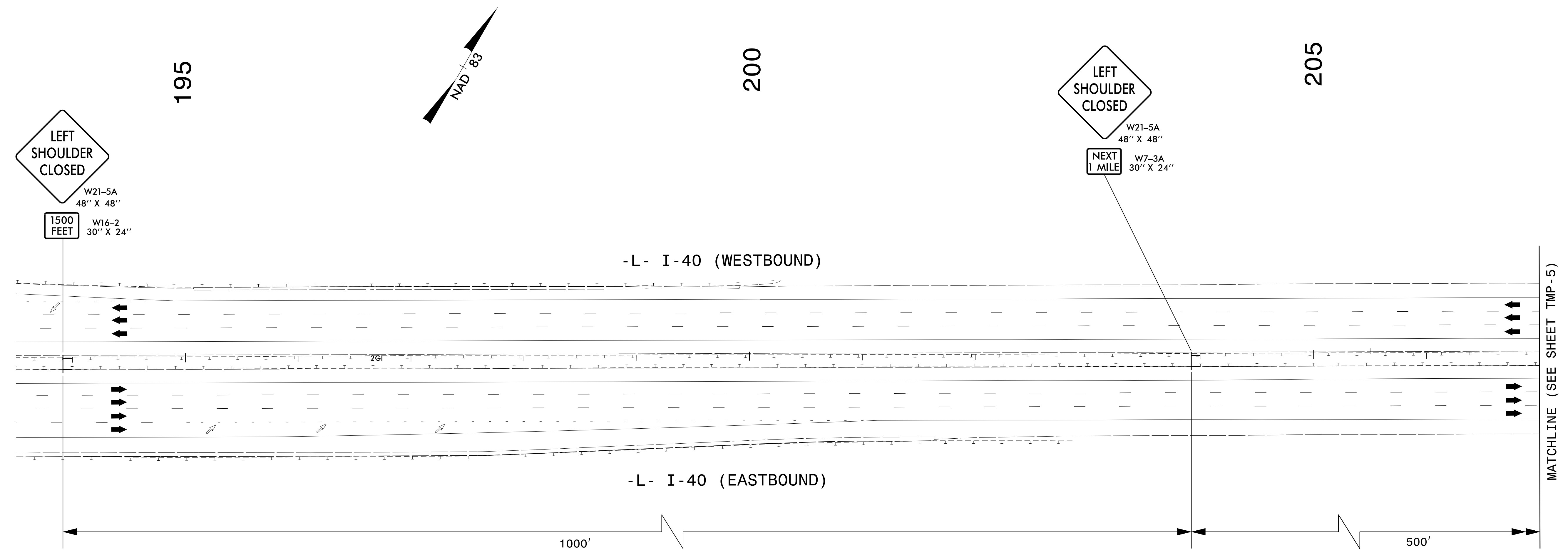
- STEP 1: USING RSD 1101.02, SHEETS 4, 8, 9 AND 10, TO TEMPORARILY CLOSE LANES ON I-40 OVERNIGHT, MILL AND RESURFACE EXISTING I-40 PAVEMENT UP THROUGH SURFACE COURSE, INCLUDING OVERLAY OF PAVED SHOULDERS, FROM STA 210+00 *L- TO THE WESTGATE CENTER DRIVE OVERPASS. REPLACE PAVEMENT MARKINGS OBLITERATED BY MILLING AND RESURFACING USING PAINT MARKINGS BY THE END OF EACH WORK PERIOD AND PRIOR TO REOPENING THE LANE(S) TO TRAFFIC.
- STEP 2: USING RSD 1101.02, SHEETS 4, 9 AND 10, TO TEMPORARILY CLOSE LANES ON I-40 OVERNIGHT, RE-CUT RUMBLE STRIPS ALONG SHOULDERS OF I-40 FROM STA 210+00 *L- TO THE WESTGATE CENTER DRIVE OVERPASS. USING RSD 1101.02, SHEETS 4, 8, 9, 10 AND 13, TO TEMPORARILY CLOSE LANES ON I-40 OVERNIGHT, PLACE FINAL PAVEMENT MARKINGS AND MARKERS IN EXISTING PATTERN ON ALL LANES OF I-40 FROM STA 210+00 *L- TO THE WESTGATE CENTER DRIVE OVERPASS.

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ALL PAVEMENT MARKINGS
ARE EXISTING

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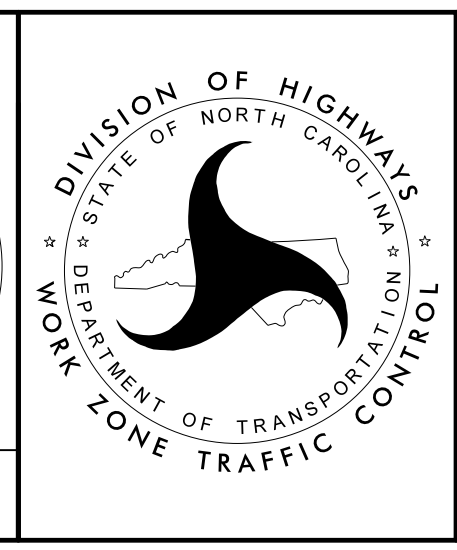
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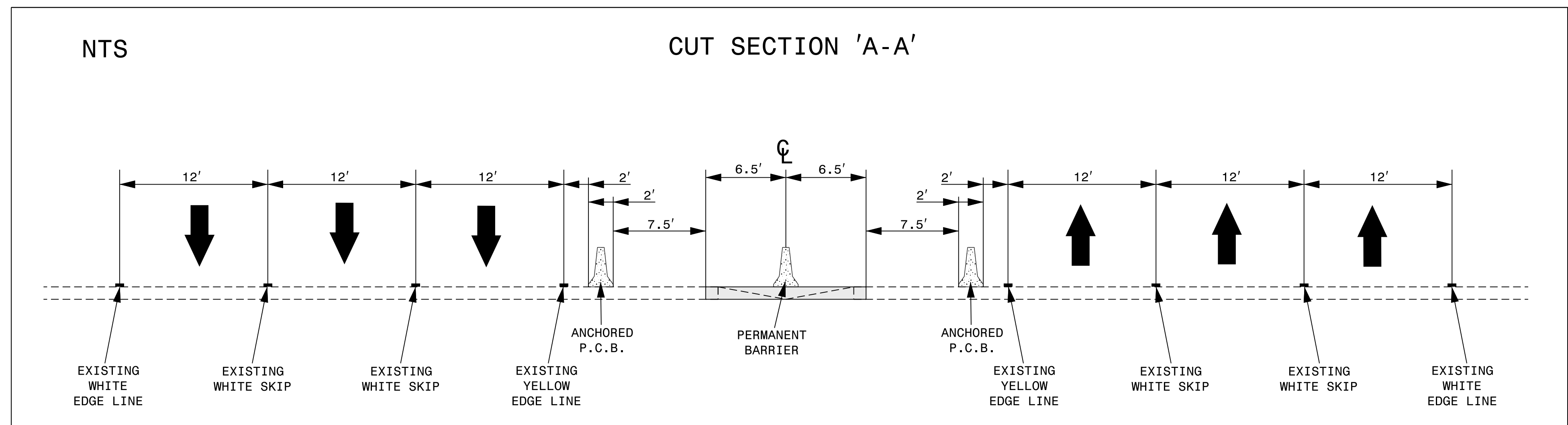
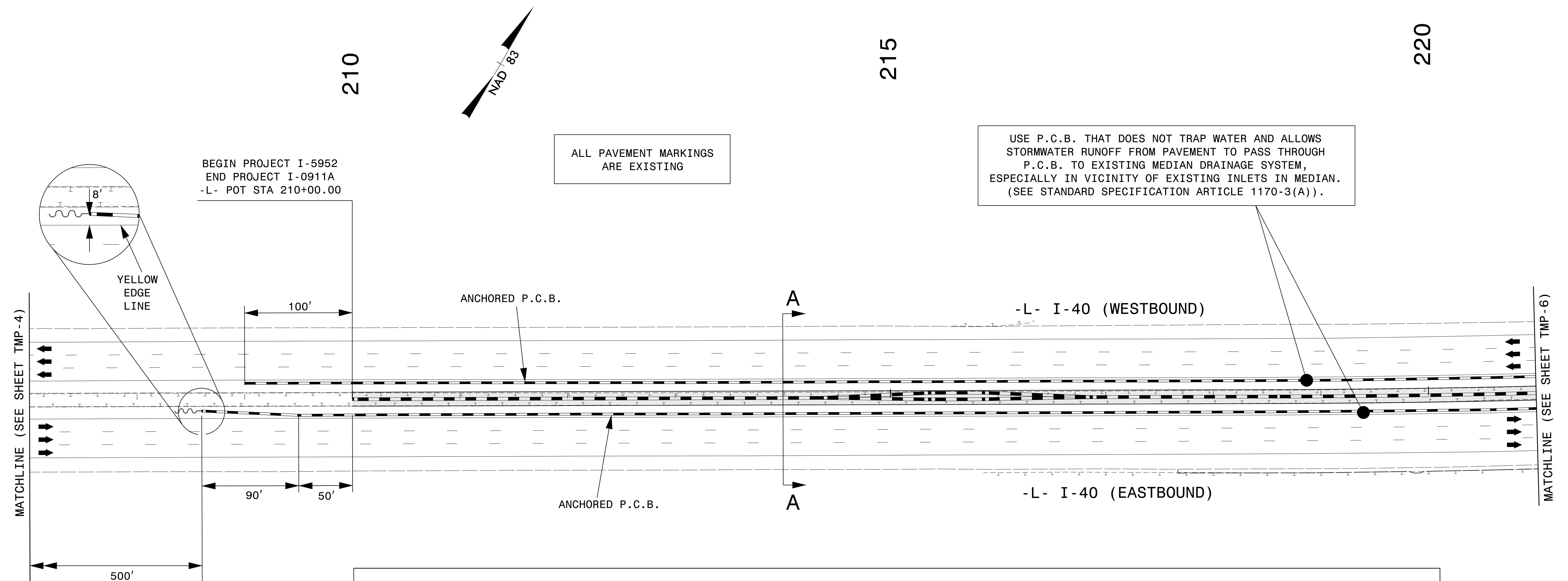
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PHASE I DETAIL



REFER TO RSD 1101.05, SHEET 2 FOR WORK ZONE VEHICLE INGRESS/EGRESS THROUGH P.C.B. COORDINATE WITH AND OBTAIN ENGINEER'S APPROVAL OF ACCESS POINTS TO/FROM MEDIAN WORK AREA. THERE SHALL BE NO MORE THAN ONE WORK ZONE VEHICLE ACCESS THROUGH P.C.B. PER TRAVEL DIRECTION WEST OF LEWISVILLE CLEMMONS ROAD AND NO MORE THAN ONE WORK ZONE VEHICLE ACCESS THROUGH P.C.B. PER TRAVEL DIRECTION EAST OF LEWISVILLE CLEMMONS ROAD.

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2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: *[Signature]*

DATE: 9/18/2018

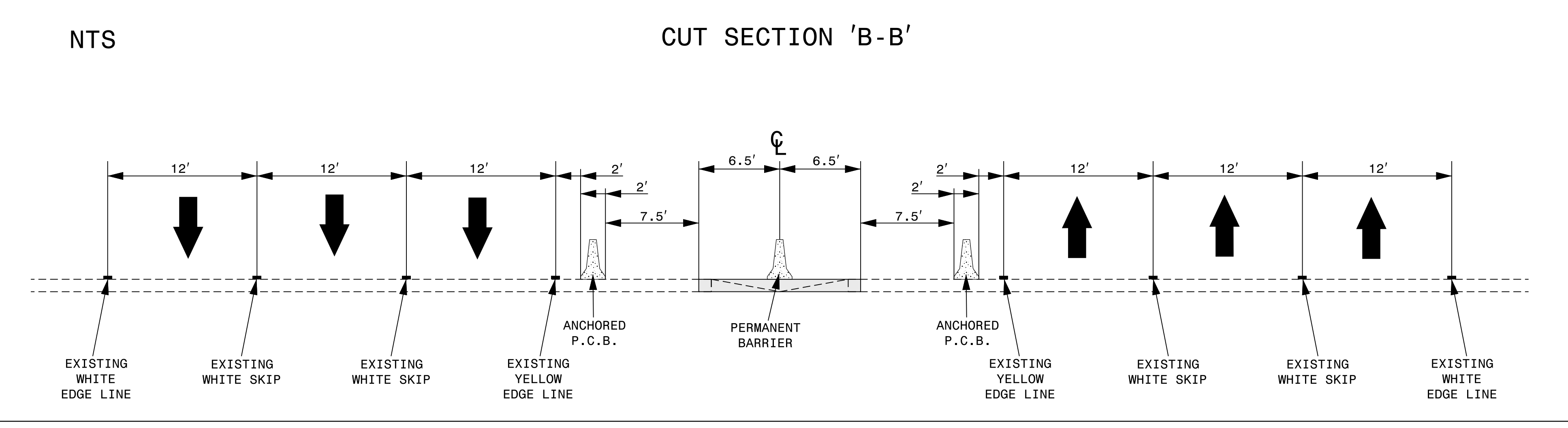
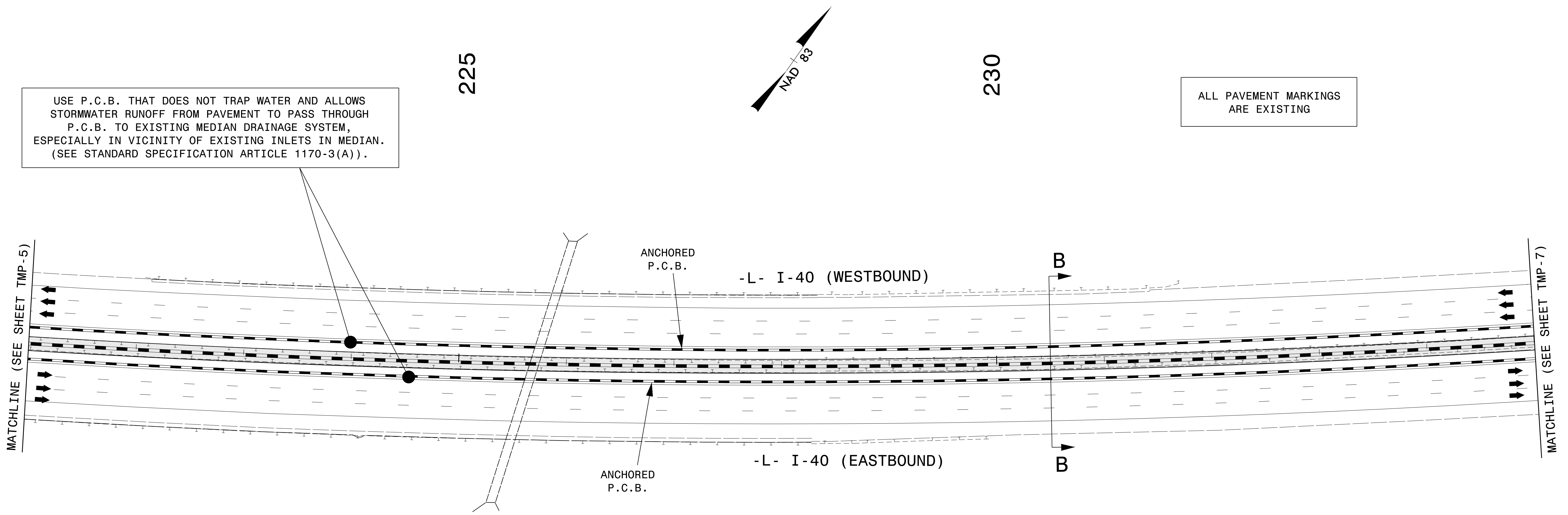
SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PHASE I DETAIL

USE P.C.B. THAT DOES NOT TRAP WATER AND ALLOWS STORMWATER RUNOFF FROM PAVEMENT TO PASS THROUGH P.C.B. TO EXISTING MEDIAN DRAINAGE SYSTEM, ESPECIALLY IN VICINITY OF EXISTING INLETS IN MEDIAN. (SEE STANDARD SPECIFICATION ARTICLE 1170-3(A)).

ALL PAVEMENT MARKINGS ARE EXISTING



REFER TO RSD 1101.05, SHEET 2 FOR WORK ZONE VEHICLE INGRESS/EGRESS THROUGH P.C.B. COORDINATE WITH AND OBTAIN ENGINEER'S APPROVAL OF ACCESS POINTS TO/FROM MEDIAN WORK AREA. THERE SHALL BE NO MORE THAN ONE WORK ZONE VEHICLE ACCESS THROUGH P.C.B. PER TRAVEL DIRECTION WEST OF LEWISVILLE CLEMMONS ROAD AND NO MORE THAN ONE WORK ZONE VEHICLE ACCESS THROUGH P.C.B. PER TRAVEL DIRECTION EAST OF LEWISVILLE CLEMMONS ROAD.

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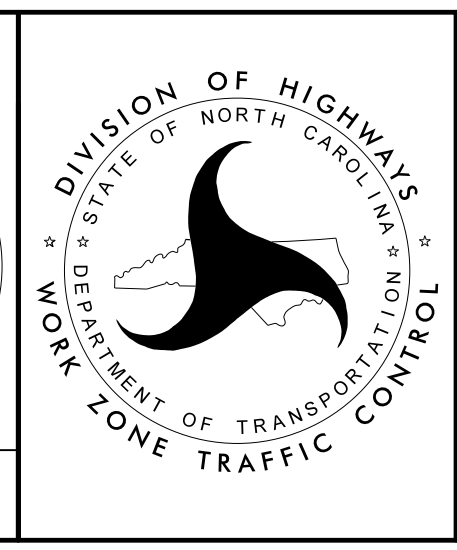
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED *[Signature]*
DATE: 9/18/2018

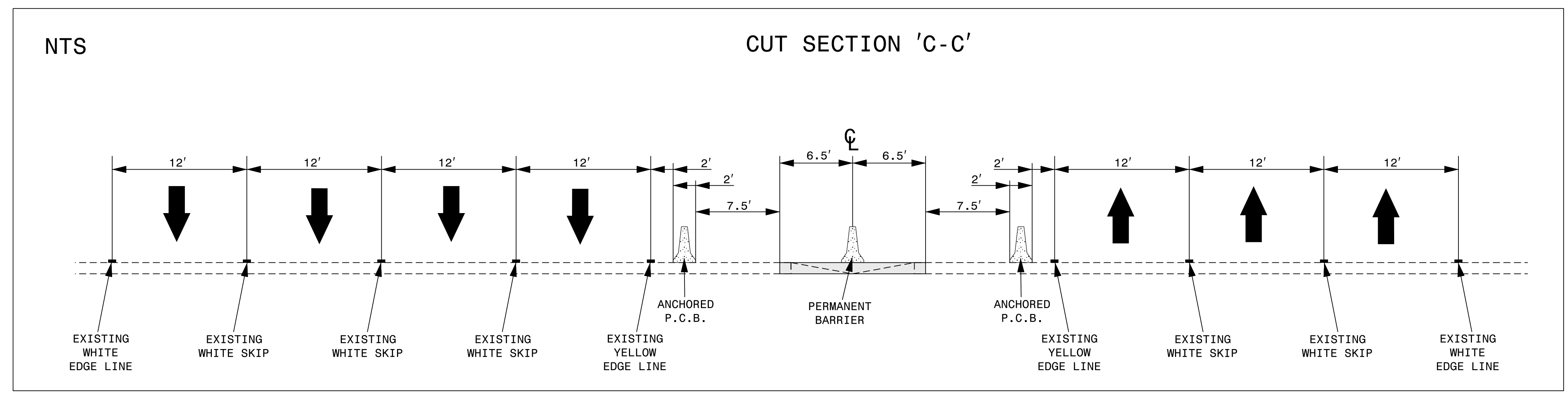
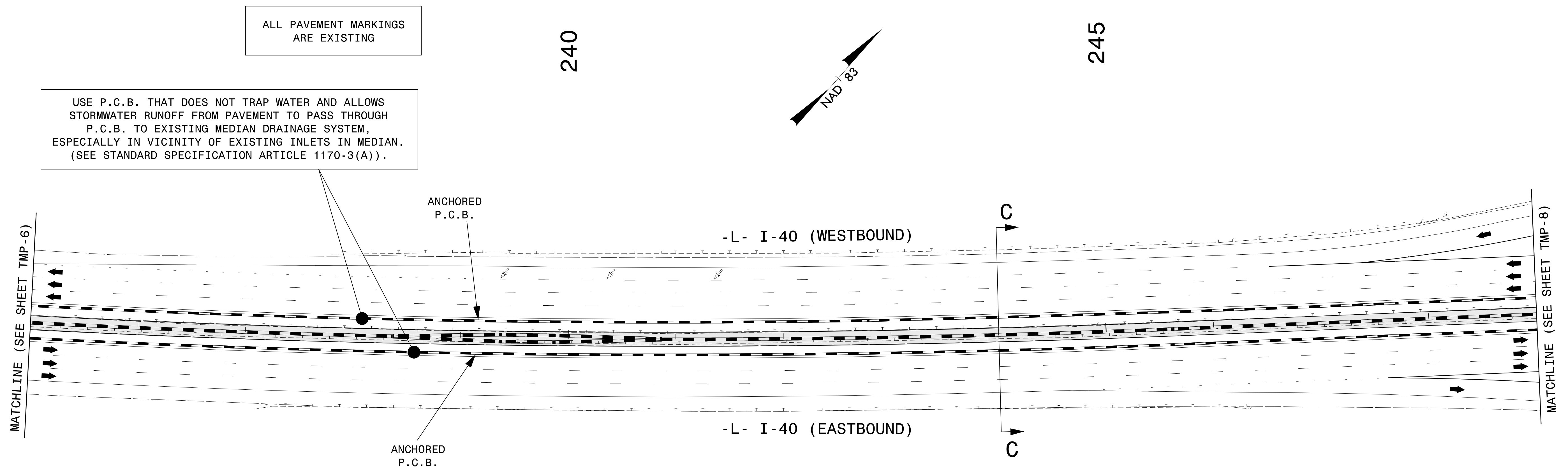
SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 17586
J. TODD BROOKS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PHASE I DETAIL



REFER TO RSD 1101.05, SHEET 2 FOR WORK ZONE VEHICLE INGRESS/EGRESS THROUGH P.C.B. COORDINATE WITH AND OBTAIN ENGINEER'S APPROVAL OF ACCESS POINTS TO/FROM MEDIAN WORK AREA. THERE SHALL BE NO MORE THAN ONE WORK ZONE VEHICLE ACCESS THROUGH P.C.B. PER TRAVEL DIRECTION WEST OF LEWISVILLE CLEMMONS ROAD AND NO MORE THAN ONE WORK ZONE VEHICLE ACCESS THROUGH P.C.B. PER TRAVEL DIRECTION EAST OF LEWISVILLE CLEMMONS ROAD.

