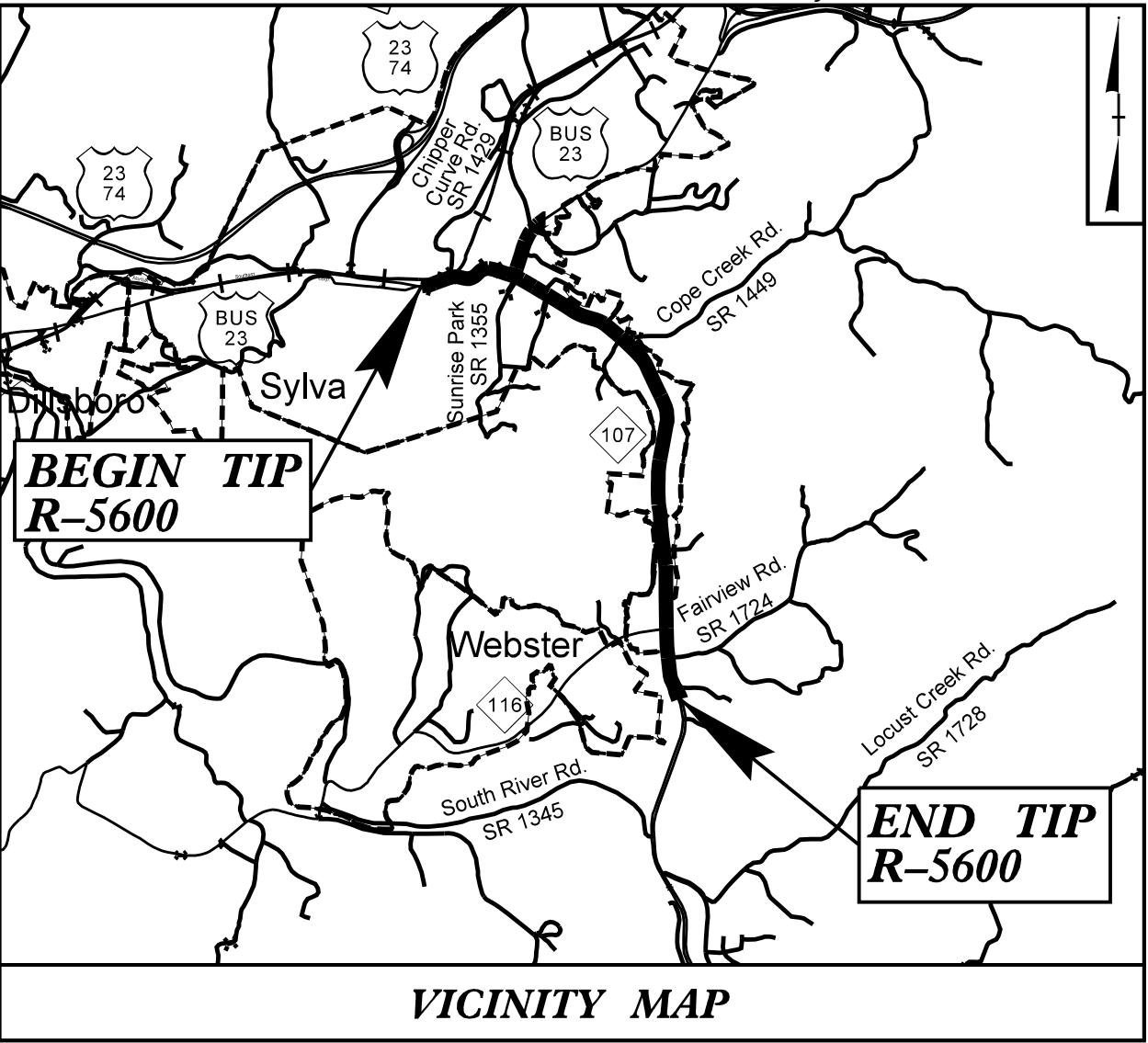


TIP PROJECT: R-5600
CONTRACT: C205086

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



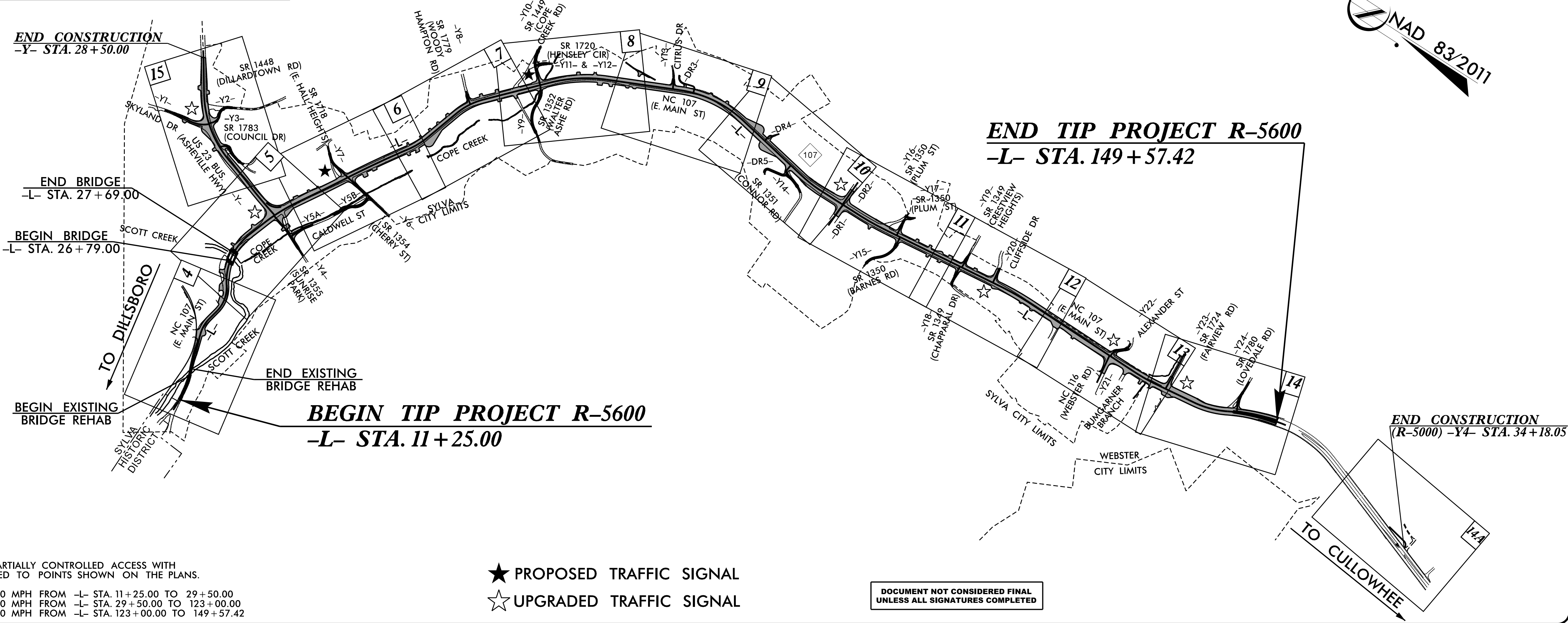
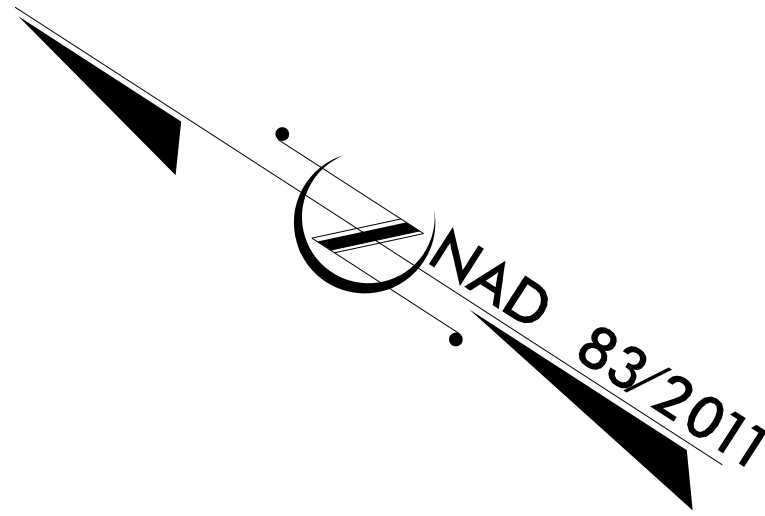
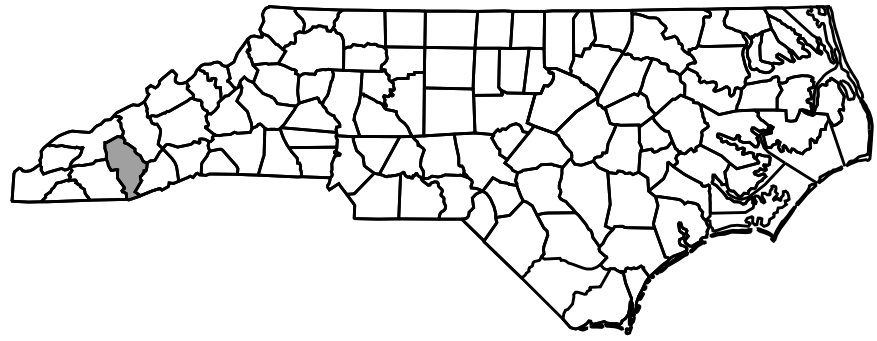
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JACKSON COUNTY

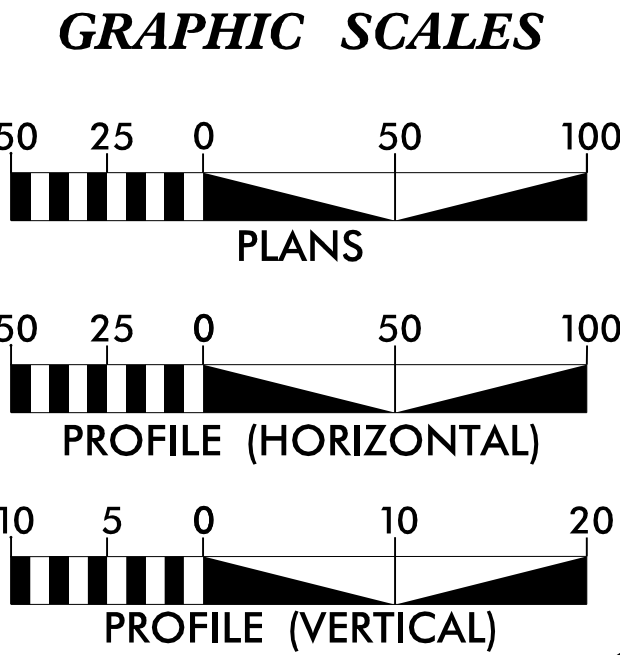
LOCATION: NC 107, US 23 BUSINESS TO NC 116 (WEBSTER ROAD). US 23 BUSINESS, SR 1432 (SKYLAND DRIVE) TO WEST OF MUNICIPAL DRIVE IN SYLVA. CONSTRUCT ACCESS MANAGEMENT IMPROVEMENTS

TYPE OF WORK: GRADING, PAVING, DRAINAGE, RETAINING WALLS, STRUCTURES AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5600	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45818.1.FR1	STP-0107(13)	PE	
45818.2.2	STP-0107(13)	ROW	
45818.2.3	STP-0107(13)	UTILITIES	
45818.3.1	STP-0107(13)	CONSTRUCTION	



NOTES:
THIS PROJECT HAS PARTIALLY CONTROLLED ACCESS WITH ACCESS BEING LIMITED TO POINTS SHOWN ON THE PLANS.
DESIGN SPEED = 30 MPH FROM -L- STA. 11+25.00 TO 29+50.00
DESIGN SPEED = 40 MPH FROM -L- STA. 29+50.00 TO 123+00.00
DESIGN SPEED = 50 MPH FROM -L- STA. 123+00.00 TO 149+57.42



DESIGN DATA	
ADT 2025 =	37,340
ADT 2045 =	42,420
K =	9 %
D =	55 %
T =	5 % *
V =	30 MPH TO 50 MPH
* TTST =	4% DUAL = 3%
FUNC CLASS =	ARTERIAL
REGIONAL TIER	

PROJECT LENGTH	
LENGTH ROADWAY TIP PROJECT R-5600 =	2.603 MILES
LENGTH STRUCTURES TIP PROJECT R-5600 =	0.017 MILES
TOTAL LENGTH TIP PROJECT R-5600 =	2.620 MILES

Prepared in the Office of:
HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

2024 STANDARD SPECIFICATIONS	PHILLIP E. ROGERS, PE PROJECT ENGINEER
RIGHT OF WAY DATE: AUGUST 2, 2021	ALEXANDER D. SNIDER, PE PROJECT DESIGN ENGINEER
LETTING DATE: NOVEMBER 18, 2025	JEANETTE L. WHITE, PE NCDOT CONTACT

HYDRAULICS ENGINEER

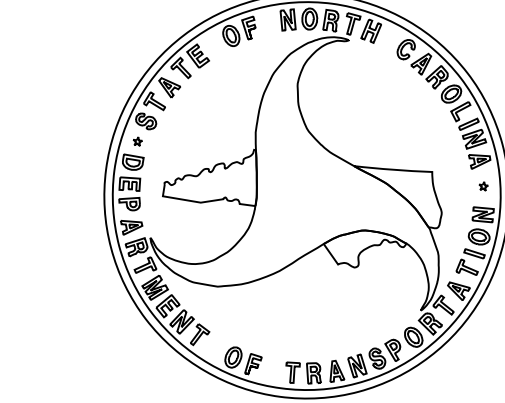
10/13/2025

Dr. W. Lewis
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

10/13/2025

Alexander D. Snider
SIGNATURE: P.E.



INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-11	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1 THRU 2B-20	ROADWAY DETAILS
2C-1 THRU 2C-26	ROADWAY SPECIAL DETAILS
2D-1	HYDRAULIC DETAILS
2G-1 THRU 2G-2	GEOTECHNICAL DETAILS
3B-1 THRU 3B-3	ROADWAY SUMMARIES
3D-1 THRU 3D-18	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARIES
3P-1 THRU 3P-2	PARCEL INDEX SHEETS
4 THRU 15	PLAN SHEETS
16 THRU 31	PROFILE SHEETS
RW01 THRU RW15	ROW PLAN SHEETS
TMP-1 THRU TMP-59	TRANSPORTATION MANAGEMENT PLAN SHEETS
PMP-1 THRU PMP-13	PAVEMENT MARKING PLAN SHEETS
EC-1 THRU EC-27	EROSION CONTROL PLAN SHEETS
RF-1	REFORESTATION PLAN SHEETS
SIGN-1 THRU SIGN-17	SIGNING PLAN SHEETS
SIG-1.0 THRU SIG-47.4	SIGNAL PLAN SHEETS
SIG.M1A THRU SIG.M8	SIGNAL DETAILS
SCP-1 THRU SCP-23	SIGNAL COMMUNICATION PLAN SHEETS
UC-1 THRU UC-16	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-15	UTILITIES BY OTHERS PLAN SHEETS
X-1 THRU X-207	CROSS-SECTIONS
S01-1 THRU S01-18	BRIDGE 490050 PRESERVATION
S02-1 THRU S02-41	BRIDGE 27+24.00 -L-
S03-1 THRU S03-8	CULVERT 12+33.00 -Y4-
S04-1 THRU S04-8	CULVERT 12+94.00 -Y6-
S05-1 THRU S05-14	CULVERT 64+35.31 -L-
S06-1 THRU S06-12	CULVERT 135+82.00 -L-
S07-1 THRU S07-10	CULVERT 11+63.55 -Y18-
W-1 THRU W-46	RETAINING WALL SHEETS

GENERAL NOTES

	2024 SPECIFICATIONS EFFECTIVE: 01-16-2024 REVISED:
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.
CLEARING:	CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
SUPERELEVATION:	ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.
SHOULDER CONSTRUCTION:	ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01
SIDE ROADS:	THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.
BERM DITCHES:	BERM DITCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 240.01 AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
SUBSURFACE DRAINS:	SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.
DRIVEWAYS:	DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3 FOOT RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
STREET TURNOUT:	DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.
	STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.
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.
TEMPORARY SHORING:	SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING".
END BENTS:	THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.
UTILITIES:	UTILITY OWNERS ON THIS PROJECT ARE DUKE ENERGY, ENBRIDGE OPTIMUM, ERC, SPECTRUM, BALSAM, WEST FIBERNET, FRONTIER TUCKASEEGEE WATER & SEWER AUTHORITY
	ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.
RIGHT-OF-WAY MARKERS:	ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.
CURB RAMPS	CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD. 848.06.
ROCK	ROCK IS POSSIBLE BETWEEN 76+75 AND 79+25 -L- LT & RT. BLASTING MAY BE REQUIRED FOR EXCAVATION ON THE PROJECT. SEE SECTION 220 OF THE STANDARD SPECIFICATIONS AND IF APPLICABLE, ROCK BLASTING PROVISION.

2024 ROADWAY ENGLISH STANDARD DRAWINGS

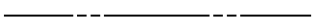
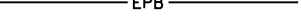
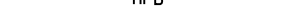
EFF. 01-16-2024
REV.

The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit - N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

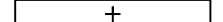
STD. NO.	TITLE
DIVISION 2	- EARTHWORK
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
240.01	Guide for Berm Ditch Construction
275.01	Rock Paving
DIVISION 3	- PIPE CULVERTS
300.01	Method of Pipe Installation (Use Details in Lieu of Standards for Sheets 1 and 2 of 2)
310.10	Driveway Pipe Construction
DIVISION 4	- MAJOR STRUCTURES
423.01	Bridge Approach Fills - Type 1 Approach Fill for Bridge Abutment
423.02	Bridge Approach Fills - Type 1A Alternate Approach Fill for Integral Bridge Abutment
DIVISION 5	- SUBGRADE, BASES AND SHOULDERS
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6	- ASPHALT BASES AND PAVEMENTS
654.01	Pavement Repairs
DIVISION 8	- INCIDENTALS
815.02	Subsurface Drain
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.11	Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.27	Reinforced Concrete Endwall - for Single 60" Pipe 90 Skew
838.39	Reinforced Concrete Endwall - for Single 72" Pipe 90 Skew
838.45	Notes for Reinforced Concrete Endwall - Std. Dwg 838.21 thru 838.40
838.57	Reinforced Brick Endwall - for Single 60" Pipe 90 Skew
838.69	Reinforced Brick Endwall - for Single 72" Pipe 90 Skew
838.75	Notes for Reinforced Brick Endwall - Std. Dwg 838.51 thru 838.70
838.80	Precast Endwalls - 12" thru 72" Pipe 90 Skew
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.04	Concrete Open Throat Catch Basin - 12" thru 48" Pipe
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg. 840.14 and 840.15
840.17	Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.22	Frames and Wide Slot Sag Grates
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.26	Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.29	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.30	Driveway Drop Inlet
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick 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
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.51	Brick Manhole - 12" thru 36" Pipe
840.52	Precast Manhole - 4', 5' and 6' Diameter 12" thru 48" Pipe
840.53	Precast Manhole with Masonry Base - 12" thru 42" Pipe
840.54	Manhole Frame and Cover
840.55	Manhole Frame and Cover (Flush with Slab for Open Throat Catch Basin)
840.66	Drainage Structure Steps
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk (Use Detail in Lieu of Standard for Sheet 1 of 1)
848.02	Driveway Turnout - Radius Type
848.03	Driveway Turnout - Drop Curb Type
848.04	Street Turnout
848.06	Curb Ramp (Use Details in Lieu of Standards for Sheets 9 and 10 of 13)
850.01	Concrete Paved Ditches
850.10	Guide for Berm Drainage Outlet - 15" and 18" Pipe
852.01	Concrete Islands
852.02	Concrete Mountable Median - for Use with Rigid or Flexible Pavement
852.06	Method for Placement of Drop Inlets in Concrete Islands
852.07	Median Curb for Traffic Bearing Grated Drop Inlet for Use with 2'-9" Curb and Gutter (Use Detail in Lieu of Standard for Sheet 1 of 1)
852.10	Median Construction - with Curb and Gutter
862.01	Guardrail Placement (Use Details in Lieu of Standards for Sheets 4, 6, 12, and 14 of 15)
862.02	Guardrail Installation
862.03	Structure Anchor Units (Use Detail in Lieu of Standard for Sheet 8 of 9)
862.04	Anchoring End of Guardrail - for B-77 and B-83 Anchor Units
866.01	Chain Link Fence - 4', 5' and 6' High Fence
866.06	Chain Link Fence on Retaining Wall
876.01	Rip Rap in Channels and Ditches
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS
CONVENTIONAL PLAN SHEET SYMBOLS

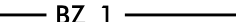
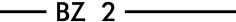
BOUNDARIES AND PROPERTY:

State Line	
County Line	
Township Line	
City Line	
Reservation Line	
Property Line	
Existing Iron Pin	
Computed Property Corner	
Property Monument	
Parcel/Sequence Number	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
Existing Historic Property Boundary	
Known Contamination Area: Soil	
Potential Contamination Area: Soil	
Known Contamination Area: Water	
Potential Contamination Area: Water	
Contaminated Site: Known or Potential	

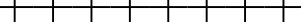
BUILDINGS AND OTHER CULTURE:

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

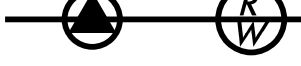
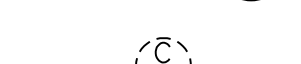
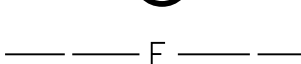
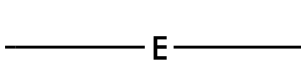
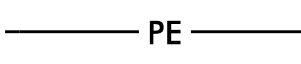
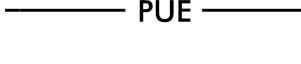
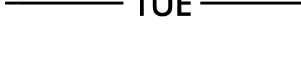
HYDROLOGY:

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

RAILROADS:

Standard Gauge	
RR Signal Milepost	
Switch	
RR Abandoned	
RR Dismantled	

RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	
Primary Horiz Control Point	
Primary Horiz and Vert Control Point	
Exist Permanent Easment Pin and Cap	
New Permanent Easement Pin and Cap	
Vertical Benchmark	
Existing Right of Way Marker	
Existing Right of Way Line	
New Right of Way Line	
New Right of Way Line with Pin and Cap	
New Right of Way Line with Concrete or Granite RW Marker	
New Control of Access Line with Concrete C/A Marker	
Existing Control of Access	
New Control of Access	
Existing Easement Line	
New Temporary Construction Easement	
New Temporary Drainage Easement	
New Permanent Easement	
New Permanent Drainage Easement	
New Permanent Drainage / Utility Easement	
New Permanent Utility Easement	
New Temporary Utility Easement	
New Aerial Utility Easement	

ROADS AND RELATED FEATURES:

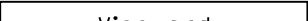
Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	
Proposed Slope Stakes Fill	
Proposed Curb Ramp	
Existing Metal Guardrail	
Proposed Guardrail	
Existing Cable Guiderail	
Proposed Cable Guiderail	
Equality Symbol	
Pavement Removal	

VEGETATION:

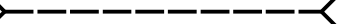
Single Tree	
Single Shrub	

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

Hedge	
Woods Line	
Orchard	
Vineyard	

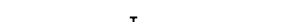
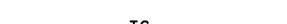
EXISTING STRUCTURES:

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.*) _____	-----P-----
U/G Power Line LOS C (S.U.E.*) _____	-----P-----
U/G Power Line LOS D (S.U.E.*) _____	-----P-----

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.*)	

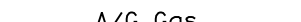
WATER:

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.*)	

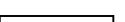
GAS:

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:

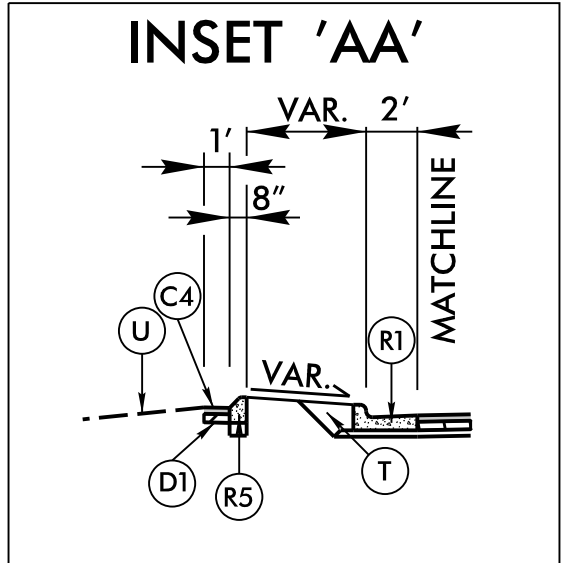
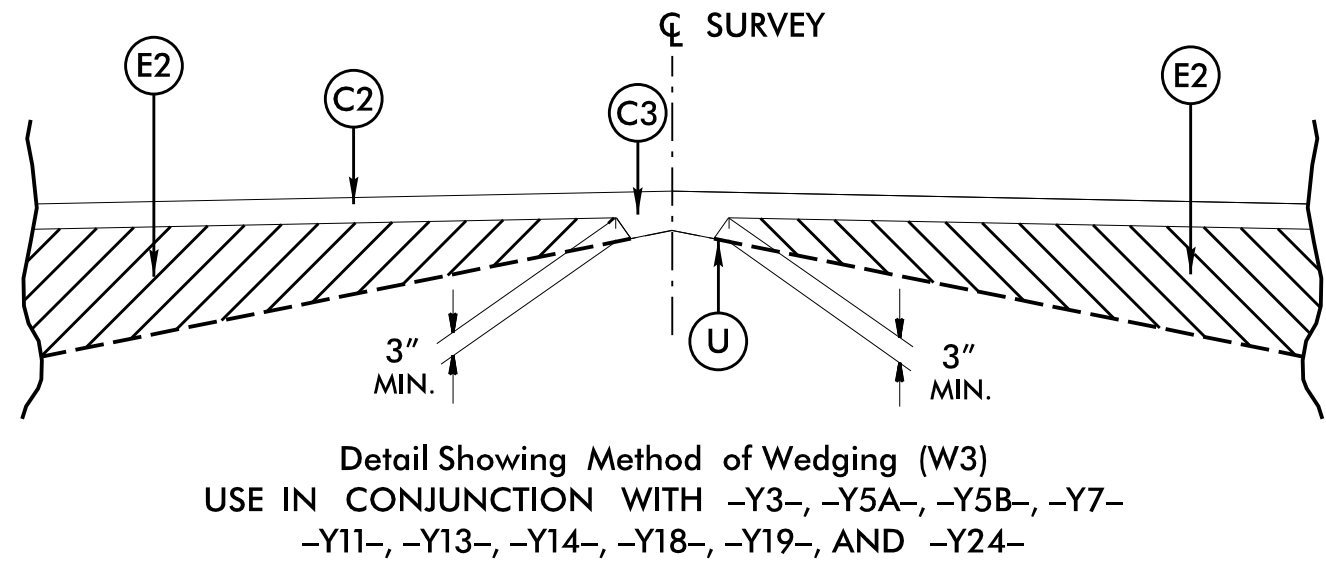
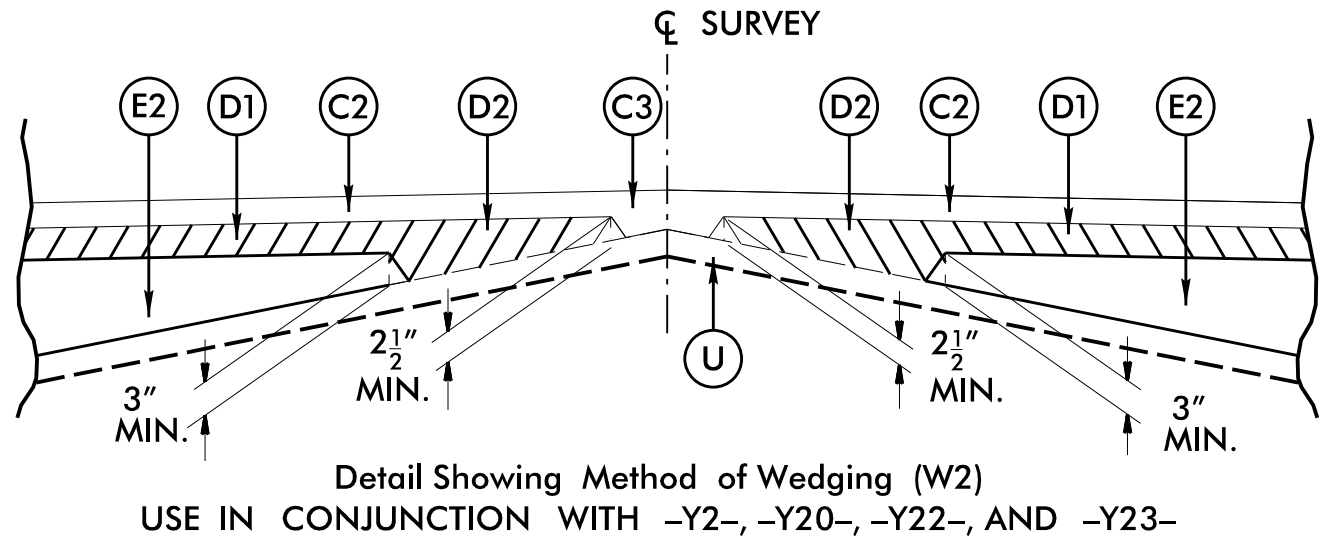
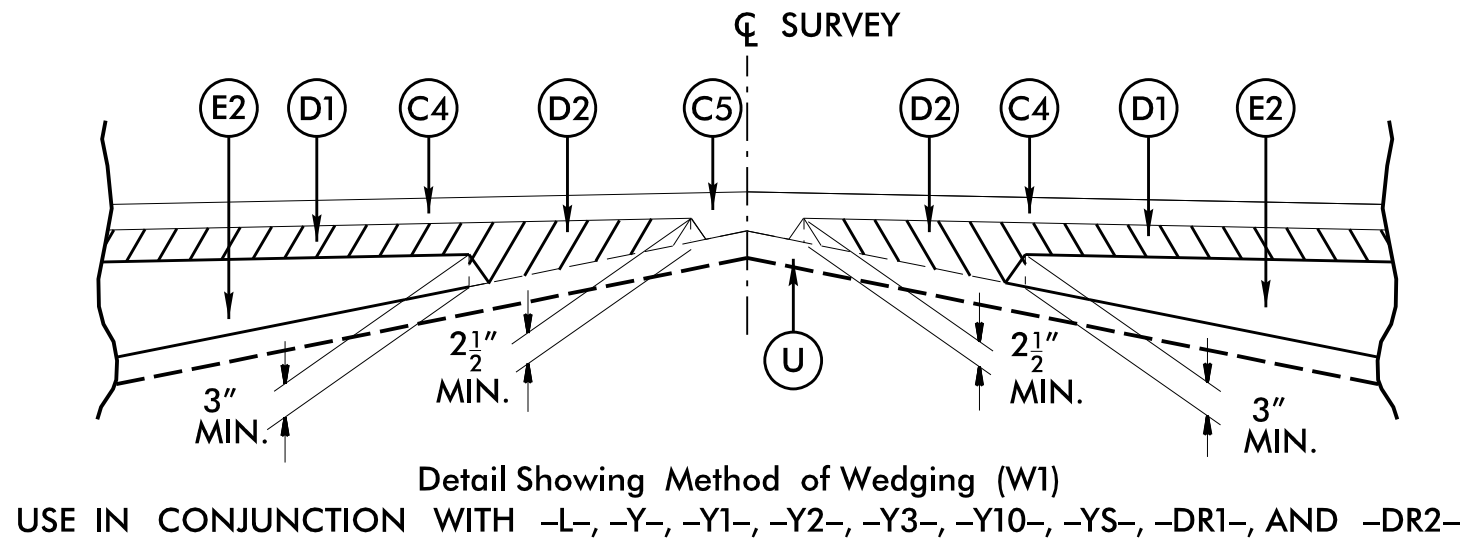
Sanitary Sewer Manhole	
Sanitary Sewer Cleanout	
U/G Sanitary Sewer Line	
Above Ground Sanitary Sewer	
SS Forced Main Line LOS B (S.U.E.*)	
SS Forced Main Line LOS C (S.U.E.*)	
SS Forced Main Line LOS D (S.U.E.*)	

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	
End of Information	

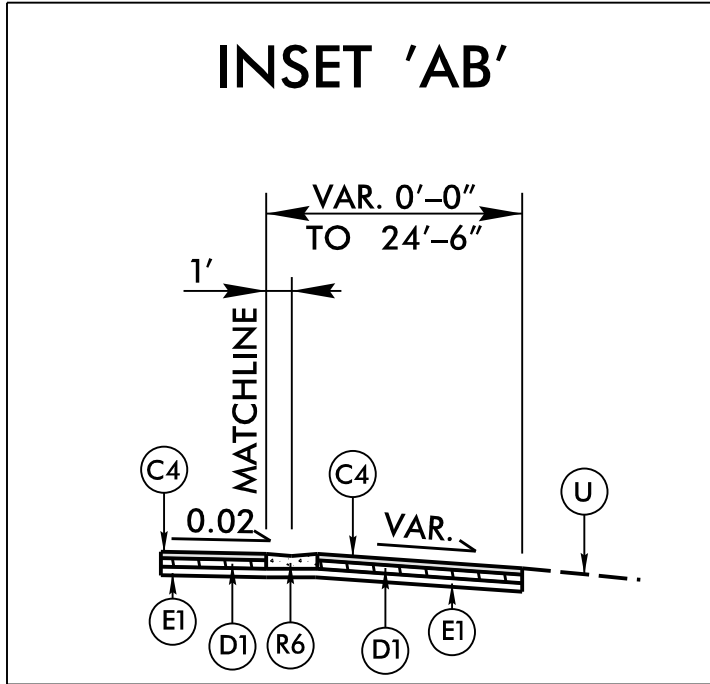
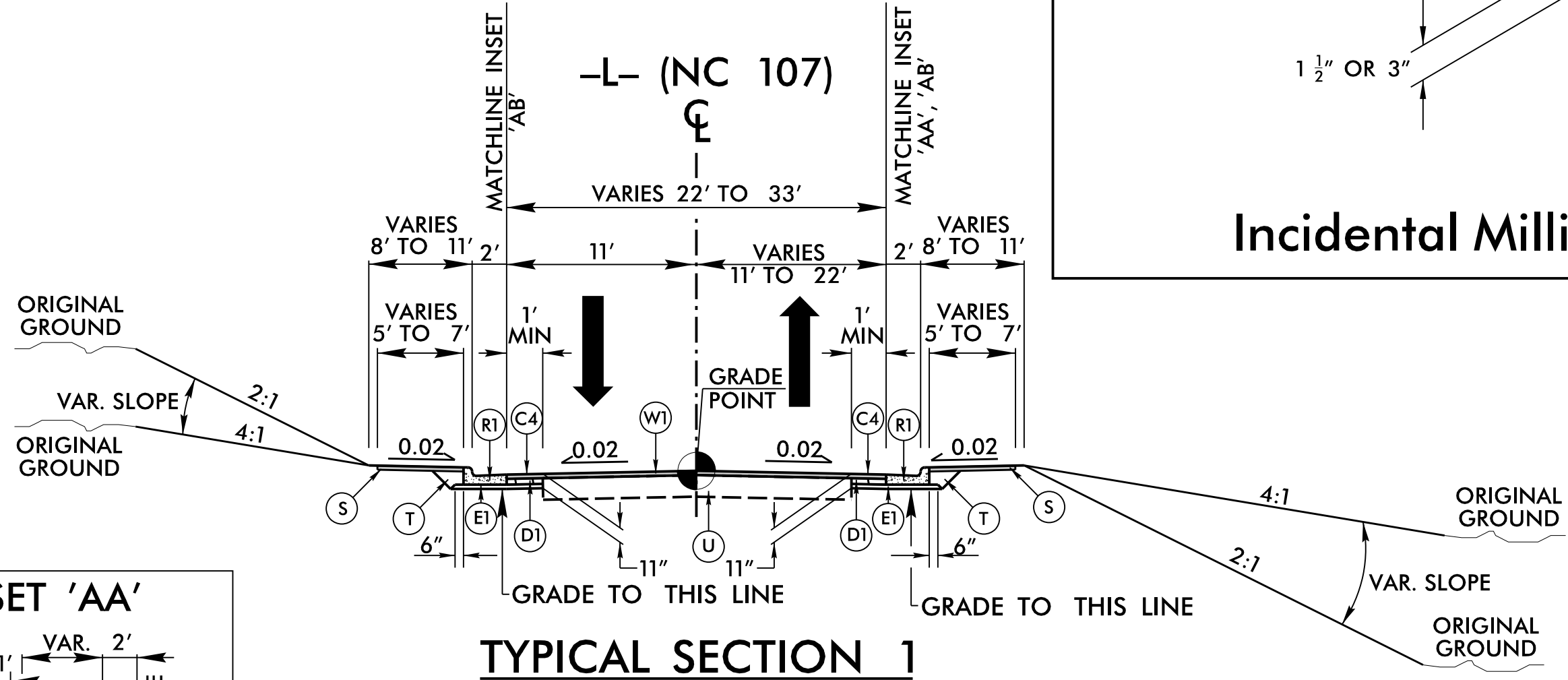
PAVEMENT SCHEDULE				(FINAL PAVEMENT DESIGN 12/05/2019)	
				R4	1' 6" CONCRETE CURB AND GUTTER.
C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.	R5	8" x 18" CONCRETE CURB.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	J1	PROP. 6" AGGREGATE BASE COURSE.	R6	2'-0" CONCRETE ISLAND VALLEY GUTTER.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.	K	12" CLASS IV SUBGRADE STABILIZATION.	S	4" CONCRETE SIDEWALK.
C4	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	N	GEOTEXTILE FOR SUBGRADE STABILIZATION.	T	EARTH MATERIAL.
C5	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1½" IN DEPTH OR GREATER THAN 2" IN DEPTH.	P	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YARD.	U	EXISTING PAVEMENT.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R1	2'-6" CONCRETE CURB AND GUTTER.	W1	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).
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 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.	R2	5" MONOLITHIC CONCRETE ISLAND (KEYED IN).	W2	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R3	2' 9" CONCRETE CURB AND GUTTER.	W3	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



