

09/08/2021

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

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

BRUNSWICK COUNTY

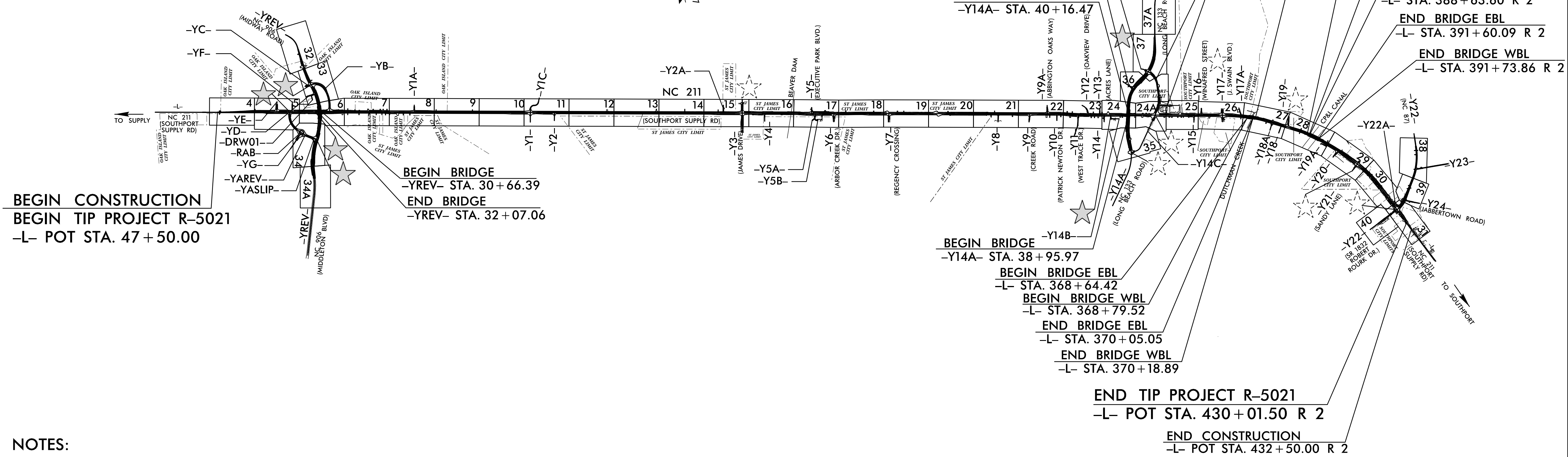
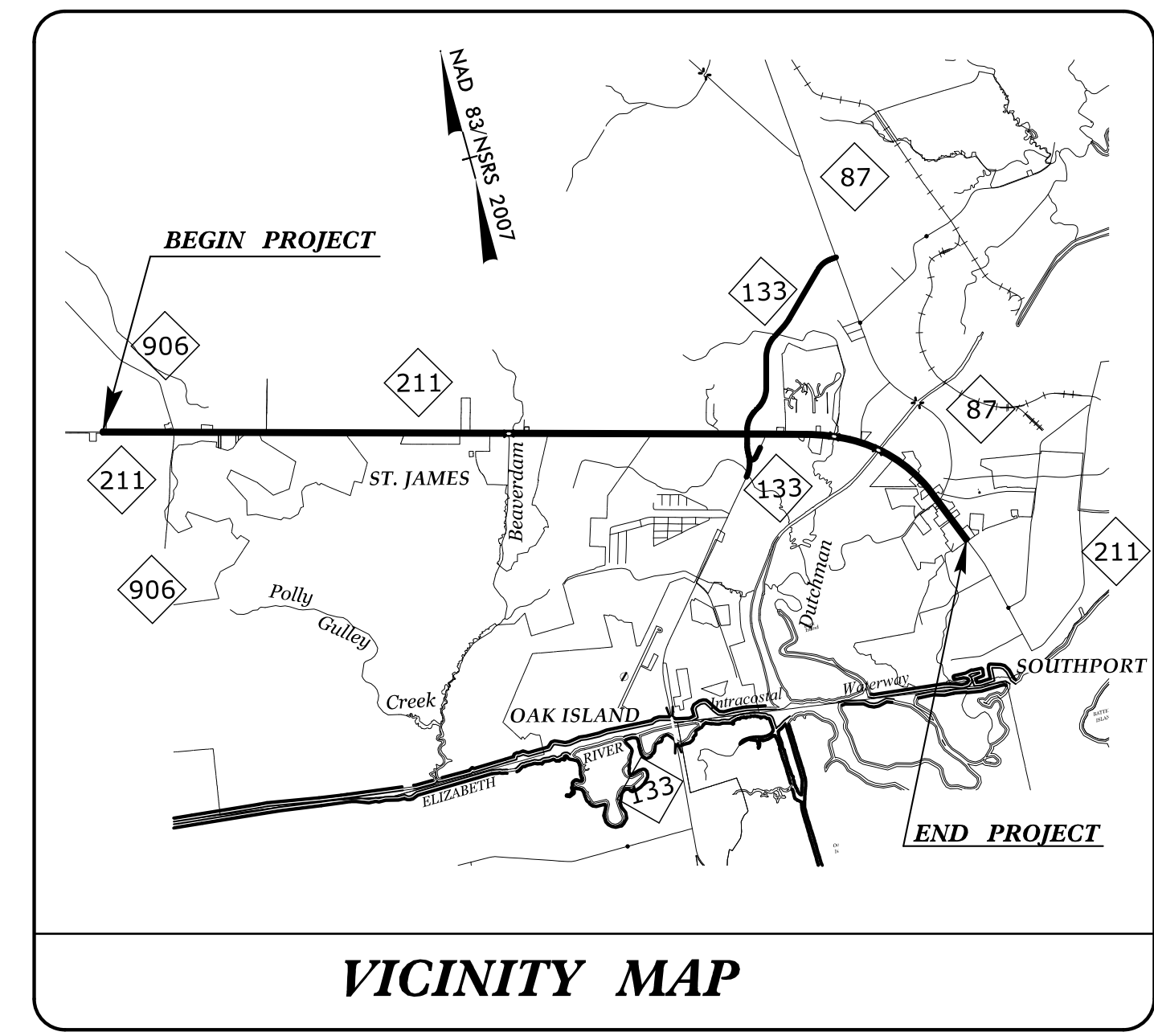
**LOCATION: NC 211 FROM WEST OF NC 906 (MIDWAY ROAD)
TO EAST OF NC 87**

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5021	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41582.1.1	STP-0211(021)	PE	
41582.2.2	STP-0211(021)	UTILITIES	
41582.2.3	STP-0211(021)	RW	
41582.3.1	STP-0211(021)	CONSTRUCTION	

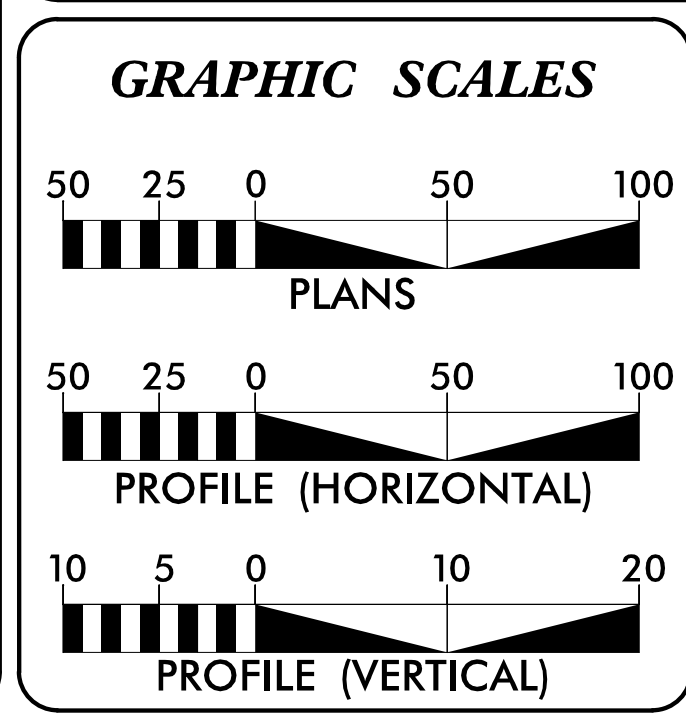
TIP PROJECT: R-5021

CONTRACT: C204123



NOTES:
1. THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2019 =	28,000
ADT 2039 =	44,000
K =	8 %
D =	55 %
T =	6 % *
V =	40-60 MPH
* (TTST 2% + DUAL 4%)	
FUNC CLASS =	
RURAL MAJOR COLLECTOR	
REGIONAL TIER	

PROJECT LENGTH

LENGTH OF ROADWAY T.I.P. PROJECT R-5021 =	7.158 MILES
LENGTH OF STRUCTURES T.I.P. PROJECT R-5021 =	0.086 MILES
TOTAL LENGTH OF T.I.P. PROJECT R-5021 =	7.244 MILES
ALL LENGTH BASED ON -L- CENTERLINE	
STRUCTURES LENGTH BASED ON EBL	

Prepared in the Office of:
HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

2018 STANDARD SPECIFICATIONS

DOUGLAS M. WHEATLEY, PE
PROJECT ENGINEER

ANDREW HALL, PE
PROJECT DESIGN ENGINEER

MICHAEL BASS
NCDOT CONTACT

RIGHT OF WAY DATE:
JANUARY 28, 2016

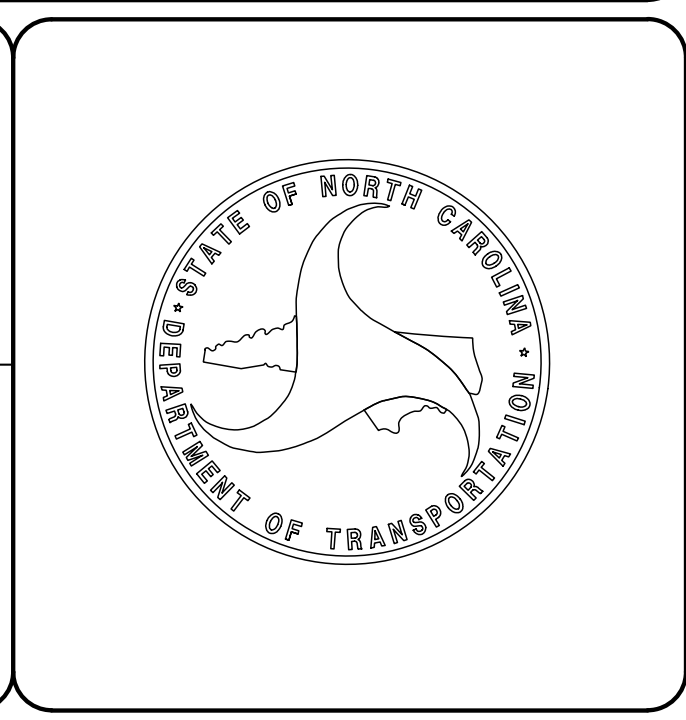
LETTING DATE:
DECEMBER 7, 2021

HYDRAULICS ENGINEER

DocuSigned by:
James Byrd
23592959E54F47C
SIGNATURE: 11/8/2021

ROADWAY DESIGN ENGINEER

DocuSigned by:
Douglas M. Wheatley
AB7893E9DB424DA
SIGNATURE: 11/8/2021





PROJECT REFERENCE NO.	SHEET NO.
R-5021	1A
ROADWAY DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

INDEX OF SHEETS

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2B-5 THRU 2B-6	BRIDGE SKETCHES
2B-7	INTERCHANGE OVERVIEW AT -L- & -YREV-
2B-8	INTERCHANGE OVERVIEW AT -L- & -Y14A-
2B-9	DETAIL OF TEMPORARY PAVEMENT
2B-10	DETAIL OF EMERGENCY CROSSOVER
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2C-1	DETAIL OF 2'-9" CURB & GUTTER TO FRAME & GRATE
2C-2	DETAIL OF 2'-9" CURB & GUTTER
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2C-8	DETAIL OF TYPE III REINFORCED APPROACH FILL
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2C-10	DETAIL OF TEMPORARY 1" STEEL COVER OVER DRAINAGE STRUCTURE
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2C-12	DETAIL OF EMERGENCY VEHICLE ACCESS FOR CONCRETE ISLAND
2C-13	DETAIL OF CONVERT T.B.D.I. TO T.B.J.B.
2C-14	DETAIL OF IMPACT ATTENUATOR INSTALLATION
2C-15	DETAIL OF MINIMUM DEPTH CONCRETE CATCH BASIN
2C-16	DETAIL OF 1'-6" CURB & GUTTER
2C-17	DETAIL OF GRATED DROP INLET W/ 60"x38" HERCP
2C-18	DETAIL OF 2'-6" CURB & GUTTER TO EXPRESSWAY GUTTER TRANSITION SECTION DETAIL
2C-19	COAL COMBUSTION DETAIL
2C-20	DETAIL OF 1'-6" CURB AND GUTTER TO 2'-9" CURB AND GUTTER TRANSITION SECTION
2D-1 THRU 2D-4	DRAINAGE DETAILS
2G-1 THRU 2G-3	GEOTECHNICAL DETAILS
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3D-1 THRU 3D-23	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARIES
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GENERAL NOTES: 2018 SPECIFICATIONS EFFECTIVE: 01-16-2018 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 MODIFIED METHOD III.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 OR STD. NO. 225.05 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.

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 RADIUS OR RADIUS AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADIUS 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 WATER & SEWER - CITY OF SOUTHPORT, NEW BRUNSWICK COUNTY POWER - DUKE ENERGY, BRUNSWICK EMC, CITY OF SOUTHPORT

TELECOMM & FIBER - AT&T, ATMC, TIME WARNER

GAS - PIEDMONT NATURAL GAS

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 848.05 and/or 848.06.

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	
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.05	Method of Obtaining Superelevation - Divided Highways
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
422.01	Bridge Approach Fills - Type I Standard Approach Fill
422.03	Reinforced Bridge Approach Fills - Type A Alternate Approach Fill for Integral 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	
610.01	Guide for Paving Shoulders Under Bridges - Method I
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
838.21	Reinforced Concrete Endwall - for Single 54" Pipe 90 Skew
838.45	Notes for Reinforced Concrete Endwall - Std. Dwg 838.21 thru 838.40
838.51	Reinforced Brick Endwall - for Single 54" Pipe 90 Skew
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	Frames, Grates and Hood - for Use on Standard Catch Basin
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
840.19	Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.20	Frames and Wide Slot Flat Grates
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
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.28	Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
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
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
846.02	Drop Inlet Installation in Expressway Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
848.05	Curb Ramp - Proposed Curb & Gutter
850.01	Concrete Paved Ditches
850.10	Guide for Berm Drainage Outlet - 15" and 18" Pipe
850.11	Guide for Berm Drainage Outlet - 24" and 30" Pipe
852.01	Concrete Islands
852.02	Concrete Mountable Median - for Use with Rigid or Flexible Pavement
852.04	Method for Placement of Drop Inlets in Grassed Median - Using 1'-6" Curb and Gutter
852.05	Median Curb for Catch Basin - for Use with 1'-6" Curb and Gutter
852.06	Method for Placement of Drop Inlets in Concrete Islands
857.01	Precast Reinforced Concrete Barrier - 41" Single Faced
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
862.04	Anchoring End of Guardrail - B-77 and B-83 Anchor Units
866.02	Woven Wire Fence - with Wood Post
866.03	Woven Wire Fence - with Steel Post
876.01	Rip Rap in Channels
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	○ EIP
Computed Property Corner	----->
Property Monument	□ EDM
Parcel/Sequence Number	⑫③
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	○
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 & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	●
Exist Permanent Easement 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	----- R/W
New Right of Way Line with Pin and Cap	----- R/W ▲
New Right of Way Line with Concrete or Granite RW Marker	----- R/W ▲
New Control of Access Line with Concrete CA Marker	----- C/A
Existing Control of Access	----- C/A
New Control of Access	----- C/A
Special Control of Access	----- C/A
Existing Easement Line	----- E
New Temporary Construction Easement	----- E
New Temporary Drainage Easement	----- TDE
New Permanent Drainage Easement	----- PDE
New Permanent Drainage / Utility Easement	----- DUE
New Permanent Utility Easement	----- PUE
New Temporary Utility Easement	----- TUE
New Aerial Utility Easement	----- AUE

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	----- C
Proposed Slope Stakes Fill	----- F
Proposed Curb Ramp	----- CR
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	----- Vineyard

EXISTING STRUCTURES:

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

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊠
Power Transformer	⊠
H-Frame Pole	●
U/G Power Cable Hand Hole	----- P
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	----- T
U/G Telephone Cable LOS B (S.U.E.*)	----- T
U/G Telephone Cable LOS C (S.U.E.*)	----- T
U/G Telephone Cable LOS D (S.U.E.*)	----- T
U/G Telephone Conduit LOS B (S.U.E.*)	----- TC
U/G Telephone Conduit LOS C (S.U.E.*)	----- TC
U/G Telephone Conduit LOS D (S.U.E.*)	----- TC
U/G Fiber Optics Cable LOS B (S.U.E.*)	----- T FO
U/G Fiber Optics Cable LOS C (S.U.E.*)	----- T FO
U/G Fiber Optics Cable LOS D (S.U.E.*)	----- T FO

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	⊠
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	----- 7UTL
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.

12/2/2016 22-JUL-2021 09:54 \\p01\p01\proj\5021_rdy_sym.dgn

6/2/2021

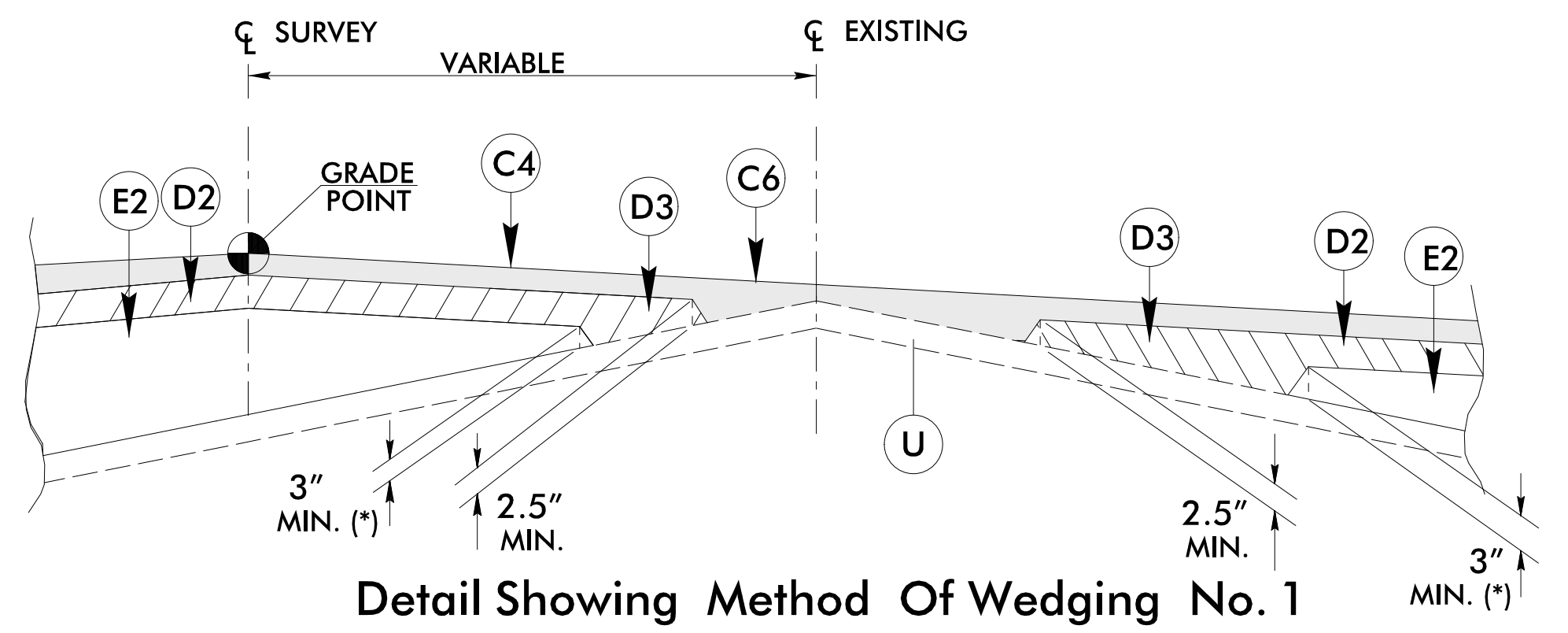
PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH 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 LESS THAN 1" IN DEPTH OR GREATER THAN 1.5" IN DEPTH.
C4	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C5	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.
C6	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 1.5" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D3	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" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
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 5.5" IN DEPTH. (*)NOTE: FOR B25.0C PLACED ON UNSTABILIZED SUBGRADE, MINIMUM LIFT THICKNESS IS 4".
J1	PROP. 6" AGGREGATE BASE COURSE
J2	PROP. 8" AGGREGATE BASE COURSE
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT, 0.35 GAL/SY
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	2'-9" CONCRETE CURB AND GUTTER.
R3	1'-6" CONCRETE CURB AND GUTTER. (STD MOUNTABLE)
R4	5" MONOLITHIC CONCRETE ISLAND
R5	SHOULDER BERM GUTTER
R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6"GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 x W3.5 OR W5 x W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W1	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING No. 1)
W2	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING No. 2)

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

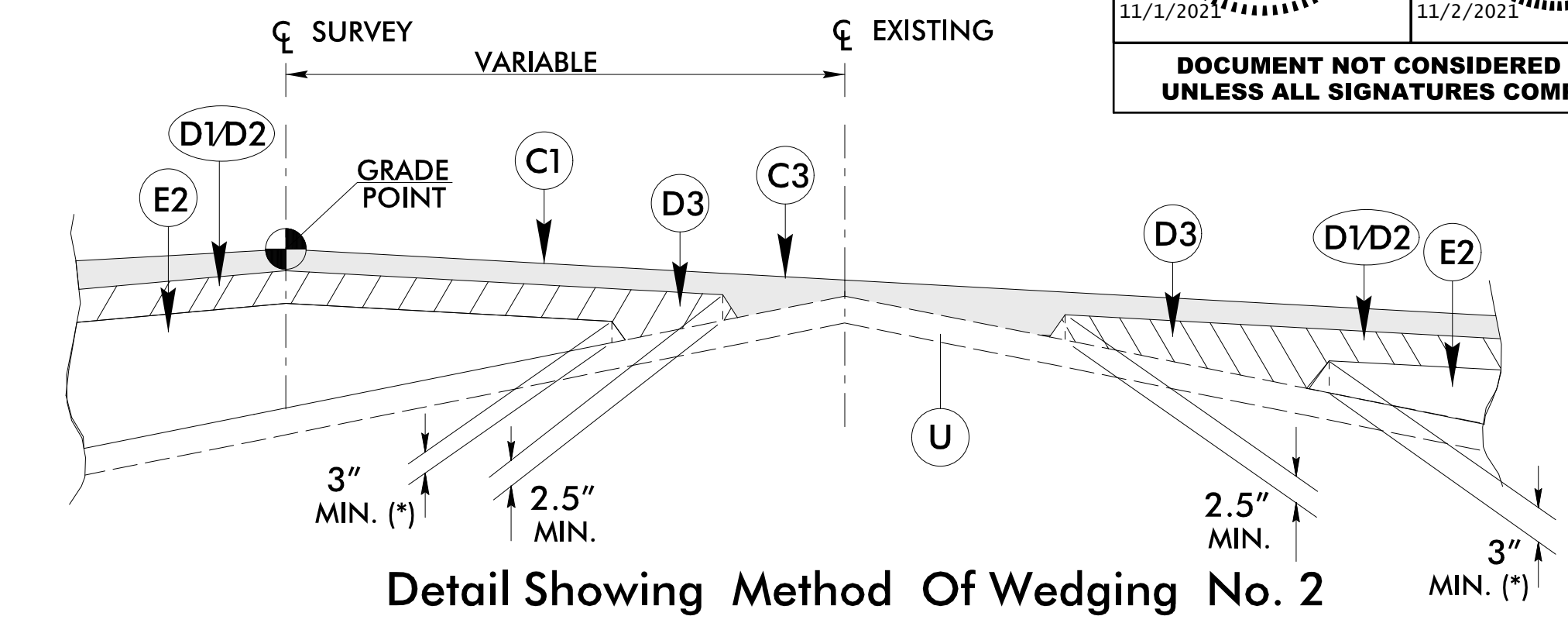


PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER <i>Carl S. Morrison</i> 11/1/2021	PAVEMENT DESIGN ENGINEER <i>Carl S. Morrison</i> 11/2/2021

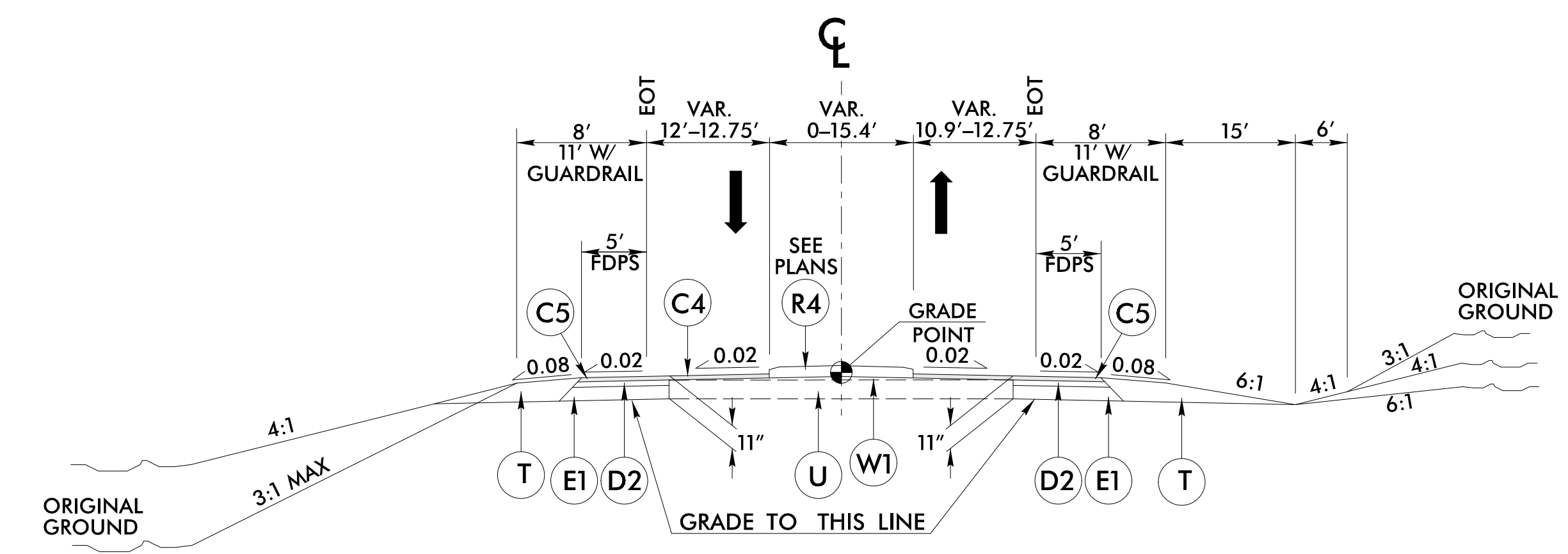
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



Detail Showing Method Of Wedging No. 1



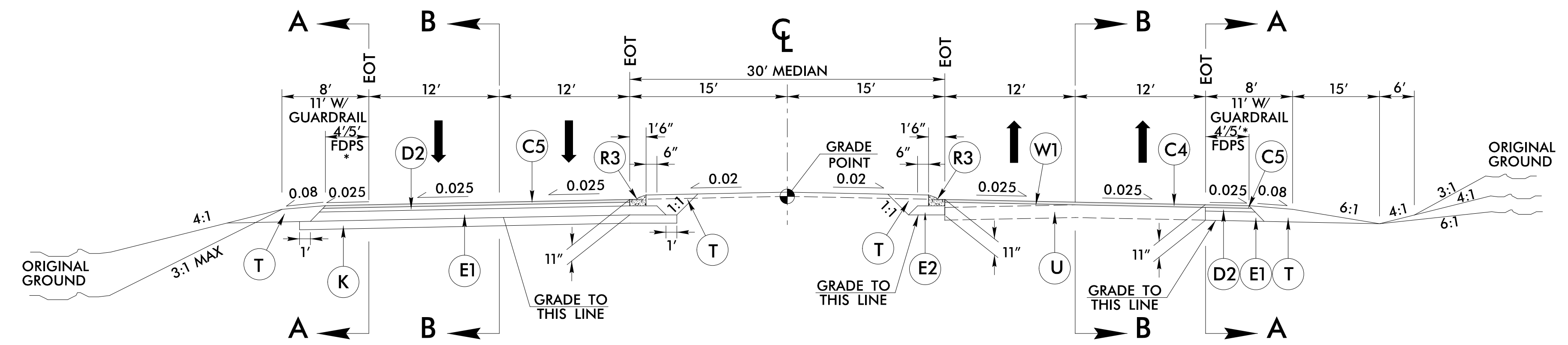
Detail Showing Method Of Wedging No. 2



TYPICAL SECTION NO. 1

-L- STA. 47+50.00 TO STA. 53+00.00

TRANSITION TYPICAL SECTION NO. 1 TO TYPICAL SECTION NO. 3
-L- STA. 53+00.00 TO STA. 59+00.00



TYPICAL SECTION NO. 2

- L- STA. 53+00.00 TO STA. 54+50.00
- L- STA. 76+00.00 TO STA. 83+05.00
- L- STA. 208+00.00 TO STA. 214+00.00
- L- STA. 229+00.00 TO STA. 243+00.00
- L- STA. 290+00.00 TO STA. 307+10.00
- L- STA. 312+89.00 TO STA. 316+10.00
- L- STA. 317+95.00 TO STA. 368+72.00
- L- STA. 370+12.00 TO STA. 387+76.87
- L- STA. 387+80.00 R 2 TO STA. 388+55.50 R 2
- L- STA. 391+67.00 R 2 TO STA. 425+74.65 R 2

*NOTE: USE 5' FULL DEPTH PAVED SHOULDERS FROM -L- STA 47+50.00 TO STA 300+54.32

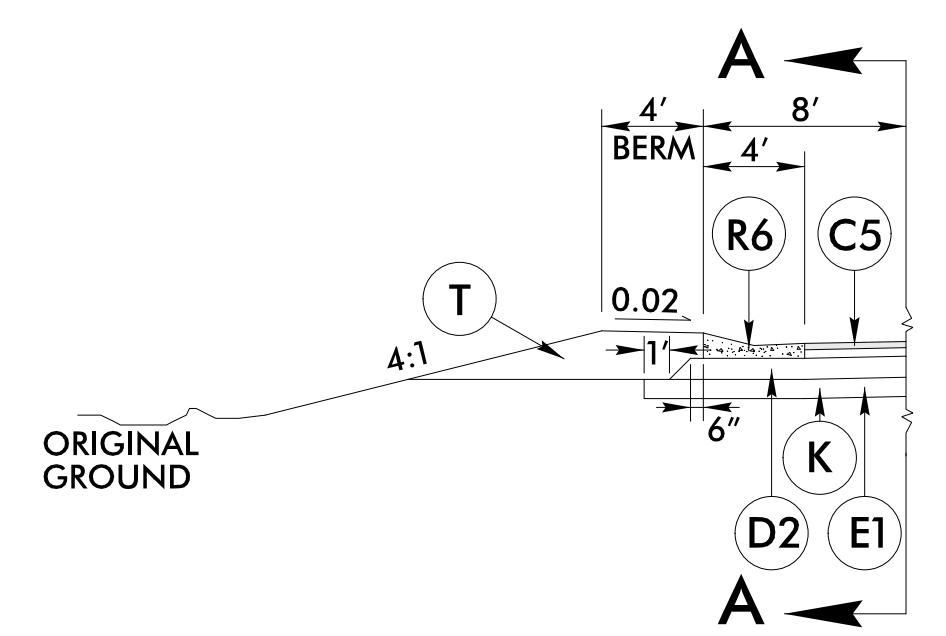
NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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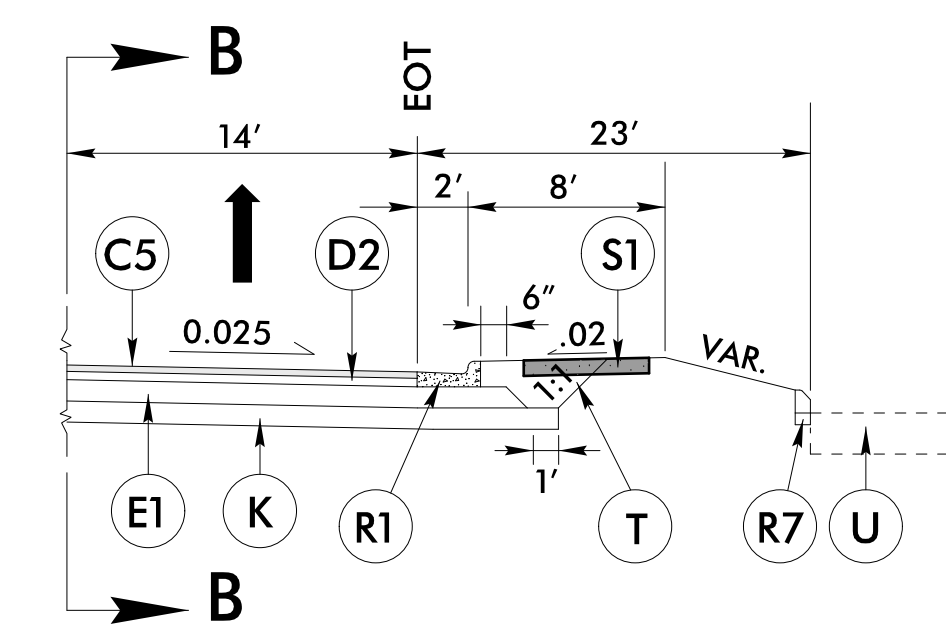
6/2/19

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
D2	PROP. APPROX. 4" ACIC, TYPE I19.0C
D3	PROP. VAR. DEPTH ACIC, TYPE I19.0C
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	2'-9" CONCRETE CURB AND GUTTER.
R3	1'-6" CONCRETE CURB AND GUTTER. (STD MOUNTABLE)
R4	5" MONOLITHIC CONCRETE ISLAND
R5	SHOULDER BERM GUTTER
R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6" GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 x W3.5 OR W5 x W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

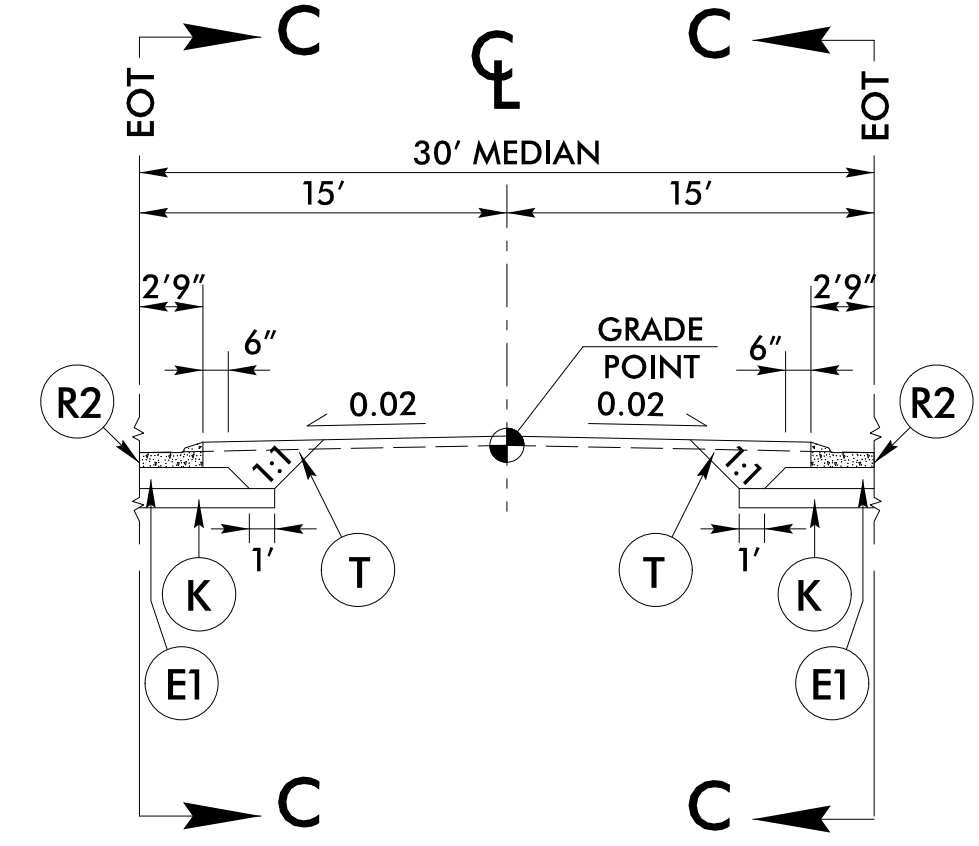
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



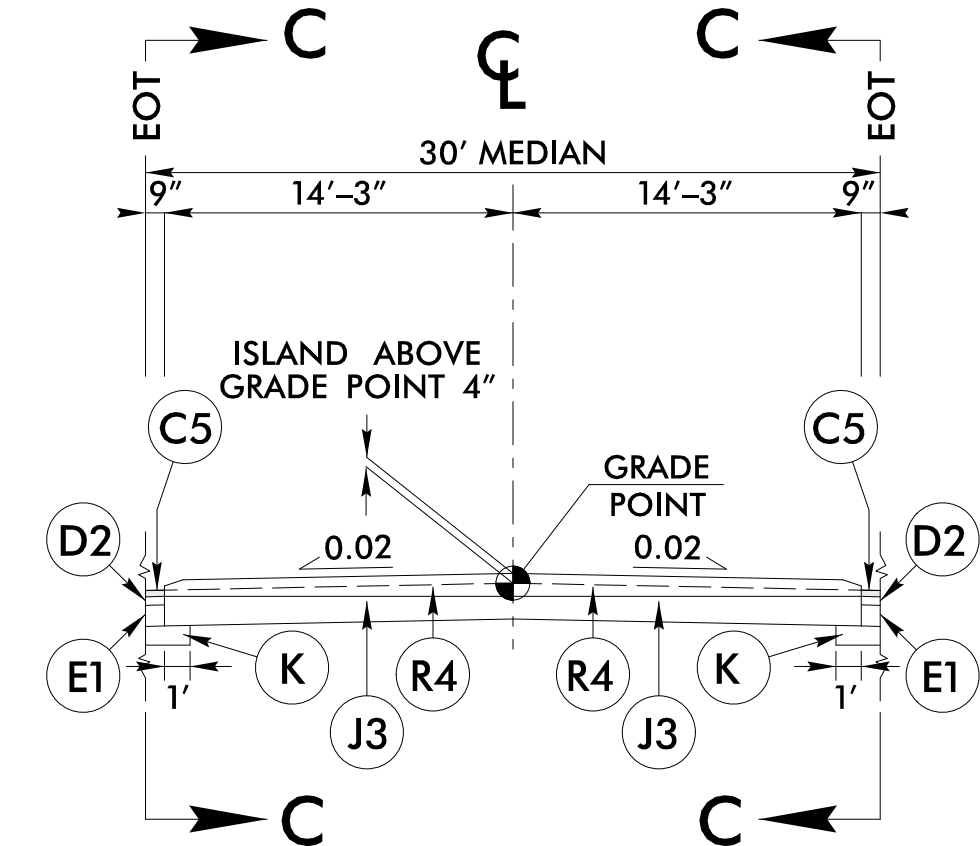
TYPICAL SECTION NO. 3E
EXPRESSWAY GUTTER LOCATIONS
USE TYPICAL SECTION NO. 3E IN CONJUNCTION WITH TYPICAL SECTION NO. 2 & 3
-L- STA. 90+55.53 TO STA. 94+05.63



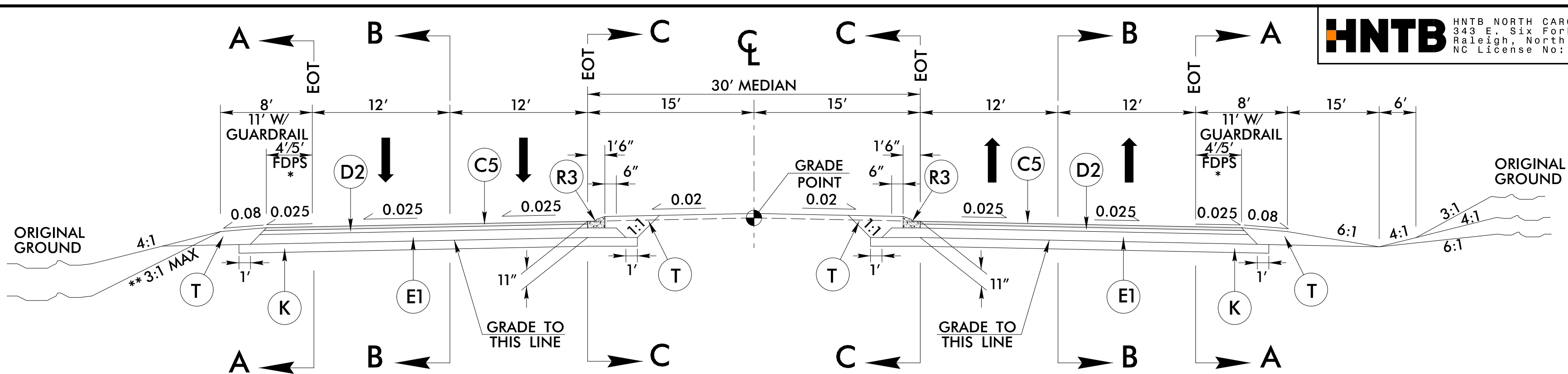
TYPICAL SECTION NO. 3F
CHANNELIZATION WITH 8"x18" CURB
USE TYPICAL SECTION NO. 3F IN CONJUNCTION WITH TYPICAL SECTION NO. 2 & 3
SEE PLANS FOR LOCATIONS



TYPICAL SECTION NO. 3G
2'-9" CONCRETE MEDIAN CURBING
USE TYPICAL SECTION NO. 3G IN CONJUNCTION WITH TYPICAL SECTION NO. 2, 3 & 4
-L- STA. 349+83.39 TO STA. 358+58.75
-L- STA. 362+48.21 TO STA. 368+64.42 (EBL)/368+55.48 (WBL) (BEG. BRIDGE)
-L- STA. 370+05.05 (EBL)/370+18.89 (WBL) (END BRIDGE) TO STA. 370+85.00
-LREV- STA. 370+85.00 TO STA. 379+96.97
-LREV- STA. 381+89.54 TO STA. 387+76.87
-L- STA. 387+76.87 TO STA. 388+47.34 (EBL)/388+63.60 (WBL) (BEG. BRIDGE)
-L- STA. 391+60.09 (EBL)/391+73.86 (WBL) (END BRIDGE) TO STA. 399+33.24

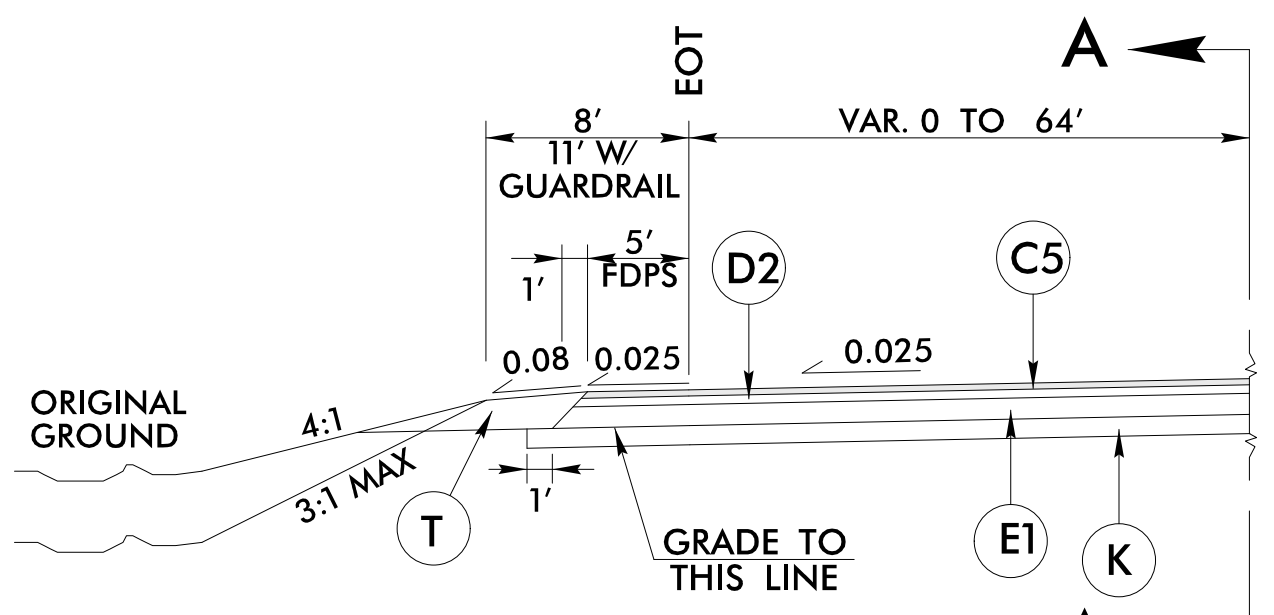


TYPICAL SECTION NO. 3H
CONCRETE MEDIAN UNDERNEATH MIDWAY BRIDGE
USE TYPICAL SECTION NO. 3H IN CONJUNCTION WITH TYPICAL SECTION NO. 3
-L- STA. 78+82.50 TO STA. 79+82.50

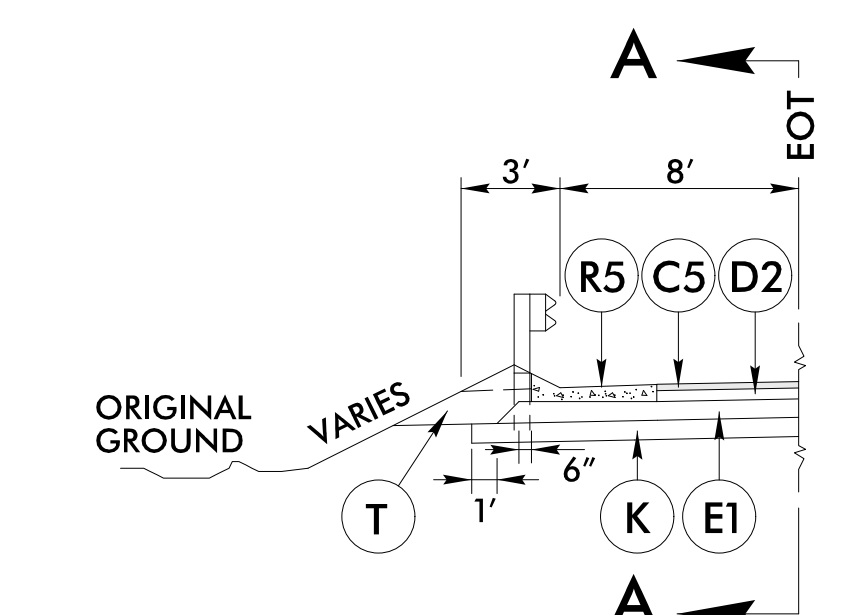


TYPICAL SECTION NO. 3
-L- STA. 54+50.00 TO STA. 76+00.00
-L- STA. 83+05.00 TO STA. 208+00.00
-L- STA. 214+00.00 TO STA. 229+00.00
-L- STA. 243+00.00 TO STA. 290+00.00
-L- STA. 307+10.00 TO STA. 312+89.00
-L- STA. 316+10.00 TO STA. 317+95.00

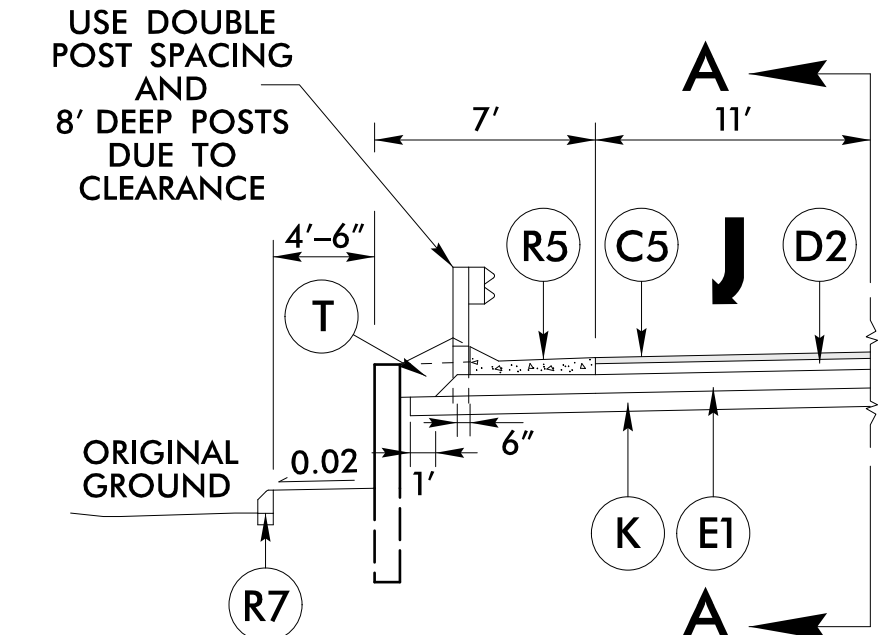
TRANSITION 5' FULL DEPTH PAVED SHOULDERS TO 4' FULL DEPTH PAVED SHOULDERS FROM
-L- STA. 300+54.32 TO STA. 300+94.32.
CONTINUE 4' FULL DEPTH PAVED SHOULDERS FROM
-L- STA. 300+94.32 TO -L- STA. 370+85.00
-LREV- STA. 370+85.00 TO STA. 387+76.87
-L- STA. 387+80.00 R 2 TO -L- STA. 399+33.24 R 2



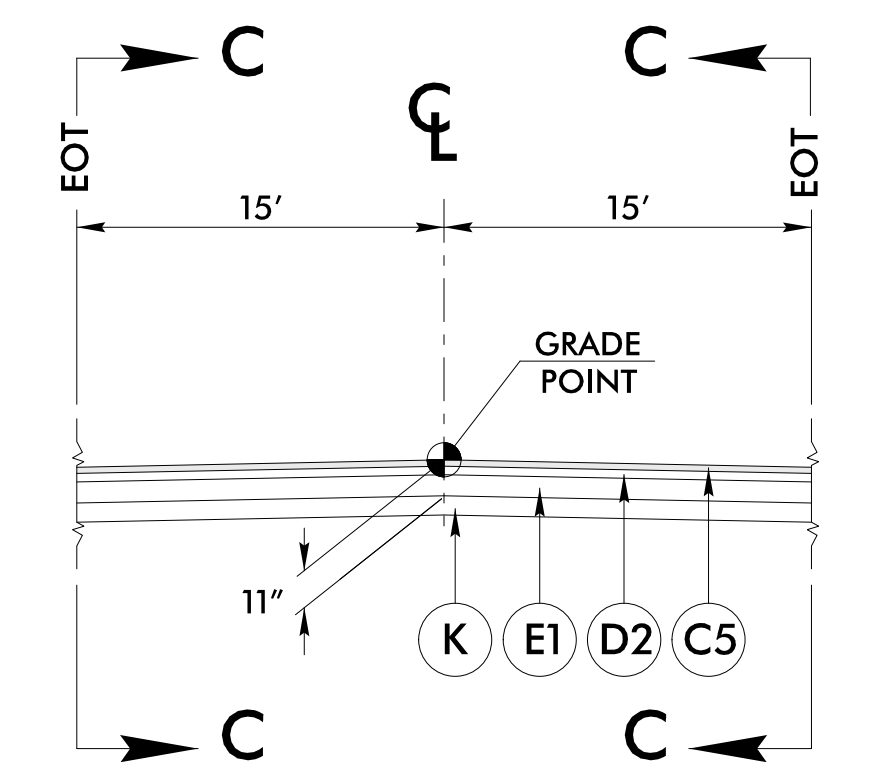
TYPICAL SECTION NO. 3A
U-TURN BULB LOCATIONS
USE TYPICAL SECTION NO. 3A IN CONJUNCTION WITH TYPICAL SECTION NO. 2 & 3
SEE PLANS FOR LOCATIONS



TYPICAL SECTION NO. 3B
SHOULDER BERM GUTTER LOCATIONS
USE TYPICAL SECTION NO. 3B IN CONJUNCTION WITH TYPICAL SECTION NO. 2 & 3
SEE PLANS FOR LOCATIONS

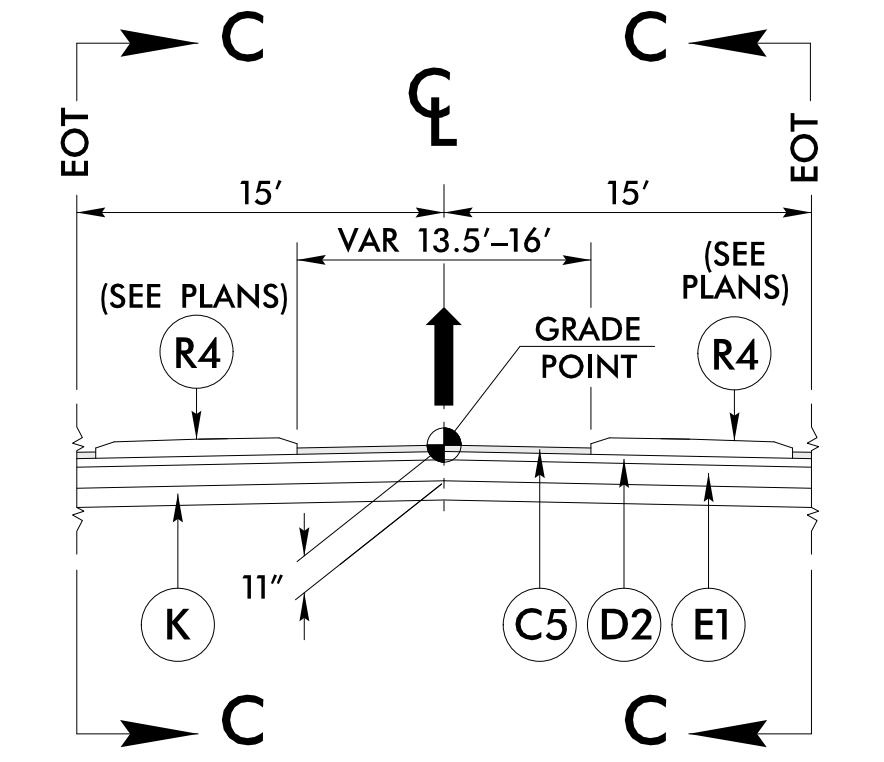


TYPICAL SECTION NO. 3C
RETAINING WALL LOCATION 1 & 2
USE TYPICAL SECTION NO. 3C IN CONJUNCTION WITH TYPICAL SECTION NO. 3
-L- STA. 232+85.84 TO STA. 236+48.52
-L- STA. 237+02.93 TO STA. 237+90.00



TYPICAL SECTION NO. 3D
UNDIVIDED MEDIAN LOCATIONS

USE TYPICAL SECTION NO. 3D IN CONJUNCTION WITH TYPICAL SECTION NO. 2, 3 & 4
-L- STA. 144+10.68 TO STA. 145+59.48
-L- STA. 210+13.64 TO STA. 211+59.10
-L- STA. 338+30.00 TO STA. 340+85.00
-L- STA. 359+60.70 TO STA. 361+42.69
-LREV- STA. 380+96.94 TO STA. 381+89.54
-L- STA. 405+24.79 R 2 TO STA. 406+70.21 R 2
-L- STA. 424+22.24 R 2 TO STA. 425+74.65 R 2



TYPICAL SECTION NO. 3i
MONOLITHIC ISLAND LOCATIONS

USE TYPICAL SECTION NO. 3i IN CONJUNCTION WITH TYPICAL SECTION NO. 2, 3 & 4
-L- STA. 63+86.05 TO STA. 68+55.00
-L- STA. 71+75.00 TO STA. 72+32.00
-L- STA. 78+82.50 TO STA. 79+82.50
-L- STA. 100+84.25 TO STA. 109+15.00
-L- STA. 143+10.70 TO STA. 144+10.68
-L- STA. 145+59.48 TO STA. 146+79.35
-L- STA. 209+13.67 TO STA. 210+13.64
-L- STA. 211+59.10 TO STA. 217+15.00
-L- STA. 230+21.56 TO STA. 235+93.06
-L- STA. 239+05.00 TO STA. 241+51.50
-L- STA. 254+14.00 TO STA. 258+69.00
-L- STA. 269+47.04 TO STA. 274+02.09
-L- STA. 300+19.32 TO STA. 302+84.32
-L- STA. 322+85.00 TO STA. 338+30.00
-L- STA. 340+85.00 TO STA. 349+83.39
-L- STA. 358+58.75 TO STA. 359+60.70
-L- STA. 361+42.69 TO STA. 362+48.21
-LREV- STA. 379+96.97 TO STA. 380+96.94
-L- STA. 403+83.44 R 2 TO STA. 405+24.79 R 2
-L- STA. 406+70.21 R 2 TO STA. 407+89.93 R 2
-L- STA. 416+87.50 R 2 TO STA. 424+22.24 R 2
-L- STA. 425+74.65 R 2 TO STA. 428+37.02 R 2

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.



PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER <i>[Signature]</i>	PAVEMENT DESIGN ENGINEER <i>[Signature]</i>
11/1/2021	11/2/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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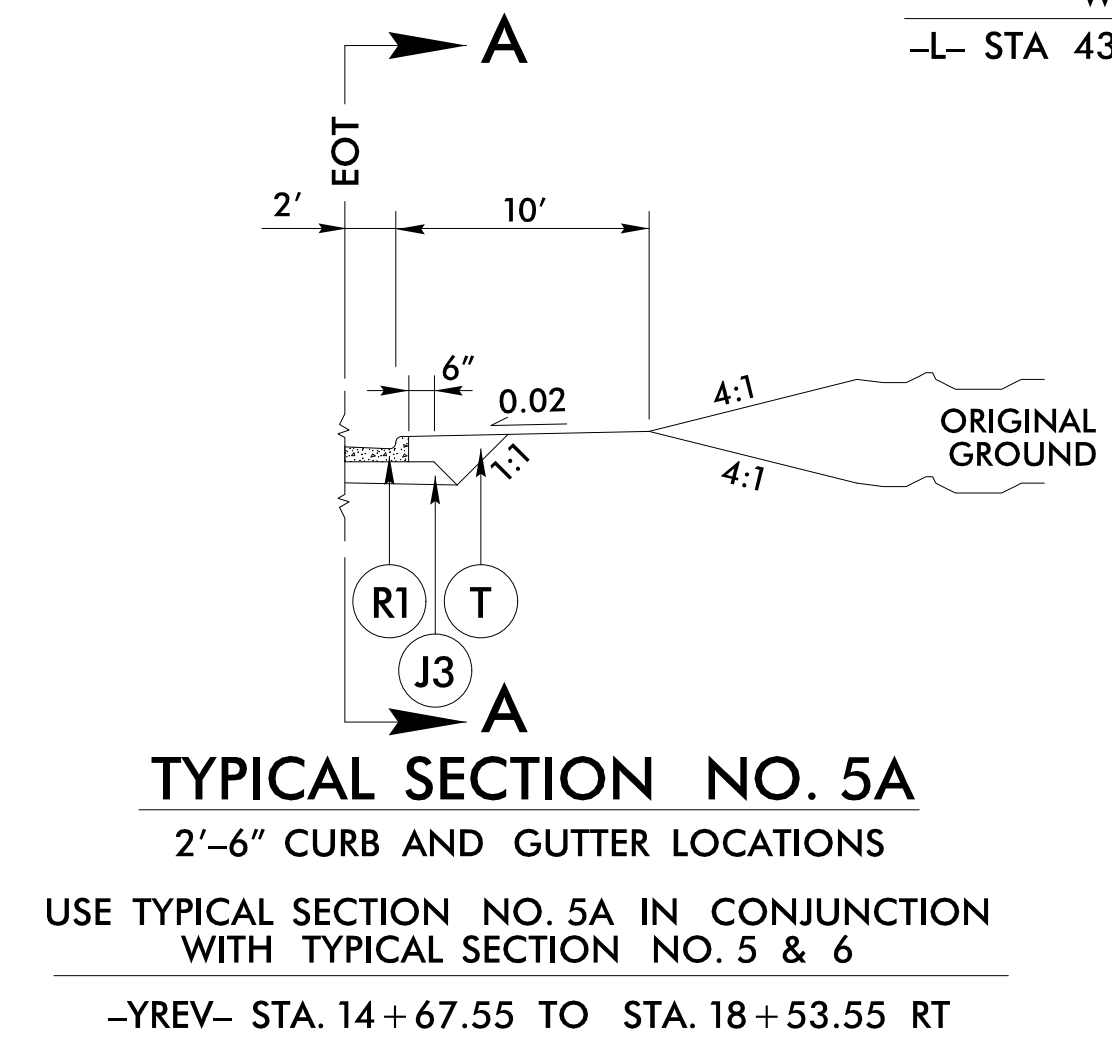
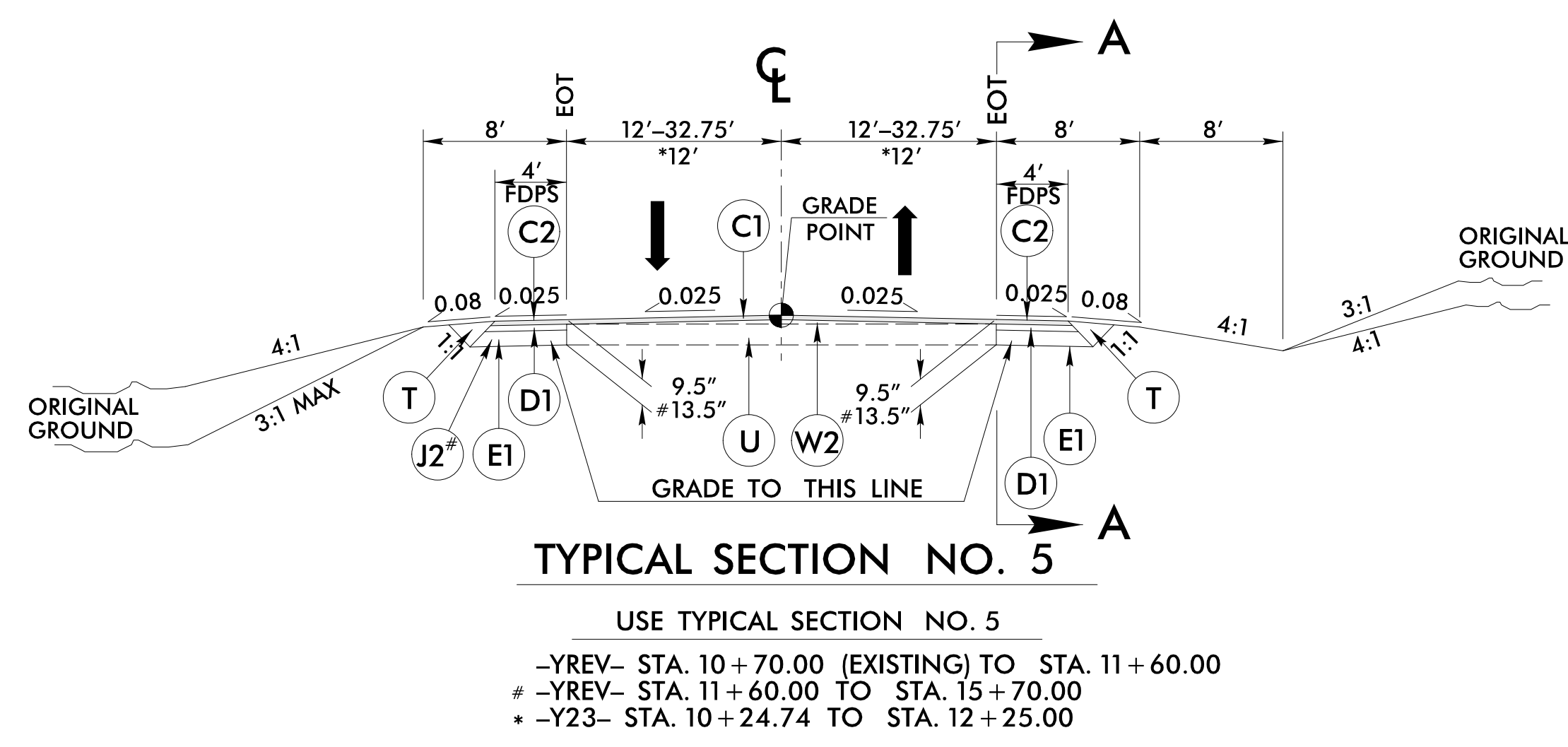
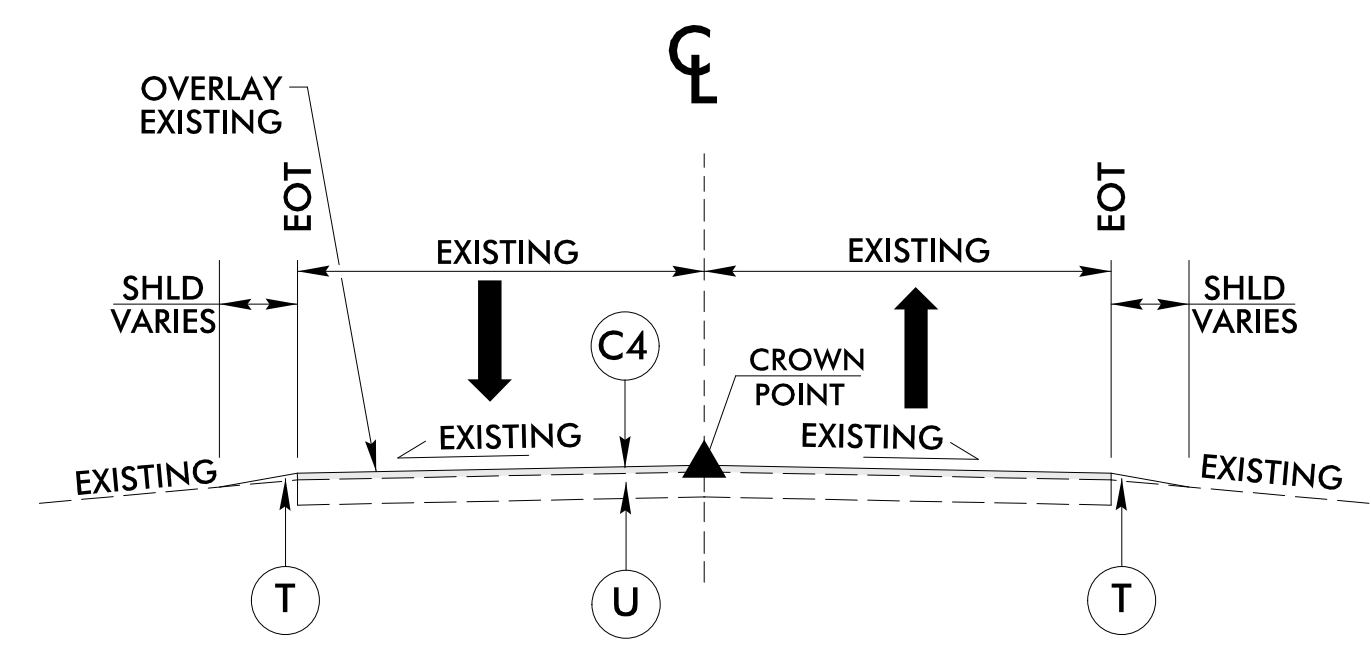
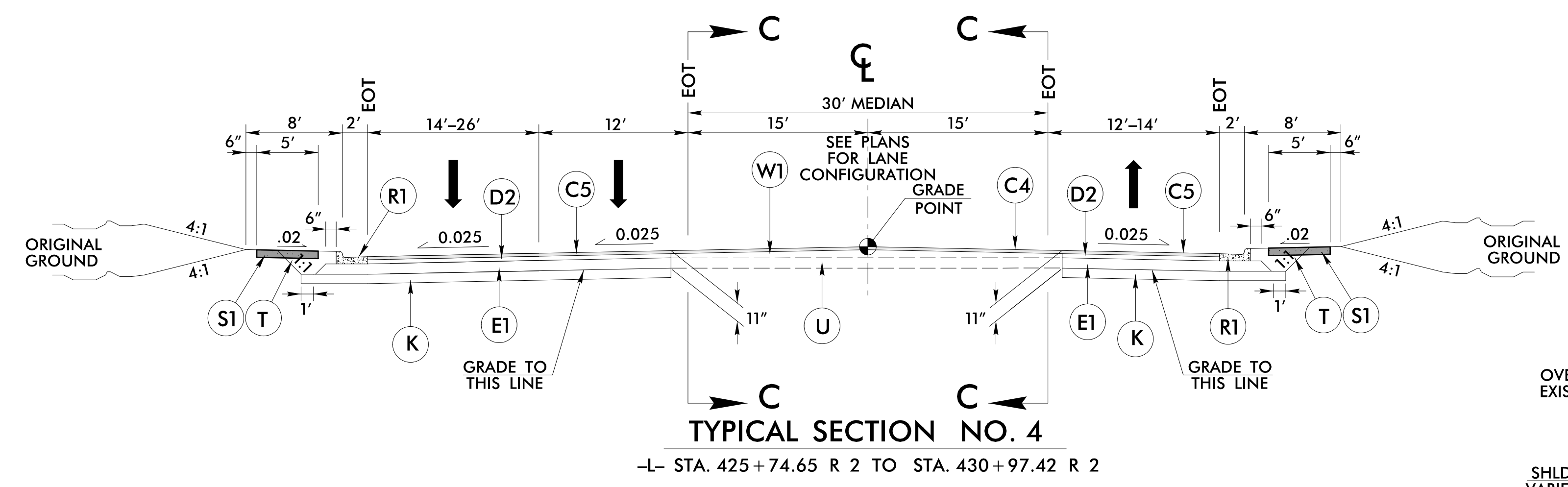
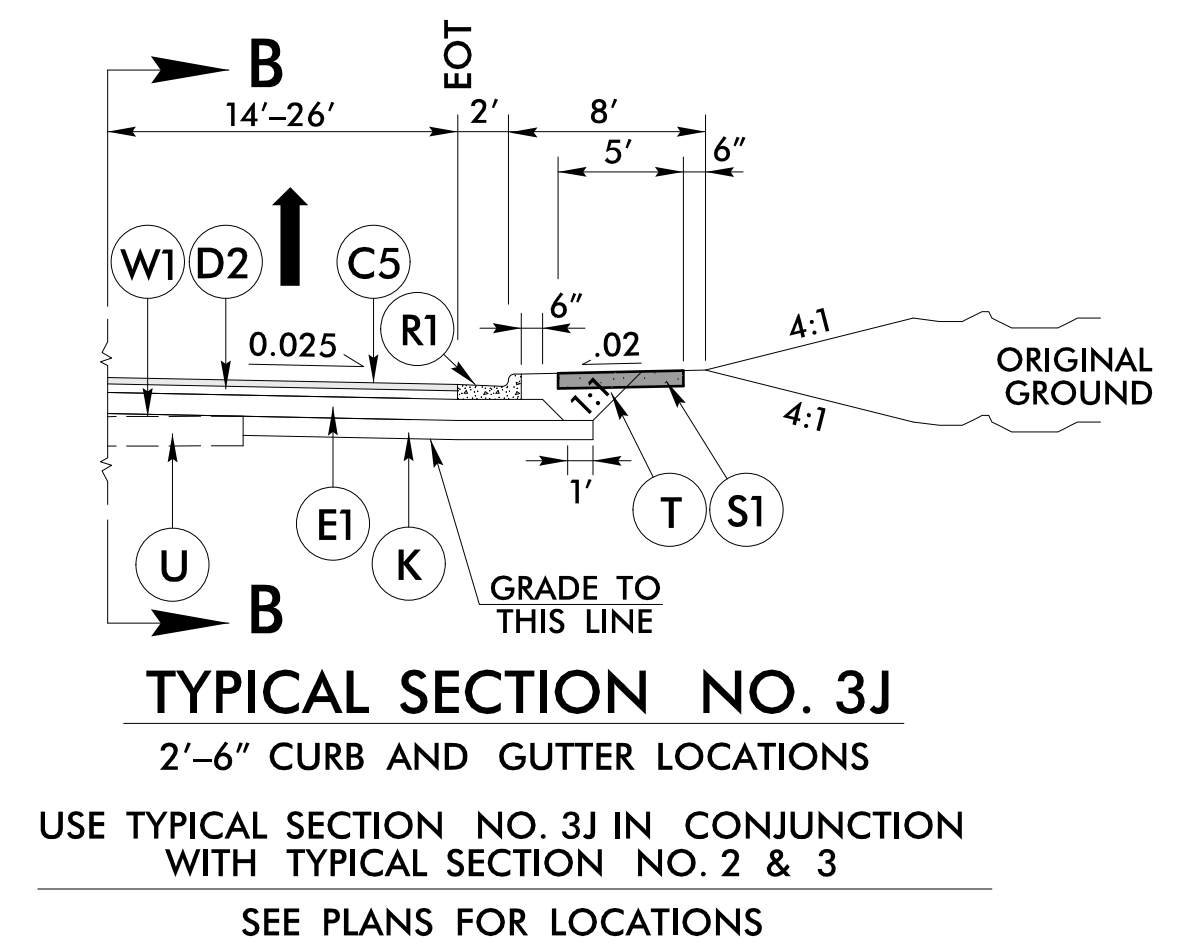
6/2/99

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
D2	PROP. APPROX. 4" ACIC, TYPE I19.0C
D3	PROP. VAR. DEPTH ACIC, TYPE I19.0C
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	2'-9" CONCRETE CURB AND GUTTER.
R3	1'-6" CONCRETE CURB AND GUTTER. (STD MOUNTABLE)
R4	5" MONOLITHIC CONCRETE ISLAND
R5	SHOULDER BERM GUTTER
R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6"GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 X W3.5 OR W5 X W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

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

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1524

PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-3
ROADWAY DESIGN ENGINEER <i>Douglas M. Whitley</i> 11/1/2021	PAVEMENT DESIGN ENGINEER <i>Carl S. Morrison</i> 11/2/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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6/2/2021

PAVEMENT SCHEDULE
(FINAL PAVEMENT DESIGN)

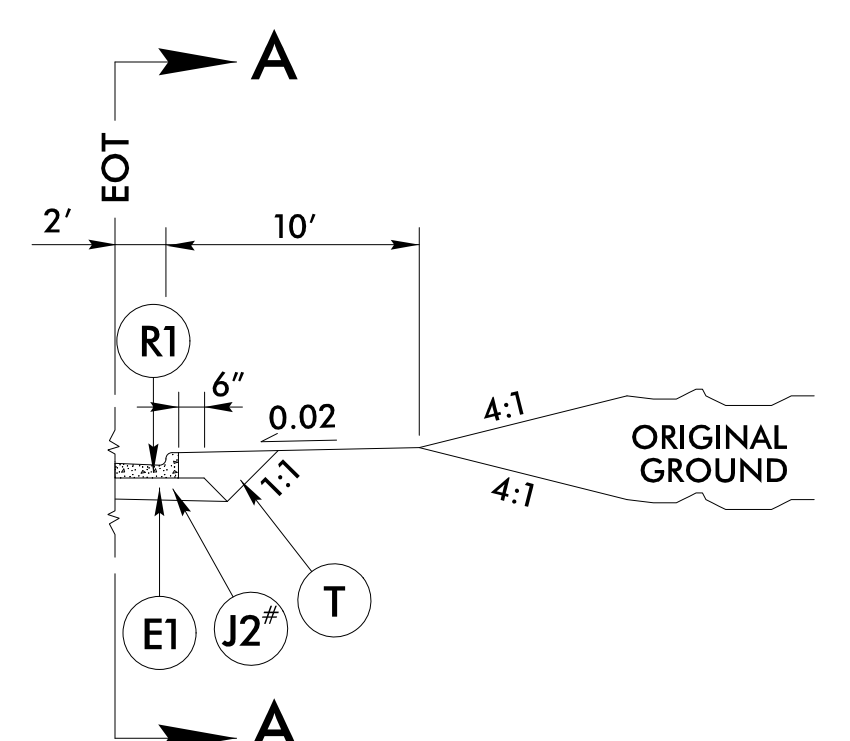
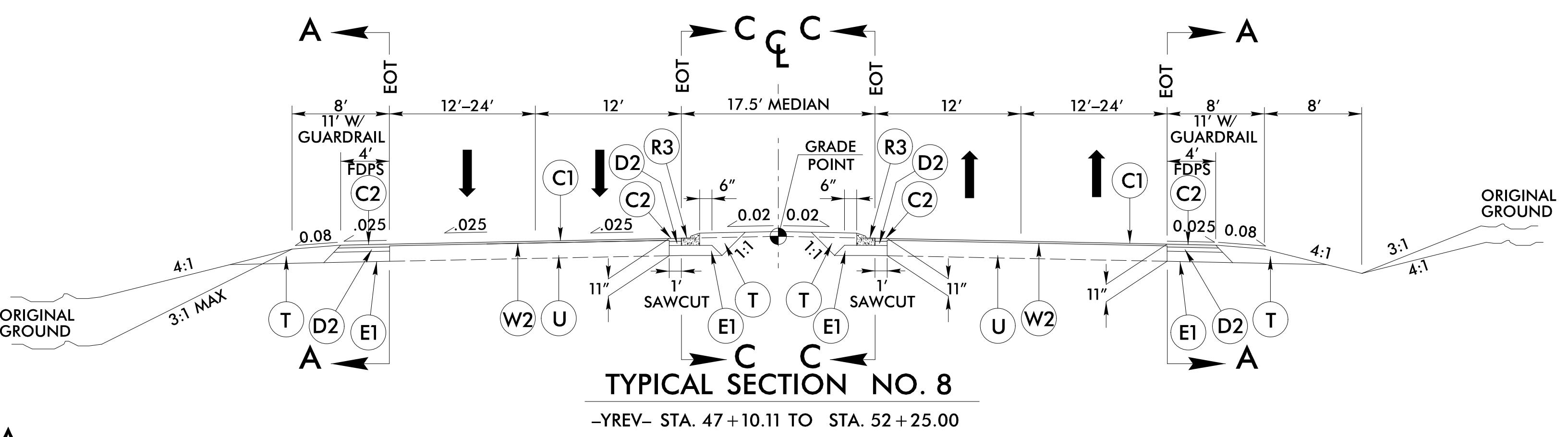
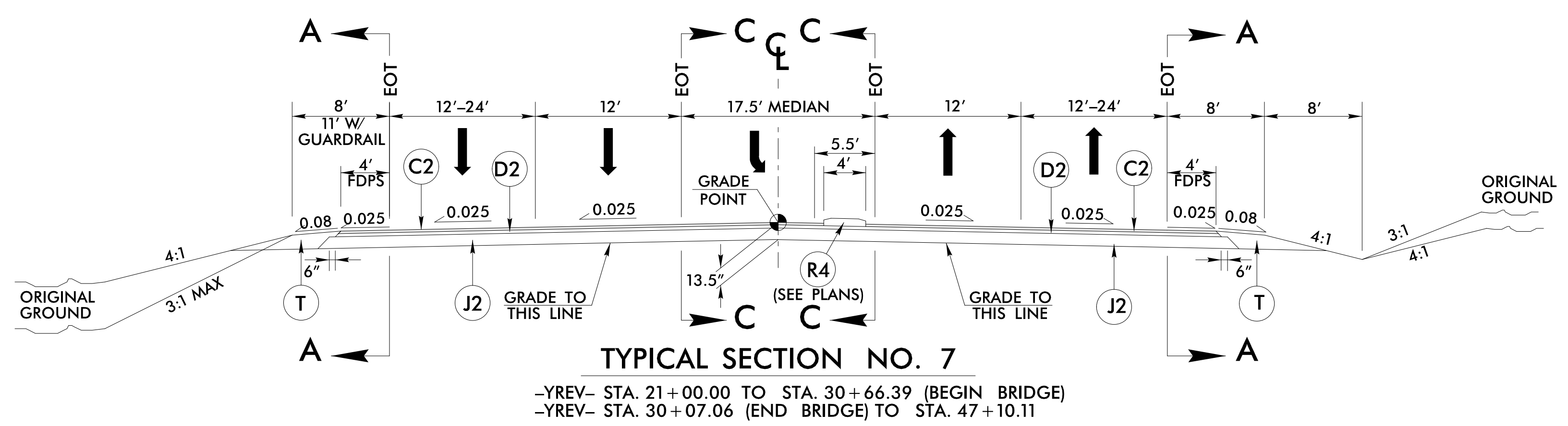
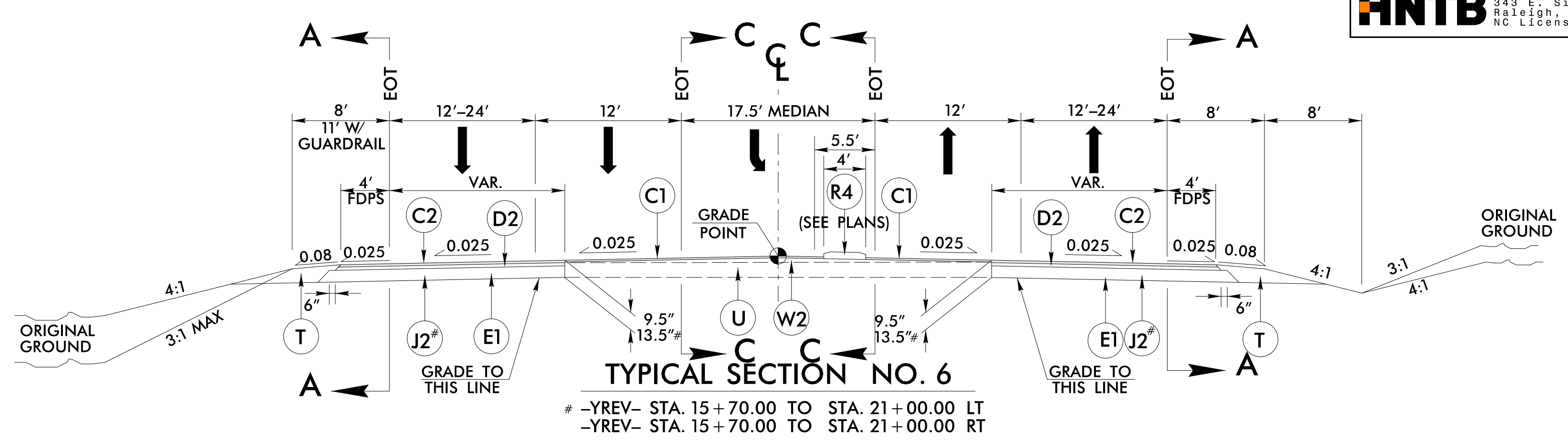
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
D2	PROP. APPROX. 4" ACIC, TYPE I19.0C
D3	PROP. VAR. DEPTH ACIC, TYPE I19.0C
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	2'-9" CONCRETE CURB AND GUTTER.
R3	1'-6" CONCRETE CURB AND GUTTER. (STD MOUNTABLE)
R4	5" MONOLITHIC CONCRETE ISLAND
R5	SHOULDER BERM GUTTER
R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6"GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 x W3.5 OR W5 x W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

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

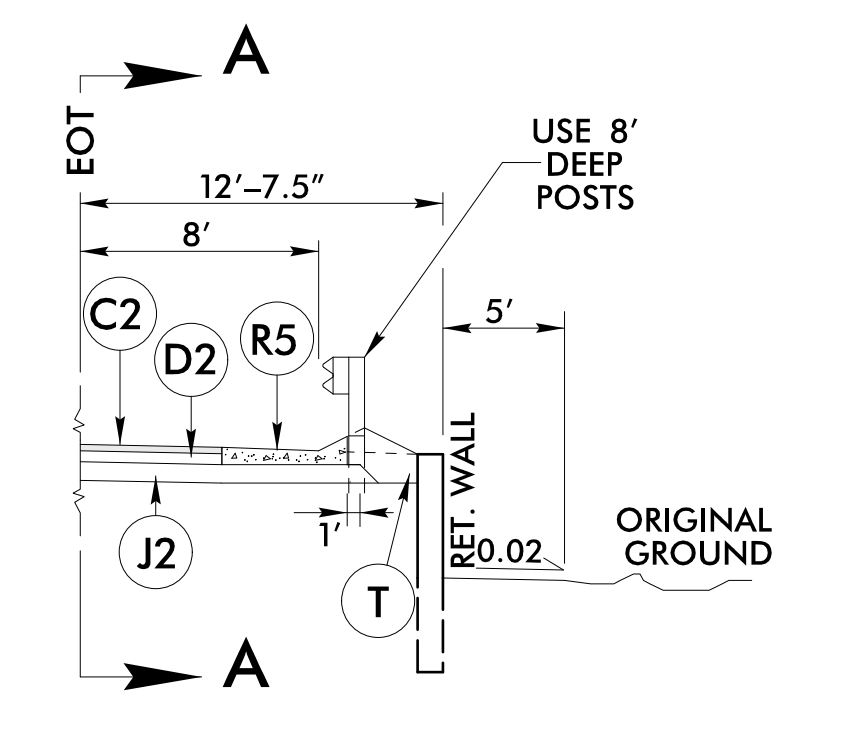
HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1524

PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-4
ROADWAY DESIGN ENGINEER <i>Seal Wigney</i> 36786	PAVEMENT DESIGN ENGINEER <i>Carl S. Morrison</i> 022896
11/1/2021	11/2/2021

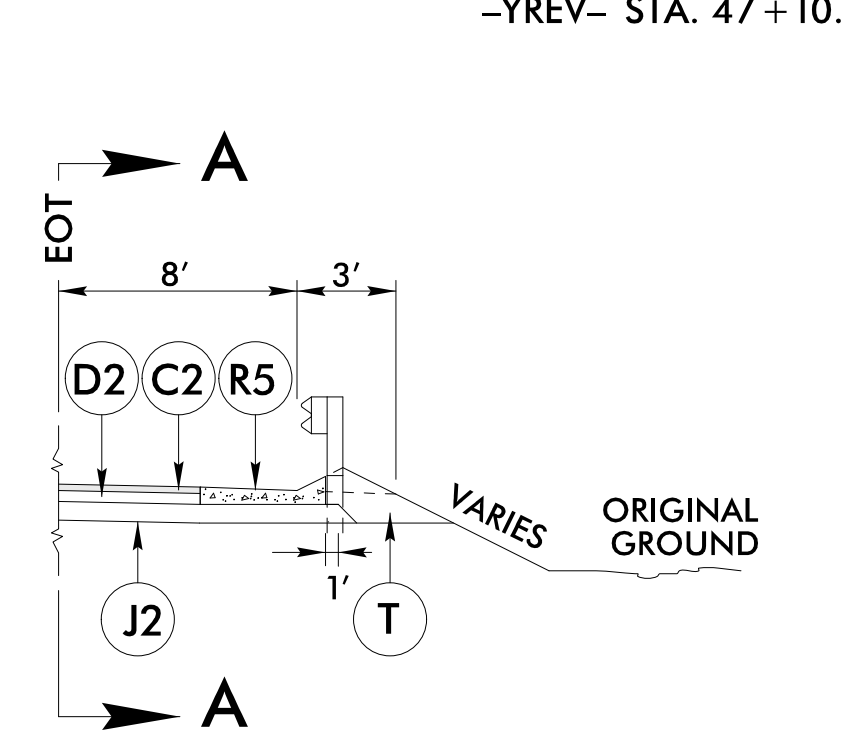
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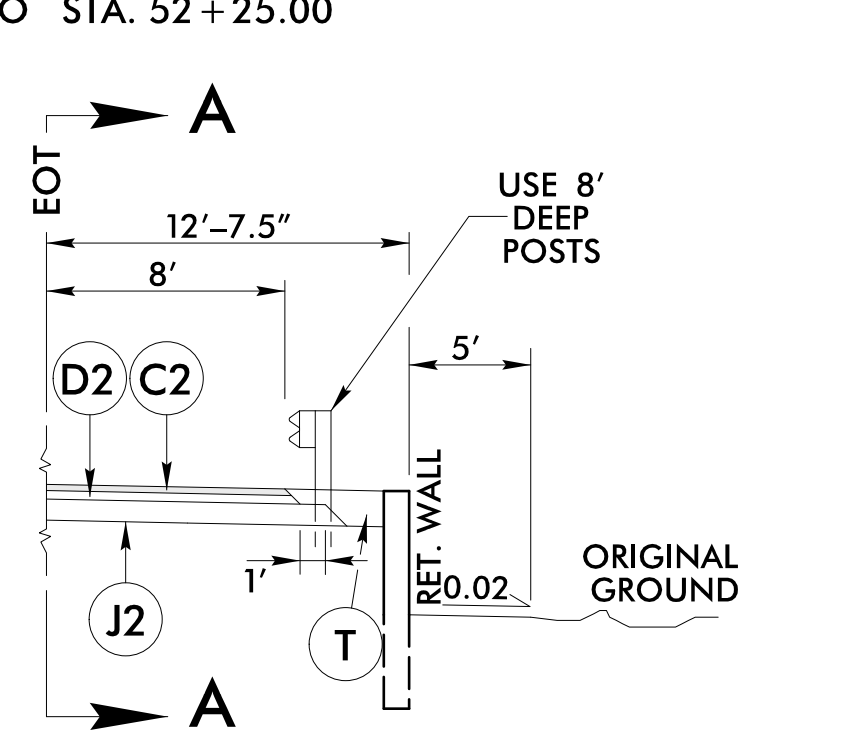
TYPICAL SECTION NO. 6A
2'-6" CURB AND GUTTER LOCATIONS
USE TYPICAL NO. 6A IN CONJUNCTION WITH TYPICAL SECTION NO. 6 & 7
-YREV- STA. 18+53.55 TO STA. 25+50.00 RT



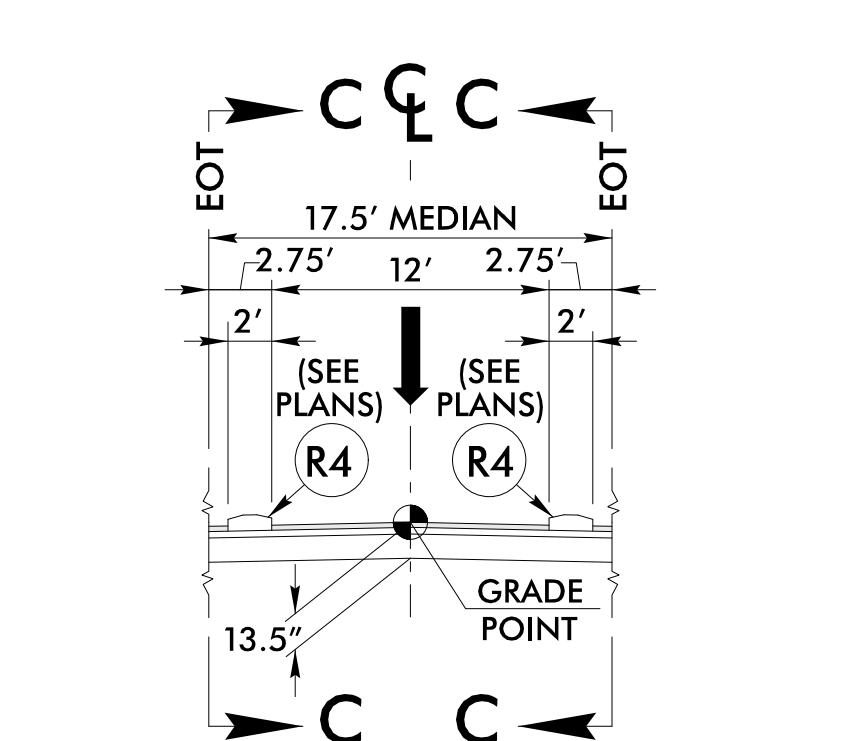
TYPICAL SECTION NO. 7A
RETAINING WALL LOCATIONS
USE TYPICAL NO. 7A IN CONJUNCTION WITH TYPICAL SECTION NO. 7 & 8
-YREV- STA. 29+65.69 TO STA. 30+36.44 RT
-YREV- STA. 32+29.25 TO STA. 33+50.33 RT
-YREV- STA. 37+95.00 TO STA. 47+66.75 LT



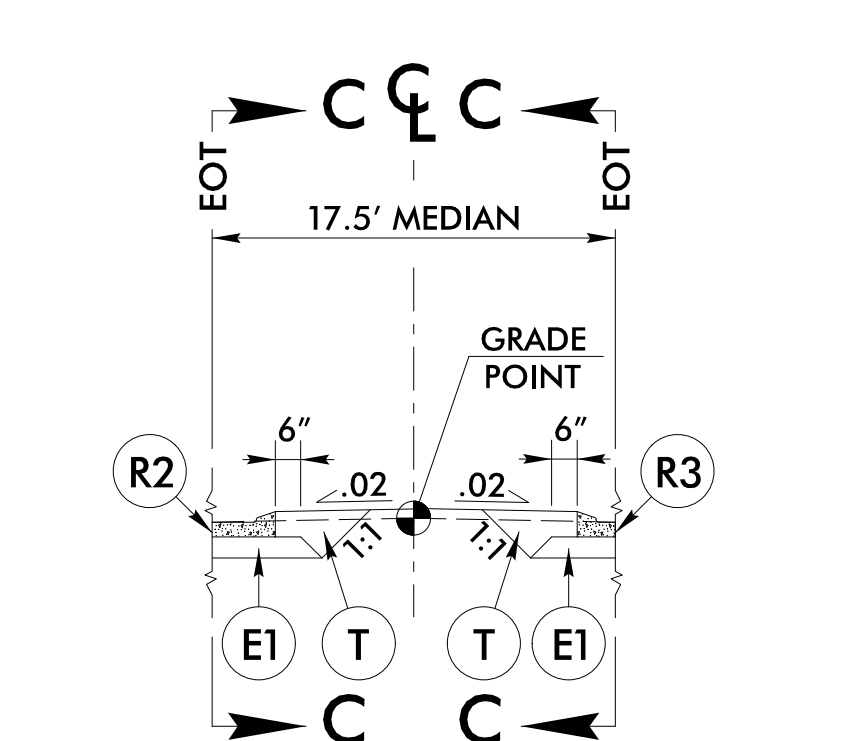
TYPICAL SECTION NO. 7B
SHOULDER BERM GUTTER LOCATIONS
USE TYPICAL NO. 7B IN CONJUNCTION WITH TYPICAL SECTION NO. 7 & 8
-YREV- STA. 25+50.00 TO STA. 29+65.90 RT
-YREV- STA. 32+29.25 TO STA. 36+50.00 RT



TYPICAL SECTION NO. 7C
RETAINING WALL LOCATIONS
USE TYPICAL NO. 7C IN CONJUNCTION WITH TYPICAL SECTION NO. 7 & 8
-YREV- STA. 29+51.83 TO STA. 30+47.72 LT
-YREV- STA. 32+33.10 TO STA. 33+44.60 LT



TYPICAL SECTION NO. 7D
GREEN-T MEDIAN ACCELERATION LANE
USE TYPICAL NO. 7D IN CONJUNCTION WITH TYPICAL SECTION NO. 7
-YREV- STA. 38+42.67 TO STA. 41+41.48



TYPICAL SECTION NO. 8A
MEDIAN CURB TO MATCH EXISTING
USE TYPICAL NO. 8A IN CONJUNCTION WITH TYPICAL SECTION NO. 8
-YREV- STA. 50+00.30 TO STA. 52+25.00

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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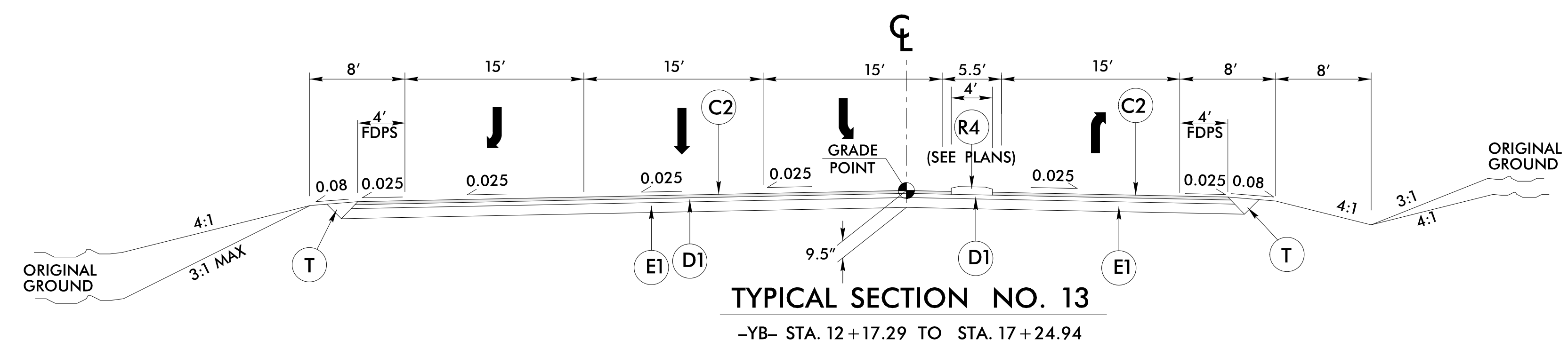
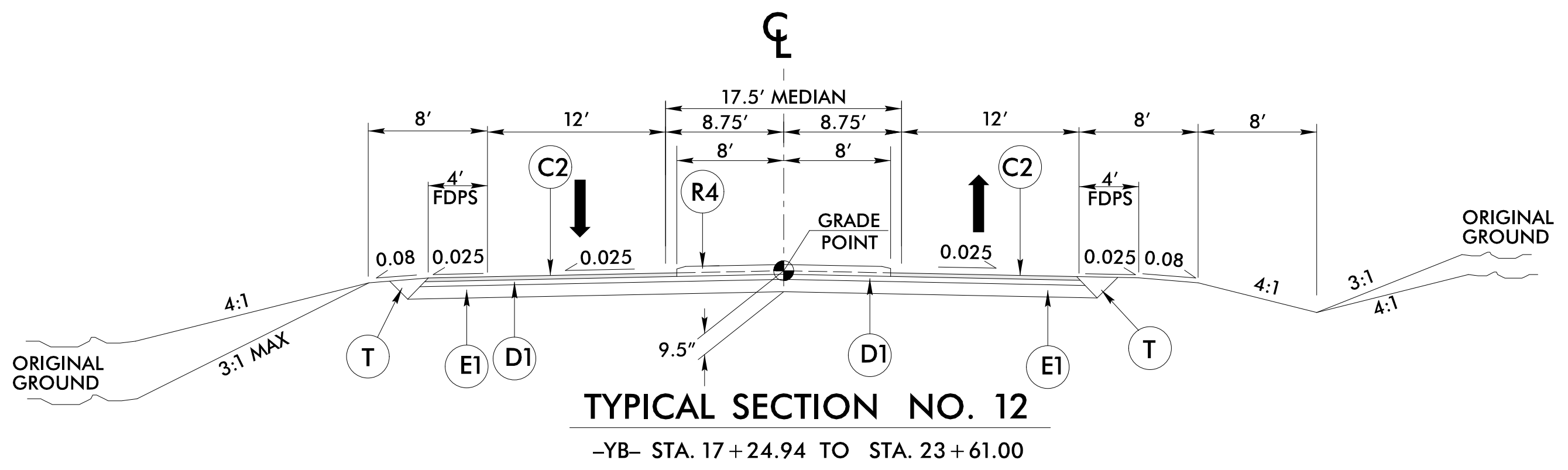
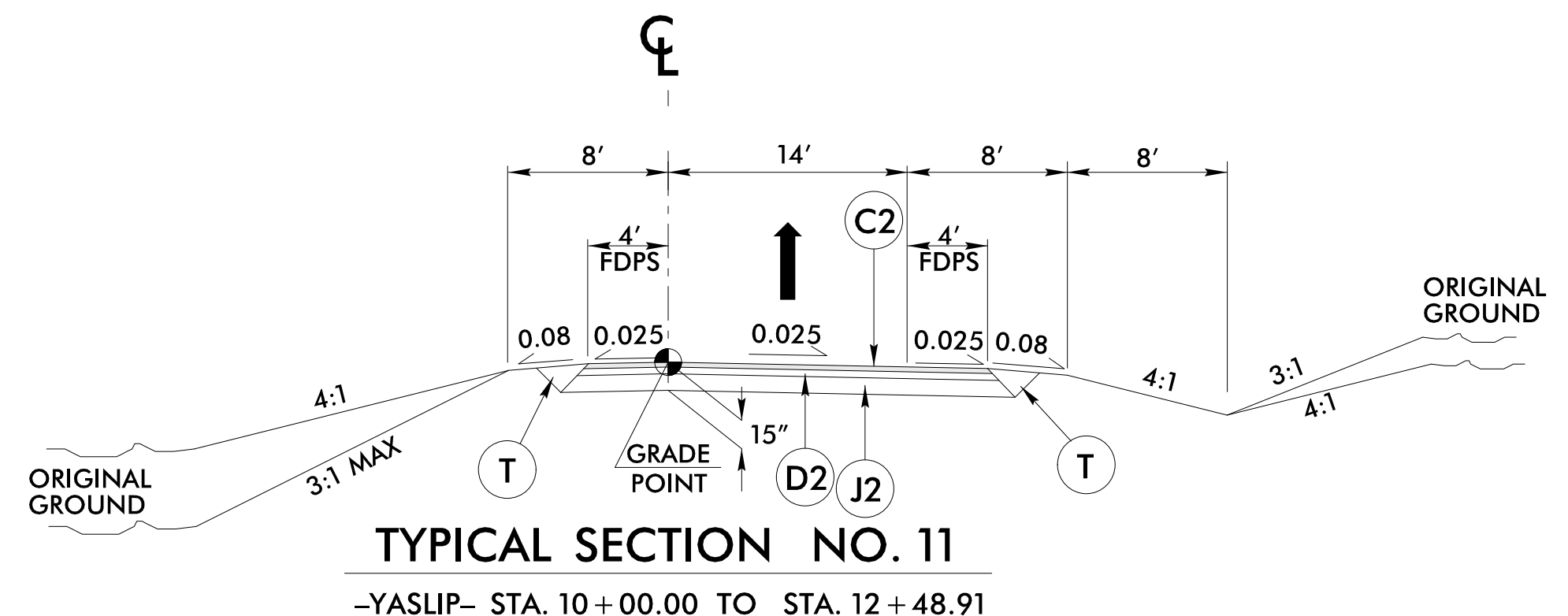
6/2/2021

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
D2	PROP. APPROX. 4" ACIC, TYPE I19.0C
D3	PROP. VAR. DEPTH ACIC, TYPE I19.0C
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	2'-9" CONCRETE CURB AND GUTTER.
R3	1'-6" CONCRETE CURB AND GUTTER. (STD MOUNTABLE)
R4	5" MONOLITHIC CONCRETE ISLAND
R5	SHOULDER BERM GUTTER
R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6" GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 x W3.5 OR W5 x W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

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

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NC License No: C-1524

PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-5
ROADWAY DESIGN ENGINEER <i>Douglas M. Whitley</i> 11/1/2021	PAVEMENT DESIGN ENGINEER <i>Carl S. Morrison</i> 11/2/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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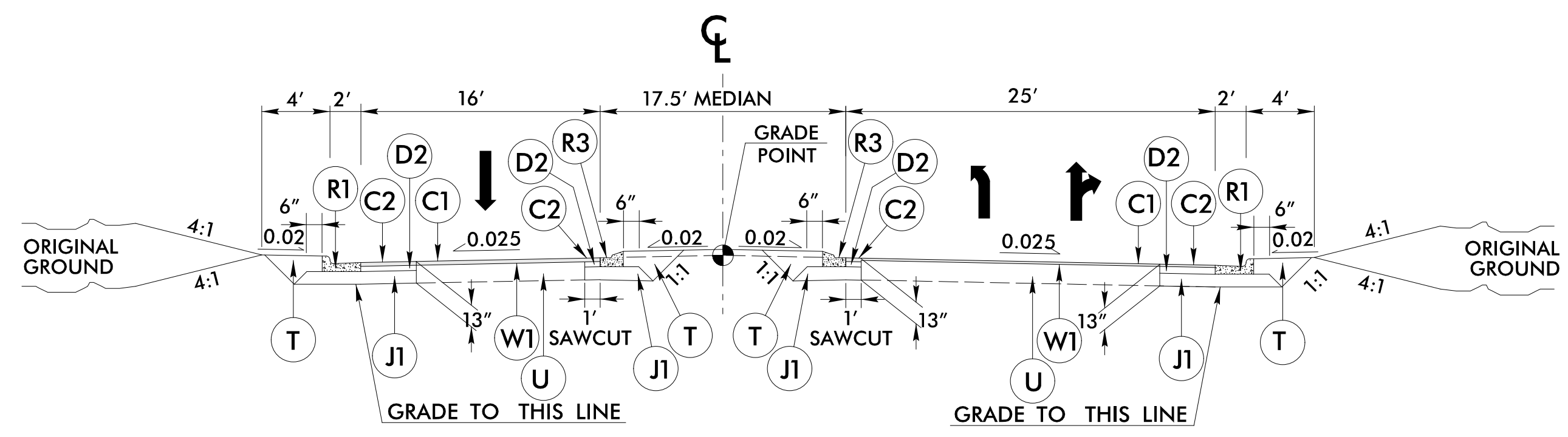
PAVEMENT SCHEDULE
(FINAL PAVEMENT DESIGN)

C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
D2	PROP. APPROX. 4" ACIC, TYPE I19.0C
D3	PROP. VAR. DEPTH ACIC, TYPE I19.0C
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
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S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

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

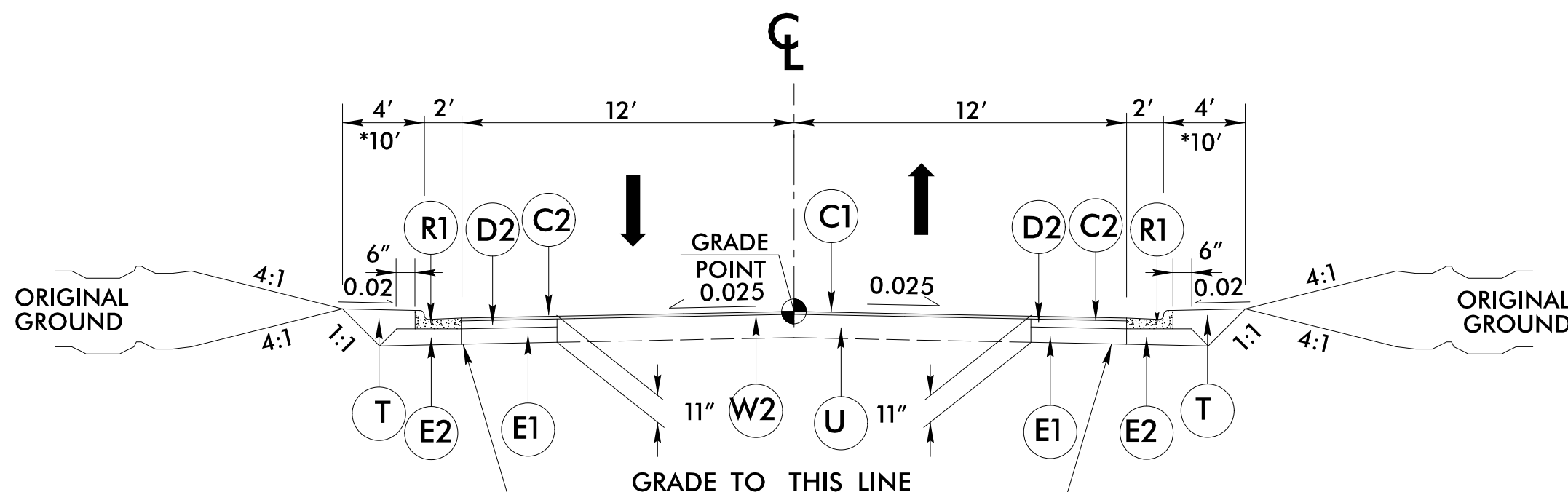
HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1524

PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-6
ROADWAY DESIGN ENGINEER <i>David S. Wilentz</i> 36786 11/1/2021	PAVEMENT DESIGN ENGINEER <i>Carl S. Sturman</i> 022896 11/2/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



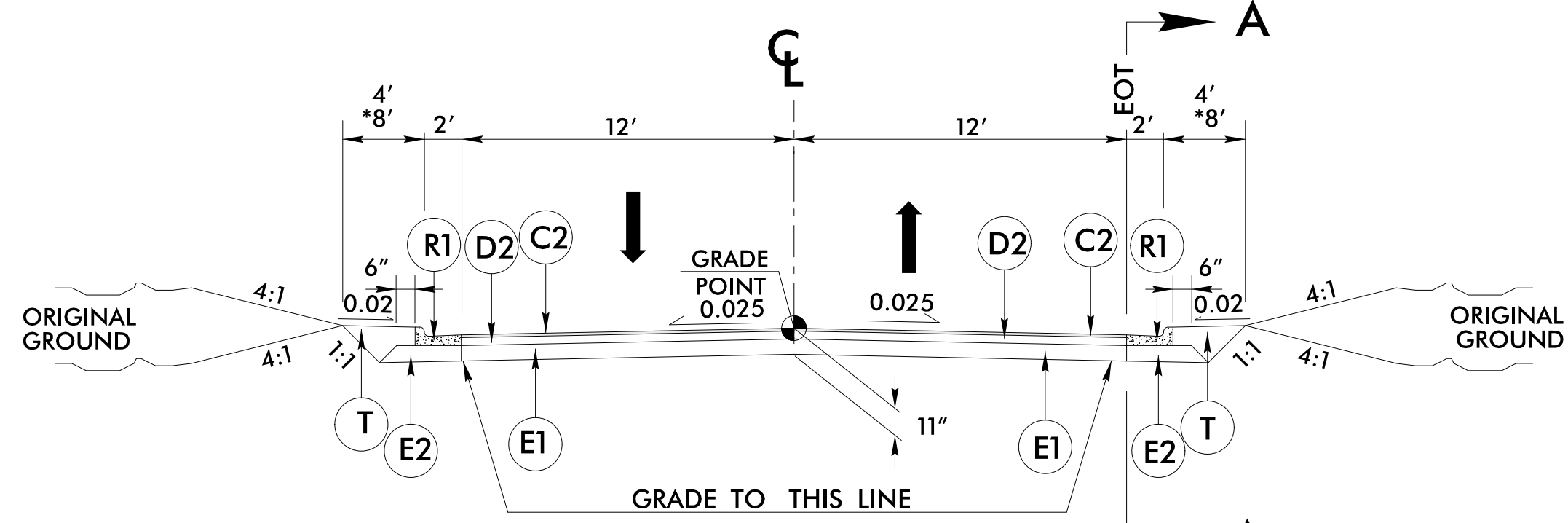
TYPICAL SECTION NO. 14

-YC- STA. 10+25.00 TO STA. 11+66.44



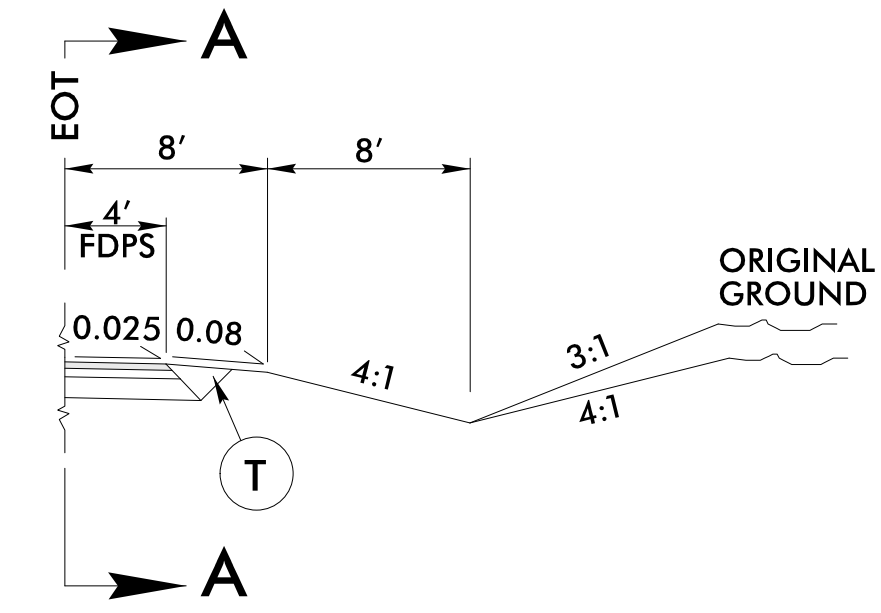
TYPICAL SECTION NO. 15

-YD- STA. 10+25.00 TO STA. 10+95.00
*Y14B- STA. 10+39.40 TO STA. 12+39.27
-Y14G- STA. 10+31.98 TO STA. 12+00.00



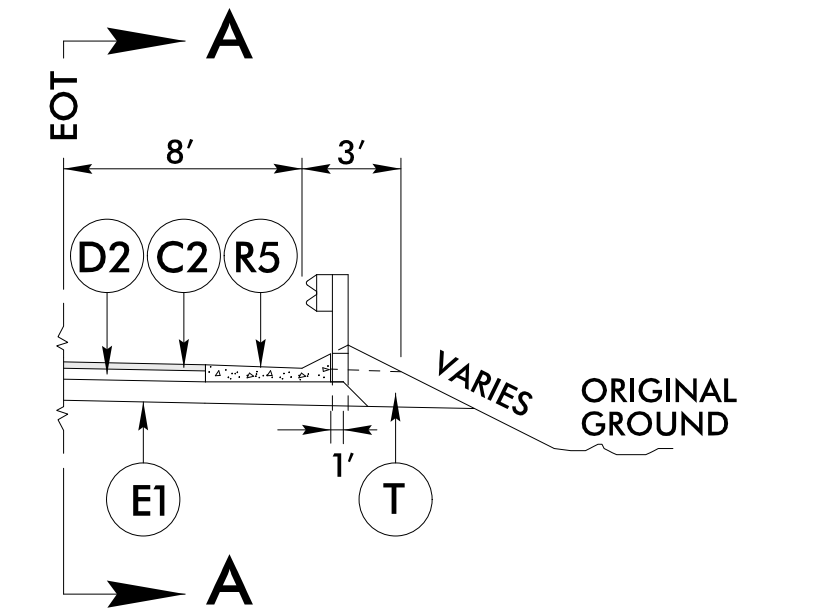
TYPICAL SECTION NO. 16

-Y1A- STA. 10+00.00 TO STA. 11+63.00
-Y2A- STA. 10+65.00 TO STA. 12+00.00
-YD- STA. 10+95.00 TO STA. 12+67.17
-Y14F- STA. 11+38.00 TO STA. 12+00.00
-Y14G- STA. 12+00.00 TO STA. 13+50.00



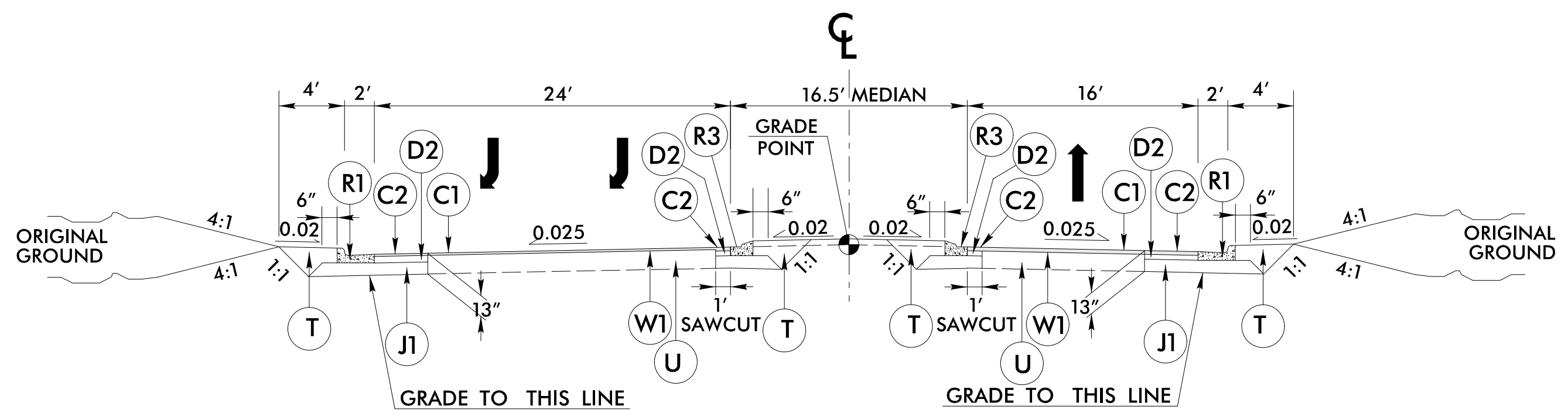
TYPICAL SECTION NO. 16A
8' SHOULDER LOCATION

USE TYPICAL SECTION NO. 16A IN CONJUNCTION WITH TYPICAL SECTION NO. 16
-YD- STA. 11+75.00 TO STA. 12+20.66 RT



TYPICAL SECTION NO. 16B
SHOULDER BERM GUTTER LOCATIONS

USE TYPICAL SECTION NO. 16B IN CONJUNCTION WITH TYPICAL SECTION NO. 16
-YD- STA. 12+20.66 TO STA. 12+67.17 RT



TYPICAL SECTION NO. 17

-YE- STA. 10+75.00 TO STA. 12+50.00

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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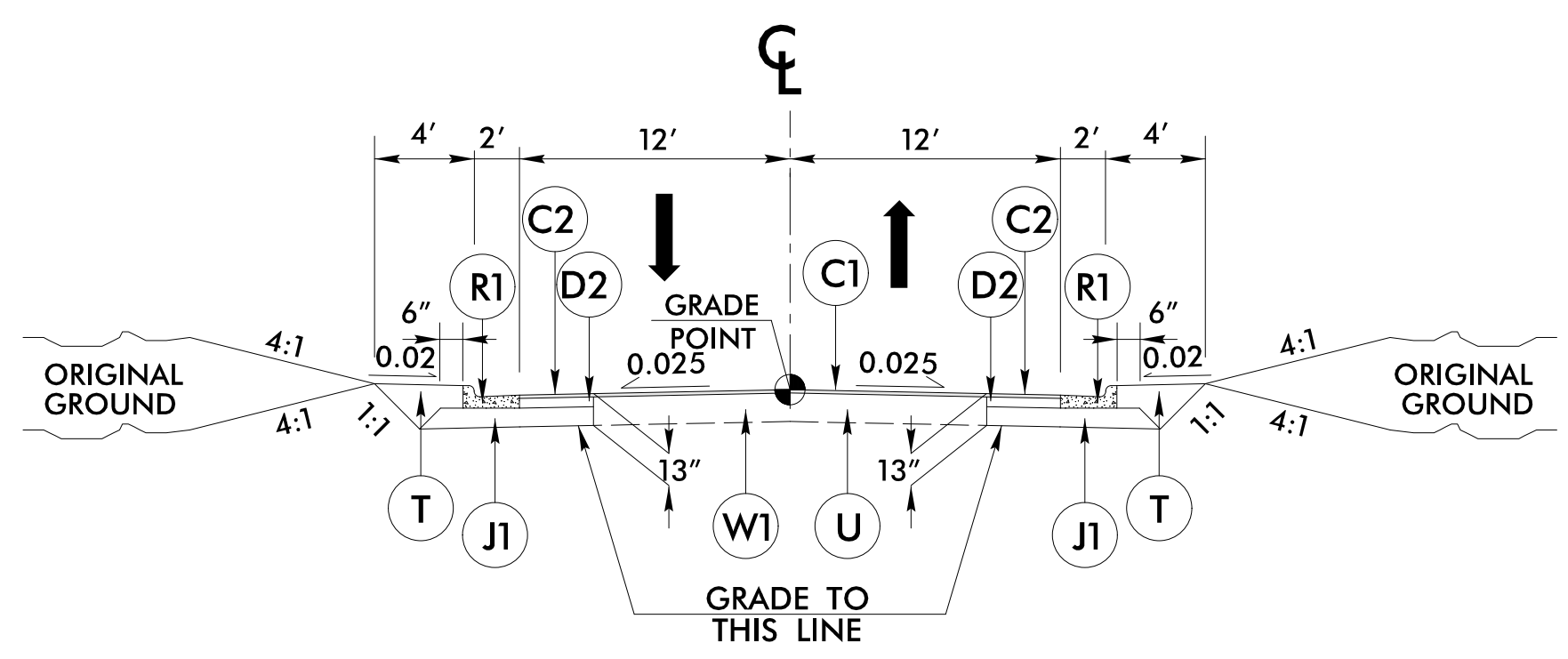
PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)

C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
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C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
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S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

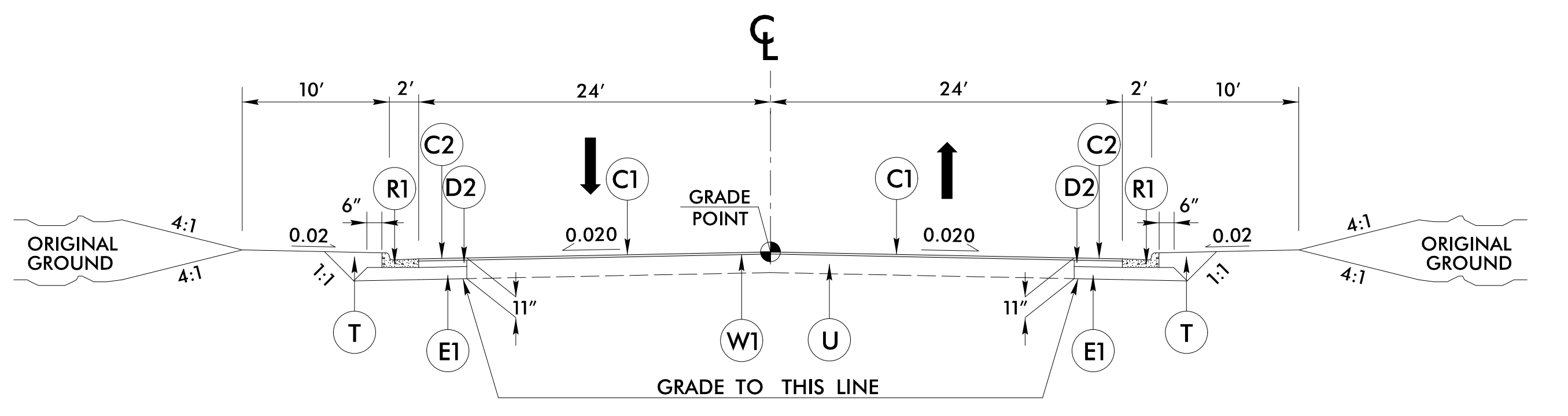
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

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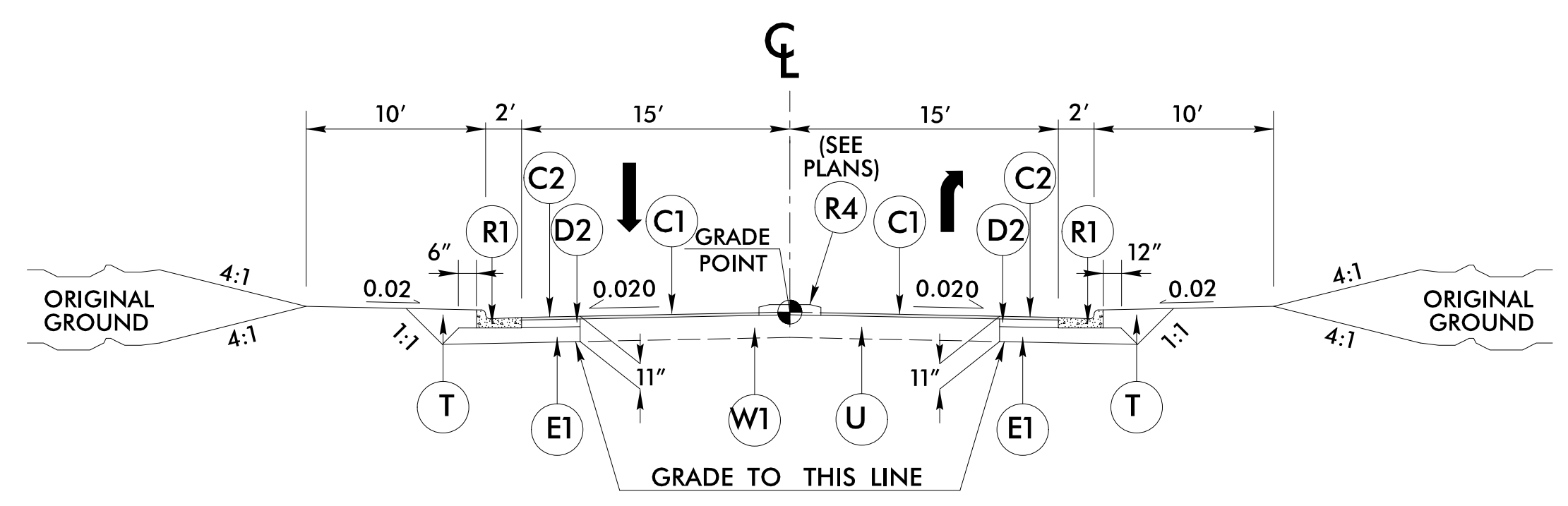
PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-7
ROADWAY DESIGN ENGINEER <i>David S. Wilkey</i> 022886 11/1/2021	PAVEMENT DESIGN ENGINEER <i>Carl S. Morrison</i> 022896 11/2/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



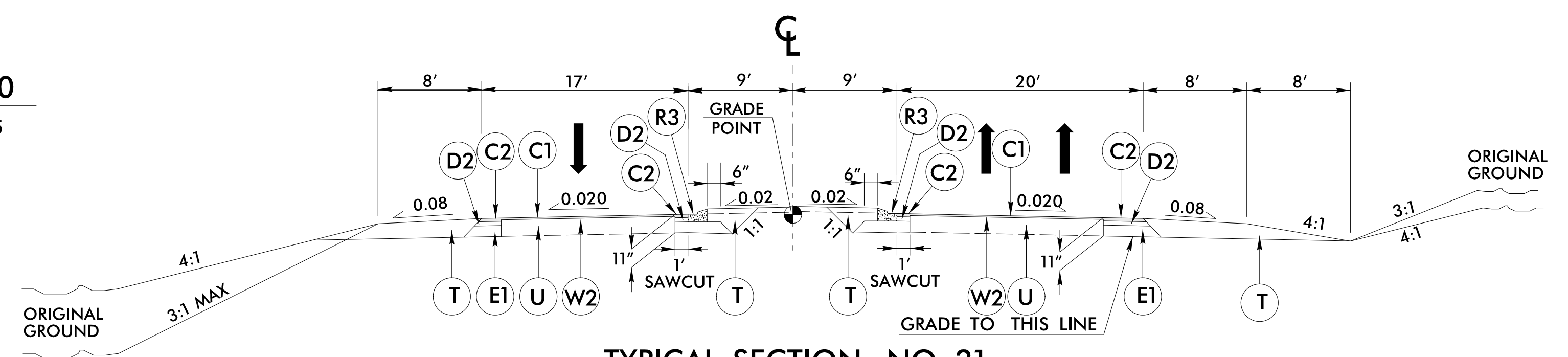
TYPICAL SECTION NO. 18
-YF- STA. 10+75.00 TO STA. 12+50.00



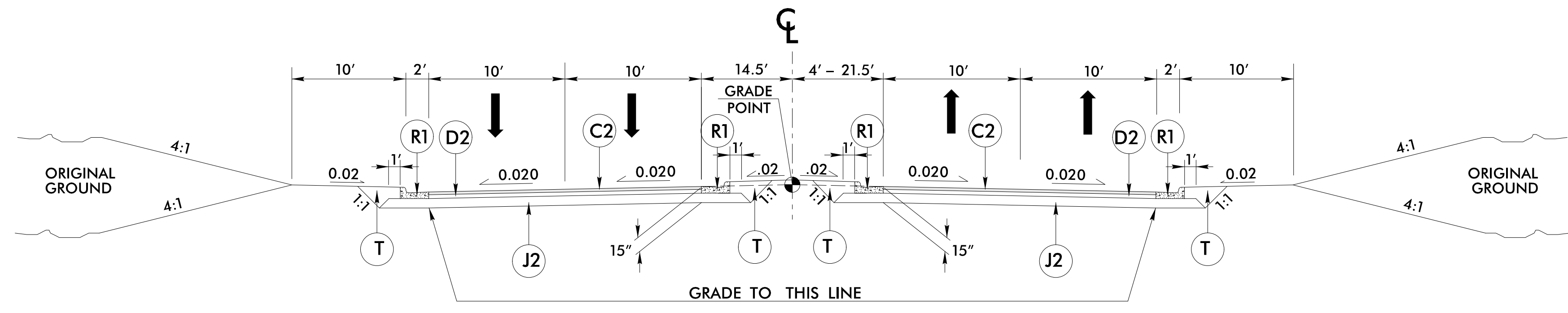
TYPICAL SECTION NO. 19
-Y1- STA. 10+51.00 TO STA. 11+01.00



TYPICAL SECTION NO. 20
-Y2- STA. 10+51.00 TO STA. 11+01.65



TYPICAL SECTION NO. 21
-Y3- STA. 10+00.00 TO STA. 12+87.60



TYPICAL SECTION NO. 22
-Y3- STA. 13+78.00 TO STA. 16+30.23

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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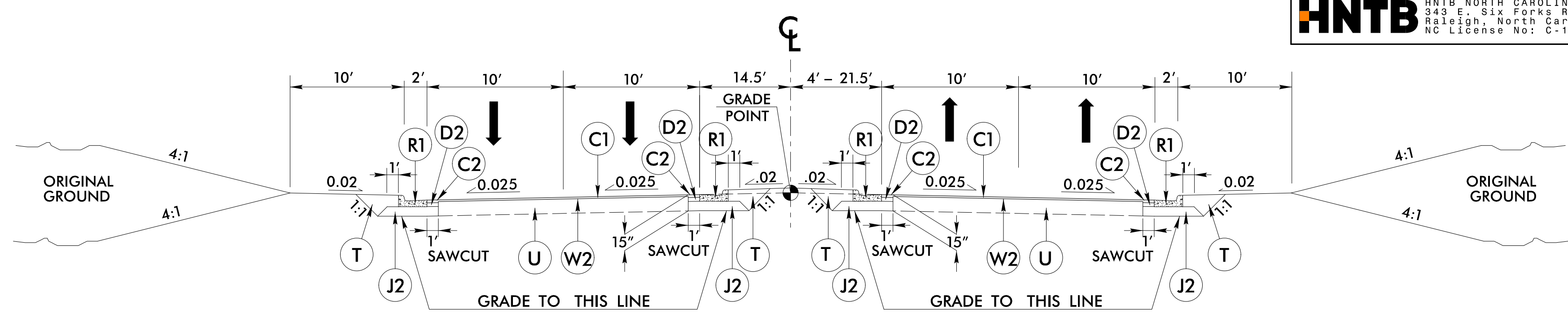
PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)

C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
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D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
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R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

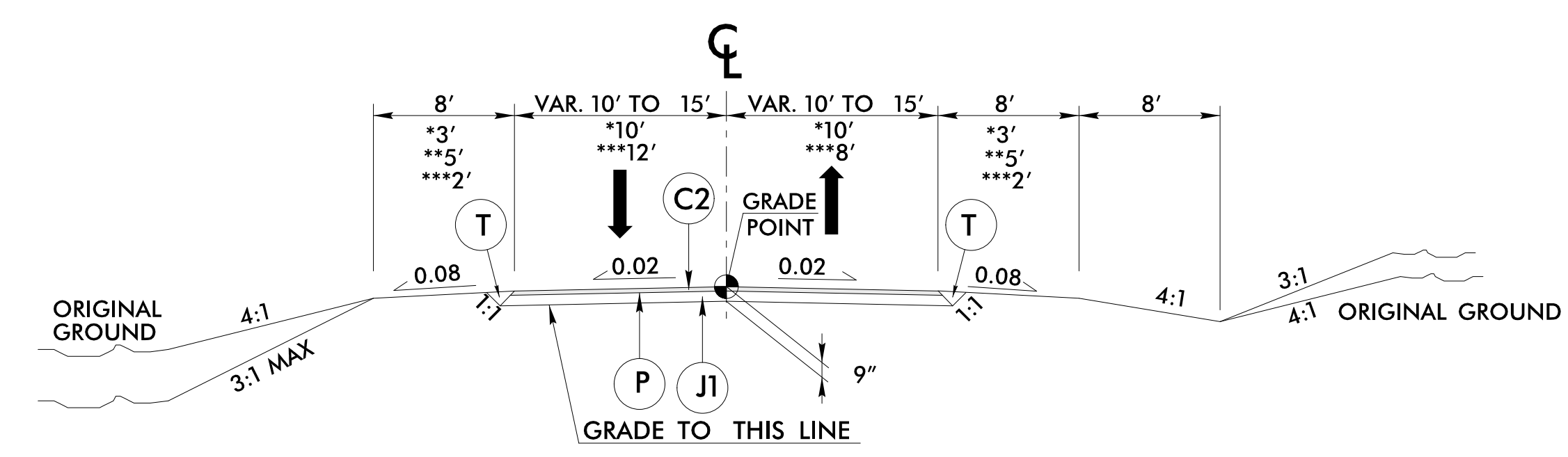
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

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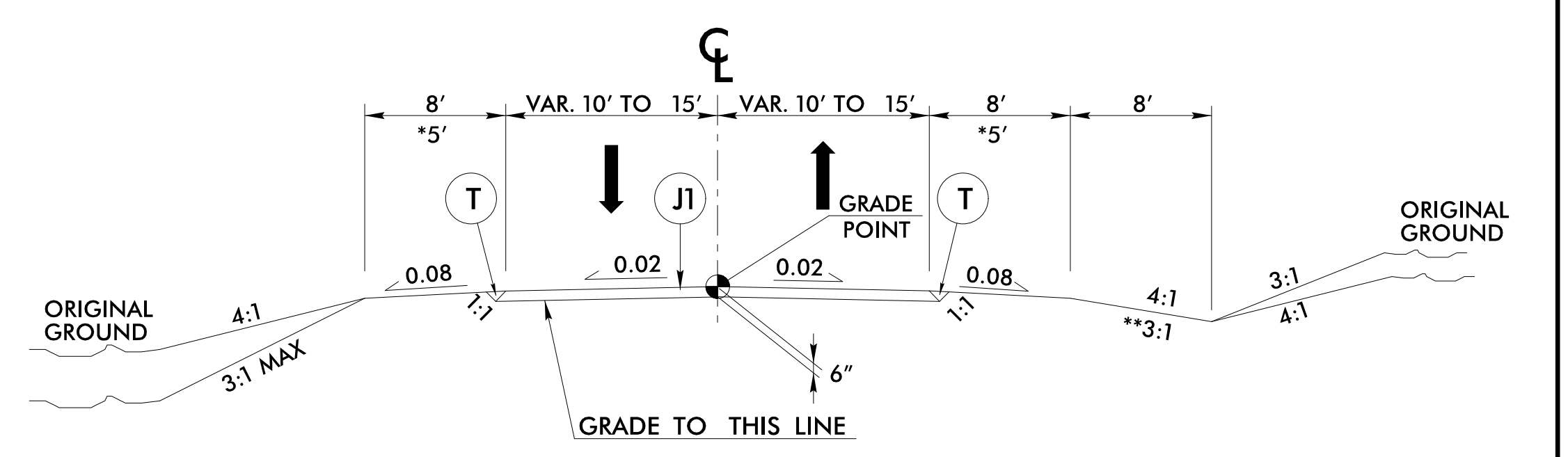
PROJECT REFERENCE NO.	SHEET NO.
R-5021	2A-8
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
11/1/2021	11/2/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



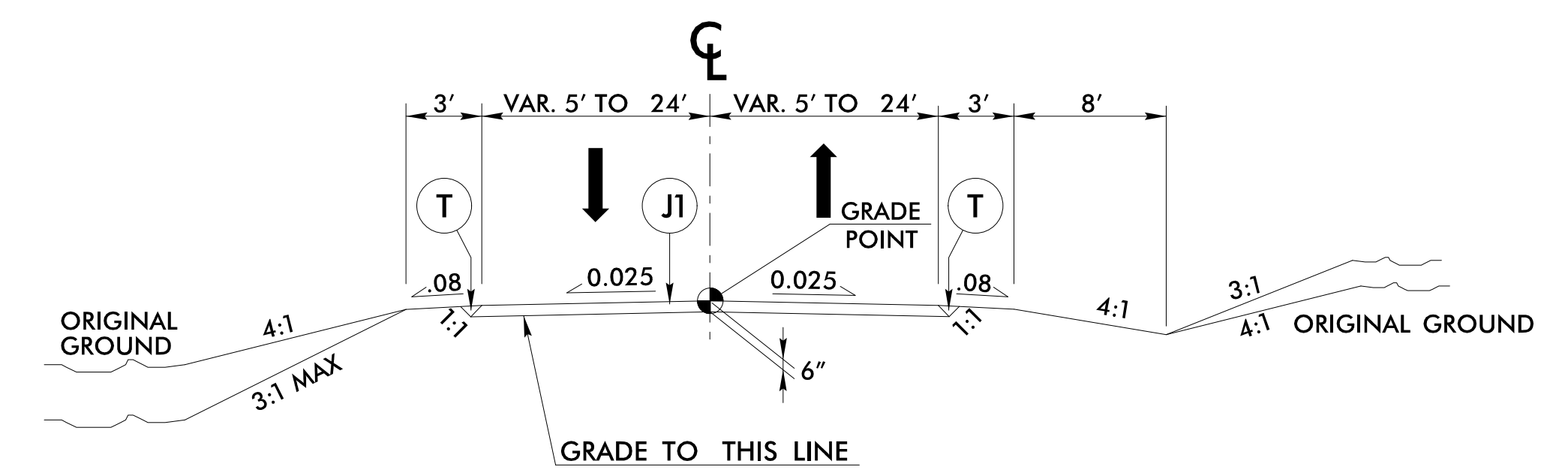
TYPICAL SECTION NO. 23
-Y3- STA. 16+30.23 TO STA. 17+15.00



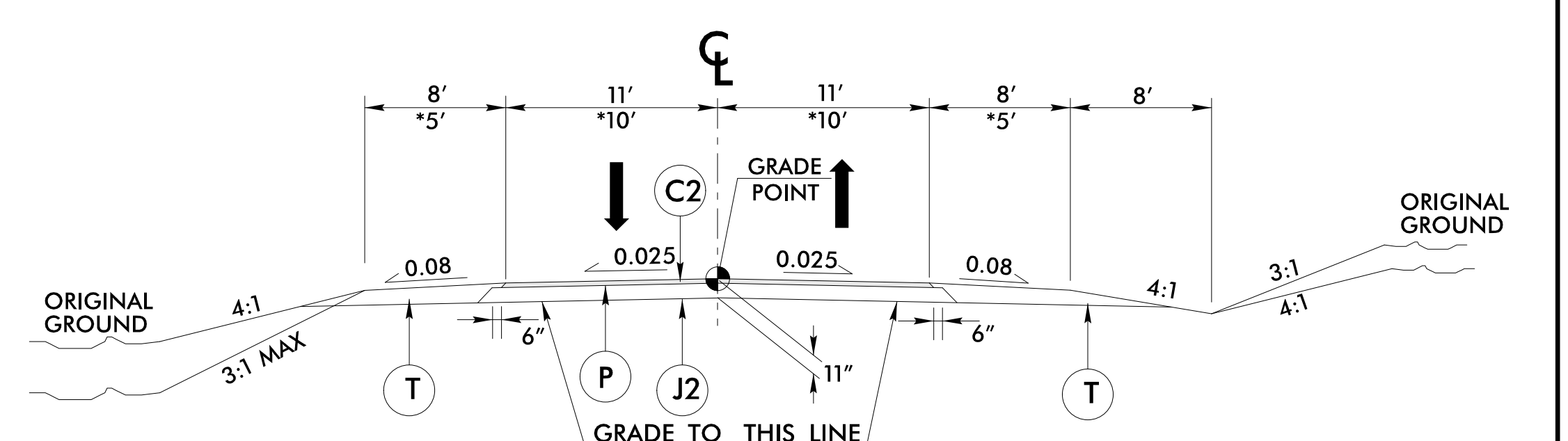
TYPICAL SECTION NO. 24
*-Y4- STA. 10+51.01 TO STA. 11+25.00
-Y10- STA. 10+39.00 TO STA. 10+75.00
**-Y13- STA. 11+35.00 TO STA. 11+71.05
-Y14- STA. 10+37.10 TO STA. 10+75.00
-Y15- STA. 10+51.00 TO STA. 10+85.00
***-Y17A- STA. 11+21.54 TO STA. 12+20.86



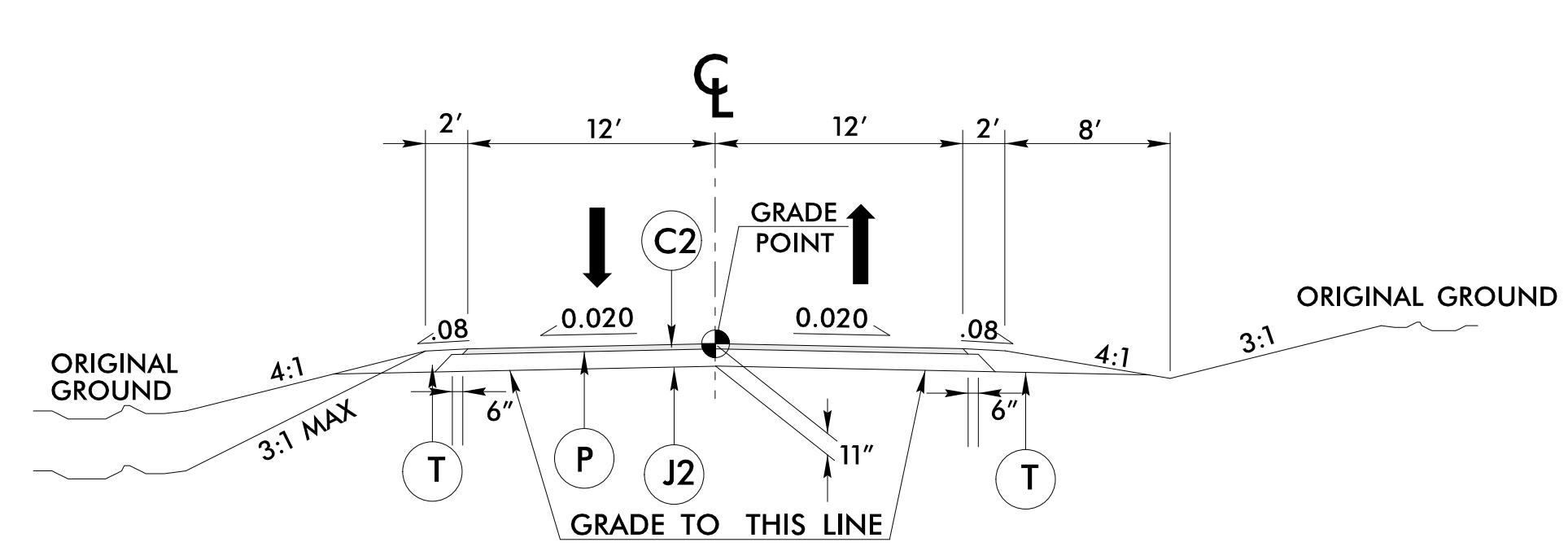
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-Y9- STA. 11+75.00 TO STA. 12+00.00
-Y10- STA. 10+75.00 TO STA. 11+80.00
*-Y13- STA. 10+80.00 TO STA. 11+35.00
-Y14- STA. 10+75.00 TO STA. 11+50.00
-Y15- STA. 10+85.00 TO STA. 11+50.00
-Y18REV- STA. 10+75.00 TO STA. 11+50.00



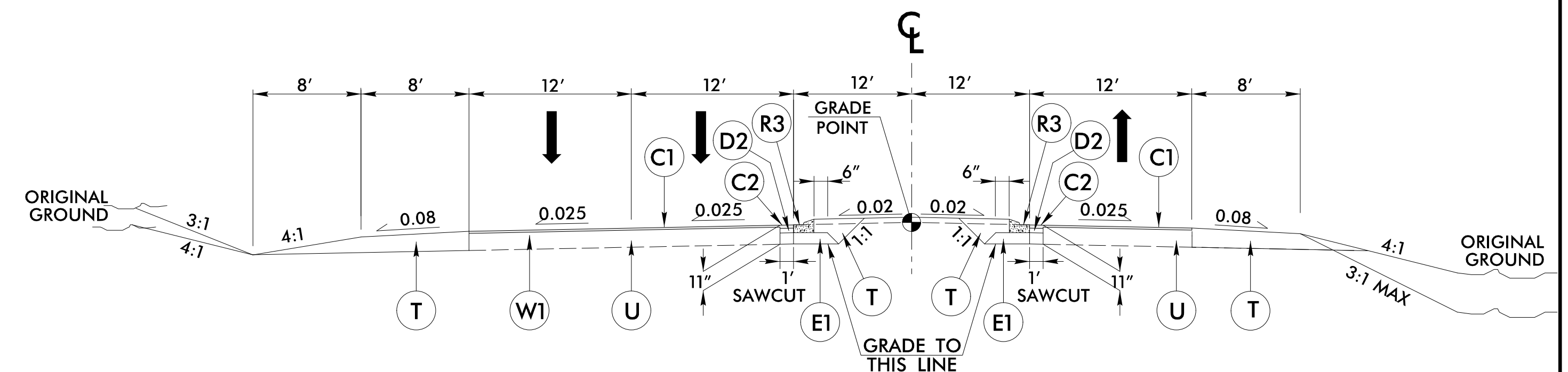
TYPICAL SECTION NO. 26
-Y1C- STA. 10+00.00 TO STA. 14+50.00



TYPICAL SECTION NO. 27
-Y5- STA. 10+50.00 TO STA. 11+36.66
*-Y11- STA. 10+51.00 TO STA. 13+25.00



TYPICAL SECTION NO. 28
-Y5A- STA. 10+51.00 TO STA. 11+35.00
-Y5B- STA. 10+34.08 TO STA. 11+17.17



TYPICAL SECTION NO. 29
-Y6- STA. 10+51.00 TO STA. 11+40.00

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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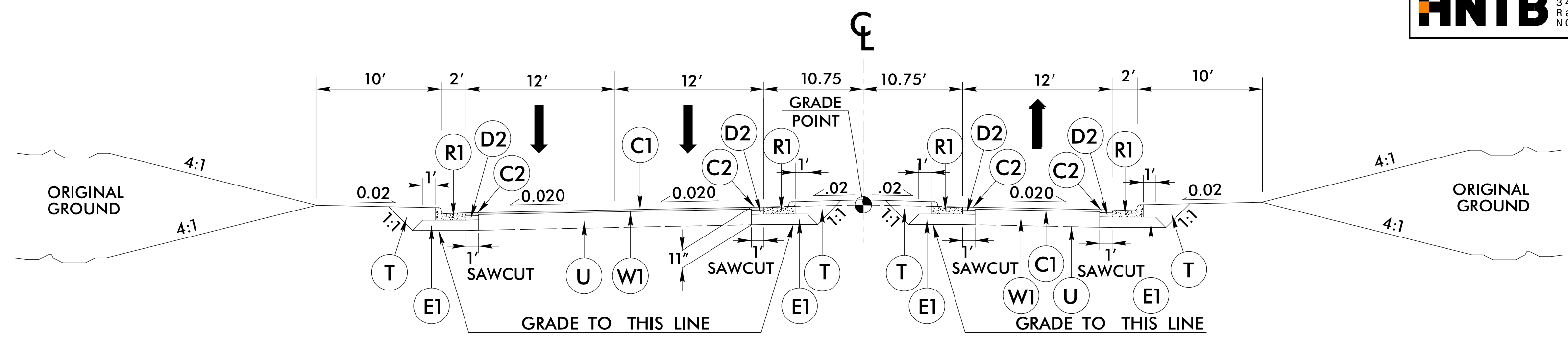
PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
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W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

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

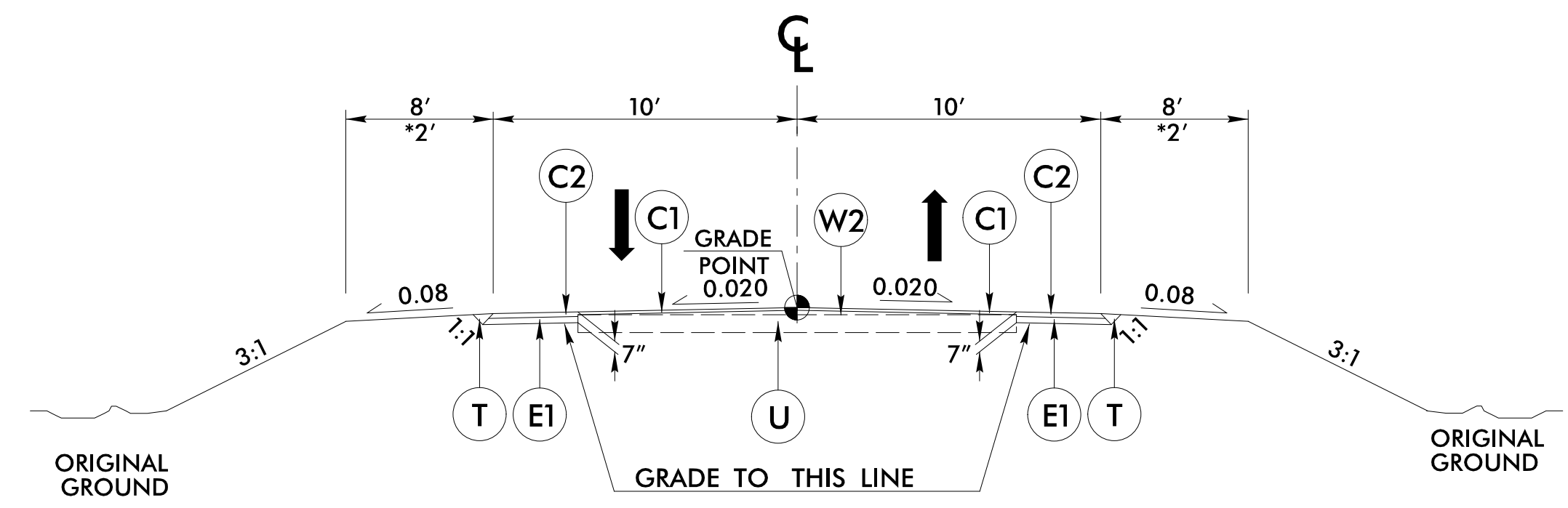
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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1524

PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-9
ROADWAY DESIGN ENGINEER <i>Douglas M. Whentley</i>	PAVEMENT DESIGN ENGINEER <i>Carl S. Morrison</i>
11/1/2021	11/2/2021

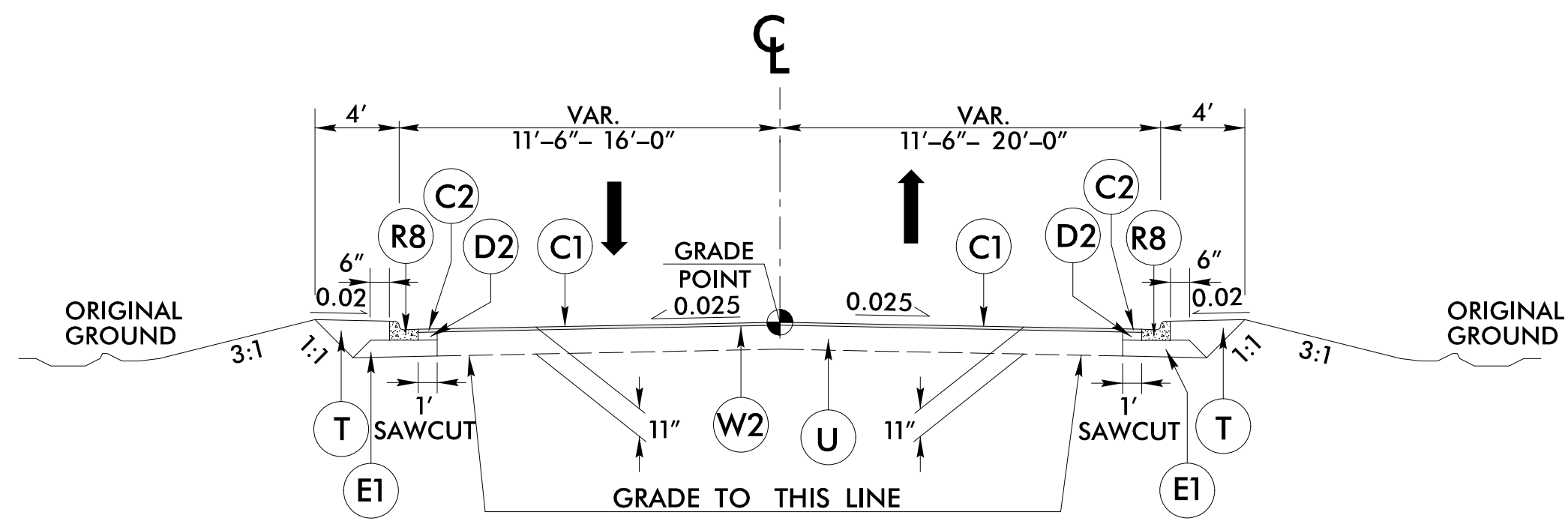
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



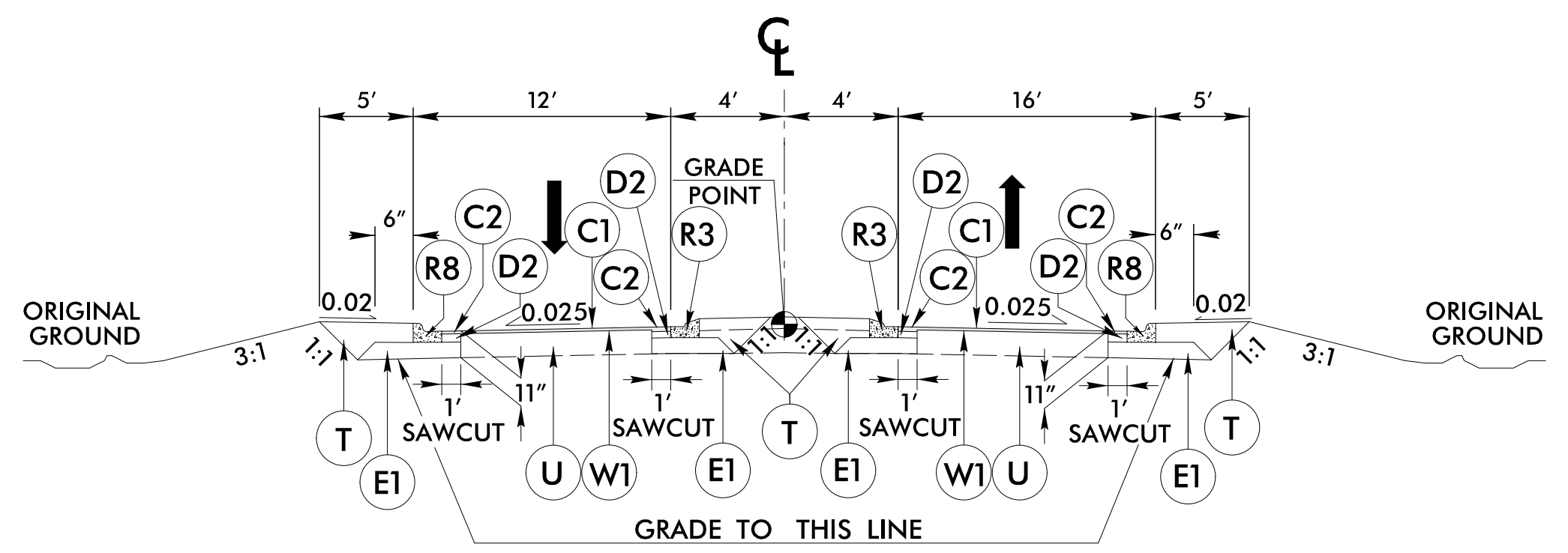
TYPICAL SECTION NO. 30
 -Y7- STA. 10+51.00 TO STA. 11+75.00



TYPICAL SECTION NO. 31
 -Y8- STA. 10+39.03 TO STA. 11+80.00
 TRANSITION SHOULDER FROM 8' TO 2'
 -Y8- STA. 10+70.00 TO STA. 11+20.00



TYPICAL SECTION NO. 32
 -Y9A- STA. 10+50.00 TO STA. 11+50.00



TYPICAL SECTION NO. 33
 -Y9A- STA. 11+50.00 TO 12+18.00

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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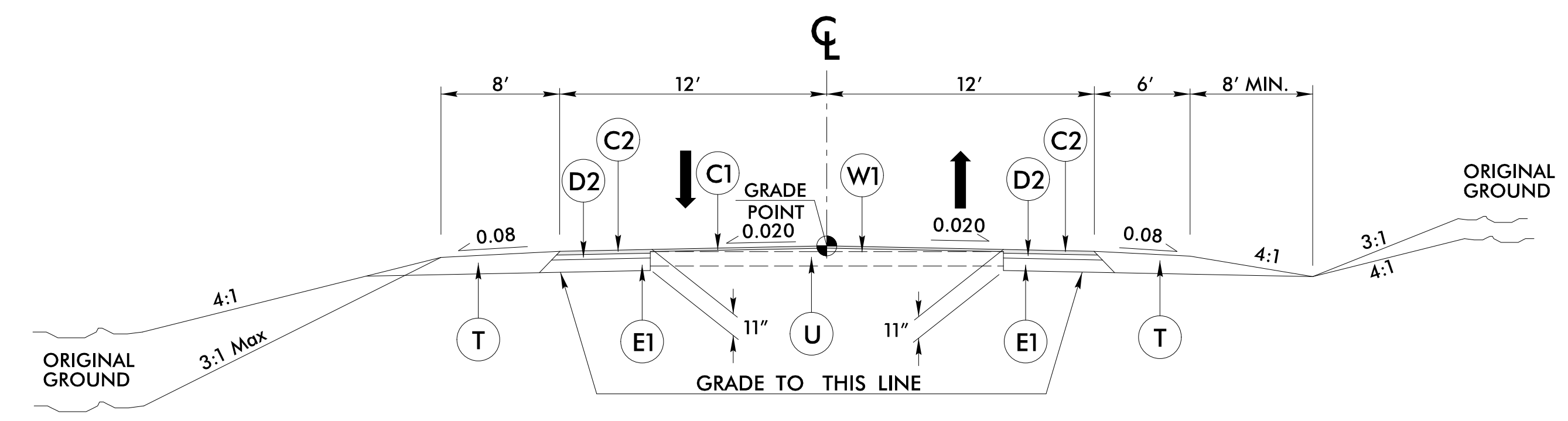
6/2/2021

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
D2	PROP. APPROX. 4" ACIC, TYPE I19.0C
D3	PROP. VAR. DEPTH ACIC, TYPE I19.0C
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	2'-9" CONCRETE CURB AND GUTTER.
R3	1'-6" CONCRETE CURB AND GUTTER. (STD MOUNTABLE)
R4	5" MONOLITHIC CONCRETE ISLAND
R5	SHOULDER BERM GUTTER
R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6"GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 X W3.5 OR W5 X W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

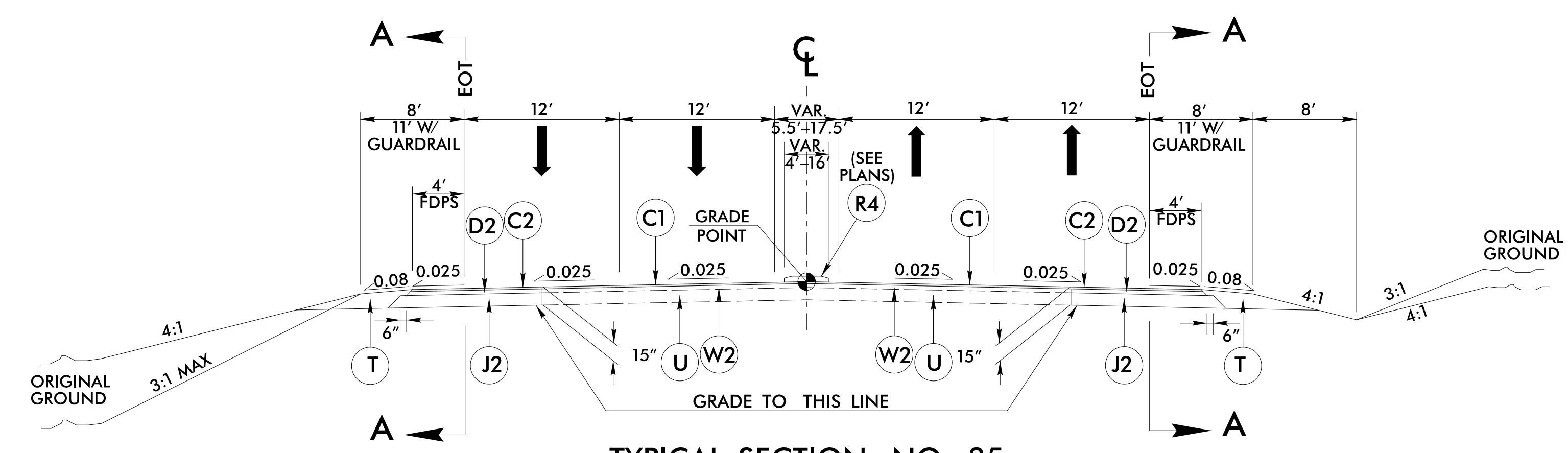
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