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SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: *[Signature]*

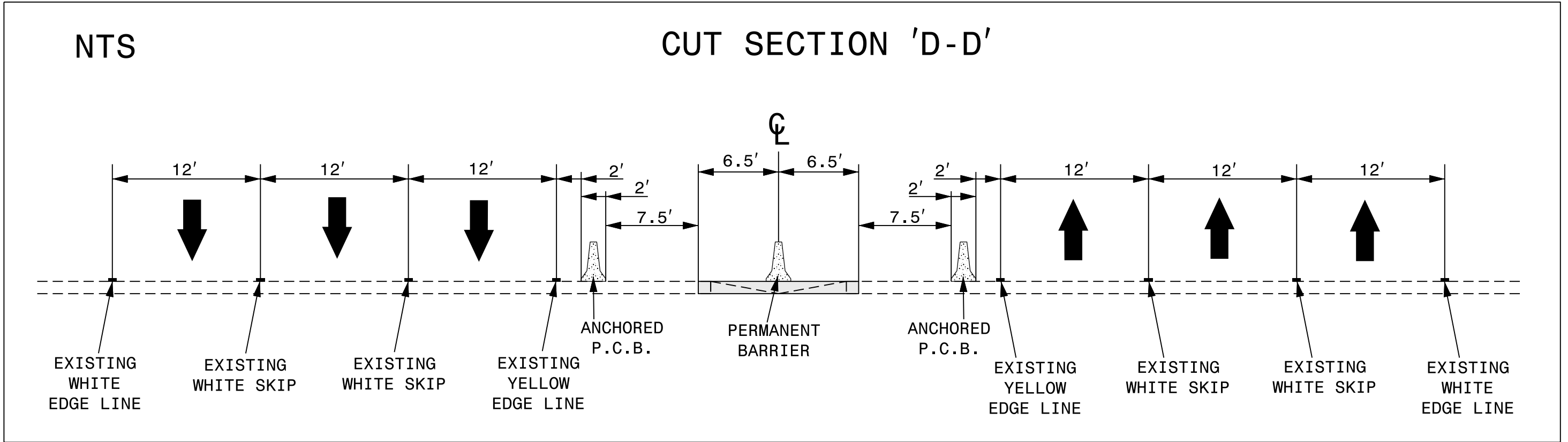
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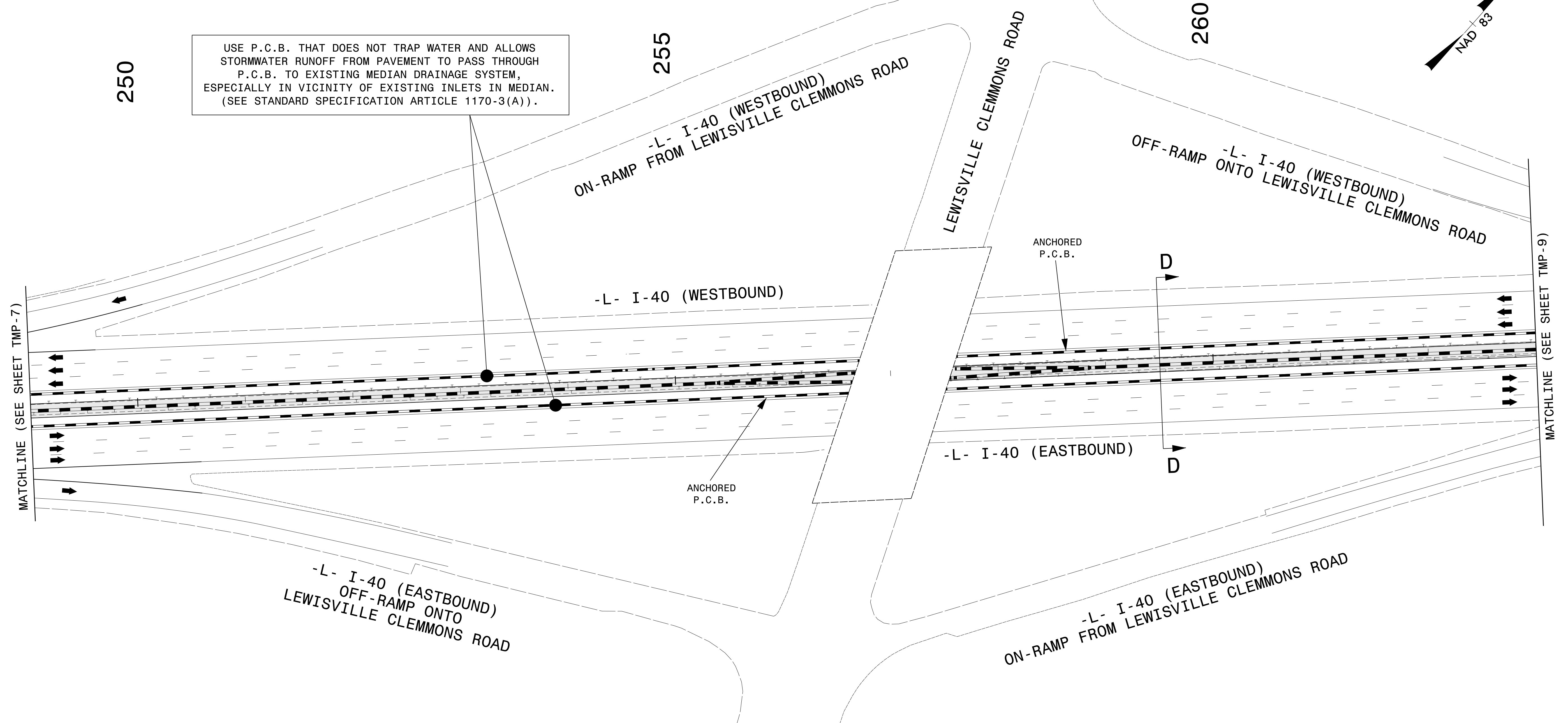
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

PHASE I DETAIL



ALL PAVEMENT MARKINGS ARE EXISTING

USE P.C.B. THAT DOES NOT TRAP WATER AND ALLOWS STORMWATER RUNOFF FROM PAVEMENT TO PASS THROUGH P.C.B. TO EXISTING MEDIAN DRAINAGE SYSTEM, ESPECIALLY IN VICINITY OF EXISTING INLETS IN MEDIAN. (SEE STANDARD SPECIFICATION ARTICLE 1170-3(A)).



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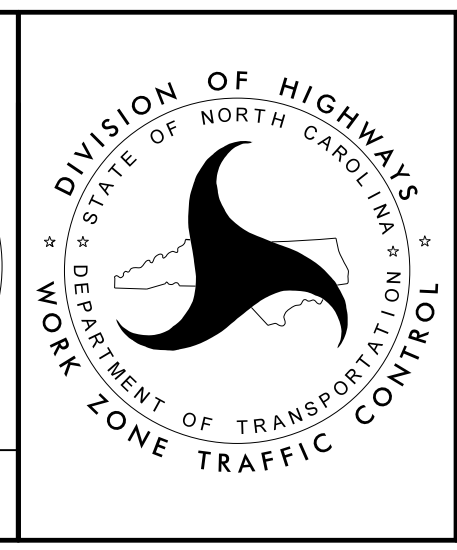
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: *[Signature]*
DATE: 9/18/2018

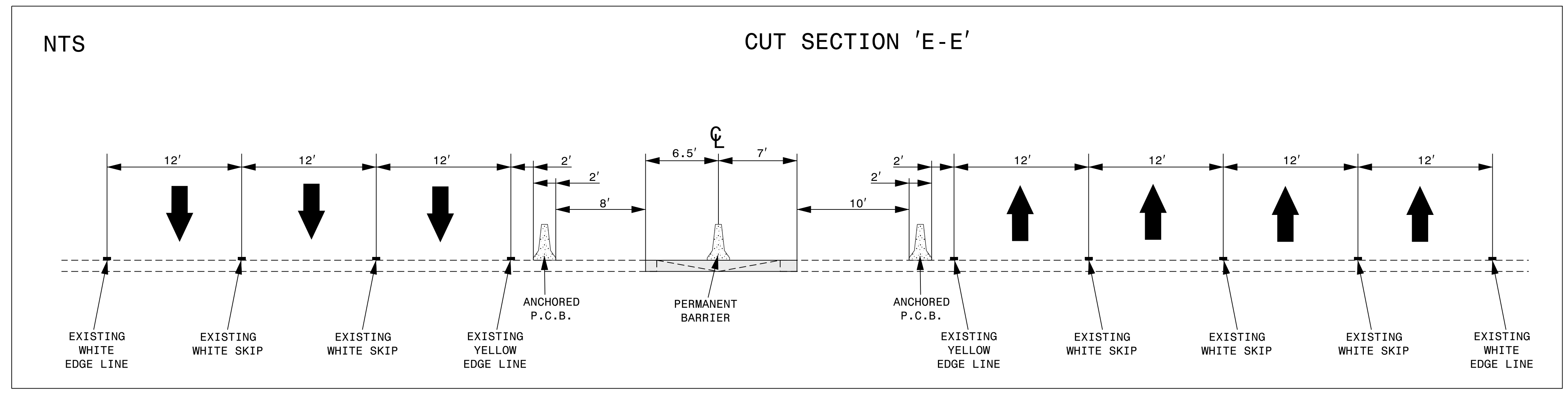
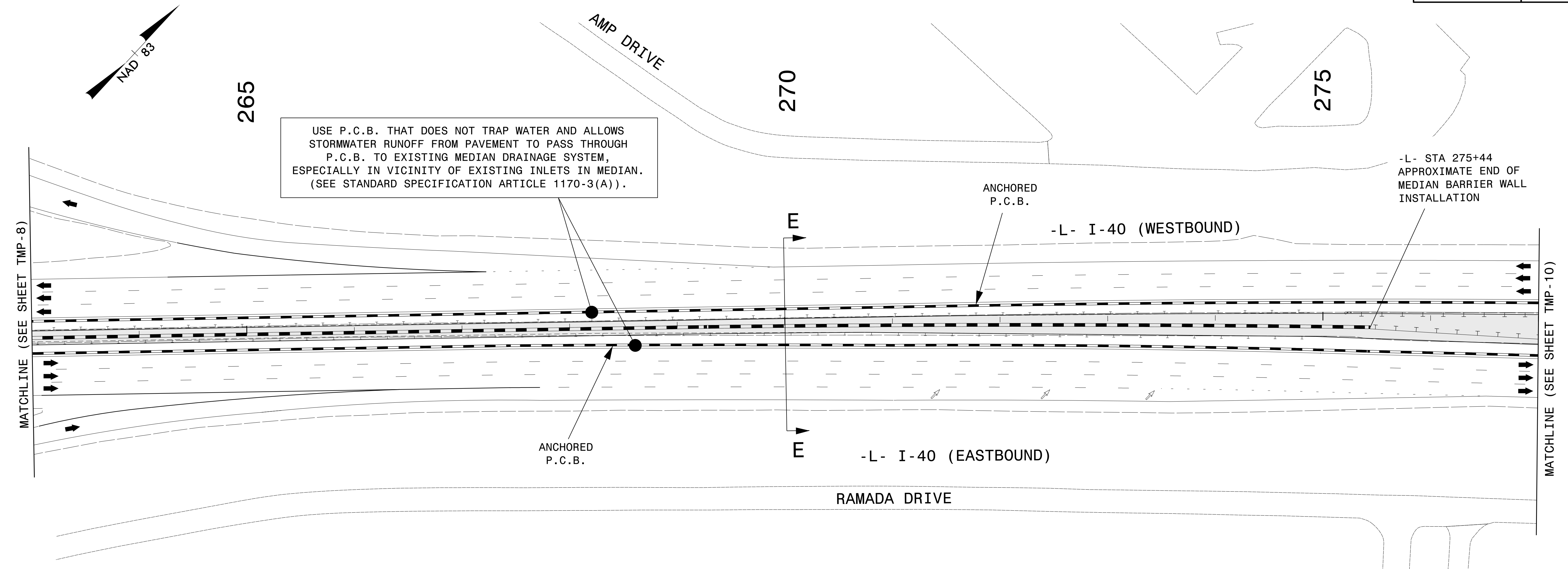
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NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 17586
J. TODD BROOKS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PHASE I DETAIL



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2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: *[Signature]*
DATE: 9/18/2018

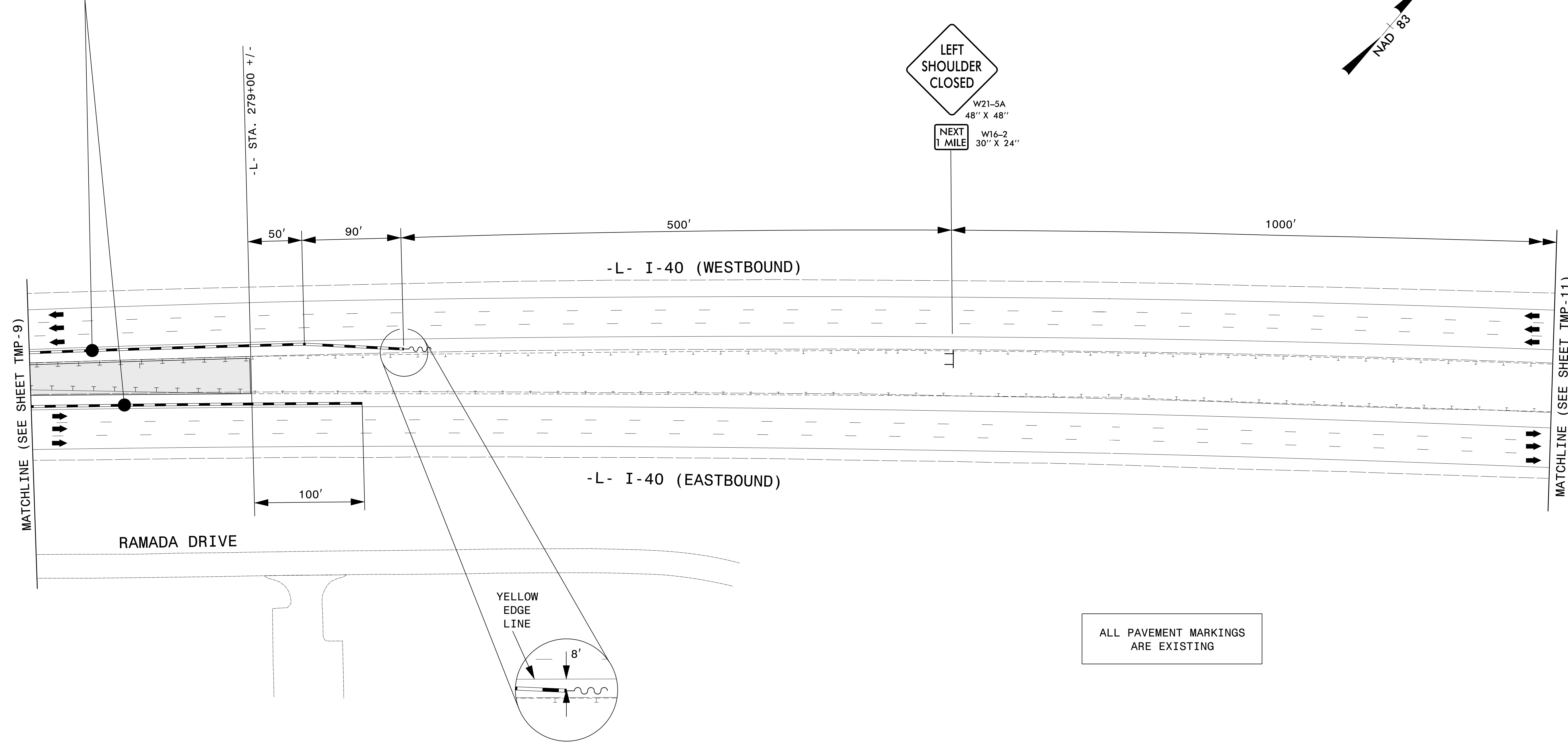
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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