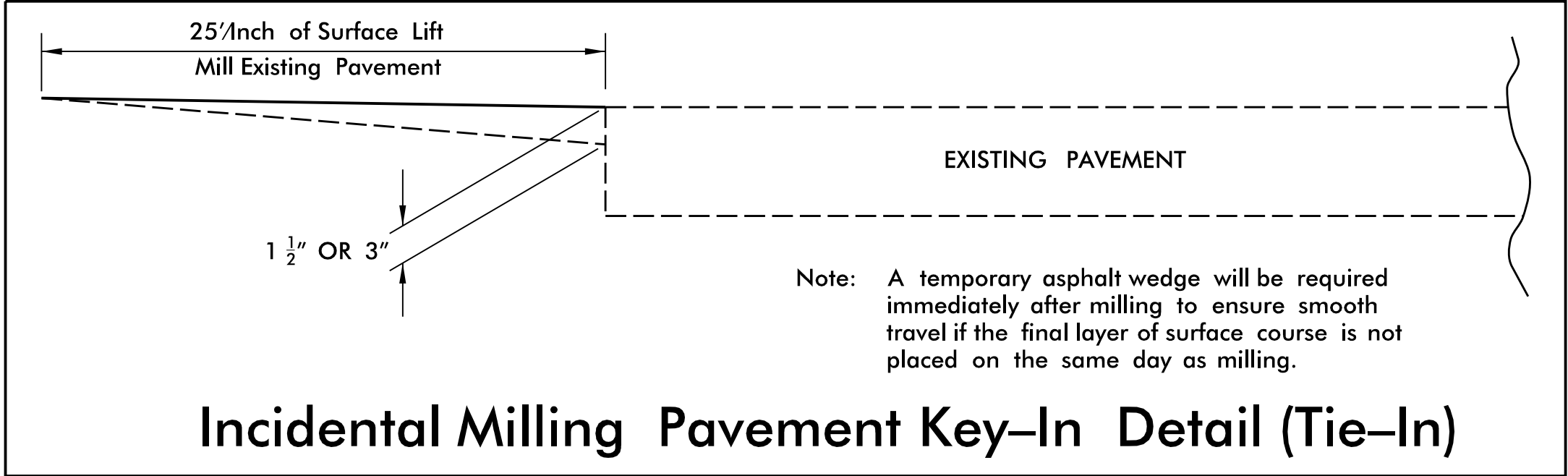
USE INSET 'AA' IN CONJUNCTION WITH TYPICAL SECTION NOS. 1, 4, 5, 6, & 8

- L- FROM STA. 11+25.00 TO STA. 13+17.89 RT
- L- FROM STA. 28+50.07 TO STA. 29+57.82 LT
- L- FROM STA. 28+84.57 TO STA. 29+74.95 RT
- L- FROM STA. 34+85.43 TO STA. 35+94.10 LT
- L- FROM STA. 42+64.39 TO STA. 46+23.08 LT
- L- FROM STA. 55+25.00 TO STA. 56+49.25 LT
- L- FROM STA. 61+52.20 TO STA. 63+27.45 RT
- L- FROM STA. 64+18.58 TO STA. 66+63.85 RT
- L- FROM STA. 71+60.17 TO STA. 74+85.99 LT
- L- FROM STA. 110+82.46 TO STA. 112+90.94 LT
- L- FROM STA. 115+12.71 TO STA. 115+49.64 RT
- L- FROM STA. 117+50.00 TO STA. 122+96.04 LT
- L- FROM STA. 118+86.99 TO STA. 119+73.82 RT
- L- FROM STA. 122+87.26 TO STA. 123+82.03 RT
- Y- FROM STA. 10+39.14 TO STA. 11+53.82 RT
- Y- FROM STA. 11+77.94 TO STA. 12+36.03 RT
- Y- FROM STA. 12+60.35 TO STA. 12+82.82 RT



USE INSET 'AB' IN CONJUNCTION WITH TYPICAL SECTION NOS. 1 & 5

- L- FROM STA. 12+04.10 TO STA. 13+47.08 LT
- L- FROM STA. 13+17.89 TO STA. 13+95.40 RT
- L- FROM STA. 116+18.56 TO STA. 116+62.15 RT



- L- FROM STA. 11+25.00 TO STA. 11+75.00 LT &
- L- FROM STA. 11+25.00 TO STA. 11+75.00 RT
- TRANSITION FROM EXISTING TO TYPICAL SECTION NO.1

- TYPICAL SECTION 1
- L- FROM STA. 11+75.00 LT & STA. 11+75.00 RT TO EXIST. BRIDGE STA. 13+90.85
- L- FROM EXIST BRIDGE STA. 14+66.75 TO STA. 18+94.36

- BERM WIDTHS LT
- L- FROM STA. 11+25.00 TO STA. 12+04.10 8'
- L- FROM STA. 13+47.08 TO STA. 15+05.00 11'
- L- FROM STA. 15+05.00 TO STA. 15+25.00 11' TO 8'
- L- FROM STA. 15+25.00 TO STA. 25+50.00 8'
- L- FROM STA. 25+50.00 TO STA. 28+50.00 10'
- L- FROM STA. 28+50.00 TO STA. 32+40.00 8'
- L- FROM STA. 32+40.00 TO STA. 32+50.00 8' TO 10'
- L- FROM STA. 32+50.00 TO STA. 46+05.00 10'
- L- FROM STA. 46+05.00 TO STA. 46+15.00 10' TO 8'
- L- FROM STA. 46+15.00 TO STA. 50+48.00 8'
- L- FROM STA. 50+48.00 TO STA. 59+79.00 10'
- L- FROM STA. 59+79.00 TO STA. 61+29.00 8'
- L- FROM STA. 61+29.00 TO STA. 61+39.00 8' TO 10'
- L- FROM STA. 61+39.00 TO STA. 65+28.00 10'
- L- FROM STA. 65+28.00 TO STA. 65+38.00 10' TO 8'
- L- FROM STA. 65+38.00 TO STA. 81+00.00 8'
- L- FROM STA. 81+00.00 TO STA. 81+10.00 8' TO 10'
- L- FROM STA. 81+10.00 TO STA. 106+65.00 10'
- L- FROM STA. 106+65.00 TO STA. 106+75.00 10' TO 8'
- L- FROM STA. 106+75.00 TO STA. 108+00.00 8'
- L- FROM STA. 108+03.00 TO STA. 109+20.00 6'
- L- FROM STA. 109+20.00 TO STA. 109+45.00 10'
- L- FROM STA. 109+45.00 TO STA. 109+64.00 8'
- L- FROM STA. 109+65.00 TO STA. 109+75.00 8' TO 10'
- L- FROM STA. 109+75.00 TO STA. 145+00.00 10'

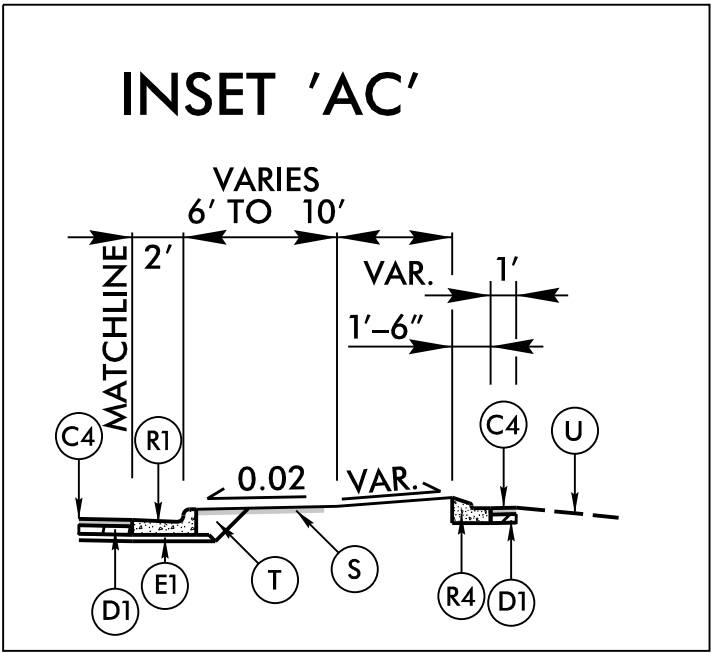
- BERM WIDTHS RT
- L- FROM STA. 11+25.00 TO STA. 13+17.89 8'
- L- FROM STA. 13+95.40 TO STA. 13+52.50 8' TO 11'
- L- FROM STA. 13+52.50 TO STA. 15+50.00 11'
- L- FROM STA. 15+50.00 TO STA. 15+75.00 11' TO 8'
- L- FROM STA. 15+75.00 TO STA. 25+00.00 8'
- L- FROM STA. 25+00.00 TO STA. 28+10.00 8.5'
- L- FROM STA. 28+10.00 TO STA. 29+50.00 8.5' TO 6'
- L- FROM STA. 29+50.00 TO STA. 30+25.00 6'
- L- FROM STA. 30+25.00 TO STA. 32+30.00 7'
- L- FROM STA. 32+30.00 TO STA. 32+55.00 7' TO 8'
- L- FROM STA. 32+55.00 TO STA. 32+85.85 8'
- L- FROM STA. 33+28.85 TO STA. 43+85.35 10'
- L- FROM STA. 43+85.35 TO STA. 46+20.00 6'
- L- FROM STA. 46+20.00 TO STA. 46+30.00 6' TO 10'
- L- FROM STA. 46+30.00 TO STA. 52+80.00 12'
- L- FROM STA. 52+80.00 TO STA. 71+65.00 10'
- L- FROM STA. 71+65.00 TO STA. 75+00.00 6'
- L- FROM STA. 75+00.00 TO STA. 75+10.00 6' TO 10'
- L- FROM STA. 75+10.00 TO STA. 96+75.00 10'
- L- FROM STA. 96+75.00 TO STA. 96+85.00 10' TO 8'
- L- FROM STA. 96+85.00 TO STA. 98+93.00 8'
- L- FROM STA. 98+93.00 TO STA. 115+58.00 10'
- L- FROM STA. 115+58.00 TO STA. 115+68.00 10' TO 6'
- L- FROM STA. 115+68.00 TO STA. 116+69.13 6'
- L- FROM STA. 116+69.13 TO STA. 131+36.71 10'
- L- FROM STA. 131+36.71 TO STA. 134+84.00 8'
- L- FROM STA. 134+84.00 TO STA. 145+00.00 10'

6/2/2025

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PENTABLE: R5600.pshp.fl.tdi
TIME: 3:16:24 PM

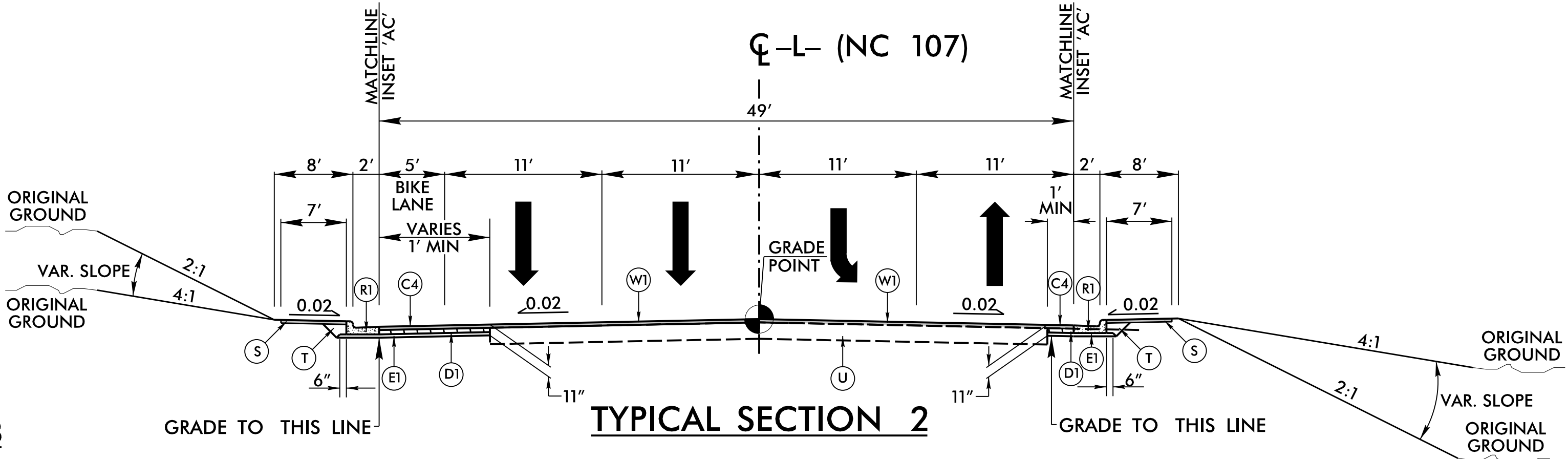
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FILE: \



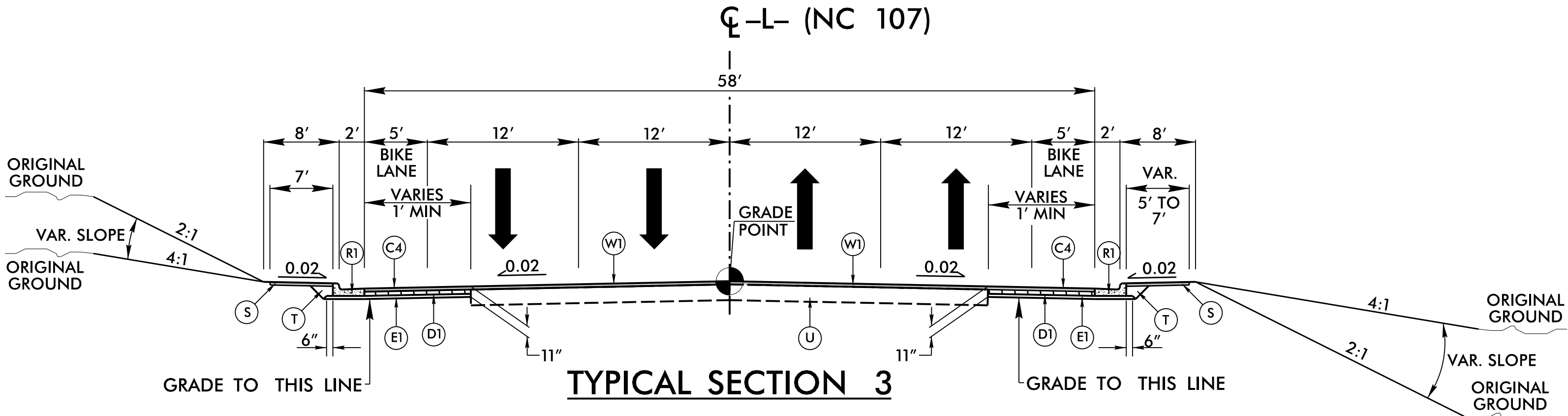
**USE INSET 'AC' IN CONJUNCTION
WITH TYPICAL SECTION NOS. 2, 5, 6, & 8**

- L- FROM STA. 19+69.69 TO STA. 20+97.66 RT
- L- FROM STA. 30+08.27 TO STA. 30+25.01 RT
- L- FROM STA. 32+30.00 TO STA. 32+86.48 RT
- L- FROM STA. 35+40.00 TO STA. 36+67.40 RT
- L- FROM STA. 36+48.00 TO STA. 37+34.80 LT
- L- FROM STA. 38+93.96 TO STA. 39+11.86 RT
- L- FROM STA. 39+51.66 TO STA. 39+93.91 RT
- L- FROM STA. 40+33.71 TO STA. 40+42.02 RT
- L- FROM STA. 43+88.00 TO STA. 44+49.69 RT
- L- FROM STA. 45+00.00 TO STA. 45+27.52 RT
- L- FROM STA. 57+14.20 TO STA. 57+81.00 LT
- L- FROM STA. 57+37.81 TO STA. 59+11.94 RT
- L- FROM STA. 59+87.65 TO STA. 61+09.90 RT
- L- FROM STA. 70+06.56 TO STA. 70+58.98 RT
- L- FROM STA. 71+68.12 TO STA. 72+94.54 RT
- L- FROM STA. 95+83.73 TO STA. 98+68.00 RT
- L- FROM STA. 100+68.00 TO STA. 102+33.00 RT
- L- FROM STA. 103+02.58 TO STA. 104+90.00 RT
- Y- FROM STA. 12+39.54 TO STA. 12+60.10 LT
- Y- FROM STA. 12+92.79 TO STA. 13+32.42 LT
- Y- FROM STA. 23+00.54 TO STA. 23+18.92 LT

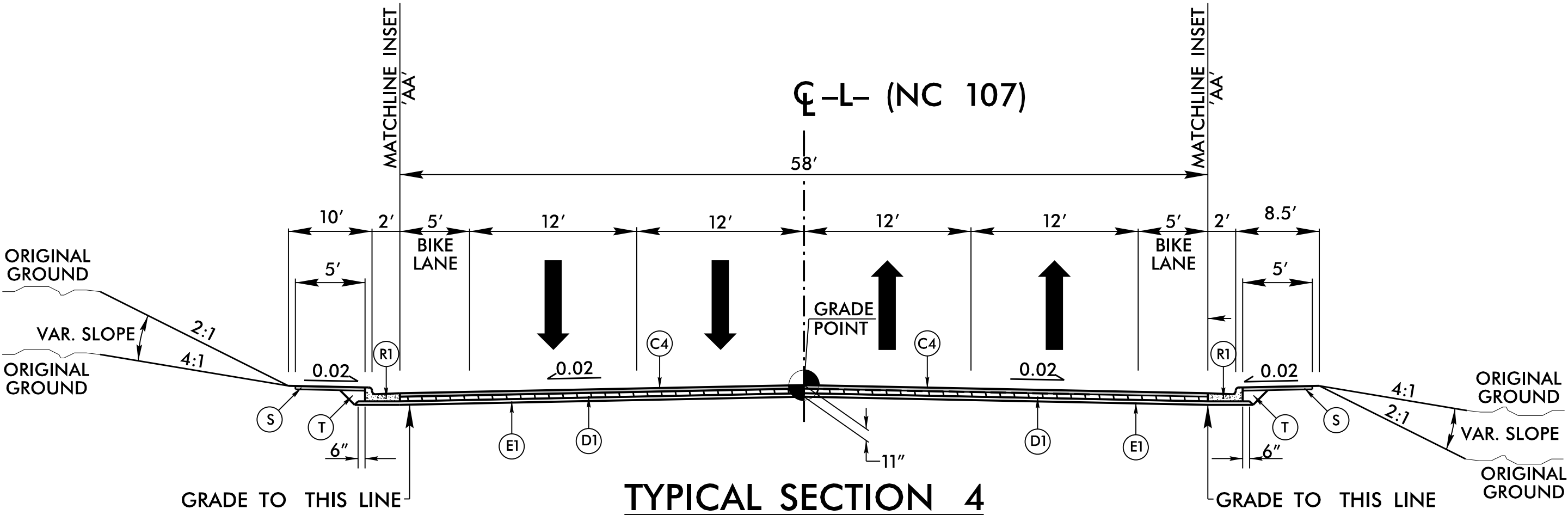


TYPICAL SECTION 2
-L- FROM STA. 18+94.36 TO STA. 24+70.00

-L- STA. 24+70.00 TO STA. 25+00.00 TRANSITION
FROM TYPICAL SECTION NO. 2 TO TYPICAL SECTION NO. 3



TYPICAL SECTION 3
-L- FROM STA. 25+00.00 TO STA. 25+50.00



TYPICAL SECTION 4

- L- FROM STA. 25+50.00 TO BEGIN BRIDGE STA. 26+79 +/-
- L- FROM END BRIDGE STA. 27+69 +/- TO STA. 28+10.00
- L- STA. 28+10.00 TO STA. 29+50.00 TRANSITION
FROM TYPICAL SECTION NO. 4 TO TYPICAL SECTION NO. 5

PAVEMENT SCHEDULE

C1	2"	S9.5B
C2	3"	S9.5B
C3	VAR.	S9.5B
C4	3"	S9.5C
C5	VAR.	S9.5C
D1	4"	I19.0C
D2	VAR.	I19.0C
E1	4"	B25.0C
E2	VAR.	B25.0C
J1	6"	ABC
K	SUBGRADE STAB.	
N	GEOTEXTILE	
P	PRIME COAT	
R1	2'-6"	CONC. C&G
R2	5"	CONC. ISLAND
R3	2'-9"	CONC. C&G
R4	1'-6"	CONC. C&G
R5	8" x 18"	CONC. CURB
R6	2'-0"	CONC. VALLEY
S	4"	CONCRETE SIDEWALK
T	EARTH MATERIAL	
U	EXISTING PAVEMENT	
W1	VAR. WEDGING	
W2	VAR. WEDGING	
W3	VAR. WEDGING	

6/2/2025

PROJECT REFERENCE NO.
R-5600

ROADWAY DESIGN
ENGINEER



10/12/2025

SHEET NO.
2A-3

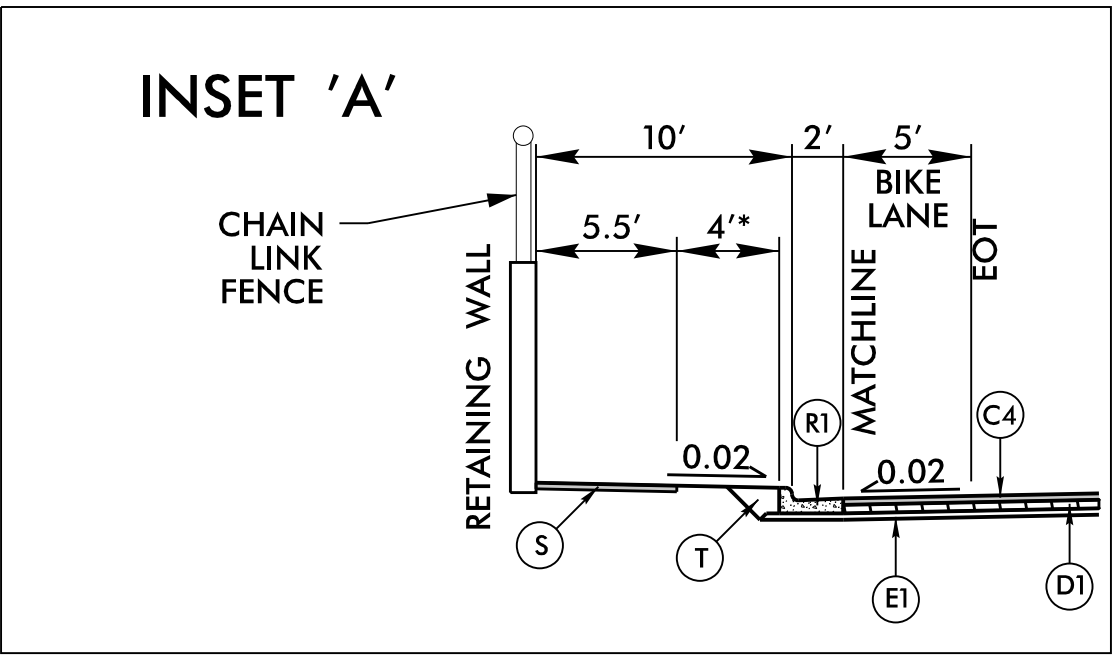
PAVEMENT DESIGN
ENGINEER



10/10/2025

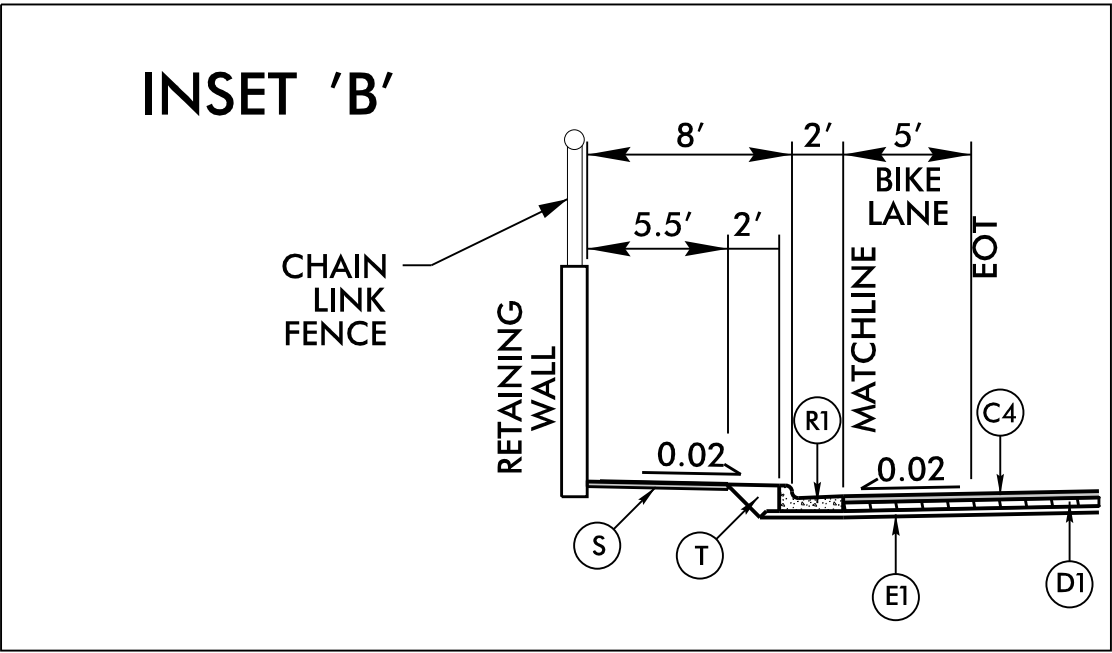
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St. Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116



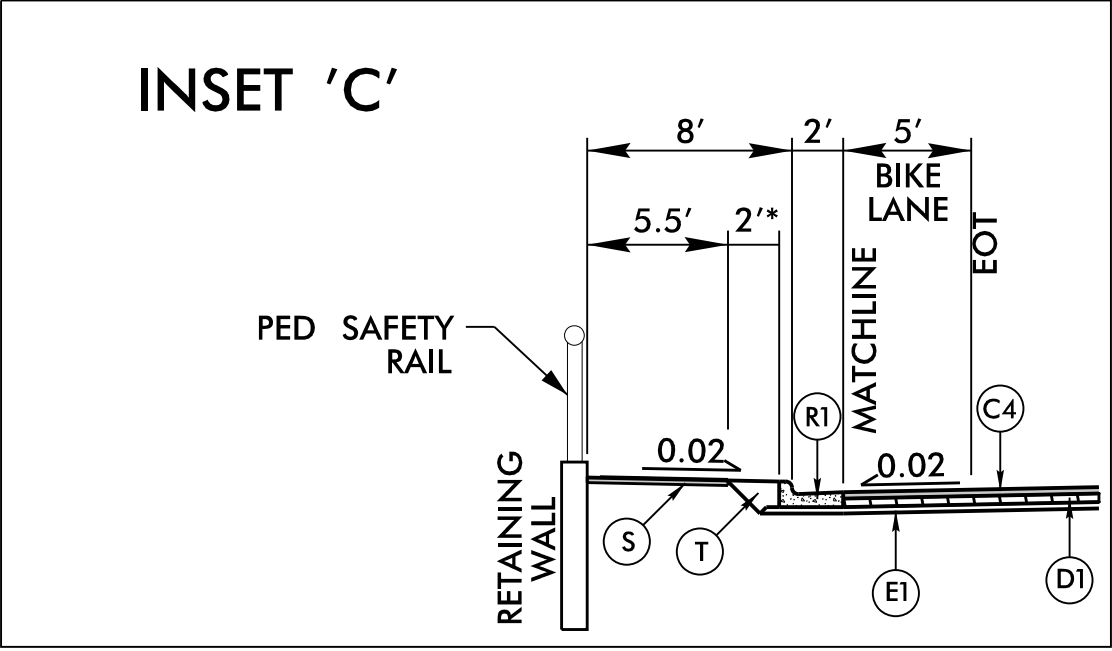
**USE INSET 'A' IN CONJUNCTION
WITH TYPICAL SECTION NOS. 5 & 6**

- L- FROM STA. 34+50.00 TO STA. 35+40.00 RT
- L- FROM STA. 55+25.00 TO STA. 56+29.00 LT
- L- FROM STA. 74+83.50 TO STA. 75+85.00 LT
- L- FROM STA. 94+75.00 TO STA. 99+06.61 LT
- L- FROM STA. 95+75.00 TO STA. 96+85.00 RT
- L- FROM STA. 99+72.01 TO STA. 103+60.00 LT *NOTE: NO STRIP
- L- FROM STA. 123+50.00 TO STA. 130+77.89 LT



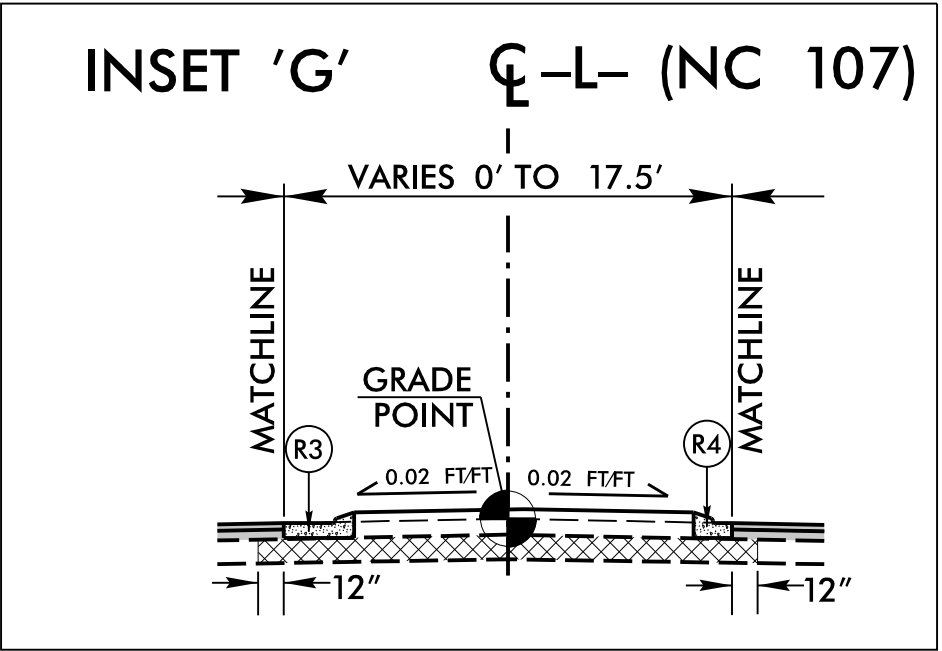
**USE INSET 'B' IN CONJUNCTION
WITH TYPICAL SECTION NOS. 5 & 6**

- L- FROM STA. 47+00.00 TO STA. 48+77.00 LT
- L- FROM STA. 49+05.00 TO STA. 50+40.00 LT
- L- FROM STA. 59+85.00 TO STA. 61+29.00 LT
- L- FROM STA. 108+30.00 TO STA. 109+10.00 LT



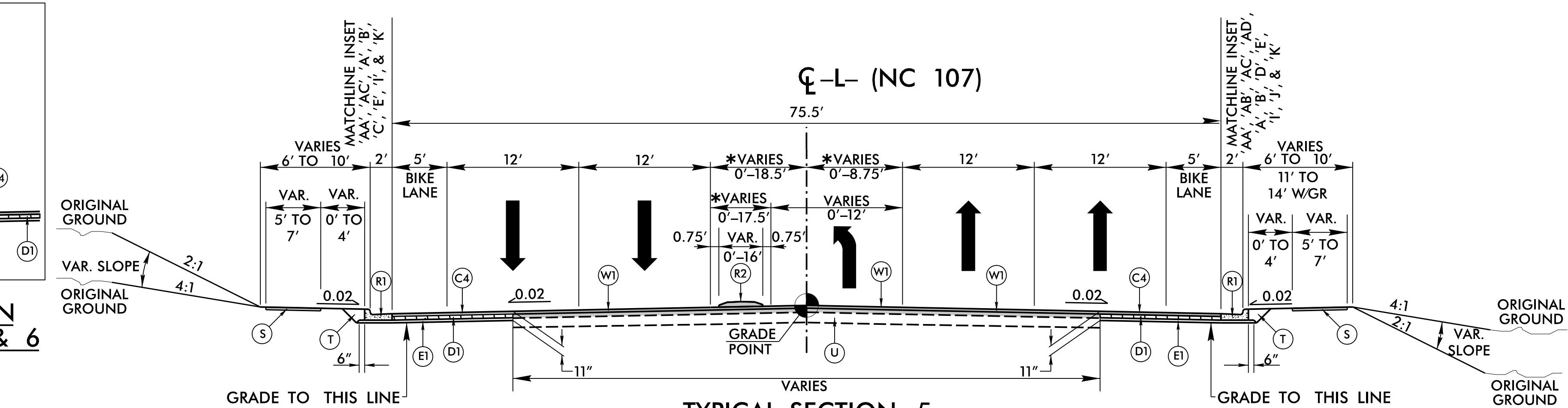
**USE INSET 'C' IN CONJUNCTION
WITH TYPICAL SECTION NOS. 5 & 6**

- L- FROM STA. 42+56.80 TO STA. 43+35.00 RT
- L- FROM STA. 65+40.00 TO STA. 67+84.00 LT
- L- FROM STA. 103+01.79 TO STA. 103+90.00 RT *NOTE: 4' STRIP
- L- FROM STA. 106+75.00 TO STA. 107+60.00 LT
- L- FROM STA. 133+50.00 TO STA. 134+75.00 RT