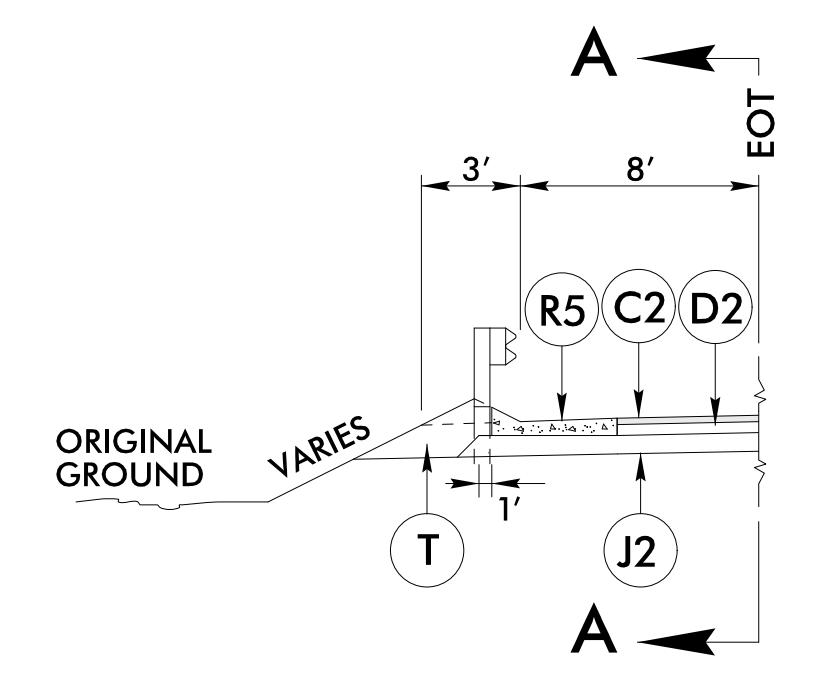
PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-10
ROADWAY DESIGN ENGINEER <i>David S. Wipfler</i> 36786 11/1/2021	PAVEMENT DESIGN ENGINEER <i>Carl S. Morrison</i> 022896 11/2/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



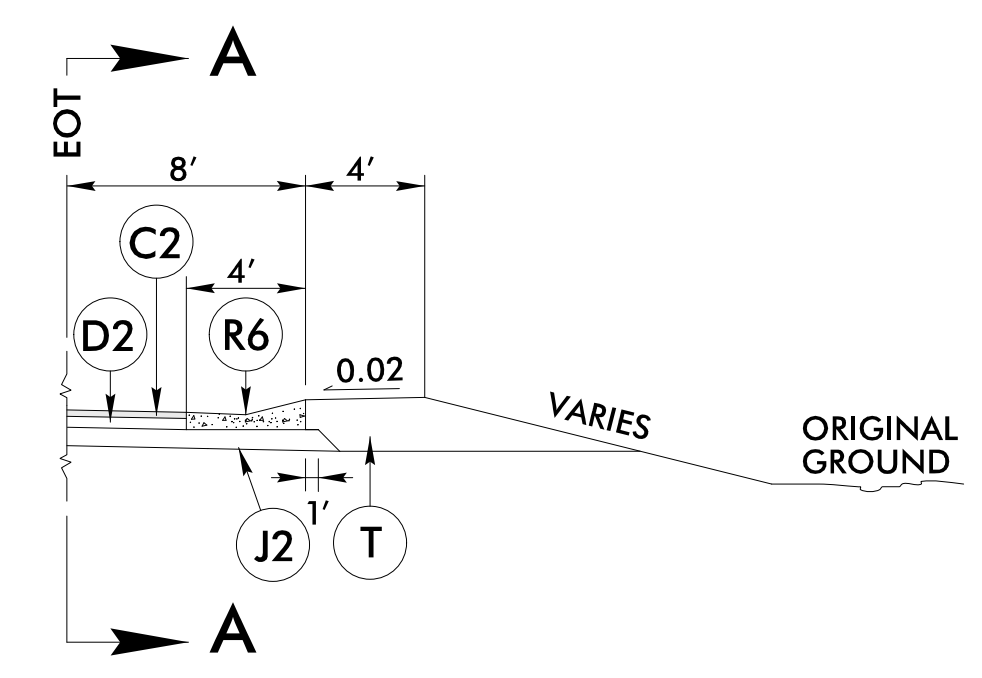
TYPICAL SECTION NO. 34
-Y12- STA. 11+55.00 TO STA. 13+21.07



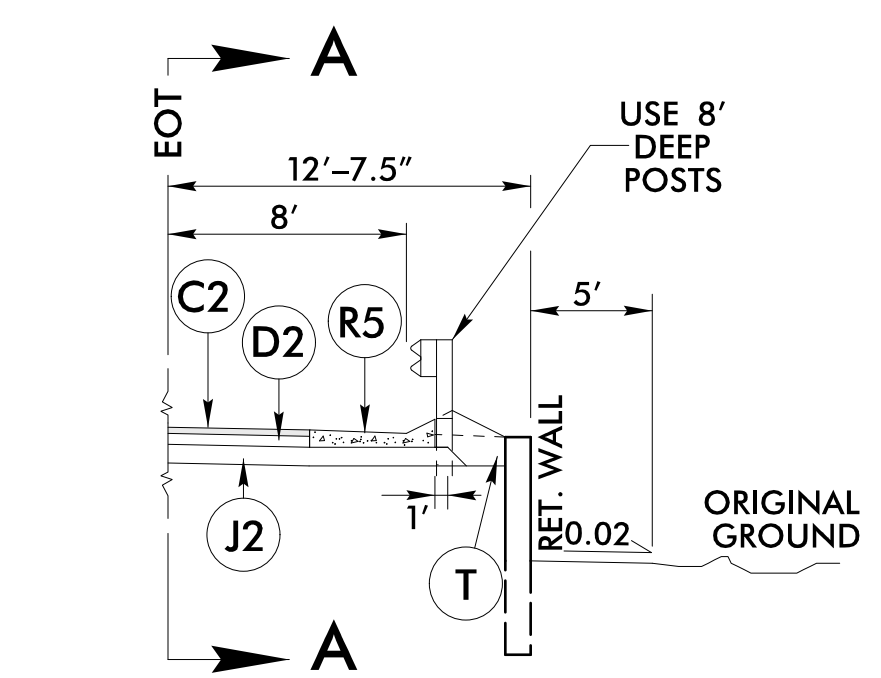
TYPICAL SECTION NO. 35
-Y14A- STA. 27+20.00 TO STA. 38+95.97 (BEG. BRIDGE)
-Y14A- STA. 40+16.47 (END BRIDGE) TO STA. 61+60.00



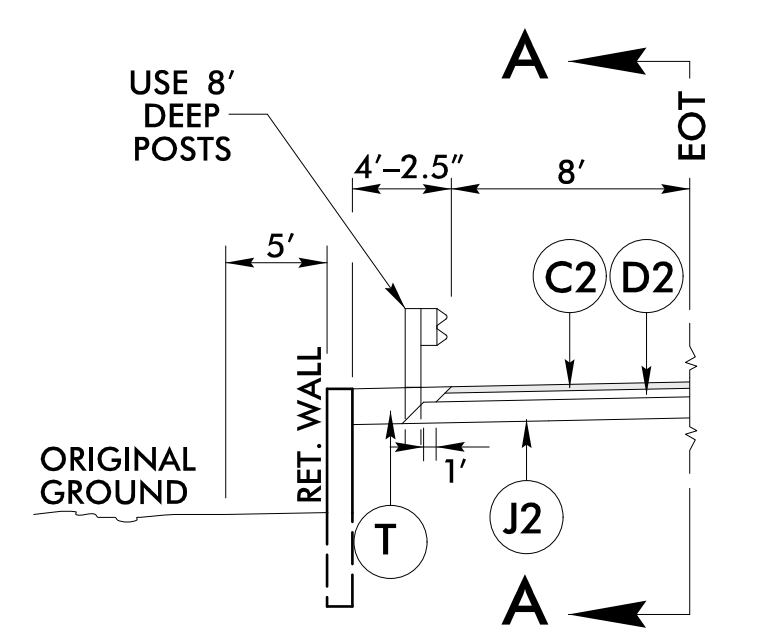
TYPICAL SECTION NO. 35A
SHOULDER BERM GUTTER LOCATIONS
USE TYPICAL SECTION NO. 35A IN CONJUNCTION WITH TYPICAL SECTION NO. 35
-Y14A- STA. 41+11.17 TO STA. 45+00.00 RT
-Y14A- STA. 29+50.00 TO STA. 30+80.42 LT



TYPICAL SECTION NO. 35B
EXPRESSWAY GUTTER LOCATIONS
USE TYPICAL SECTION NO. 35B IN CONJUNCTION WITH TYPICAL SECTION NO. 35
-Y14A- STA. 30+75.05 TO STA. 31+50.02 RT



TYPICAL SECTION NO. 35C
RETAINING WALL WITH SHOULDER BERM GUTTER LOCATIONS
USE TYPICAL SECTION NO. 35C IN CONJUNCTION WITH TYPICAL SECTION NO. 35
-Y14A- STA. 32+44.38 RT TO STA. 38+95.97 (BEG. BRIDGE)
-Y14A- STA. 40+16.47 (END BRIDGE) TO STA. 41+12.43 RT
-Y14A- STA. 36+92.57 LT TO STA. 38+95.97 (BEG. BRIDGE)
-Y14A- STA. 40+16.47 (END BRIDGE) TO STA. 41+45.72 LT
-Y14A- STA. 48+11.39 TO STA. 48+50.47 LT



TYPICAL SECTION NO. 35D
RETAINING WALL LOCATIONS
USE TYPICAL SECTION NO. 35D IN CONJUNCTION WITH TYPICAL SECTION NO. 35
-Y14A- STA. 34+44.58 TO STA. 36+92.57 LT
-Y14A- STA. 41+45.72 TO STA. 47+78.35 LT
-Y14A- STA. 48+50.47 TO STA. 54+55.39 LT

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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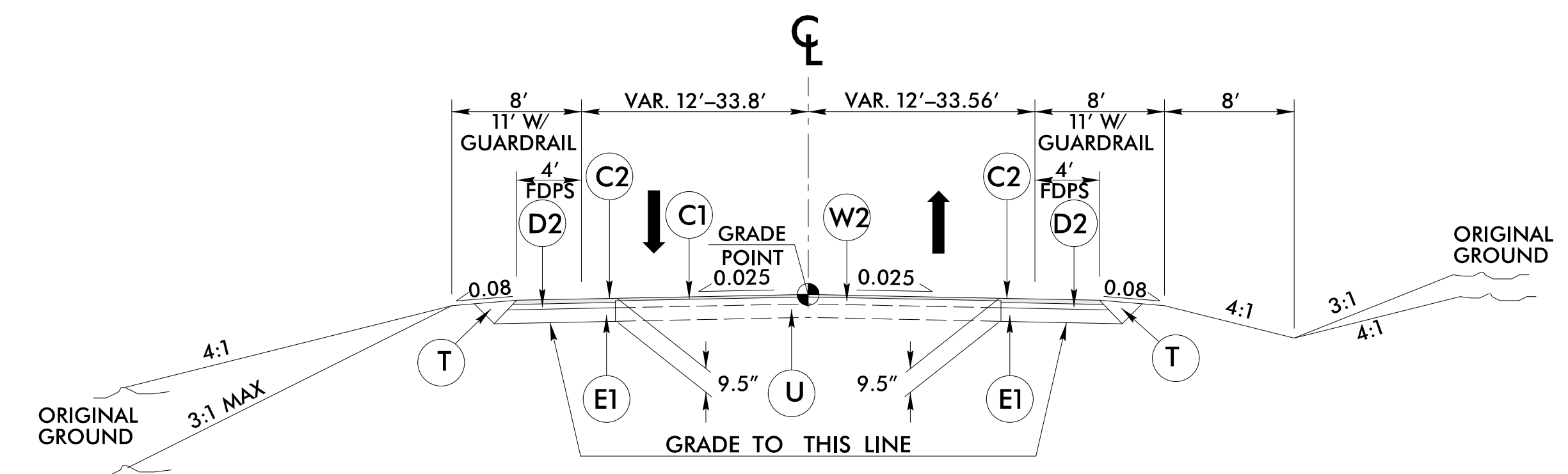
PAVEMENT SCHEDULE
(FINAL PAVEMENT DESIGN)

C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
D2	PROP. APPROX. 4" ACIC, TYPE I19.0C
D3	PROP. VAR. DEPTH ACIC, TYPE I19.0C
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	2'-9" CONCRETE CURB AND GUTTER.
R3	1'-6" CONCRETE CURB AND GUTTER. (STD MOUNTABLE)
R4	5" MONOLITHIC CONCRETE ISLAND
R5	SHOULDER BERM GUTTER
R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6"GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 X W3.5 OR W5 X W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

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

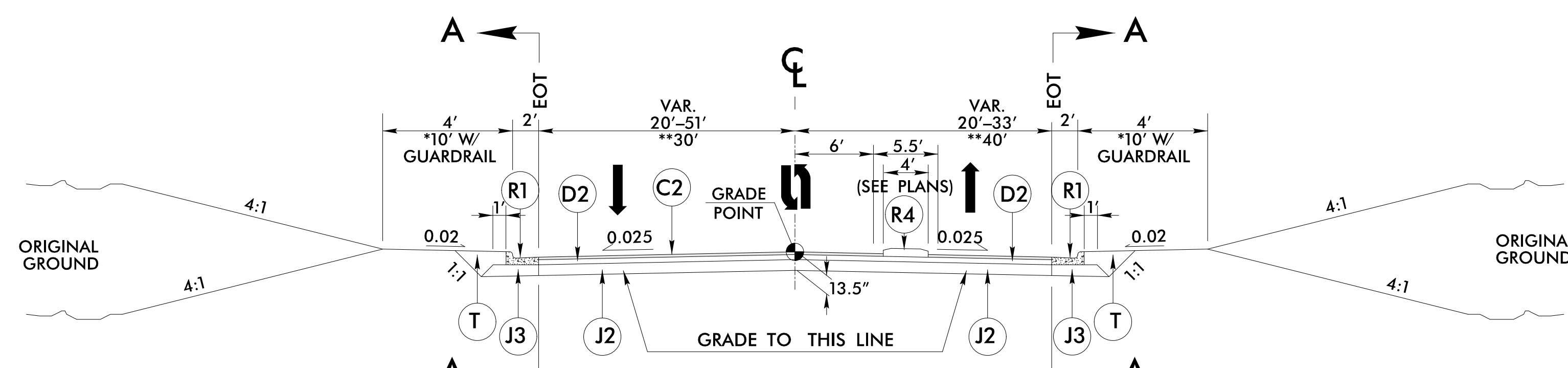


PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-11
ROADWAY DESIGN ENGINEER <i>Carla S. Morrison</i> 36786 11/1/2021	PAVEMENT DESIGN ENGINEER <i>Carla S. Morrison</i> 022896 11/2/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



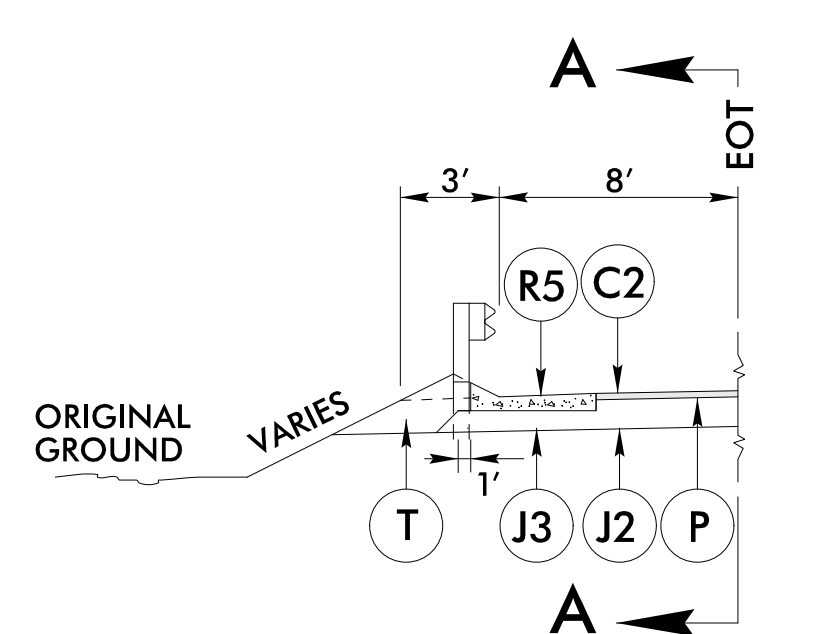
TYPICAL SECTION NO. 36

-Y14A- STA. 61+60.00 TO STA. 66+50.00



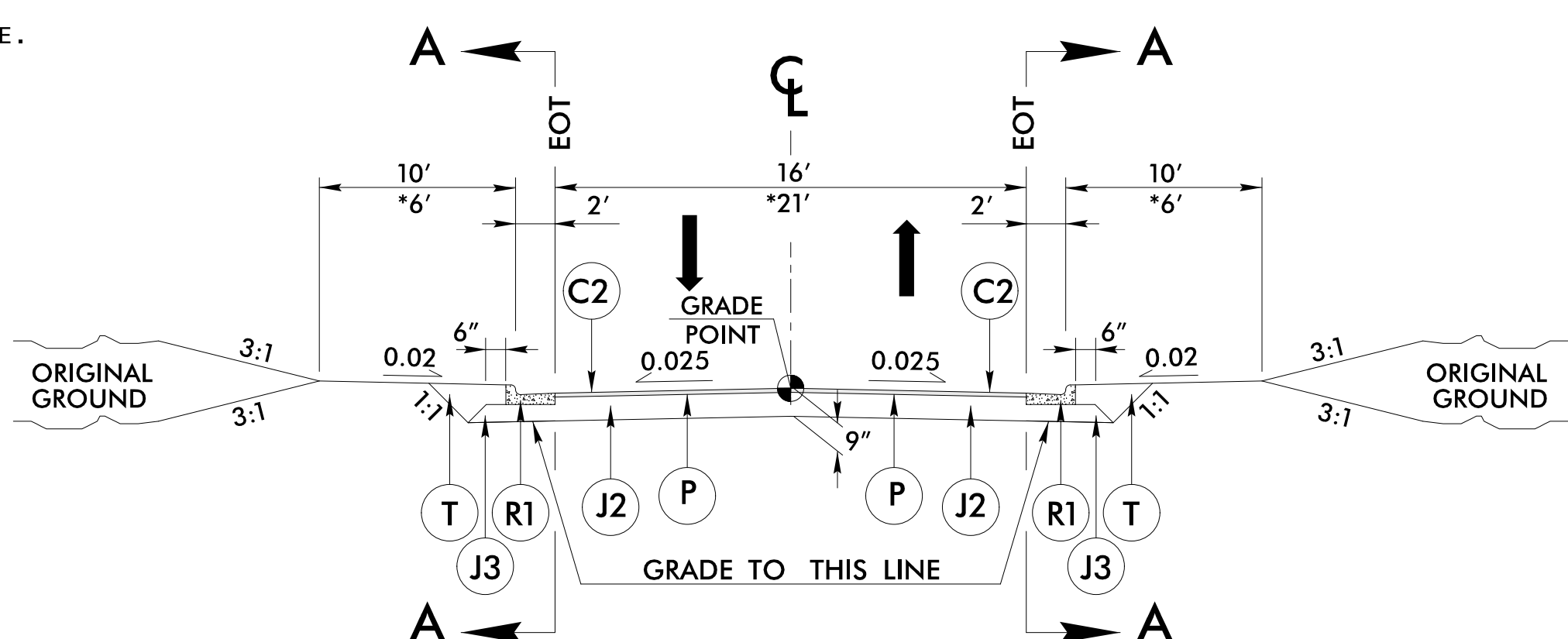
TYPICAL SECTION NO. 37

-Y14D- STA. 10+32.00 TO STA. 21+52.57 RT
 *-Y14D- STA. 21+52.57 TO STA. 24+42.63 RT
 -Y14D- STA. 10+32.00 TO STA. 13+62.69 LT
 *-Y14D- STA. 13+62.69 TO STA. 16+12.75 LT
 -Y14D- STA. 16+12.75 TO STA. 22+43.36 LT
 *-Y14D- STA. 22+43.36 TO STA. 24+42.63 LT
 **-Y14C- STA. 23+38.64 TO STA. 24+73.85



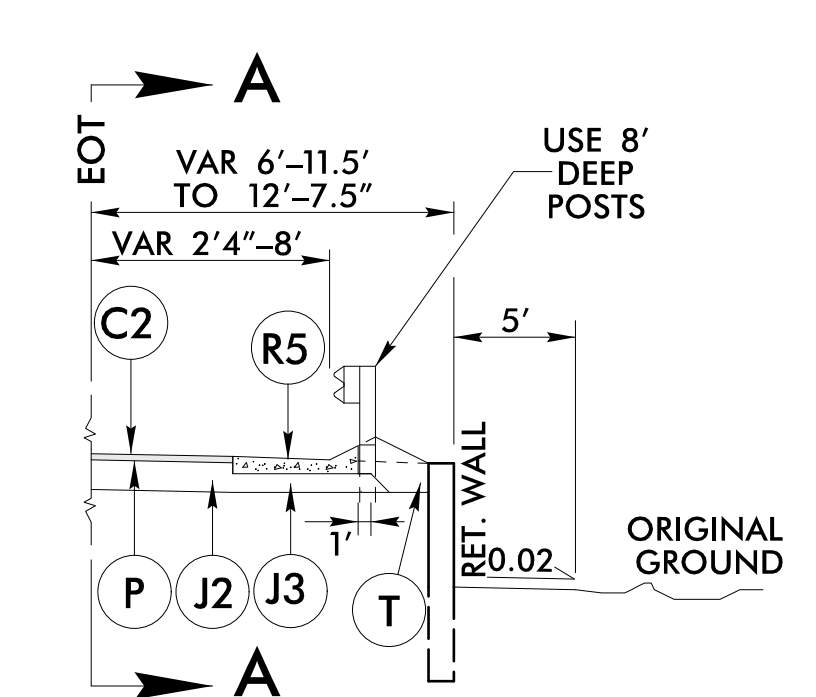
TYPICAL SECTION NO. 38A

SHOULDER BERM GUTTER LOCATIONS
 USE TYPICAL SECTION NO. 38A IN
 CONJUNCTION WITH TYPICAL SECTION NO. 38
 -Y14E- STA. 10+81.10 TO STA. 11+50.00 LT



TYPICAL SECTION NO. 38

-DRW01- STA. 10+12.00 TO STA. 11+40.00
 *-Y14E- STA. 10+03.10 TO STA. 10+97.97 RT
 *-Y14E- STA. 10+03.10 TO STA. 10+81.10 LT



TYPICAL SECTION NO. 38B

RETAINING WALL WITH SHOULDER BERM
 GUTTER LOCATIONS
 USE TYPICAL SECTION NO. 38B IN CONJUNCTION
 WITH TYPICAL SECTION NO. 38
 -Y14E- STA. 11+04.64 TO STA. 11+42.63 LT
 -Y14E- STA. 11+14.02 TO STA. 11+42.63 RT

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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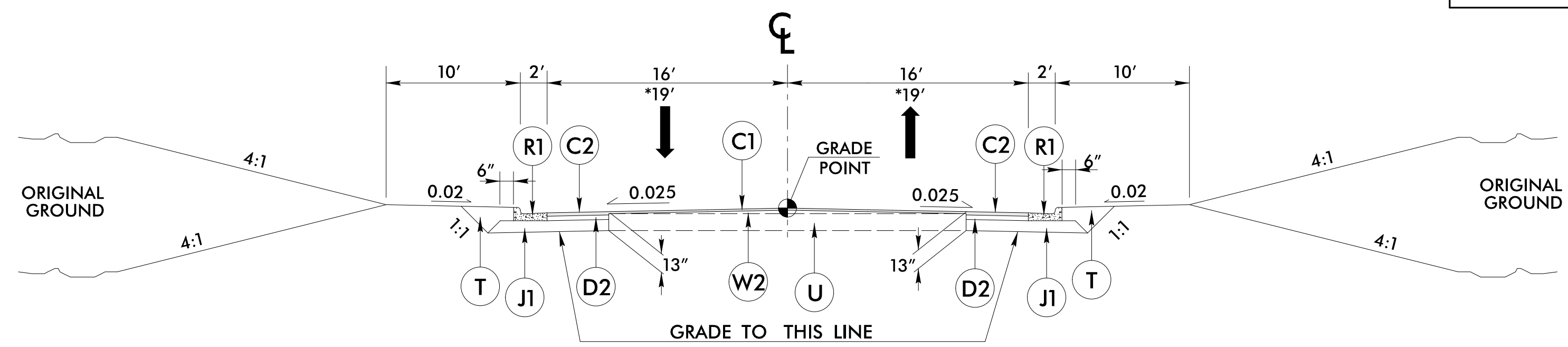
6/22/99

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
D2	PROP. APPROX. 4" ACIC, TYPE I19.0C
D3	PROP. VAR. DEPTH ACIC, TYPE I19.0C
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	2'-9" CONCRETE CURB AND GUTTER.
R3	1'-6" CONCRETE CURB AND GUTTER. (STD MOUNTABLE)
R4	5" MONOLITHIC CONCRETE ISLAND
R5	SHOULDER BERM GUTTER
R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6" GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 X W3.5 OR W5 X W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

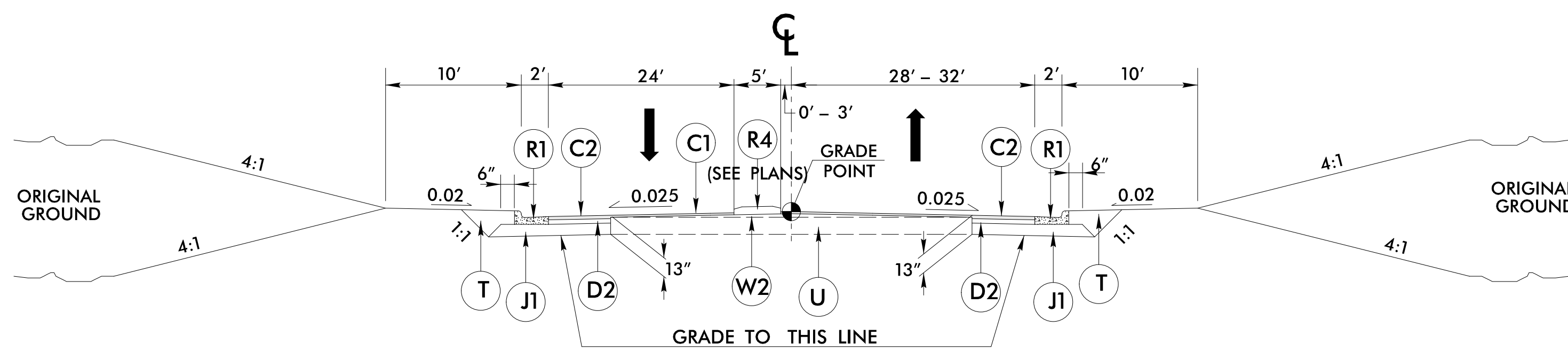
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1524

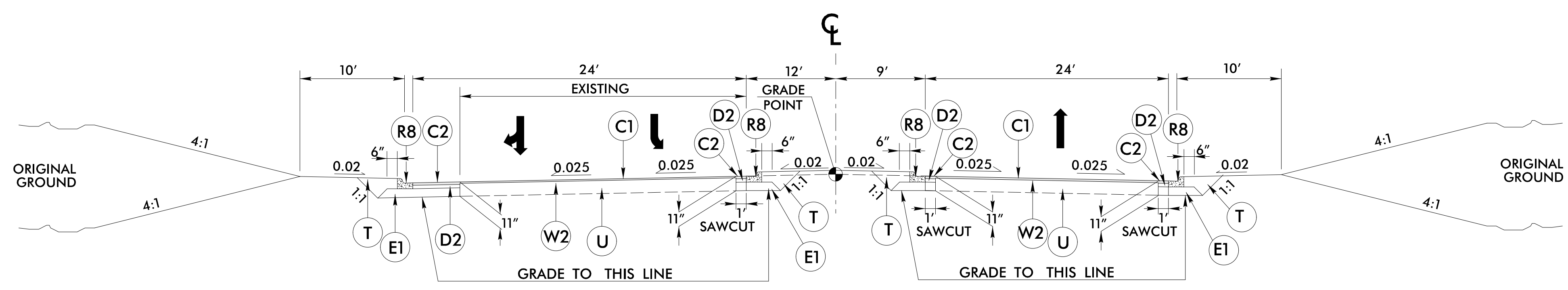
PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-12
ROADWAY DESIGN ENGINEER <i>David S. W. [Signature]</i> 36786 11/1/2021	PAVEMENT DESIGN ENGINEER <i>Carl S. Morrison [Signature]</i> 022896 11/2/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



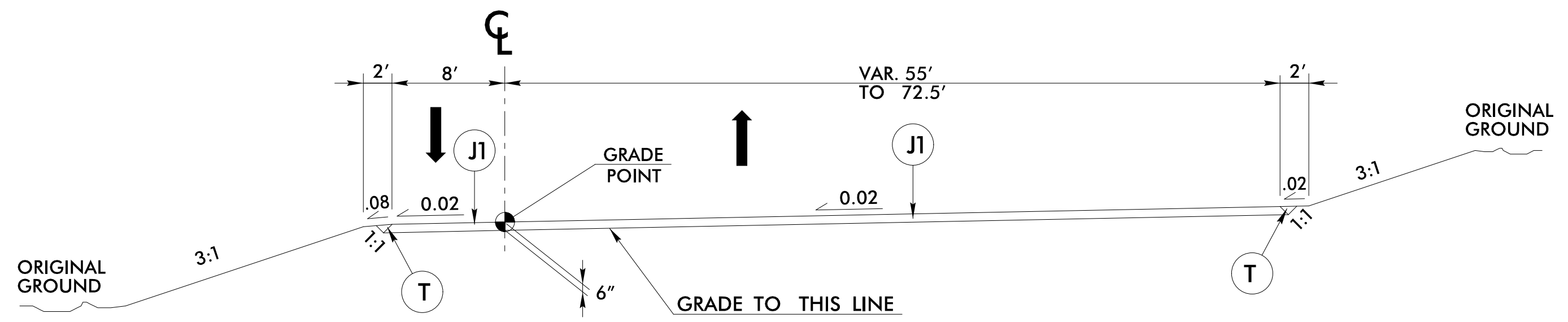
TYPICAL SECTION NO. 39
-Y16- STA. 11+00.00 TO STA. 11+71.81
*-Y20- STA. 10+51.41 TO STA. 11+60.00



TYPICAL SECTION NO. 40
-Y17- STA. 10+25.00 TO STA. 11+44.61



TYPICAL SECTION NO. 41
-Y17- STA. 12+41.57 TO STA. 13+25.00



TYPICAL SECTION NO. 42
-Y17A- STA. 10+39.00 TO STA. 11+20.00

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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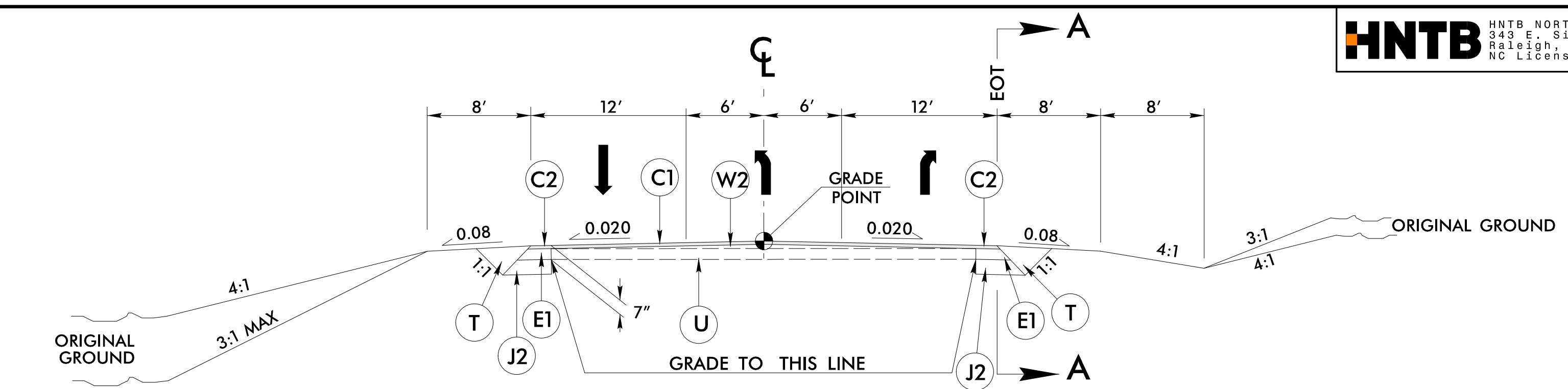
6/2/2021

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
D2	PROP. APPROX. 4" ACIC, TYPE I19.0C
D3	PROP. VAR. DEPTH ACIC, TYPE I19.0C
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	2'-9" CONCRETE CURB AND GUTTER.
R3	1'-6" CONCRETE CURB AND GUTTER. (STD MOUNTABLE)
R4	5" MONOLITHIC CONCRETE ISLAND
R5	SHOULDER BERM GUTTER
R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6"GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 X W3.5 OR W5 X W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

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

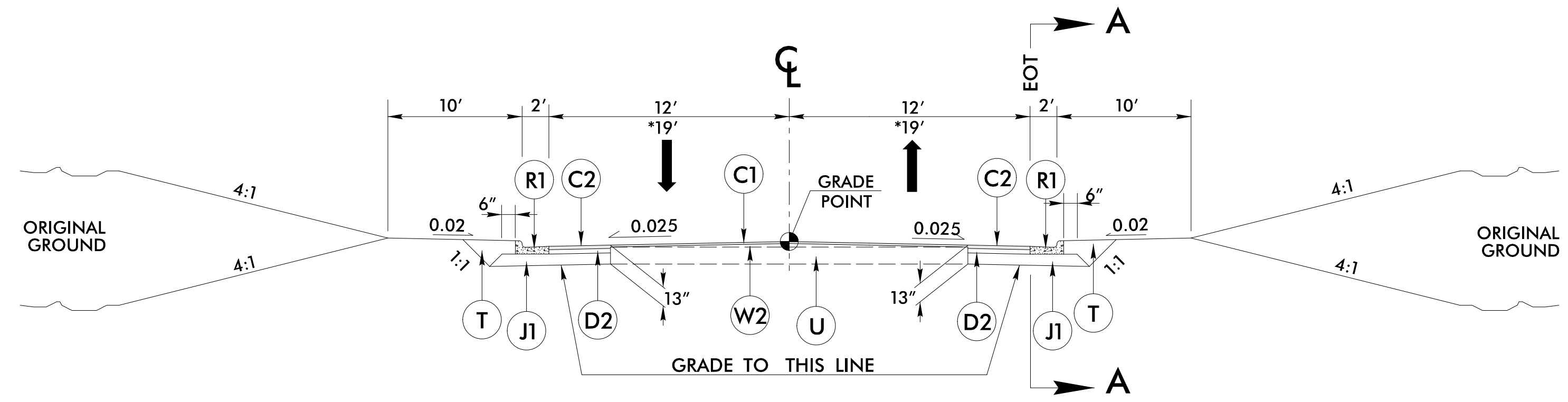


PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-13
ROADWAY DESIGN ENGINEER <i>[Signature]</i> 11/1/2021	PAVEMENT DESIGN ENGINEER <i>[Signature]</i> 11/2/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



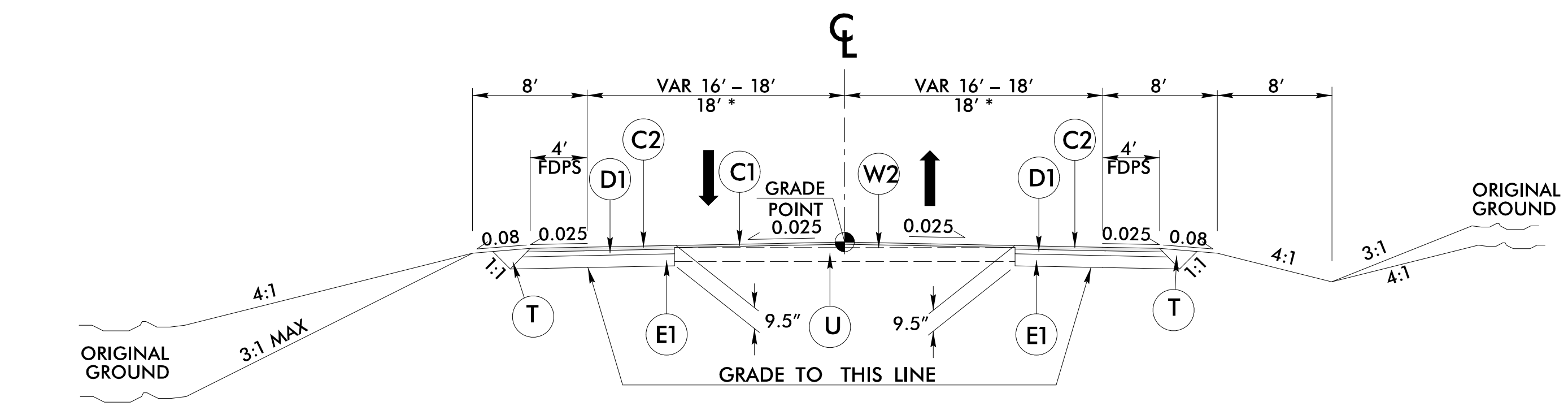
TYPICAL SECTION NO. 43

-Y19REV- STA. 11+75.00 TO STA. 13+00.00



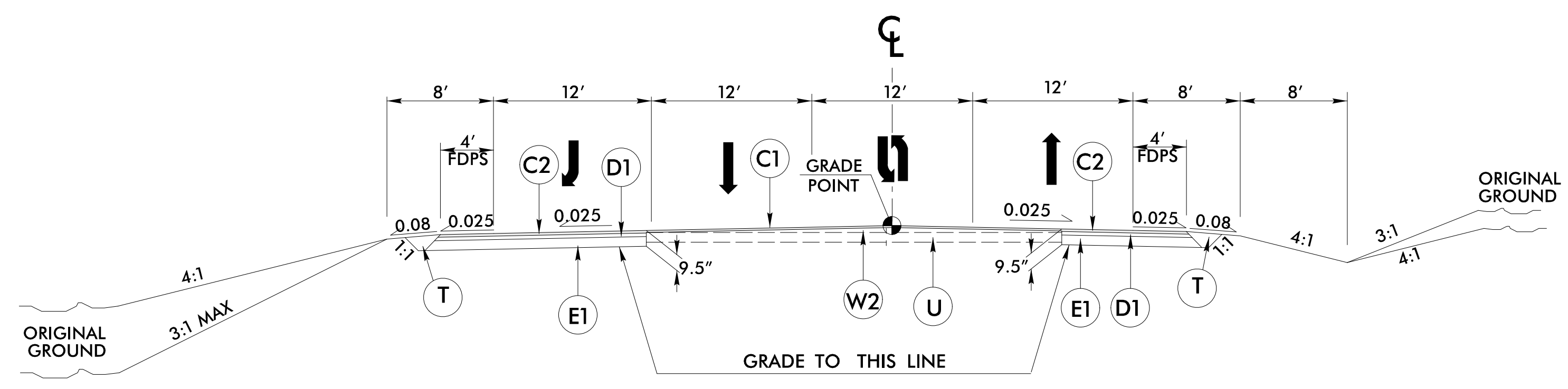
TYPICAL SECTION NO. 44

-Y21- STA. 10+25.00 TO STA. 10+93.75
*Y21- STA. 11+83.76 TO STA. 12+40.00



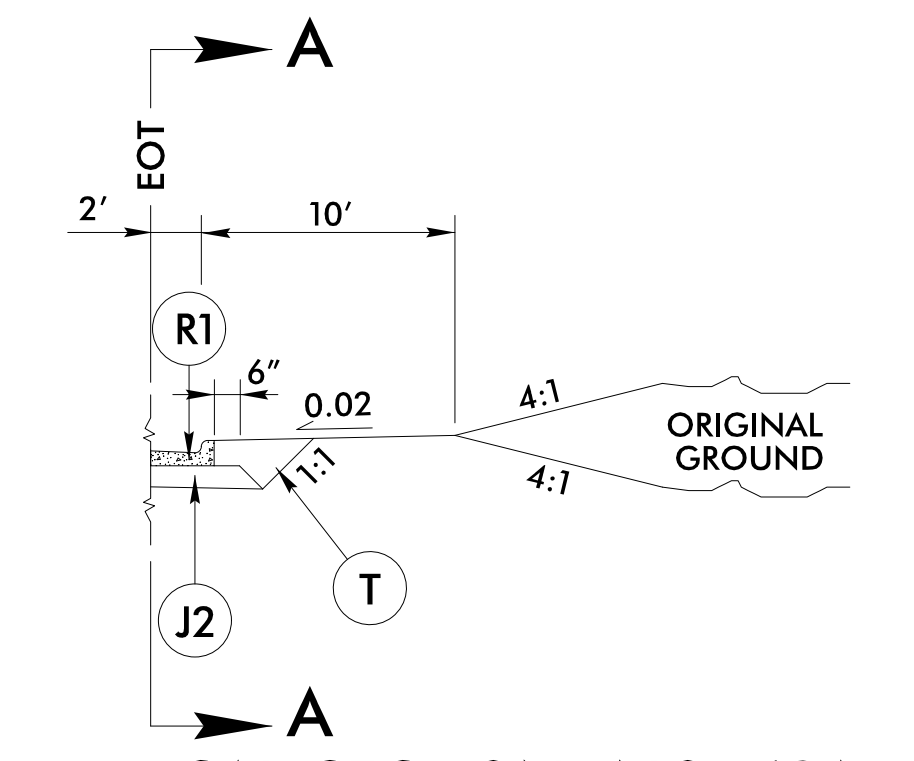
TYPICAL SECTION NO. 45

-Y22- STA. 14+00.00 (EXISTING) TO STA. 17+00.00
*Y22- STA. 17+00.00 TO STA. 21+50.00



TYPICAL SECTION NO. 46

-Y22- STA. 21+50.00 TO STA. 26+30.00



TYPICAL SECTION NO. 43A

2'-6" CURB AND GUTTER LOCATIONS
USE TYPICAL NO. 43A IN CONJUNCTION WITH TYPICAL SECTION NO. 43

-Y19REV- STA. 12+09.00 TO STA. 13+00.00 RT

TRANSITION FROM TYPICAL SECTION NO. 46 TO TYPICAL SECTION NO. 47

-Y22- STA. 26+30.00 TO STA. 30+10.00

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)

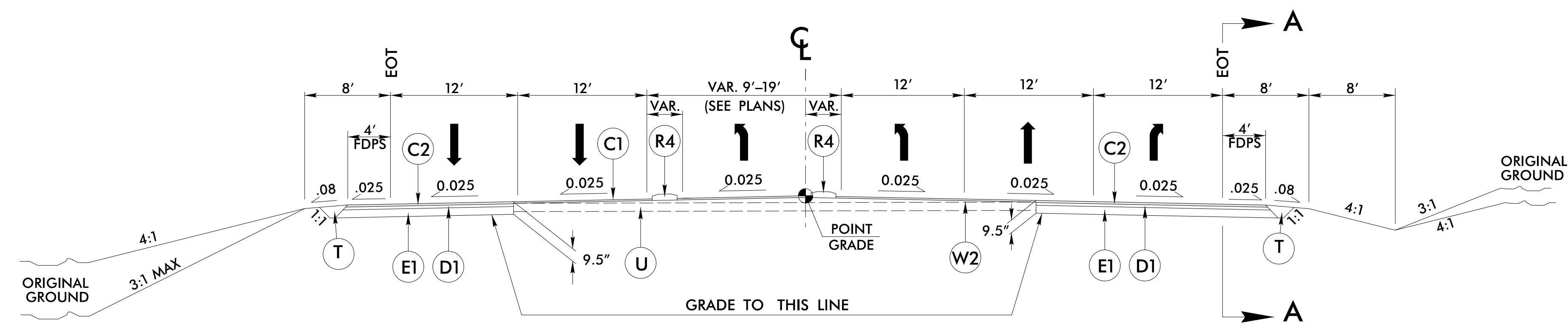
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
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E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
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R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6"GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 x W3.5 OR W5 x W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

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

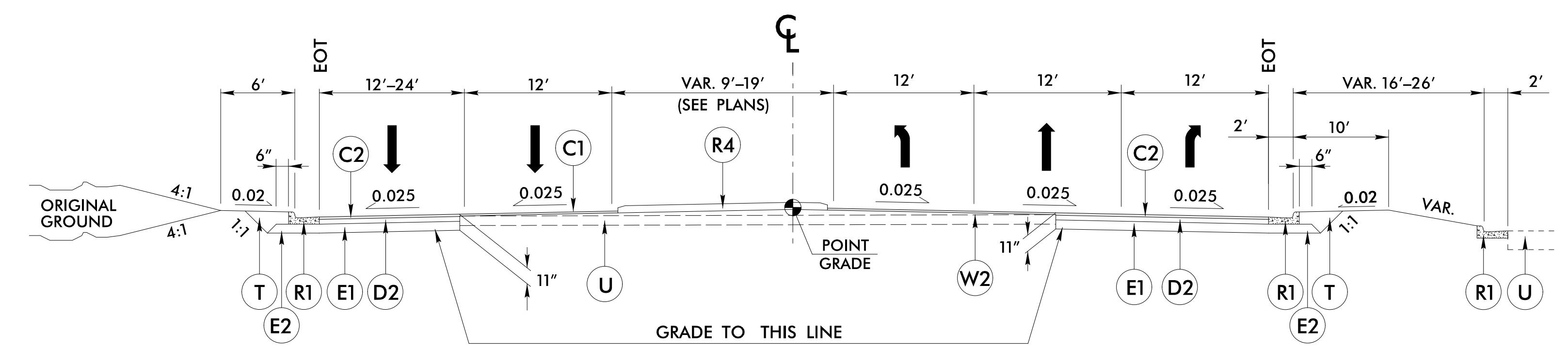
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1524

PROJECT REFERENCE NO.	R-5021	SHEET NO.	2A-14
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
11/1/2021		11/2/2021	

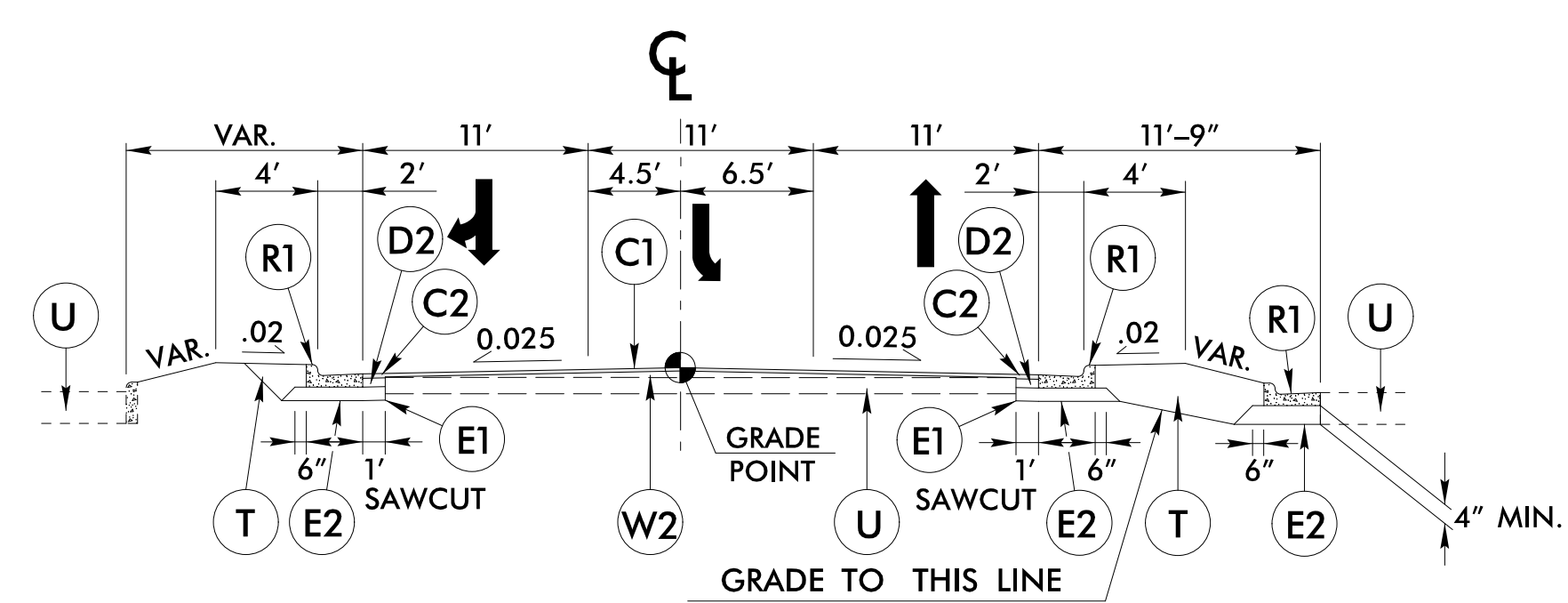
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



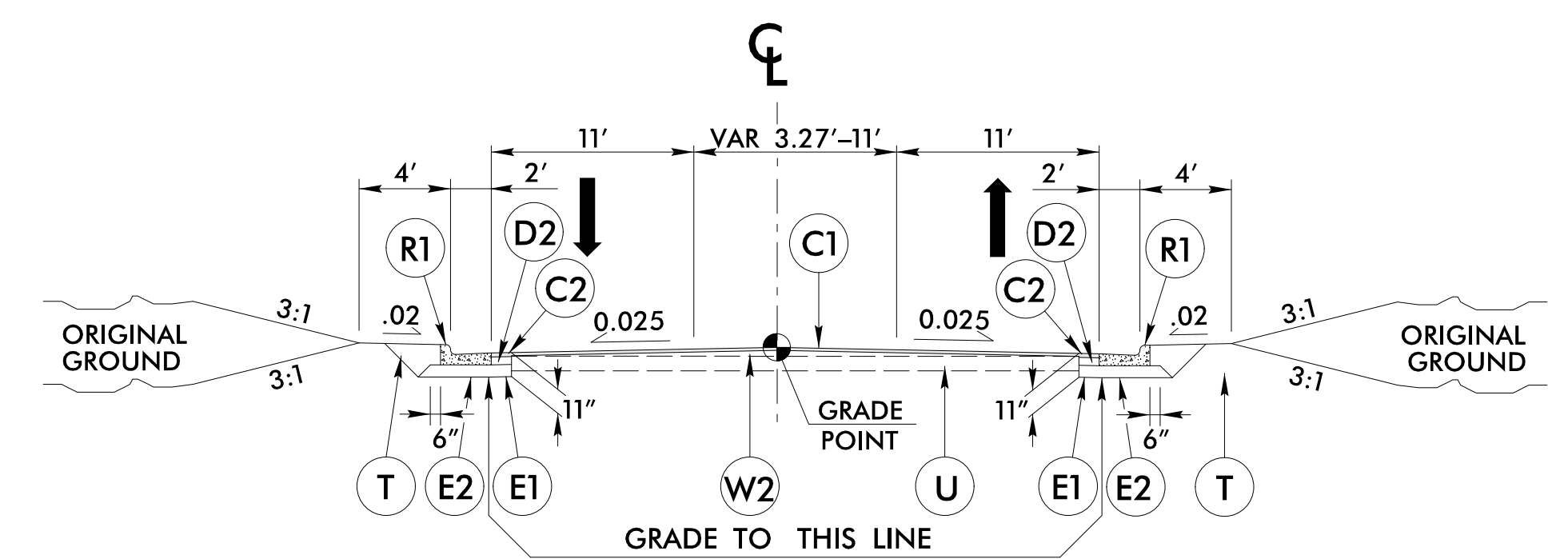
TYPICAL SECTION NO. 47
-Y22- STA. 30+10.00 TO STA. 31+45.14



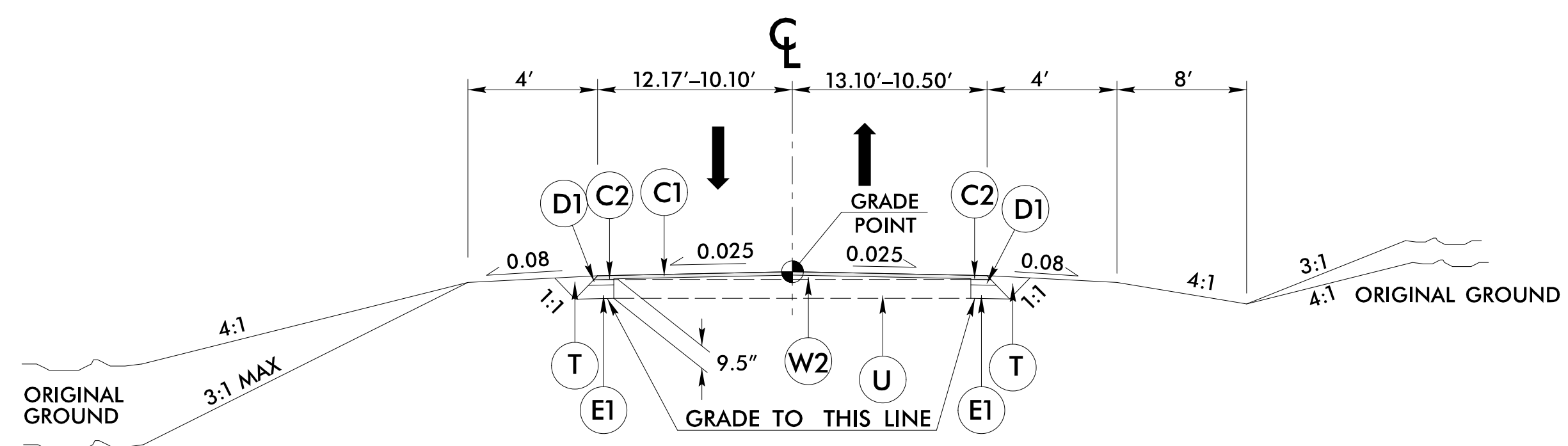
TYPICAL SECTION NO. 48
-Y22- STA. 31+45.14 TO STA. 34+71.27