PHASE I DETAIL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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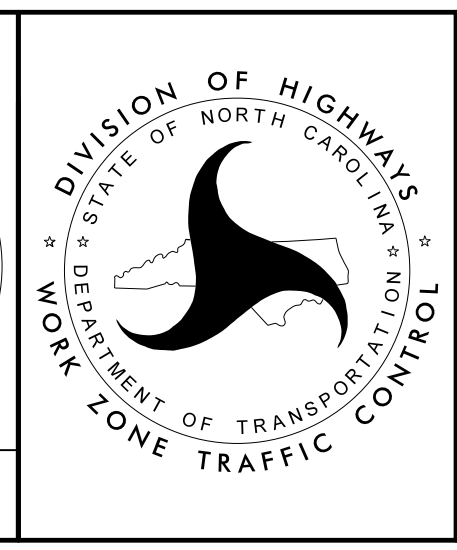
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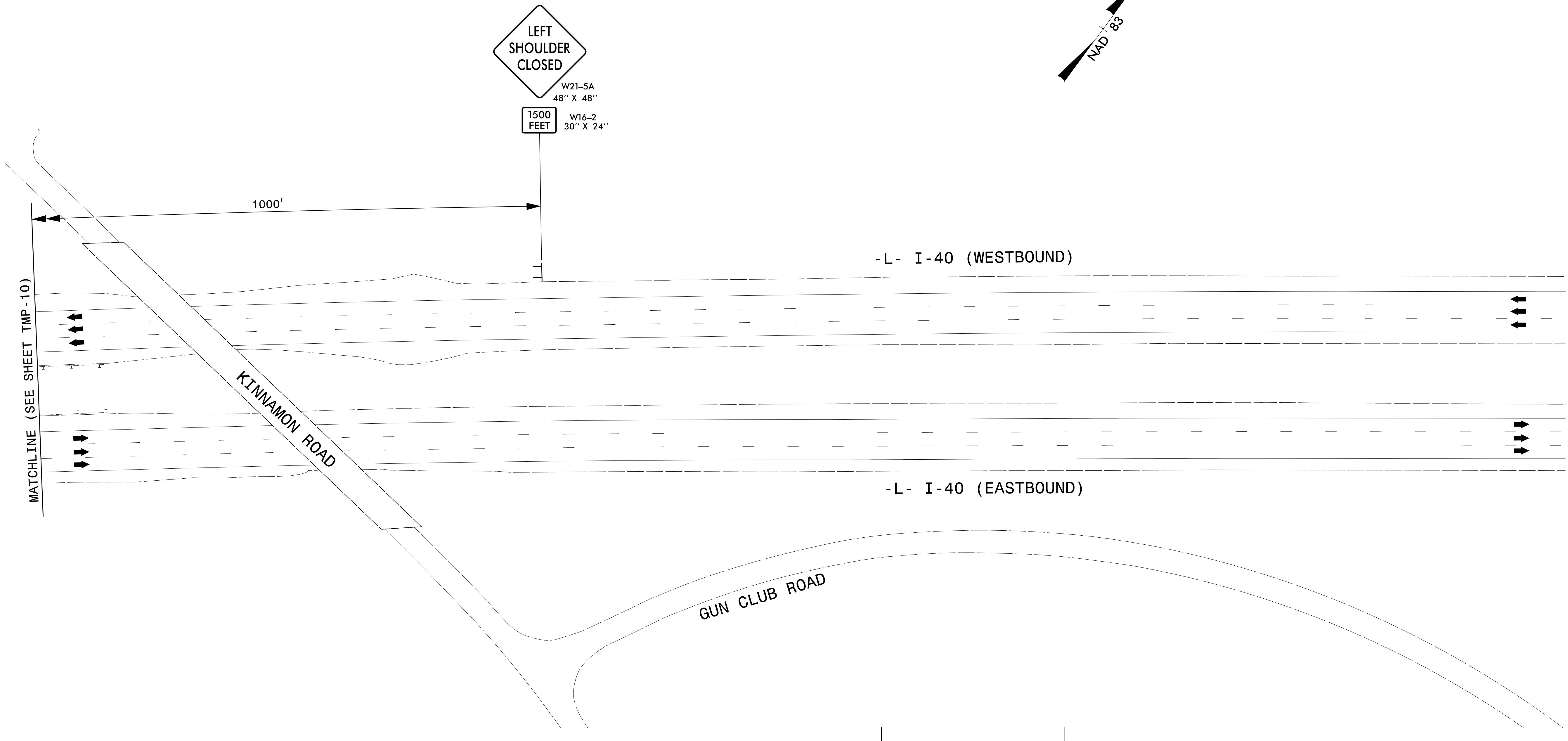
Dewberry
 2610 WYCLIFF ROAD
 SUITE 410
 RALEIGH, NC 27607
 PHONE: 919.881.9939
 NC COA No. F-0929

APPROVED: *[Signature]*
 DATE: 9/18/2018
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 17586
 U. TODD BROOKS



PHASE I DETAIL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



ALL PAVEMENT MARKINGS
ARE EXISTING

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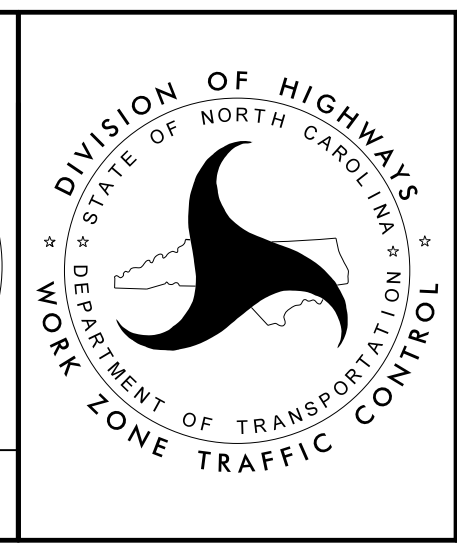
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: *J. Todd Brooks*
DATE: 9/18/2018

SEAL

NORTH CAROLINA
PROFESSIONAL
ENGINEER
U. TODD BROOKS
SEAL
17586

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

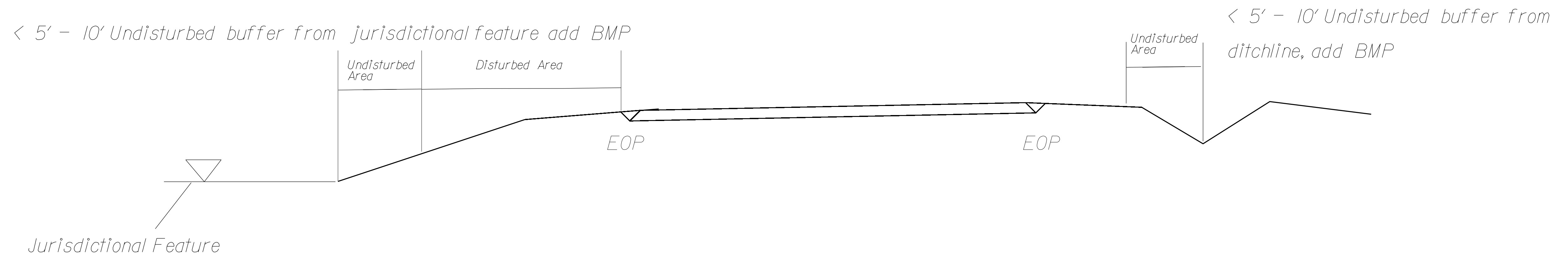
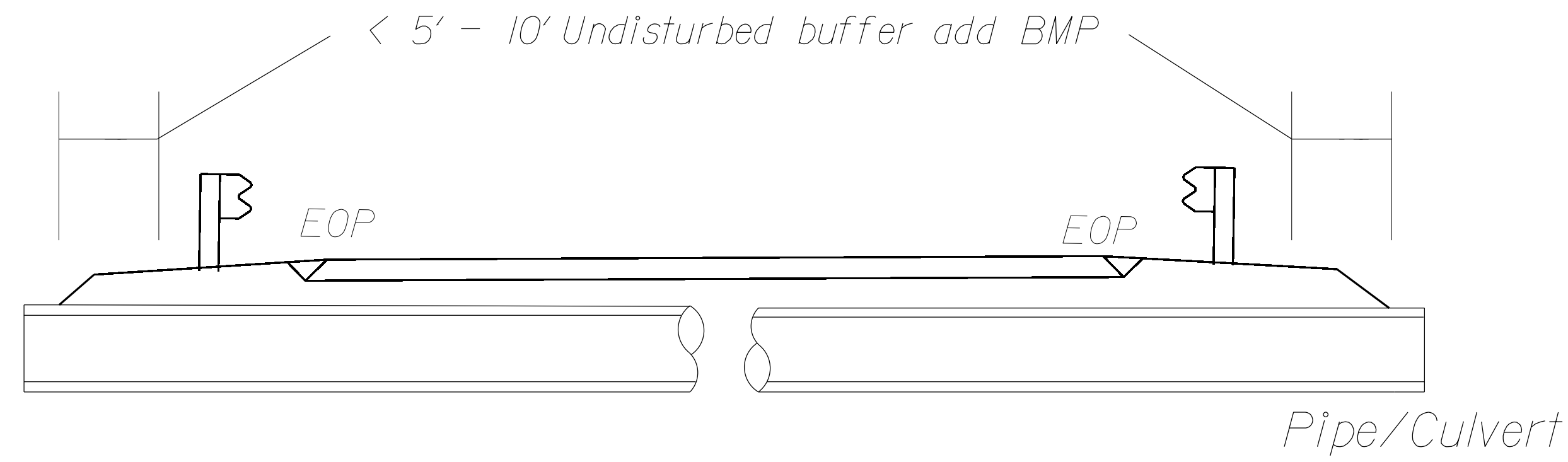


PHASE I DETAIL

NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

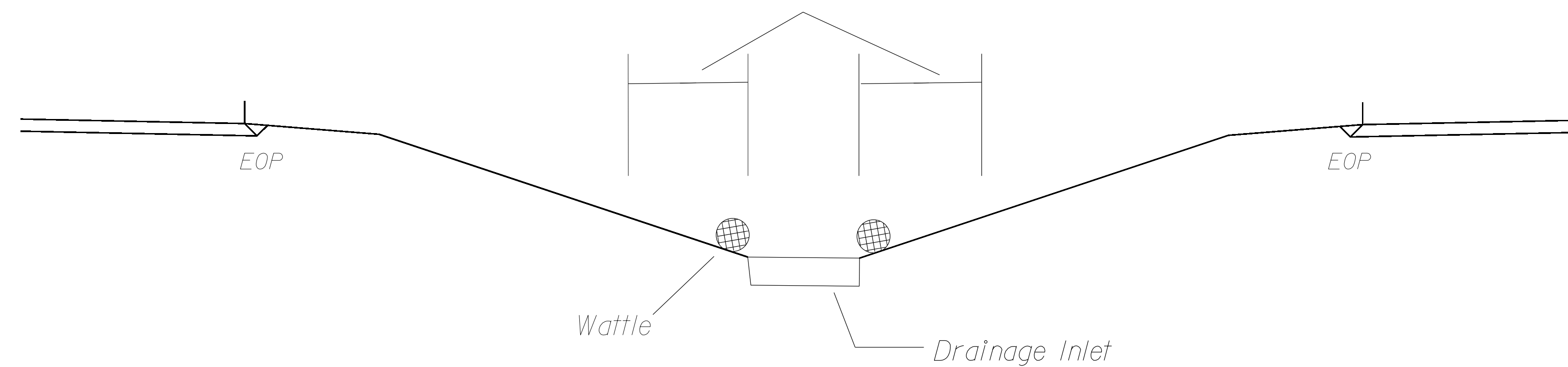
EROSION CONTROL DETAIL



Use BMP's if shoulders and/or front slopes and/or ditchline and/or backslopes are disturbed



< 5' - 10' Undisturbed buffer from inlet, add wattle

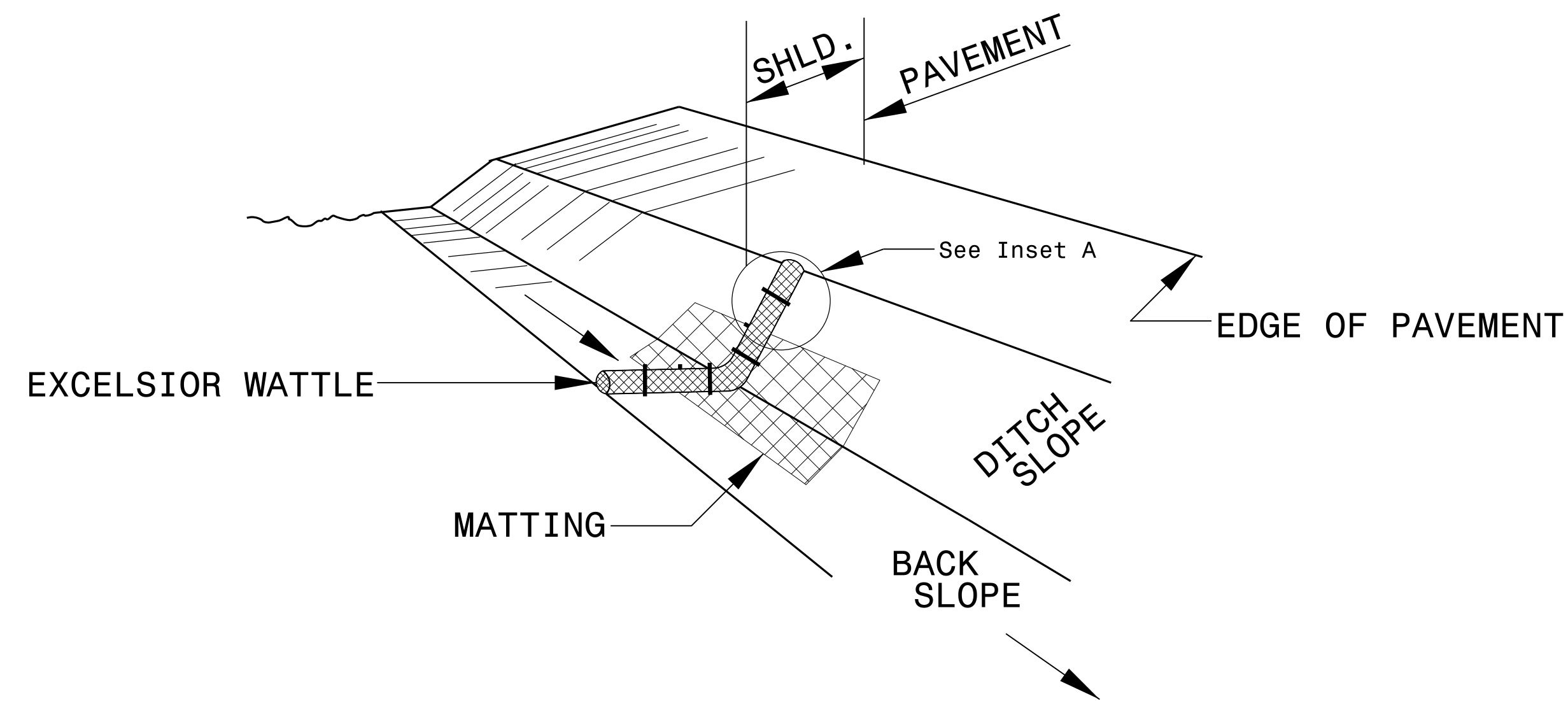


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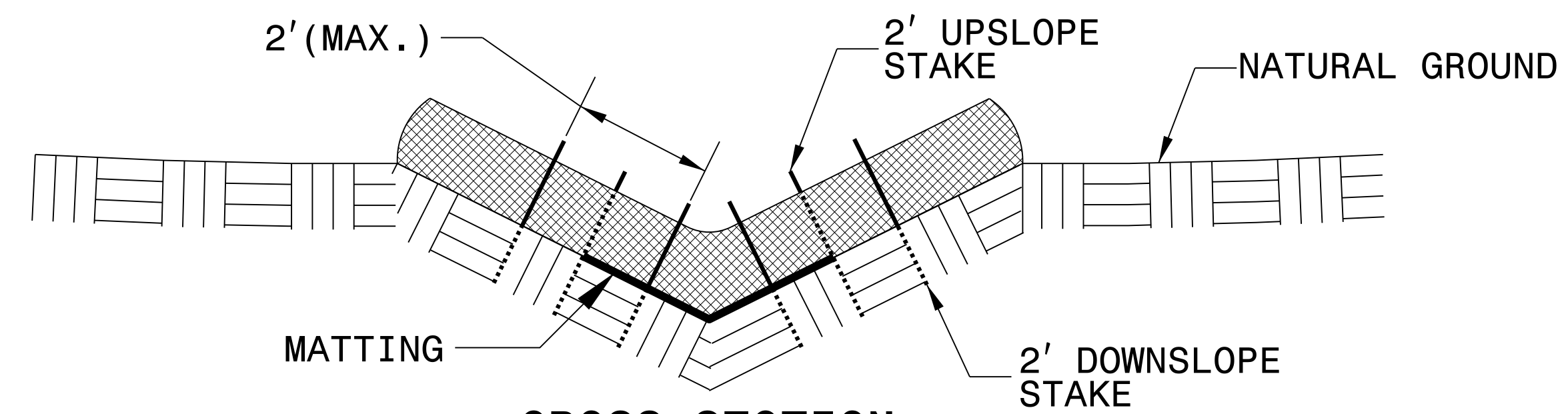
REVISIONS

8/17/99
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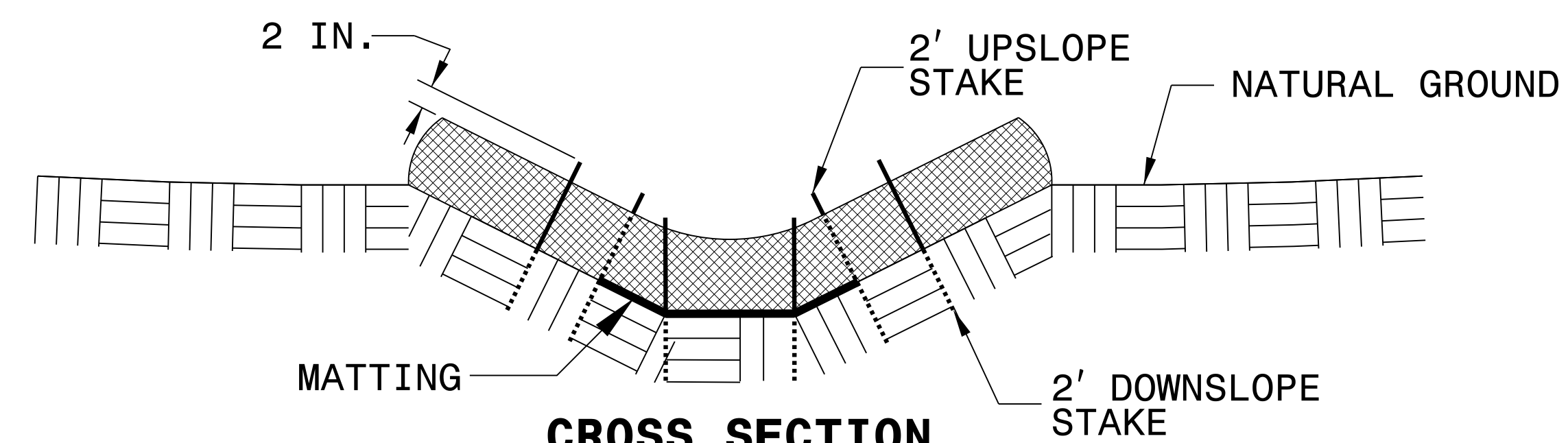
WATTLE DETAIL



ISOMETRIC VIEW



**CROSS SECTION
VEE DITCH**



**CROSS SECTION
TRAPEZOIDAL DITCH**

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

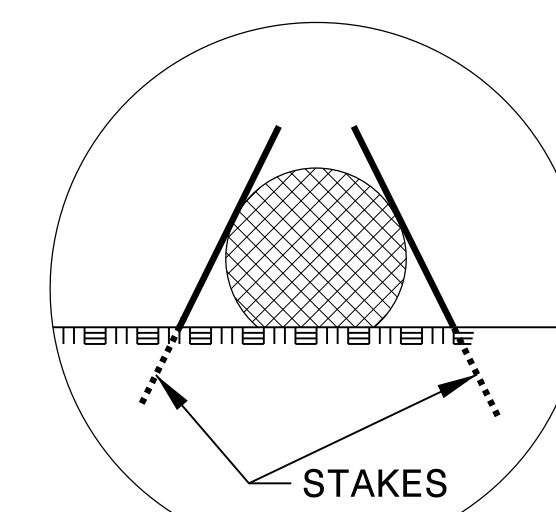
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

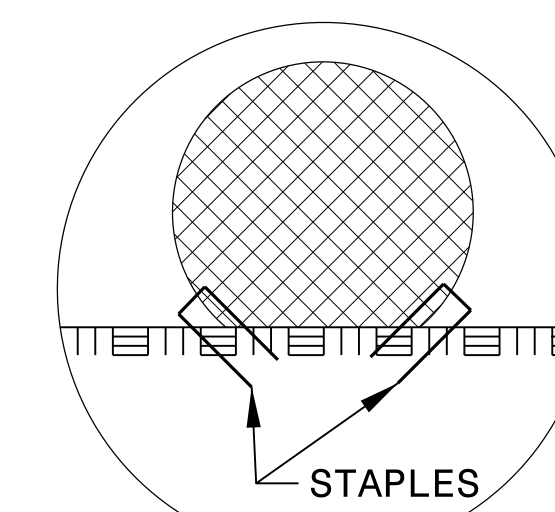
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