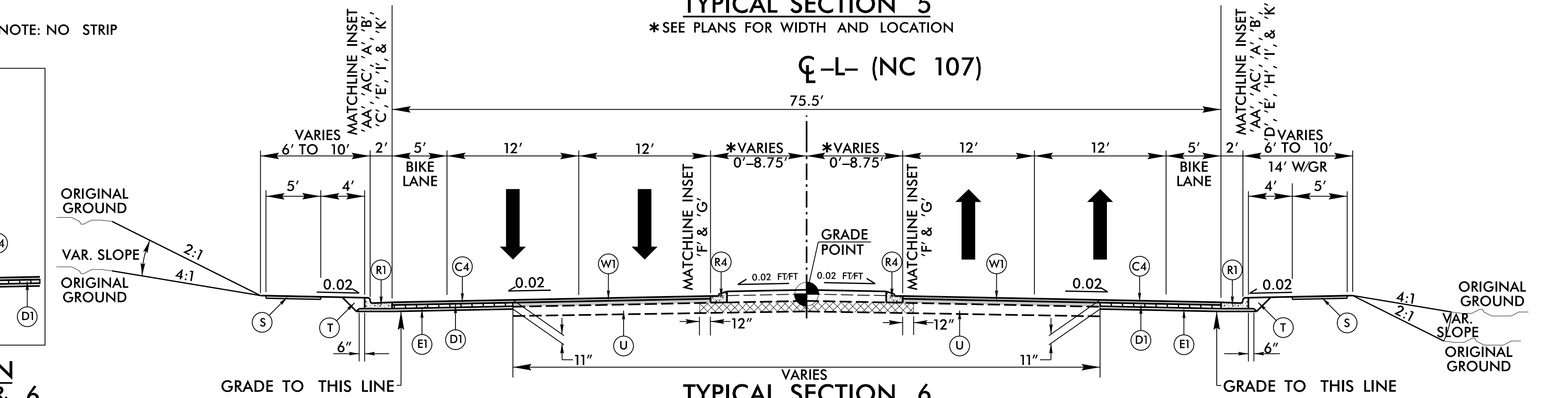


**USE INSET 'G' IN CONJUNCTION
WITH TYPICAL SECTION NO. 6**

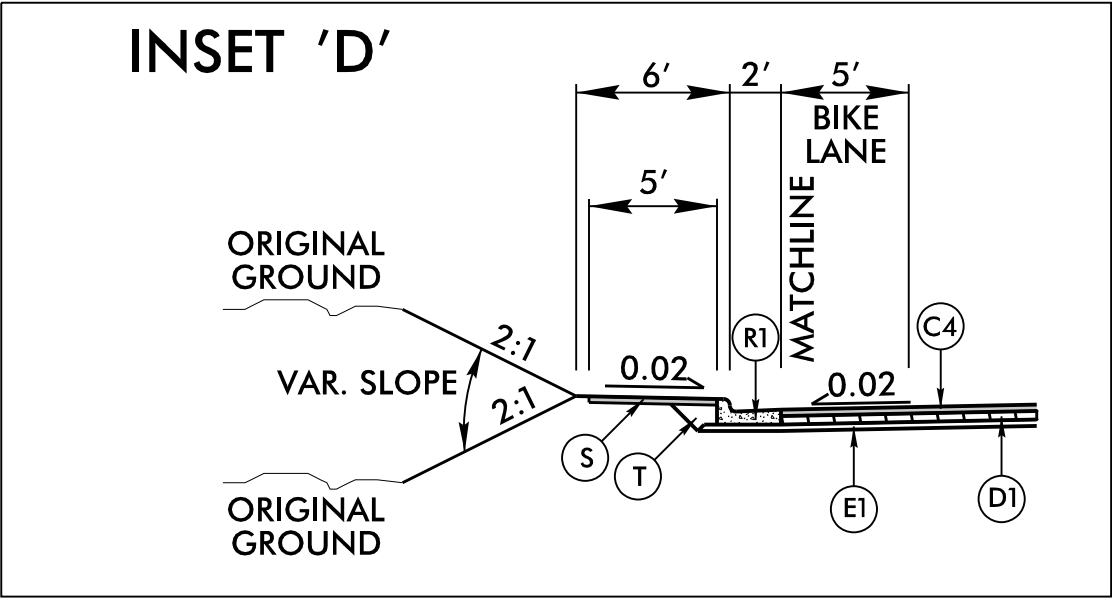
- L- FROM STA. 53+73.75 TO STA. 60+72.55
- L- FROM STA. 67+68.75 TO STA. 84+75.61



TYPICAL SECTION 5
*SEE PLANS FOR WIDTH AND LOCATION

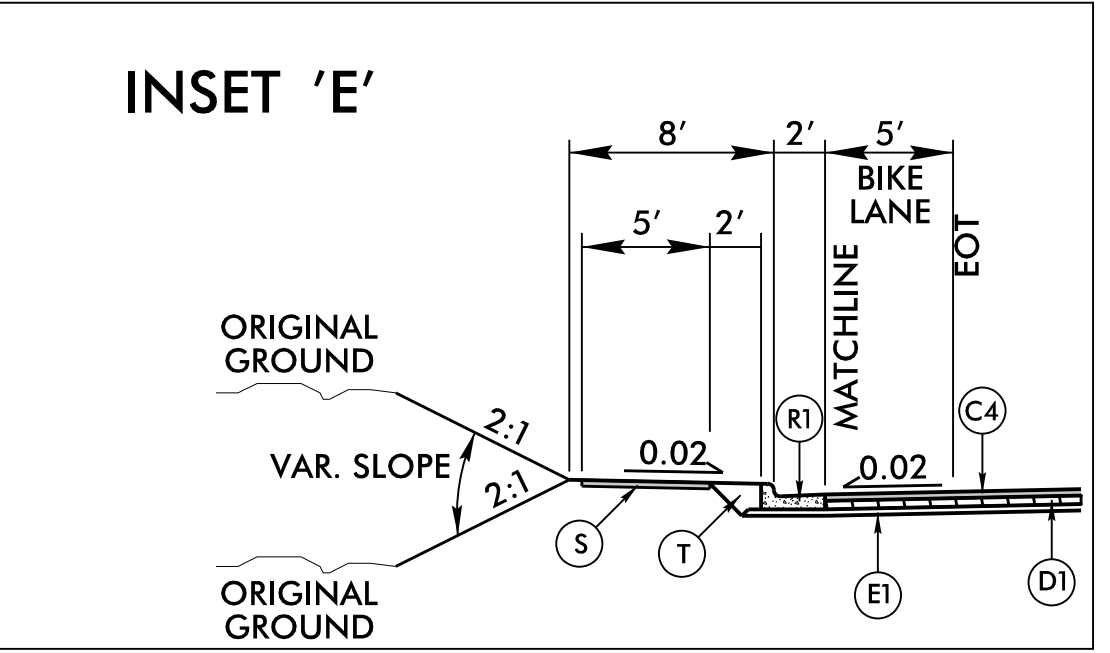


TYPICAL SECTION 6
*SEE PLANS FOR WIDTH AND LOCATION
PAVEMENT REMOVAL



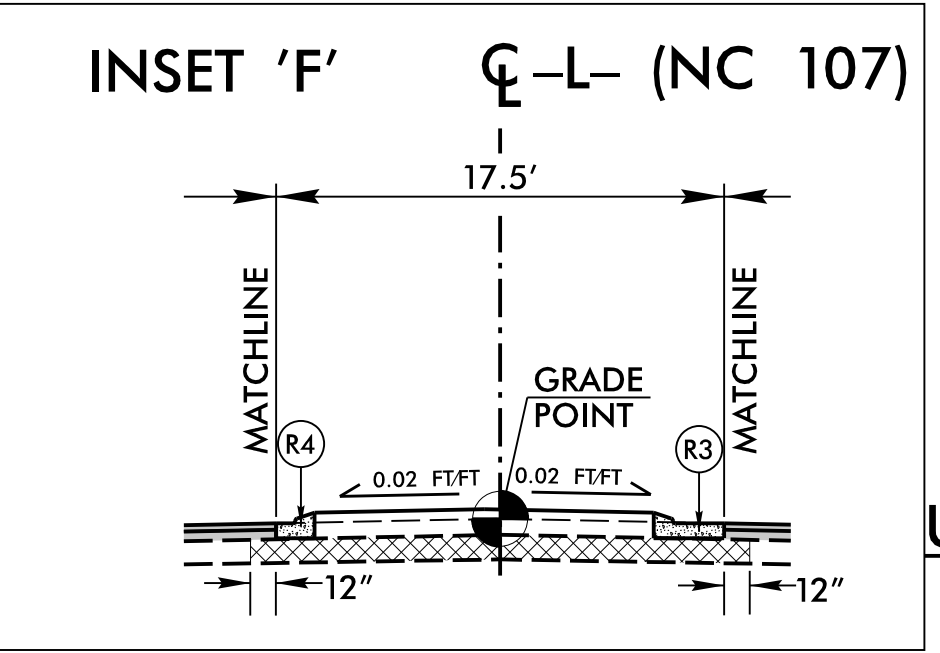
**USE INSET 'D' IN CONJUNCTION
WITH TYPICAL SECTION NOS. 5 & 6**

- L- FROM STA. 43+87.00 TO STA. 46+20.00 RT
- L- FROM STA. 71+68.50 TO STA. 75+00.00 RT



**USE INSET 'E' IN CONJUNCTION
WITH TYPICAL SECTION NOS. 5 & 6**

- L- FROM STA. 46+15.00 TO STA. 47+00.00 LT
- L- FROM STA. 48+77.00 TO STA. 49+05.00 LT
- L- FROM STA. 78+00.00 TO STA. 81+00.00 LT
- L- FROM STA. 96+95.00 TO STA. 98+93.00 RT
- L- FROM STA. 107+60.00 TO STA. 108+30.00 LT
- L- FROM STA. 109+10.00 TO STA. 109+65.00 LT



**USE INSET 'F' IN CONJUNCTION
WITH TYPICAL SECTION NO. 6**

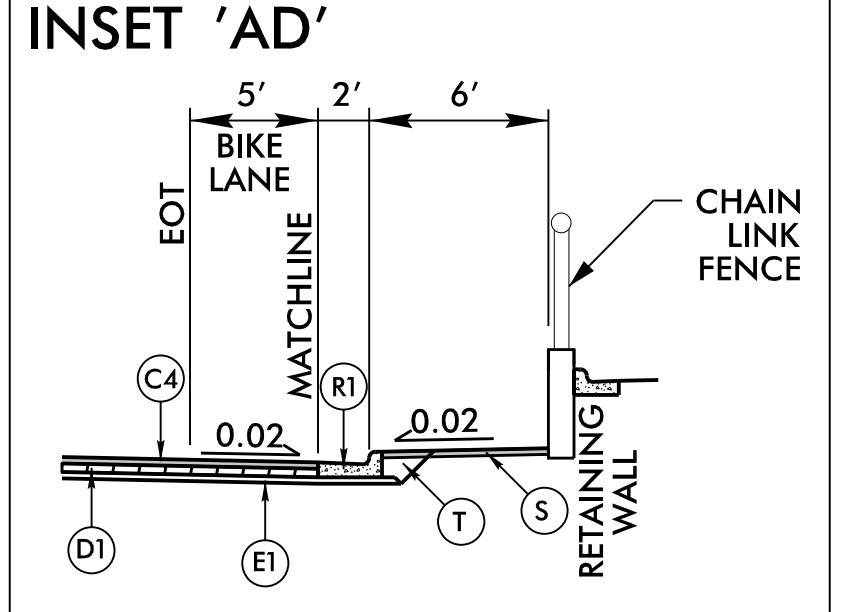
- L- FROM STA. 45+23.75 TO STA. 50+50.00
- L- FROM STA. 92+18.09 TO STA. 98+64.77
- L- FROM STA. 104+53.19 TO STA. 107+83.59

TYPICAL SECTION 5

- L- FROM STA. 29+50.00 TO STA. 36+98.33
- L- FROM STA. 38+46.67 TO STA. 45+23.75
- L- FROM STA. 50+50.00 TO STA. 53+73.75
- L- FROM STA. 60+72.55 TO STA. 67+68.75
- L- FROM STA. 84+75.61 TO STA. 92+18.09
- L- FROM STA. 96+05.47 TO STA. 104+53.19
- L- FROM STA. 107+83.59 TO STA. 122+42.67
- L- FROM STA. 124+23.51 TO STA. 143+23.51

TYPICAL SECTION 6

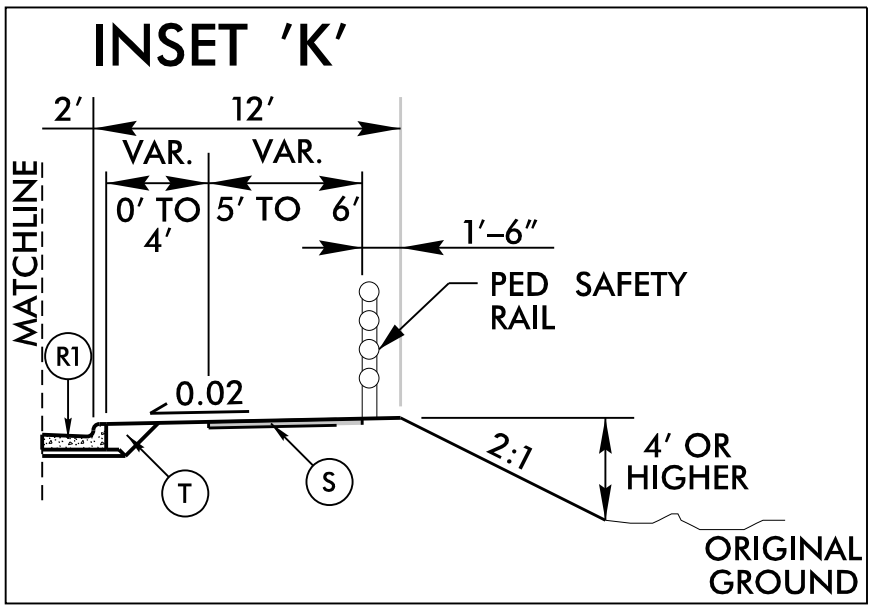
- L- FROM STA. 36+98.33 TO STA. 38+46.67
- L- FROM STA. 45+23.75 TO STA. 50+50.00
- L- FROM STA. 53+73.75 TO STA. 60+72.55
- L- FROM STA. 67+68.75 TO STA. 84+75.61
- L- FROM STA. 92+18.09 TO STA. 96+05.47
- L- FROM STA. 104+53.19 TO STA. 107+83.59
- L- FROM STA. 122+42.67 TO STA. 124+23.51
- L- FROM STA. 143+23.51 TO STA. 144+94.92



**USE INSET 'AD' IN CONJUNCTION
WITH TYPICAL SECTION NO. 5**

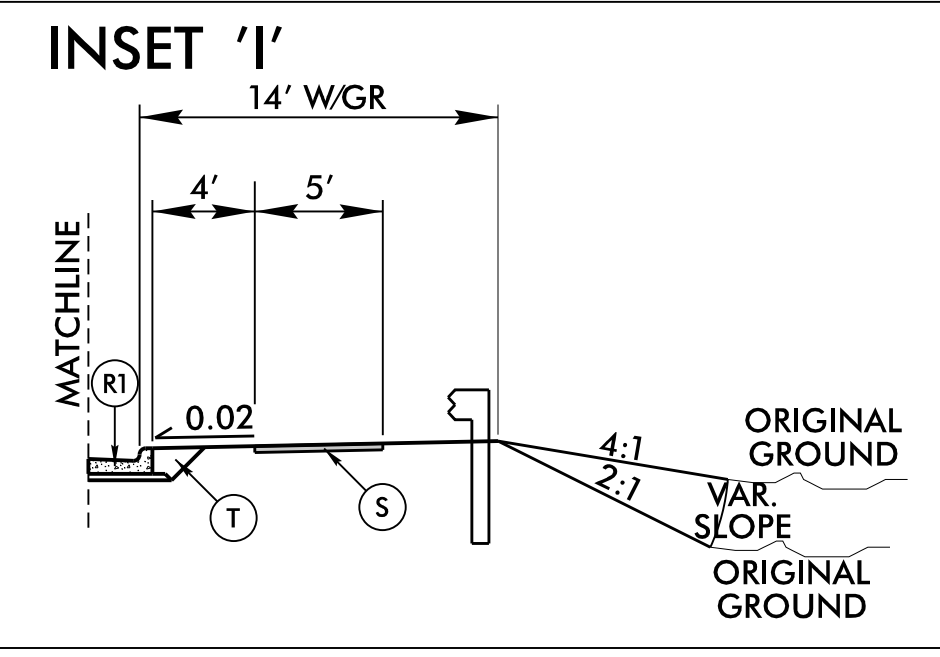
- L- FROM STA. 30+25.00 TO STA. 32+30.00 RT

PAVEMENT SCHEDULE		
C1	2"	S9.5B
C2	3"	S9.5B
C3	VAR.	S9.5B
C4	3"	S9.5C
C5	VAR.	S9.5C
D1	4"	I19.0C
D2	VAR.	I19.0C
E1	4"	B25.0C
E2	VAR.	B25.0C
J1	6"	ABC
K	SUBGRADE STAB.	
N	GEOTEXTILE	
P	PRIME COAT	
R1	2'-6"	CONC. C&G
R2	5"	CONC. ISLAND
R3	2'-9"	CONC. C&G
R4	1'-6"	CONC. C&G
R5	8" x 18"	CONC. CURB
R6	2'-0"	CONC. VALLEY
S	4"	CONCRETE SIDEWALK
T	EARTH MATERIAL	
U	EXISTING PAVEMENT	
W1	VAR. WEDGING	
W2	VAR. WEDGING	
W3	VAR. WEDGING	



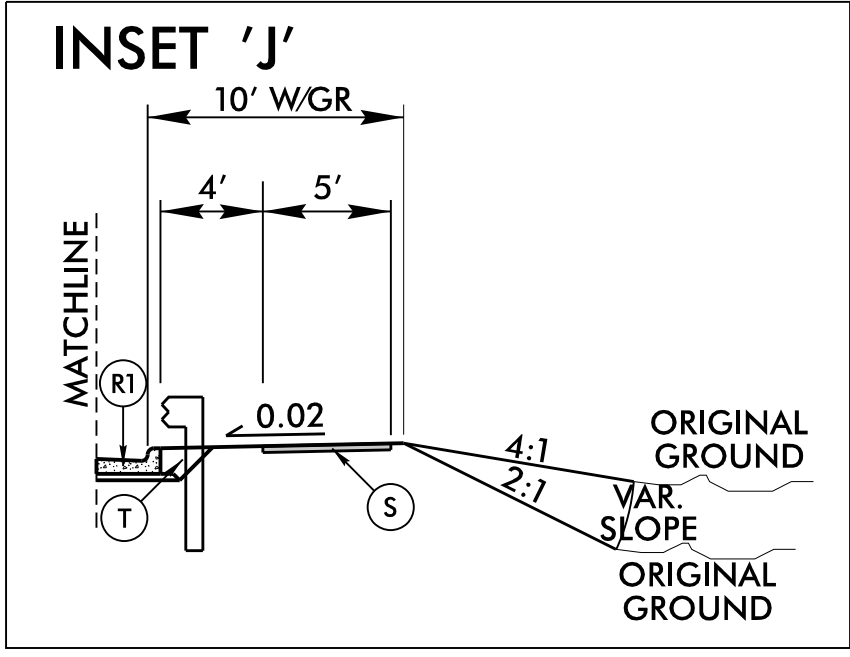
**USE INSET 'K' IN CONJUNCTION
WITH TYPICAL SECTIONs NO. 5 & 6**

- L- FROM STA. 46+95.00 TO STA. 48+40.00 RT
- L- FROM STA. 49+82.00 TO STA. 53+55.00 RT
- L- FROM STA. 70+06.56 TO STA. 71+27.30 RT
- L- FROM STA. 104+12.69 TO STA. 105+00.00 RT
- L- FROM STA. 121+76.27 TO STA. 122+41.95 RT
- L- FROM STA. 144+10.00 TO STA. 145+14.05 LT



**USE INSET 'I' IN CONJUNCTION
WITH TYPICAL SECTION NOS. 5 & 6**

- L- FROM STA. 40+38.00 TO STA. 41+68.00 RT
- L- FROM STA. 64+35.00 TO STA. 65+40.00 LT
- L- FROM STA. 106+59.00 TO STA. 107+90.25 RT
- L- FROM STA. 135+10.00 TO STA. 135+78.00 RT
- L- FROM STA. 135+12.50 TO STA. 137+10.00 LT



**USE INSET 'J' IN CONJUNCTION
WITH TYPICAL SECTION NO. 5**

- L- FROM STA. 63+18.00 TO STA. 63+63.00 RT

PENTABLE: R5600_pshp.fl.tbi

DATE: 9/2/2025

PLOT DRIVER: NCDOT.pdf_color_eng_50.plt
USER: CNUMPOWER
FILE: \



-Y- FROM STA. 26+85.00 TO STA. 28+50.00 LT



TYPICAL SECTION 9

[illegible]

USE INSET 'L' IN CONJUNCTION
WITH TYPICAL SECTION NO. 7

-L- FROM STA. 145+00.00 TO STA. 147+60.00 RT

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555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116



TYPICAL SECTION 10



TYPICAL SECTION 11



-Y3- FROM STA. 10+33.94 TO STA. 12+95.00
-Y7- FROM STA. 12+11.43 TO STA. 13+25.00
-Y24- FROM STA. 10+32.75 TO STA. 11+17.09

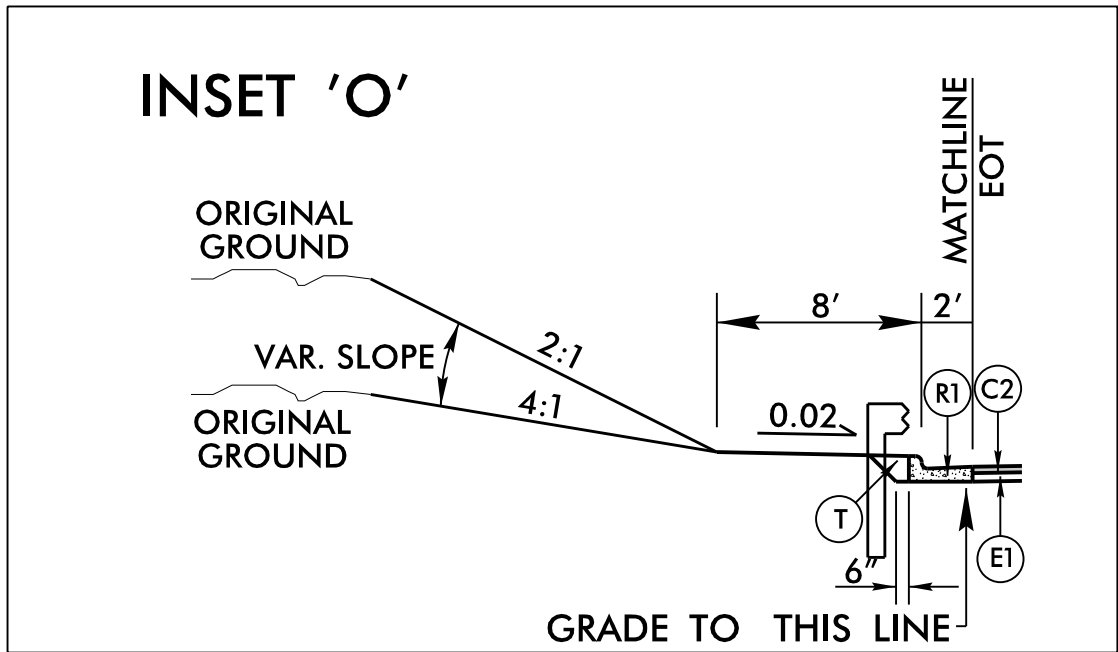
TYPICAL SECTION 12



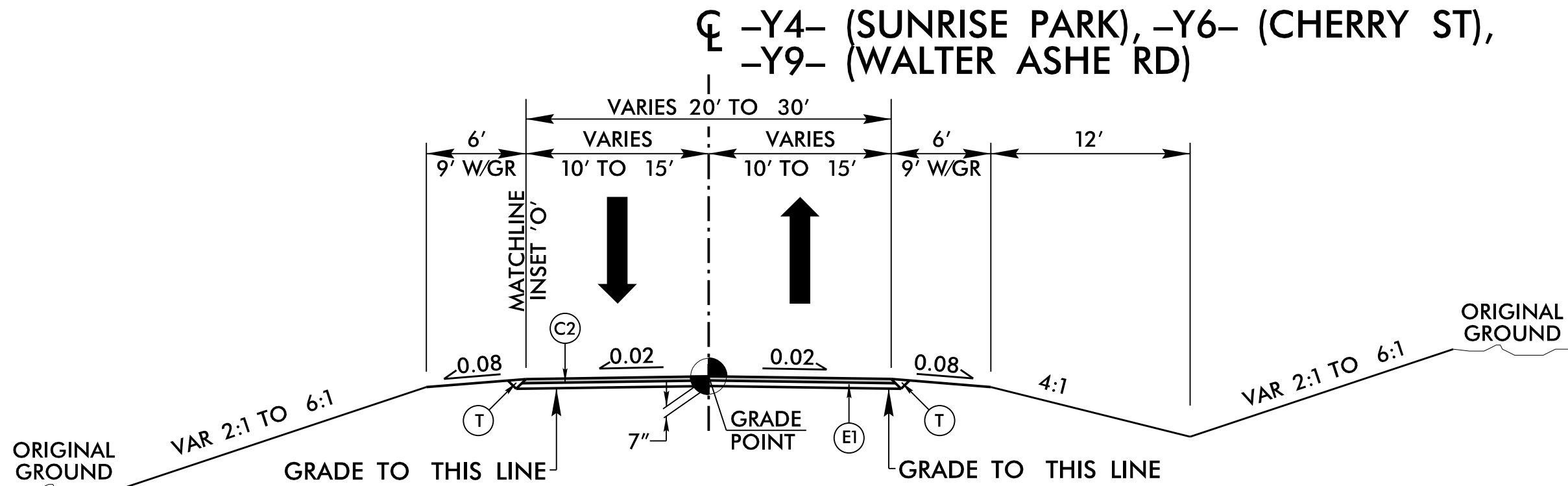
-Y4- FROM STA. 10+30.00 TO STA. 11+25.00
 -Y6- FROM STA. 12+00.00 TO STA. 12+50.00
 -Y9- FROM STA. 11+00.00 TO STA. 11+88.85

PROJECT REFERENCE NO.		SHEET NO.	
R-5600		2A-5	
ROADWAY DESIGN ENGINEER		PAYMENT DESIGN ENGINEER	
			
10/12/2025		10/10/2025	
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 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116			

PAVEMENT SCHEDULE		
C1	2"	S9.5B
C2	3"	S9.5B
C3	VAR.	S9.5B
C4	3"	S9.5C
C5	VAR.	S9.5C
D1	4"	I19.0C
D2	VAR.	I19.0C
E1	4"	B25.0C
E2	VAR.	B25.0C
J1	6"	ABC
K	SUBGRADE STAB.	
N	GEOTEXTILE	
P	PRIME COAT	
R1	2'-6"CONC. C&G	
R2	5" CONC. ISLAND	
R3	2'-9" CONC. C&G	
R4	1'-6"CONC. C&G	
R5	8" x 18"CONC. CURB	
R6	2'-0"CONC. VALLEY	
S	4" CONCRETE SIDEWALK	
T	EARTH MATERIAL	
U	EXISTING PAVEMENT	
W1	VAR. WEDGING	
W2	VAR. WEDGING	
W3	VAR. WEDGING	



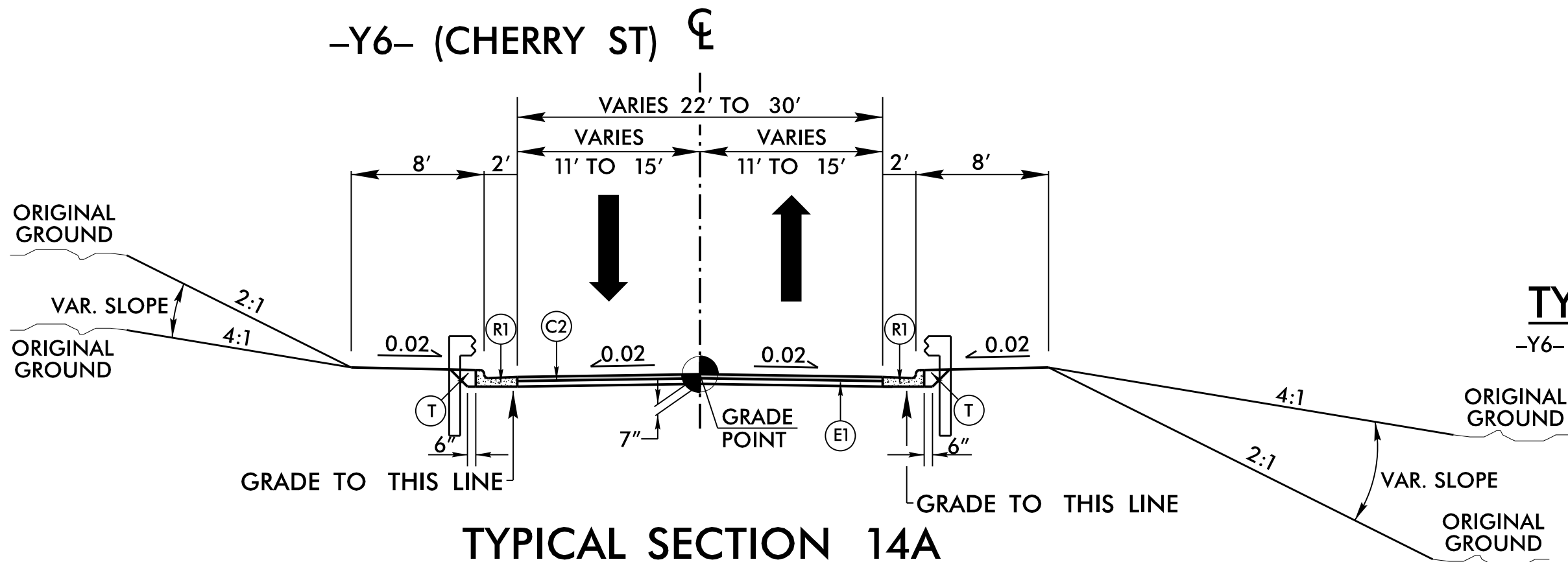
USE INSET 'O' IN CONJUNCTION
WITH TYPICAL SECTION NO. 14
-Y9- FROM STA. 14+00.00 TO STA. 15+82.32



TYPICAL SECTION 14

TYPICAL SECTION 14

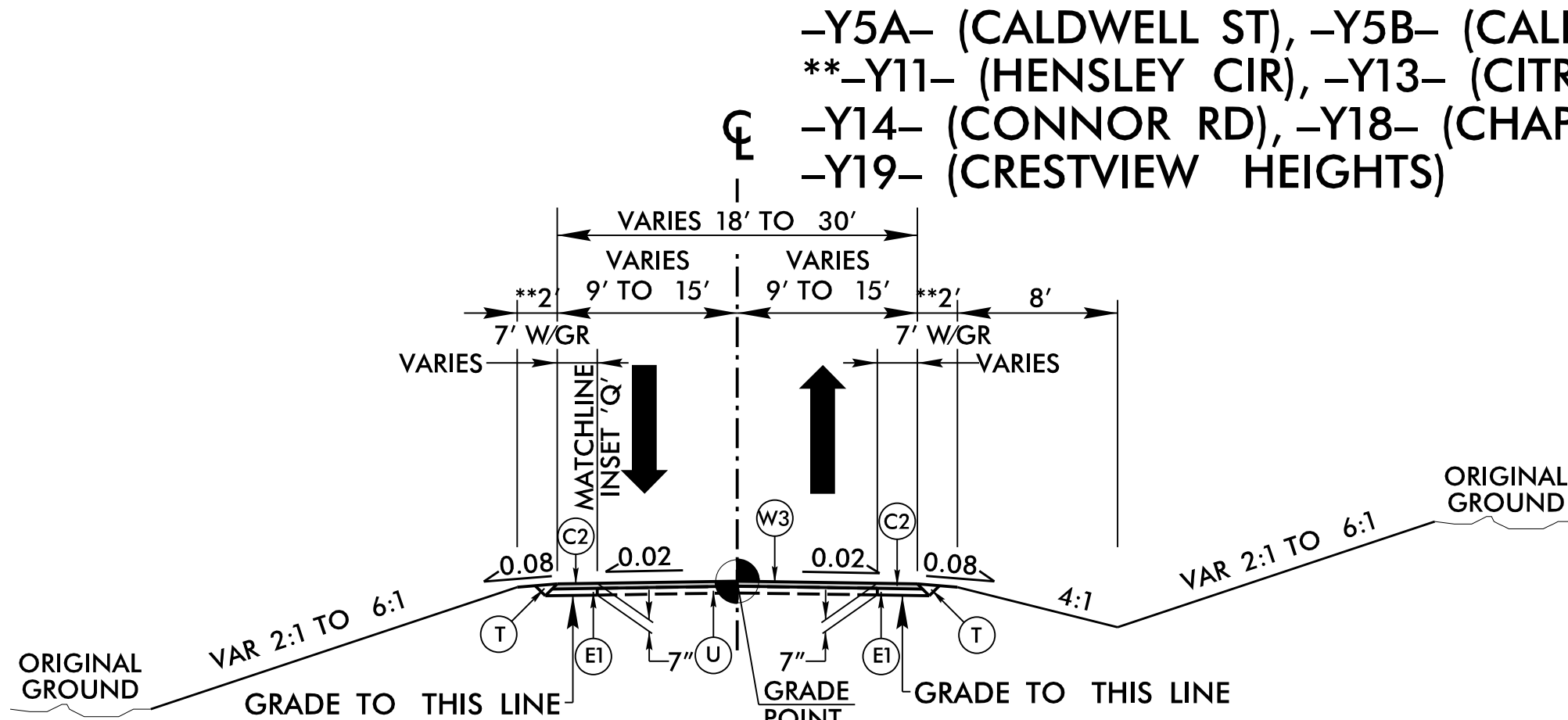
-Y4- FROM STA. 11+25.00 TO STA. 14+20.64
-Y6- FROM STA. 12+50.00 TO STA. 12+65.00
-Y9- FROM STA. 11+88.85 TO STA. 15+82.32