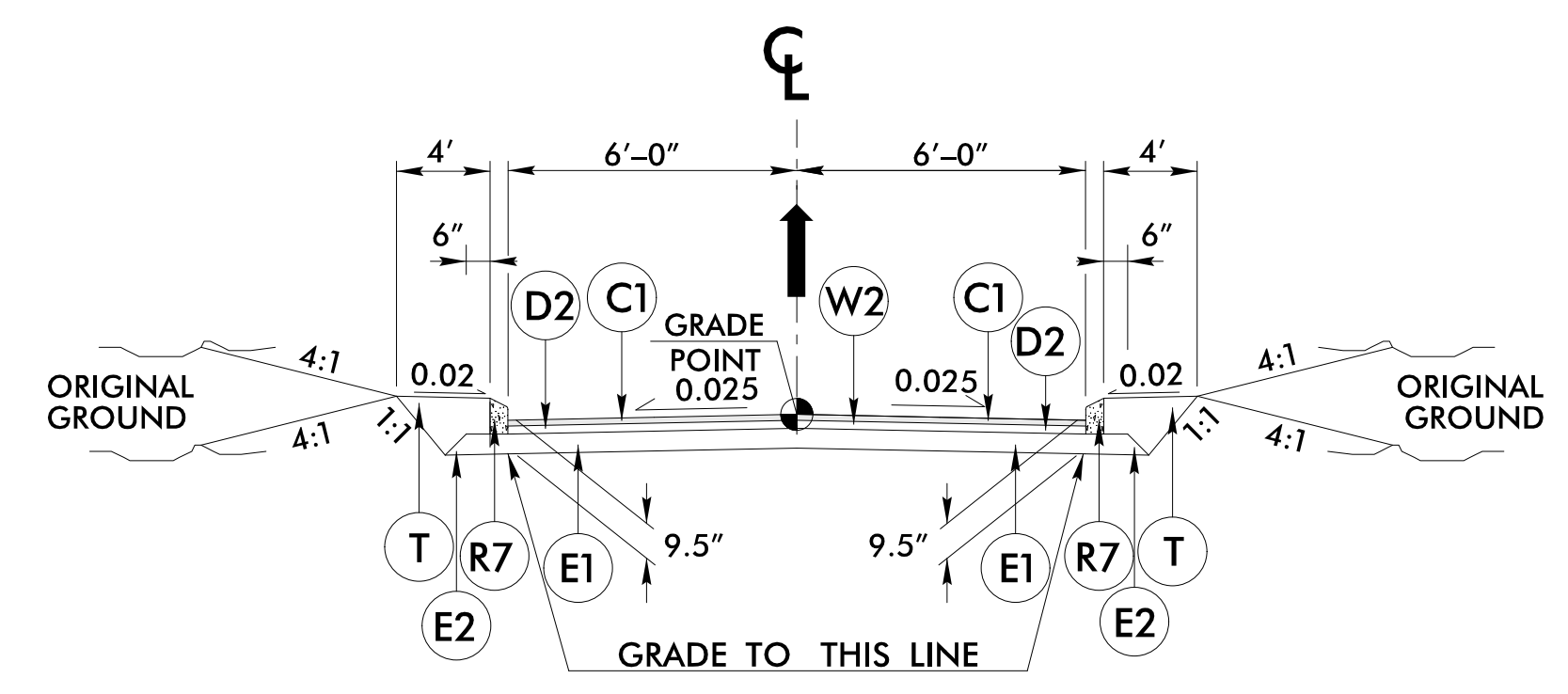
TYPICAL SECTION NO. 49
-Y22- STA. 35+60.28 TO STA. 39+00.00



TYPICAL SECTION NO. 50
-Y22- STA. 39+00.00 TO STA. 41+66.00



TYPICAL SECTION NO. 51
-Y22- STA. 41+66.00 TO STA. 42+50.00



TYPICAL SECTION NO. 52
-Y22A- STA. 10+25.00 TO STA. 12+01.92

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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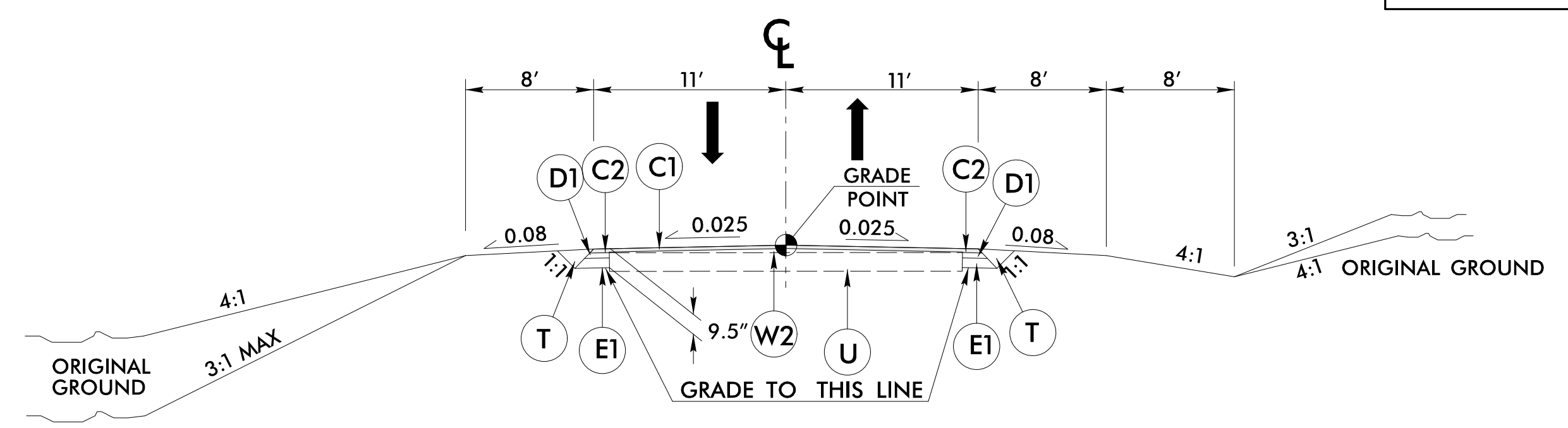
6/22/99

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
D2	PROP. APPROX. 4" ACIC, TYPE I19.0C
D3	PROP. VAR. DEPTH ACIC, TYPE I19.0C
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	2'-9" CONCRETE CURB AND GUTTER.
R3	1'-6" CONCRETE CURB AND GUTTER. (STD MOUNTABLE)
R4	5" MONOLITHIC CONCRETE ISLAND
R5	SHOULDER BERM GUTTER
R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6" GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 x W3.5 OR W5 x W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

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

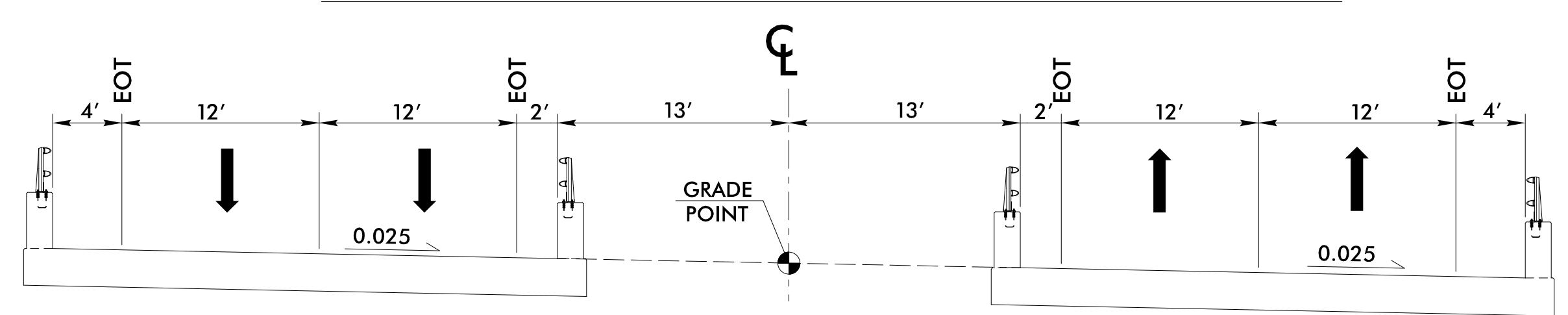
HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1524

PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-15
ROADWAY DESIGN ENGINEER <i>David S. Harrison</i> 36786 11/1/2021	PAVEMENT DESIGN ENGINEER <i>Carl S. Harrison</i> 022896 11/2/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

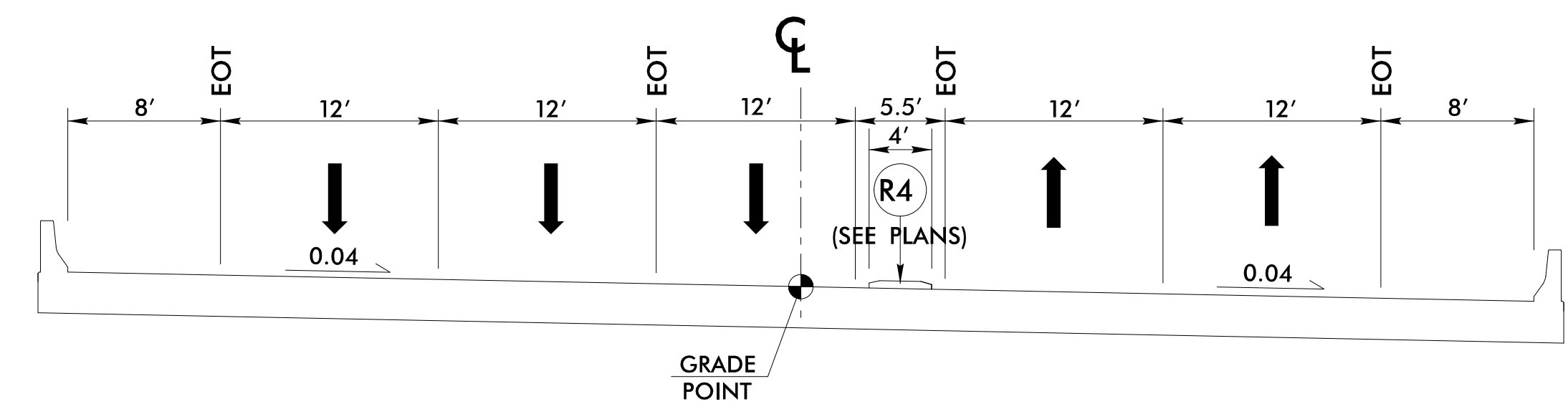


TYPICAL SECTION NO. 53
-Y24- STA. 10+35.43 TO STA. 12+81.87

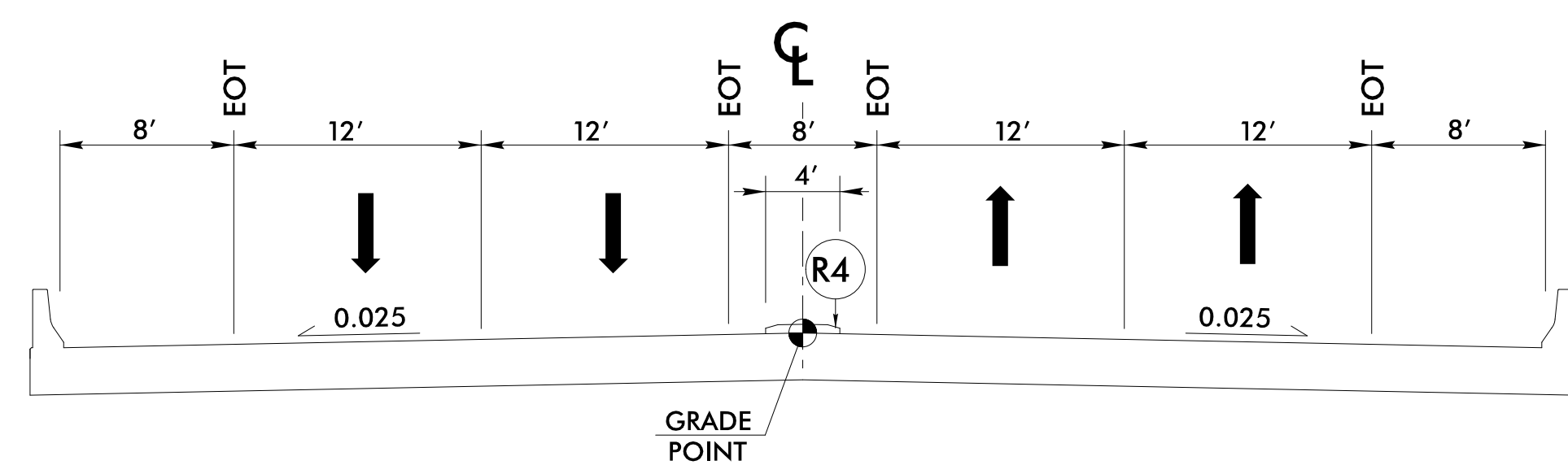
BRIDGE TYPICALS



BRIDGE TYPICAL NO. 1
-L- STA. 368+64.42 TO STA. 370+05.05 (EBL)
-L- STA. 368+55.48 TO STA. 370+18.89 (WBL)
-L- STA. 388+47.34 TO STA. 391+60.09 (EBL)
-L- STA. 388+63.60 TO STA. 391+73.86 (WBL)



BRIDGE TYPICAL NO. 2
-YREV- STA. 30+66.39 TO STA. 32+07.06



BRIDGE TYPICAL NO. 3
-Y14A- STA. 38+95.97 TO STA. 40+16.47

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

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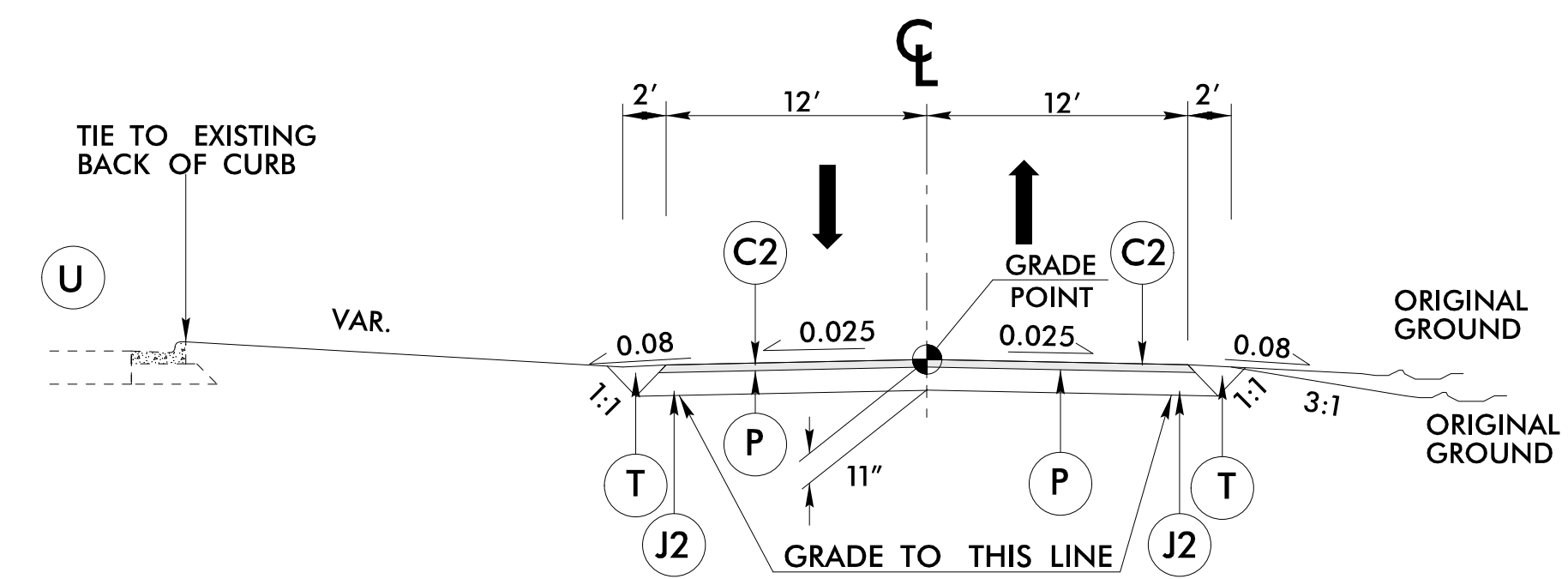
6/2/2021

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
D2	PROP. APPROX. 4" ACIC, TYPE I19.0C
D3	PROP. VAR. DEPTH ACIC, TYPE I19.0C
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	2'-9" CONCRETE CURB AND GUTTER.
R3	1'-6" CONCRETE CURB AND GUTTER. (STD MOUNTABLE)
R4	5" MONOLITHIC CONCRETE ISLAND
R5	SHOULDER BERM GUTTER
R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6"GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 X W3.5 OR W5 X W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

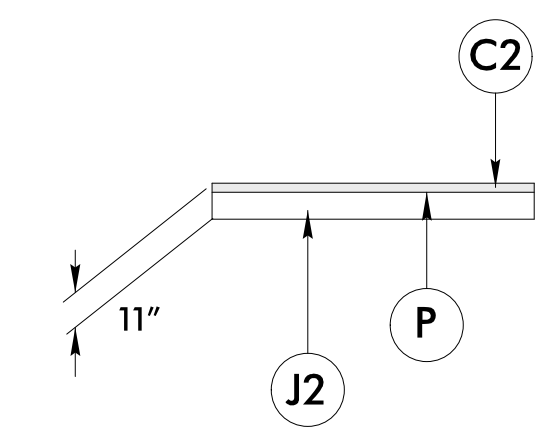
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

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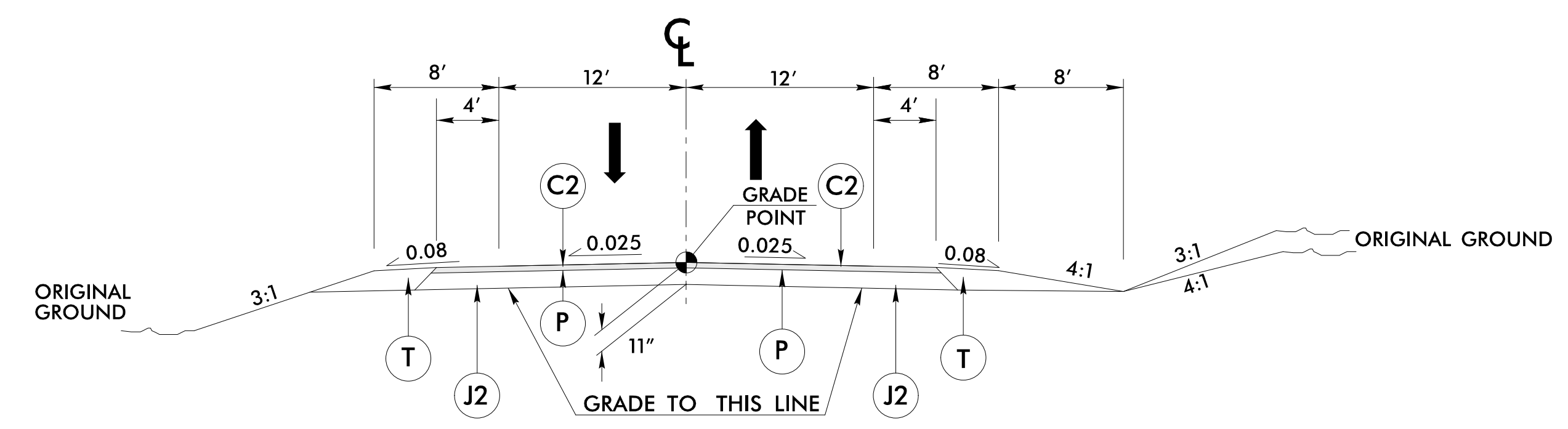
PROJECT REFERENCE NO. R-5021	SHEET NO. 2A-16
ROADWAY DESIGN ENGINEER <i>David S. Real</i> 36786 11/1/2021	PAVEMENT DESIGN ENGINEER <i>Carl S. Morrison</i> 022896 11/2/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



TYPICAL SECTION NO. 54
-YREVTCP1- STA. 10+00.00 TO STA. 17+50.00



TYPICAL SECTION NO. 55
TEMPORARY PAVEMENT DESIGN FOR USE WITH TMP PLANS



TYPICAL SECTION NO. 56
-YATCP1- STA. 10+51.02 TO STA. 19+06.40

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

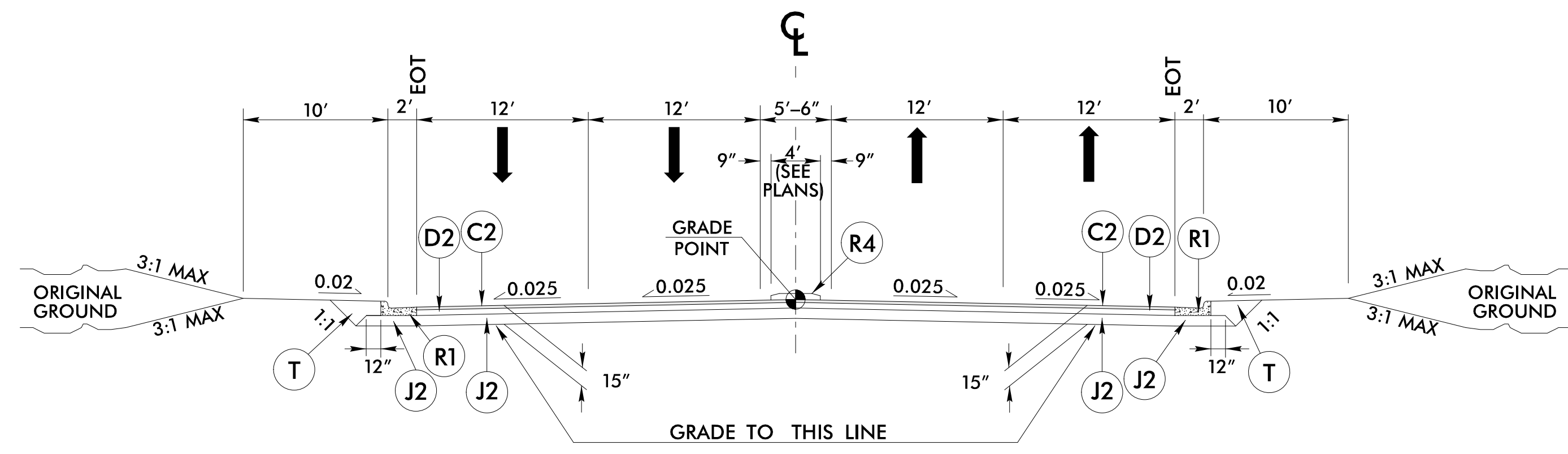
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HNTB

6/2/2019

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B
C4	PROP. APPROX. 1.5" ACSC, TYPE S9.5C
C5	PROP. APPROX. 3" ACSC, TYPE S9.5C
C6	PROP. VAR. DEPTH ACSC, TYPE S9.5C
D1	PROP. APPROX. 2.5" ACIC, TYPE I19.0C
D2	PROP. APPROX. 4" ACIC, TYPE I19.0C
D3	PROP. VAR. DEPTH ACIC, TYPE I19.0C
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C
J1	PROP. 6" ABC
J2	PROP. 8" ABC
J3	VARIABLE DEPTH ABC
K	PROP. 5" CLASS IV AGGREGATE STABILIZATION
P	PRIME COAT
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	2'-9" CONCRETE CURB AND GUTTER.
R3	1'-6" CONCRETE CURB AND GUTTER. (STD MOUNTABLE)
R4	5" MONOLITHIC CONCRETE ISLAND
R5	SHOULDER BERM GUTTER
R6	EXPRESSWAY GUTTER
R7	8"x18" CURB
R8	1'-6" CONCRETE CURB AND GUTTER. (SP 1'PAN-6"GUTTER)
R9	7" JOINTED CONCRETE (WITHOUT DOWELS REINFORCED WITH A W3.5 X W3.5 OR W5 X W5 WIRE MESH)
R10	9"x18" CONCRETE CURB
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W1	WEDGING METHOD NO. 1 - SEE SHEET 2A-1
W2	WEDGING METHOD NO. 2 - SEE SHEET 2A-1

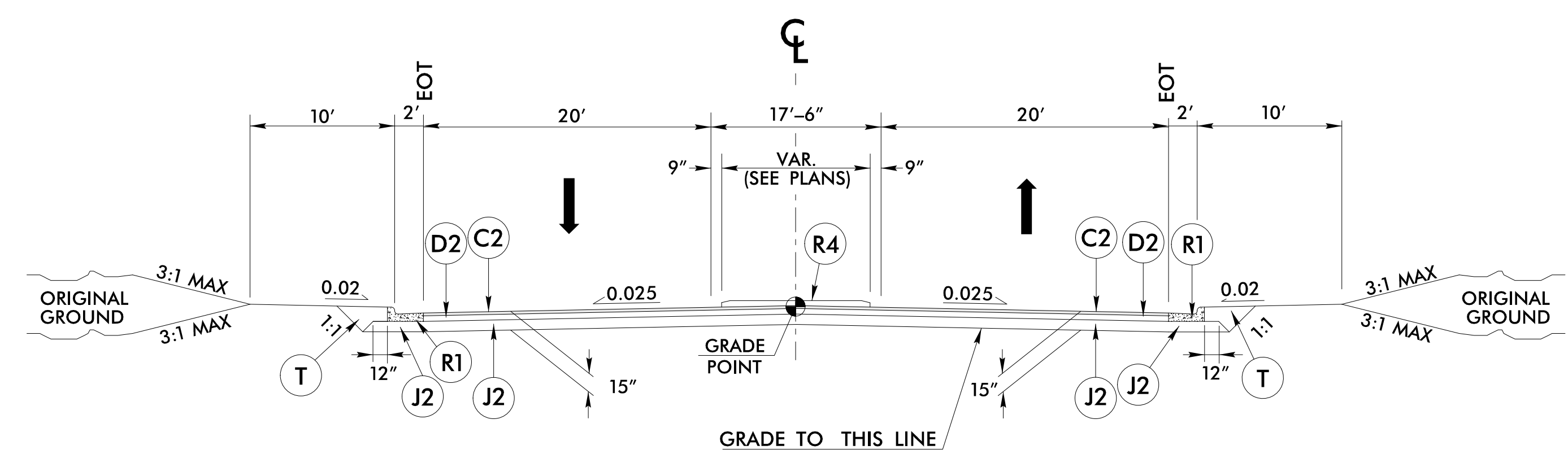
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ROADWAY DESIGN ENGINEER <i>[Signature]</i> 11/1/2021	PAVEMENT DESIGN ENGINEER <i>[Signature]</i> 11/2/2021

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TYPICAL SECTION NO. 57

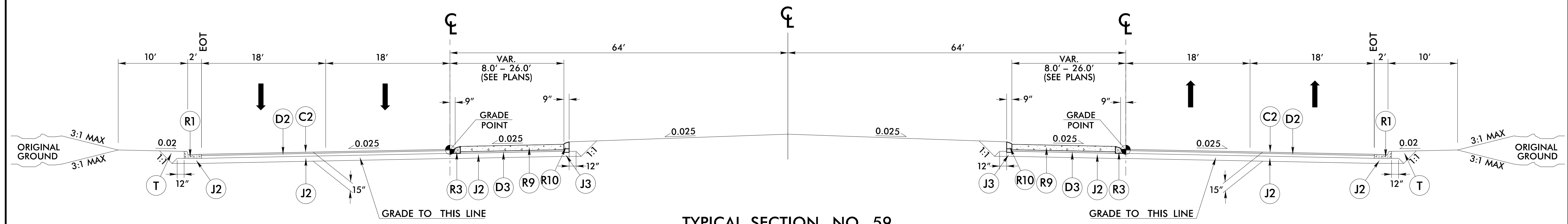
-YAREV- STA. 10+53.34 TO STA. 17+03.25 (BEG. -RAB-)
-YAREV- STA. 19+03.43 (END -RAB-) TO STA. 23+19.75



TYPICAL SECTION NO. 58

-YG- STA. 10+96.35 TO STA. 12+70.00

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



TYPICAL SECTION NO. 59

-RAB- STA. 10+00.00 TO STA. 14+02.12

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, AUXILIARY LANES, MONOLITHIC ISLANDS, CURB & GUTTER, AND LANE TAPER LOCATIONS.

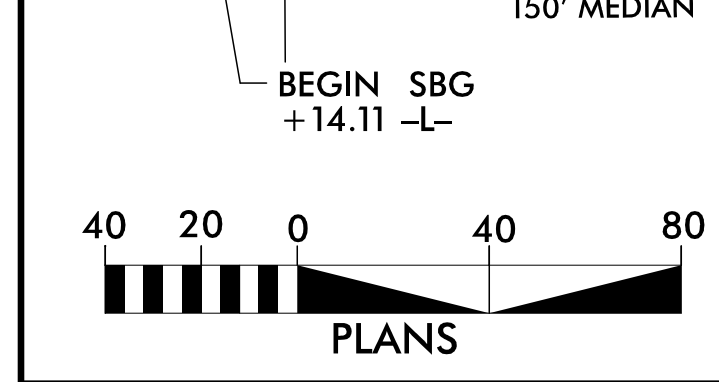
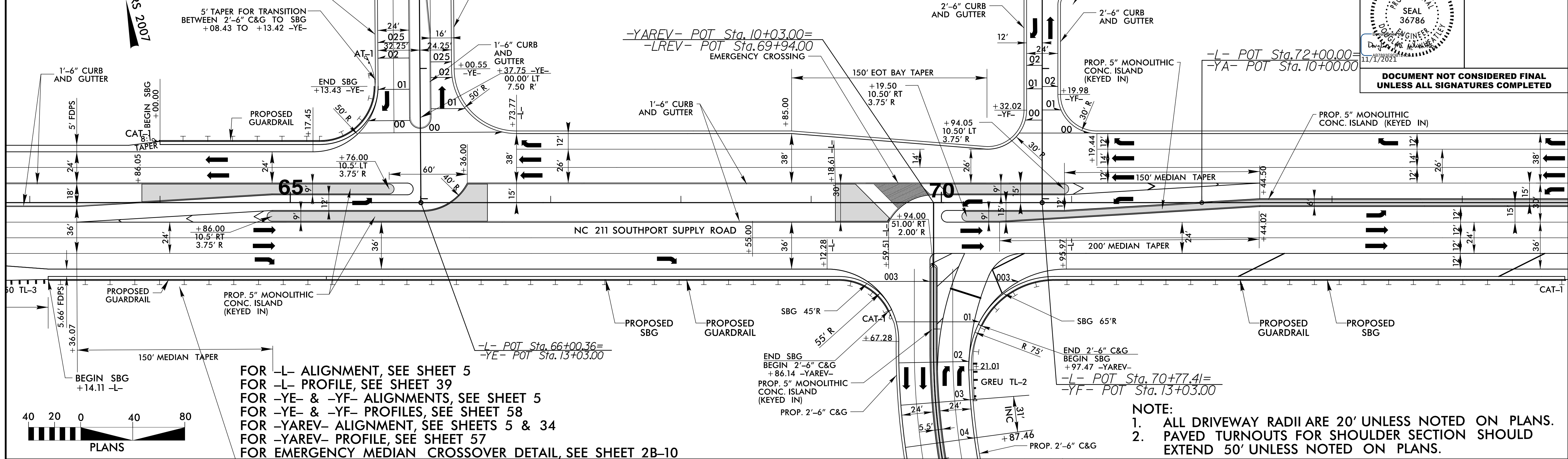
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5/14/2007

INTERSECTION DETAIL AND DIRECTIONAL CROSSOVER INTO MDI MANAGEMENT, INC -L- STA 66+00.00

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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

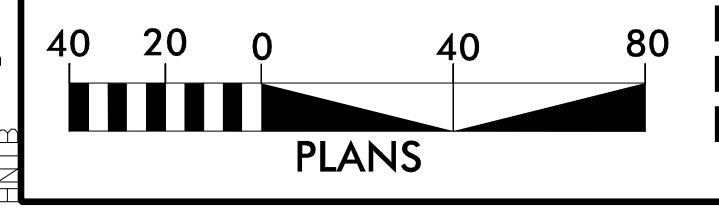
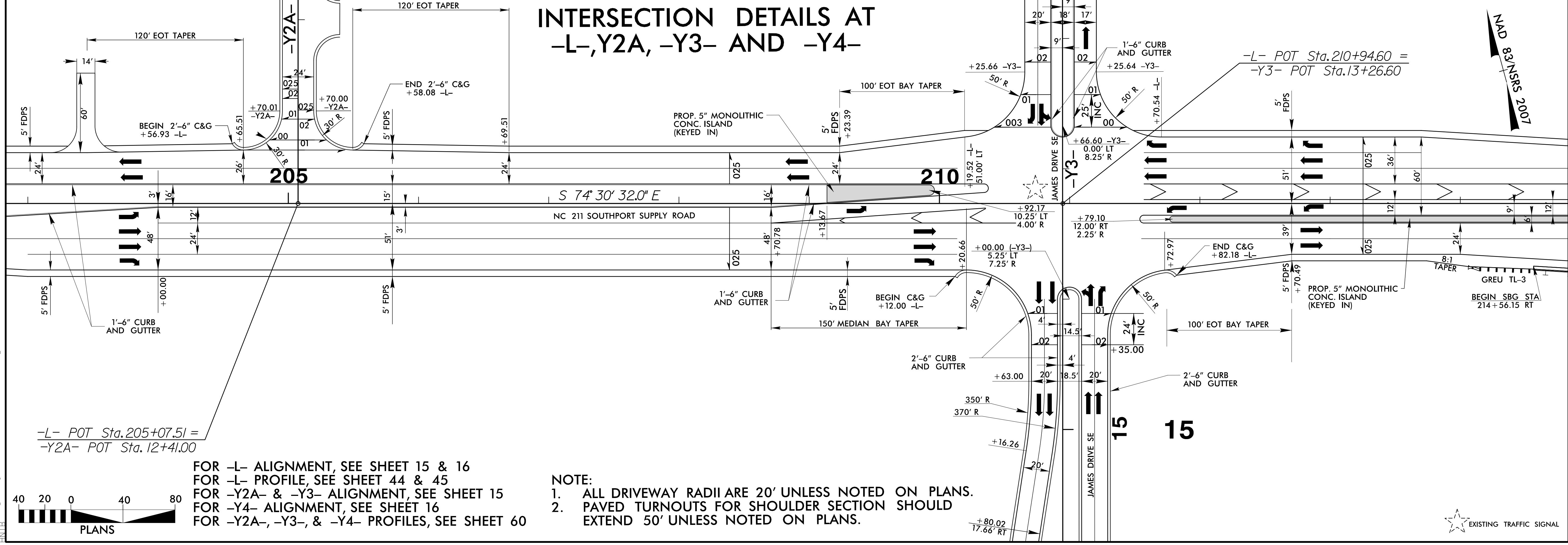
PROJECT REFERENCE NO. R-5021	SHEET NO. 2B-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



FOR -L- ALIGNMENT, SEE SHEET 5
 FOR -L- PROFILE, SEE SHEET 39
 FOR -YE- & -YF- ALIGNMENTS, SEE SHEET 5
 FOR -YE- & -YF- PROFILES, SEE SHEET 58
 FOR -YAREV- ALIGNMENT, SEE SHEETS 5 & 34
 FOR -YAREV- PROFILE, SEE SHEET 57
 FOR EMERGENCY MEDIAN CROSSOVER DETAIL, SEE SHEET 2B-10

NOTE:
 1. ALL DRIVEWAY RADII ARE 20' UNLESS NOTED ON PLANS.
 2. PAVED TURNOUTS FOR SHOULDER SECTION SHOULD EXTEND 50' UNLESS NOTED ON PLANS.

INTERSECTION DETAILS AT -L-, Y2A, -Y3- AND -Y4-



FOR -L- ALIGNMENT, SEE SHEET 15 & 16
 FOR -L- PROFILE, SEE SHEET 44 & 45
 FOR -Y2A- & -Y3- ALIGNMENT, SEE SHEET 15
 FOR -Y4- ALIGNMENT, SEE SHEET 16
 FOR -Y2A-, -Y3-, & -Y4- PROFILES, SEE SHEET 60

NOTE:
 1. ALL DRIVEWAY RADII ARE 20' UNLESS NOTED ON PLANS.
 2. PAVED TURNOUTS FOR SHOULDER SECTION SHOULD EXTEND 50' UNLESS NOTED ON PLANS.

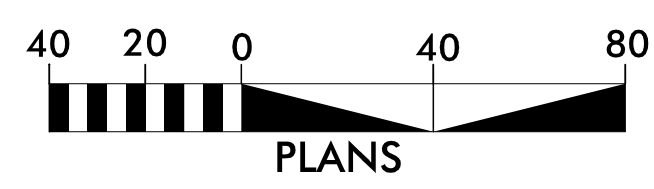
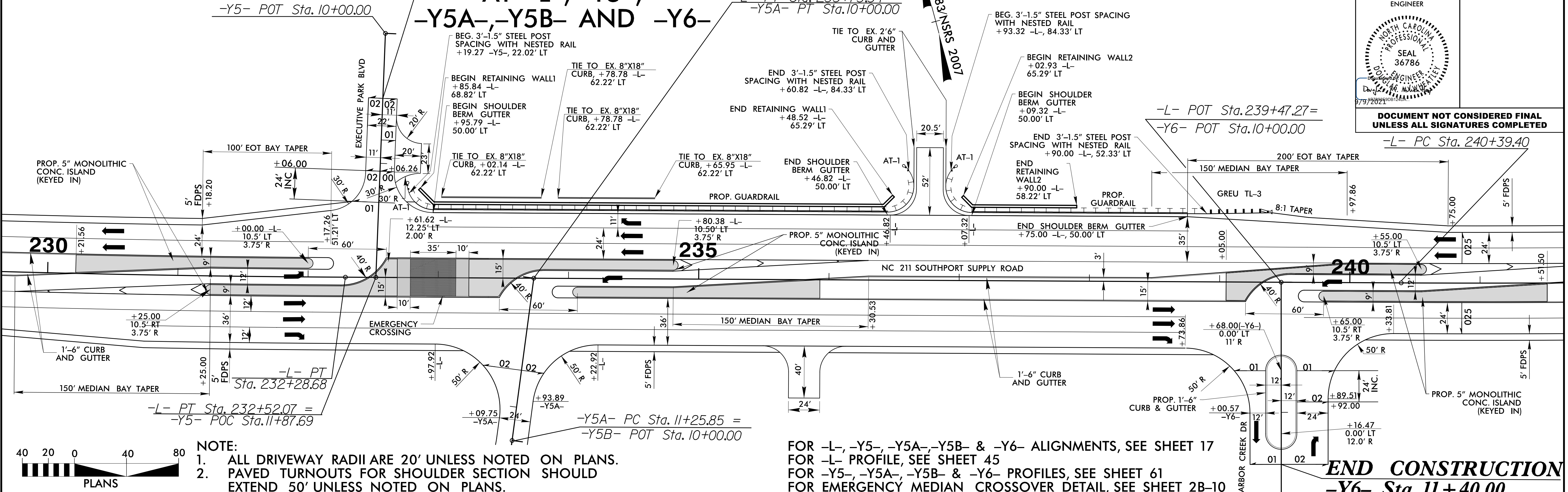


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BEGIN CONSTRUCTION INTERSECTION DETAIL -Y5- Sta. 10+50.00 AT -L-, -Y5-, -Y5A-, -Y5B- AND -Y6-

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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.	R-5021	SHEET NO.	2B-2
RW SHEET NO.			
ROADWAY DESIGN ENGINEER			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

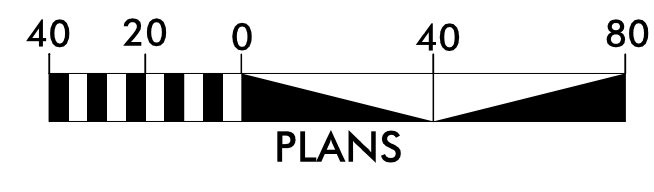
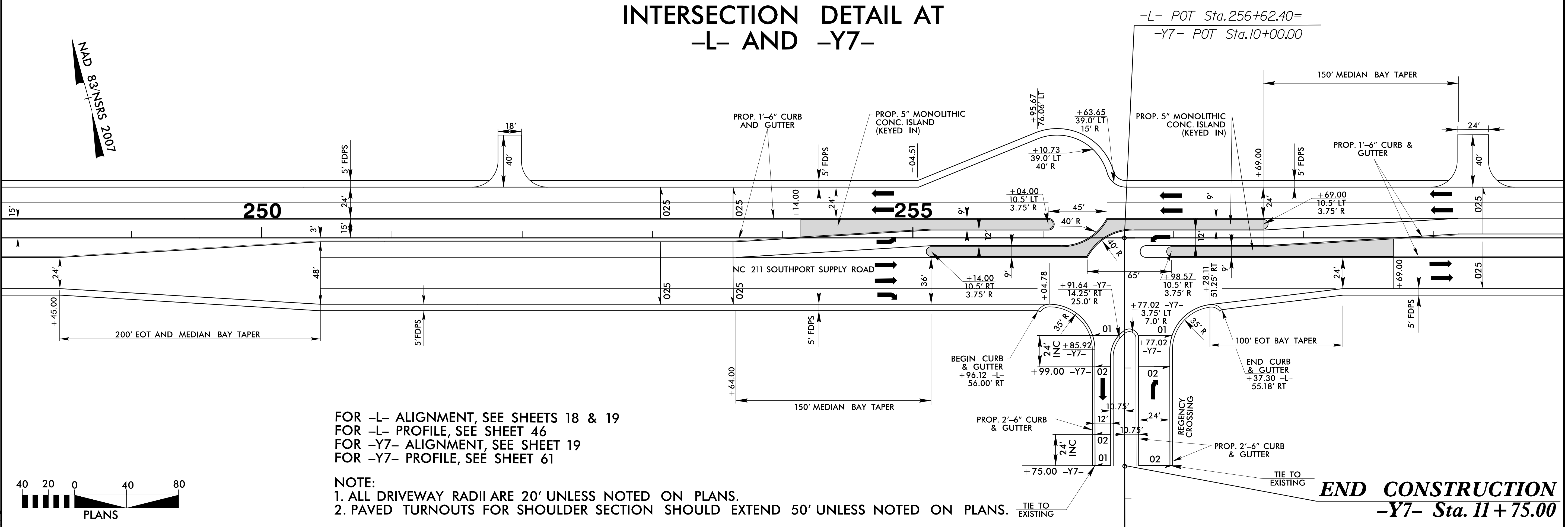


NOTE:
 1. ALL DRIVEWAY RADII ARE 20' UNLESS NOTED ON PLANS.
 2. PAVED TURNOUTS FOR SHOULDER SECTION SHOULD EXTEND 50' UNLESS NOTED ON PLANS.

FOR -L-, -Y5-, -Y5A-, -Y5B- & -Y6- ALIGNMENTS, SEE SHEET 17
 FOR -L- PROFILE, SEE SHEET 45
 FOR -Y5-, -Y5A-, -Y5B- & -Y6- PROFILES, SEE SHEET 61
 FOR EMERGENCY MEDIAN CROSSOVER DETAIL, SEE SHEET 2B-10

END CONSTRUCTION
-Y6- Sta. 11+40.00

INTERSECTION DETAIL AT -L- AND -Y7-



FOR -L- ALIGNMENT, SEE SHEETS 18 & 19
 FOR -L- PROFILE, SEE SHEET 46
 FOR -Y7- ALIGNMENT, SEE SHEET 19
 FOR -Y7- PROFILE, SEE SHEET 61

NOTE:
 1. ALL DRIVEWAY RADII ARE 20' UNLESS NOTED ON PLANS.
 2. PAVED TURNOUTS FOR SHOULDER SECTION SHOULD EXTEND 50' UNLESS NOTED ON PLANS.

END CONSTRUCTION
-Y7- Sta. 11+75.00

5/14/2017

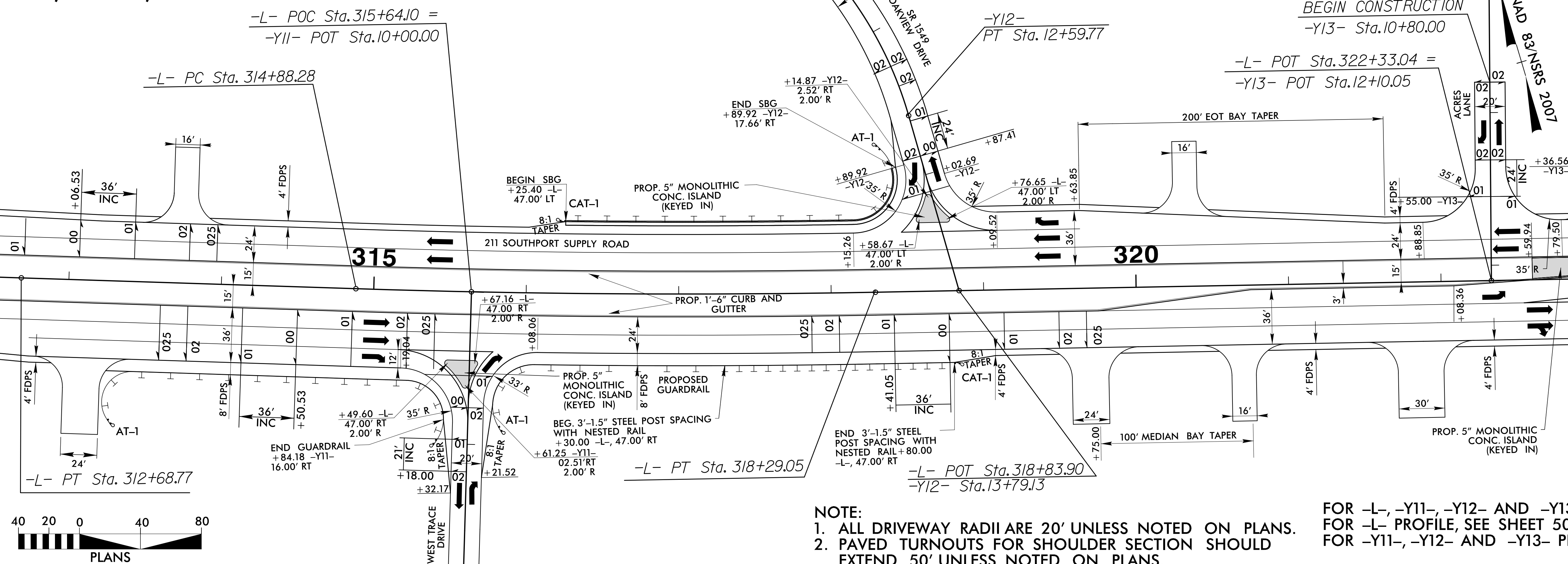
INTERSECTION DETAIL AT -L-, -Y11-, -Y12- AND -Y13-

BEGIN CONSTRUCTION
-Y12- Sta. 11+55.00

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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
R-5021	2B-3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	

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UNLESS ALL SIGNATURES COMPLETED**



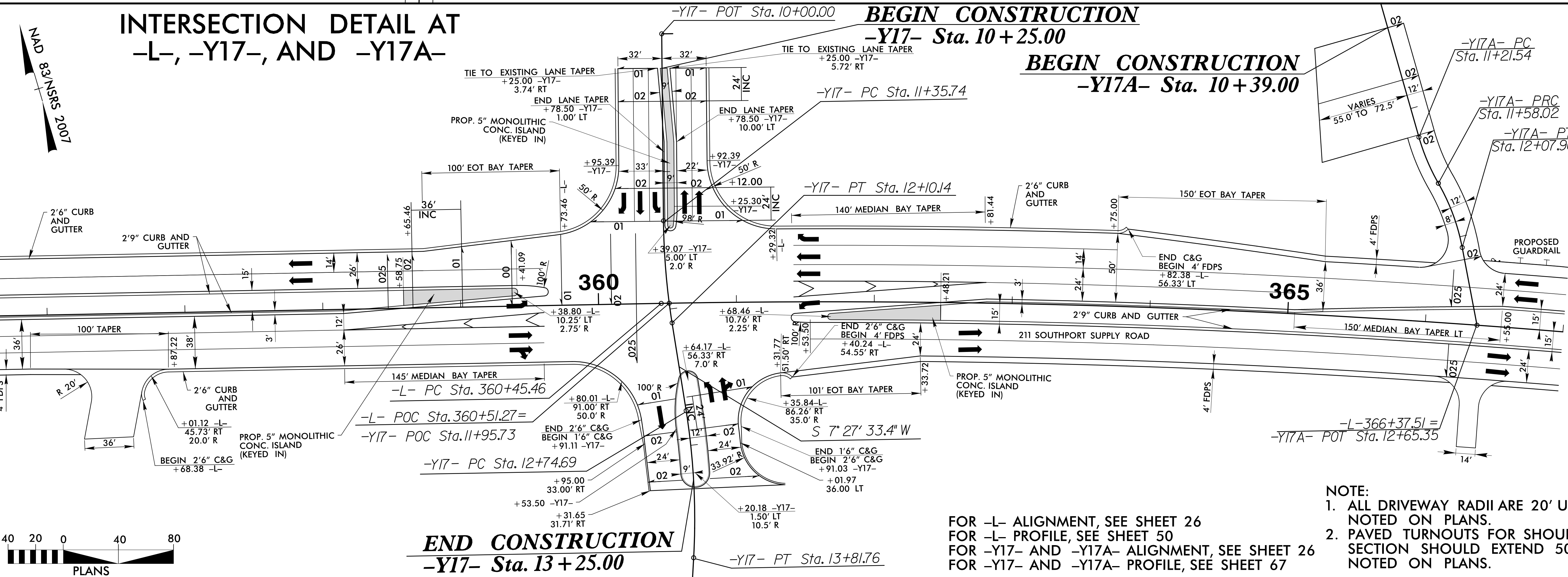
- NOTE:**
1. ALL DRIVEWAY RADII ARE 20' UNLESS NOTED ON PLANS.
 2. PAVED TURNOUTS FOR SHOULDER SECTION SHOULD EXTEND 50' UNLESS NOTED ON PLANS.

FOR -L-, -Y11-, -Y12- AND -Y13- ALIGNMENTS, SEE SHEET 23
FOR -L- PROFILE, SEE SHEET 50 AND 51
FOR -Y11-, -Y12- AND -Y13- PROFILES, SEE SHEET 62

INTERSECTION DETAIL AT -L-, -Y17-, AND -Y17A-

BEGIN CONSTRUCTION
-Y17- Sta. 10+25.00

BEGIN CONSTRUCTION
-Y17A- Sta. 10+39.00



FOR -L- ALIGNMENT, SEE SHEET 26
FOR -L- PROFILE, SEE SHEET 50
FOR -Y17- AND -Y17A- ALIGNMENT, SEE SHEET 26
FOR -Y17- AND -Y17A- PROFILE, SEE SHEET 67

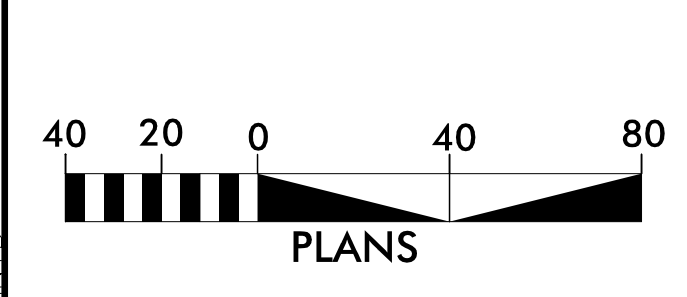
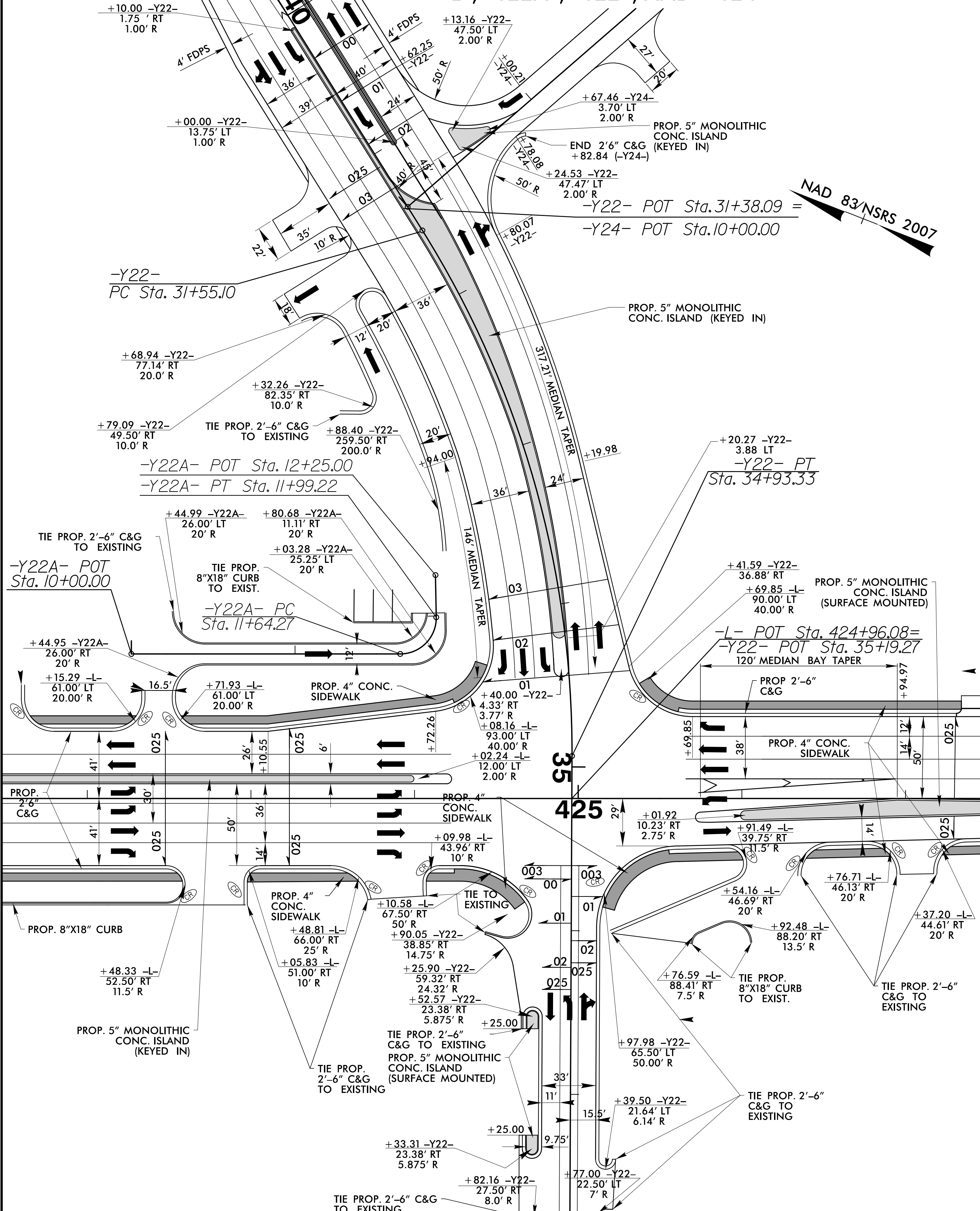
- NOTE:**
1. ALL DRIVEWAY RADII ARE 20' UNLESS NOTED ON PLANS.
 2. PAVED TURNOUTS FOR SHOULDER SECTION SHOULD EXTEND 50' UNLESS NOTED ON PLANS.