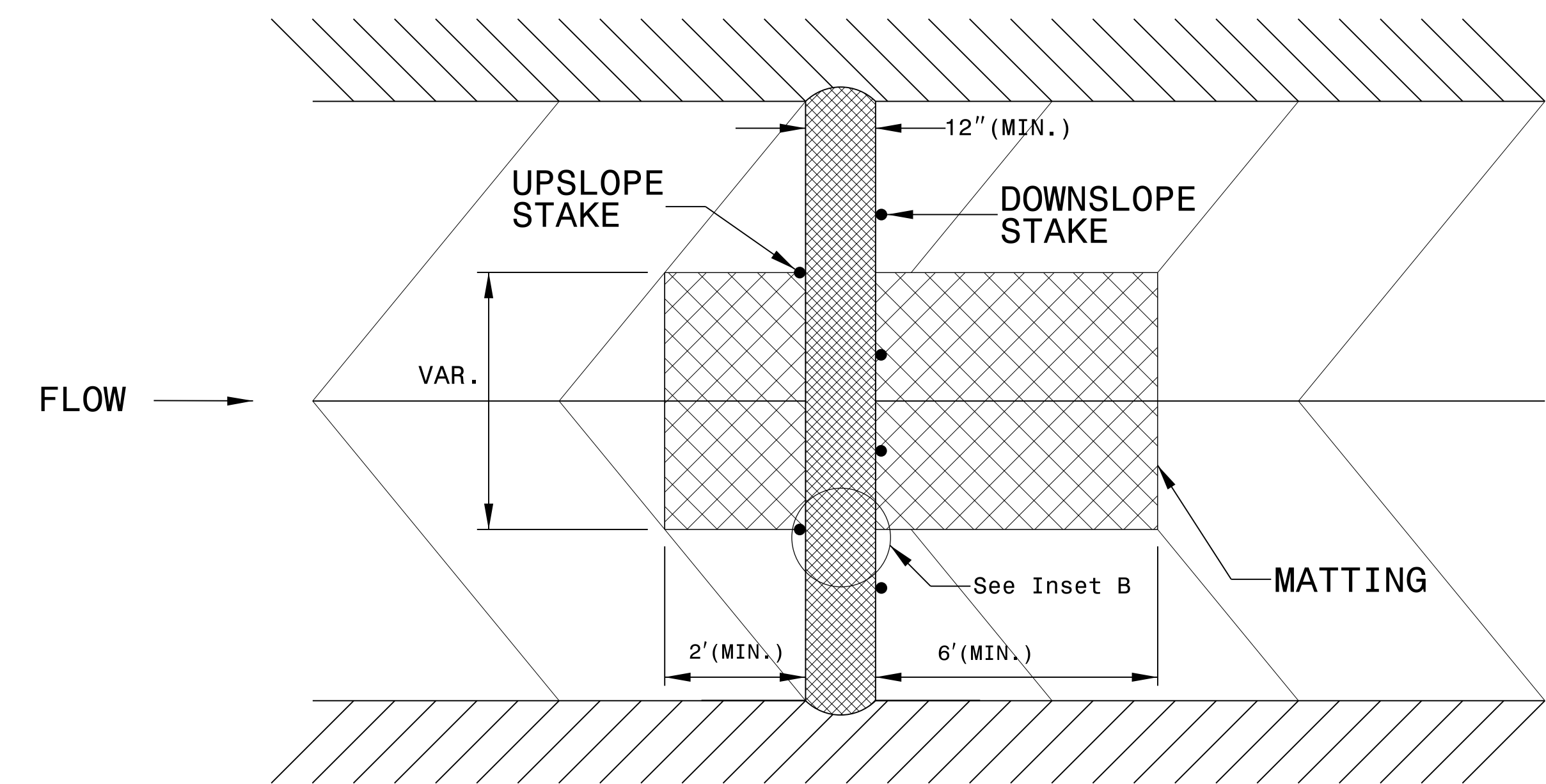
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



INSET B



TOP VIEW

REVISIONS

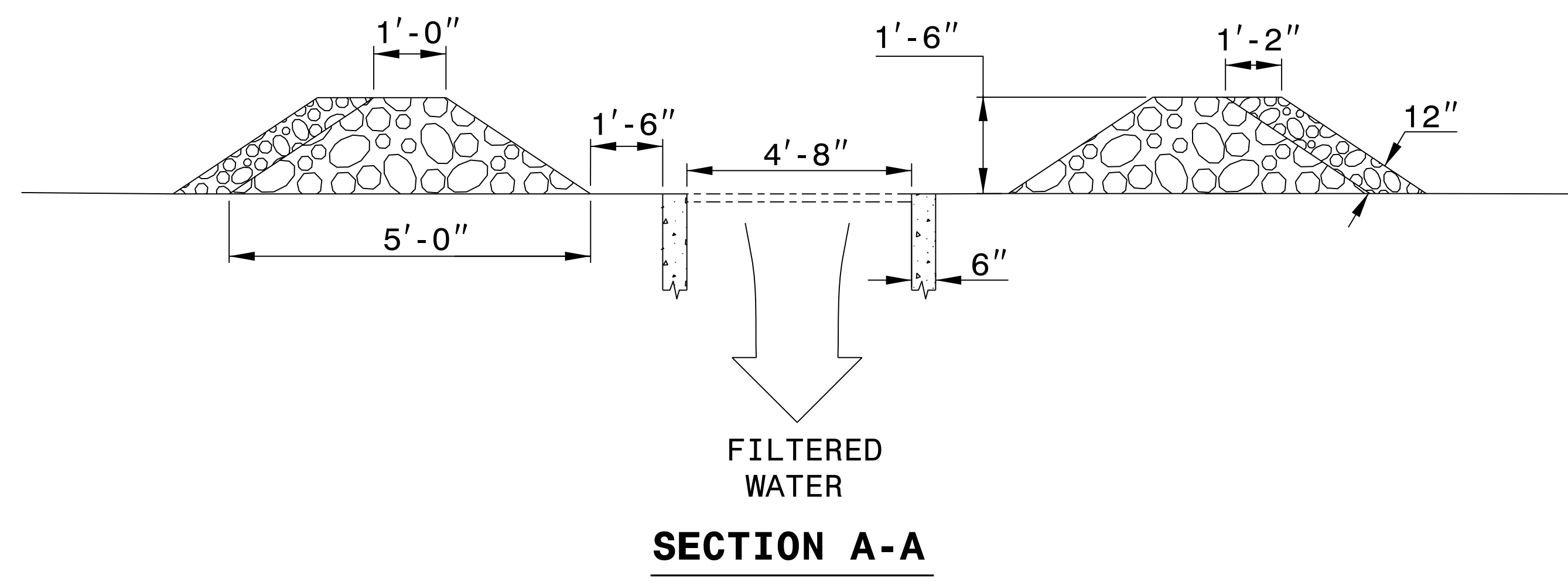
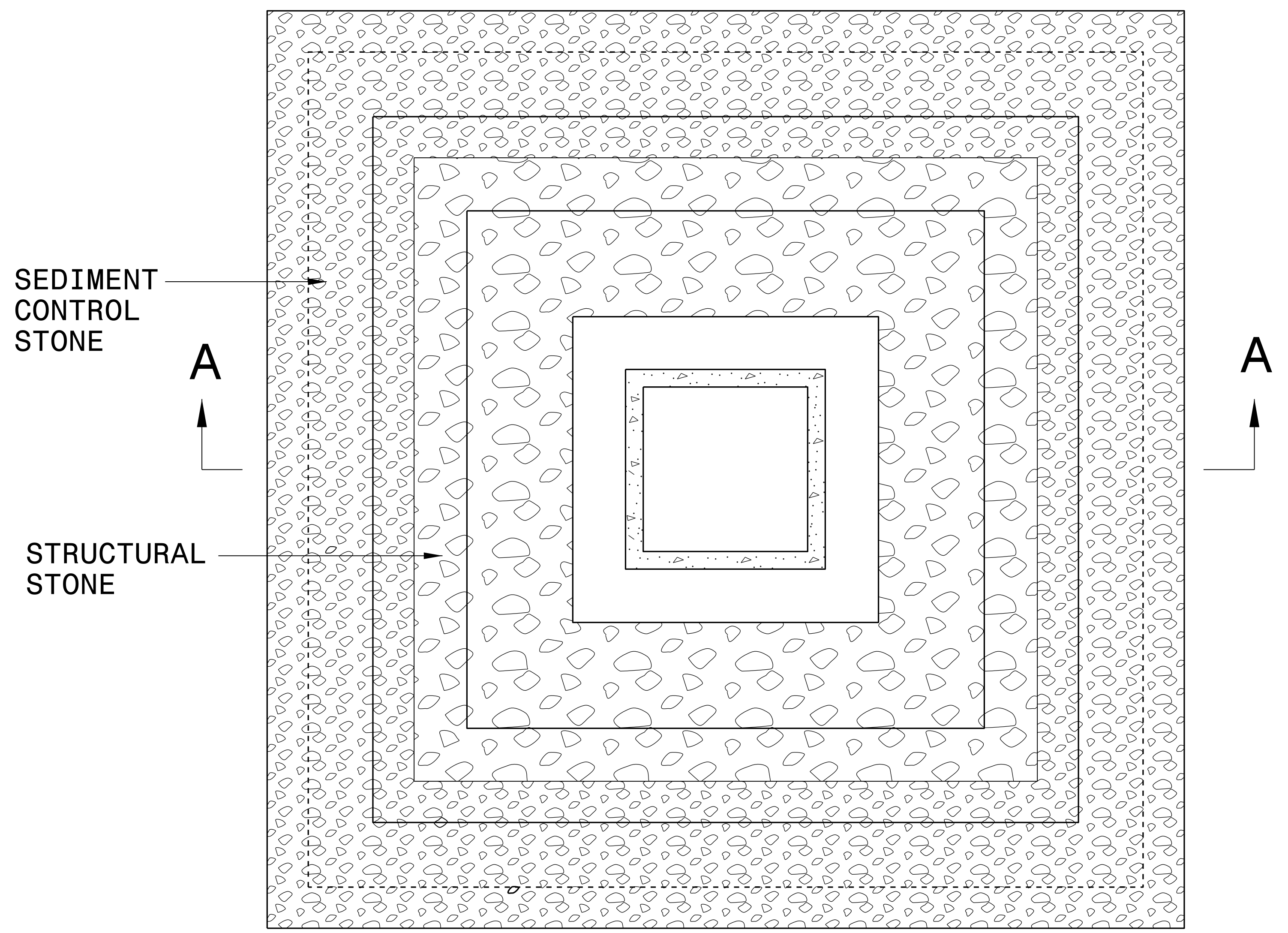
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 8/17/99
 REVISIONS

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

7-06
 ENGLISH STANDARD DRAWING FOR
ROCK INLET SEDIMENT TRAP TYPE 'B'

SHEET 1 OF 1
1632.02



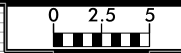
NOTE:
 USE CLASS 'A' STONE FOR
 STRUCTURAL STONE.
 USE NO. 5 OR NO. 57 STONE
 FOR SEDIMENT CONTROL.
 DIMENSIONS SHOWN ARE
 MINIMUM ACCEPTABLE UNLESS
 OTHERWISE SPECIFIED BY
 THE ENGINEER.
 CONSTRUCT TOP OF BERM A
 MINIMUM OF ONE FOOT BELOW
 THE SHOULDER OR ANY
 DIVERSION POINT.

7-06
 STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
ROCK INLET SEDIMENT TRAP TYPE 'B'

SHEET 1 OF 1
1632.02

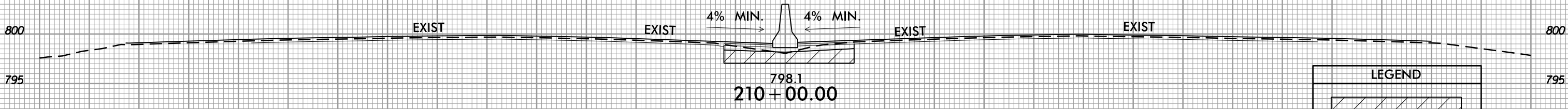
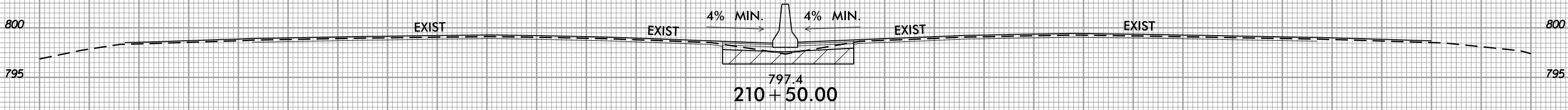
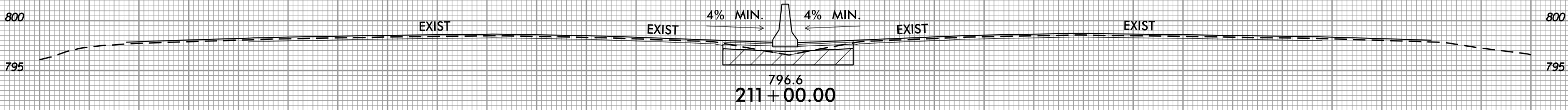
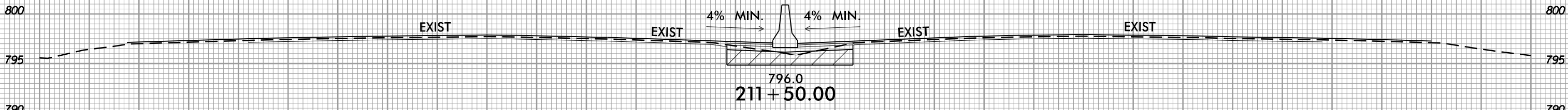
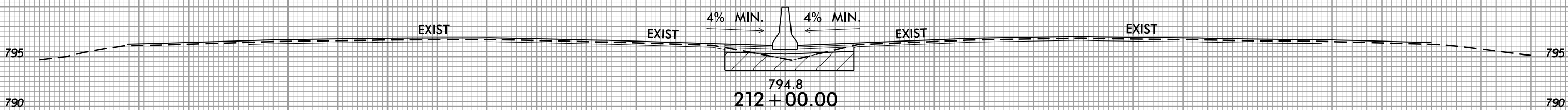
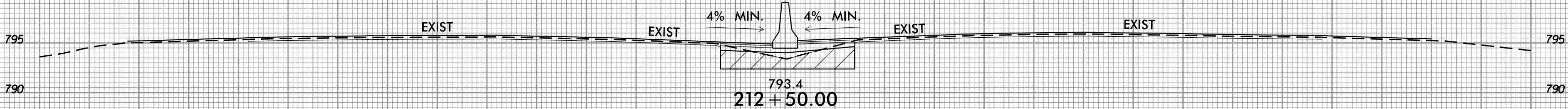
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PROJ. REFERENCE NO. -5952

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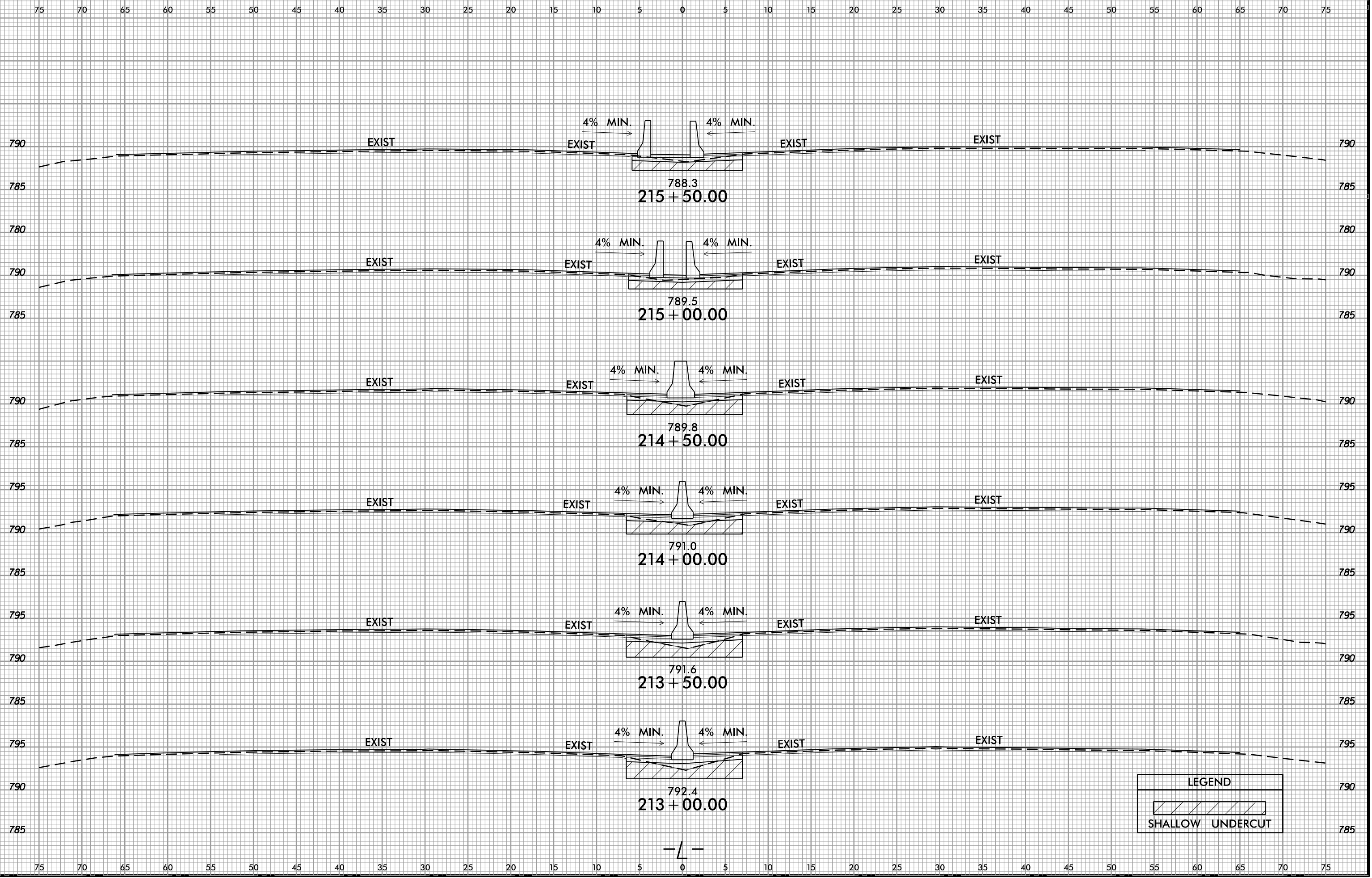
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6/23/16