TYPICAL SECTION 14A

TYPICAL SECTION 14A

-Y6- FROM STA. 12+65.00 TO STA. 15+03.75

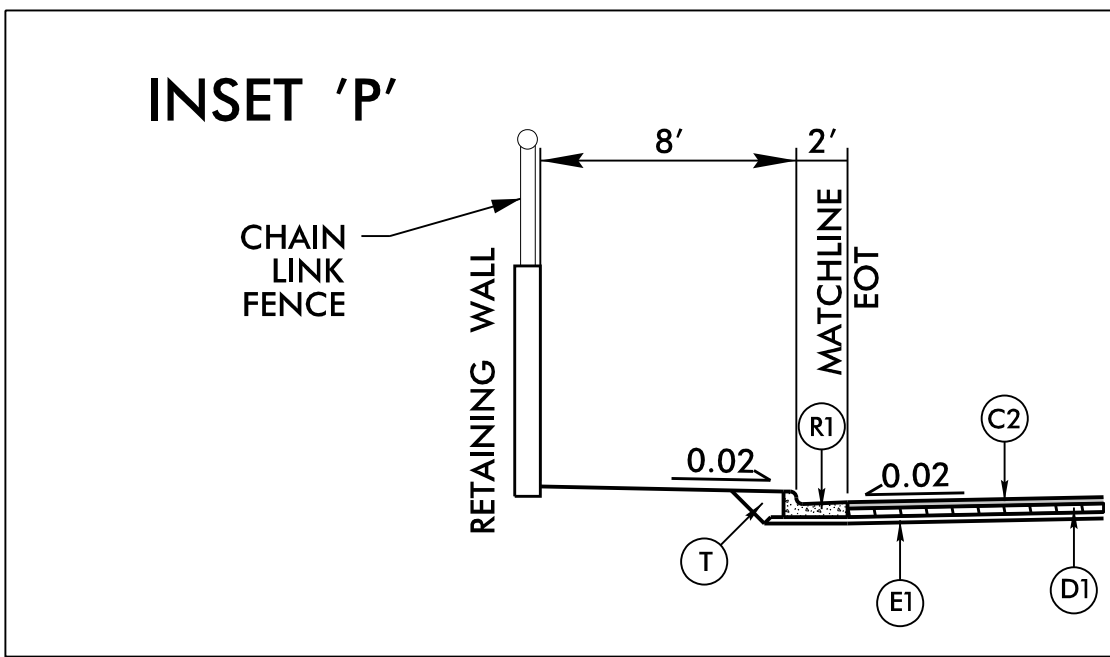


TYPICAL SECTION 15

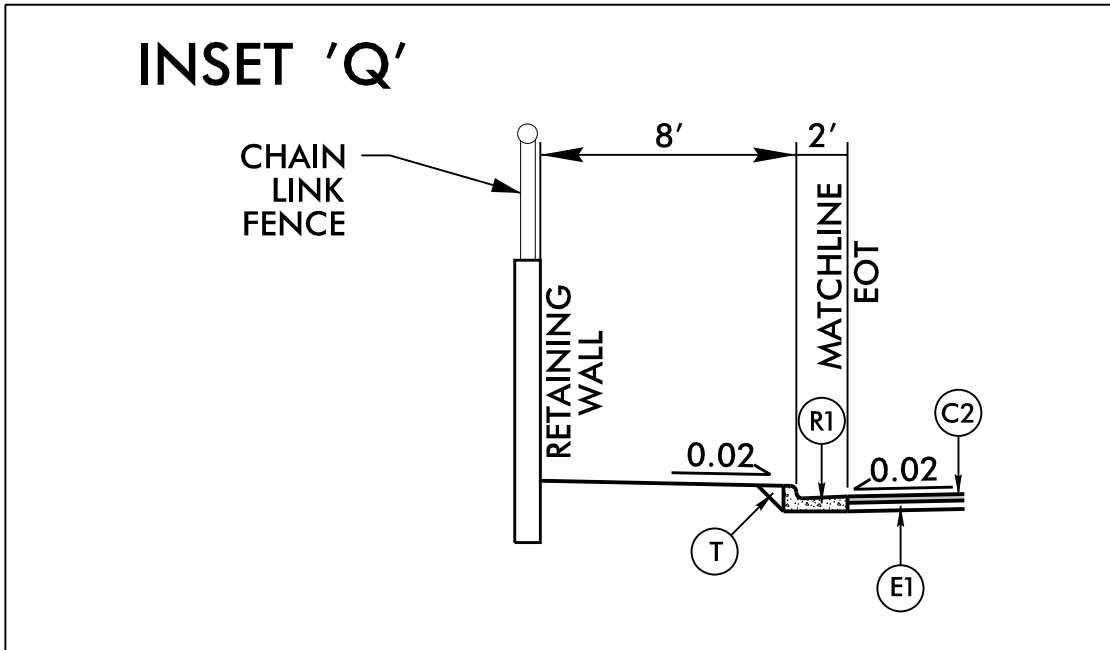
**USE 4' FDPS WIDTHS ON -Y11-

TYPICAL SECTION 15

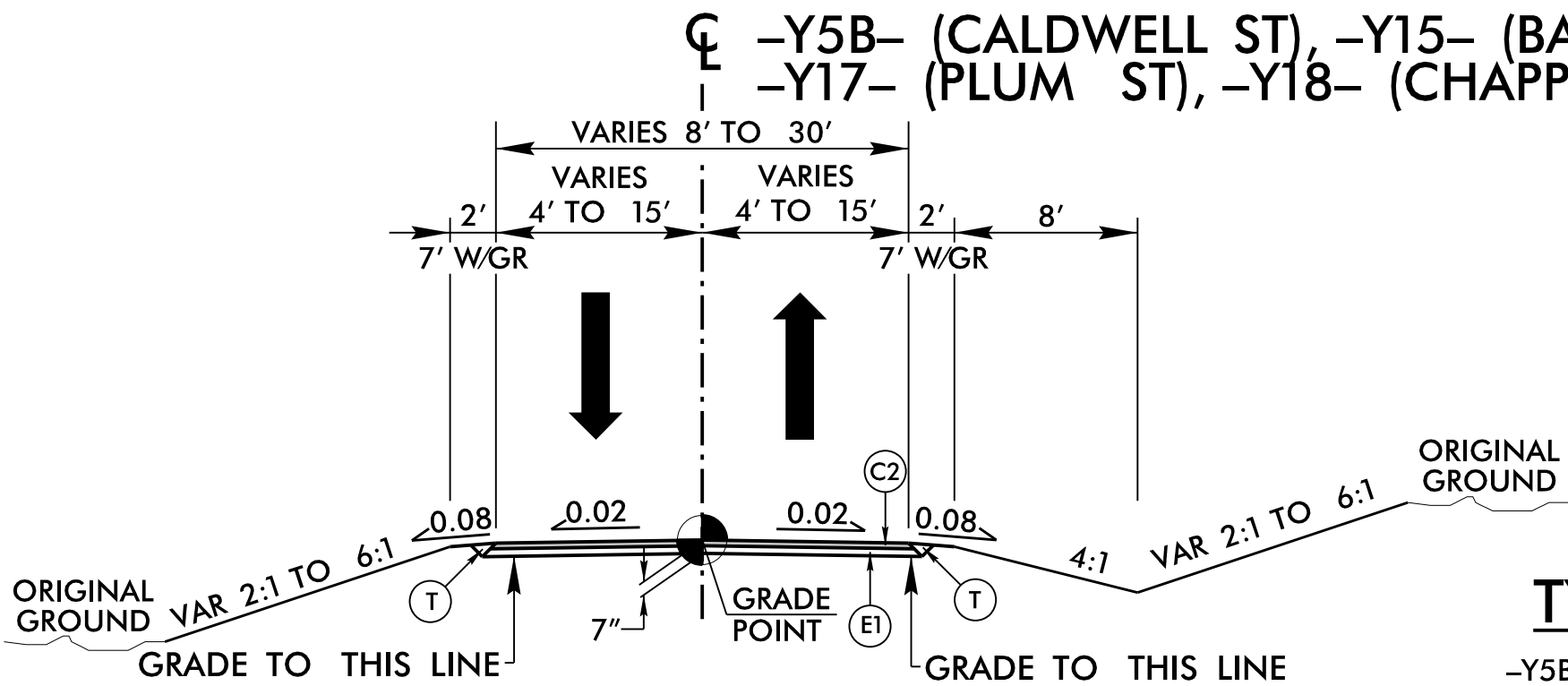
-Y5A- FROM STA. 10+11.00 TO STA. 12+50.00
-Y5B- FROM STA. 10+0.00 TO STA. 11+23.60
-Y11- FROM STA. 10+12.06 TO STA. 11+20.00
-Y13- FROM STA. 10+37.89 TO STA. 11+08.00
-Y14- FROM STA. 10+70.00 TO STA. 13+14.50
-Y18- FROM STA. 10+25.00 TO STA. 11+00.00
-Y19- FROM STA. 10+37.84 TO STA. 11+25.00



USE INSET 'P' IN CONJUNCTION
WITH TYPICAL SECTION NO. 16
-Y15- FROM STA. 12+10.00 TO STA. 13+35.00 LT



USE INSET 'Q' IN CONJUNCTION
WITH TYPICAL SECTION NO. 15
-Y14- FROM STA. 10+70.00 TO STA. 12+33.41 LT



TYPICAL SECTION 16

TYPICAL SECTION 16

-Y5B- FROM STA. 11+23.60 TO STA. 13+11.68
-Y15- FROM STA. 10+10.00 TO STA. 14+68.32
-Y17- FROM STA. 10+09.00 TO STA. 10+85.00
-Y18- FROM STA. 11+00.00 TO STA. 11+95.05

PROJECT REFERENCE NO.	SHEET NO.
R-5600	2A-6
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
	
10/12/2025	10/10/2025
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PAVEMENT SCHEDULE

C1	2"	S9.5B
C2	3"	S9.5B
C3	VAR.	S9.5B
C4	3"	S9.5C
C5	VAR.	S9.5C
D1	4"	I19.0C
D2	VAR.	I19.0C
E1	4"	B25.0C
E2	VAR.	B25.0C
J1	6"	ABC
K	SUBGRADE STAB.	
N	GEOTEXTILE	
P	PRIME COAT	
R1	2'-6"	CONC. C&G
R2	5"	CONC. ISLAND
R3	2'-9"	CONC. C&G
R4	1'-6"	CONC. C&G
R5	8" x 18"	CONC. CURB
R6	2'-0"	CONC. VALLEY
S	4"	CONCRETE SIDEWALK
T	EARTH MATERIAL	
U	EXISTING PAVEMENT	
W1	VAR. WEDGING	
W2	VAR. WEDGING	
W3	VAR. WEDGING	



TYPICAL SECTION 17

-Y7- FROM STA. 10+40.11 TO STA. 12+11.43
-Y16- FROM STA. 10+39.53 TO STA. 12+32.00
-Y24- FROM STA. 11+17.09 TO STA. 12+20.00



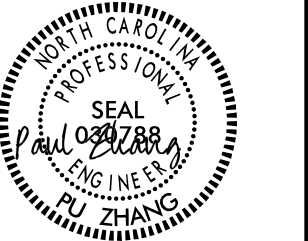
TYPICAL SECTION 18

-Y8- FROM STA. 10+37.96 TO STA. 11+10.00
-Y13- FROM STA. 10+37.89 TO STA. 11+08.00



TYPICAL SECTION 19

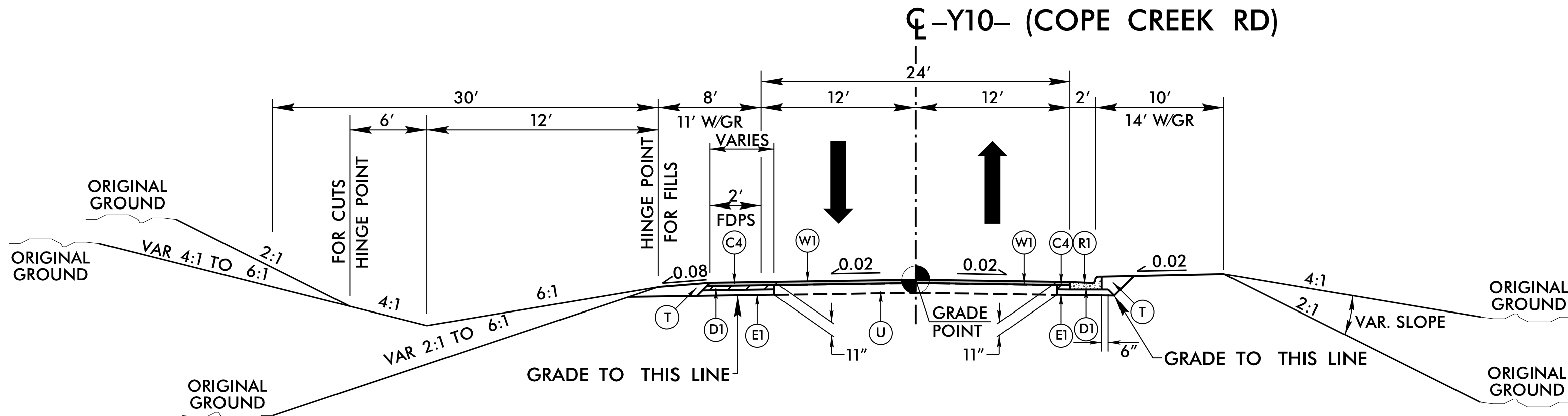
-Y10- FROM STA. 10+37.75 TO STA. 12+91.15

PROJECT REFERENCE NO.		SHEET NO.	
R-5600		2A-7	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
			
10/12/2025		10/10/2025	
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PAVEMENT SCHEDULE		
C1	2"	S9.5B
C2	3"	S9.5B
C3	VAR.	S9.5B
C4	3"	S9.5C
C5	VAR.	S9.5C
D1	4"	I19.0C
D2	VAR.	I19.0C
E1	4"	B25.0C
E2	VAR.	B25.0C
J1	6"	ABC
K	SUBGRADE STAB.	
N	GEOTEXTILE	
P	PRIME COAT	
R1	2'-6"	CONC. C&G
R2	5"	CONC. ISLAND
R3	2'-9"	CONC. C&G
R4	1'-6"	CONC. C&G
R5	8" x 18"	CONC. CURB
R6	2'-0"	CONC. VALLEY
S	4"	CONCRETE SIDEWALK
T	EARTH MATERIAL	
U	EXISTING PAVEMENT	
W1	VAR. WEDGING	
W2	VAR. WEDGING	
W3	VAR. WEDGING	

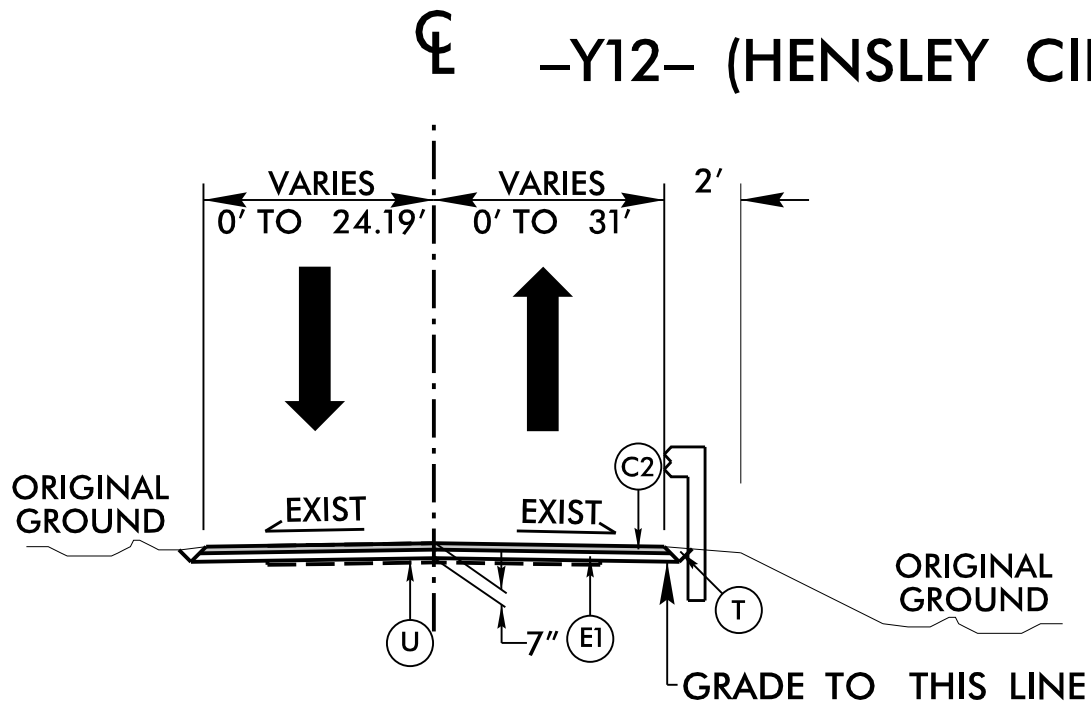
6/2/2025

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DATE: 9/2/2025
TIME: 3:16:26 PM
FILE: \



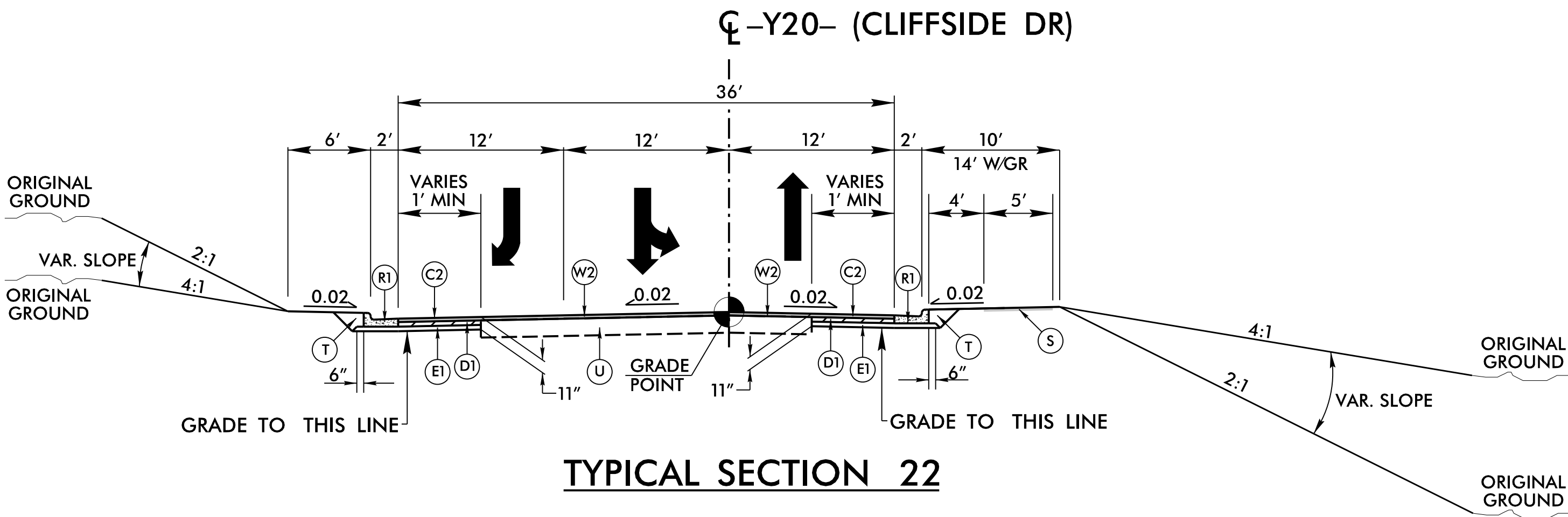
TYPICAL SECTION 20

TYPICAL SECTION 20
-Y10- FROM STA. 12+91.15 TO STA. 13+70.00



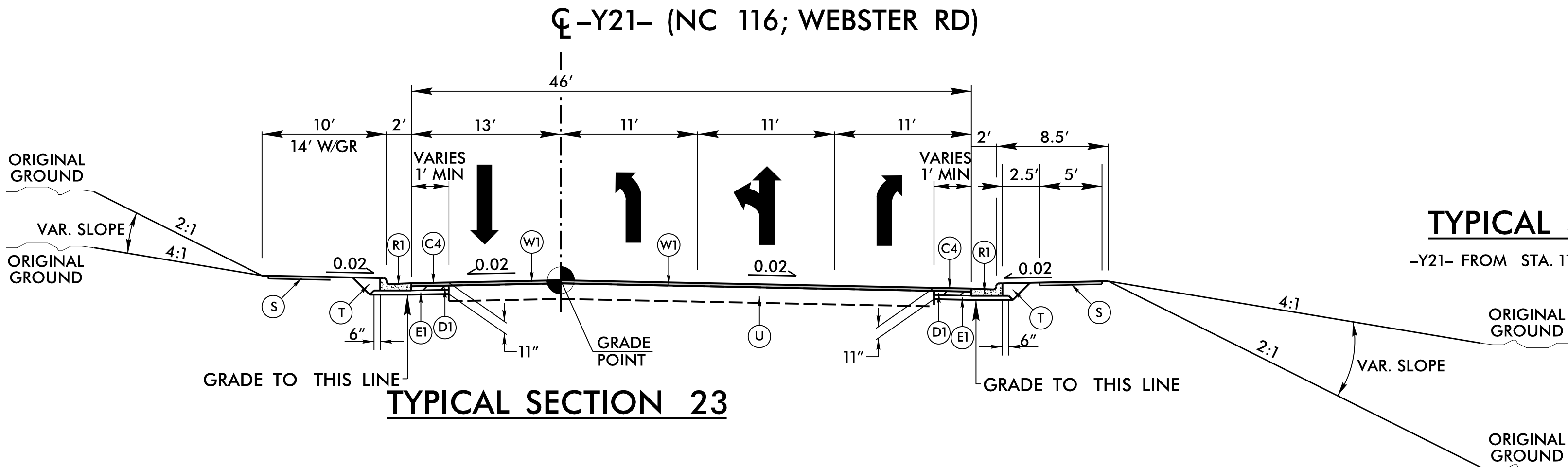
TYPICAL SECTION 21

TYPICAL SECTION 21
-Y12- FROM STA. 12+30.00 TO STA. 13+15.60



TYPICAL SECTION 22

TYPICAL SECTION 22
-Y20- FROM STA. 10+37.77 TO STA. 11+50.00

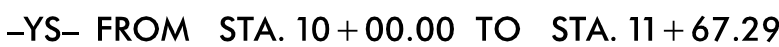
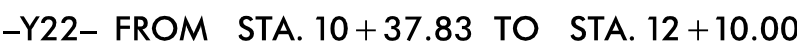


TYPICAL SECTION 23

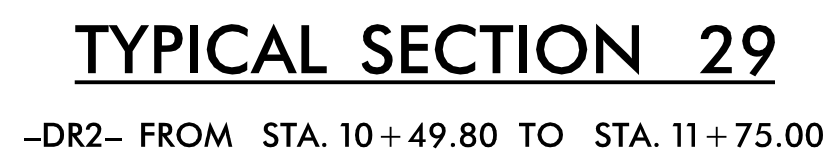
TYPICAL SECTION 23
-Y21- FROM STA. 11+17.55 TO STA. 12+70.94

PROJECT REFERENCE NO.		SHEET NO.	
R-5600		2A-8	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
			
10/12/2025		10/10/2025	
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PAVEMENT SCHEDULE		
C1	2"	S9.5B
C2	3"	S9.5B
C3	VAR.	S9.5B
C4	3"	S9.5C
C5	VAR.	S9.5C
D1	4"	I19.0C
D2	VAR.	I19.0C
E1	4"	B25.0C
E2	VAR.	B25.0C
J1	6"	ABC
K	SUBGRADE STAB.	
N	GEOTEXTILE	
P	PRIME COAT	
R1	2'-6"	CONC. C&G
R2	5"	CONC. ISLAND
R3	2'-9"	CONC. C&G
R4	1'-6"	CONC. C&G
R5	8" x 18"	CONC. CURB
R6	2'-0"	CONC. VALLEY
S	4"	CONCRETE SIDEWALK
T	EARTH MATERIAL	
U	EXISTING PAVEMENT	
W1	VAR. WEDGING	
W2	VAR. WEDGING	
W3	VAR. WEDGING	



	PAVEMENT SCHEDULE	
C1	2"	S9.5B
C2	3"	S9.5B
C3	VAR.	S9.5B
C4	3"	S9.5C
C5	VAR.	S9.5C
D1	4"	I19.0C
D2	VAR.	I19.0C
E1	4"	B25.0C
E2	VAR.	B25.0C
J1	6"	ABC
K	SUBGRADE STAB.	
N	GEOTEXTILE	
P	PRIME COAT	
R1	2'-6"	CONC. C&G
R2	5"	CONC. ISLAND
R3	2'-9"	CONC. C&G
R4	1'-6"	CONC. C&G
R5	8" x 18"	CONC. CURB
R6	2'-0"	CONC. VALLEY
S	4"	CONCRETE SIDEWALK
T	EARTH MATERIAL	
U	EXISTING PAVEMENT	
W1	VAR. WEDGING	
W2	VAR. WEDGING	
W3	VAR. WEDGING	



INSET 'Q'

2'

4'

EOT MATCHLINE

RETAINING WALL

0.02

0.02

C2

P

J1

T

USE INSET 'R' IN CONJUNCTION
WITH TYPICAL SECTION NO. 30

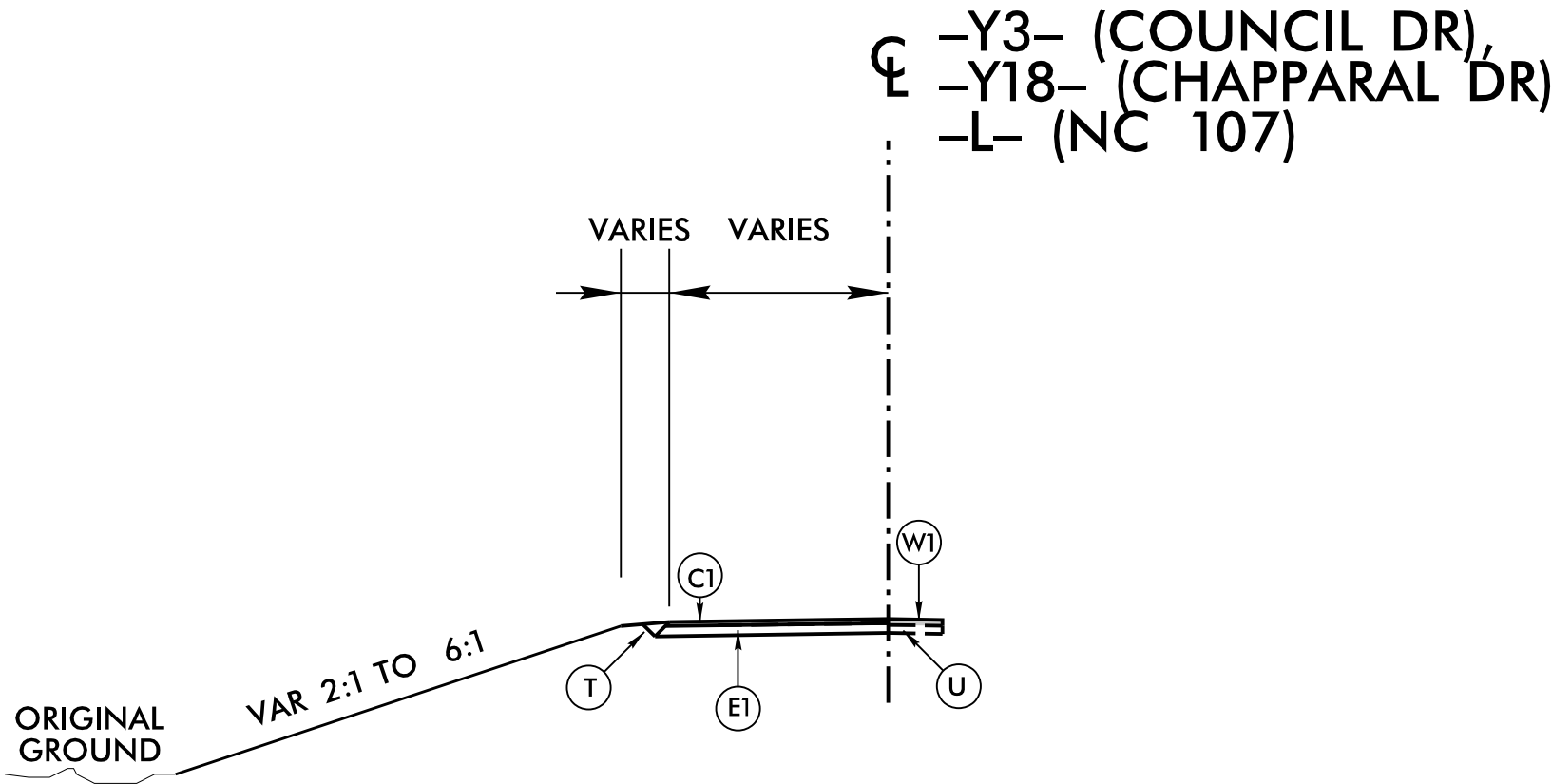
-DR3- FROM STA. 10+50.00 TO STA. 12+00.00
-DR5- FROM STA. 11+50.00 TO STA. 12+67.69

PROJECT REFERENCE NO.		SHEET NO.	
R-5600		2A-10	
ROADWAY DESIGN ENGINEER		PAYMENT DESIGN ENGINEER	
			
10/12/2025		10/10/2025	
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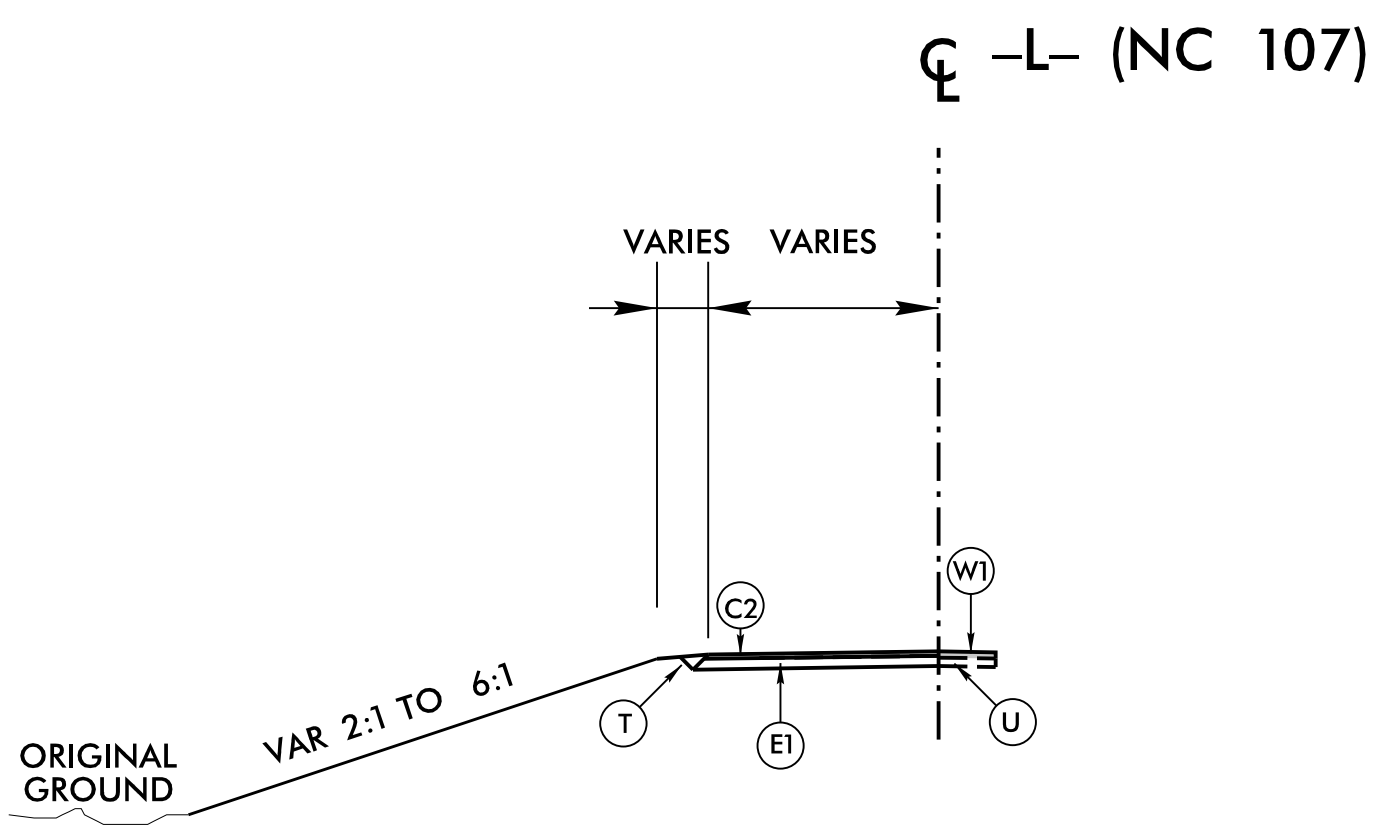
6/2/99

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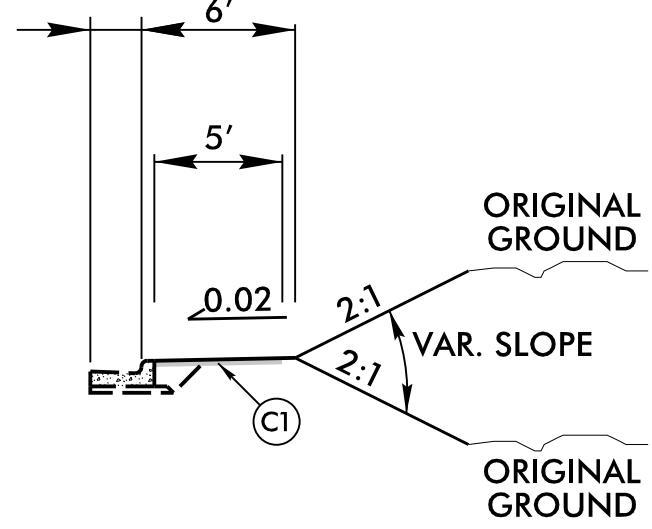


TYPICAL SECTION 31
-Y3- FROM STA. 11+83 TO STA. 13+33
-Y18- FROM STA. 10+74 TO STA. 12+10 (LT)
-Y18- FROM STA. 11+12 TO STA. 12+02 (RT)
-L- FROM STA. 80+00 TO STA. 82+50
NOTE: SEE TMP PLANS FOR LOCATION

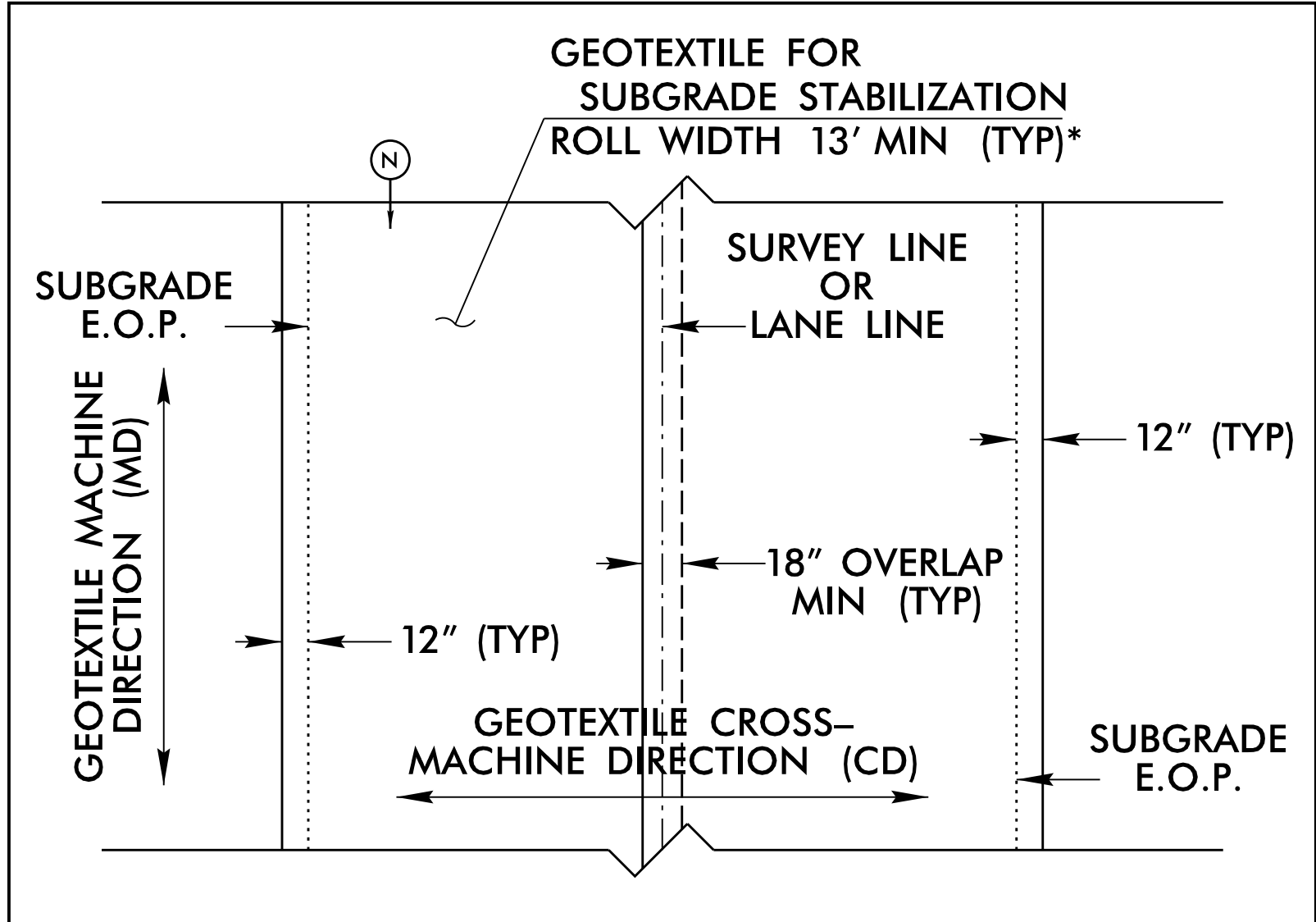


TYPICAL SECTION 32
-L- FROM STA. 119+80 TO STA. 120+02
-L- FROM STA. 120+40 TO STA. 120+48
-L- FROM STA. 121+76 TO STA. 121+85
NOTE: SEE TMP PLANS FOR LOCATION

TEMPORARY SIDEWALK DETAIL



NOTE: SEE TMP PLANS FOR LOCATION



GEOTEXTILE FOR SUBGRADE STABILIZATION (PLAN VIEW)