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5/14/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5021	2B-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

INTERSECTION DETAIL AT -L-, -Y22A-, -Y22-, AND -Y24-



NOTE:

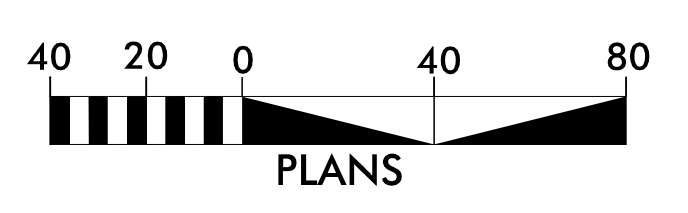
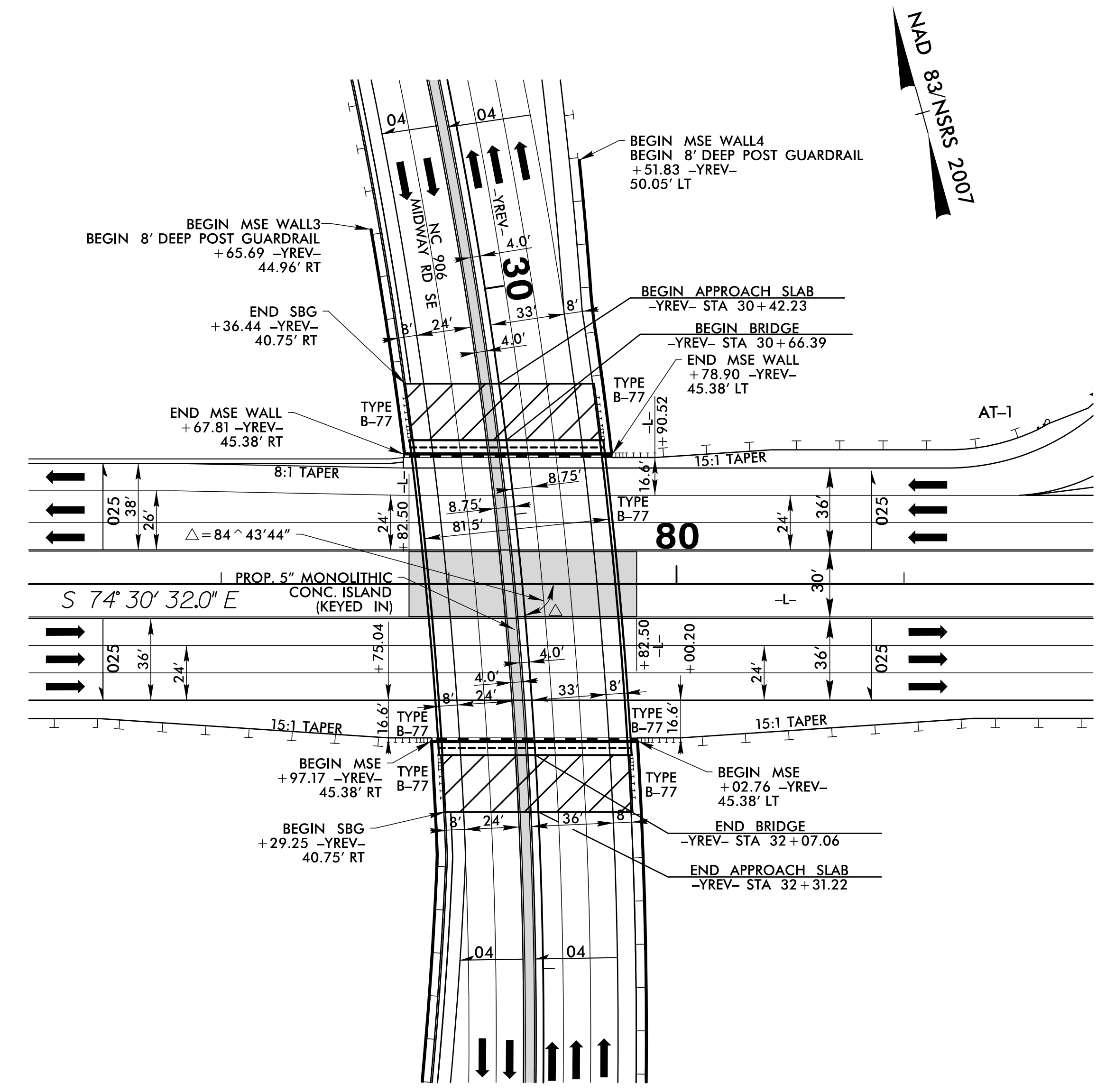
- ALL DRIVEWAY RADII ARE 20' UNLESS NOTED ON PLANS.
- PAVED TURNOUTS FOR SHOULDER SECTION SHOULD EXTEND 50' UNLESS NOTED ON PLANS.

FOR -L- AND -Y22- ALIGNMENTS, SEE SHEET 31
 FOR -Y22A- ALIGNMENT, SEE SHEETS 30 & 31
 FOR -Y24- ALIGNMENT, SEE SHEET 39
 FOR -L- PROFILE, SEE SHEET 54
 FOR -Y22A- PROFILE, SEE SHEET 69
 FOR -Y22- PROFILE, SEE SHEET 68 & 69
 FOR -Y24- PROFILE, SEE SHEET 70

22-JUL-2021 09:55
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5/14/19

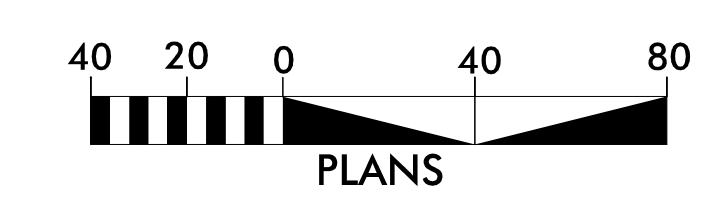
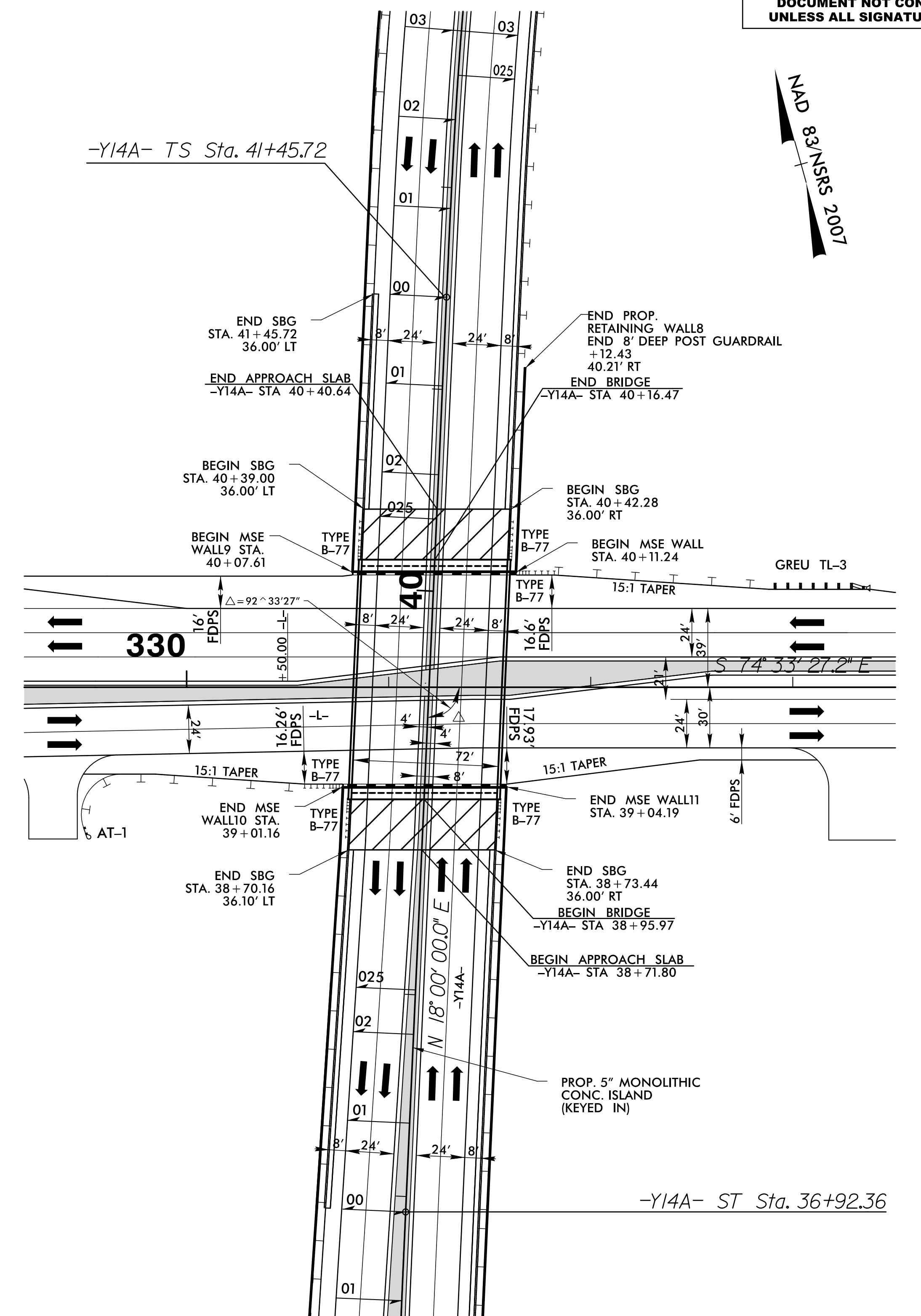
BRIDGE DETAIL AT INTERSECTION OF -L- AND -YREV-



FOR -L- AND -YREV- ALIGNMENTS, SEE SHEET 6
 FOR -L- PROFILE, SEE SHEET 42
 FOR -YREV- PROFILE, SEE SHEET 55 AND 56
 FOR STRUCTURE PLANS, SEE SHEET S3-1 THRU S3-25
 FOR RETAINING WALL PLANS, SEE SHEETS W-3 THRU W-7

PROJECT REFERENCE NO.	SHEET NO.
R-5021	2B-5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

BRIDGE DETAIL AT INTERSECTION OF -L- AND -Y14A-



FOR -L- AND -Y14A- ALIGNMENTS, SEE SHEET 24
 FOR -L- PROFILE, SEE SHEET 51
 FOR -Y14A- PROFILE, SEE SHEETS 63 AND 64
 FOR STRUCTURE PLANS, SEE SHEET S4-1 THRU S4-24
 FOR RETAINING WALL PLANS, SEE SHEETS W-8 THRU W-17

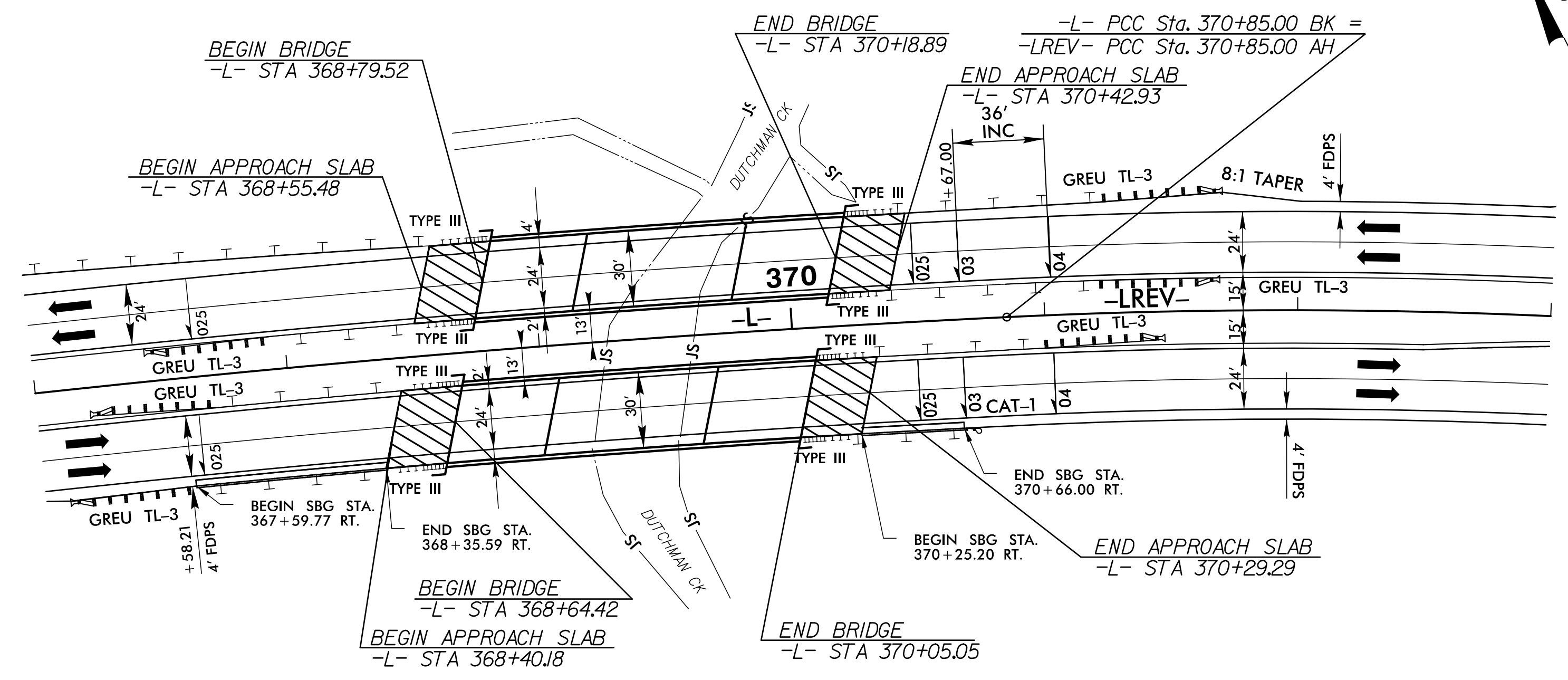
22-JUL-2021 09:55
 \\regdway\p-co\NR-5021-r-dj-de\vol1_2B-5.dgn

5/14/2021

BRIDGE DETAIL AT -L- AND DUTCHMAN CREEK

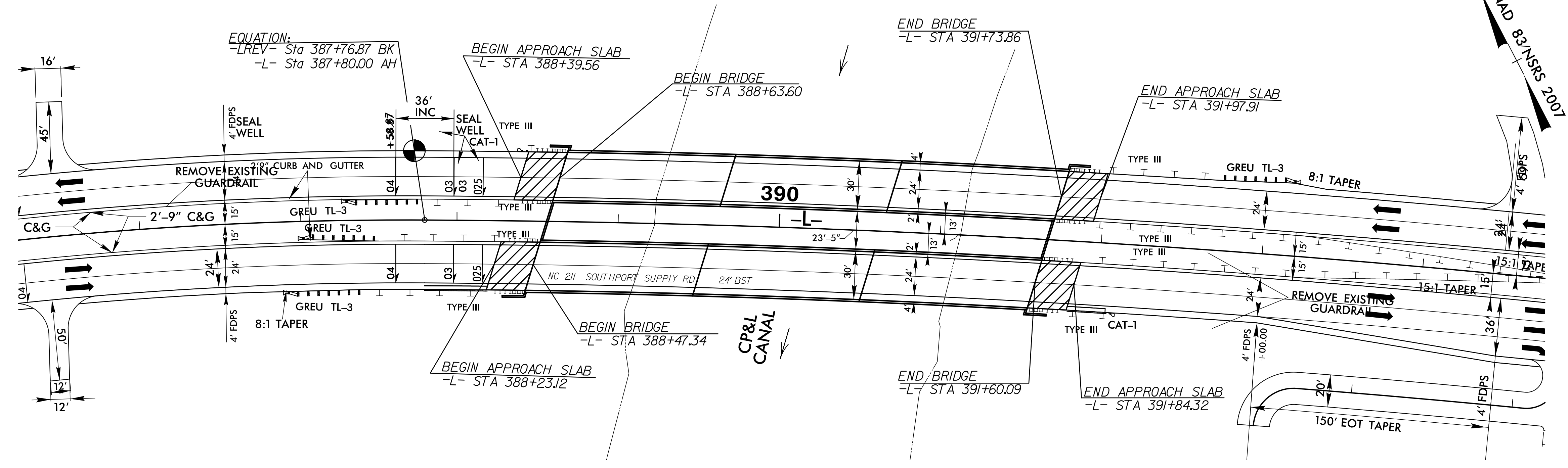
HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
R-5021	2B-6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



FOR -L- ALIGNMENT, SEE SHEET 27
 FOR -L- PROFILE, SEE SHEET 52
 FOR STRUCTURE PLANS, SEE SHEET S1-1 THRU S1-38
 FOR STRUCTURE PLANS, SEE SHEET S2-1 THRU S2-38

BRIDGE DETAIL AT -L- AND CP&L CANAL



NOTE:
 1. ALL DRIVEWAY RADII ARE 20' UNLESS NOTED ON PLANS.
 2. PAVED TURNOUTS FOR SHOULDER SECTION SHOULD EXTEND 50' UNLESS NOTED ON PLANS.

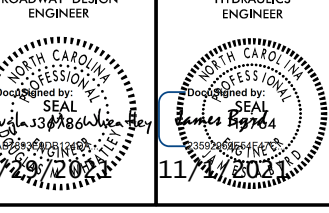
FOR -L- ALIGNMENT, SEE SHEET 28
 FOR -L- PROFILE, SEE SHEET 53
 FOR STRUCTURE PLANS, SEE SHEET S5-1 THRU S5-39
 FOR STRUCTURE PLANS, SEE SHEET S6-1 THRU S6-39

22-JUL-2021 09:55
 R:\Roadway\Pro\NR-5021_r.dwg de tai.1_2B-6.dgn
 HNTB

MIDWAY RD./MIDDLETON BLVD. INTERCHANGE OVERVIEW SHEET



PROJECT REFERENCE NO. 2-5021
SHEET NO. 2B-7



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

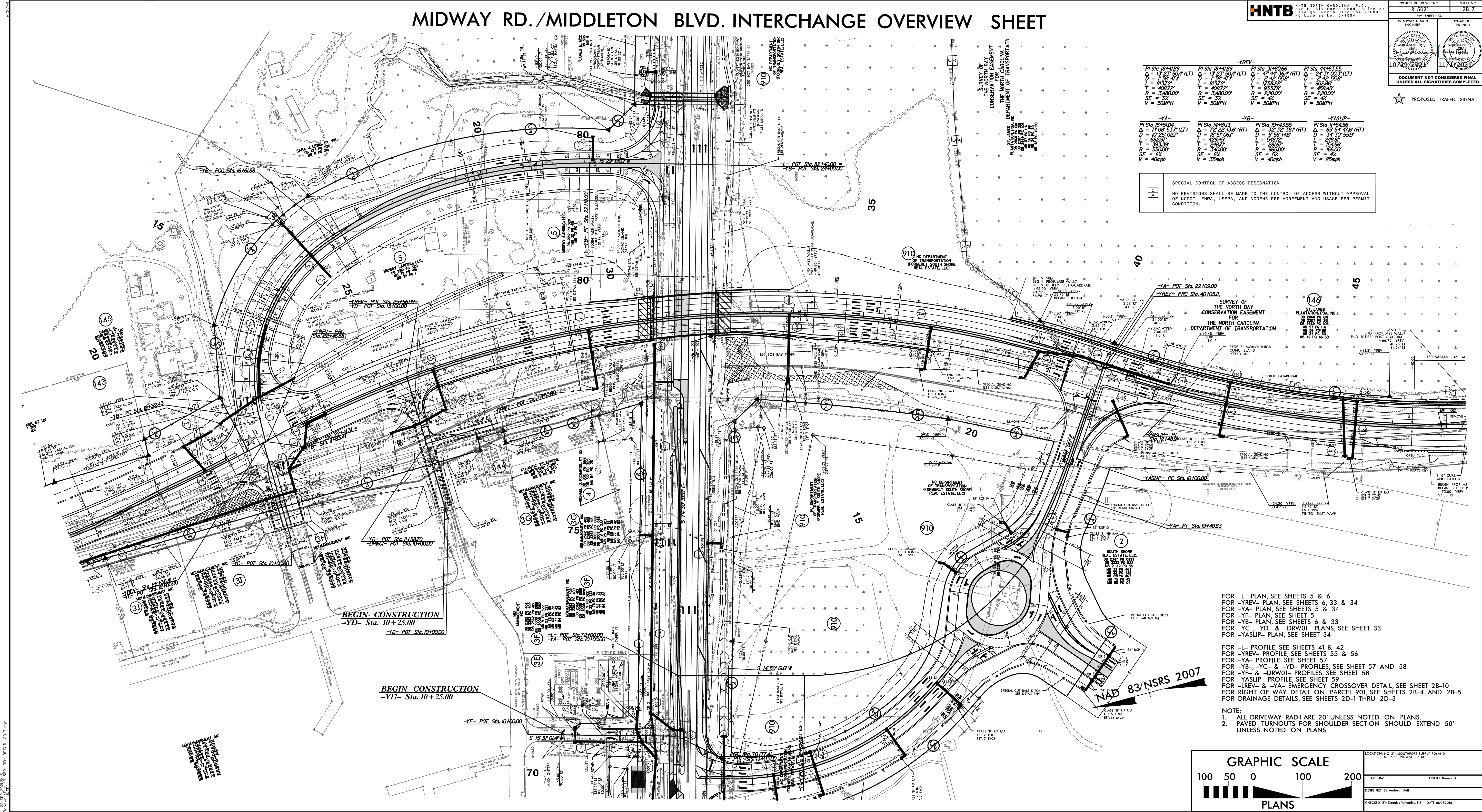
★ PROPOSED TRAFFIC SIGNAL

-YREV-			
PI Sta 18+41.89	PI Sta 18+41.89	PI Sta 31+90.66	PI Sta 44+63.55
$\Delta = 13^{\circ} 23' 50.4" (LT)$	$\Delta = 13^{\circ} 23' 50.4" (LT)$	$\Delta = 47^{\circ} 44' 36.4" (RT)$	$\Delta = 24^{\circ} 31' 00.3" (LT)$
D = 7.38' 47.4"	D = 7.38' 47.4"	D = 24.42' 53.6"	D = 50.28'
L = 813.72'	L = 813.72'	L = 1732.92'	L = 458.49'
T = 433.92'	T = 433.92'	T = 333.92'	T = 458.49'
R = 348.000'	R = 348.000'	R = 210.000'	R = 210.000'
SE = 3%	SE = 3%	SE = 4%	SE = 4%
V = 50MPH	V = 50MPH	V = 50MPH	V = 50MPH

-YA-		-YB-		-YASLIP-	
PI Sta 16+51.04	PI Sta 16+51.04	PI Sta 19+43.55	PI Sta 19+43.55	PI Sta 11+54.56	PI Sta 11+54.56
$\Delta = 10^{\circ} 25' 02.7" (LT)$	$\Delta = 10^{\circ} 25' 02.7" (LT)$	$\Delta = 16^{\circ} 5' 06.1" (RT)$	$\Delta = 5^{\circ} 58' 14.6" (RT)$	$\Delta = 34^{\circ} 30' 55.5" (RT)$	$\Delta = 34^{\circ} 30' 55.5" (RT)$
D = 468.59'	D = 468.59'	D = 548.02'	D = 548.02'	D = 548.02'	D = 548.02'
L = 468.59'	L = 468.59'	L = 281.7'	L = 281.7'	L = 154.56'	L = 154.56'
T = 333.39'	T = 333.39'	T = 340.00'	T = 340.00'	T = 168.00'	T = 168.00'
R = 350.000'	R = 350.000'	R = 365.000'	R = 365.000'	R = 45'	R = 45'
SE = 2%	SE = 2%	SE = 3%	SE = 3%	SE = 4%	SE = 4%
V = 40mph	V = 40mph	V = 35mph	V = 35mph	V = 40mph	V = 40mph

SPECIAL CONTROL OF ACCESS DESIGNATION

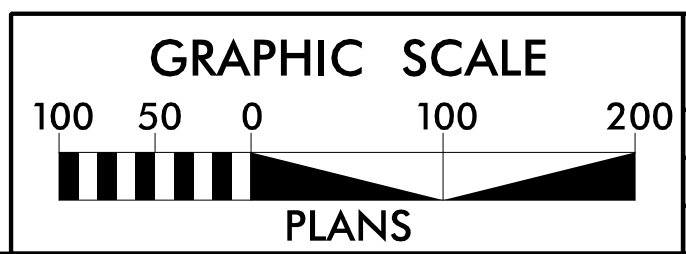
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FEMA, USEPA, AND NCEM PER AGREEMENT AND USAGE PER PERMIT CONDITION.



FOR -L- PLAN, SEE SHEETS 5 & 6
 FOR -YREV- PLAN, SEE SHEETS 6, 33 & 34
 FOR -YA- PLAN, SEE SHEETS 5 & 34
 FOR -YF- PLAN, SEE SHEET 5
 FOR -YB- PLAN, SEE SHEETS 6 & 33
 FOR -YC-, -YD-, & -DRW01- PLANS, SEE SHEET 33
 FOR -YASLIP- PLAN, SEE SHEET 34

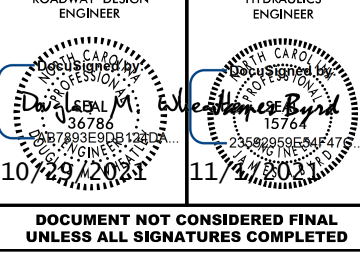
FOR -L- PROFILE, SEE SHEETS 41 & 42
 FOR -YREV- PROFILE, SEE SHEETS 55 & 56
 FOR -YA- PROFILE, SEE SHEET 57
 FOR -YB-, -YC-, & -YD- PROFILES, SEE SHEET 57 AND 58
 FOR -YF- & -DRW01- PROFILES, SEE SHEET 58
 FOR -YASLIP- PROFILE, SEE SHEET 59
 FOR -LREV- & -YA- EMERGENCY CROSSOVER DETAIL, SEE SHEET 2B-10
 FOR RIGHT OF WAY DETAIL ON PARCEL 901, SEE SHEETS 2B-4 AND 2B-5
 FOR DRAINAGE DETAILS, SEE SHEETS 2D-1 THRU 2D-3

NOTE:
 1. ALL DRIVEWAY RADI ARE 20' UNLESS NOTED ON PLANS.
 2. PAVED TURNOUTS FOR SHOULDER SECTION SHOULD EXTEND 50' UNLESS NOTED ON PLANS.



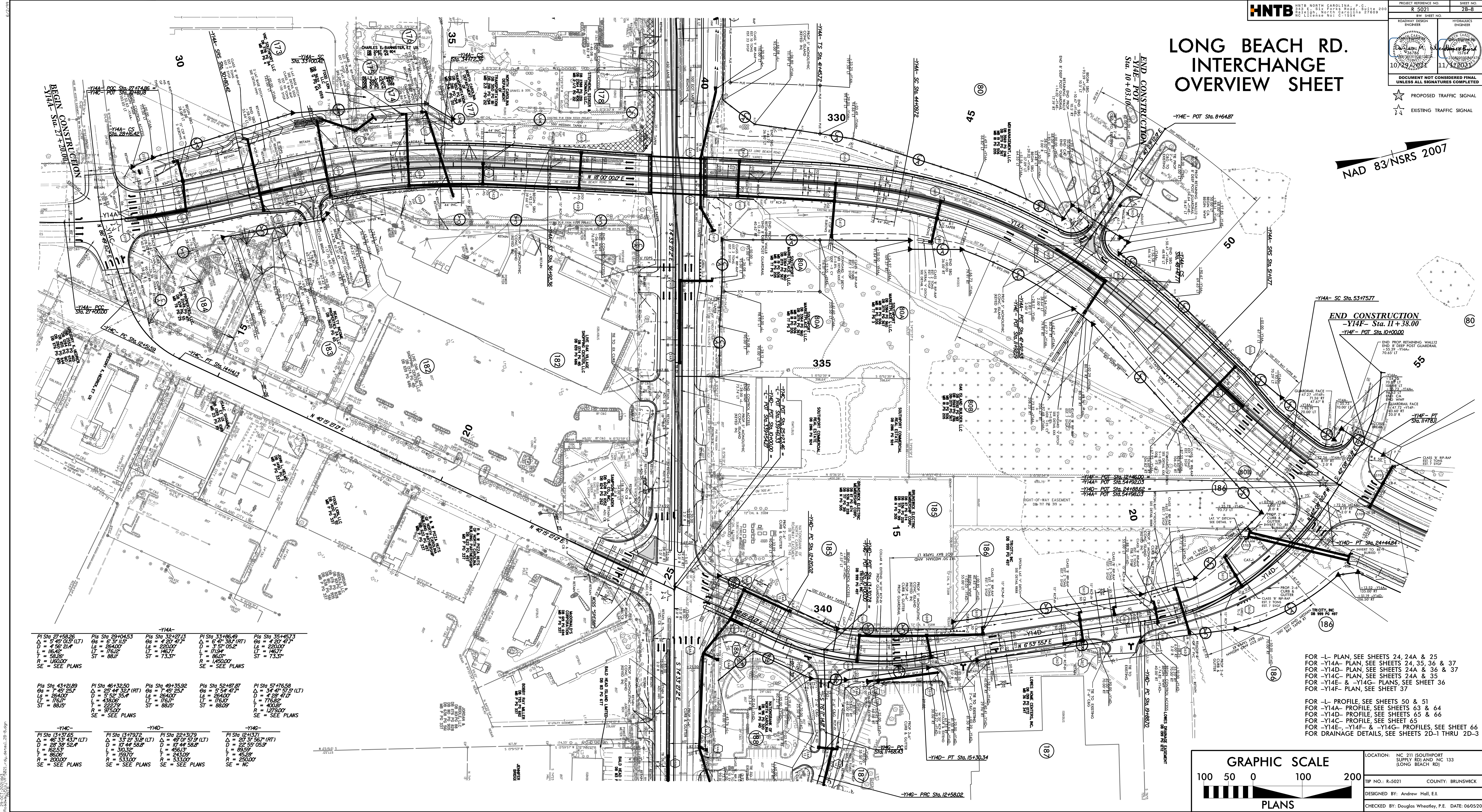
LOCATION: NC 211 (SOUTHPOPE SURVEY RD) AND
 30' (MIDWAY RD. SE)
 SHEET NO. 2-5021 COUNTY: BUNNELL
 DESIGNED BY: Andrew Hurl
 CHECKED BY: Douglas Wheatley, P.E. DATE: 06/22/18

LONG BEACH RD. INTERCHANGE OVERVIEW SHEET



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
★ PROPOSED TRAFFIC SIGNAL
☆ EXISTING TRAFFIC SIGNAL

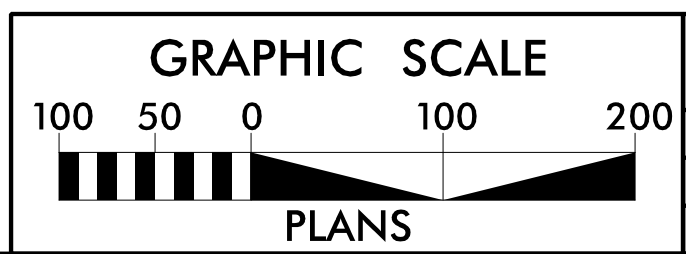
NAD 83/NSRS 2007



-Y14A-		-Y14B-		-Y14C-		-Y14D-		-Y14E-	
PI Sta 27+58.26	PI Sta 29+04.53	PI Sta 32+27.13	PI Sta 33+96.49	PI Sta 35+46.23	PI Sta 46+32.50	PI Sta 49+35.92	PI Sta 52+10.87	PI Sta 57+76.58	PI Sta 13+71.25
Δ = 5° 49' 01.5" (LT)	Δ = 6° 31' 11.5"	Δ = 4° 20' 47.7"	Δ = 6° 41' 38.1" (RT)	Δ = 4° 20' 47.7"	Δ = 48° 13' 43.7" (LT)	Δ = 33° 29' 31.8" (LT)	Δ = 45° 01' 51.2" (LT)	Δ = 51° 31' 56.7" (RT)	Δ = 28° 39' 52.4"
D = 459.214'	Ls = 220.00'	Ls = 220.00'	Ls = 220.00'	Ls = 220.00'	D = 82.33'	D = 30.32'	D = 10' 44' 58.8"	D = 98.59'	D = 82.33'
T = 16.42'	LT = 176.12'	LT = 146.37'	T = 89.00'	T = 73.31'	L = 45.13'	L = 45.13'	L = 243.00'	T = 45.28'	T = 16.42'
R = 1450.00'	ST = 88.17'	ST = 73.31'	R = 1450.00'	R = 1450.00'	R = 575.00'	R = 575.00'	R = 1279.00'	R = 2500.00'	R = 2500.00'
SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS

FOR -L- PLAN, SEE SHEETS 24, 24A & 25
 FOR -Y14A- PLAN, SEE SHEETS 24, 35, 36 & 37
 FOR -Y14B- PLAN, SEE SHEETS 24A & 35
 FOR -Y14C- PLAN, SEE SHEETS 24A & 35
 FOR -Y14E- & -Y14G- PLANS, SEE SHEET 36
 FOR -Y14F- PLAN, SEE SHEET 37

FOR -L- PROFILE, SEE SHEETS 50 & 51
 FOR -Y14A- PROFILE, SEE SHEETS 63 & 64
 FOR -Y14B- PROFILE, SEE SHEETS 65 & 66
 FOR -Y14C- PROFILE, SEE SHEET 65
 FOR -Y14E-, -Y14F- & -Y14G- PROFILES, SEE SHEET 66
 FOR DRAINAGE DETAILS, SEE SHEETS 2D-1 THRU 2D-3



LOCATION: NC 211 (SOUTHPORT SUPPLY RD) AND NC 133 (LONG BEACH RD)
 TYP NO.: R-5021 COUNTY: BRUNSWICK
 DESIGNED BY: Andrew Hall, E.I.
 CHECKED BY: Douglas Wheatley, P.E. DATE: 06/05/2018

8/17/99

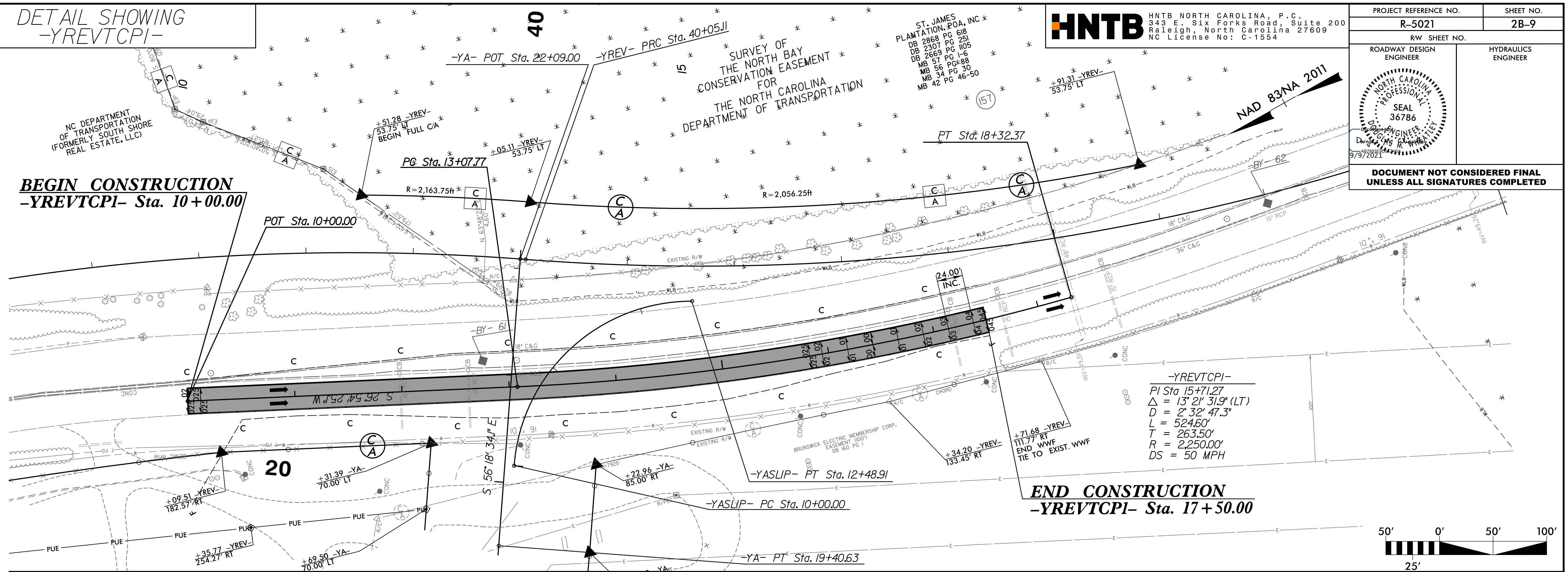
DETAIL SHOWING
-YREVTCP1-

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO. R-5021	SHEET NO. 2B-9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

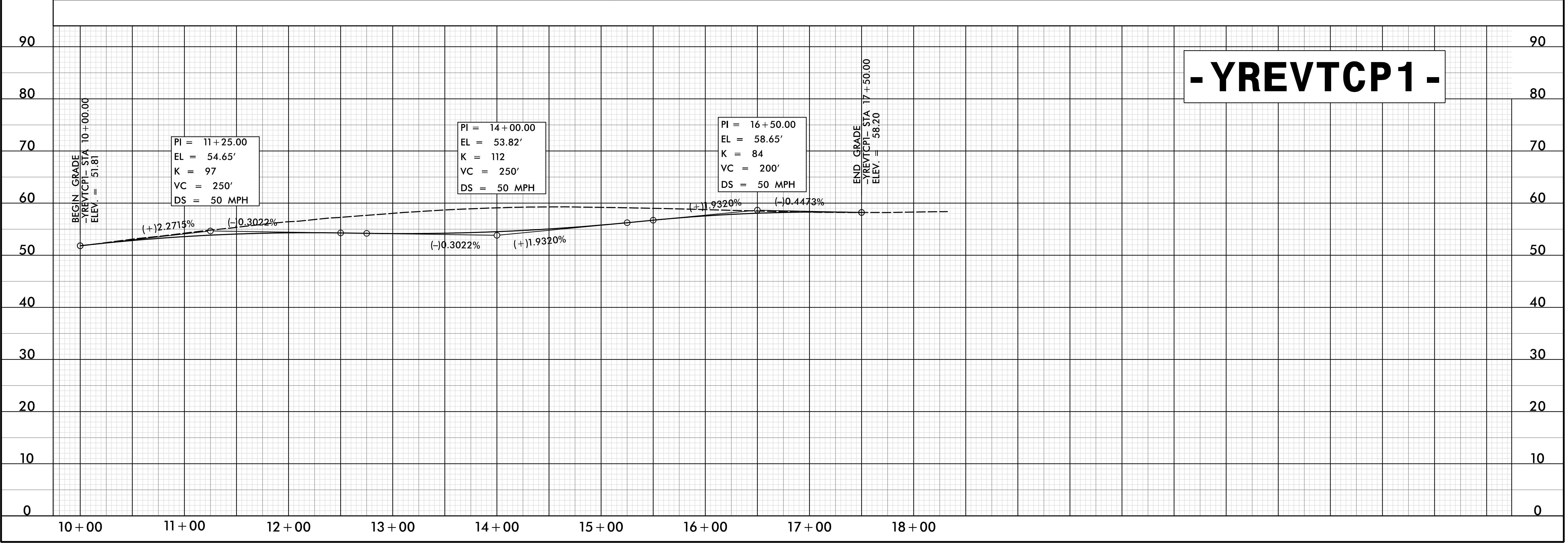
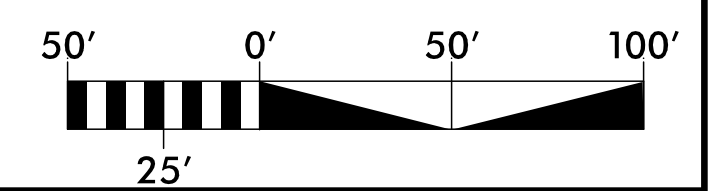
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

**BEGIN CONSTRUCTION
-YREVTCP1- Sta. 10+00.00**



-YREVTCP1-
PI Sta 15+71.27
 $\Delta = 13^\circ 21' 31.9''$ (LT)
D = 2' 32" 47.3"
L = 524.60'
T = 263.50'
R = 2,250.00'
DS = 50 MPH

**END CONSTRUCTION
-YREVTCP1- Sta. 17+50.00**



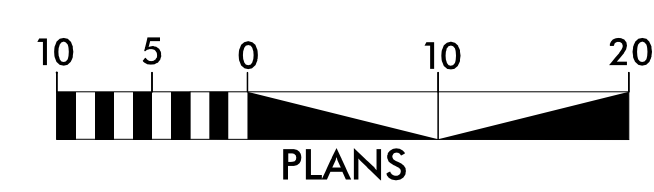
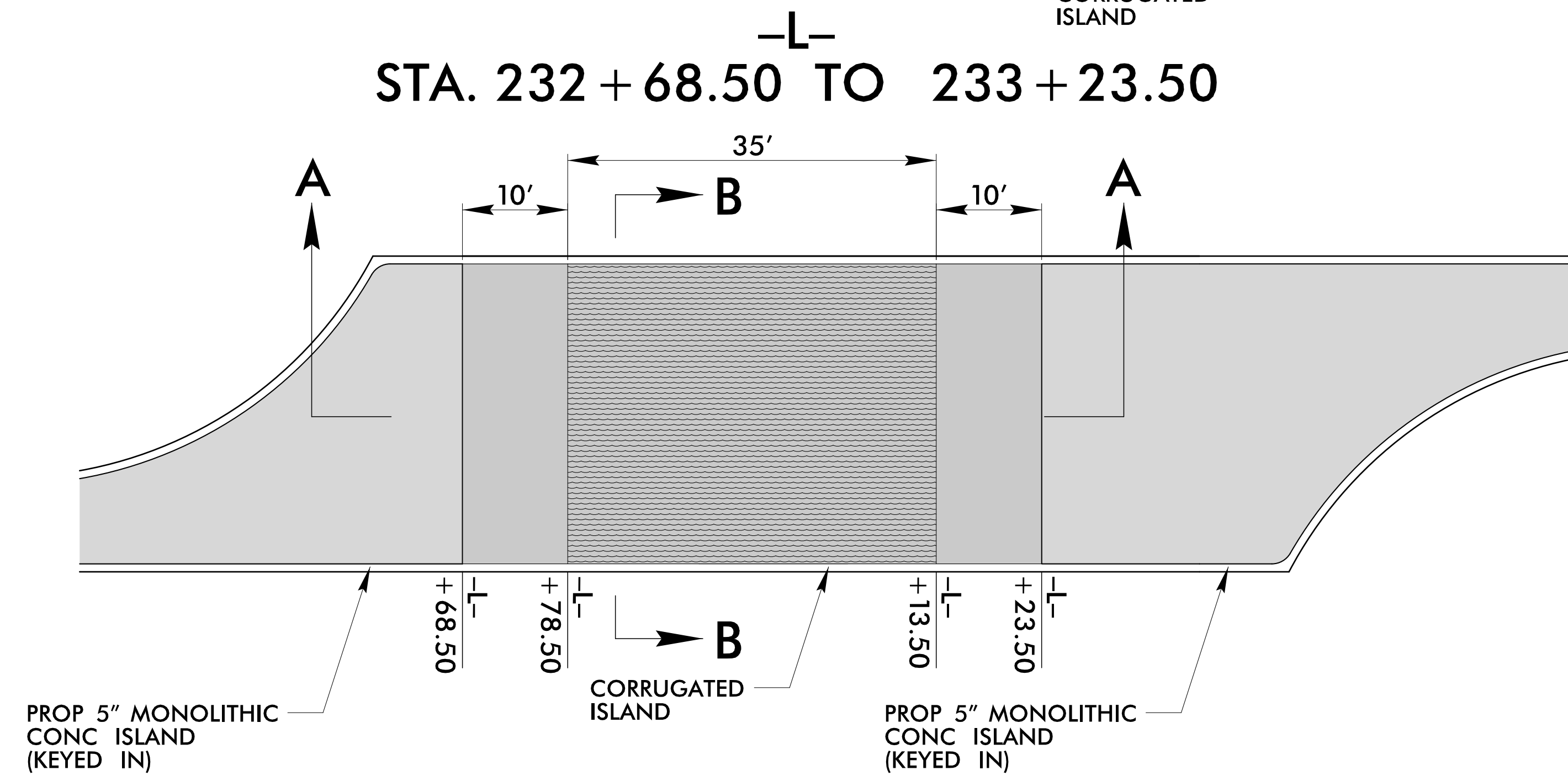
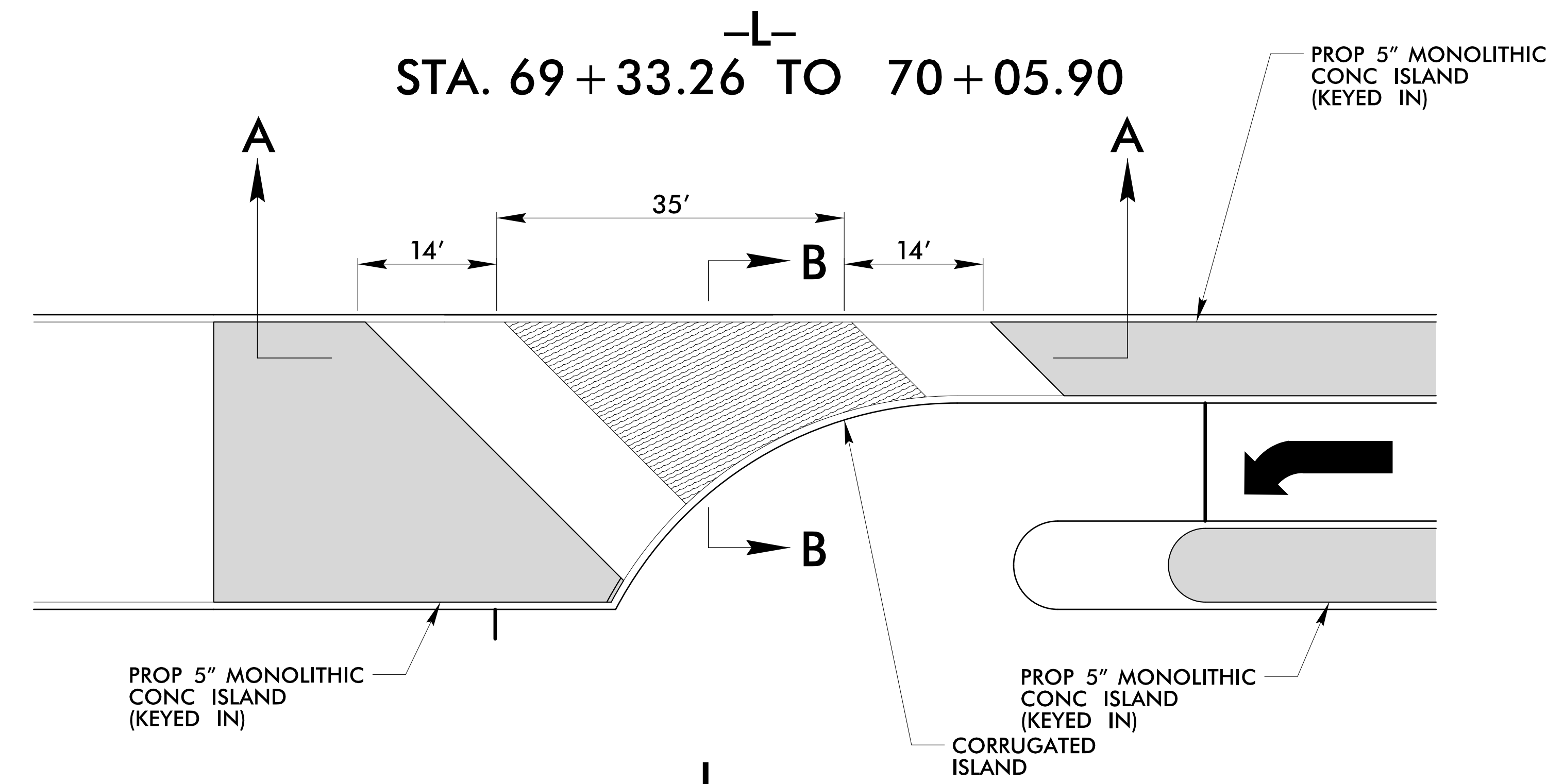
- YREVTCP1 -

5/14/99

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
R-5021	2B-10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

EMERGENCY VEHICLE ACCESS DETAILS LOCATED ON -L-



FOR EMERGENCY VEHICLE ACCESS LOCATIONS, SEE PLAN SHEETS 5, 17 & 34
FOR SECTION VIEWS OF THE EMERGENCY VEHICLE ACCESS FOR CONCRETE ISLAND DETAIL, SEE SHEET 2C-12

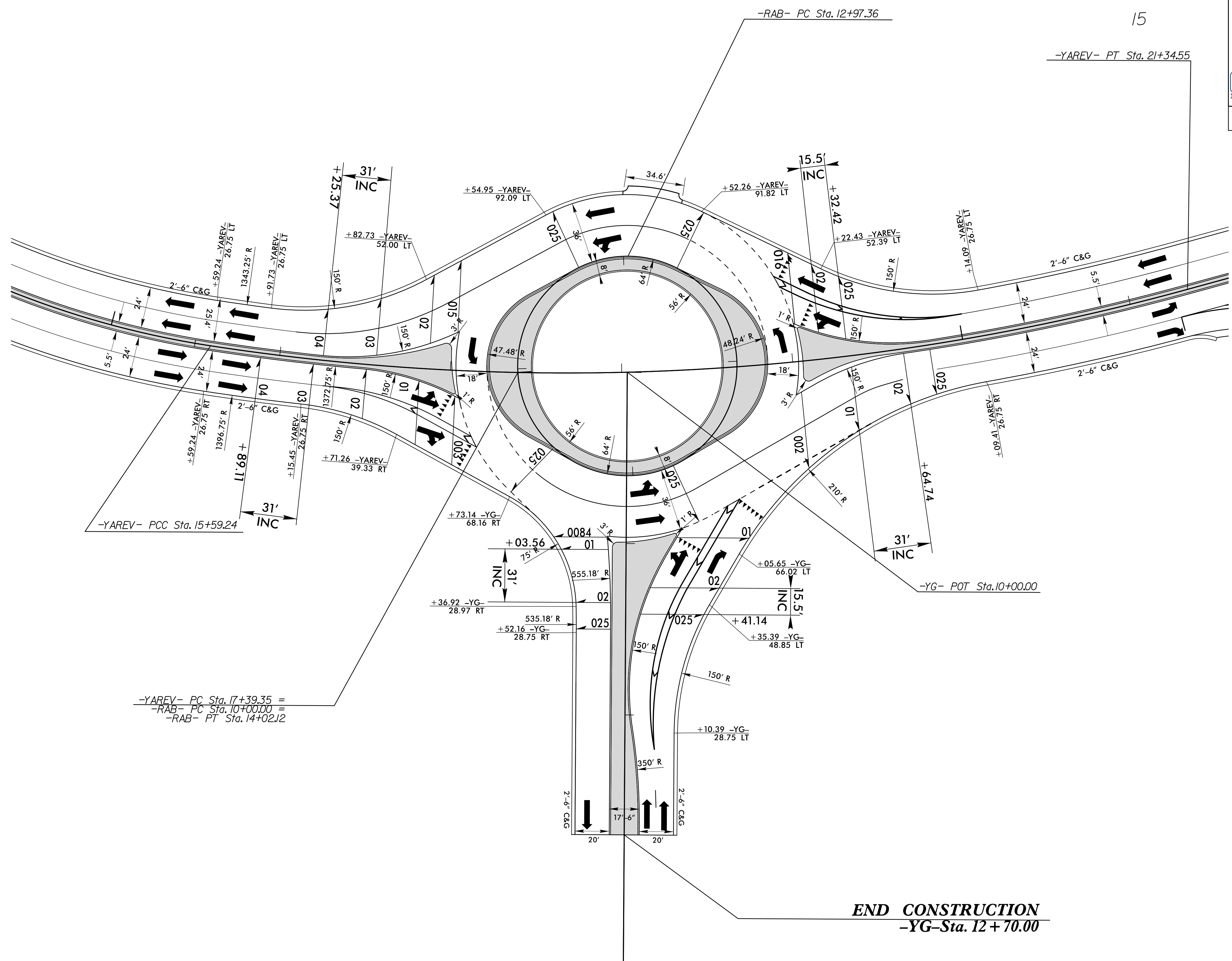
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5/14/09

RAB DETAIL

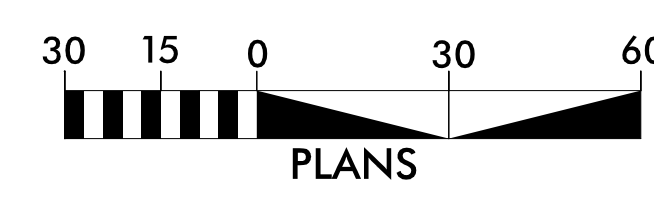
HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

PROJECT REFERENCE NO. R-5021	SHEET NO. 2B-11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



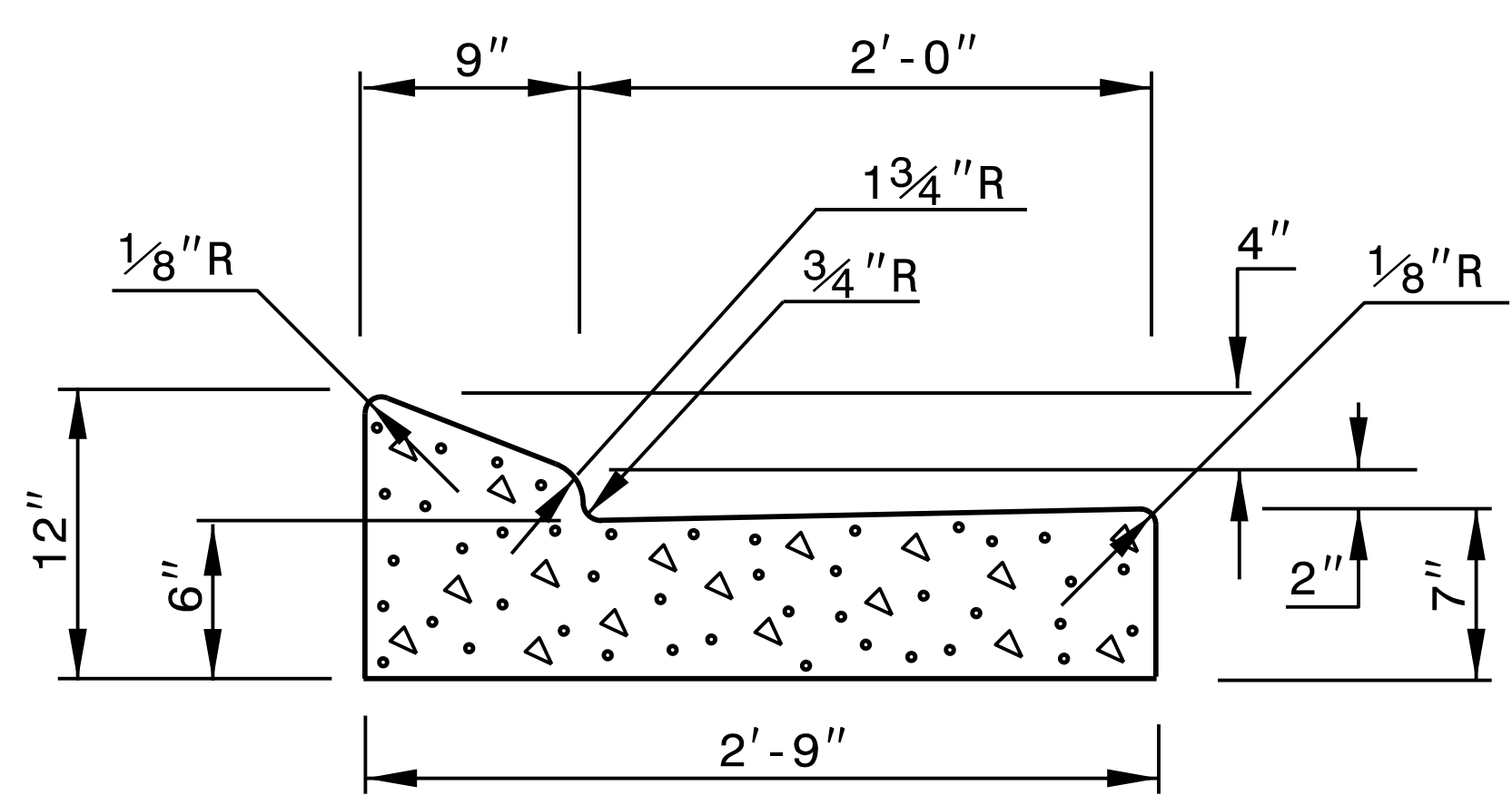
NAD
 83 NSRS 2007

END CONSTRUCTION
 -YG- Sta. 12 + 70.00

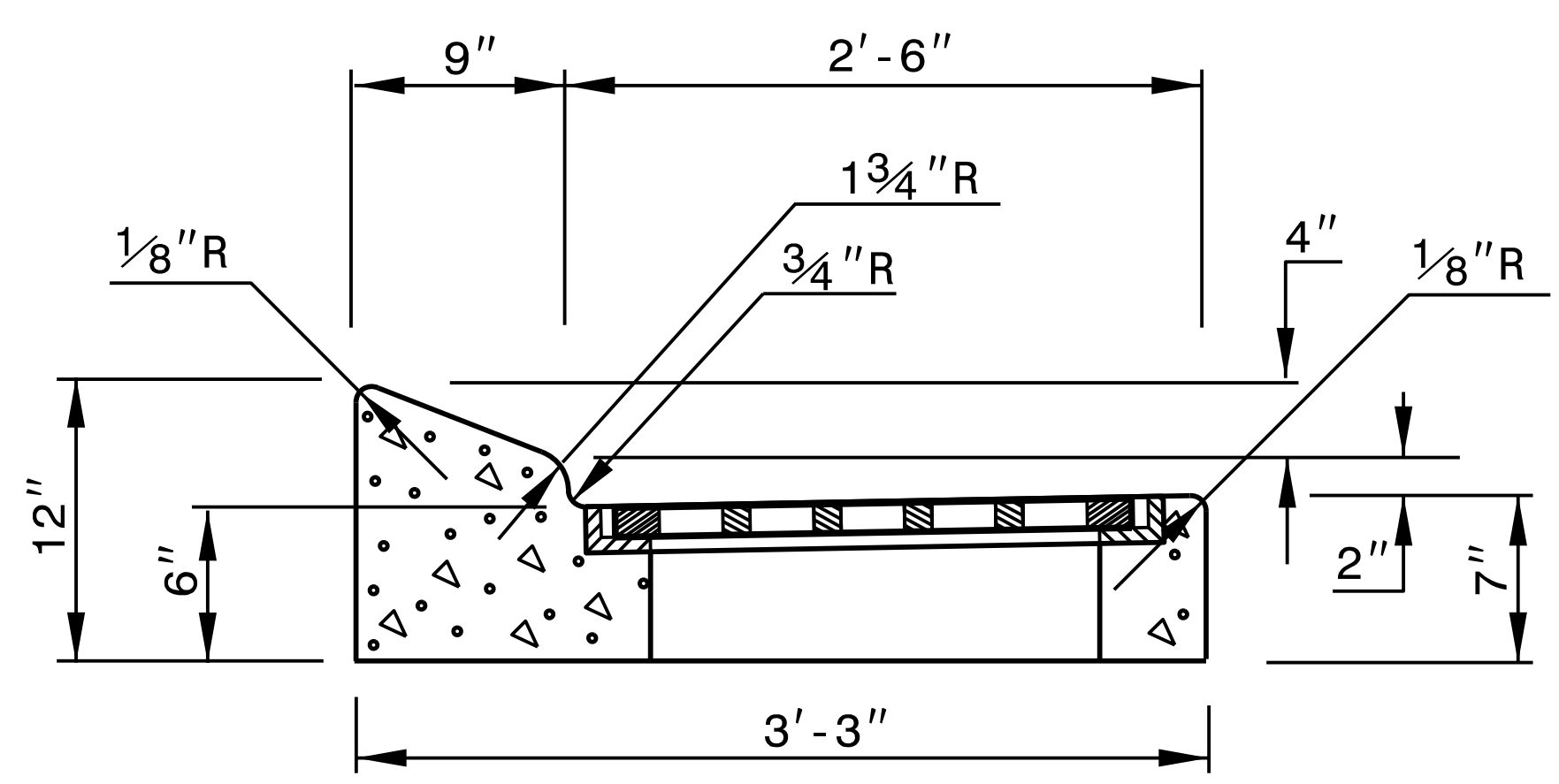


- NOTE:**
1. ALL DRIVEWAY RADII ARE 20' UNLESS NOTED ON PLANS.
 2. PAVED TURNOUTS FOR SHOULDER SECTION SHOULD EXTEND 50' UNLESS NOTED ON PLANS.