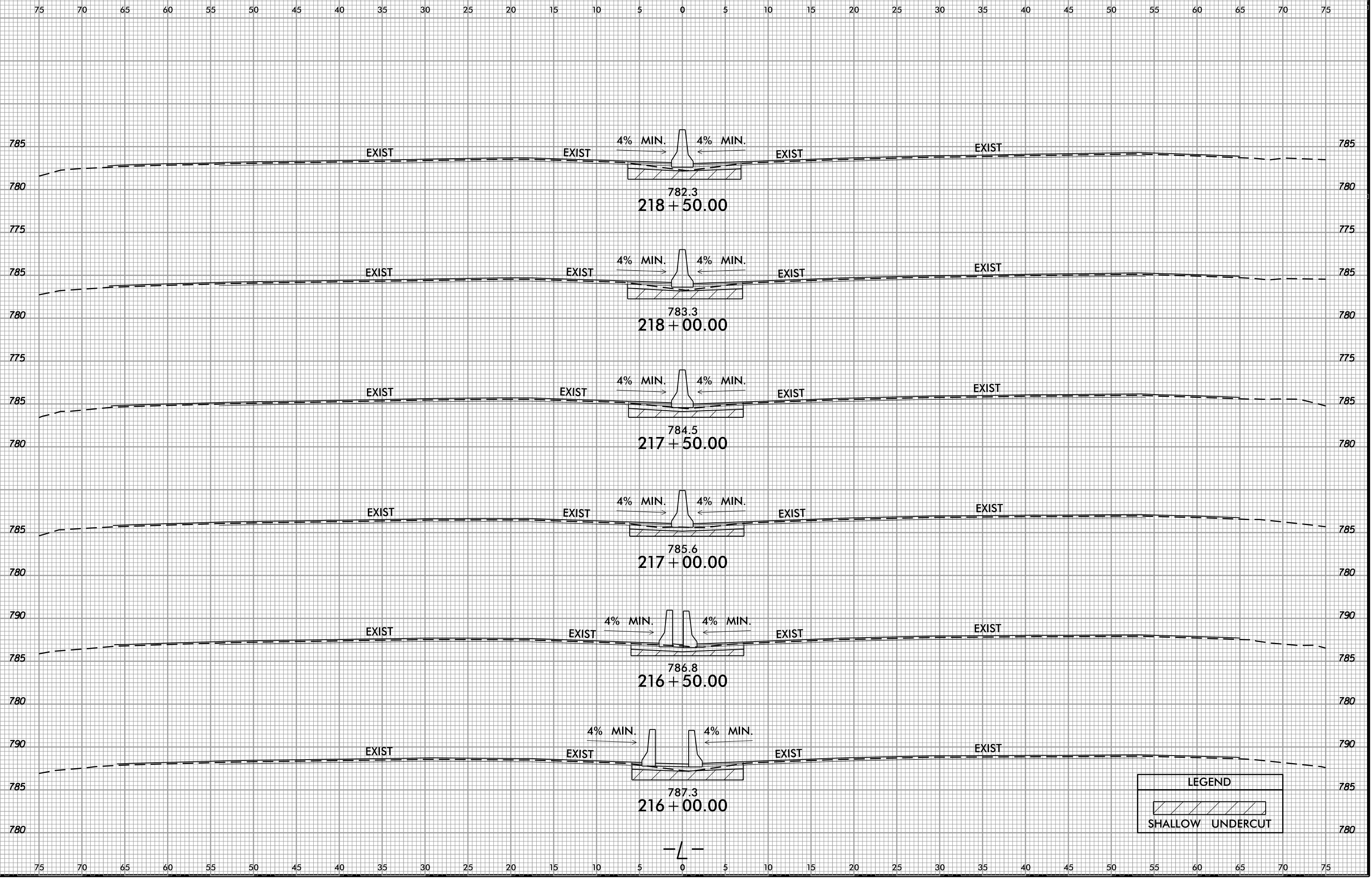


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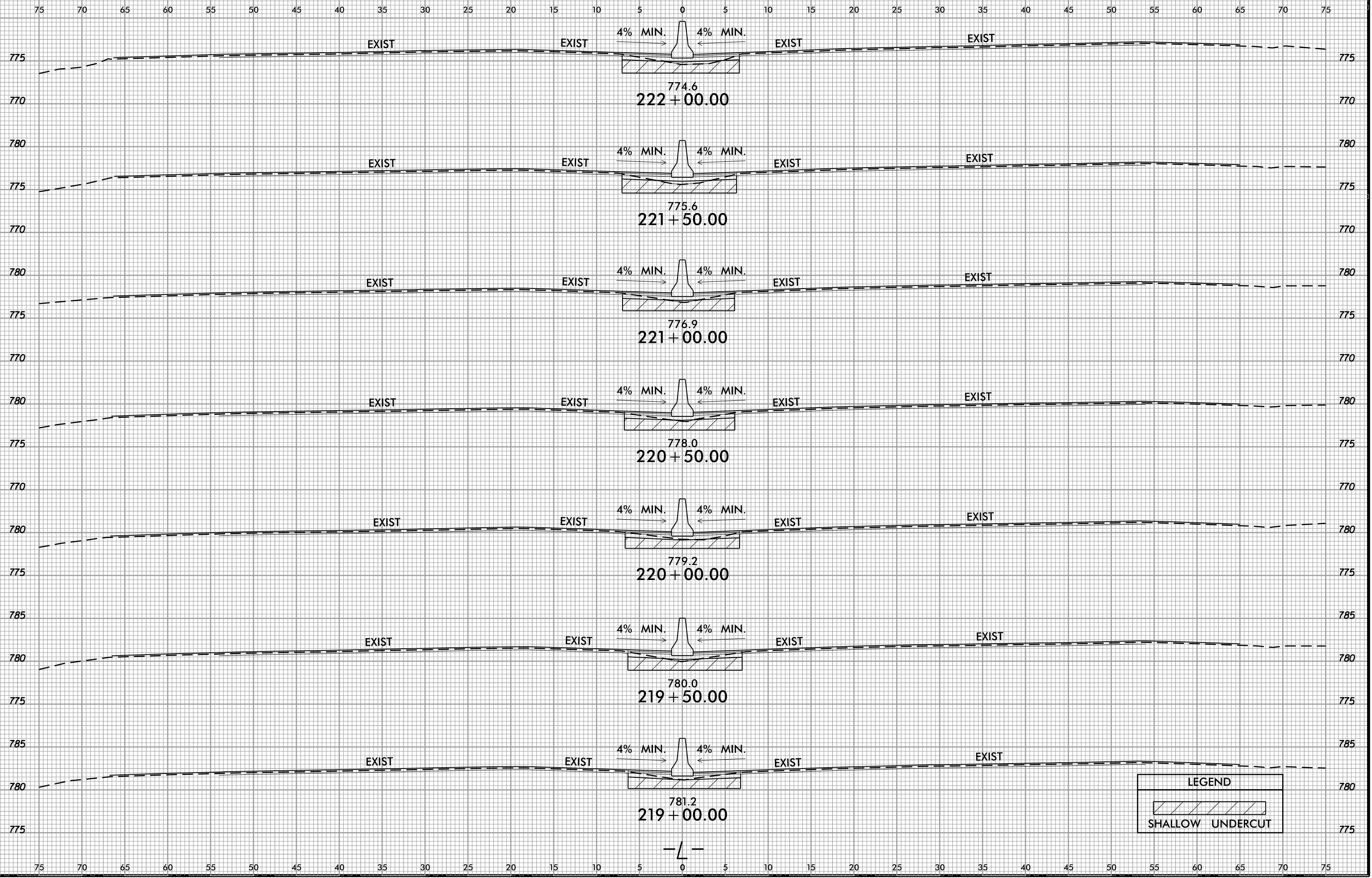
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AT DIV 2450



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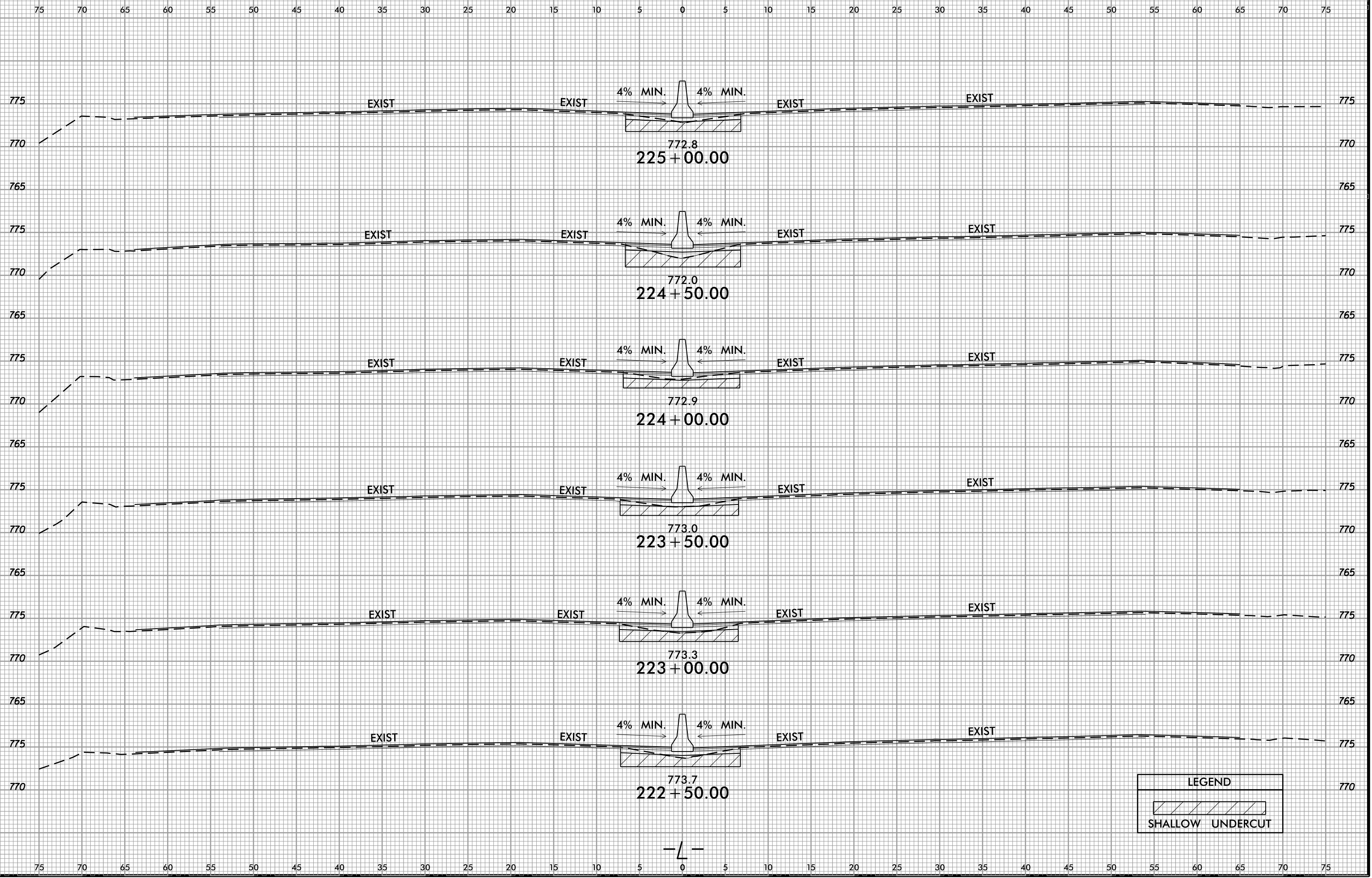
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At Division 2450



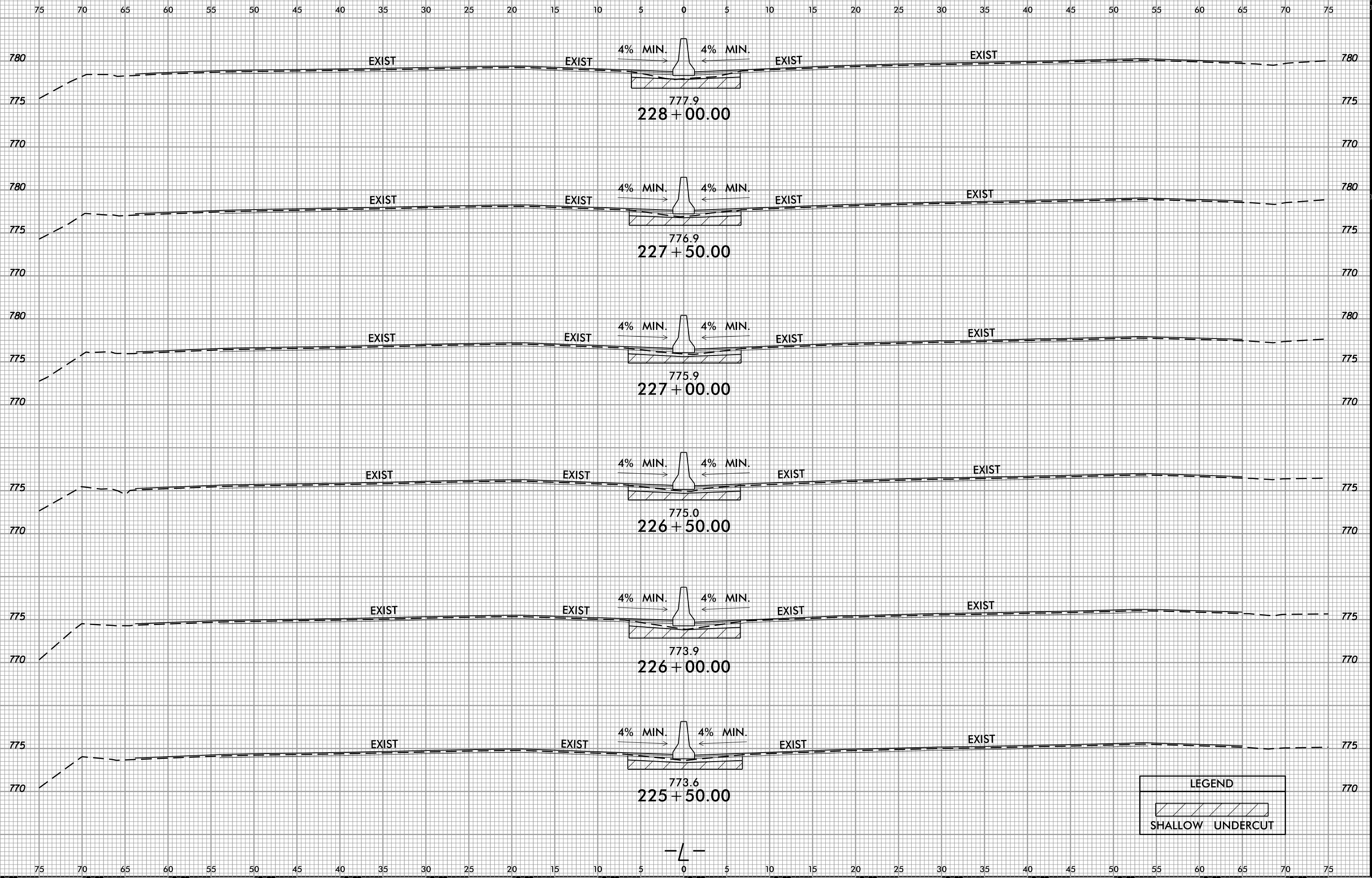
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Mike
AT DIV 2450



LEGEND
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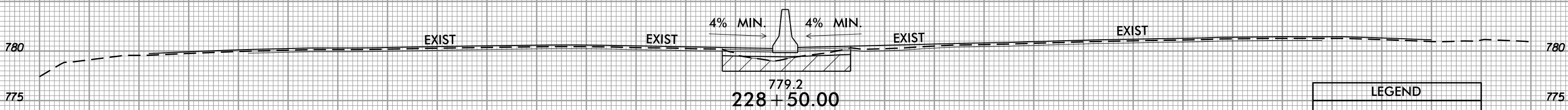
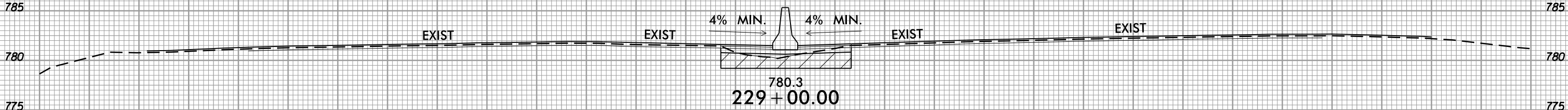
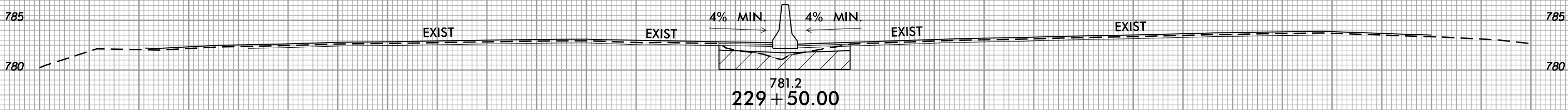
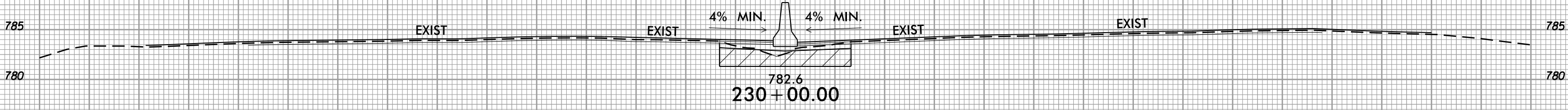
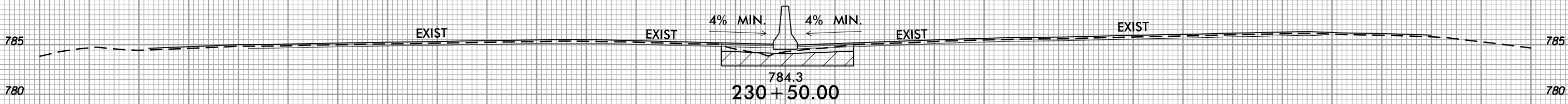
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At Division 204550



PROJ. REFERENCE NO.
I-5952

SHEET NO.
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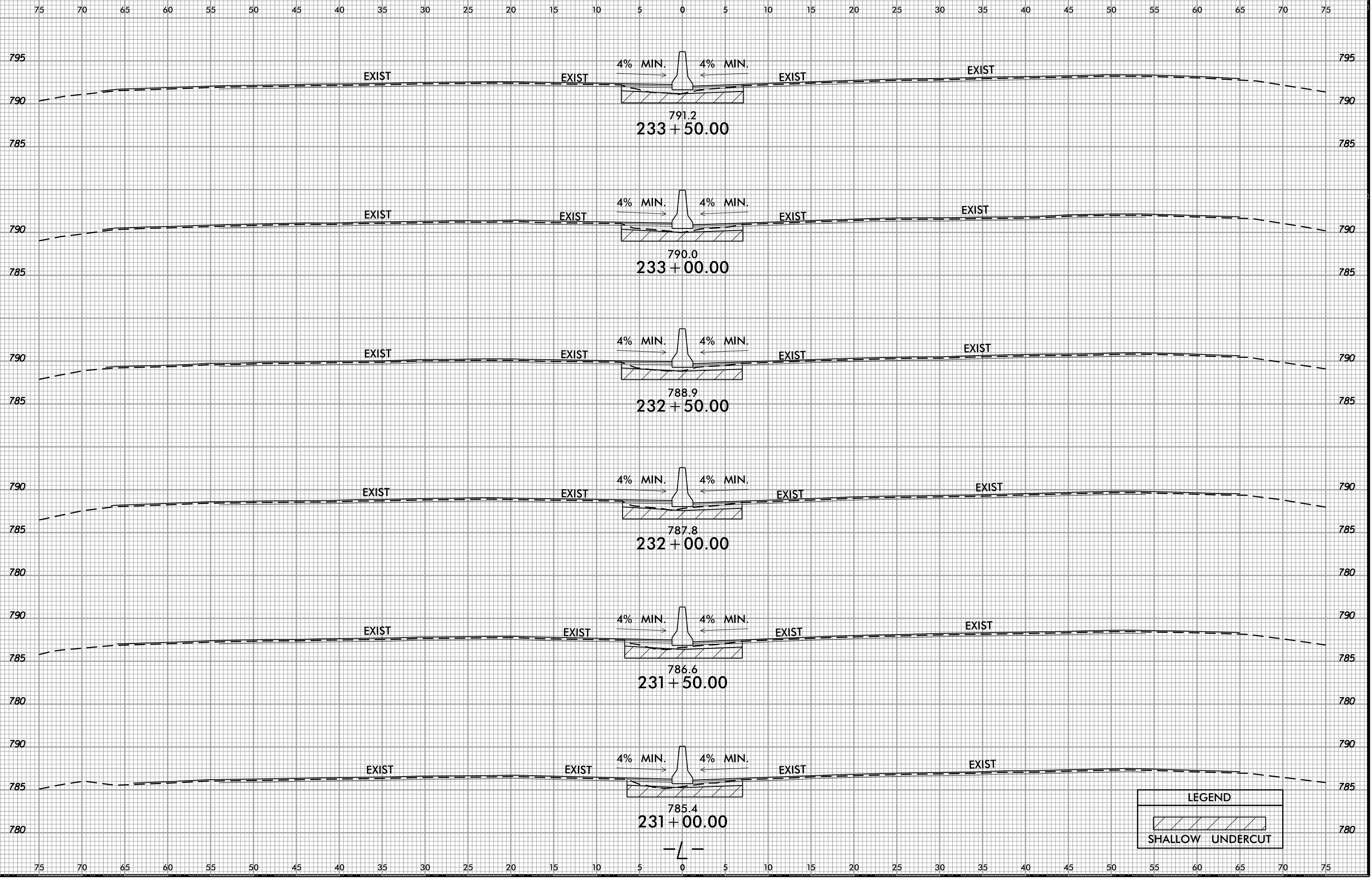
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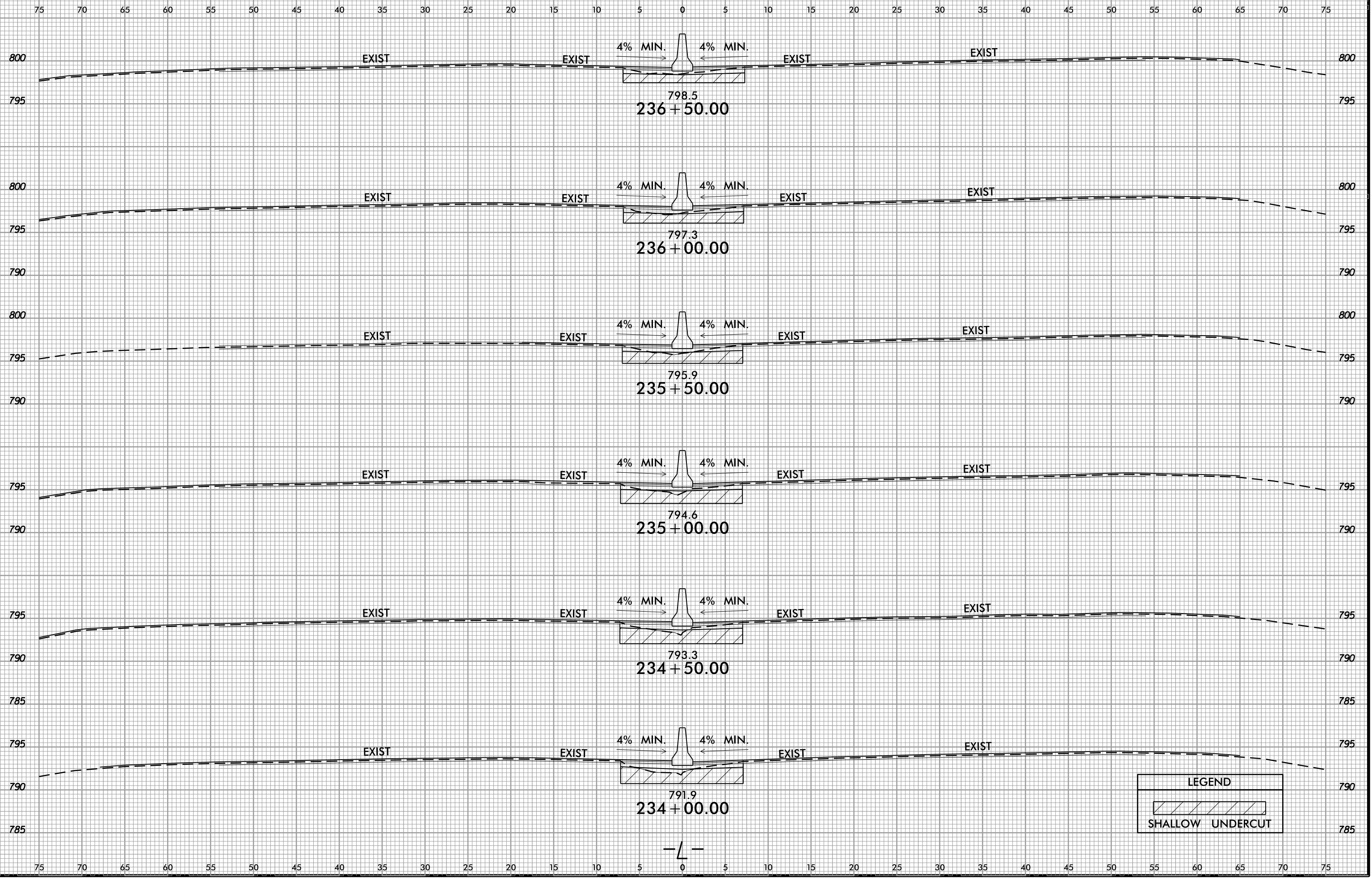
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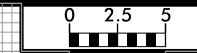
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6/23/16
9 SEP 2018 11:29
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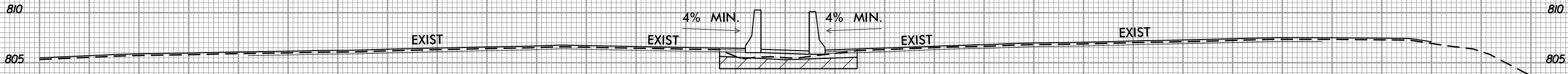
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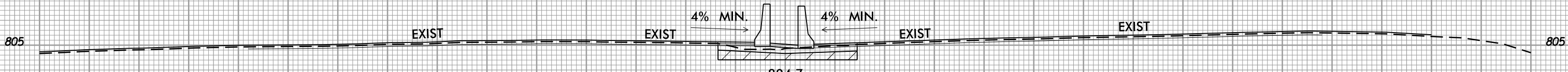
PROJ. REFERENCE NO. I-5952