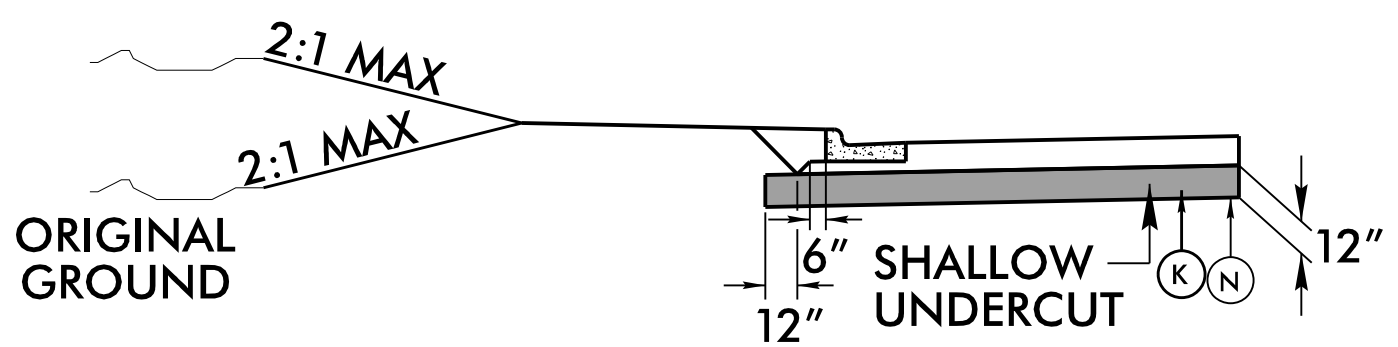
100% COVERAGE

*INSTALL GEOTEXTILE FOR SUBGRADE STABILIZATION WITH MINIMUM ROLL WIDTH UNDER ROADWAY EDGES AND SHOULDERS ADJACENT TO FILL SLOPES

USE GEOTEXTILE FOR SUBGRADE STABILIZATION DETAIL FOR:

- L- STA 27+67.00 TO 30+25.00
- L- STA 34+25.00 TO 35+25.00
- L- STA 39+25.00 TO 40+75.00
- L- STA 102+75.00 TO 103+75.00
- L- STA 116+25.00 TO 119+75.00
- L- STA 122+75.00 TO 125+25.00
- L- STA 128+25.00 TO 129+25.00
- Y5B- STA 11+25.00 TO 12+75.00

DETAIL FOR SHALLOW UNDERCUT



USE SHALLOW UNDERCUT DETAIL FOR:

- L- STA 27+67.00 TO 30+25.00
- L- STA 34+25.00 TO 35+25.00
- L- STA 39+25.00 TO 40+75.00
- L- STA 102+75.00 TO 103+75.00
- L- STA 116+25.00 TO 119+75.00
- L- STA 122+75.00 TO 125+25.00
- L- STA 128+25.00 TO 129+25.00
- Y5B- STA 11+25.00 TO 12+75.00

PAVEMENT SCHEDULE

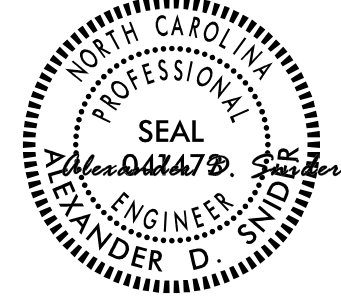
C1	2"	S9.5B
C2	3"	S9.5B
C3	VAR.	S9.5B
C4	3"	S9.5C
C5	VAR.	S9.5C
D1	4"	I19.0C
D2	VAR.	I19.0C
E1	4"	B25.0C
E2	VAR.	B25.0C
J1	6"	ABC
K	SUBGRADE STAB.	
N	GEOTEXTILE	
P	PRIME COAT	
R1	2'-6" CONC. C&G	
R2	5" CONC. ISLAND	
R3	2'-9" CONC. C&G	
R4	1'-6" CONC. C&G	
R5	8" x 18" CONC. CURB	
R6	2'-0" CONC. VALLEY	
S	4" CONCRETE SIDEWALK	
T	EARTH MATERIAL	
U	EXISTING PAVEMENT	
W1	VAR. WEDGING	
W2	VAR. WEDGING	
W3	VAR. WEDGING	

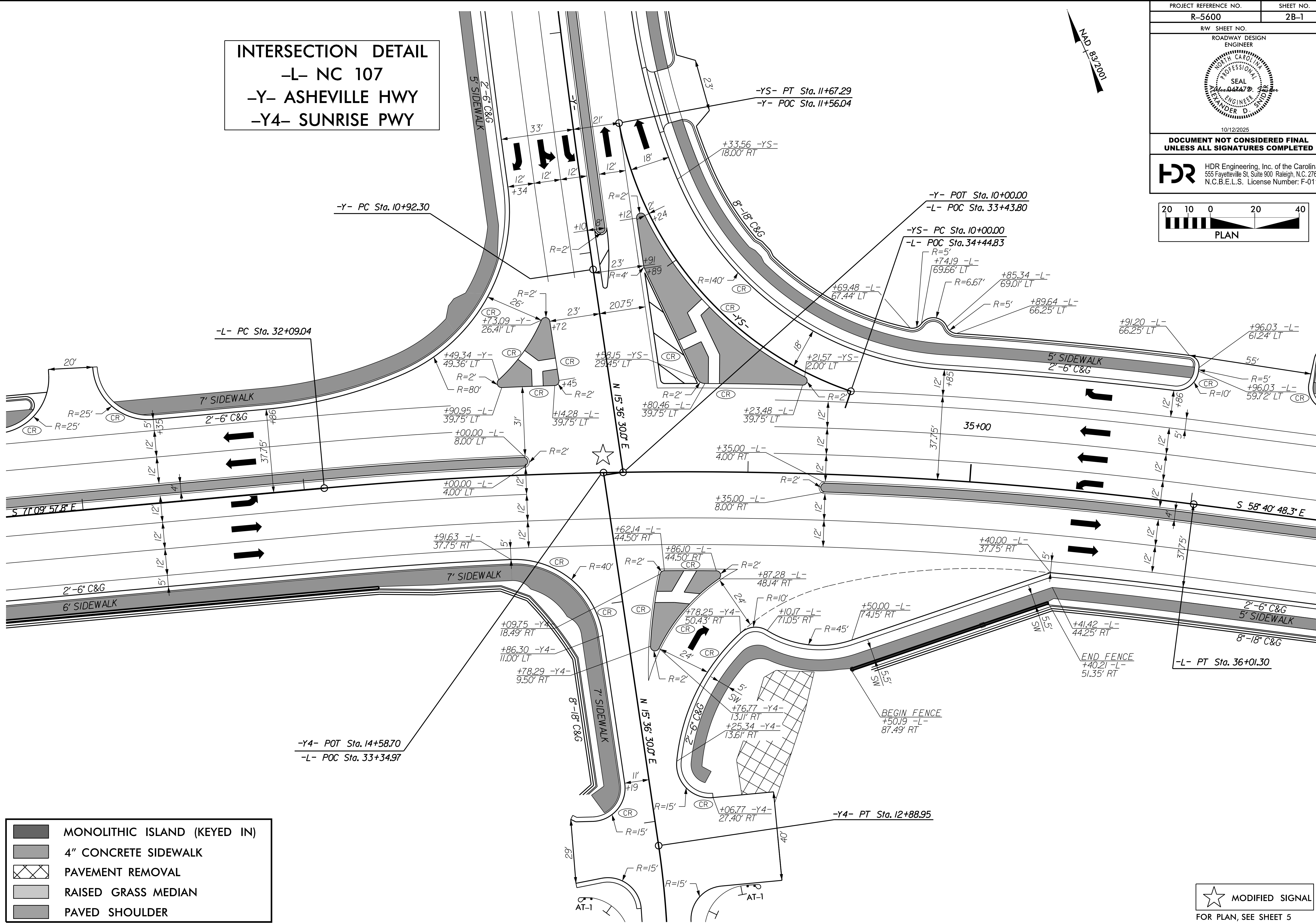
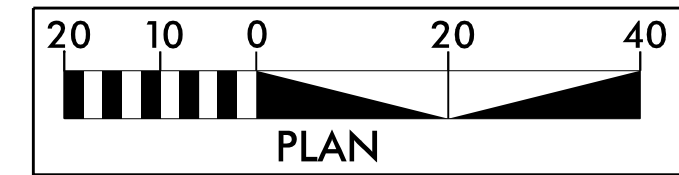
PROJECT REFERENCE NO. R-5600		SHEET NO. 2A-11
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 	
10/12/2025		10/10/2025
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
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5/14/2025

8/7/2025
A:\Projects\15600_Rdy_psh-2B-1.dgn
Rdy

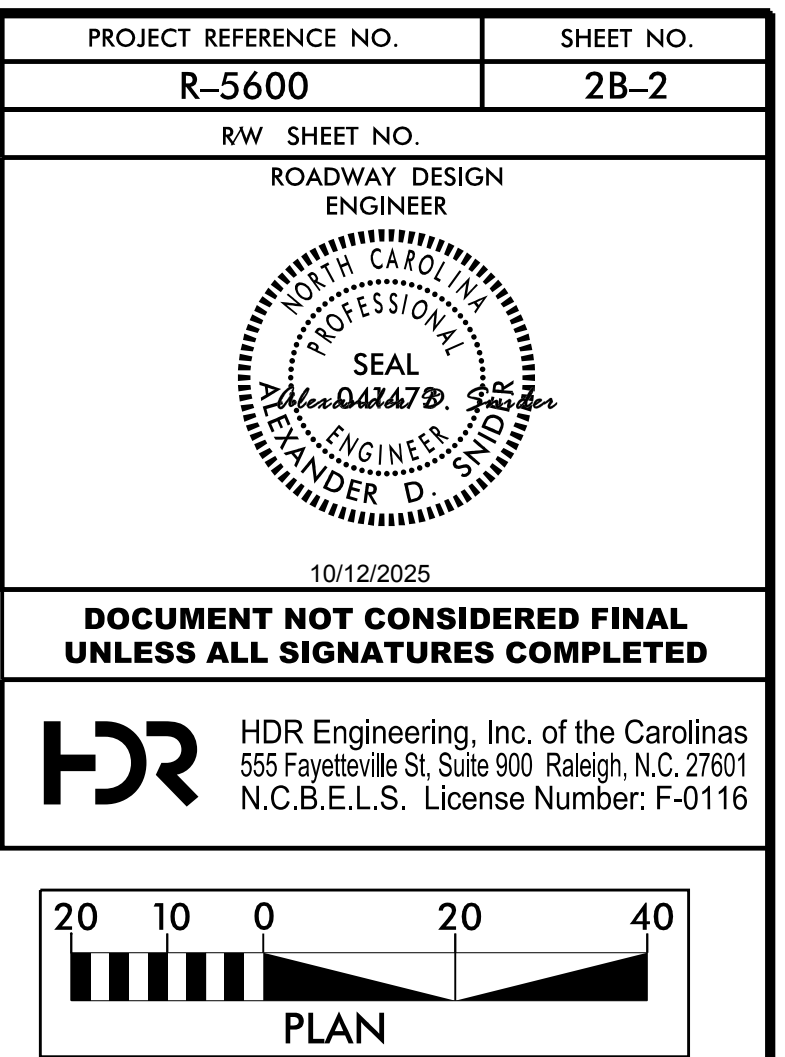
INTERSECTION DETAIL
-L- NC 107
-Y- ASHEVILLE HWY
-Y4- SUNRISE PWY

PROJECT REFERENCE NO.	SHEET NO.
R-5600	2B-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
	
10/12/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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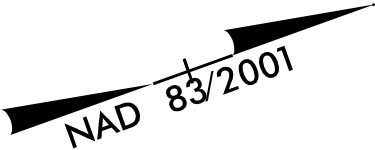


- MONOLITHIC ISLAND (KEYED IN)
- 4" CONCRETE SIDEWALK
- PAVEMENT REMOVAL
- RAISED GRASS MEDIAN
- PAVED SHOULDER

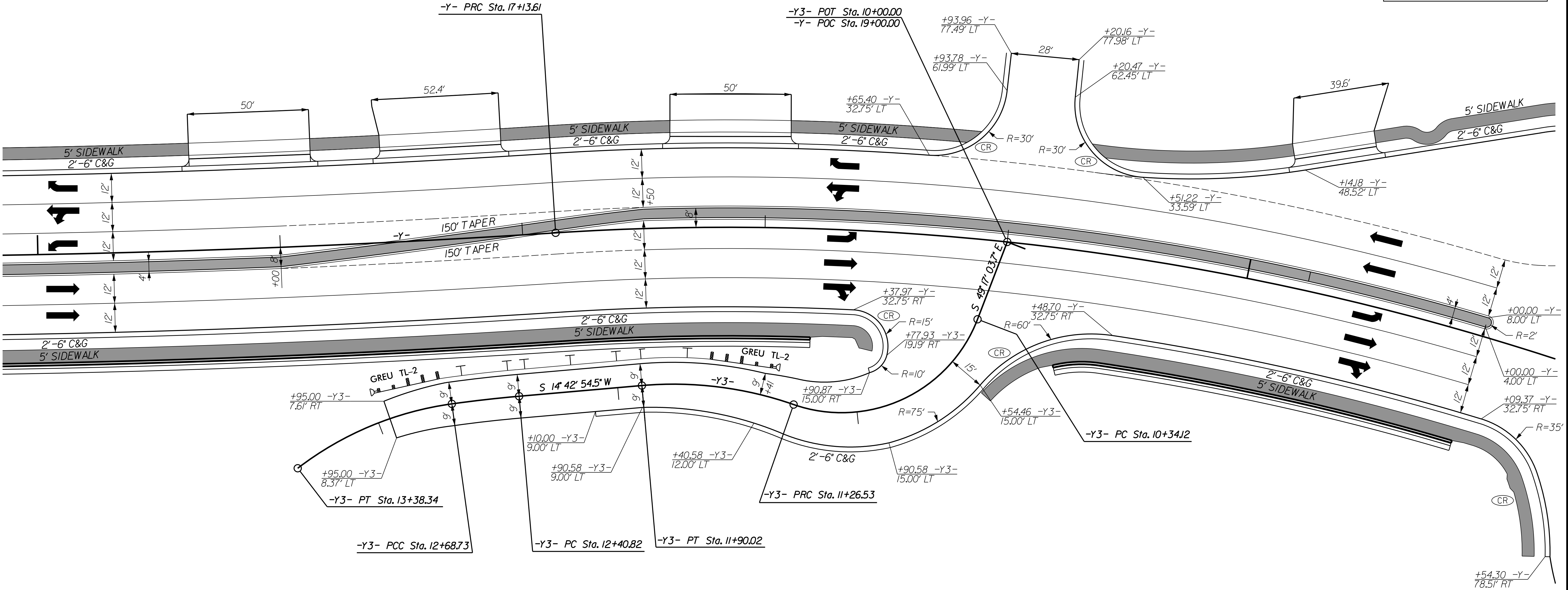
★ MODIFIED SIGNAL
FOR PLAN, SEE SHEET 5



INTERSECTION DETAIL
-Y- ASHEVILLE HWY
-Y3- COUNCIL DR

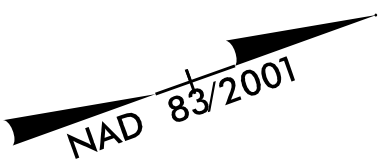


PROJECT REFERENCE NO.	SHEET NO.
R-5600	2B-3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
10/12/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

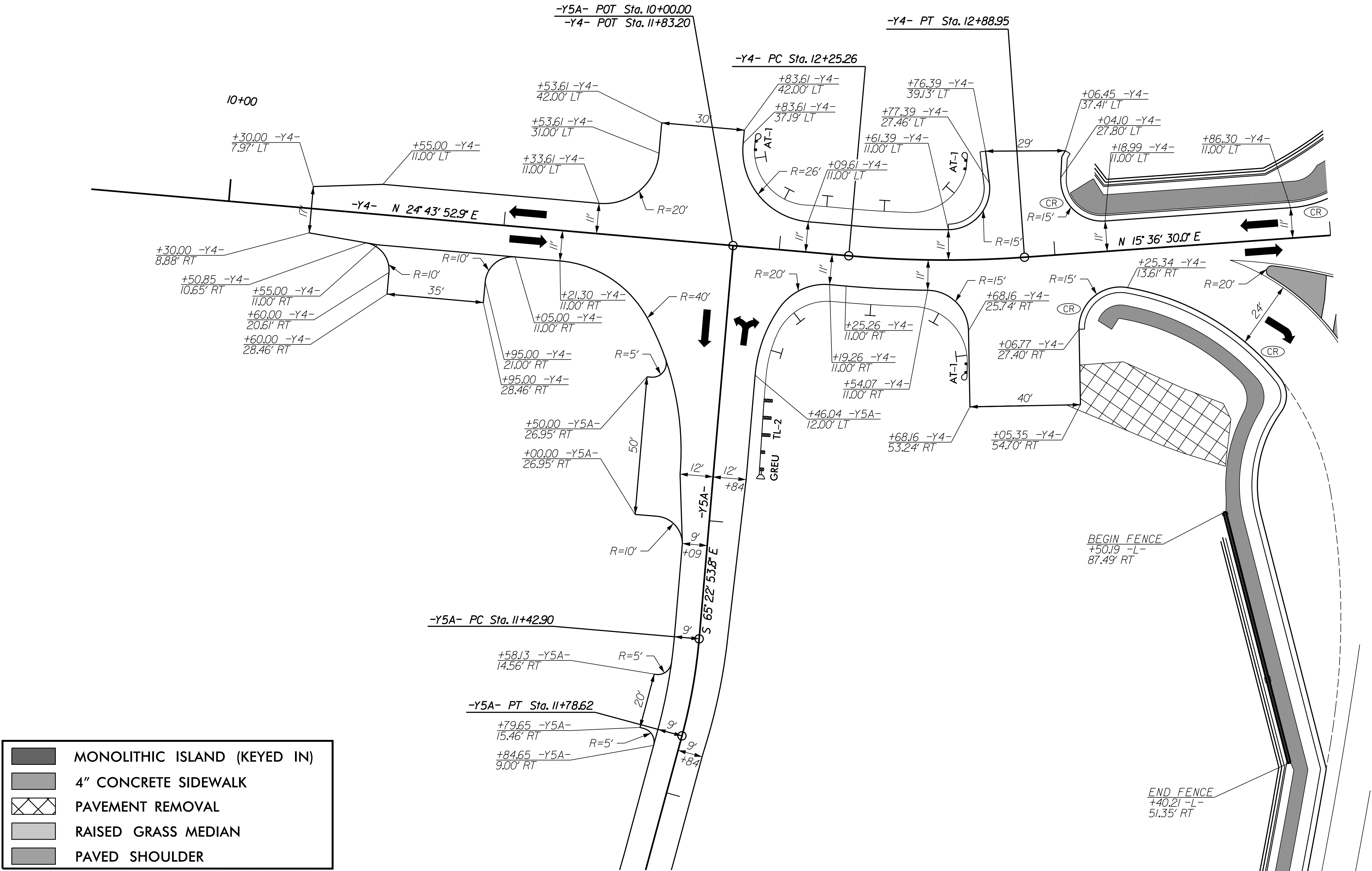
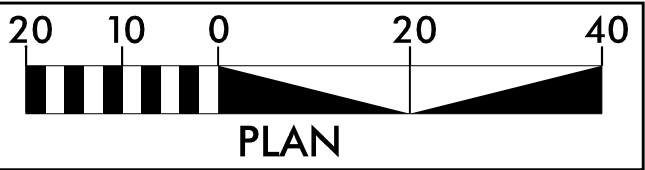


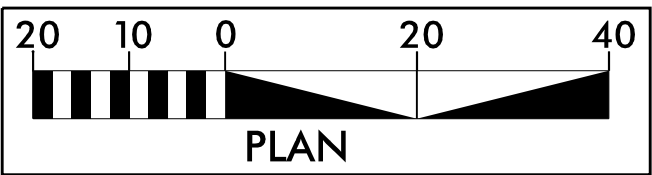
- MONOLITHIC ISLAND (KEYED IN)
- 4" CONCRETE SIDEWALK
- PAVEMENT REMOVAL
- RAISED GRASS MEDIAN
- PAVED SHOULDER

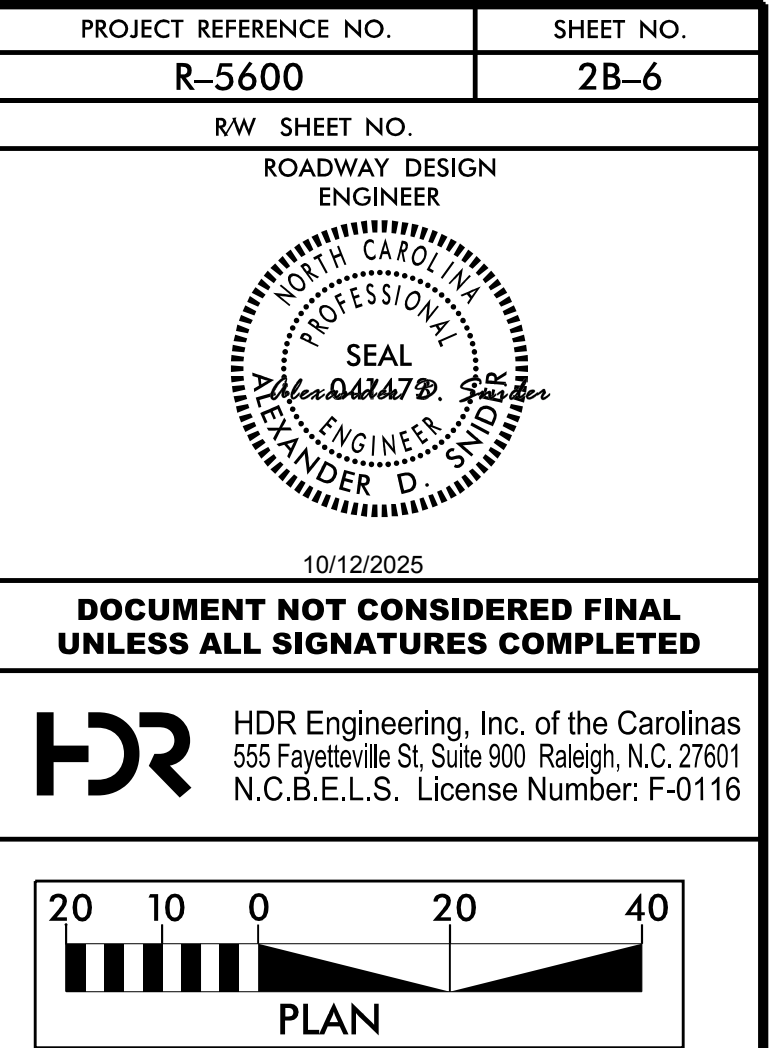
INTERSECTION DETAIL
-Y4-SUNRISE PWY
-Y5A-CALDWELL ST



PROJECT REFERENCE NO.	SHEET NO.
R-5600	2B-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
10/12/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

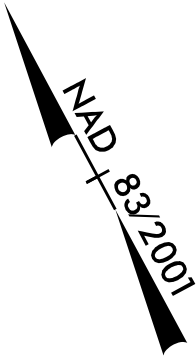




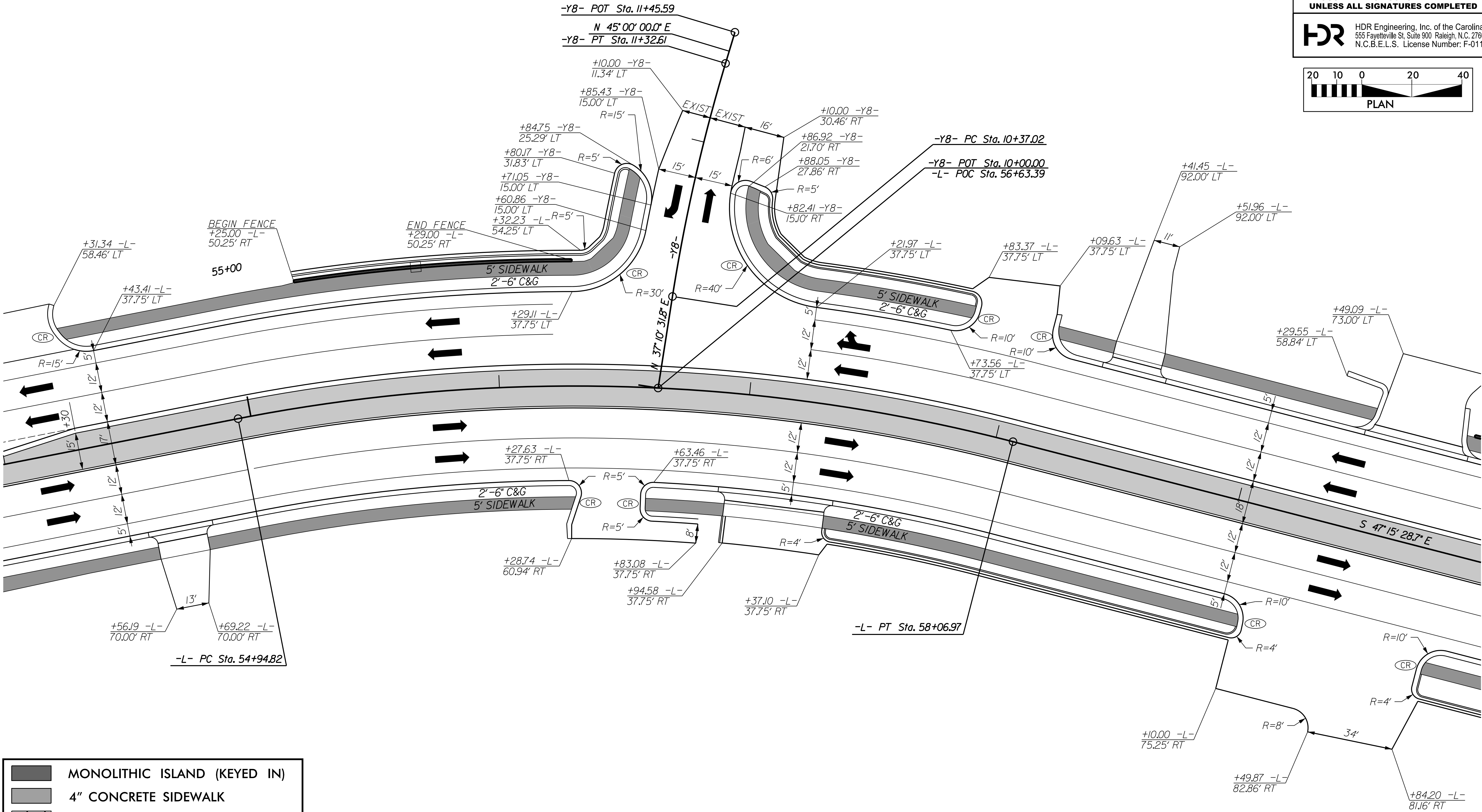


FOR PLAN, SEE SHEET 6

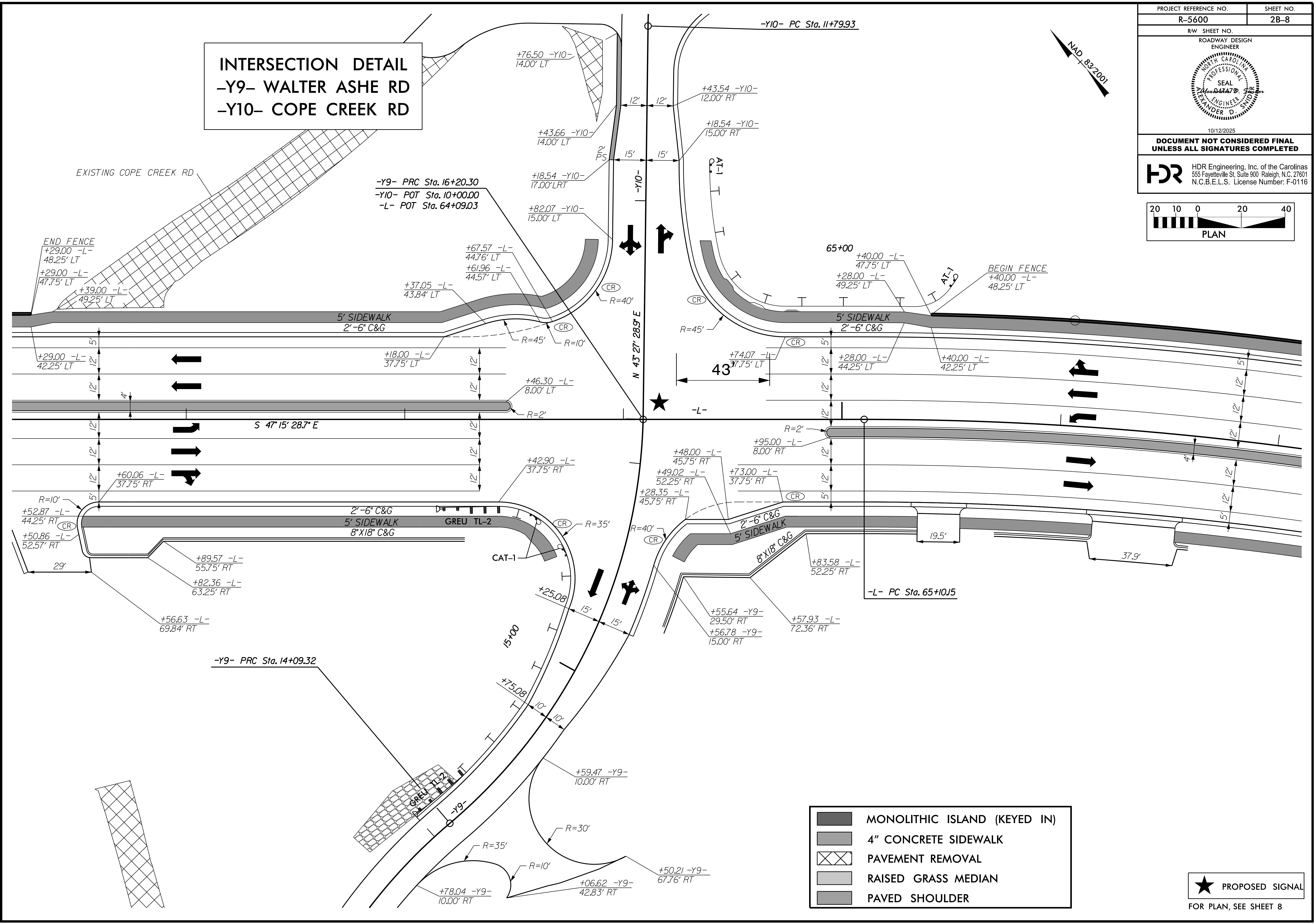
INTERSECTION DETAIL
-Y8- WOODY HAMPTON RD

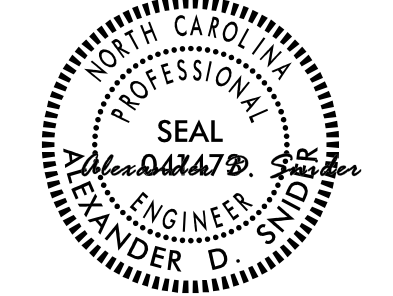


PROJECT REFERENCE NO.	SHEET NO.
R-5600	2B-7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
10/12/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

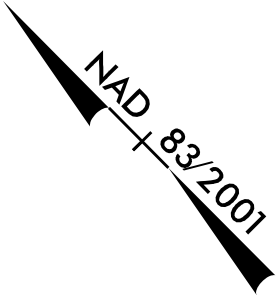


	MONOLITHIC ISLAND (KEYED IN)
	PAVEMENT REMOVAL
	RAISED GRASS MEDIAN
	PAVED SHOULDER

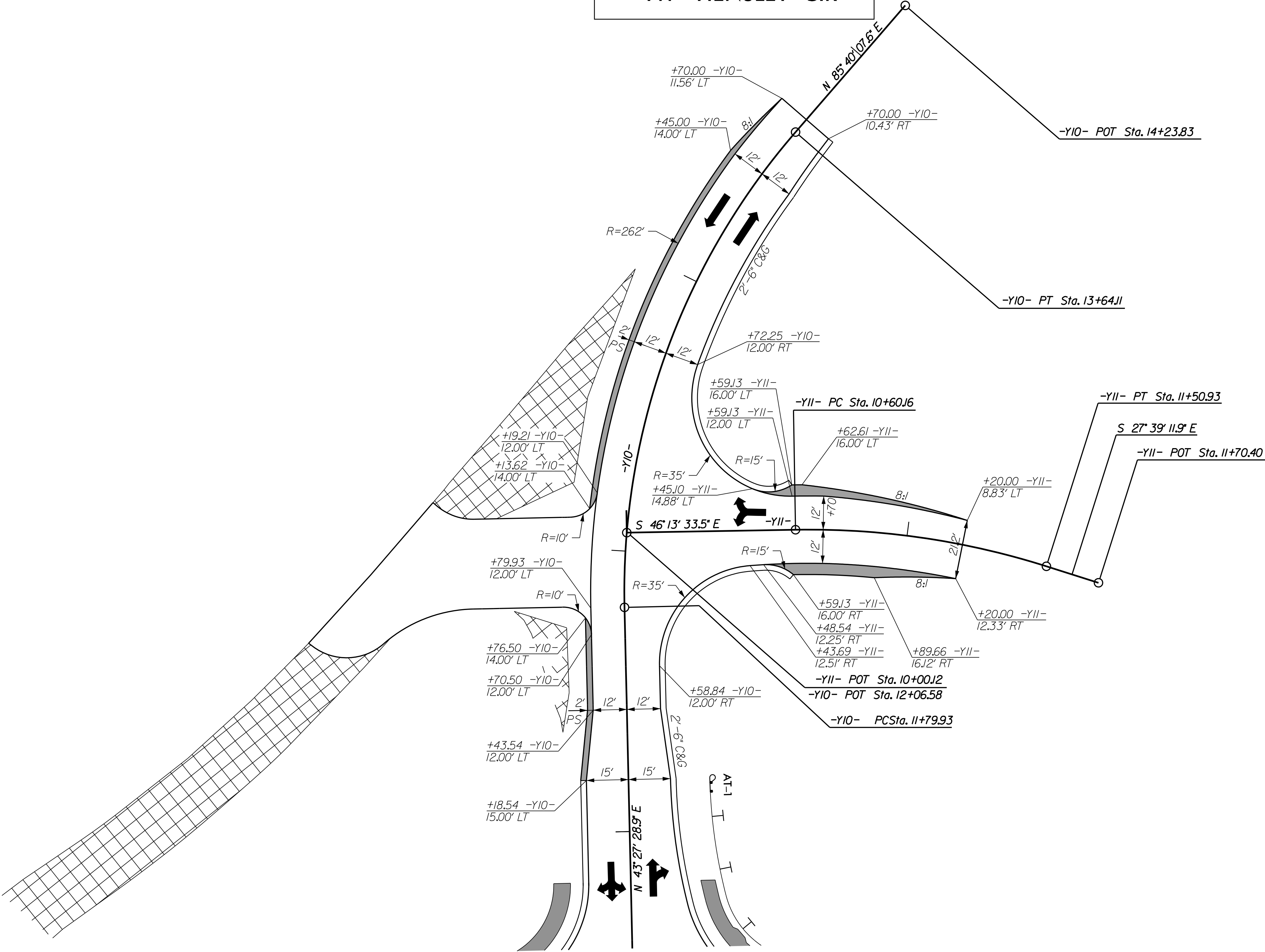


PROJECT REFERENCE NO.	SHEET NO.
R-5600	2B-8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
	