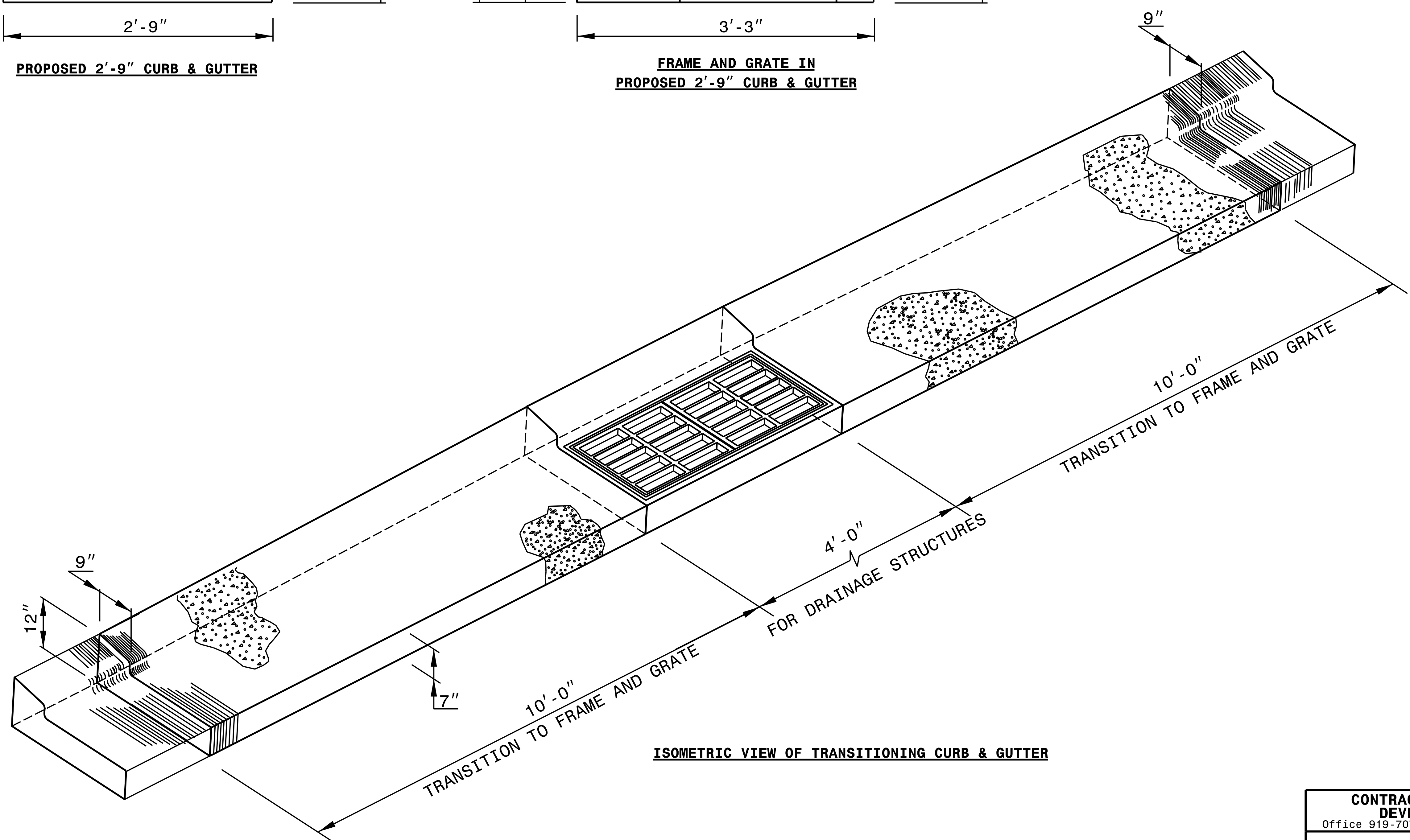
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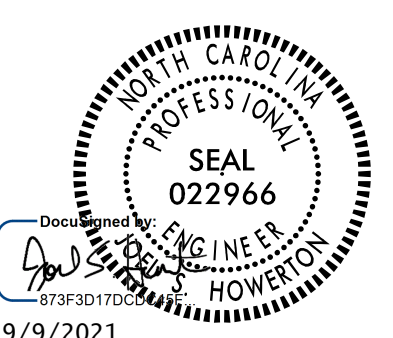
PROPOSED 2'-9" CURB & GUTTER



FRAME AND GRATE IN PROPOSED 2'-9" CURB & GUTTER



ISOMETRIC VIEW OF TRANSITIONING CURB & GUTTER



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

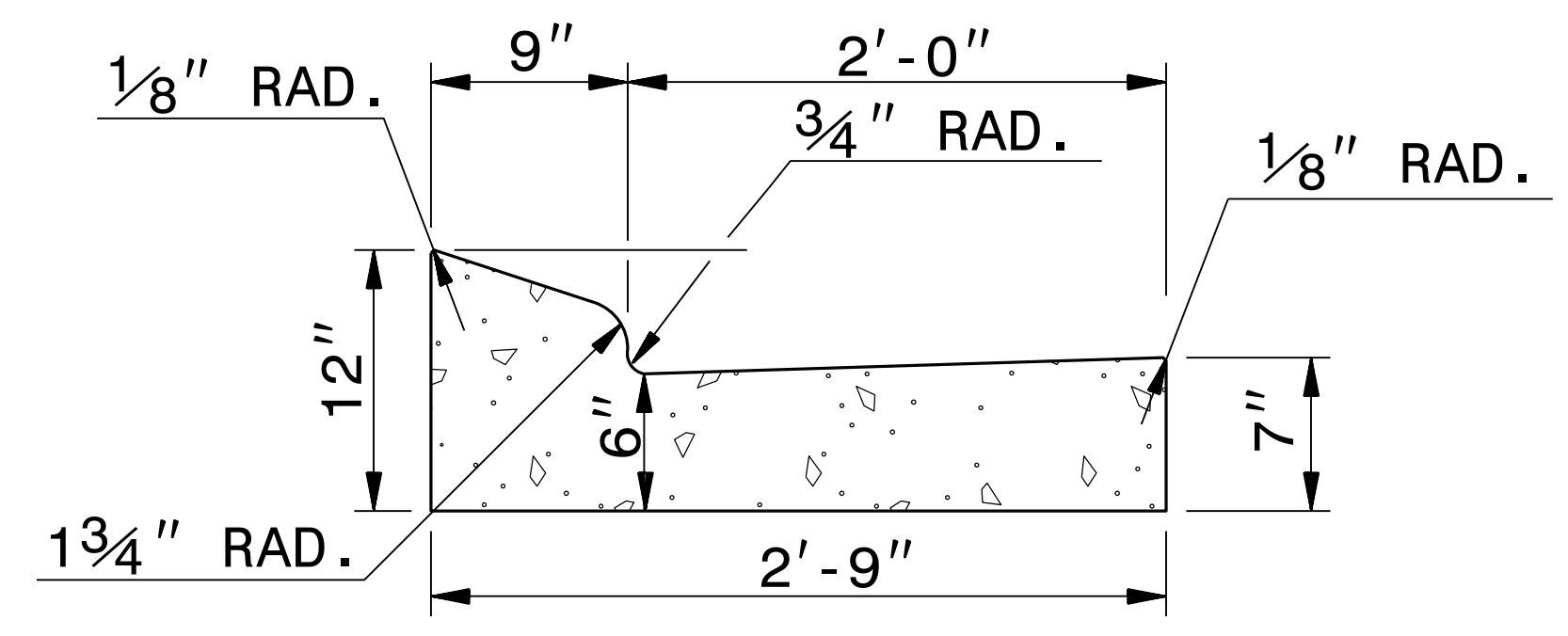
DETAIL OF 2'-9" TO FRAME AND GRATE

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: kkempf/english/curb_gutter_transition.dgn

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

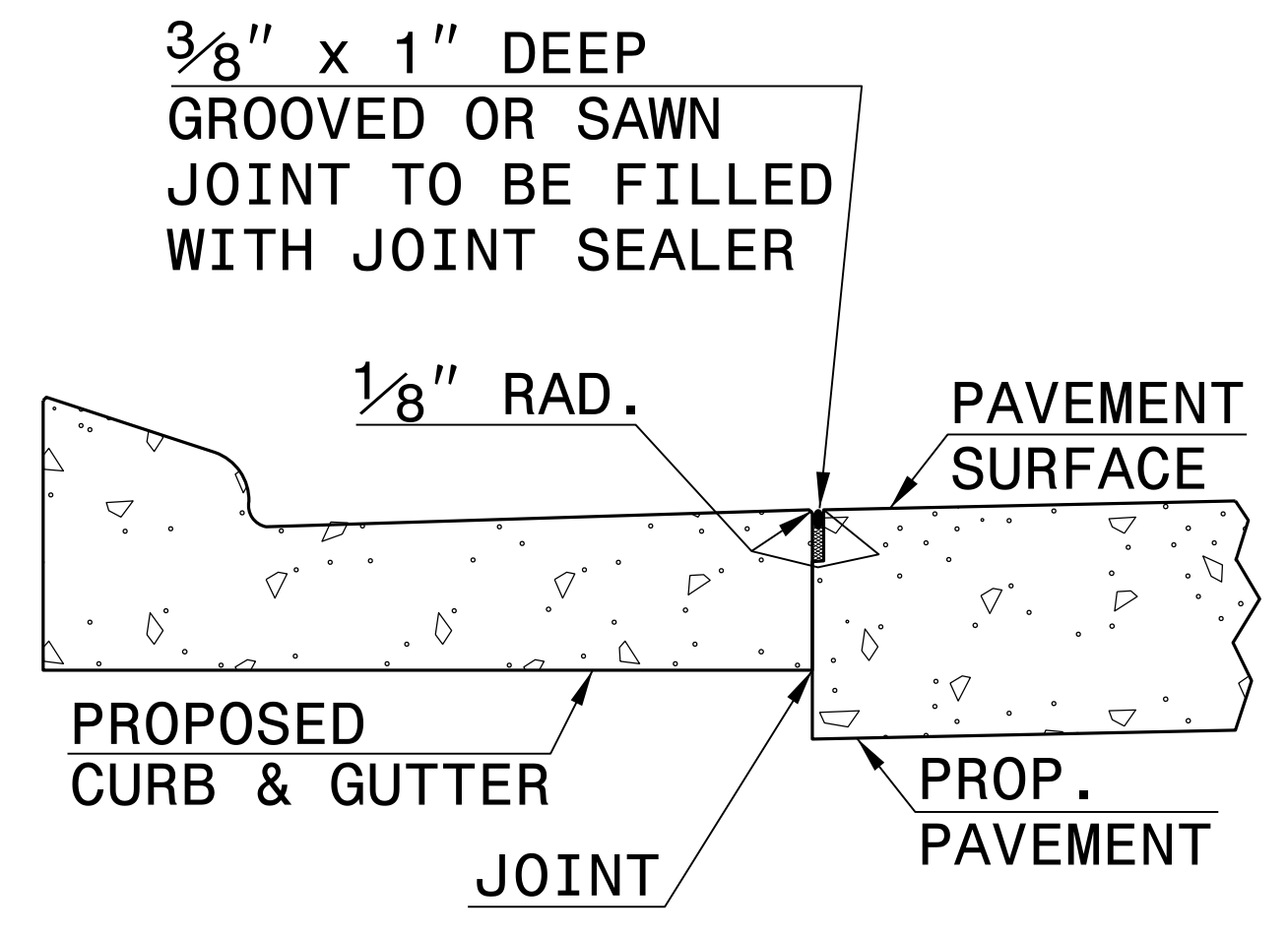
ENGLISH DETAIL DRAWING FOR
2'-9" CONCRETE CURB & GUTTER

- 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. MAKE 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.
 - SEE RDWY. STD. DWG. NO. 846.01, SHEET 2 OF 3 FOR PLACEMENT IN SUPERELEVATIONS. (USE 2'-6" CURB AND GUTTER RATES)

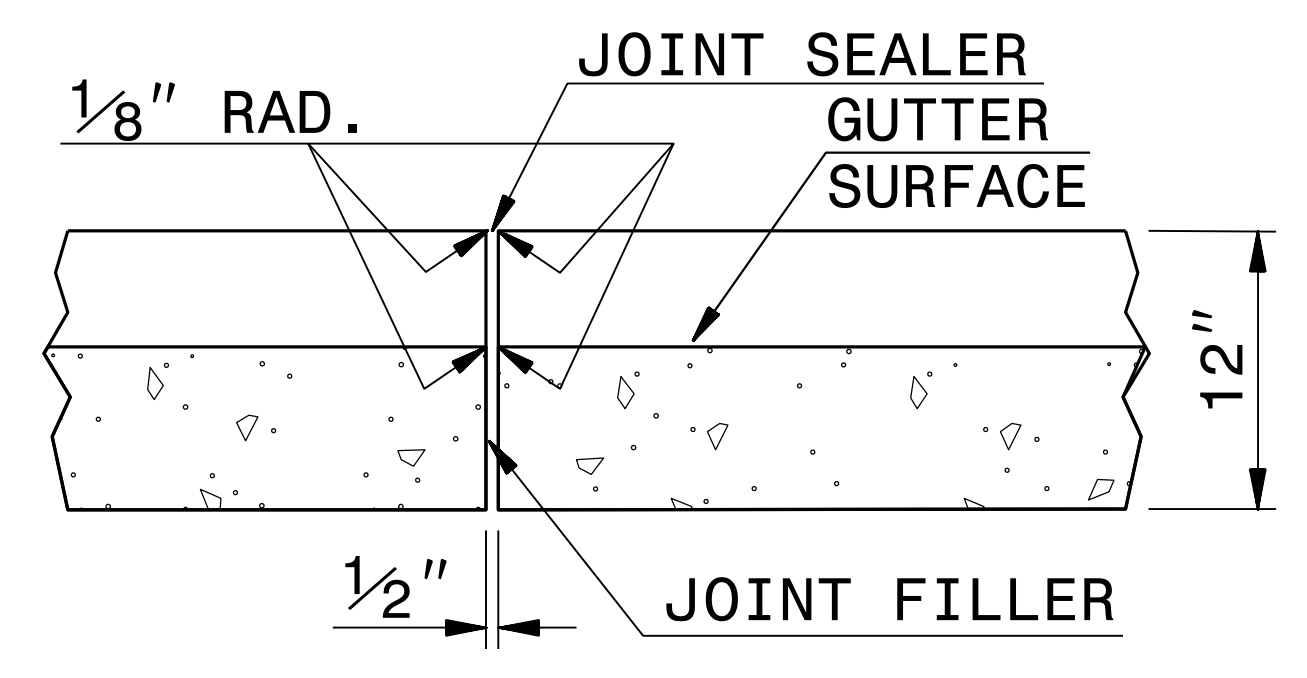


2'-9" CURB AND GUTTER

SECTION VIEW OF CURB AND GUTTER



LONGITUDINAL JOINT



TRANSVERSE EXPANSION JOINT IN CURB AND GUTTER

SECTION VIEW OF JOINTS

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

ENGLISH DETAIL DRAWING FOR
2'-9" CONCRETE CURB & GUTTER

SHEET 1 OF 1
846D01

SHEET 1 OF 1
846D01

10-AUG-2017 11:46
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J:\over ton

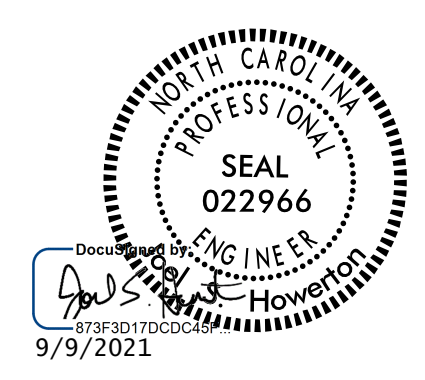
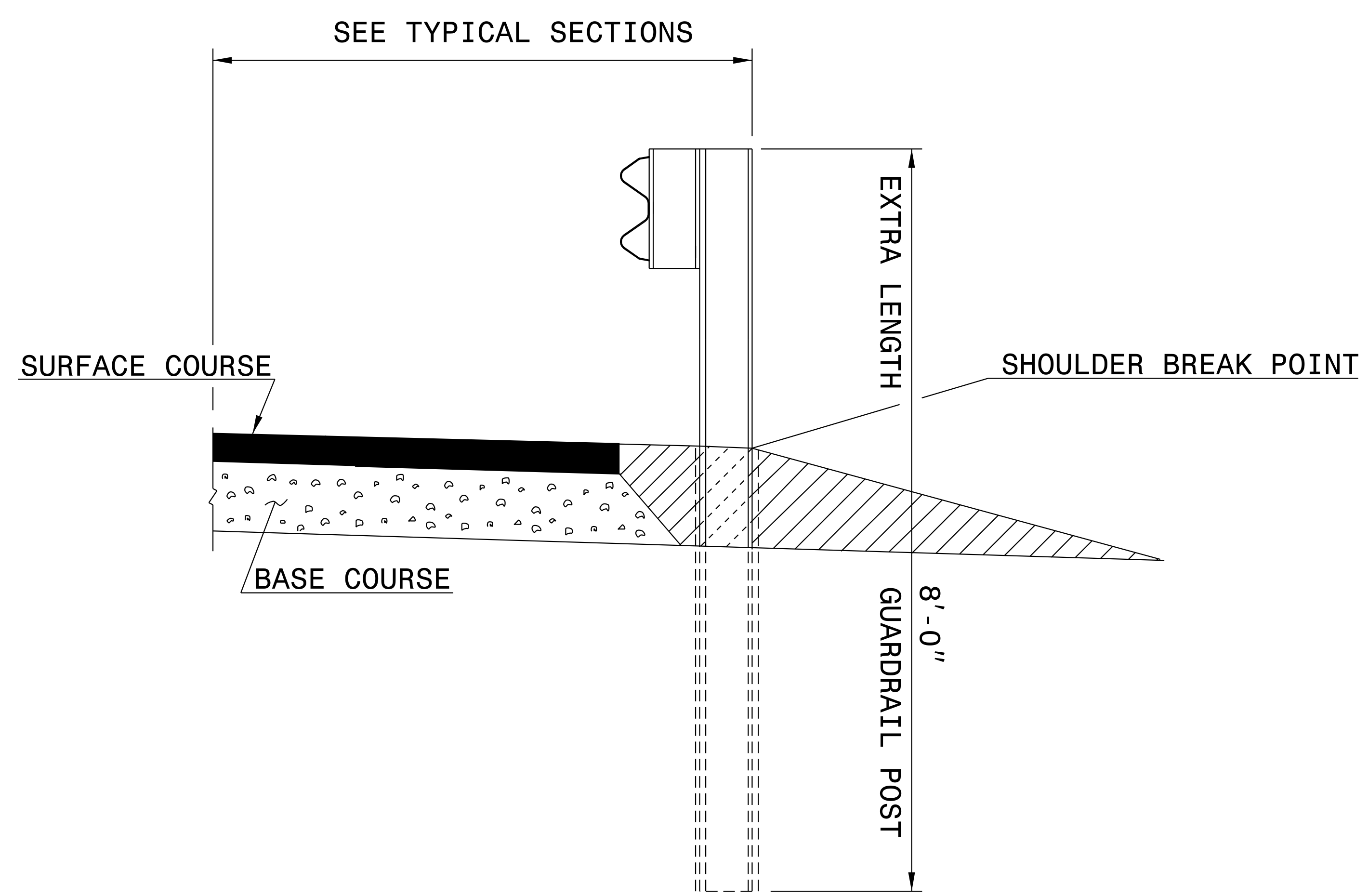


CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: STD. 846.01 DATE: _____
 MODIFIED BY: E.E. WARD DATE: 8-15-00
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: /usr/details/stand/c&g2'-9.dgn

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



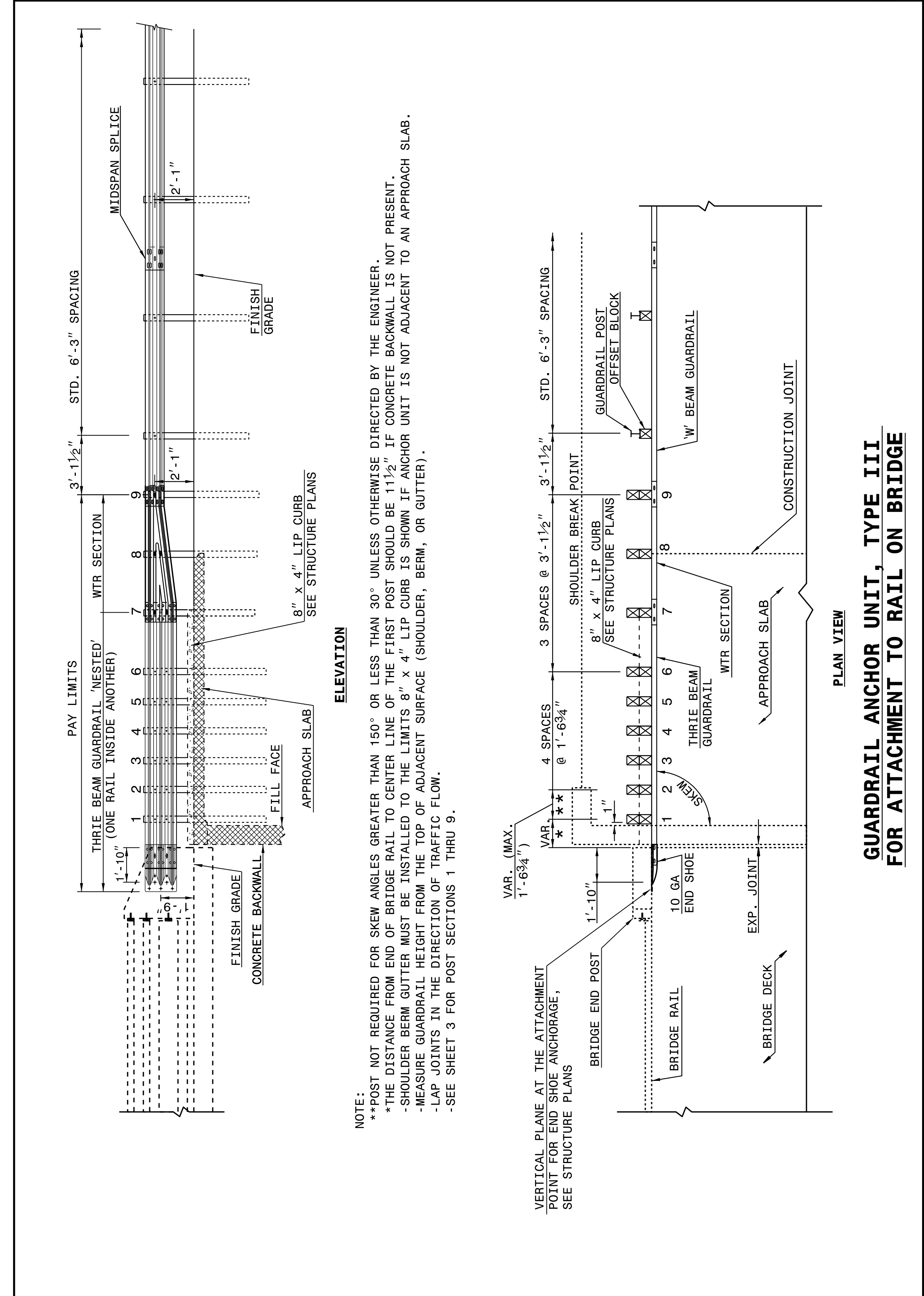
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
8' GUARDRAIL POST	
ORIGINAL BY: L. Robinson	DATE: 1995
MODIFIED BY: L. Robinson	DATE: Feb, 1996
CHECKED BY:	DATE:
FILE SPEC.: s:7'postguardrail.dgn	

09-MAY-2018 14:21
S:\Contracts\Special Details\hoverton\7'postguardrail.dgn
Jhoverton AT CSD-232595

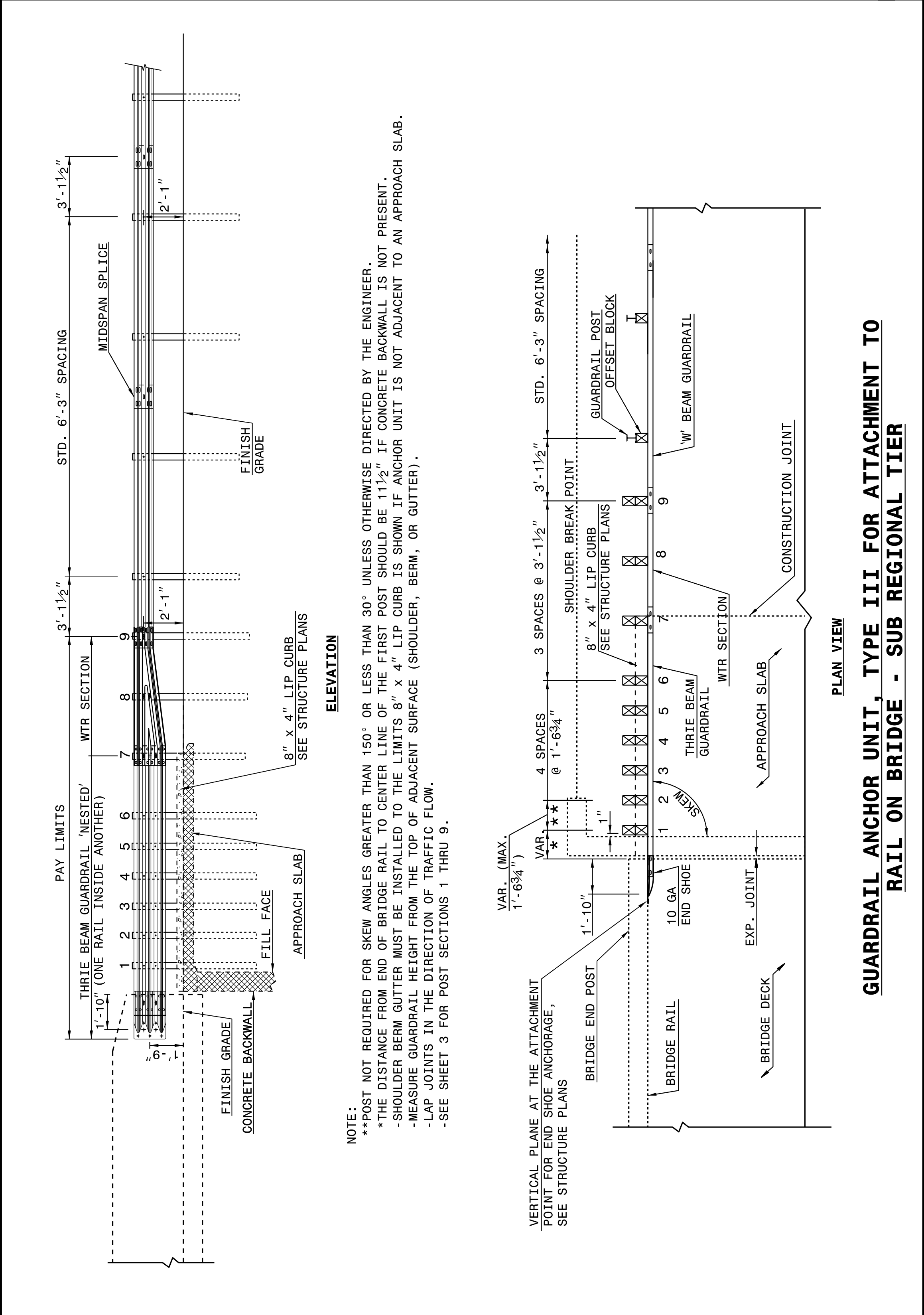
I4-DEC-2017 10:36 S:\Contracts\Projects\Special Details\Standard Drawings\Division 8\0862d0301.dgn Jhowerton AT:USD-292595

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE
SHEET 1 OF 7 862D03



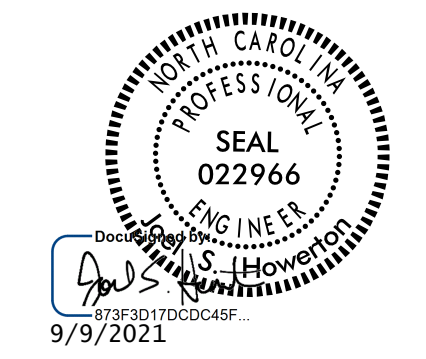
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE
SHEET 1 OF 7 862D03

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER
SHEET 2 OF 7 862D03



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER
SHEET 2 OF 7 862D03

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119
SEE TITLE BLOCK
ORIGINAL BY: J HOWERTON DATE: 06-22-12
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: DATE:

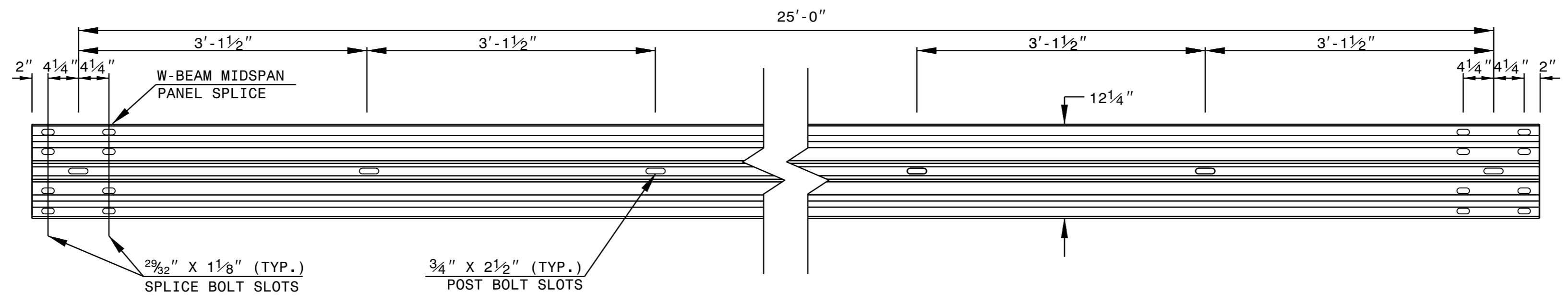


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

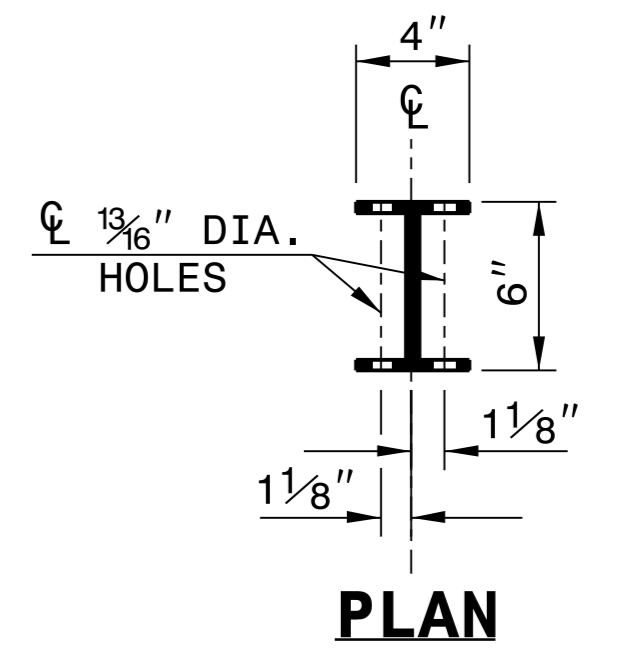
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

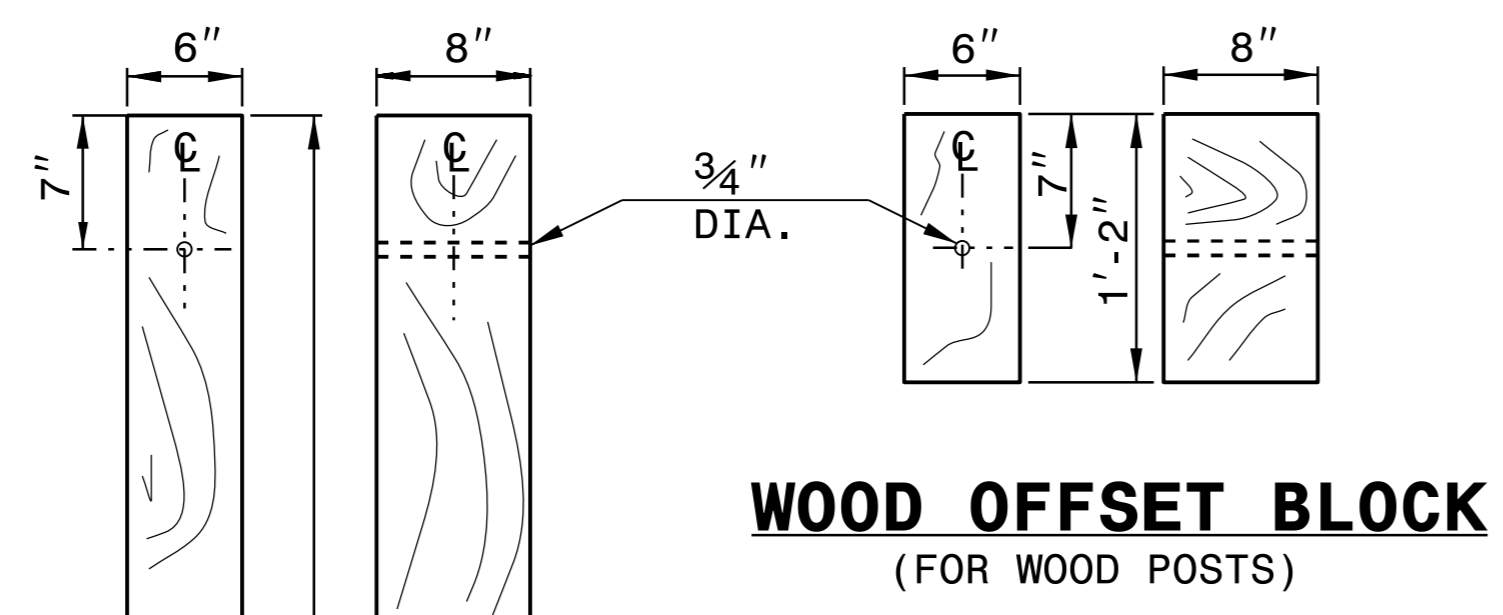
SHEET 6 OF 8
862D02



STANDARD W-BEAM GUARDRAIL



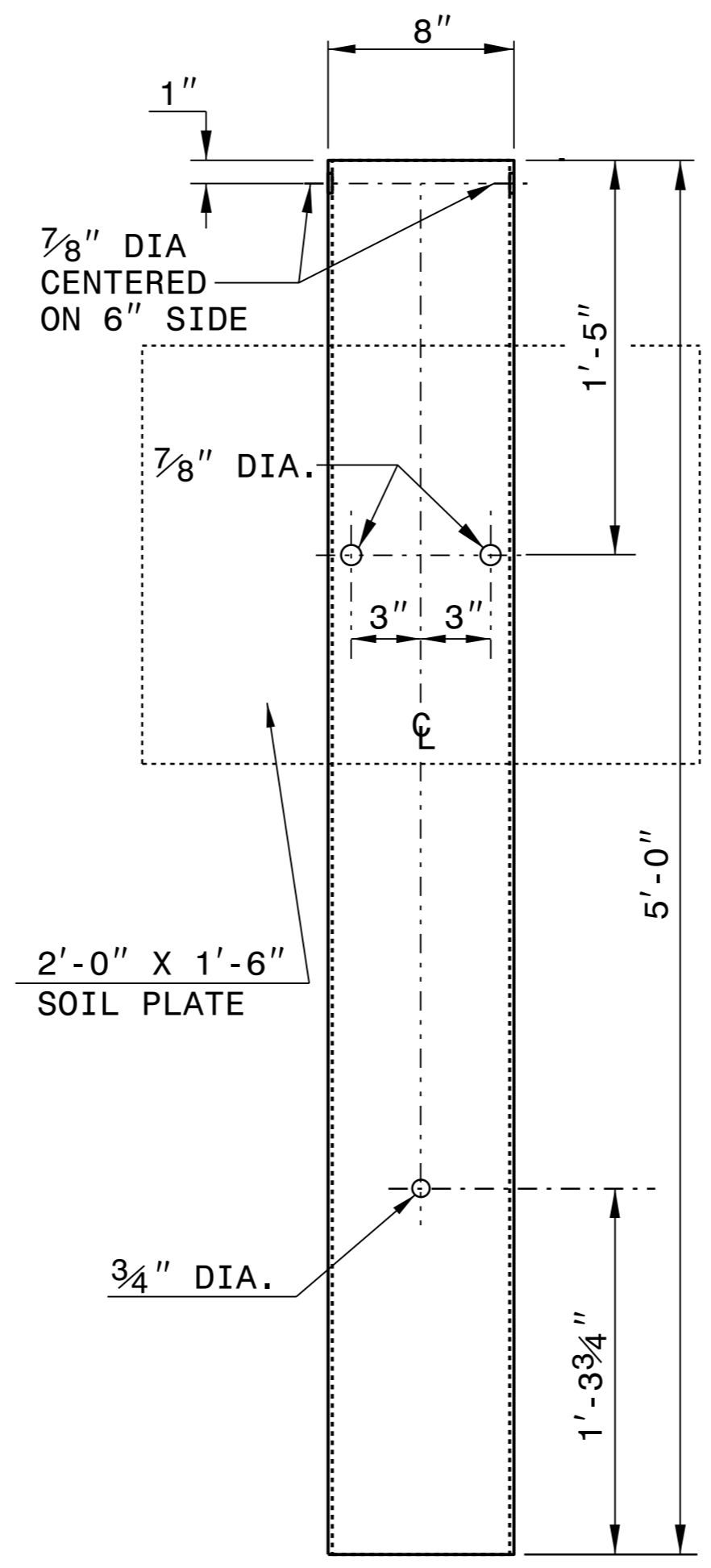
PLAN



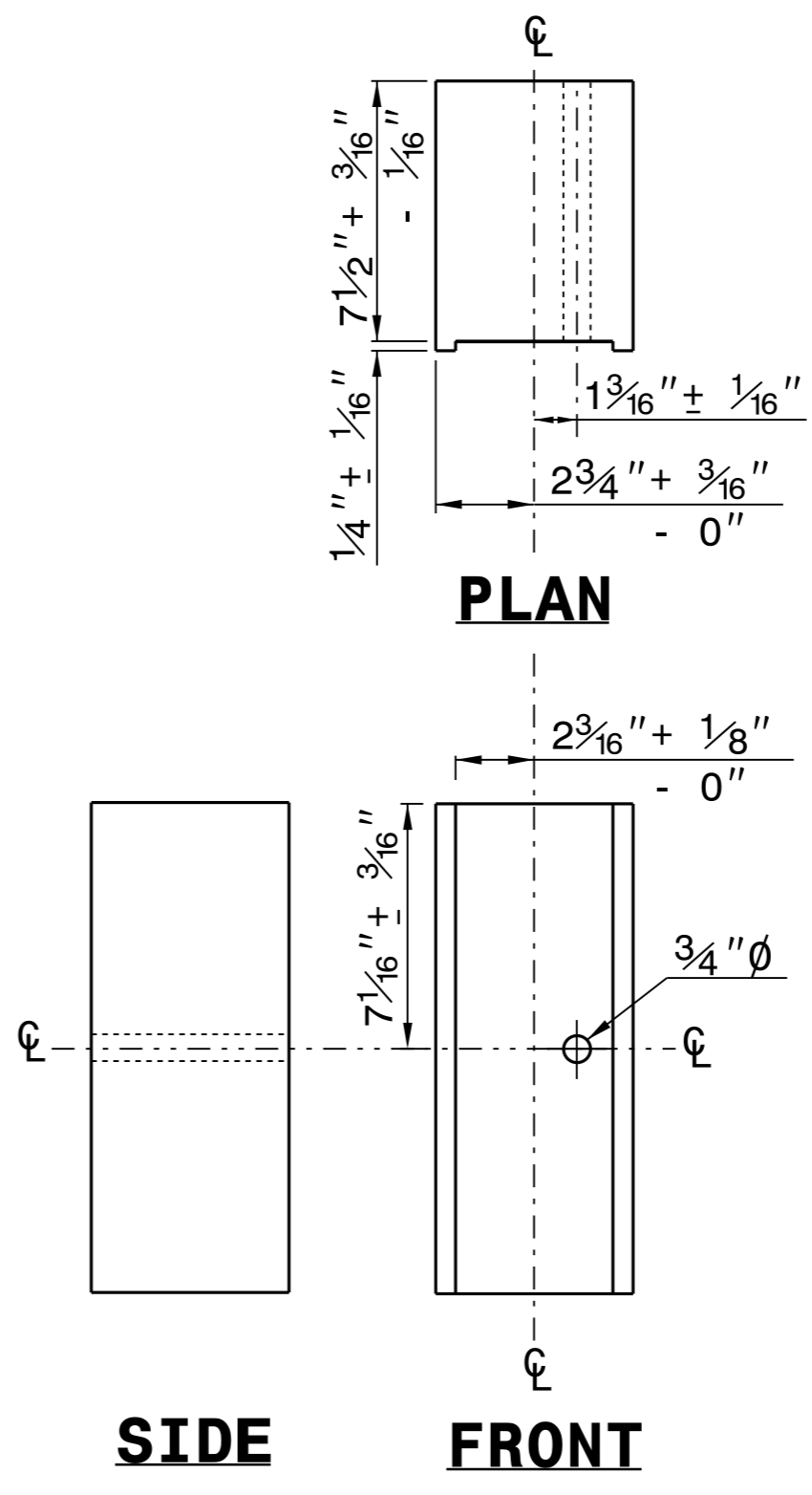
**WOOD OFFSET BLOCK
(FOR WOOD POSTS)**

**STANDARD
LINE POST**

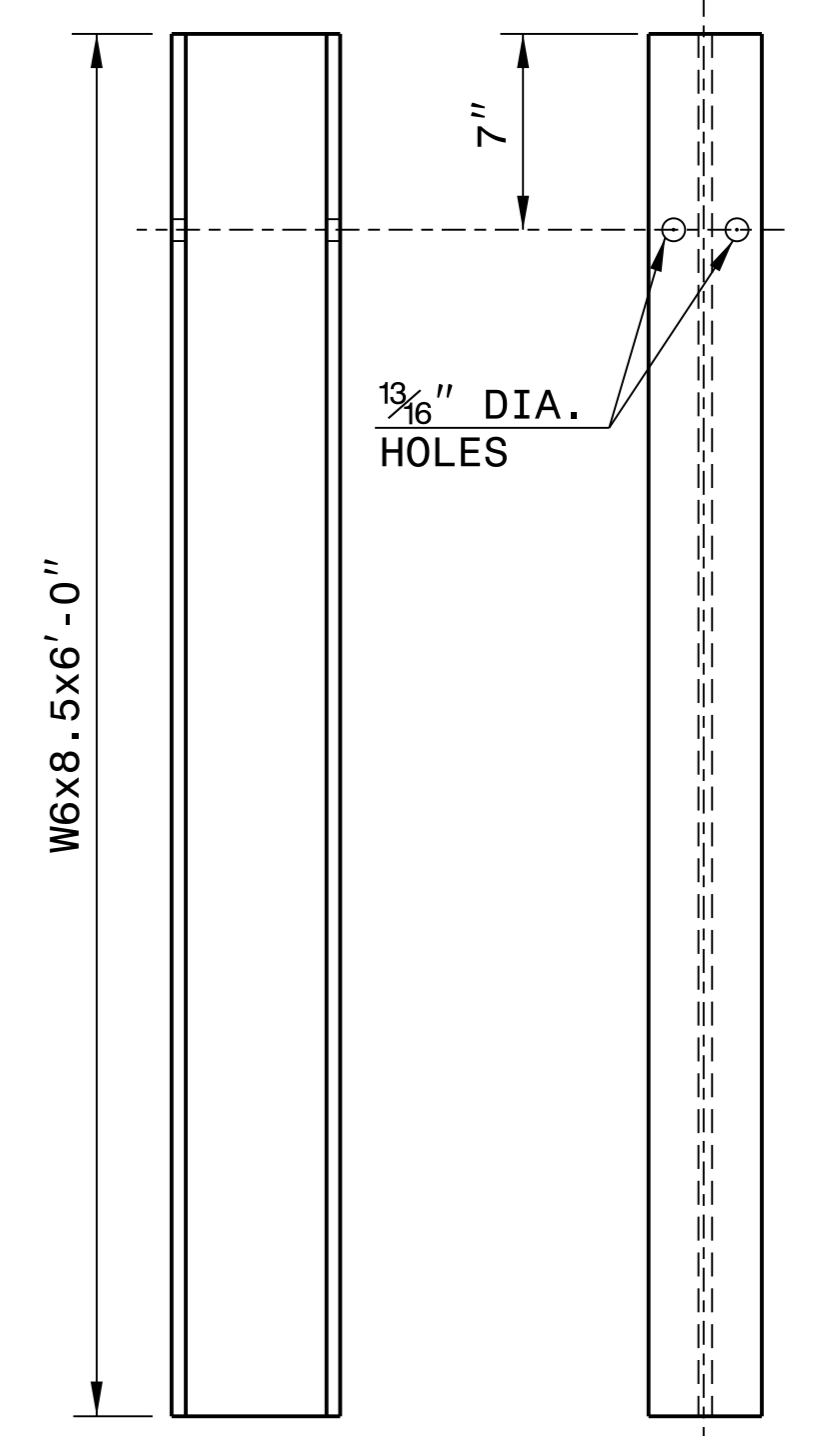
**SHORT WOOD
BREAKAWAY POST**



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



**ROUTED
OFFSET BLOCK**



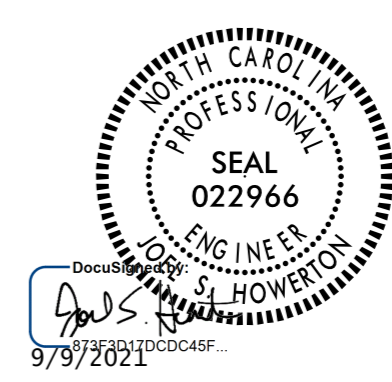
"W6" STEEL POST

SYSTEM PARTS

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02



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ORIGINAL BY: J. HOWERTON DATE: 3-7-2018
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FILE SPEC.: _____

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DIVISION OF HIGHWAYS
RALEIGH, N.C.