SHEET NO. X-10

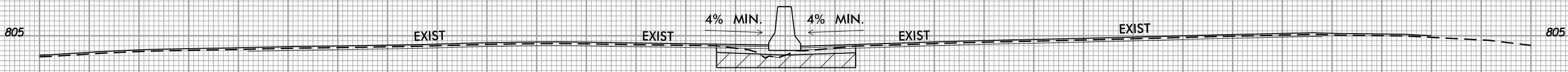
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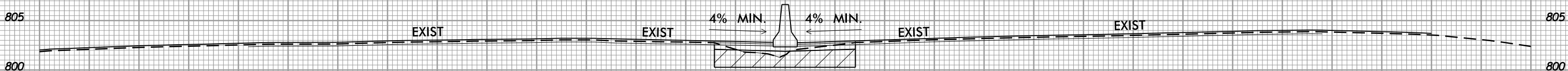
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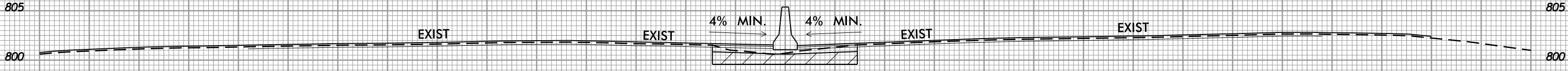
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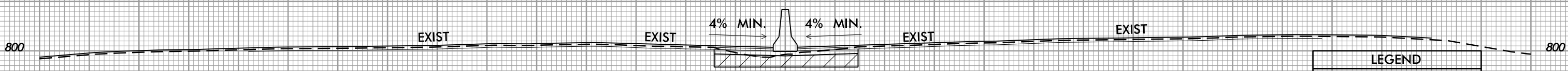
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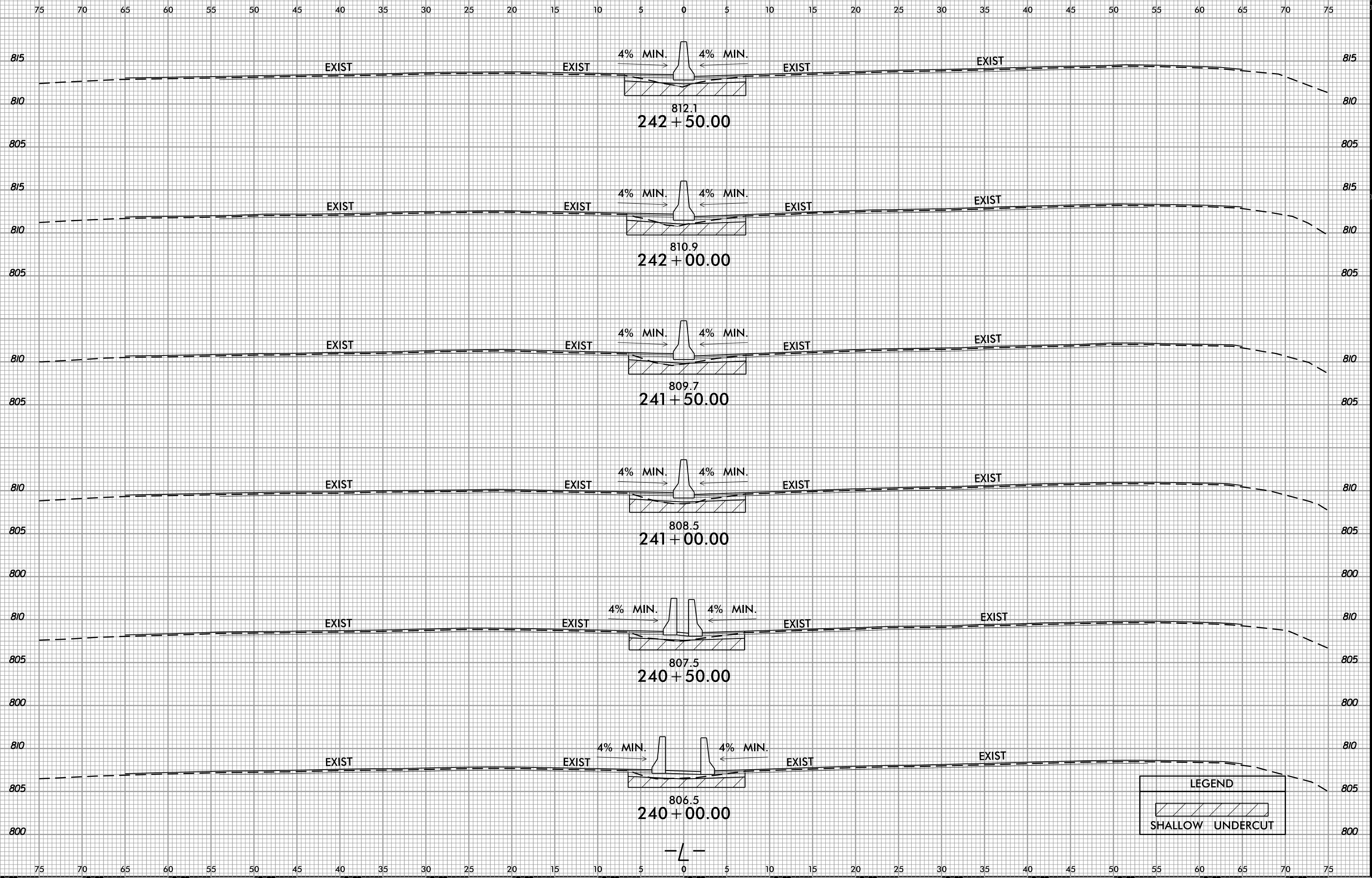
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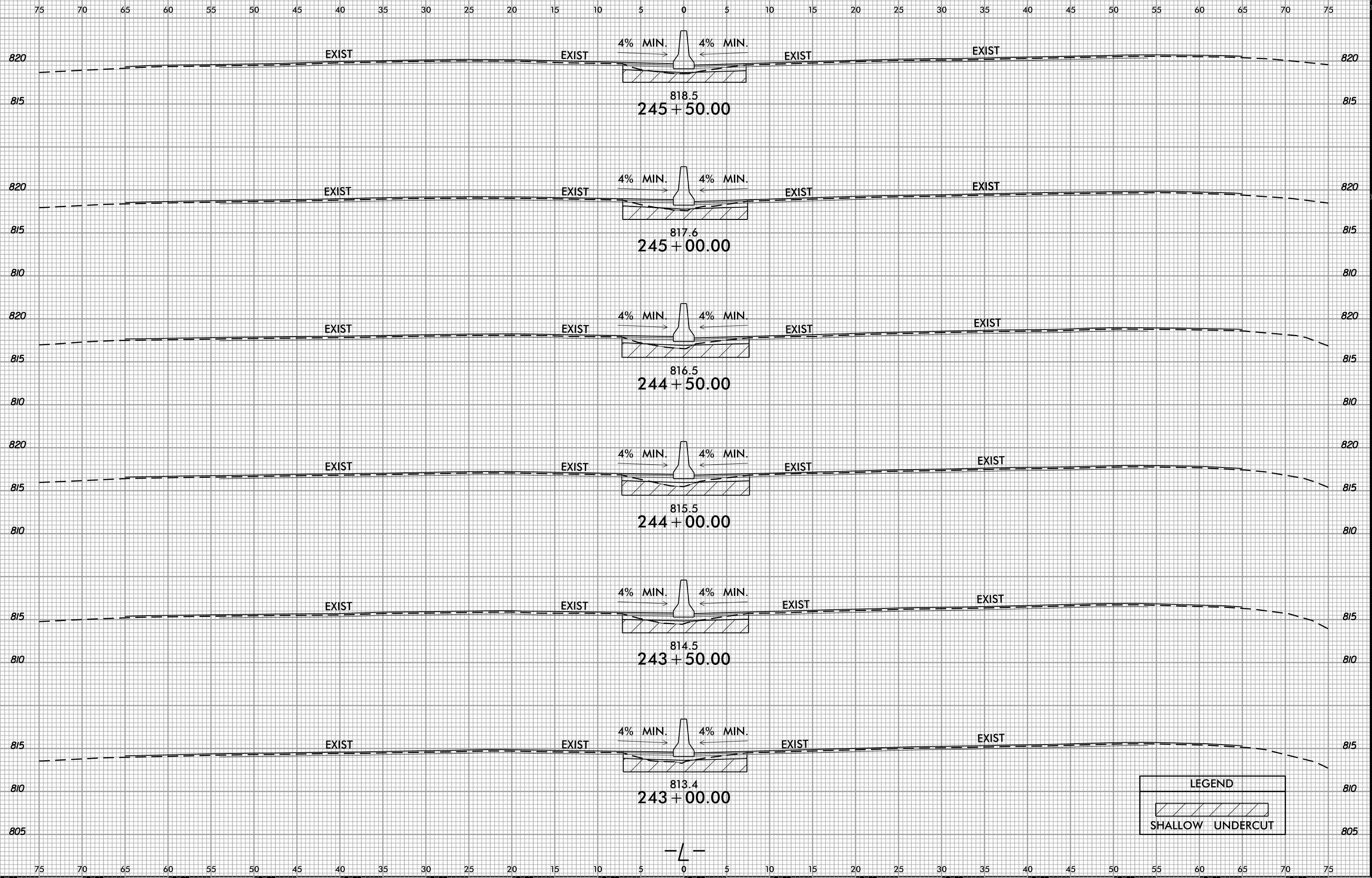
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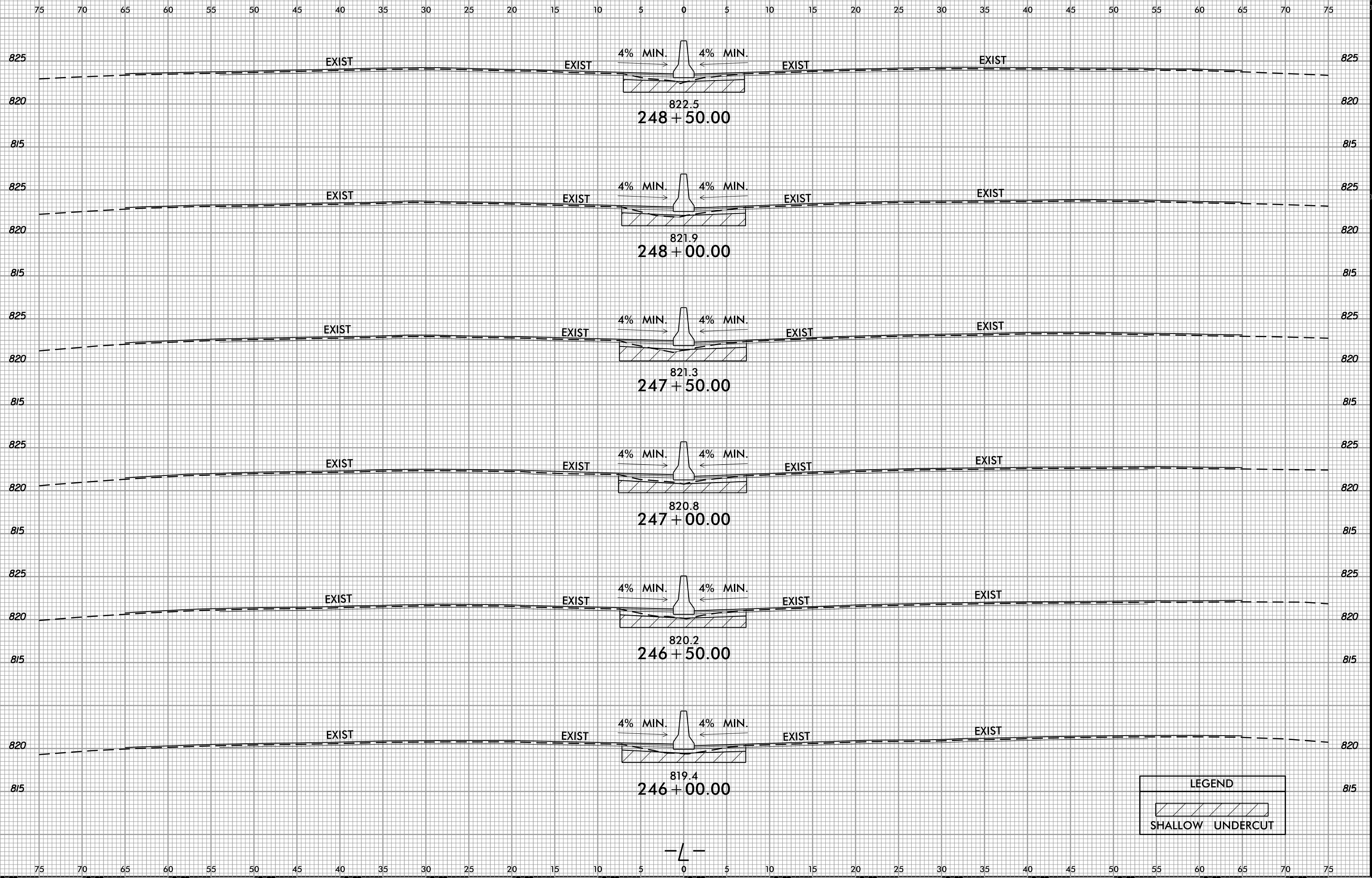
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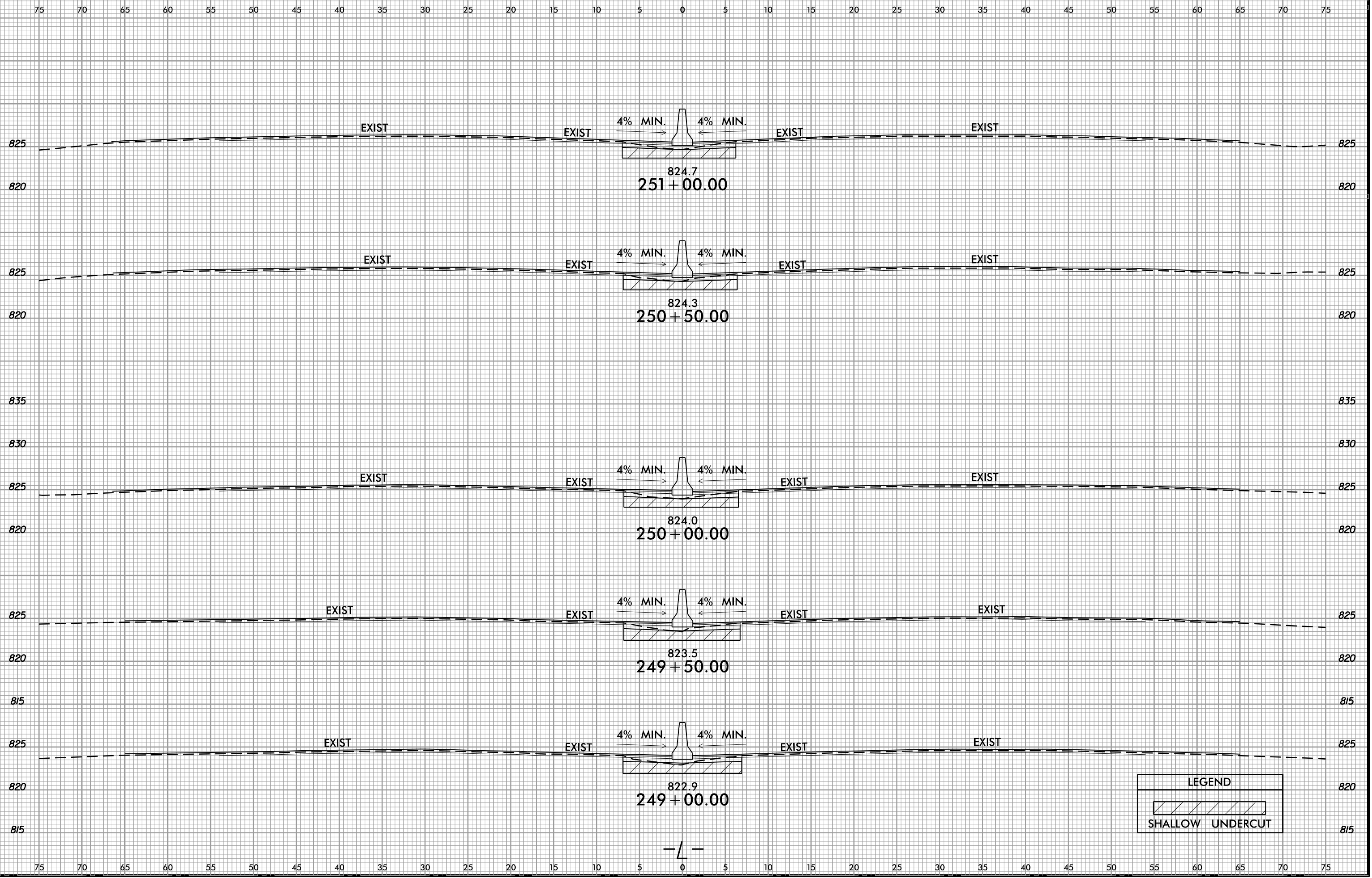