10/12/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	
 PLAN	

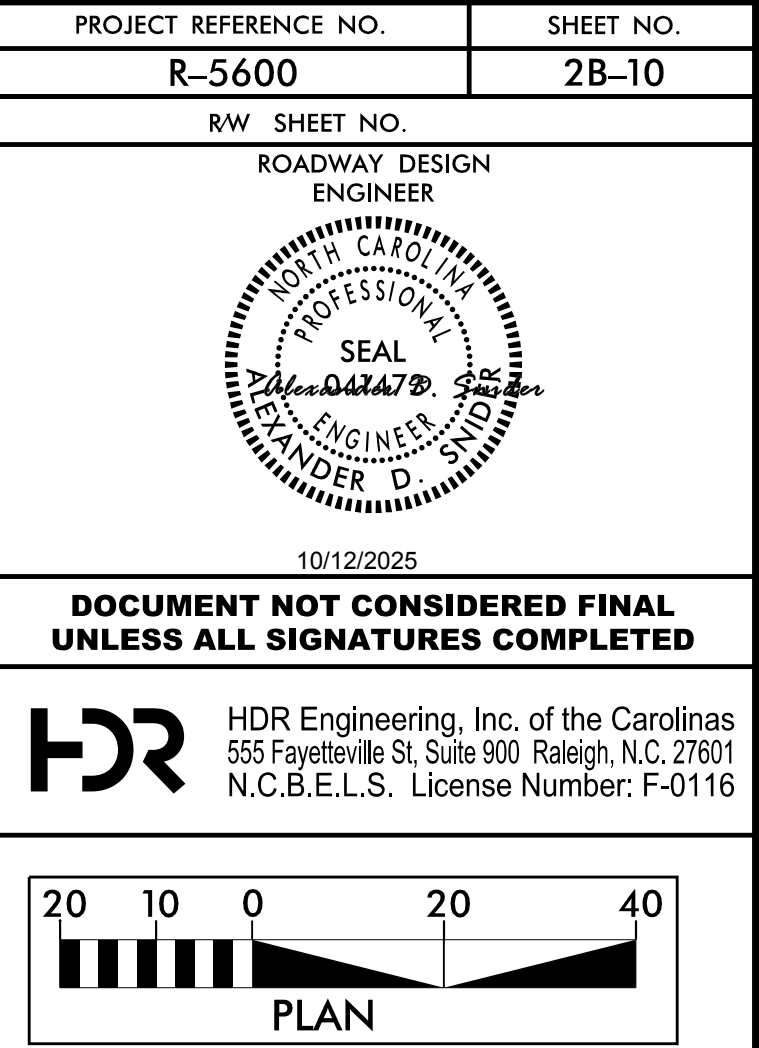
INTERSECTION DETAIL
-Y10- COPE CREEK RD
-Y11- HENSLEY CIR



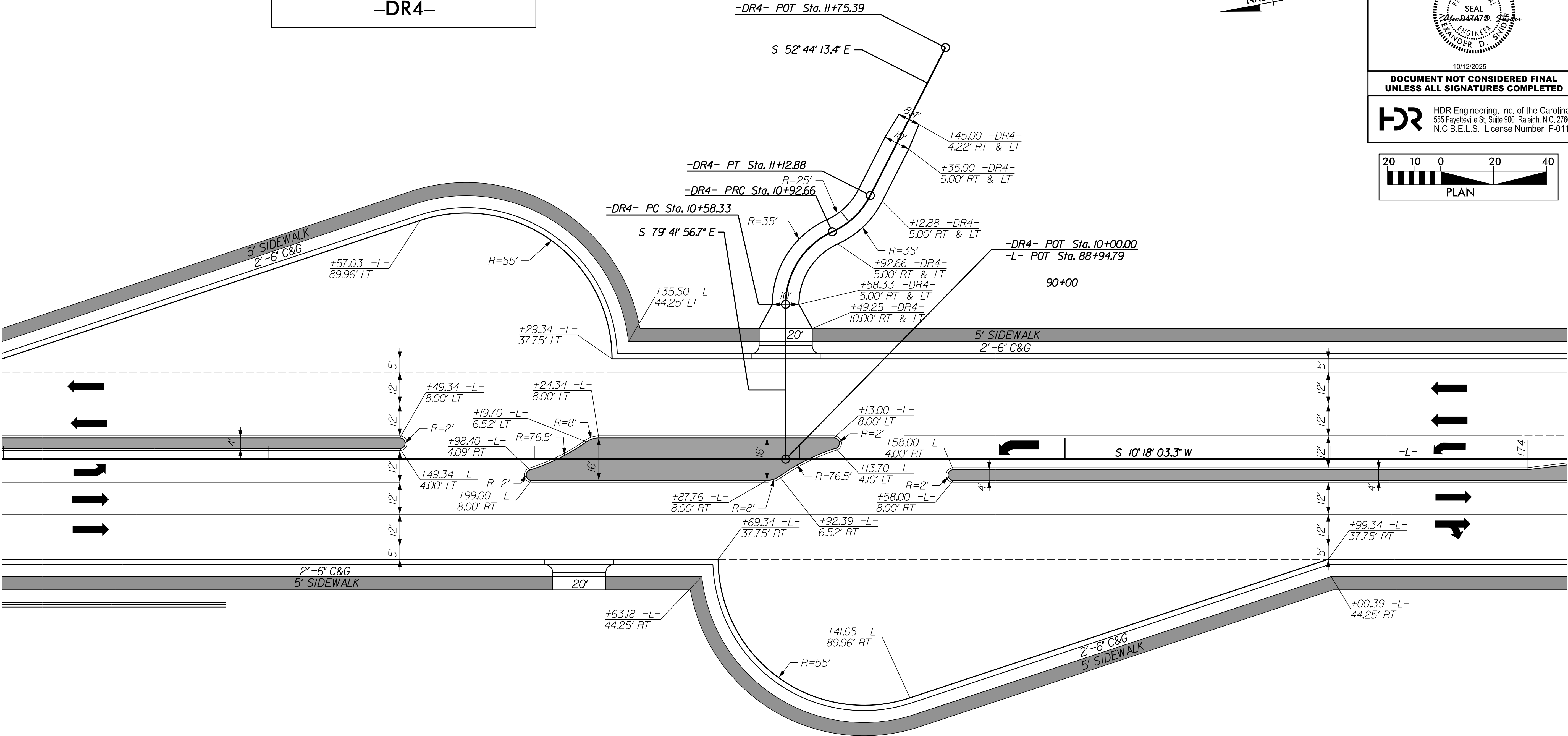
PROJECT REFERENCE NO.	SHEET NO.
R-5600	2B-9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
10/12/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

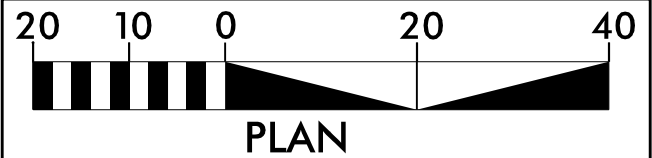


- MONOLITHIC ISLAND (KEYED IN)
- 4" CONCRETE SIDEWALK
- PAVEMENT REMOVAL
- RAISED GRASS MEDIAN
- PAVED SHOULDER

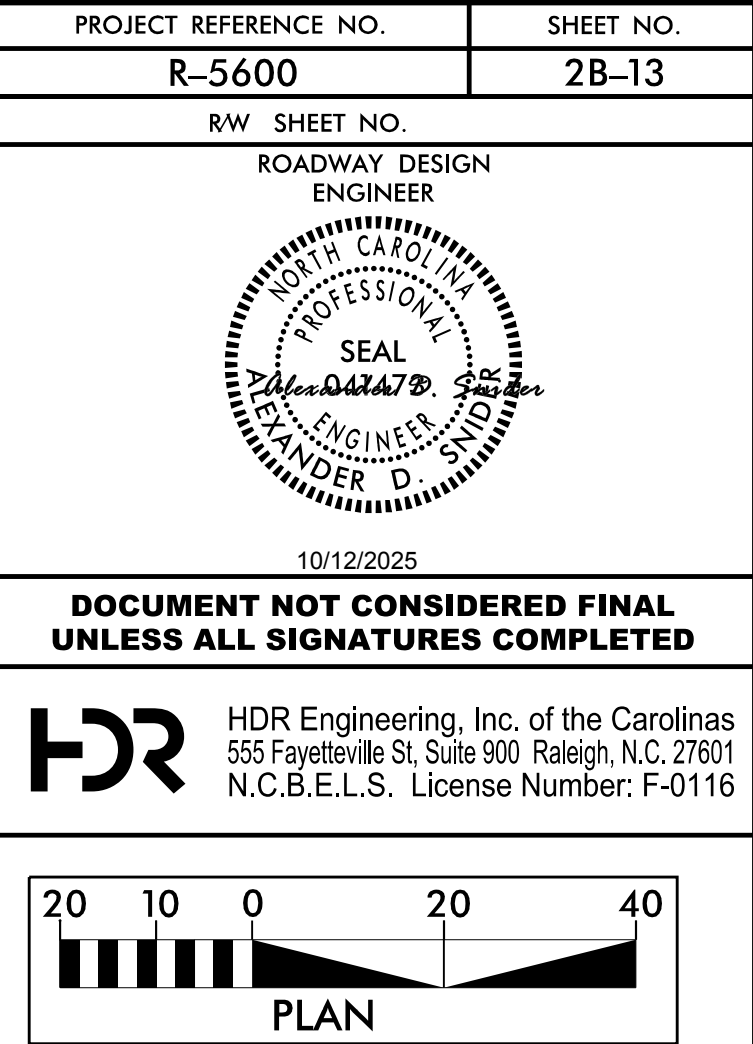


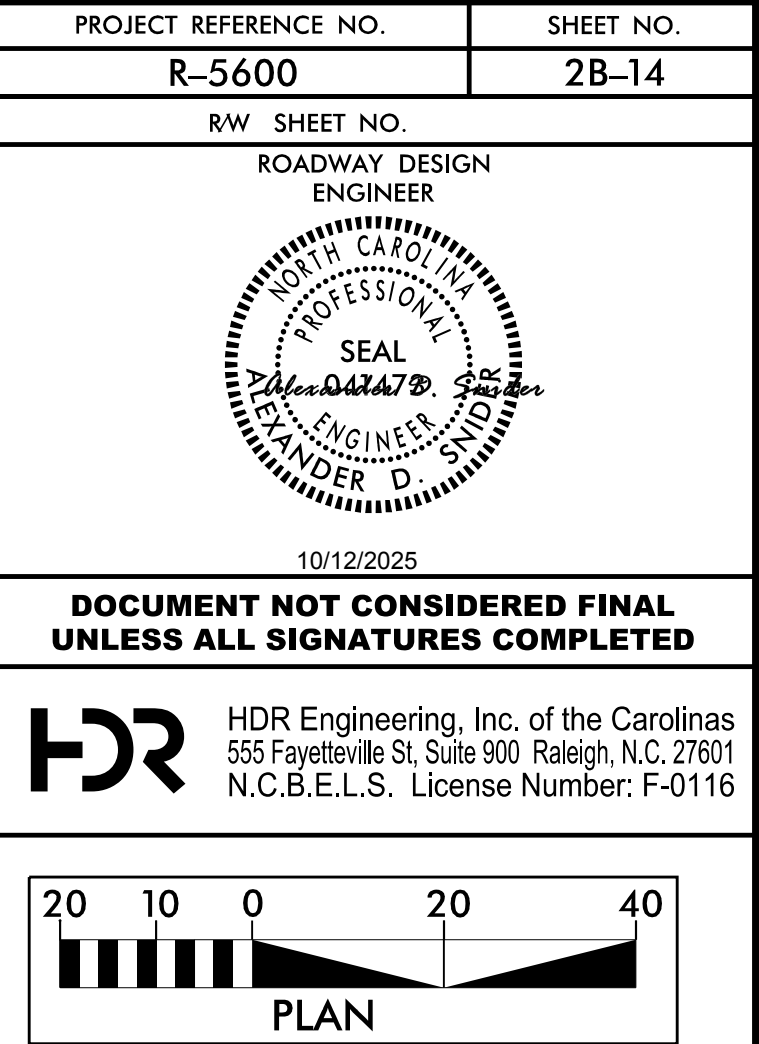
INTERSECTION DETAIL
-DR4-



PROJECT REFERENCE NO.	SHEET NO.
R-5600	2B-11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
	
10/12/2025	
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 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	
	

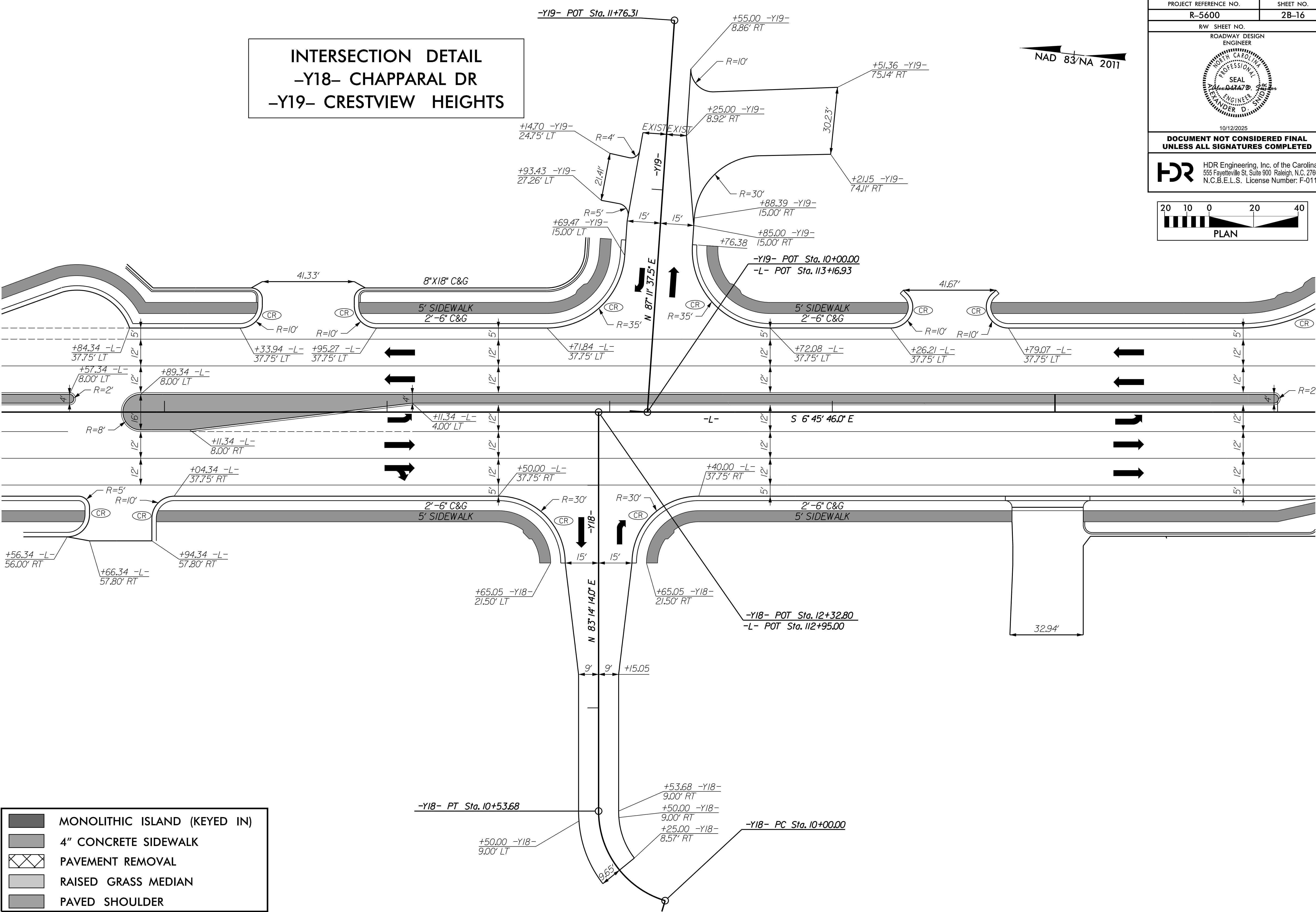
- MONOLITHIC ISLAND (KEYED IN)
- 4" CONCRETE SIDEWALK
- PAVEMENT REMOVAL
- RAISED GRASS MEDIAN
- PAVED SHOULDER

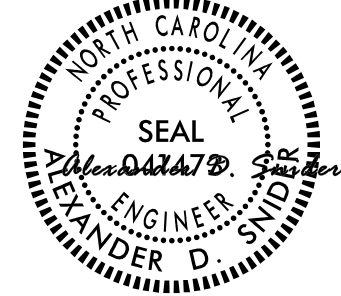


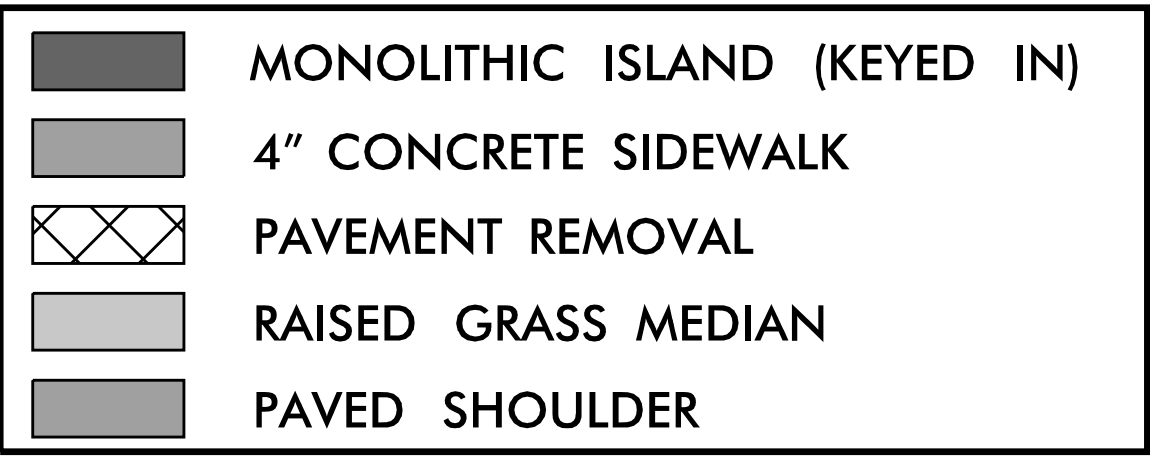




INTERSECTION DETAIL
-Y18- CHAPPARAL DR
-Y19- CRESTVIEW HEIGHTS



PROJECT REFERENCE NO.	SHEET NO.
R-5600	2B-16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
	
10/12/2025	
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 PLAN	



★ MODIFIED SIGNAL
FOR PLAN, SEE SHEET 12

NAD 83/NA 2011



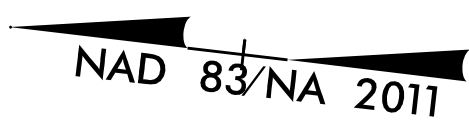
FOR PLAN, SEE SHEET 13

PLAN

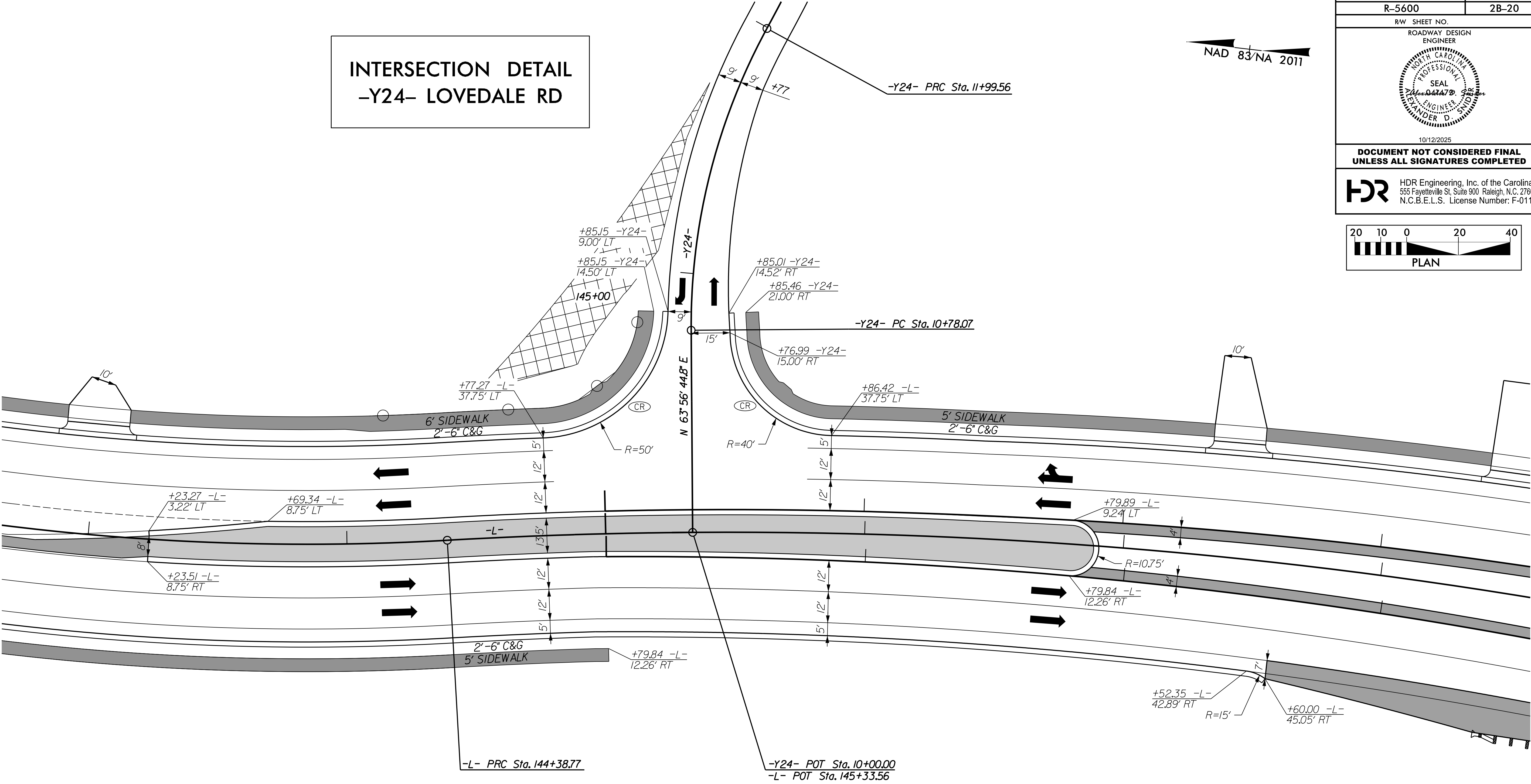


FOR PLAN, SEE SHEET 14

INTERSECTION DETAIL
-Y24- LOVEDALE RD



PROJECT REFERENCE NO.	SHEET NO.
R-5600	2B-20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
10/12/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	



- MONOLITHIC ISLAND (KEYED IN)
- 4" CONCRETE SIDEWALK
- PAVEMENT REMOVAL
- RAISED GRASS MEDIAN
- PAVED SHOULDER

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

ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
FLEXIBLE PIPE

SHEET 1 OF 2
300.01

TOP OF FILL

NORMAL EARTH FOUNDATION

TOP OF FILL

ROCK FOUNDATION
PIPE IN TRENCH

TOP OF FILL

UNSUITABLE MATERIAL FOUNDATION

TOP OF FILL

NORMAL EARTH FOUNDATION

TOP OF FILL

ROCK FOUNDATION
PIPE ABOVE GROUND

TOP OF FILL

UNSUITABLE MATERIAL FOUNDATION

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.



10/13/2025

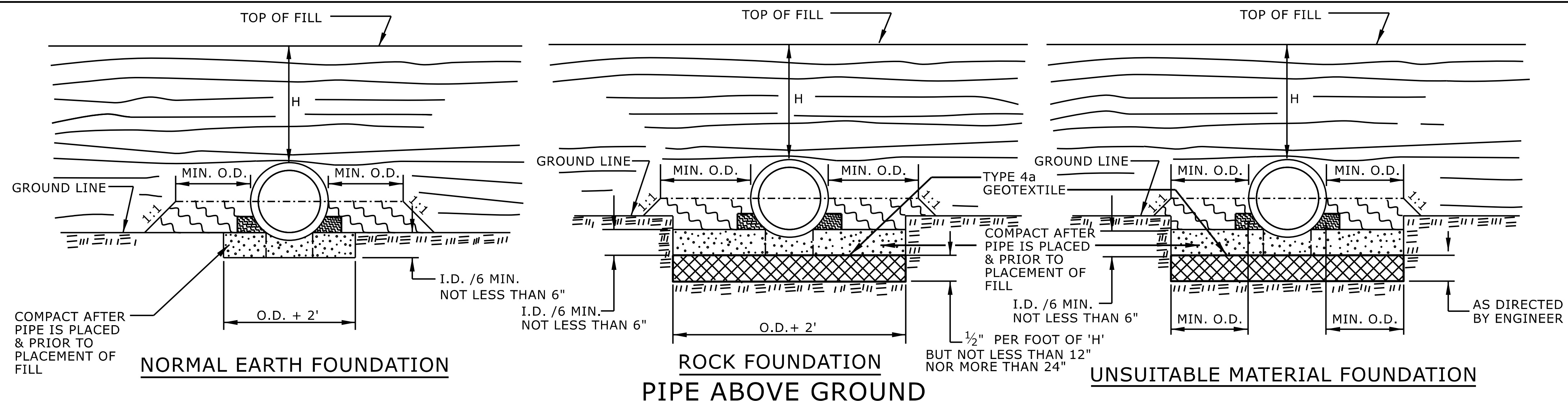
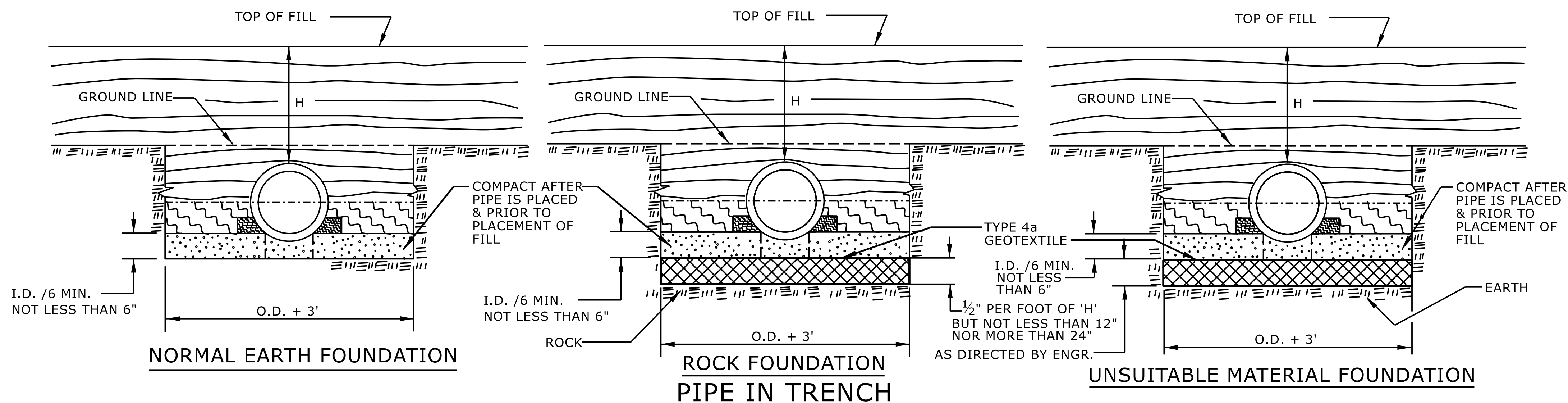
DOCUMENT NOT CONSIDERED FINAL
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CONTRACTS STANDARDS
AND DEVELOPMENT UNIT

Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: DATE:



GENERAL NOTES:
 I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
 O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
 H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT
 ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP
 OF THE EMBANKMENT AT THAT POINT.

	APPROVED SUITABLE LOCAL MATERIAL.
	TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.
	LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

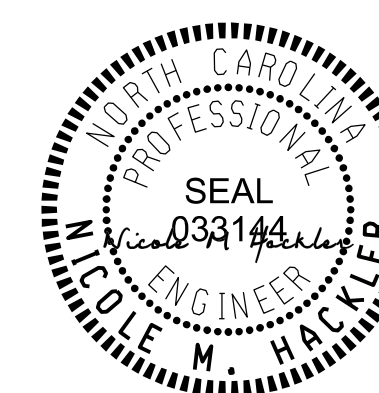
REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS
FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

	SPRINGLINE OF PIPE
	SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.
	UNDISTURBED EARTH MATERIAL
	SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

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

ROADWAY DETAIL DRAWING FOR METHOD OF PIPE INSTALLATION RIGID PIPE

SHEET 2 OF 2
300.01



10/13/2025

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UNLESS ALL SIGNATURES COMPLETED

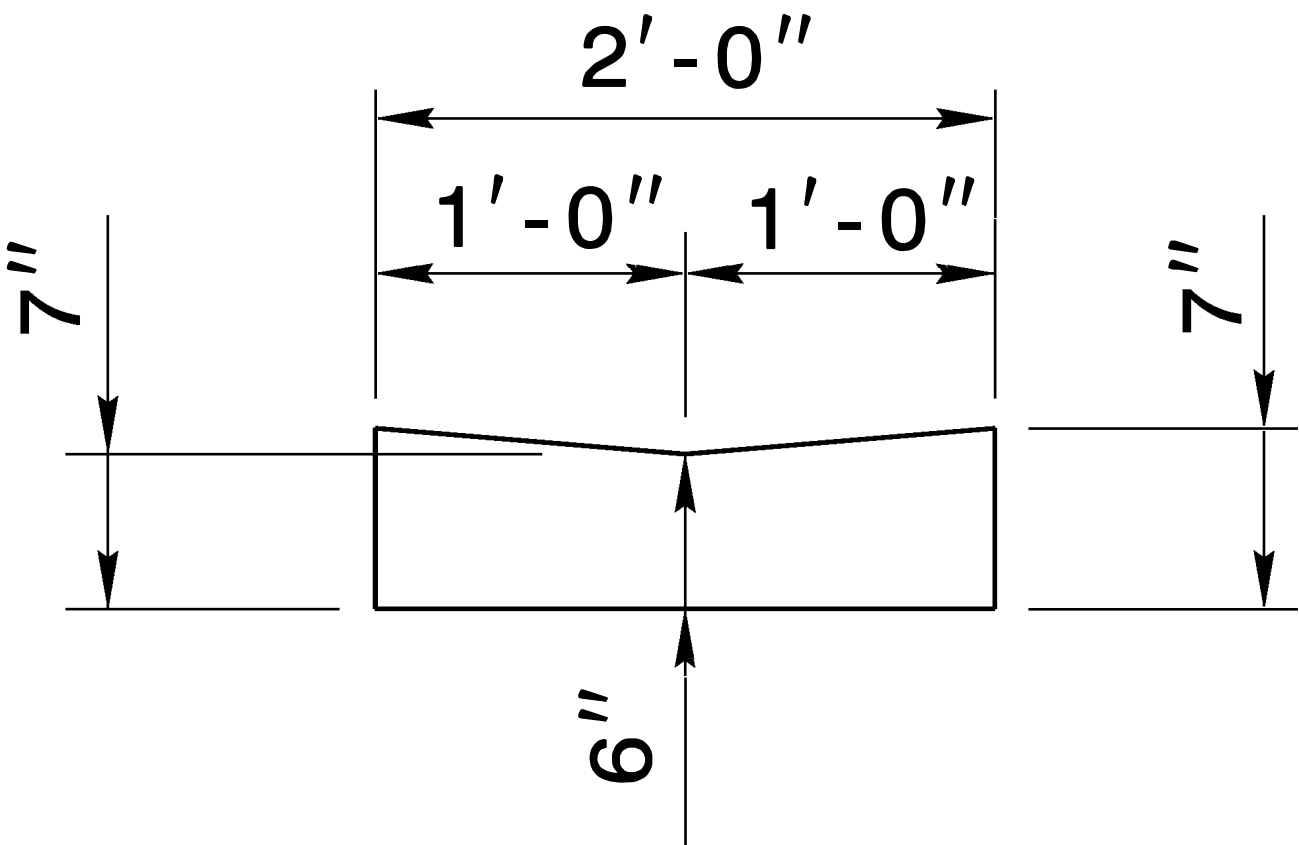
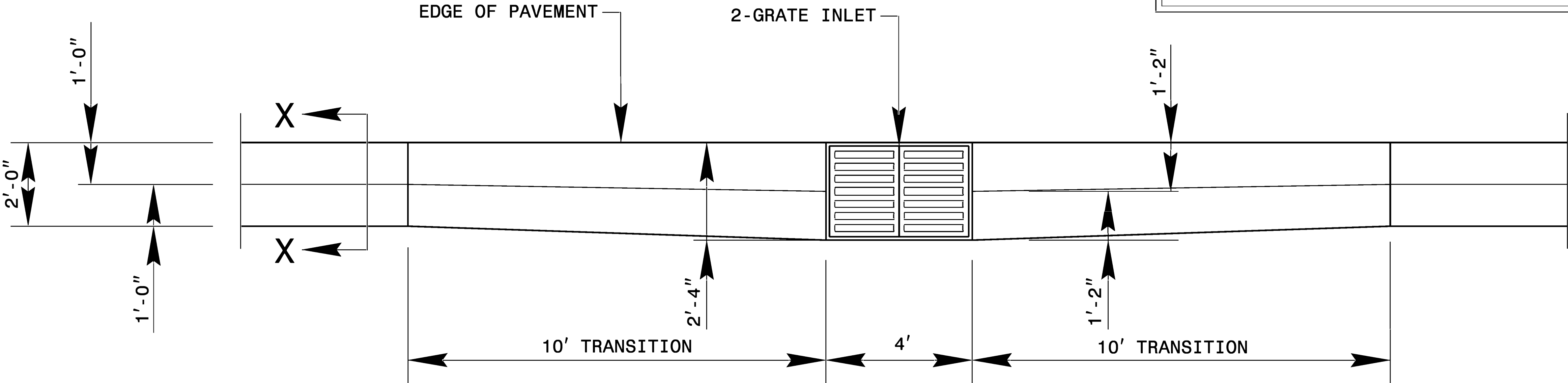
**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**

Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

GENERAL NOTES:
-PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
-JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
-CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.
-CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1½" DEEP.
-FILL ALL CONSTRUCTION JOINTS WITH JOINT FILLER AND SEALER.
-SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



10/13/2025

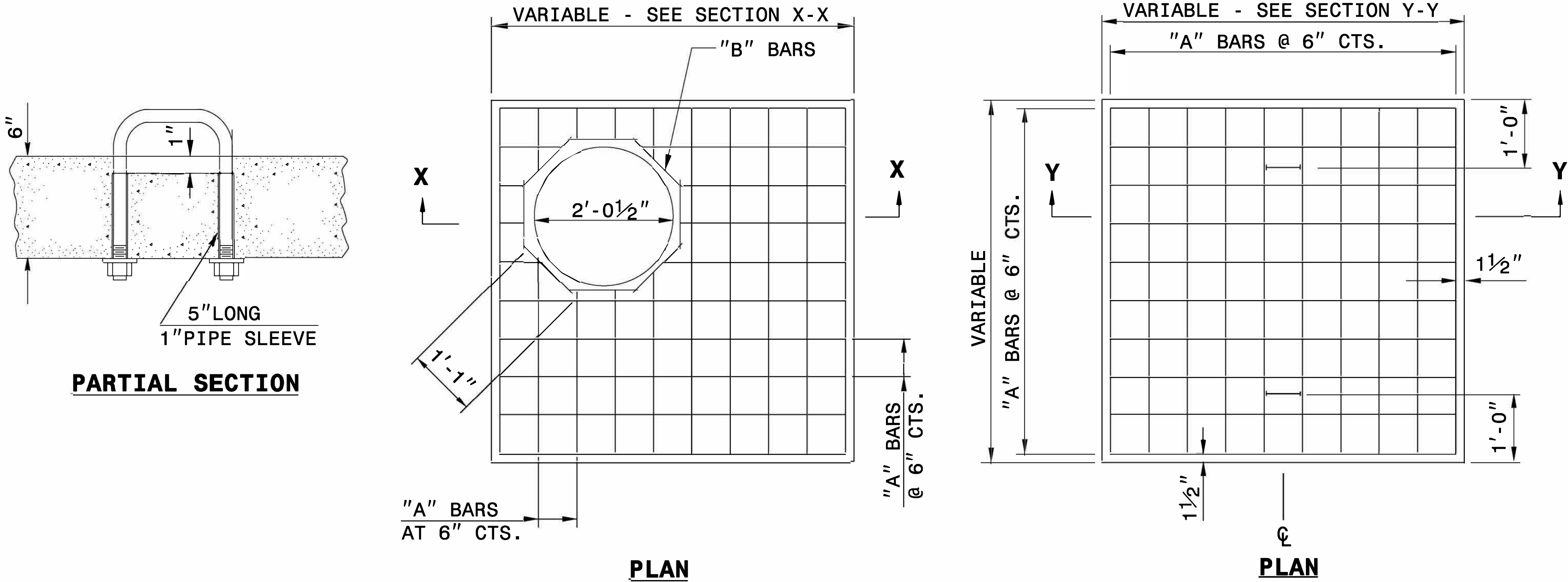
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS & DEVELOPMENT UNIT STANDARDS AND SPECIAL DESIGN	
Office 919-707-6950 FAX 919-250-4119	
2-GI IN VALLEY GUTTER	
ORIGINAL BY: _____	DATE: _____
MODIFIED BY: <u>rnbritt</u>	DATE: <u>02-20-12</u>
CHECKED BY: _____	DATE: _____
FILE SPEC. : <u>details/english/misc/2gi in valley gutter.dgn</u>	

DocuSign Envelope ID: 4B52CC8F-99F3-4B12-ACBF-48E09DA3002D

10/13/2025

PROJECT REFERENCE NO.	SHEET NO.
R-5600	2C-4



GENERAL NOTES:

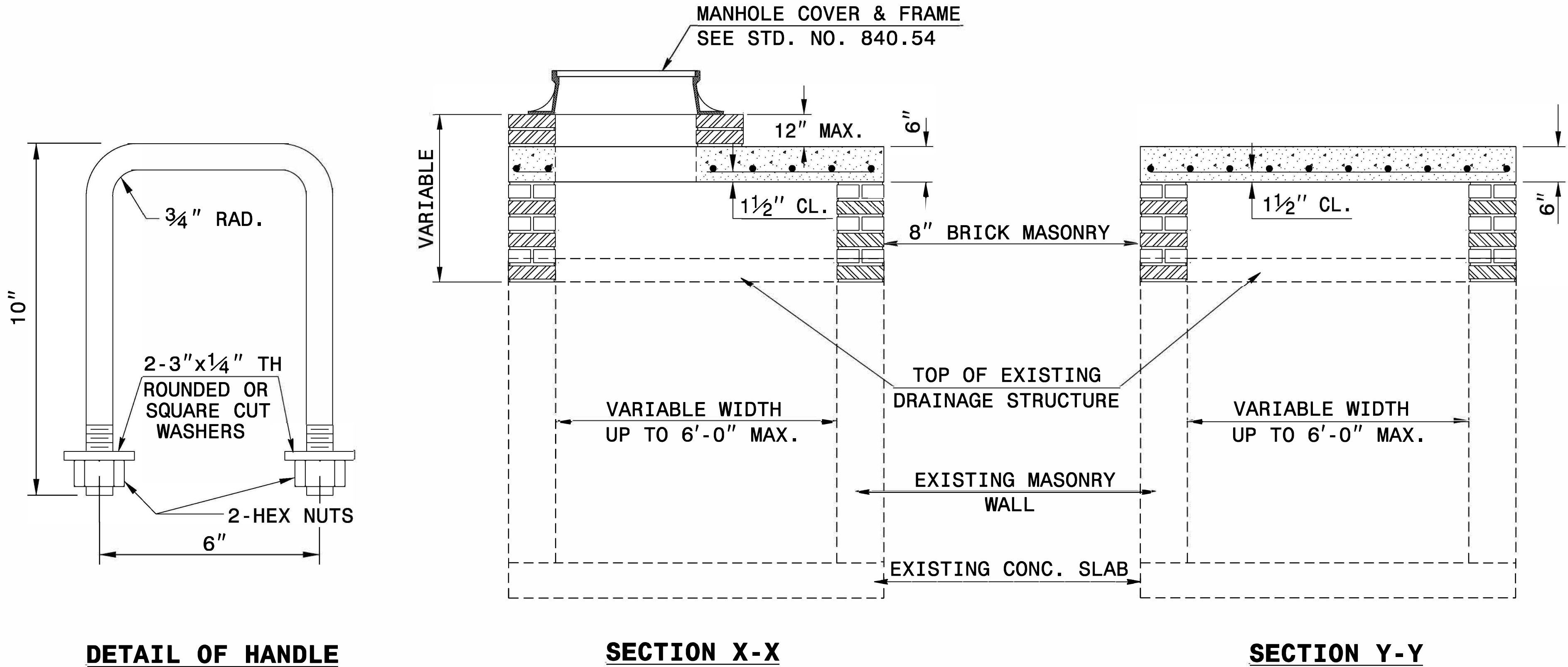
CONSTRUCT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.