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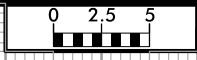
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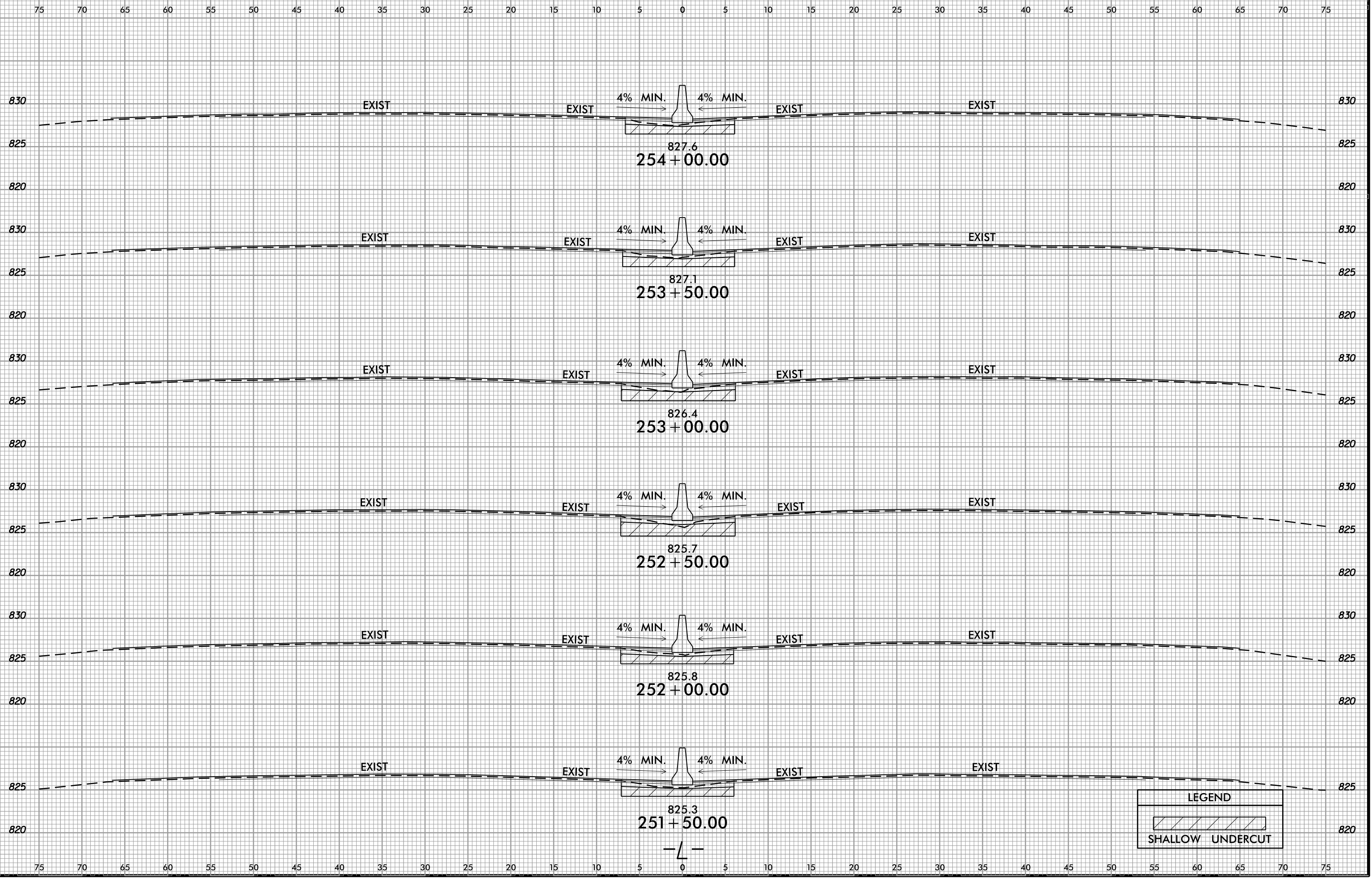
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PROJ. REFERENCE NO.
I-5952

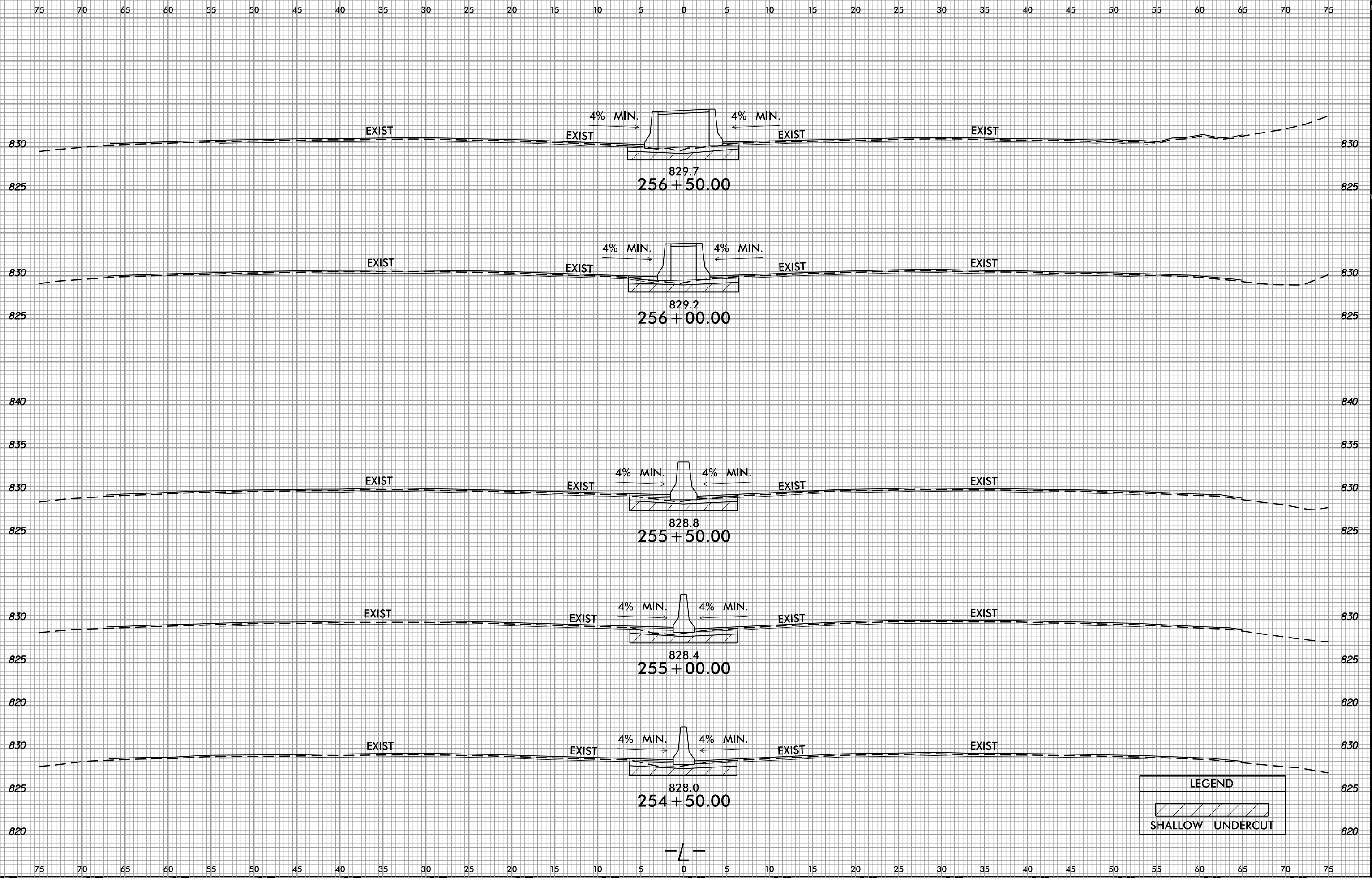
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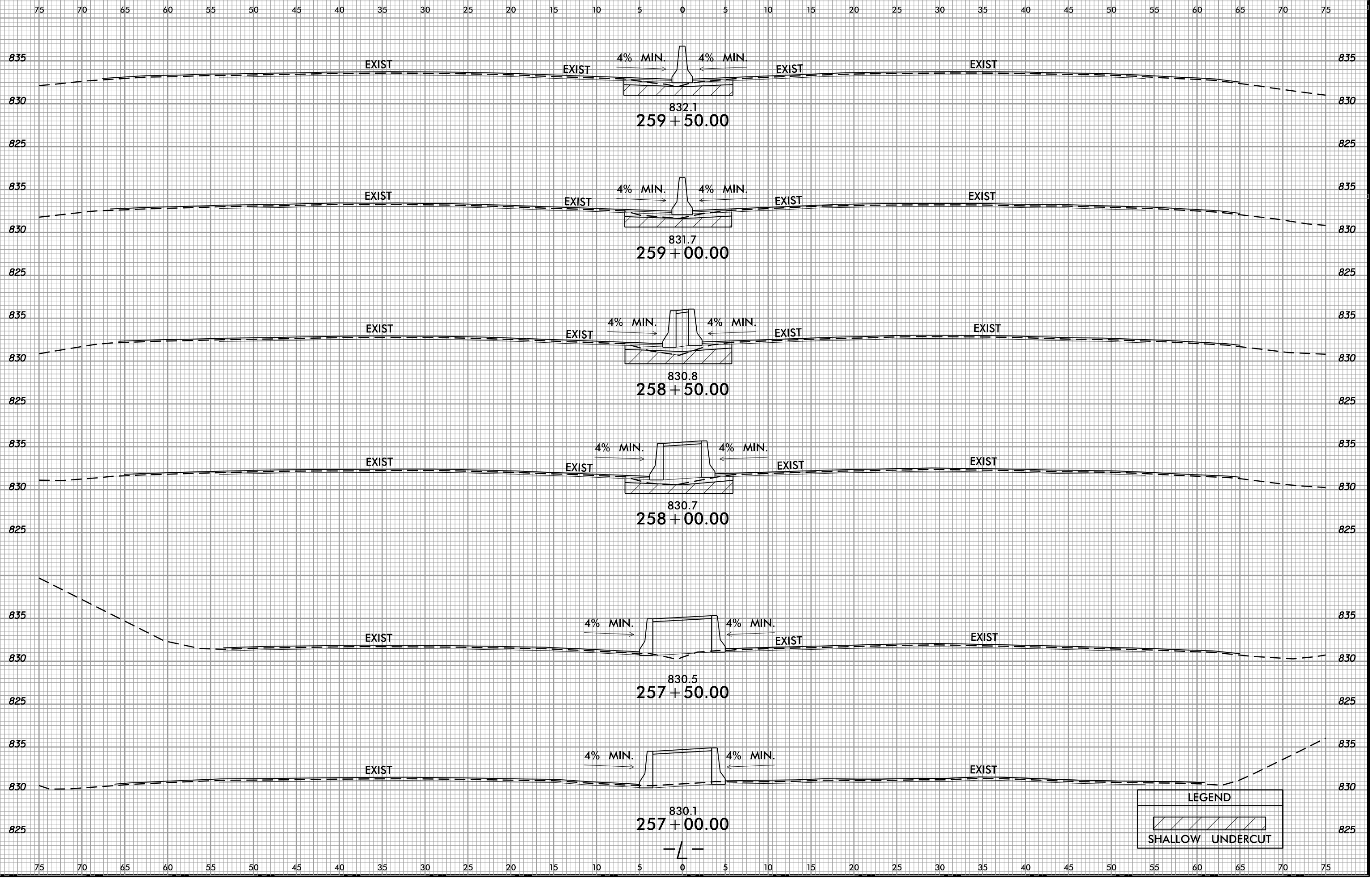


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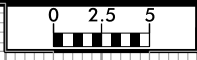
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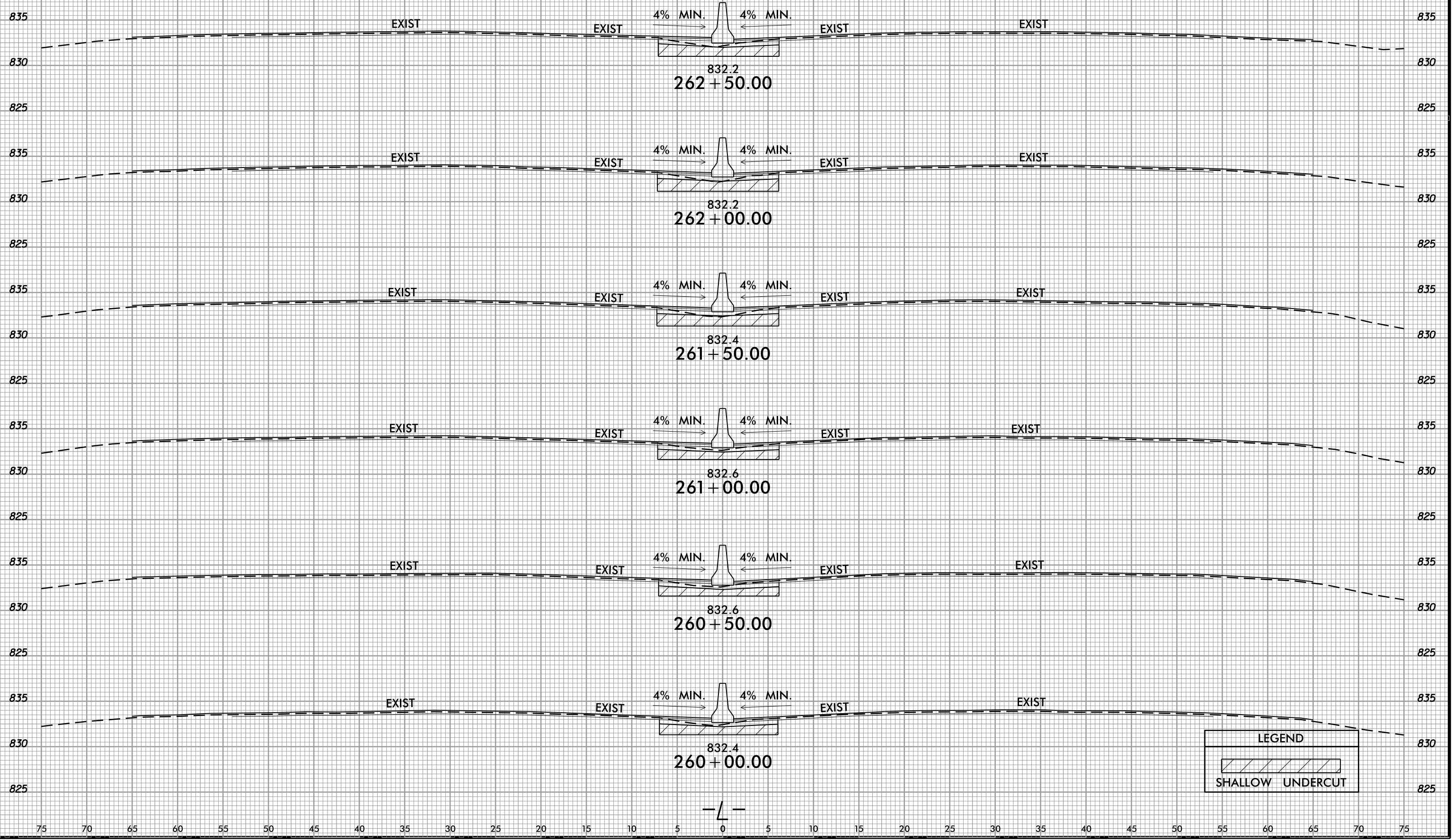
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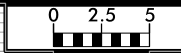


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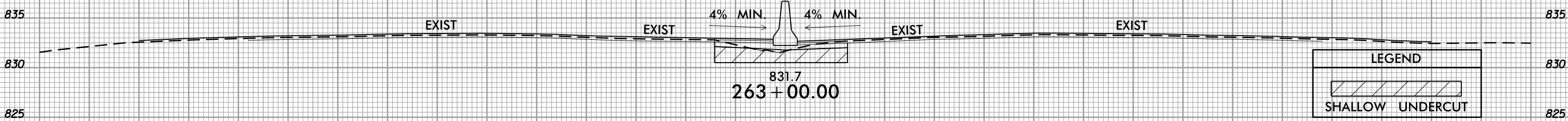
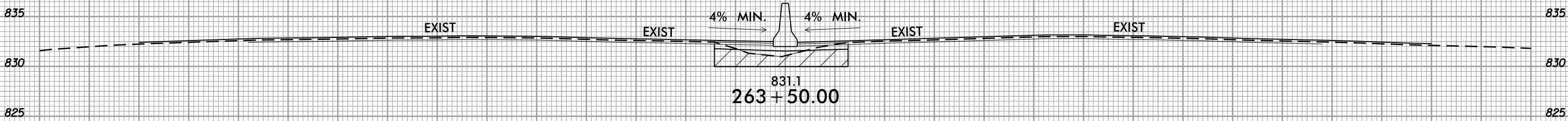
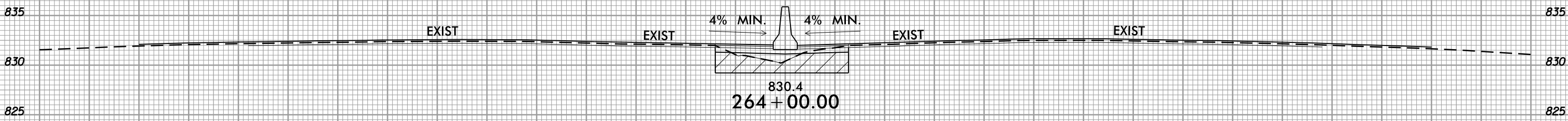
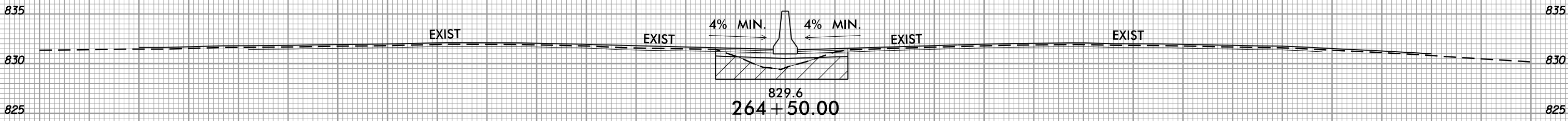
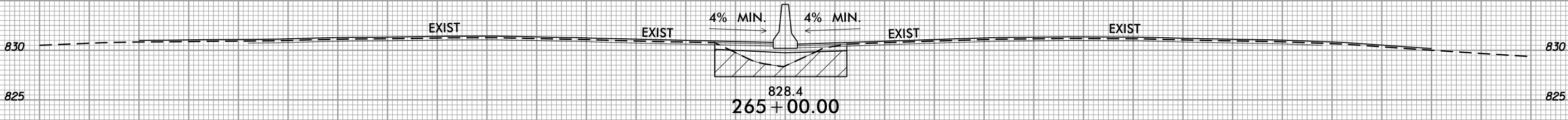
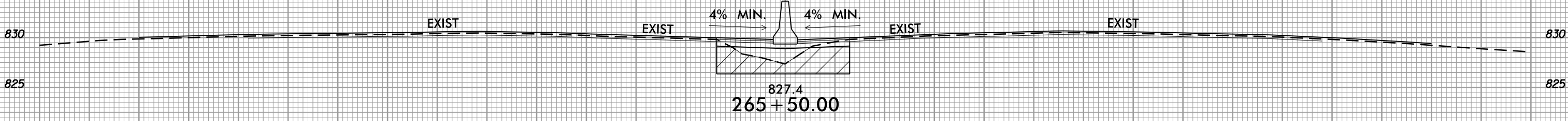
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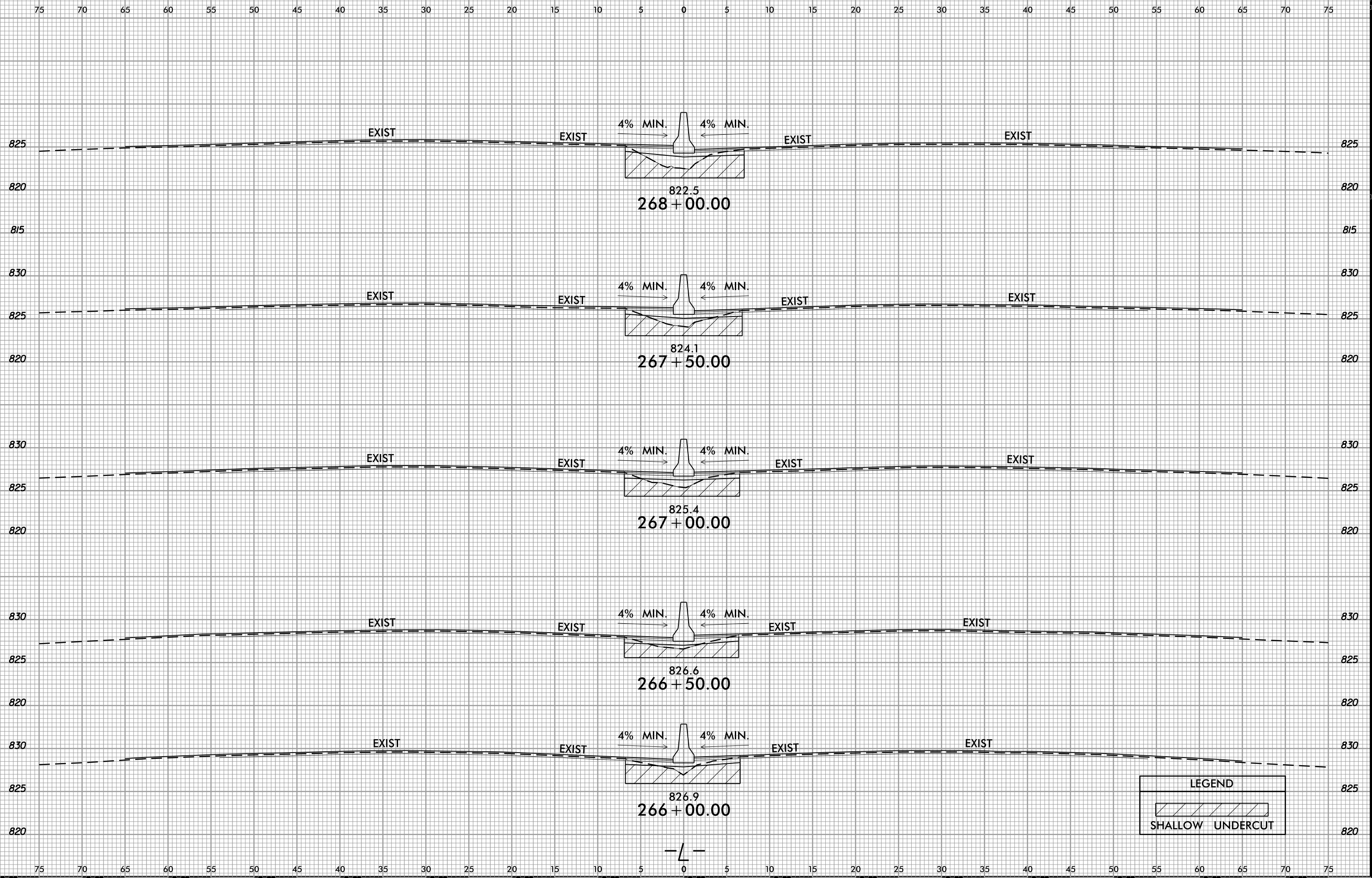
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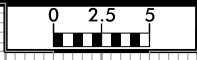
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AT DIV 204550