THE DIMENSIONS FOR THE EXISTING BOXES ARE APPROXIMATE AND MAY VARY SLIGHTLY.

DETAIL INTENDED FOR NON-TRAFFIC BEARING DRAINAGE STRUCTURES.

BILL OF MATERIALS				
REINFORCING STEEL				
CODE	SIZE	QTY.	LENGTH	REINF. STEEL LBS.
A	#4	20	4'-6"	60.12
B	#4	8	1'-1"	5.79
TOTAL				65.91 *
MASONRY				CU YDS
TOP SLAB CONCRETE CLASS "B"				.4326 *
BRICK MASONRY PER FT HT (MIN)				.4111

*** NOTE:**
QUANTITIES BASED ON 3'-6" X 3'-6" DRAINAGE STRUCTURE. ADJUST QUANTITIES FOR LARGER STRUCTURES AND MANHOLE CONSTRUCTION.

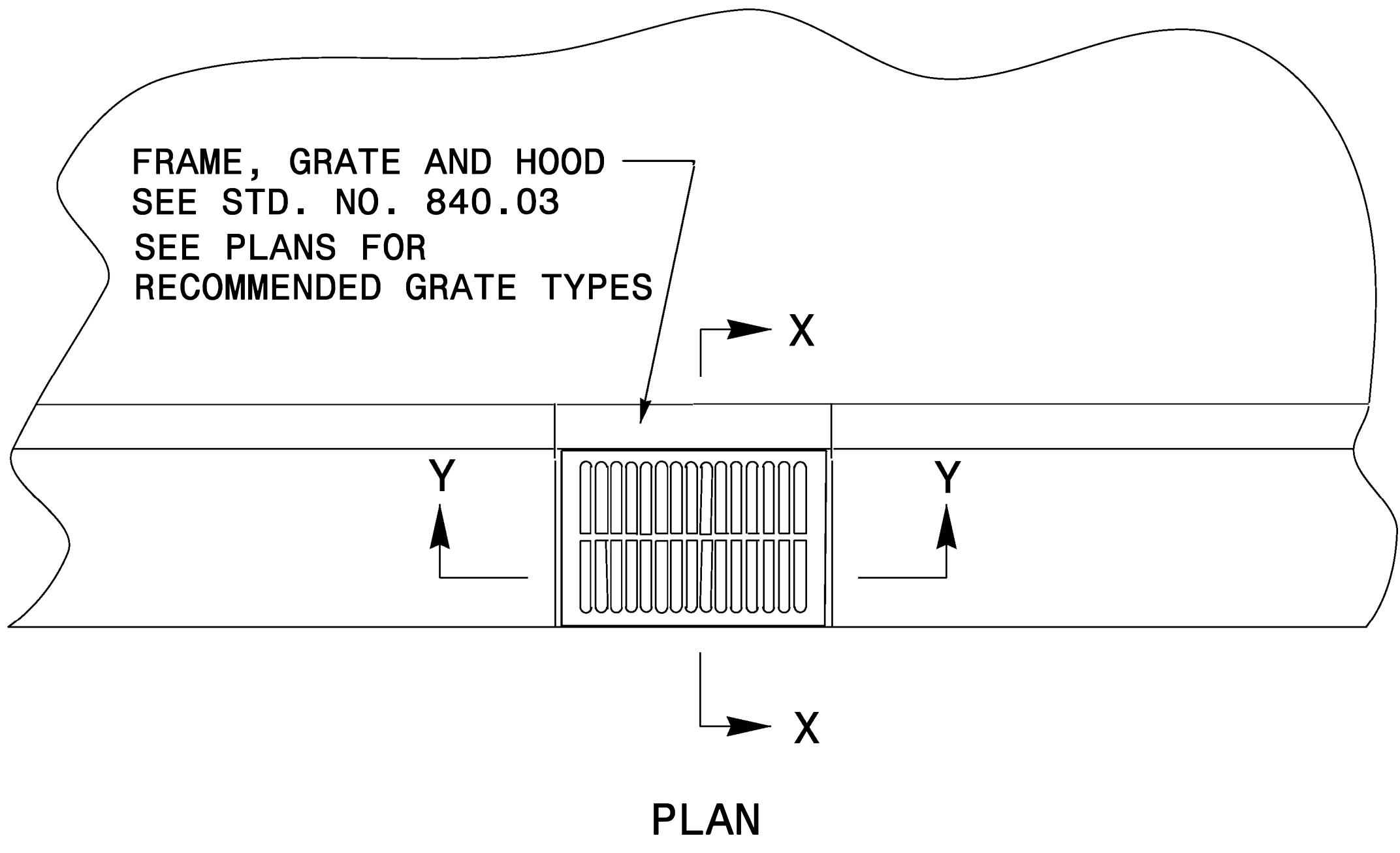


DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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

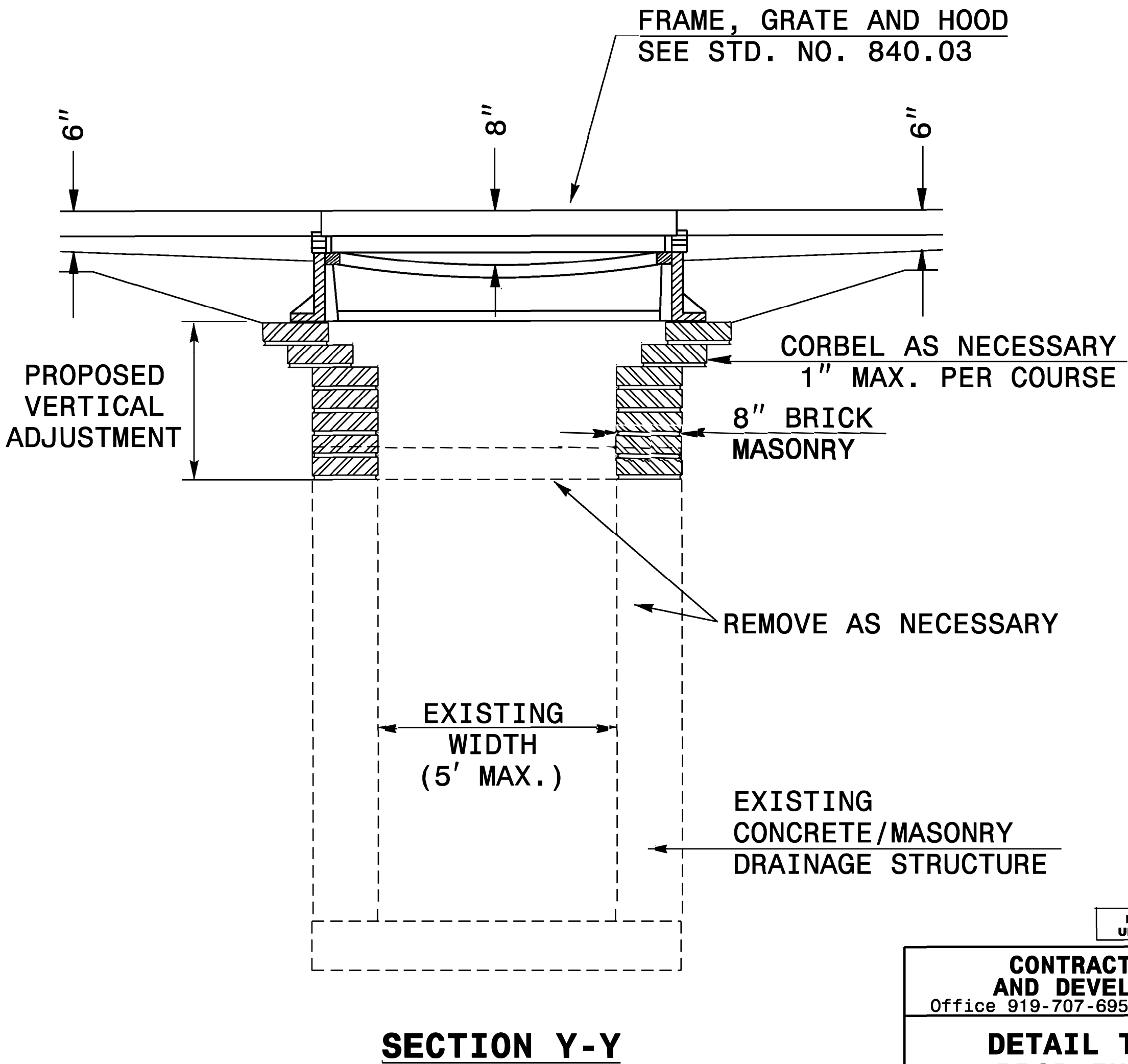
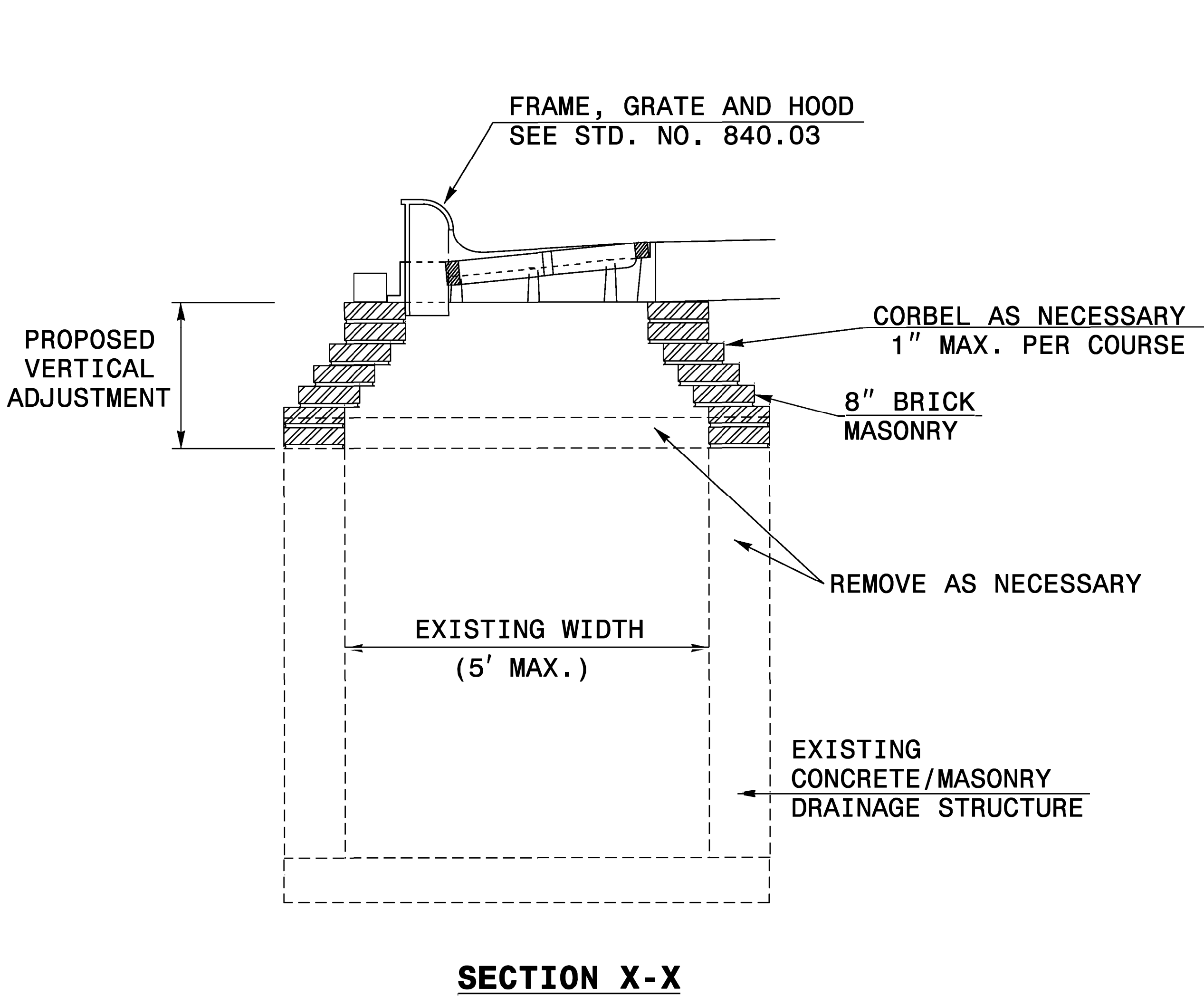
**DETAIL TO CONVERT EXISTING
DI, CB, OTCB or GI
TO JUNCTION BOX
(MANHOLE OPTIONAL)**

ORIGINAL BY: T.S.S. DATE: NOV. 1997
MODIFIED BY: T.S.S. DATE: FEB. 2000
CHECKED BY: DATE:
FILE SPEC.: ds174:/usr/details/stand/boxtojb.dgn



GENERAL NOTES:

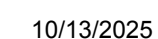
- THE ROADWAY PLANS INDICATE STRUCTURES TO BE CONVERTED.
- AFTER REMOVAL, STORE GRATES AND FRAMES AS DIRECTED BY THE ENGINEER.
- 4" SOLID CLAY BRICK, JUMBO BRICK, CONCRETE, OR 4" SOLID CONCRETE BLOCK MAY BE USED FOR VERTICAL ADJUSTMENT OF THE STRUCTURE.
- CONVERT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

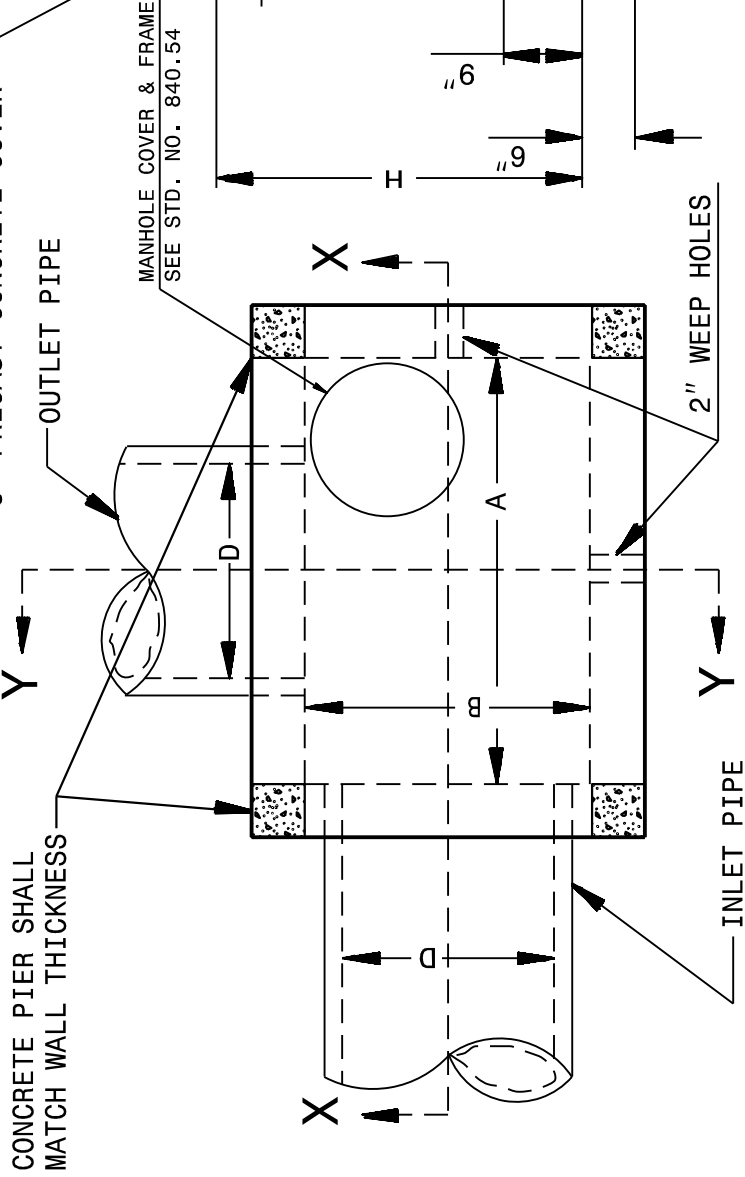
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
DETAIL TO CONVERT DROP INLET OR JB TO CATCH BASIN	
ORIGINAL BY: <u>E.E. WARD</u>	DATE: <u>11-97</u>
MODIFIED BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
FILE SPEC.: <u>DS37:usr\details\stand\jbtcob.dgn</u>	

*NOTE: SEE STD. DWG. 846.01
FOR 2'-6" CURB AND GUTTER
INFORMATION.

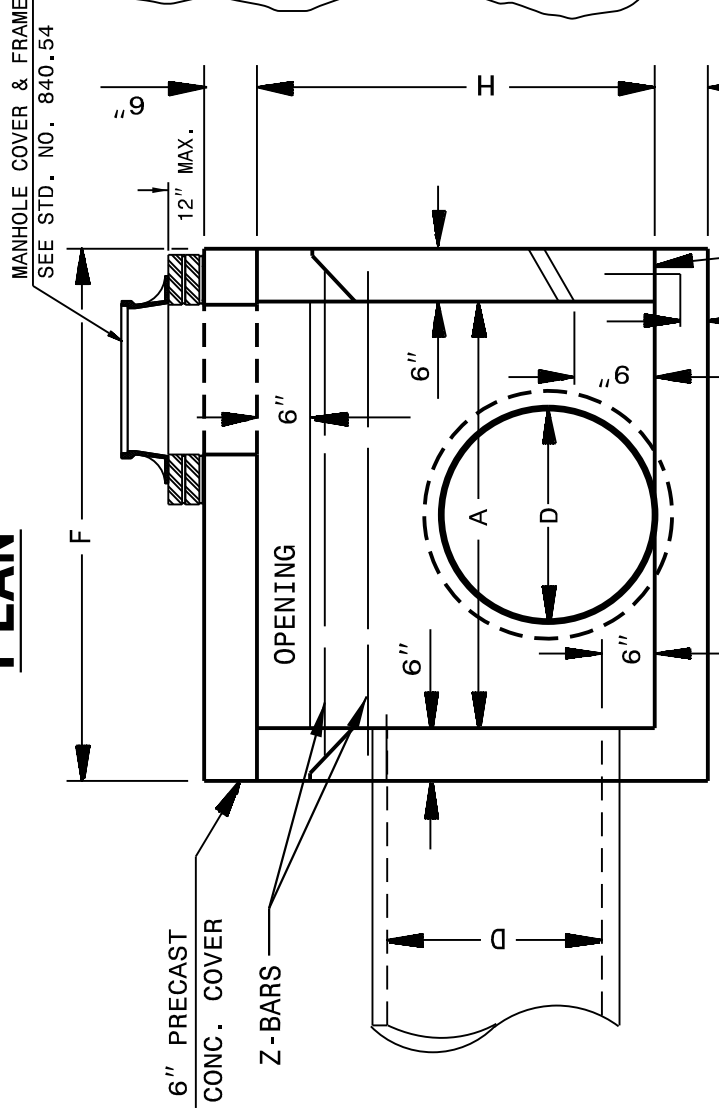


ORIGINAL BY:_____	DATE:_____
MODIFIED BY:_____	DATE:_____
CHECKED BY:_____	DATE:_____
FILE SPEC.: DS174:/usr/details/stand/cgtransit.dgn	

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

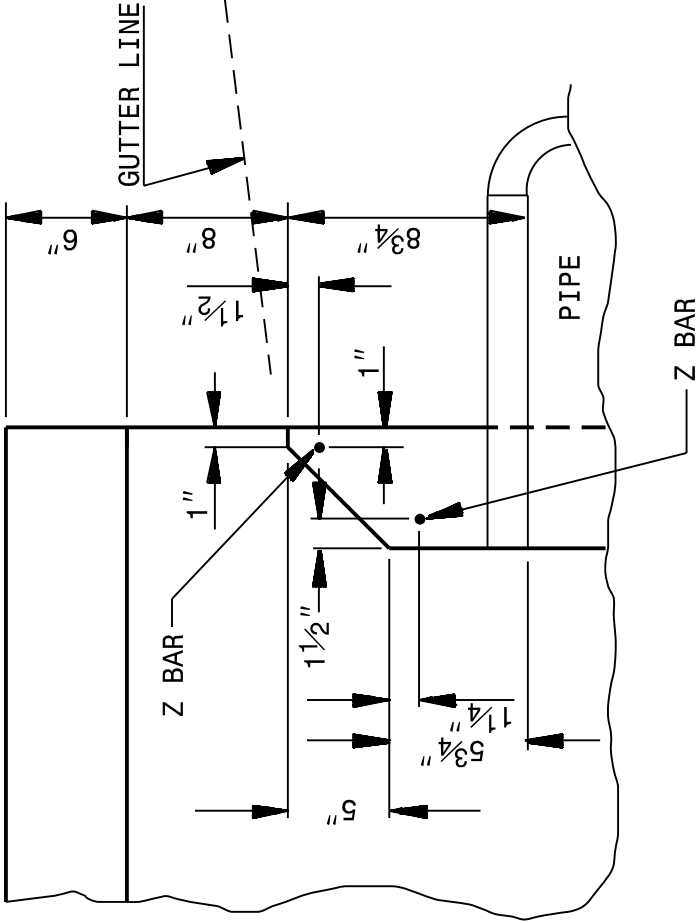


SECTION Y-Y



ENGLISH DETAIL DRAWING FOR
CONCRETE CATCH BASIN
(3 OR 4 SIDE OPEN THROAT)
(MANHOLE OPTIONAL)

GENERAL NOTES:
ALL CATCH BASINS OVER 3'-6" IN DEPTH TO BE PROVIDED WITH STEPS
12" ON CENTERS. STEPS SHALL BE IN ACCORDANCE WITH STD. 840.66.
ALL EXPOSED CORNERS TO BE CHAMFERED 1".
CLASS "B" CONCRETE TO BE USED THROUGHOUT.
2" PIPE WEEPHOLES TO BE PLACED AS DIRECTED BY ENGINEER.
THE 6" PIPE WEEPHOLES TO BE INCREASED TO 8" MAXIMUM IF DEEMED TO
BE NECESSARY BY THE ENGINEER.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #5 BAR DOWELS
AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE
AS SHOWN ON STD. DWG. 840.00.
A STONE DRAIN CONSISTING OF 1 CUBIC FOOT OF NO. 78M STONE
CONTAINED IN A BAG OF POROUS FABRIC SHALL BE PLACED AT EACH WEEP HOLE.
FOR 8" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB.
OVER 8" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. QUANTITIES
TO BE ADJUSTED ACCORDINGLY.
DIMENSIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.



PART SECTION Y-Y

SHOWING METHOD OF
CONSTRUCTION FOR 6" OPENING

PART SECTION Y-Y

SHOWING METHOD OF CONSTRUCTION
IF INCREASED OPENING IS USED

MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H)																					
DIM'S OF BOX & PIPE				REINFORCING				TOP & BOT. SLAB DIMENSIONS			CU. YDS. CONC. IN BOX			TOTAL QUANTITIES BOX & SLABS		DEDUCTION ONE PIPE		DED. ONE 6" THROAT OPENING			
PIPE	SPAN	WIDTH	HEIGHT	BAR	X	Y	NO.	LENGTH	NO.	LENGTH	BAR	Z	NO.	LENGTH	TOP SLAB	BOT. SLAB	WALL FT. H.	LBS. REIN. YD ³ (MIN. H)	C.S.	R.C.	YD ³
D	A	B	H												F	G					
12"	3'-6"	2'-3"	1'-10"	4	3'-0"	6	4'-3"	2	4'-3"	4'-6"	3'-3"	3'-3"	0.181	0.271	0.250	27	1.046	0.015	0.032	0.046	
15"	3'-6"	2'-3"	2'-1"	4	3'-0"	6	4'-3"	2	4'-3"	4'-6"	3'-3"	3'-3"	0.181	0.271	0.250	27	1.046	0.015	0.032	0.046	
18"	4'-0"	2'-8"	2'-4"	5	3'-5"	7	4'-9"	2	4'-9"	5'-0"	3'-8"	3'-8"	0.226	0.340	0.284	35	1.379	0.023	0.049	0.053	
24"	4'-0"	2'-8"	2'-10"	5	3'-5"	7	4'-9"	2	4'-9"	5'-0"	3'-8"	3'-8"	0.226	0.340	0.284	35	1.379	0.023	0.049	0.053	
30"	4'-0"	3'-6"	3'-4"	5	4'-3"	9	4'-9"	2	4'-9"	5'-0"	4'-6"	4'-6"	0.278	0.417	0.315	43	1.921	0.059	0.065	0.063	
36"	4'-6"	4'-0"	3'-10"	5	4'-9"	10	5'-3"	2	5'-3"	5'-6"	5'-0"	5'-0"	0.340	0.510	0.382	51	2.390	0.132	0.178	0.089	
42"	5'-0"	4'-6"	4'-4"	5	5'-3"	12	5'-9"	2	5'-9"	6'-0"	5'-6"	5'-6"	0.407	0.611	0.389	64	2.914	0.180	0.243	0.066	
48"	5'-0"	5'-0"	4'-10"	5	5'-9"	13	5'-9"	2	5'-9"	6'-0"	6'-0"	6'-0"	0.444	0.666	0.407	68	3.299	0.235	0.317	0.066	

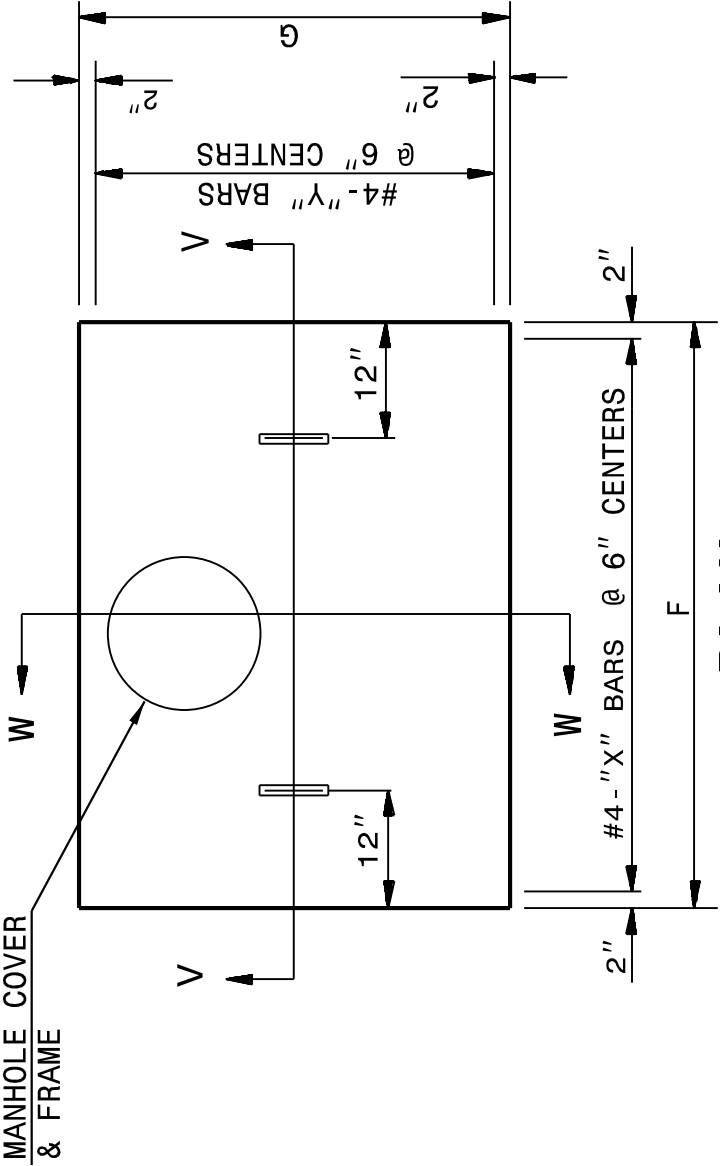
SHEET 1 OF 2
840D04

SHEET 1 OF 2
840D04

ENGLISH DETAIL DRAWING FOR
CONCRETE CATCH BASIN
(3 OR 4 SIDE OPEN THROAT)
(MANHOLE OPTIONAL)

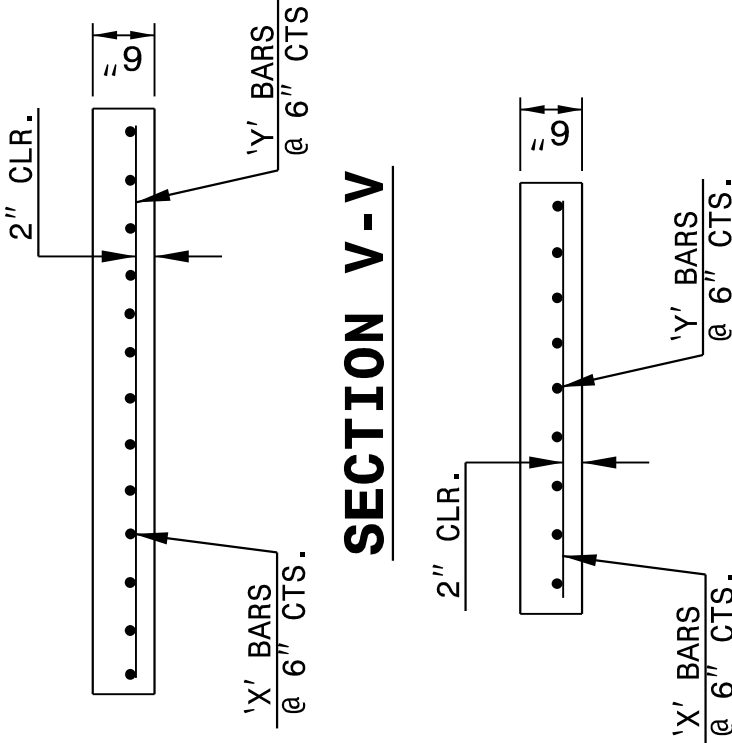
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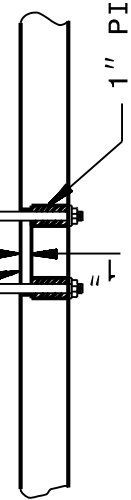
PLAN OF PRECAST COVER

ENGLISH DETAIL DRAWING FOR
CONCRETE CATCH BASIN
(3 OR 4 SIDE OPEN THROAT)
(MANHOLE OPTIONAL)



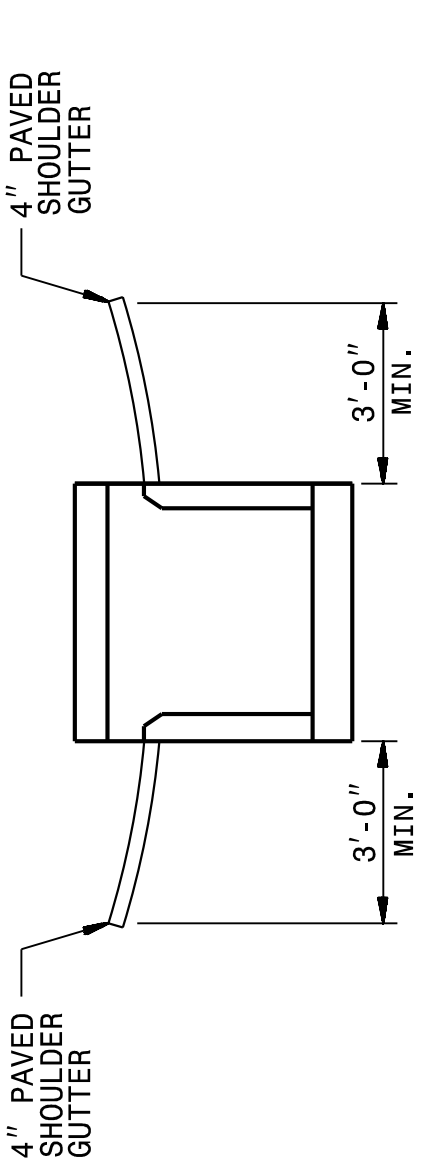
SECTION W-W

PART WHERE HANDLE IS LOCATED SHALL
BE COUNTERSUNK 1", AND HANDLE
SHALL BE FREE TO MOVE UP AND DOWN.