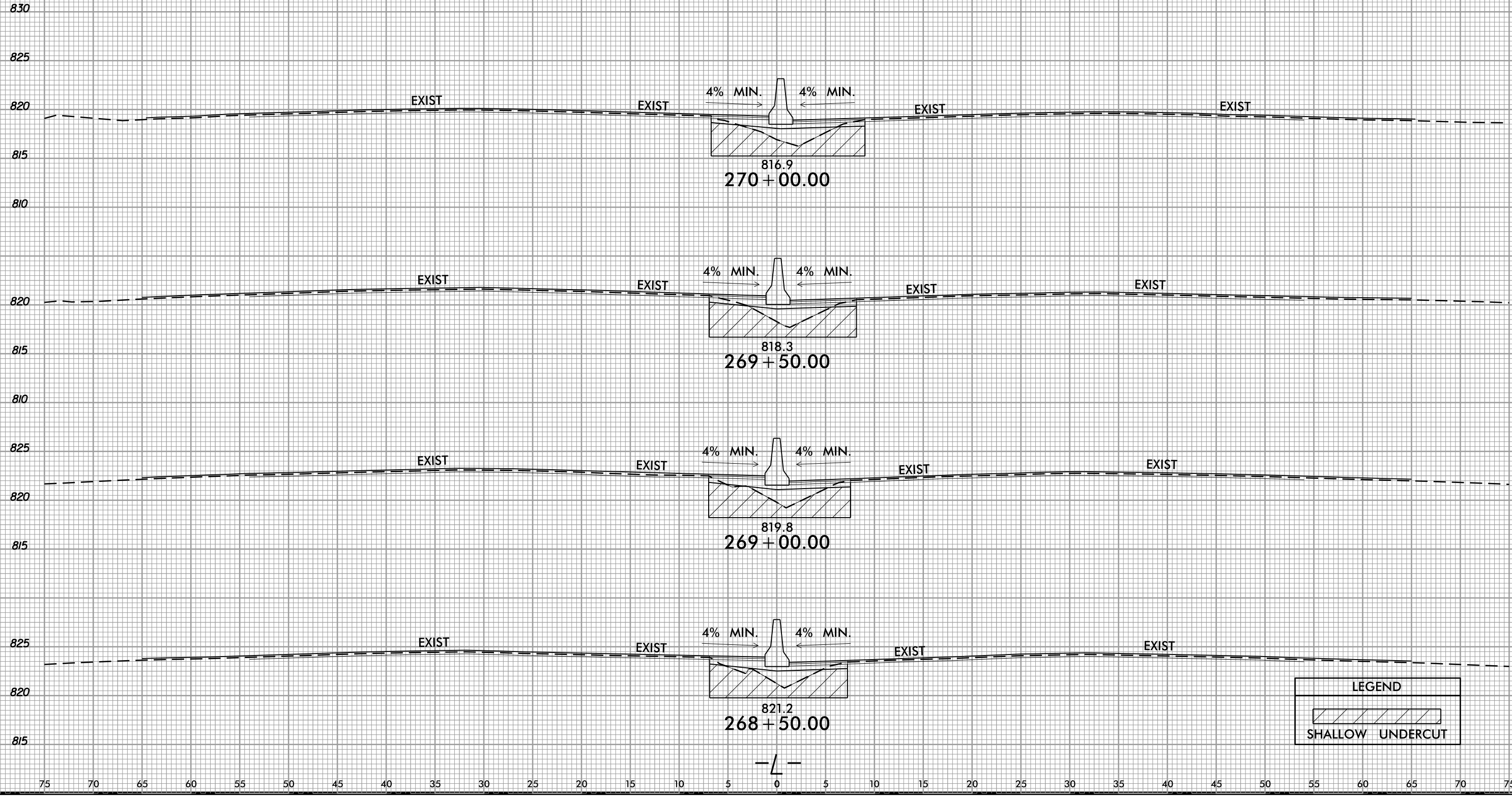
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SHEET NO.
X-21

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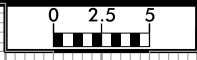


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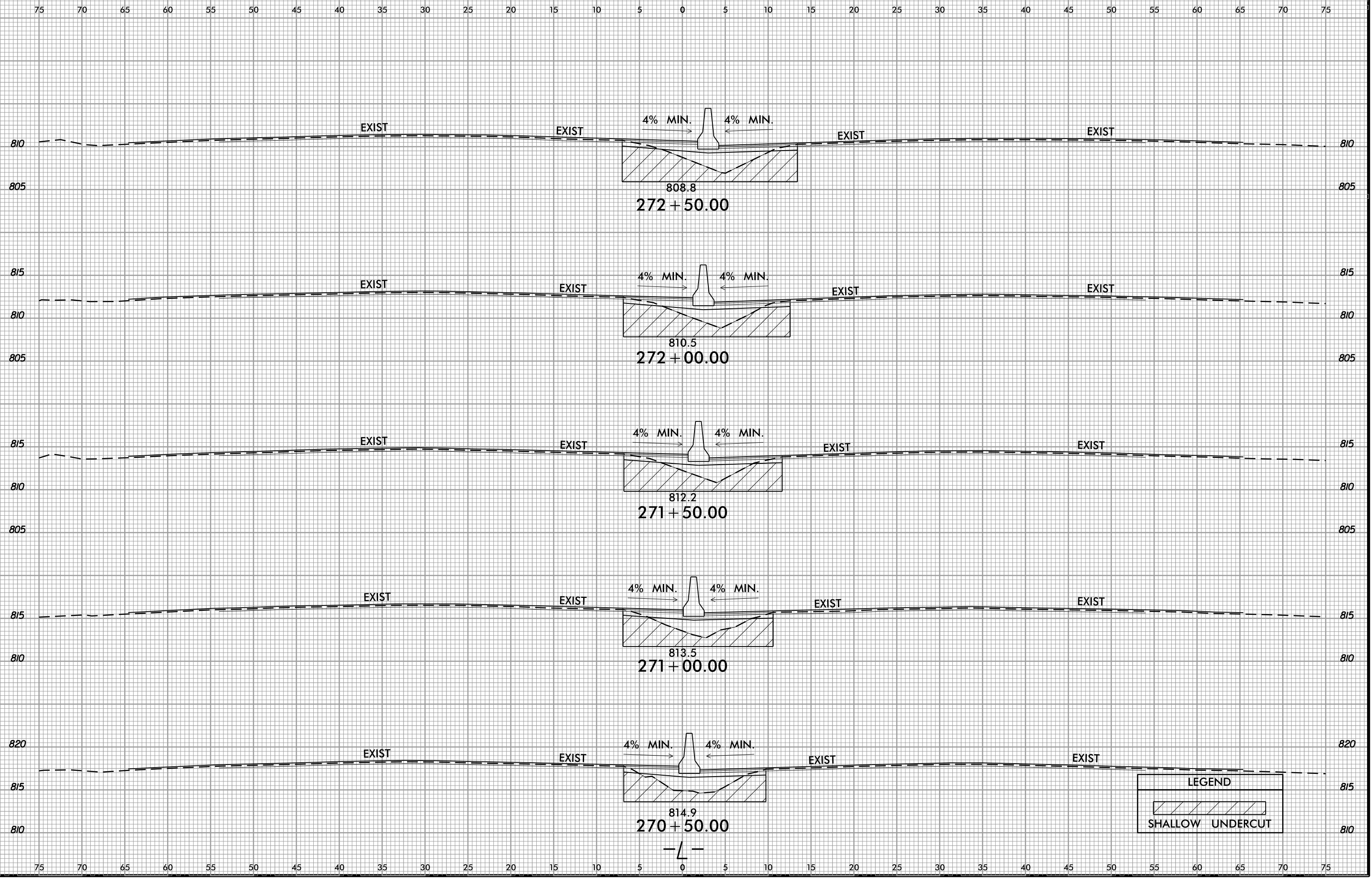
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AT DIV 24550



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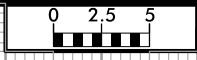
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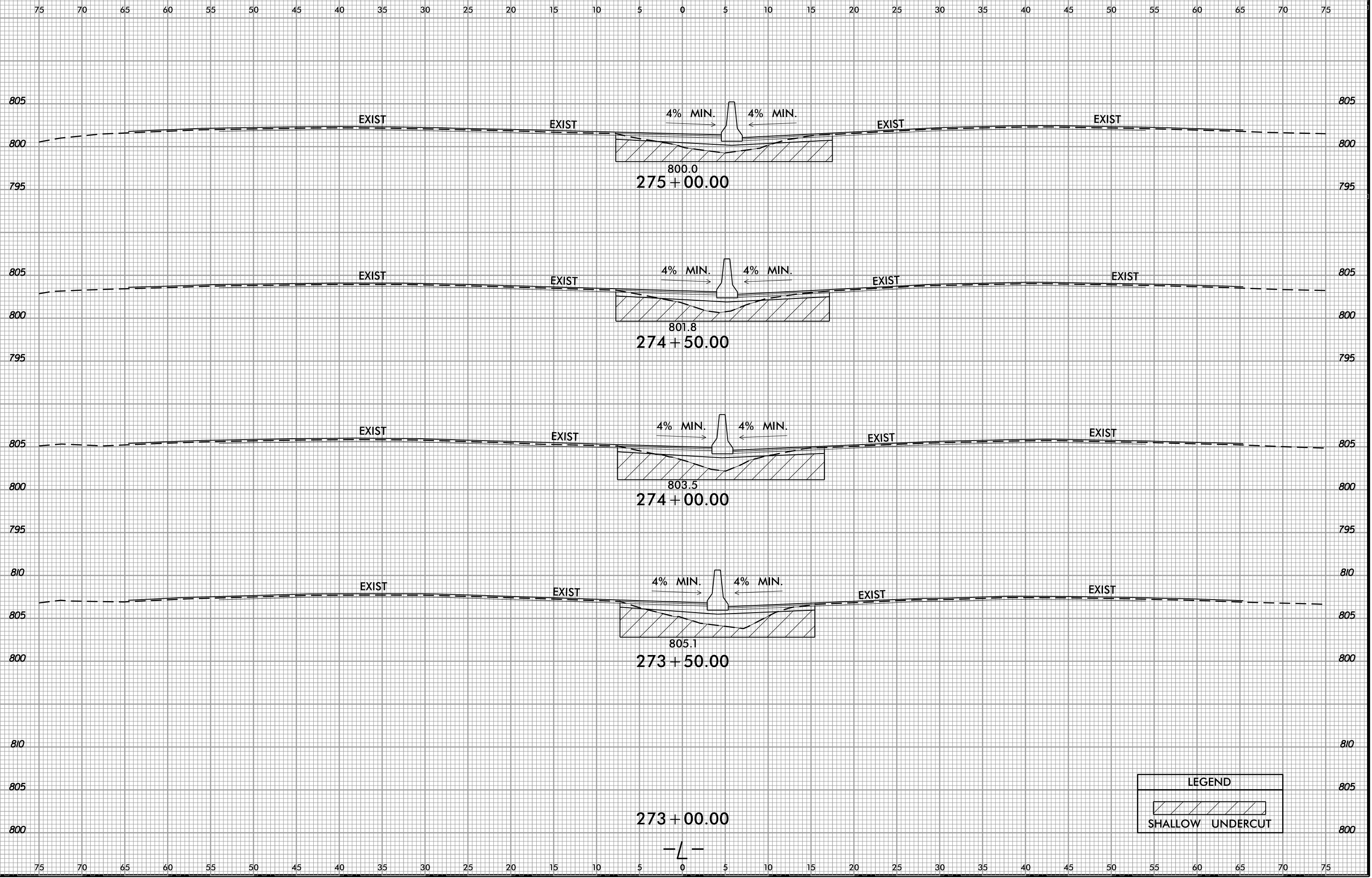
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At Division 204550



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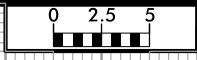
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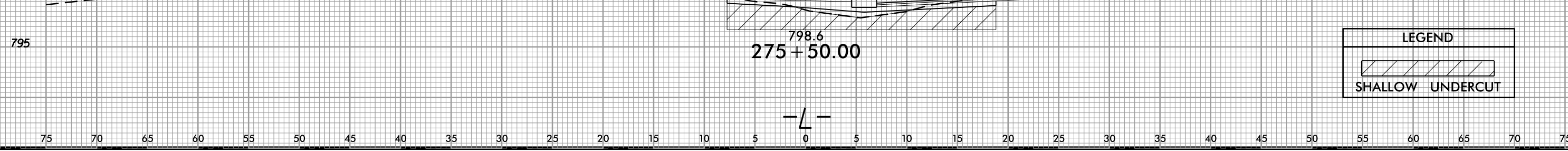
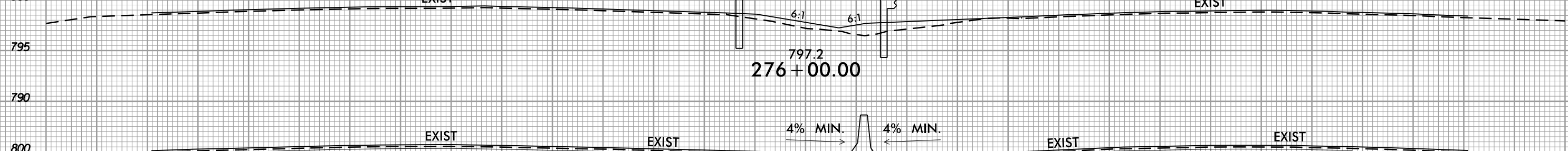
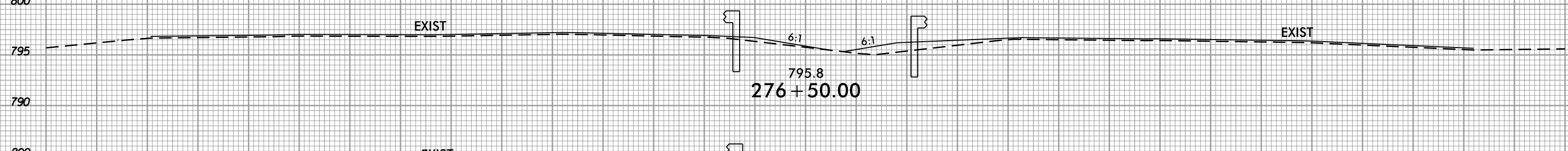
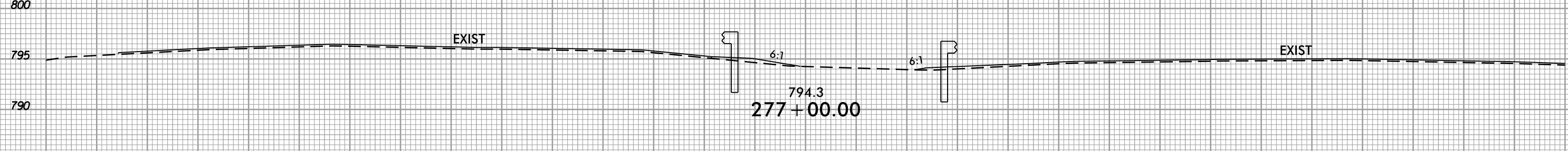
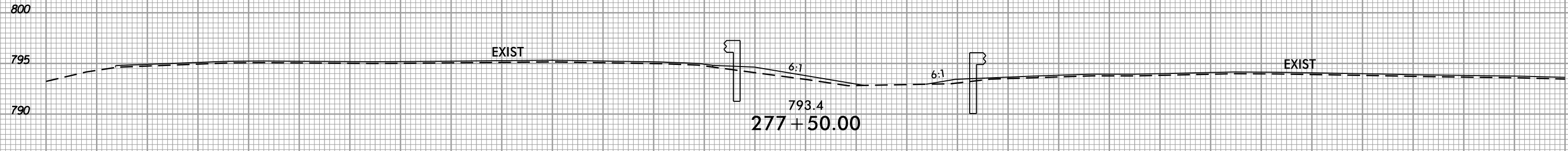
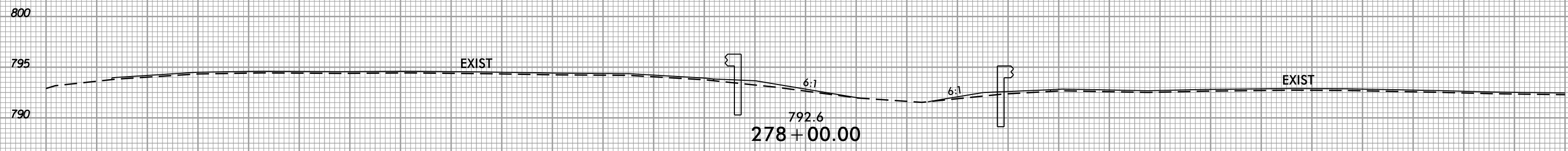
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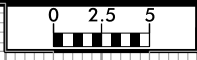
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At Division 294550



PROJ. REFERENCE NO.
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SHEET NO.
X-25

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