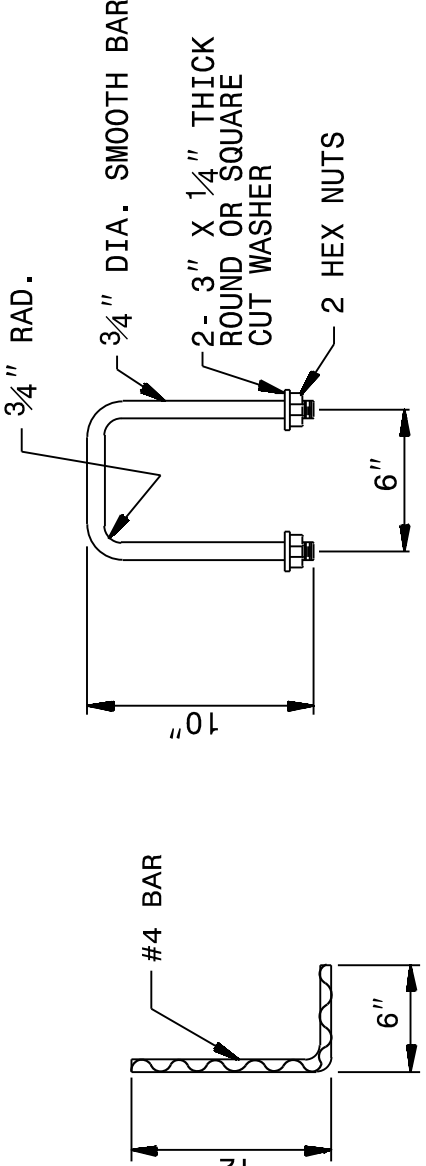
PART SECTION
THRU COVER SHOWING HANDLE

PLAN OF CATCH BASIN IN MEDIAN STRIP



SECTION OF CATCH BASIN MEDIAN STRIP

DETAIL SHOWING METHOD OF PLACING
CATCH BASIN AND PAVED SHOULDER GUTTER



DETAIL OF HANDLE

DOWEL

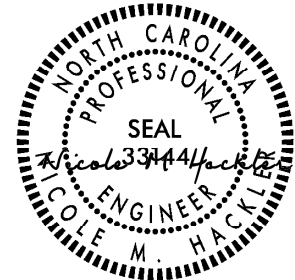
SHEET 2 OF 2
840D04

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SEE PLATE FOR TITLE

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CHECKED BY: _____ DATE: _____
FILE SPEC.: details/rnbritt/english/hydro/840d04.dgn

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PROJECT REFERENCE NO.	SHEET NO.
R-5600	2C-8

\\SEP-2017 1155\projects\Special Details\howerton\840D17 Minimum Depth Type A.dgn
At CSD-262595
howerton

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ENGLISH DETAIL DRAWING FOR
CONCRETE GRATED DROP INLET TYPE 'A'
MINIMUM DEPTH
12" THRU 72" PIPE

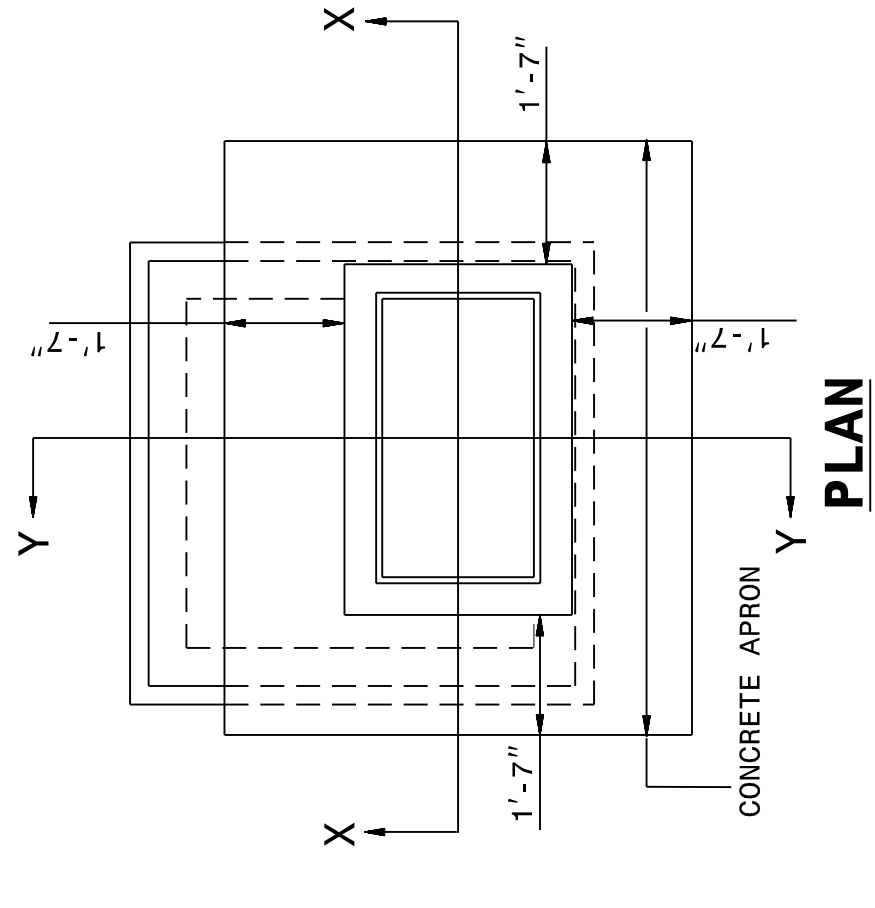
SHEET 1 OF 2
840d17

GENERAL NOTES:
USE CLASS "B" CONCRETE THROUGHOUT.
PROVIDE ALL GRATED DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
CONSTRUCT WITH PIPE CROWNS MATCHING.
USE STANDARD FRAMES AND GRATES 840.22 (SHOWN), 840.24 (SHOWN), 840.20 (NOT SHOWN) OR 840.29 (NOT SHOWN).
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET.

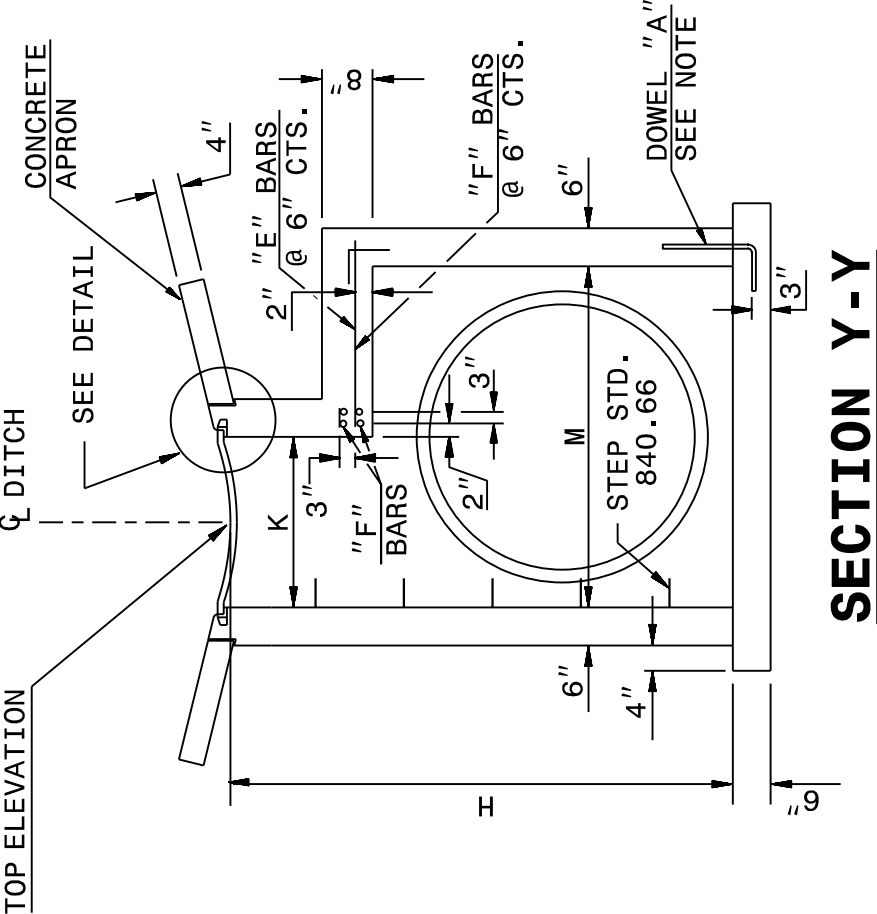
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ENGLISH DETAIL DRAWING FOR
CONCRETE GRATED DROP INLET TYPE 'A'
MINIMUM DEPTH
12" THRU 72" PIPE

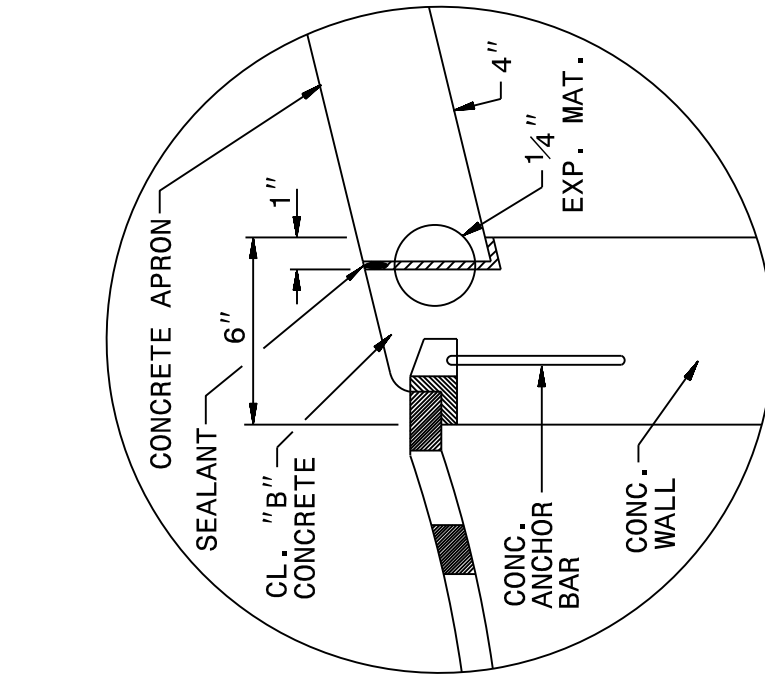
SHEET 1 OF 2
840d17



PLAN

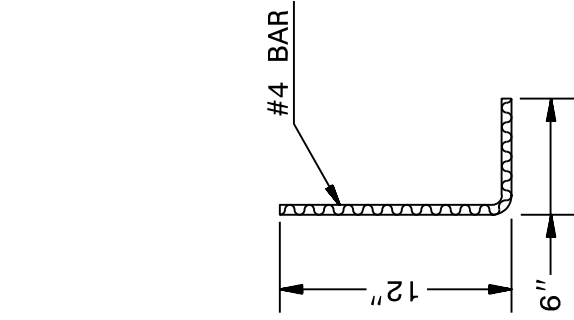


SECTION Y-Y

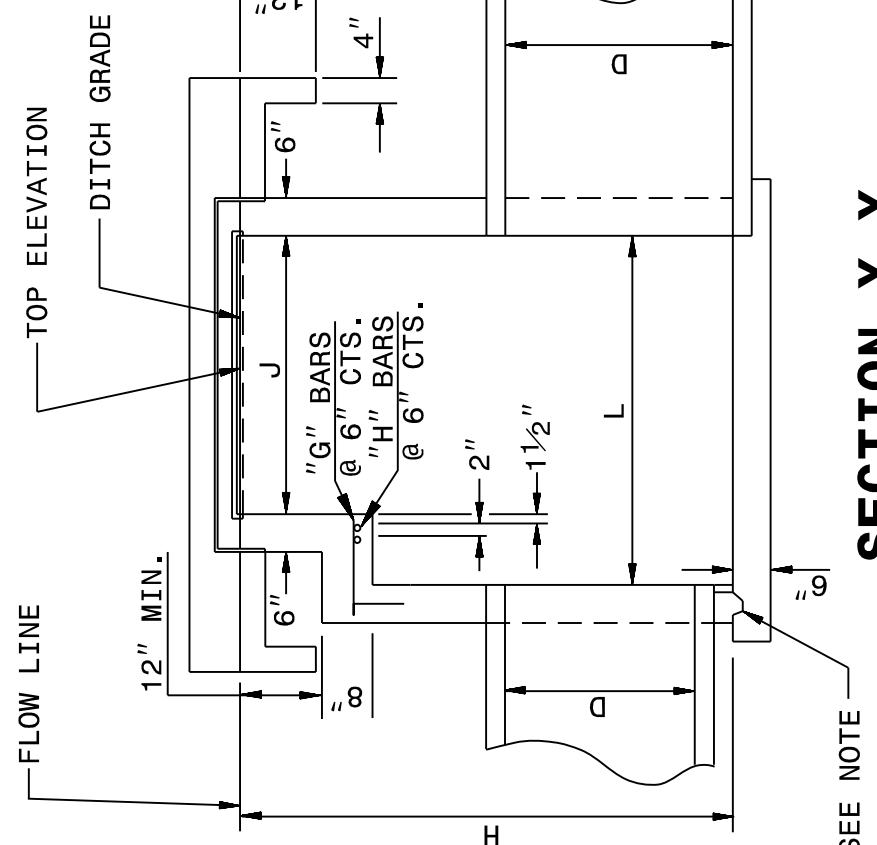


DETAIL

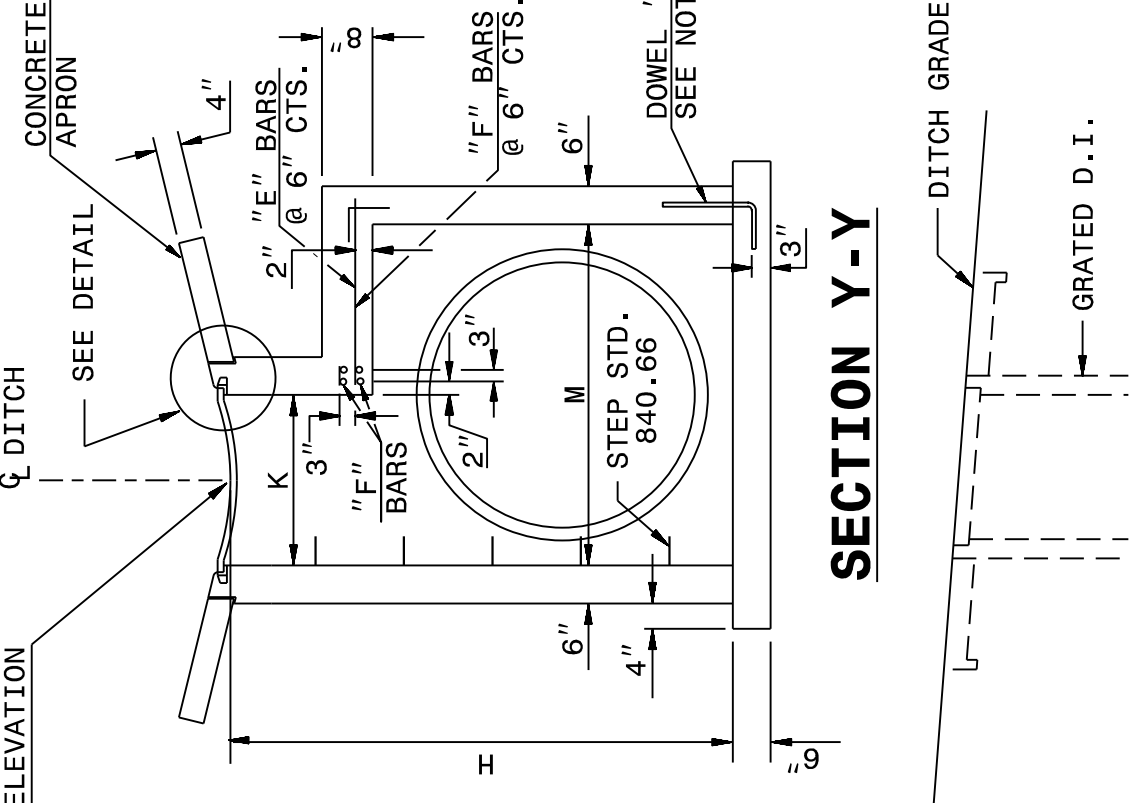
(APRON SUPPORT NOTCH)



DOWEL-A



SECTION X-X

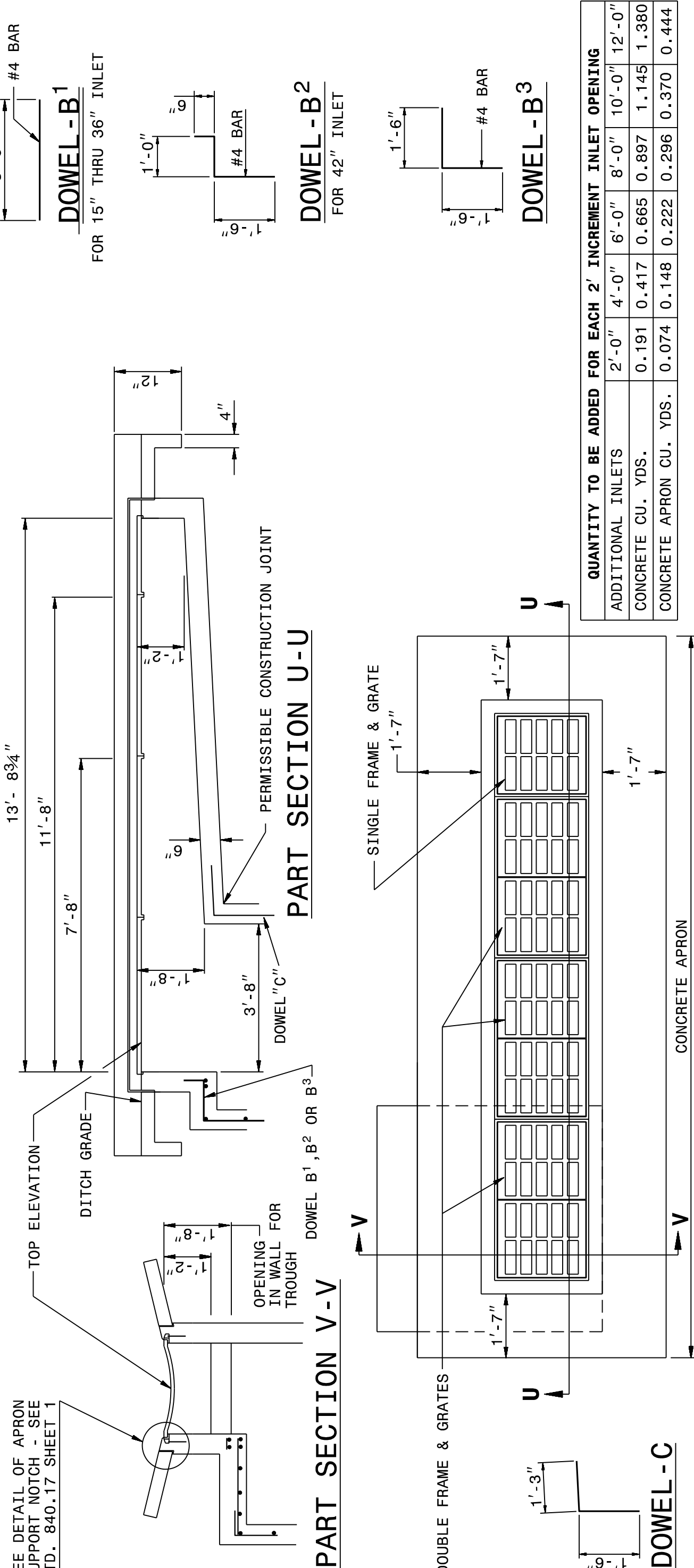


TOP ELEVATION

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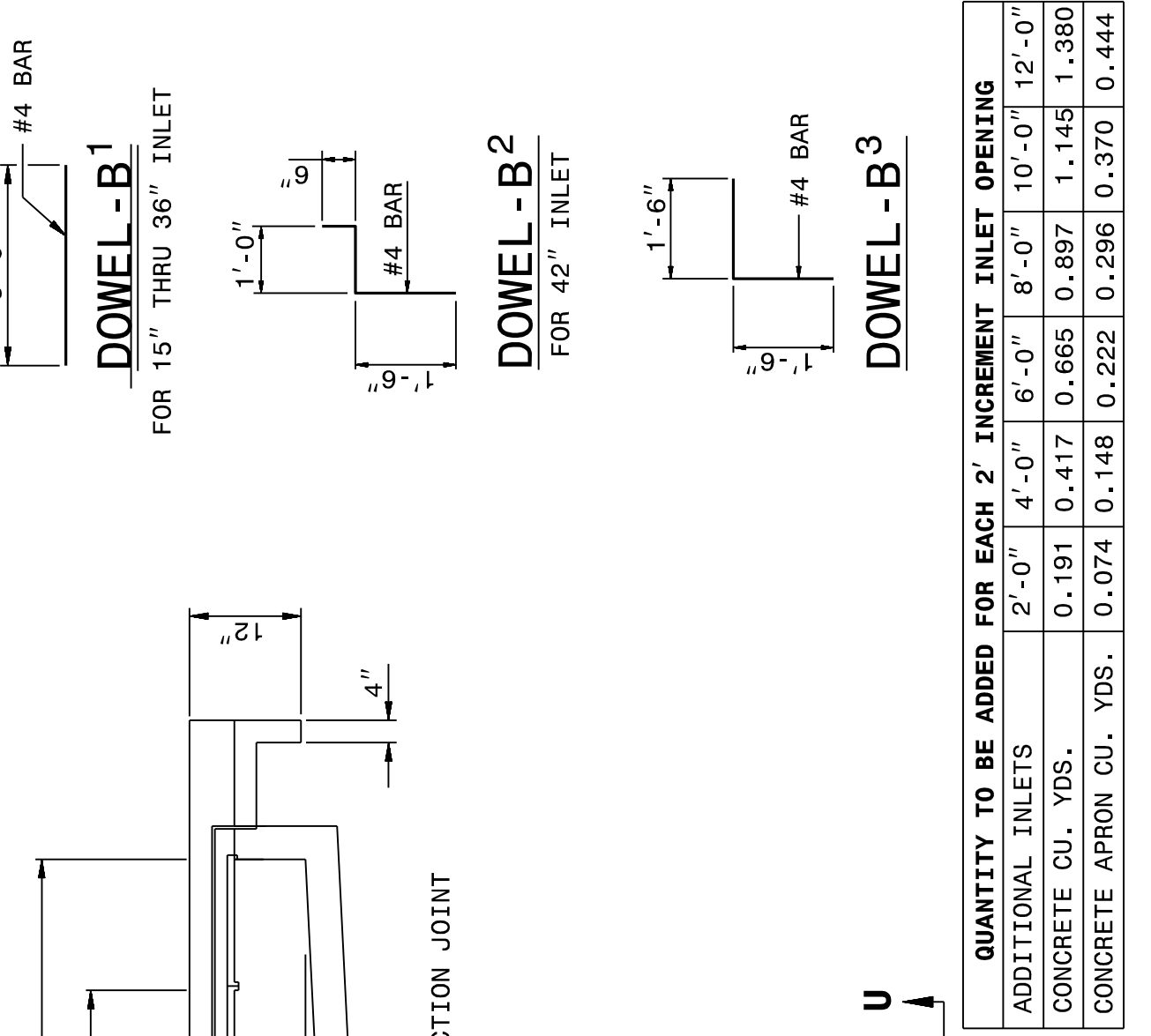
ENGLISH DETAIL DRAWING FOR
CONCRETE GRATED DROP INLET TYPE 'A'
MINIMUM DEPTH
12" THRU 72" PIPE

SHEET 2 OF 2
840d17



PART SECTION U-U

PART SECTION V-V



DOWEL-B1

DOWEL-B2

DOWEL-B3

QUANTITY TO BE ADDED FOR EACH 2' INCREMENT INLET OPENING						
ADDITIONAL INLETS	2'-0"	4'-0"	6'-0"	8'-0"	10'-0"	12'-0"
CONCRETE CU. YDS.	0.191	0.417	0.665	0.897	1.145	1.380
CONCRETE APRON CU. YDS.	0.074	0.148	0.222	0.296	0.370	0.444

MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE GRATED DROP INLET (BASED ON MIN. HEIGHT, H)									
DIMENSIONS OF BOX AND PIPE					REINFORCING STEEL - NO. 4 BARS				
PIPE	SPAN	WIDTH	SPAN	WIDTH	HEIGHT	BARS E	BARS F	BARS G	BARS H
D	J	K	L	M	H	NO.	LENGTH	NO.	LENGTH
12"	3'-8"	2'-0"	3'-8"	2'-0"	2'-3"	—	—	—	—
15"	3'-8"	2'-0"	3'-8"	2'-0"	2'-5"	—	—	—	—
18"	3'-8"	2'-0"	3'-8"	2'-0"	2'-8"	—	—	—	—
24"	3'-8"	2'-0"	3'-8"	2'-0"	3'-3"	8	1'-5"	6	4'-9"
30"	3'-8"	2'-0"	3'-8"	2'-0"	3'-10"	8	2'-0"	7	4'-9"
36"	3'-8"	2'-0"	3'-8"	2'-0"	4'-4"	8	2'-5"	8	4'-11"
42"	3'-8"	2'-0"	3'-8"	2'-0"	5'-0"	10	3'-1"	9	5'-7"
48"	3'-8"	2'-0"	3'-8"	2'-0"	5'-6"	11	3'-7"	10	6'-1"
54"	3'-8"	2'-0"	3'-8"	2'-0"	6'-0"	12	4'-1"	11	6'-7"
60"	3'-8"	2'-0"	3'-8"	2'-0"	6'-6"	13	4'-9"	12	7'-3"
66"	3'-8"	2'-0"	3'-8"	2'-0"	7'-1"	14	5'-4"	14	7'-10"
72"	3'-8"	2'-0"	3'-8"	2'-0"	7'-8"	15	5'-11"	15	8'-5"
CONCRETE APRON					CU YDS CONC. IN BOX				
DEDUCTIONS FOR ONE PIPE					TOTAL				
C.S.					R.C.				
0.191	0.417	0.665	0.897	1.145	0.074	0.148	0.222	0.296	0.370
0.074	0.148	0.222	0.296	0.370	0.074	0.148	0.222	0.296	0.370

ORIGINAL BY: J. Howerton DATE: 1/22/14
MODIFIED BY: DATE:
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FILE SPEC.: howerton\minimum depth type A.dgn

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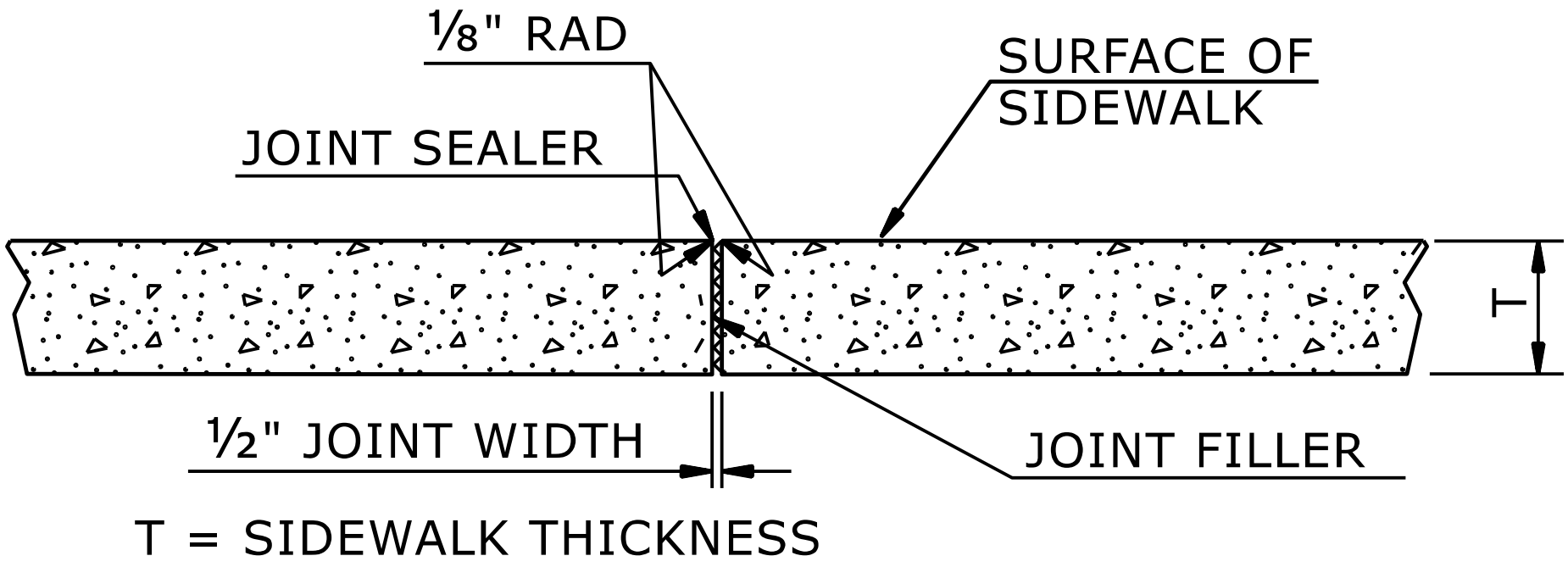
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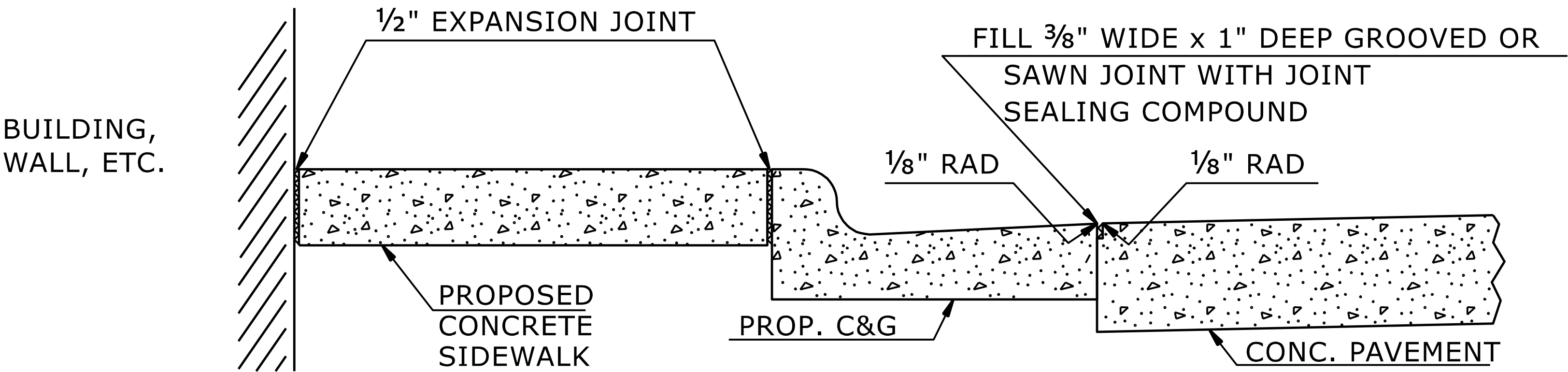
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH 1/8" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.06 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



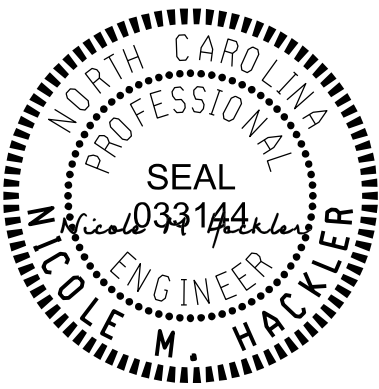
TRANSVERSE EXPANSION JOINT
IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

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ROADWAY DETAIL DRAWING FOR
CONCRETE SIDEWALK



10/13/2025

SHEET 1 OF 1

848D01

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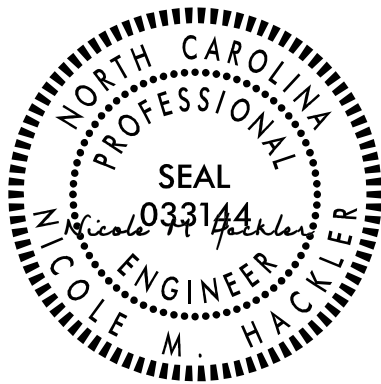
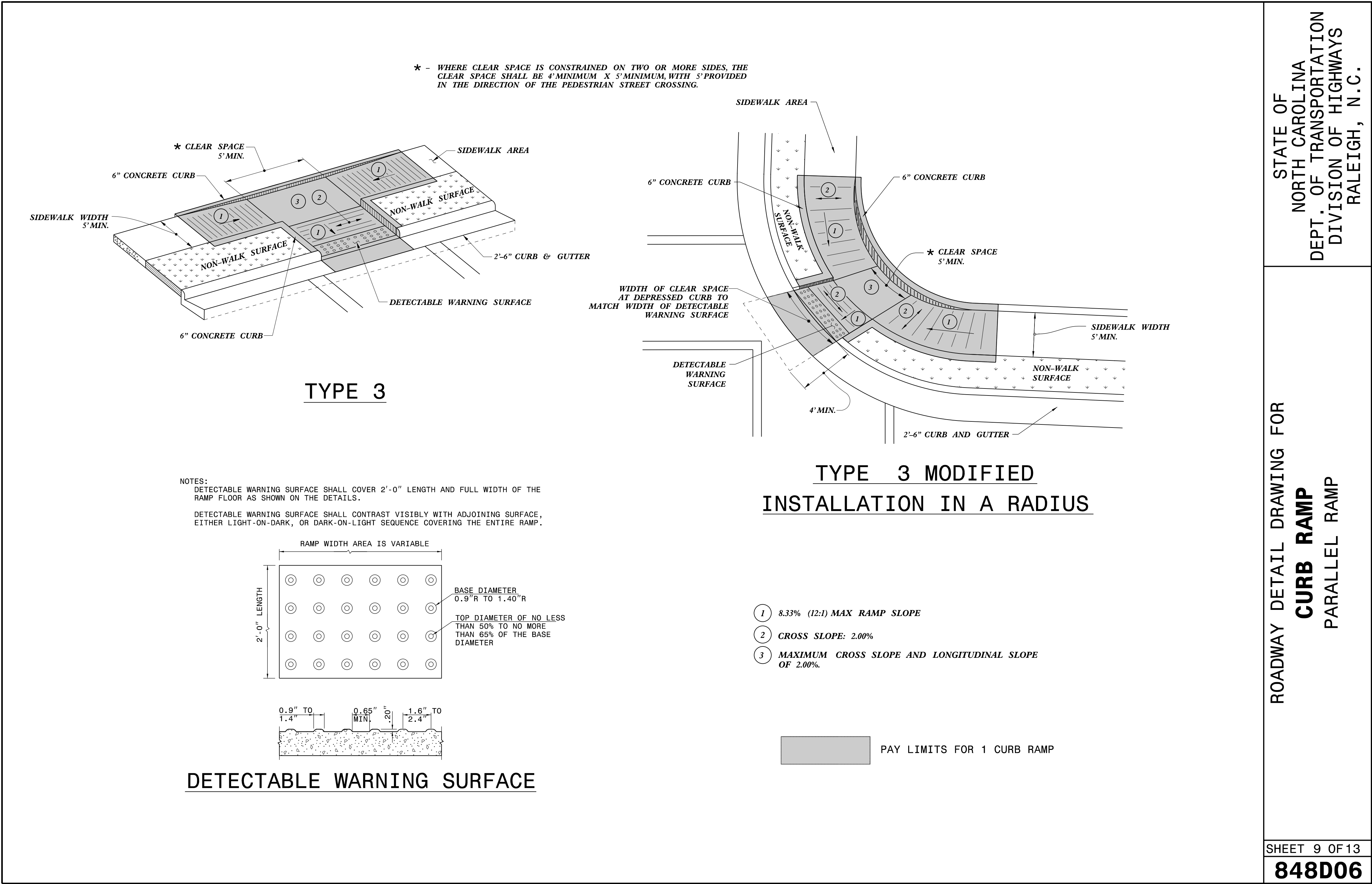
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