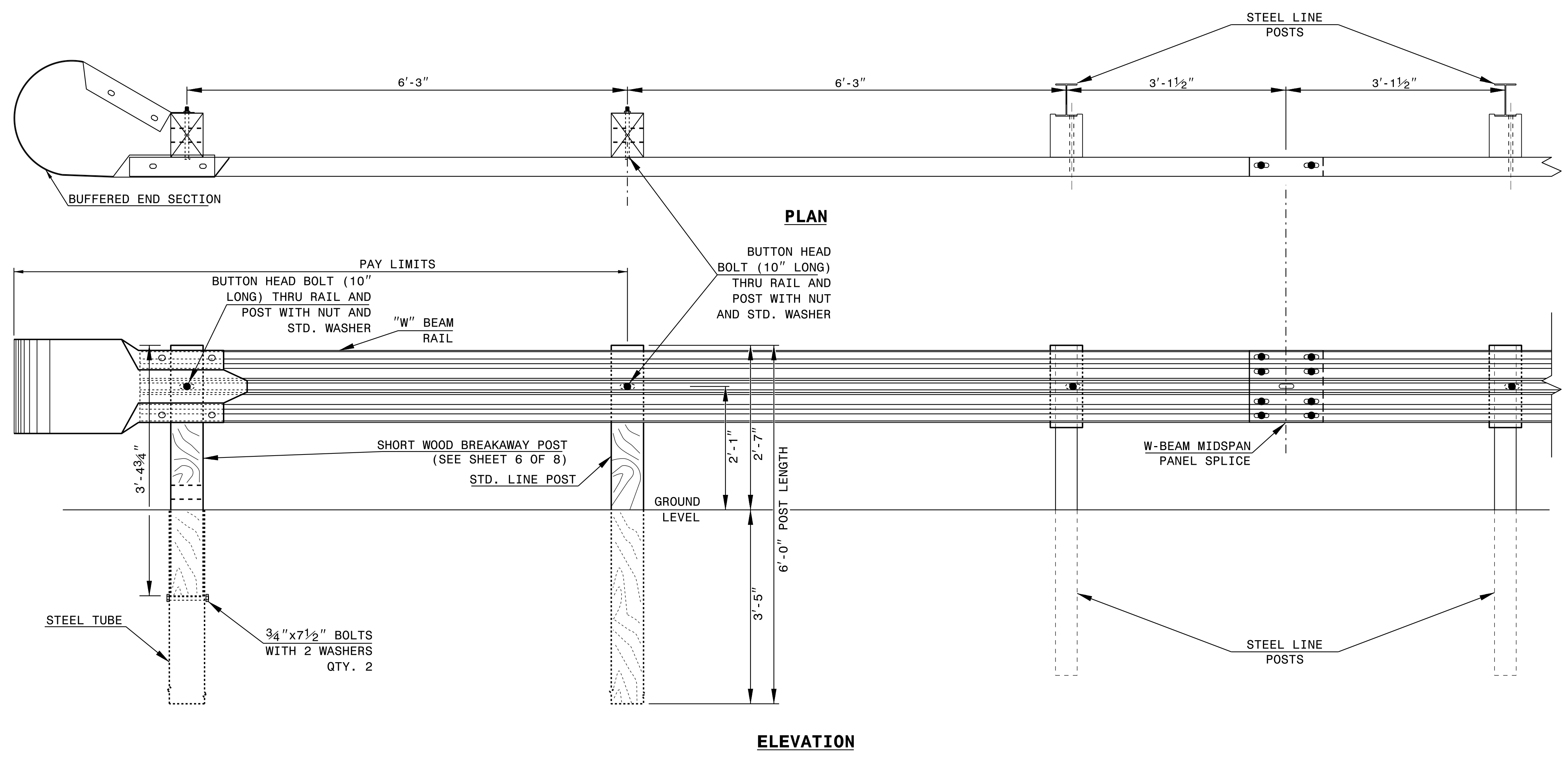
ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET OF

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET OF

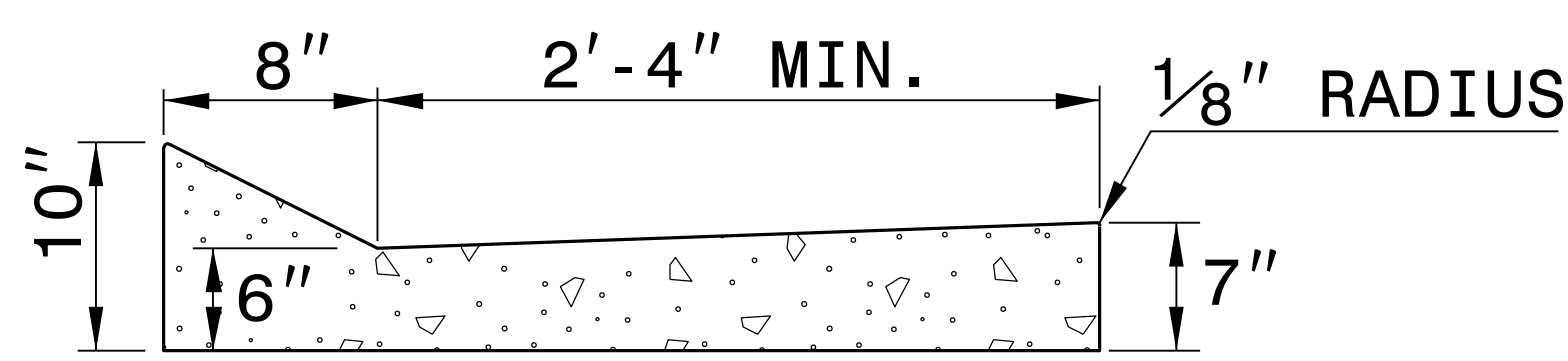


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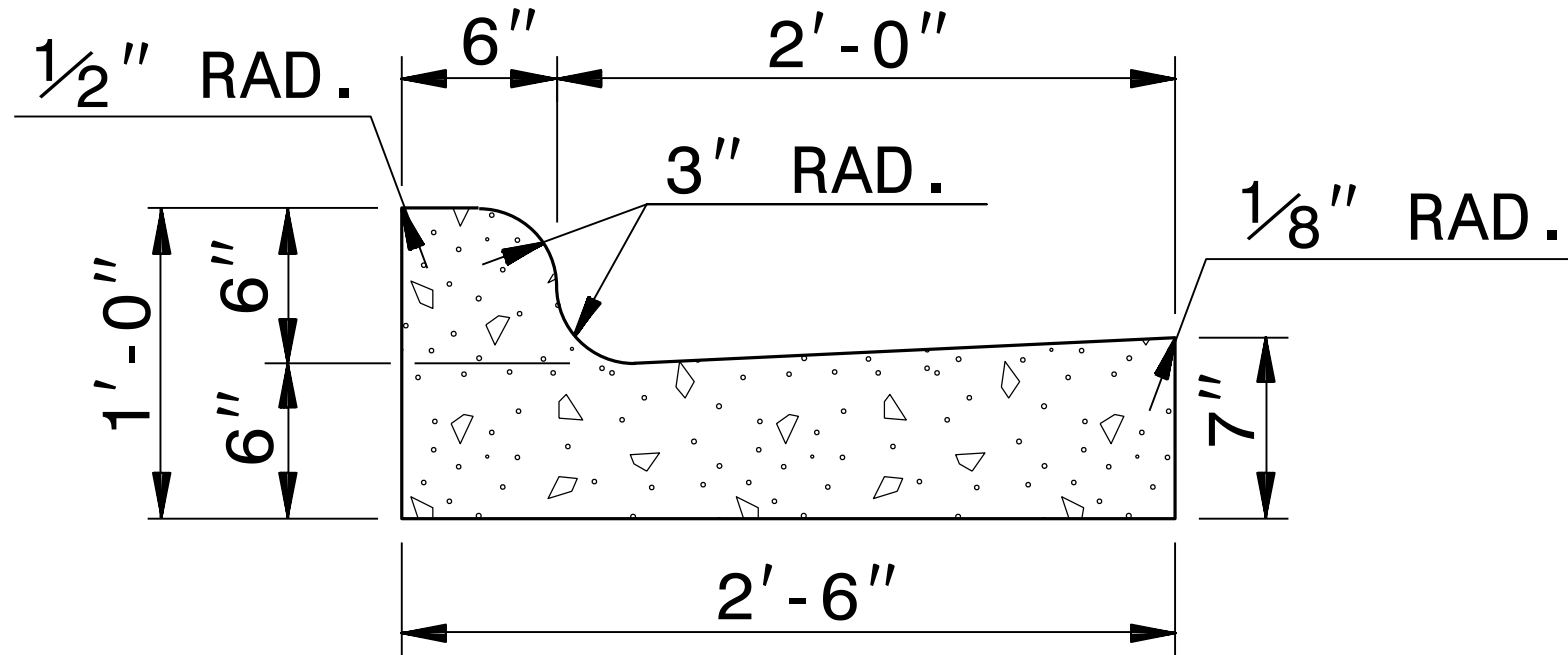


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Office 919-707-6950 FAX 919-250-4119	
A.T. - 1 SYSTEM	
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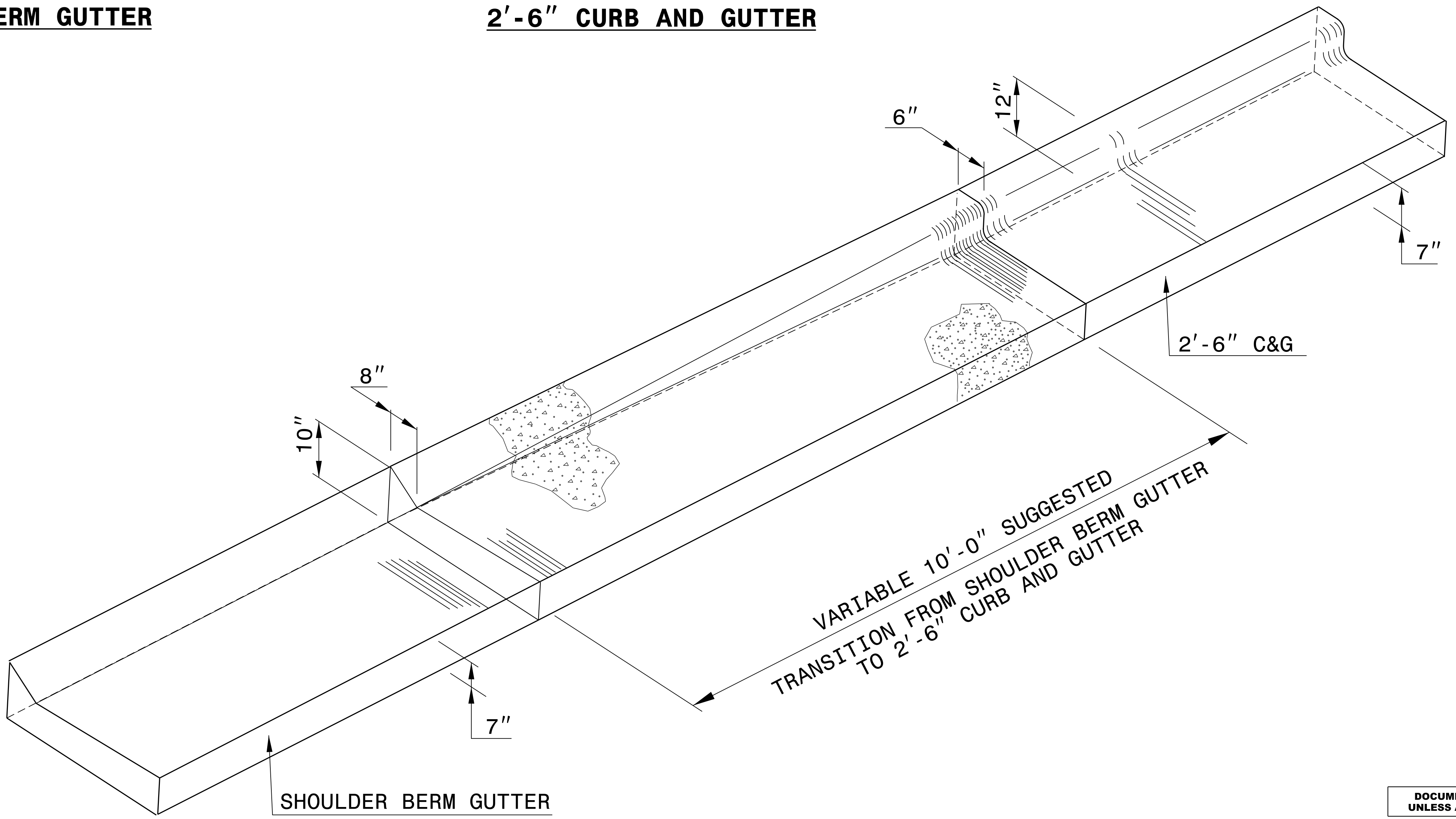


SHOULDER BERM GUTTER



2'-6" CURB AND GUTTER

*NOTE: SEE STD. DWG. 846.01 FOR GENERAL NOTES



ISOMETRIC VIEW OF TRANSITION



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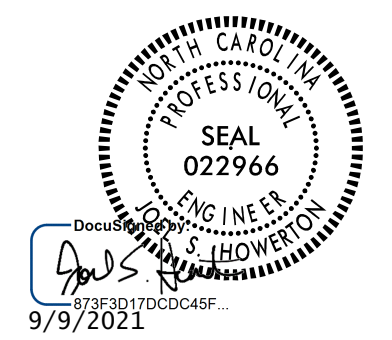
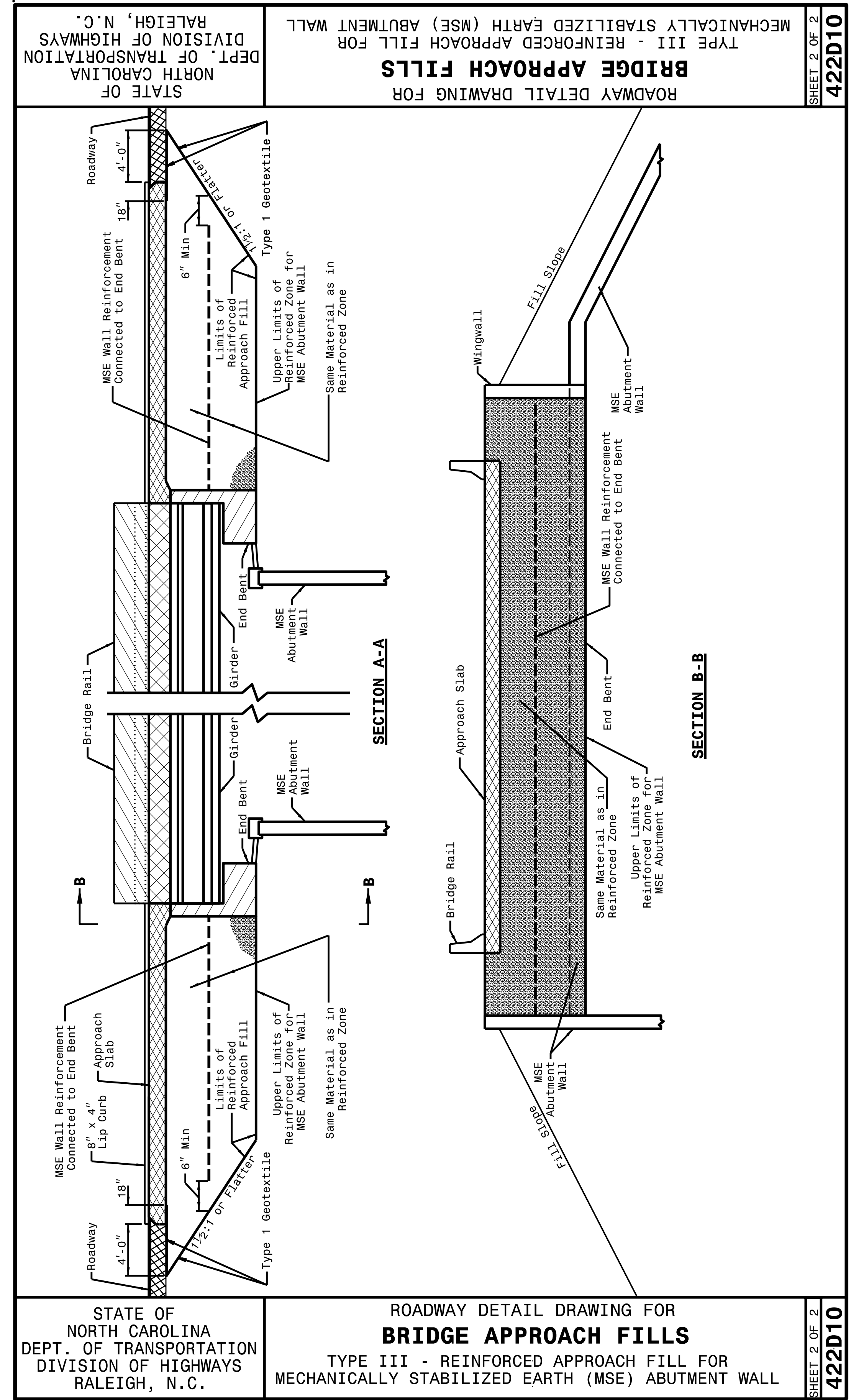
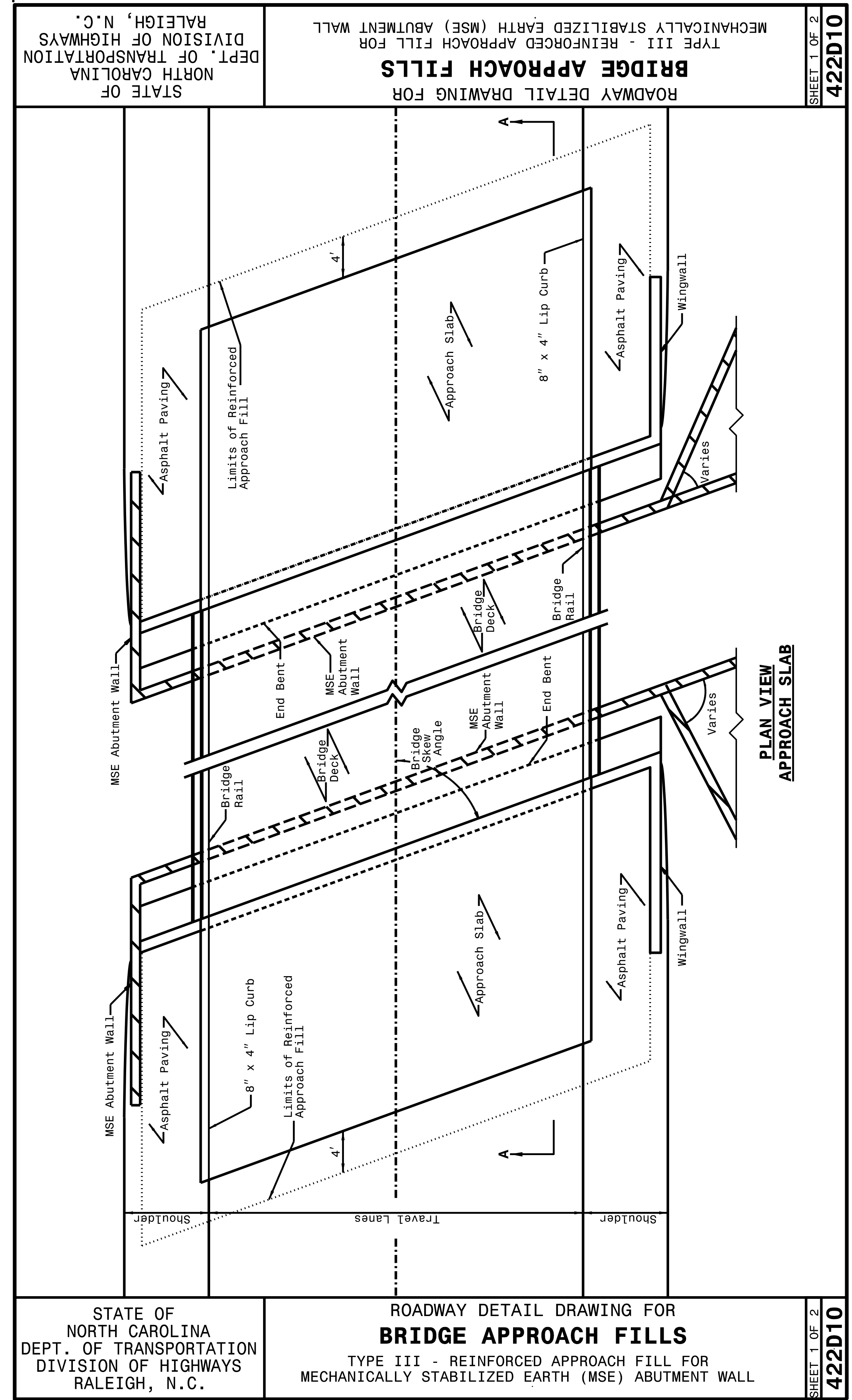
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DETAIL OF SHOULDER BERM GUTTER TO 2'-6" CURB & GUTTER TRANSITION SECTION

ORIGINAL BY: E.E. WARD	DATE: 5-29-02
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: /usr/details/stand/cgtransit.dgn	

20-OCT-2017 09:40 S:\Contracts\ContractDetails\stand\c&g transition sections.dgn JHowerton AT USD-292595

5/14/99



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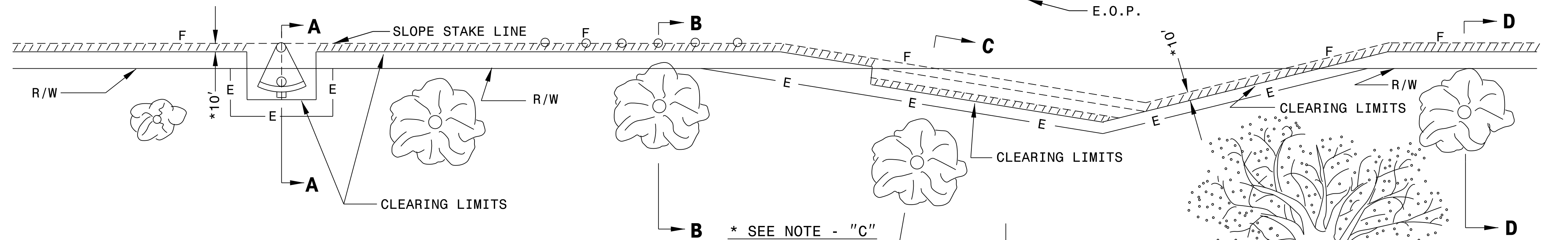
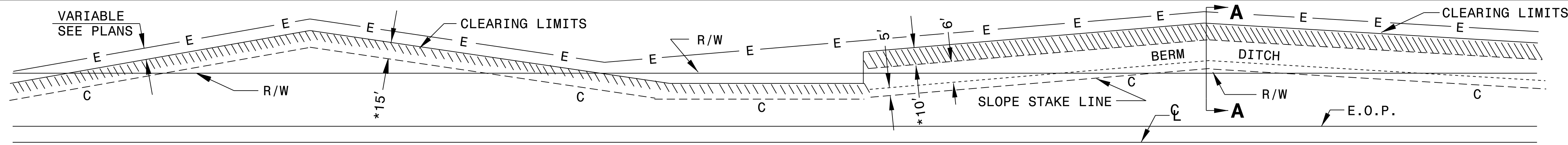
**TYPE III
REINFORCED
APPROACH FILLS**

ORIGINAL BY: K. A. KEMPF DATE: JULY 2017
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC.: 2018 standard drawings\division 422d10.dgn

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

ENGLISH DETAIL DRAWING FOR
METHOD OF CLEARING
MODIFIED METHOD - III

SHEET 1 OF 1
200D03



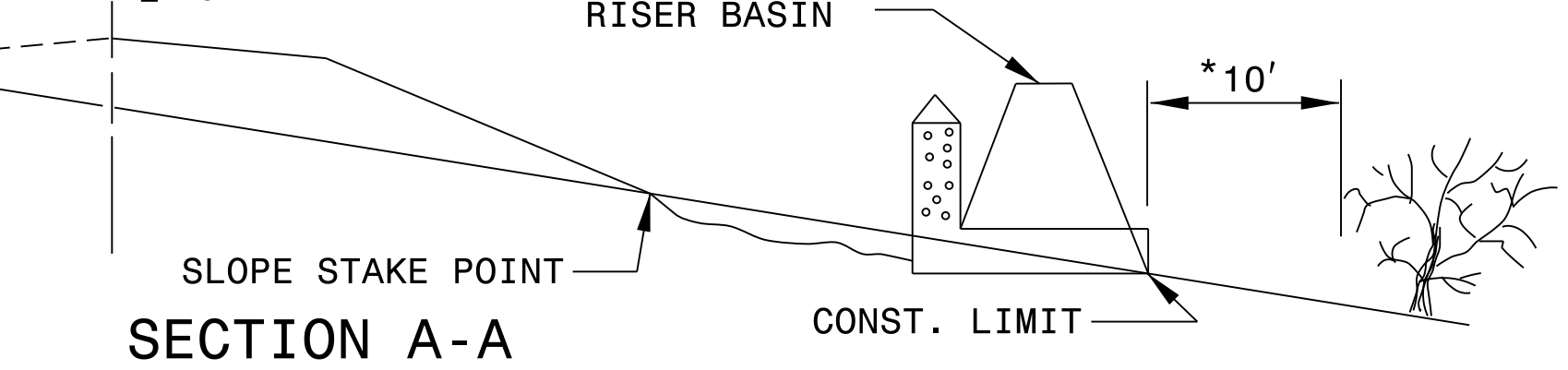
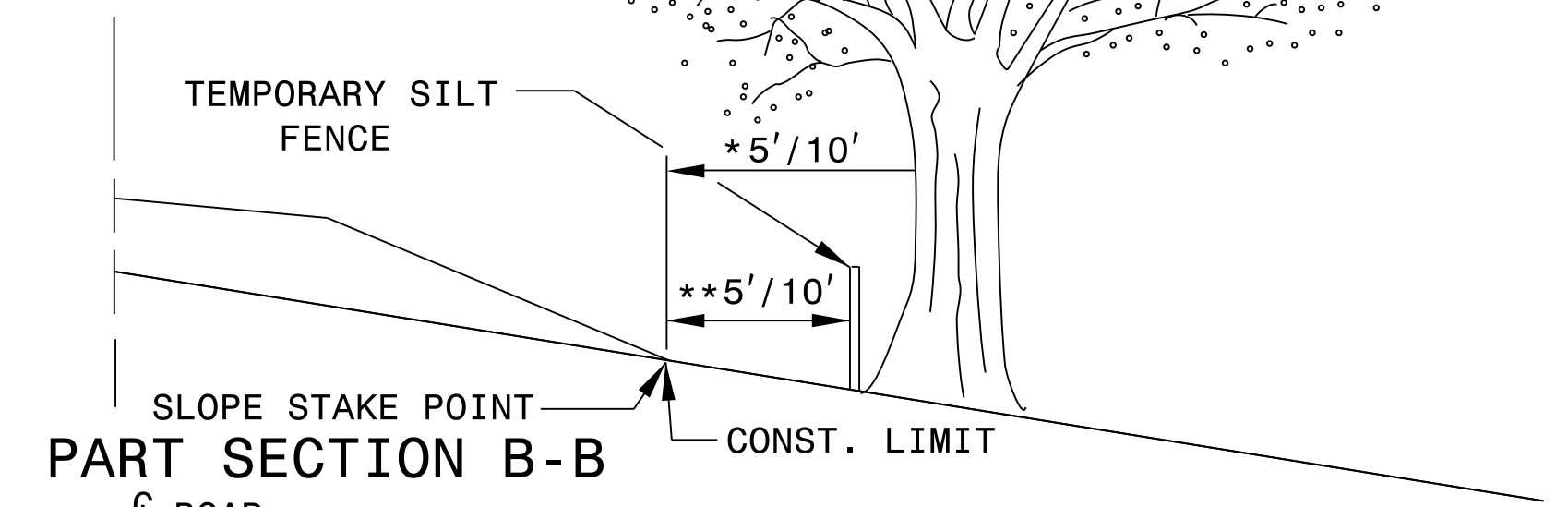
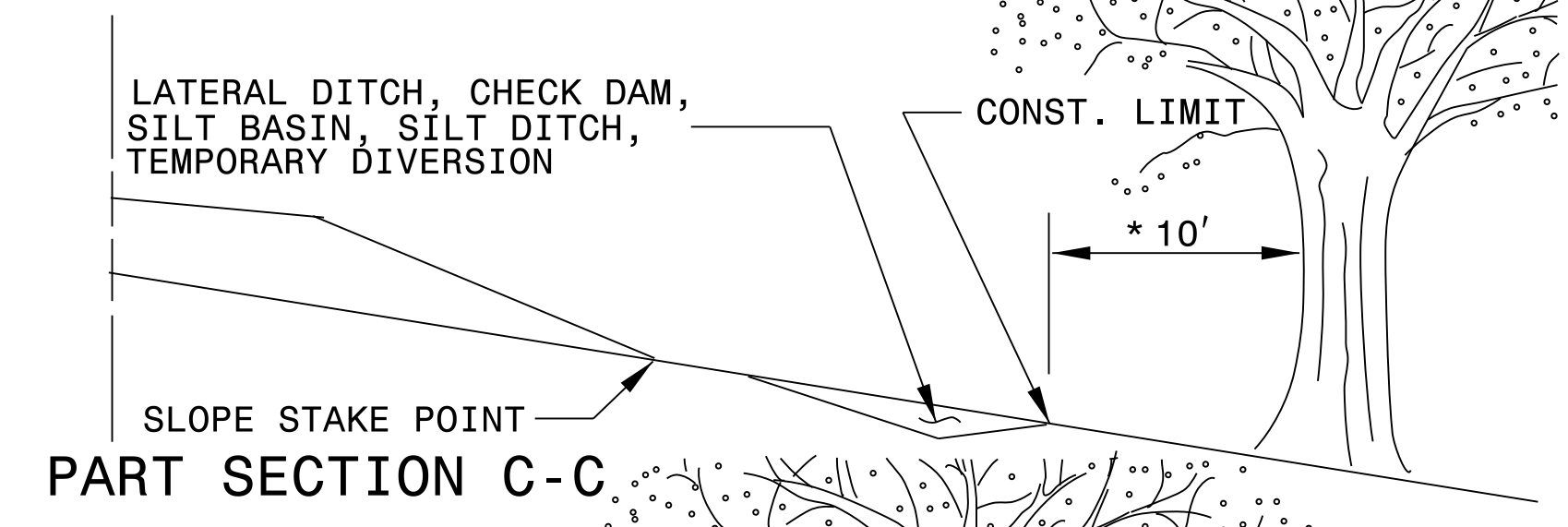
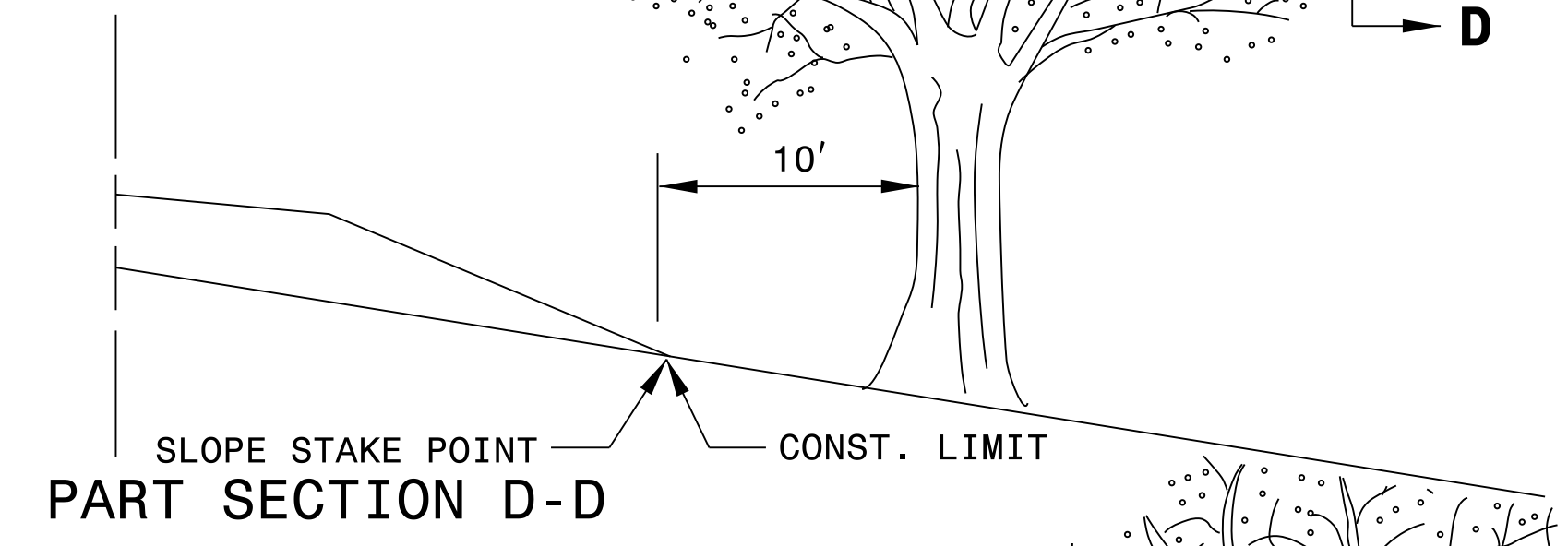
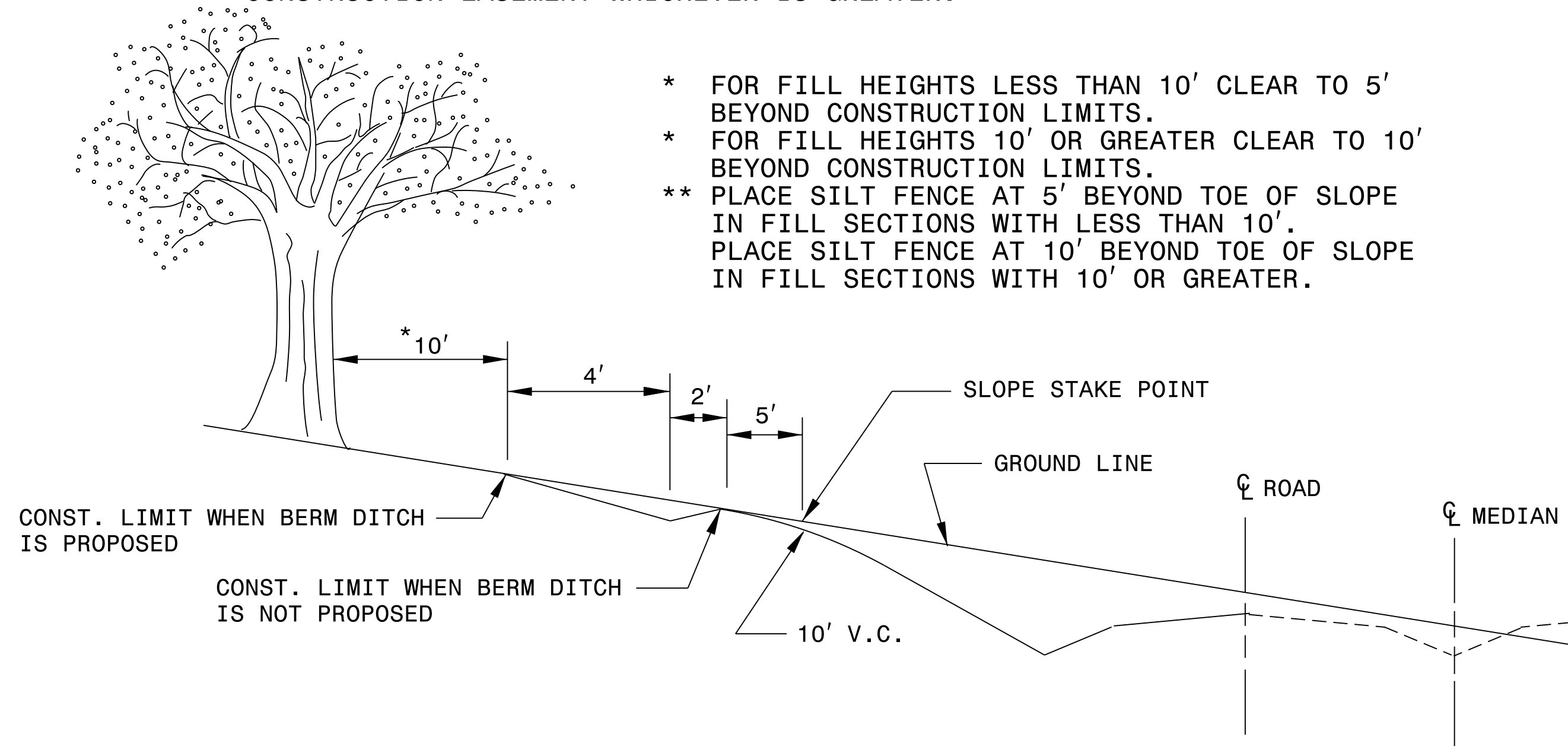
GENERAL NOTES:

1. REMOVE TREES OUTSIDE THE CLEARING LIMIT WHEN, IN THE OPINION OF THE ENGINEER, THE UTILITY OF A TREE WILL BE DESTROYED BY THE CONSTRUCTION OR THE CLEARING OPERATION.
2. CLEAR IN ACCORDANCE WITH THIS STANDARD EXCEPT WHERE ADDITIONAL CLEARING IS REQUIRED FOR SAFETY AS SHOWN ON THE PLANS.

METHOD III CLEARING LIMITS

- (A) CUTS -- CLEAR TO CONSTRUCTION LIMITS.
- (B) FILLS - CLEAR TO 5'/10' * BEYOND CONSTRUCTION LIMITS, UNLESS SPECIFIED OTHERWISE BY WETLAND PERMIT.
- (C) CUTS AND FILLS - WHEN THE CLEARING LIMITS (A AND B) EXCEED THE PROPOSED R/W OR PROPOSED CONSTRUCTION EASEMENTS, THEN CLEAR ONLY TO THE R/W OR CONSTRUCTION EASEMENT WHICHEVER IS GREATER.

- * FOR FILL HEIGHTS LESS THAN 10' CLEAR TO 5' BEYOND CONSTRUCTION LIMITS.
- * FOR FILL HEIGHTS 10' OR GREATER CLEAR TO 10' BEYOND CONSTRUCTION LIMITS.
- ** PLACE SILT FENCE AT 5' BEYOND TOE OF SLOPE IN FILL SECTIONS WITH LESS THAN 10'. PLACE SILT FENCE AT 10' BEYOND TOE OF SLOPE IN FILL SECTIONS WITH 10' OR GREATER.



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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
METHOD OF CLEARING
MODIFIED METHOD - III

SHEET 1 OF 1
200D03

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Jhowerton AT CSD-292595

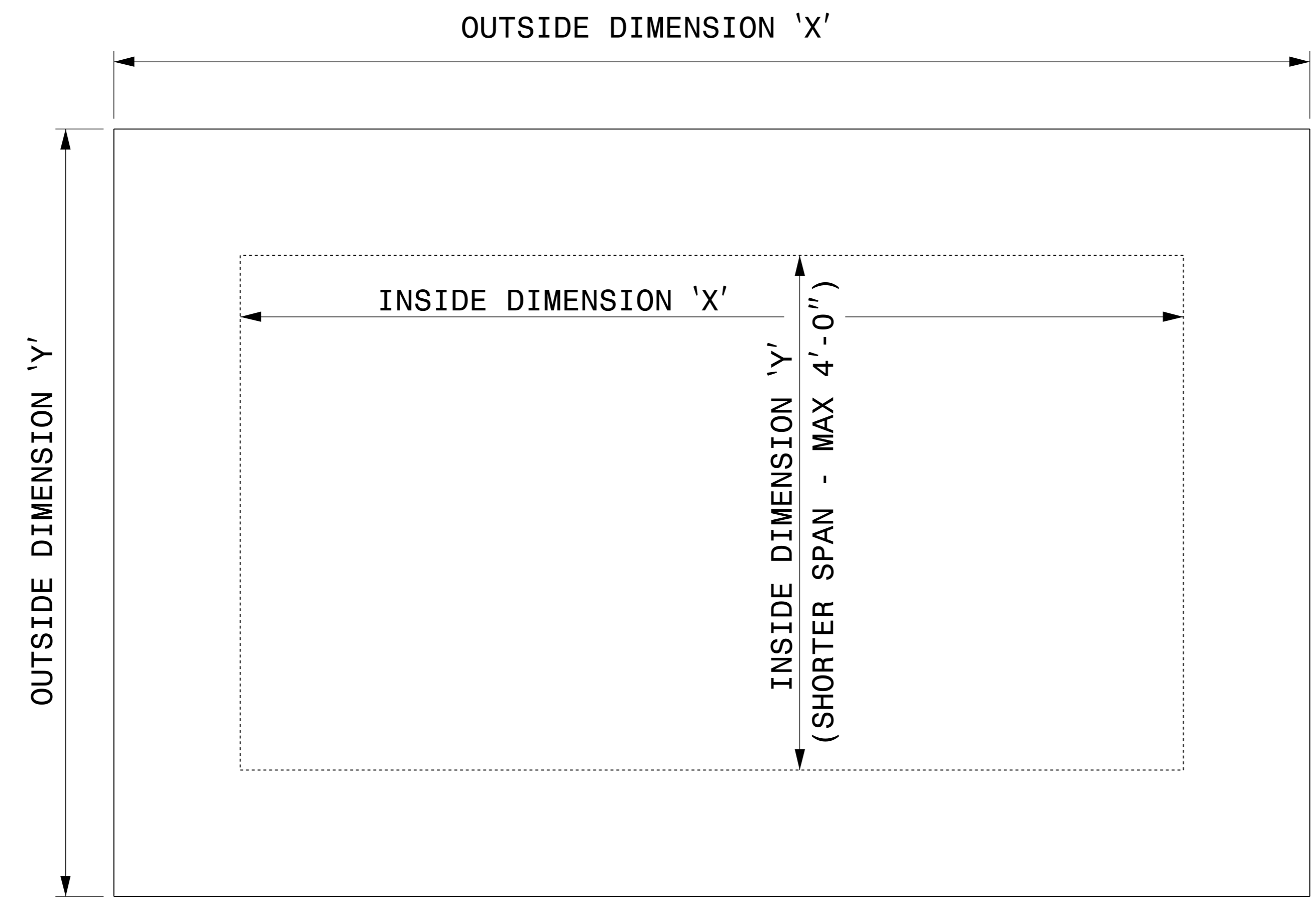


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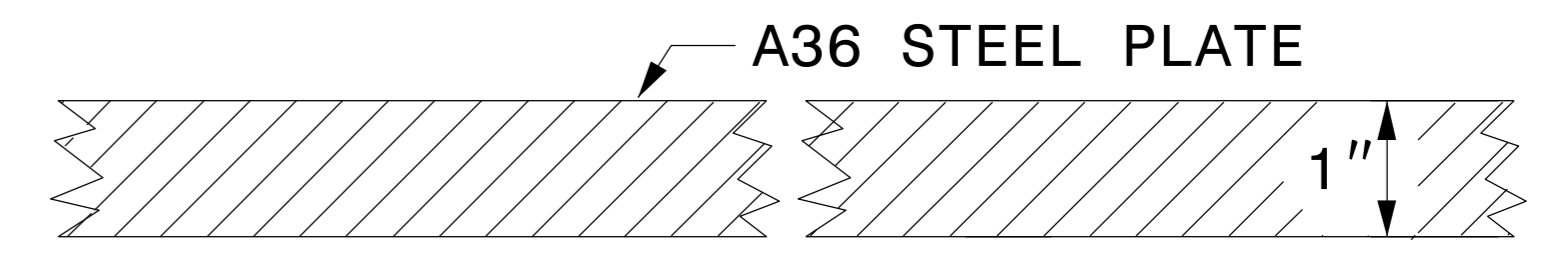
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MODIFIED BY:	K.A.K.	DATE:	AUG. 2016
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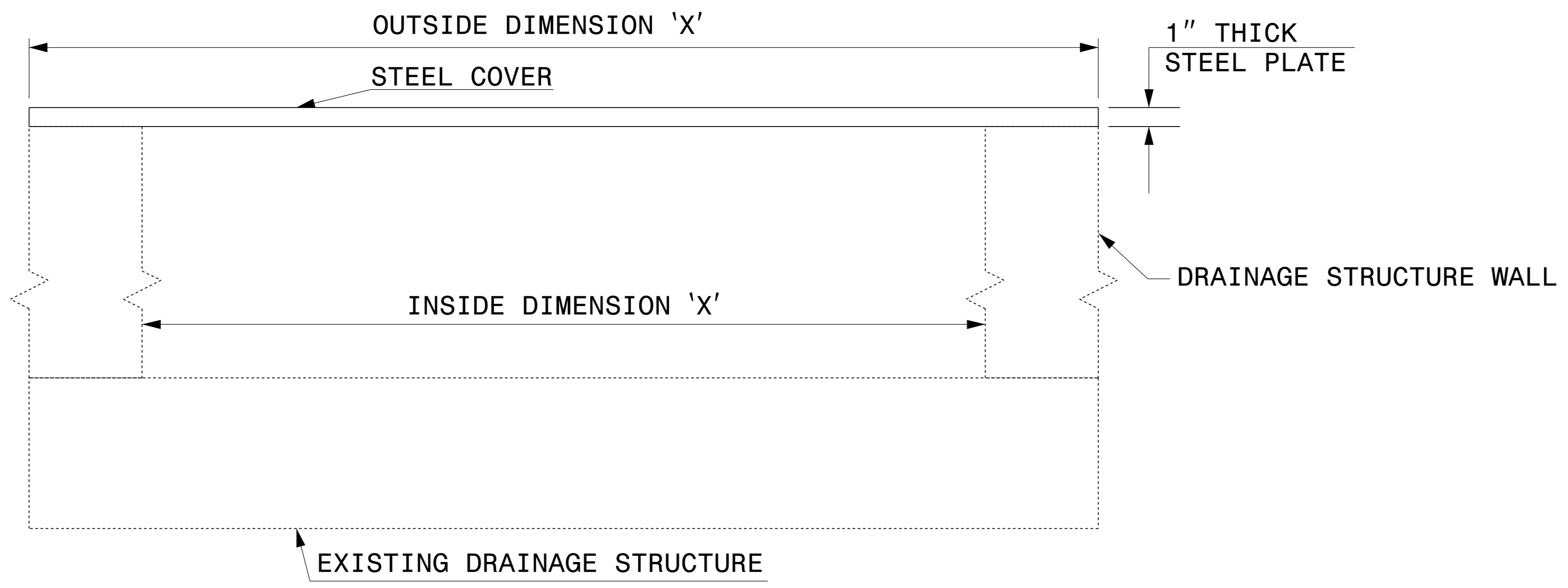
GENERAL NOTES:

- USE GRADE A36 STEEL
- STEEL COVERS ARE FOR TEMPORARY USE DURING PHASE CONSTRUCTION.
- FILL SHALL BE PLACED DIRECTLY OVER THE STEEL PLATES.
- SEE ROADWAY PLANS AND PROVISIONS FOR LOCATIONS
- QUANTITIES TO BE PAID FOR AT THE UNIT PRICE BID PER EACH.

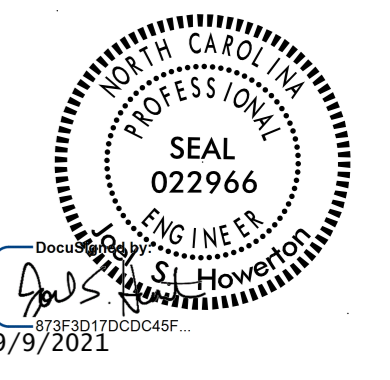


SECTION VIEW OF STEEL TOP PLATE

PLAN VIEWS



ELEVATION VIEWS



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DETAIL OF TEMPORARY 1" STEEL COVER OVER DRAINAGE STRUCTURE

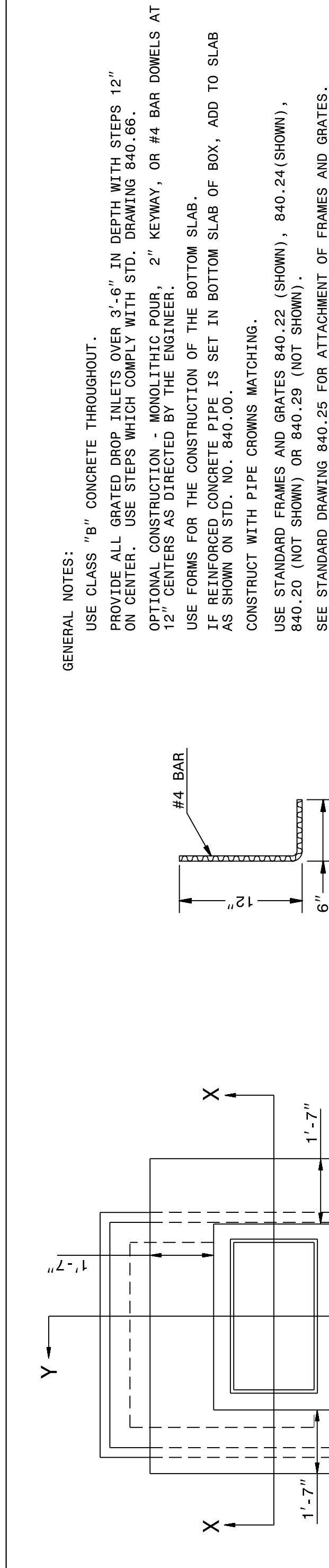
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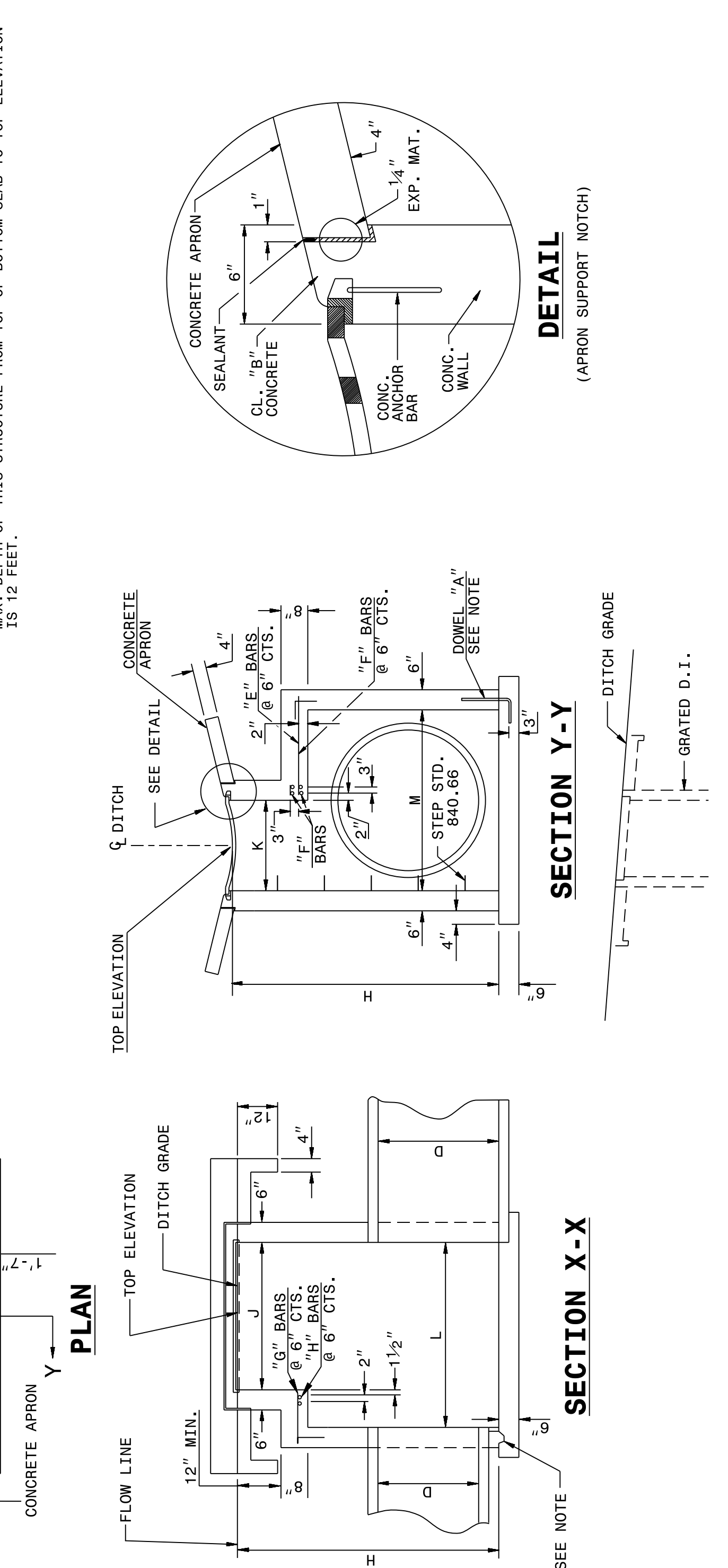
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DIVISION OF HIGHWAYS
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ENGLISH DETAIL DRAWING FOR
CONCRETE GRATED DROP INLET TYPE 'A'
12" THRU 72" PIPE

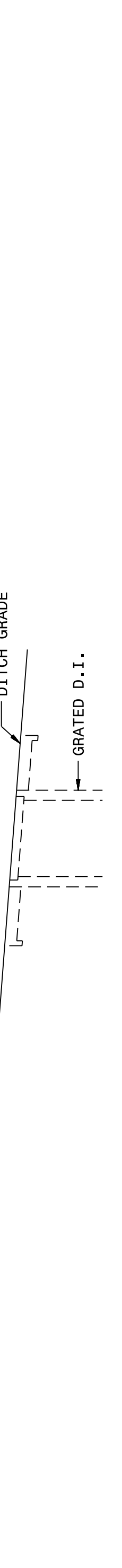
SHEET 1 OF 2
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SECTION X-X



SECTION Y-Y



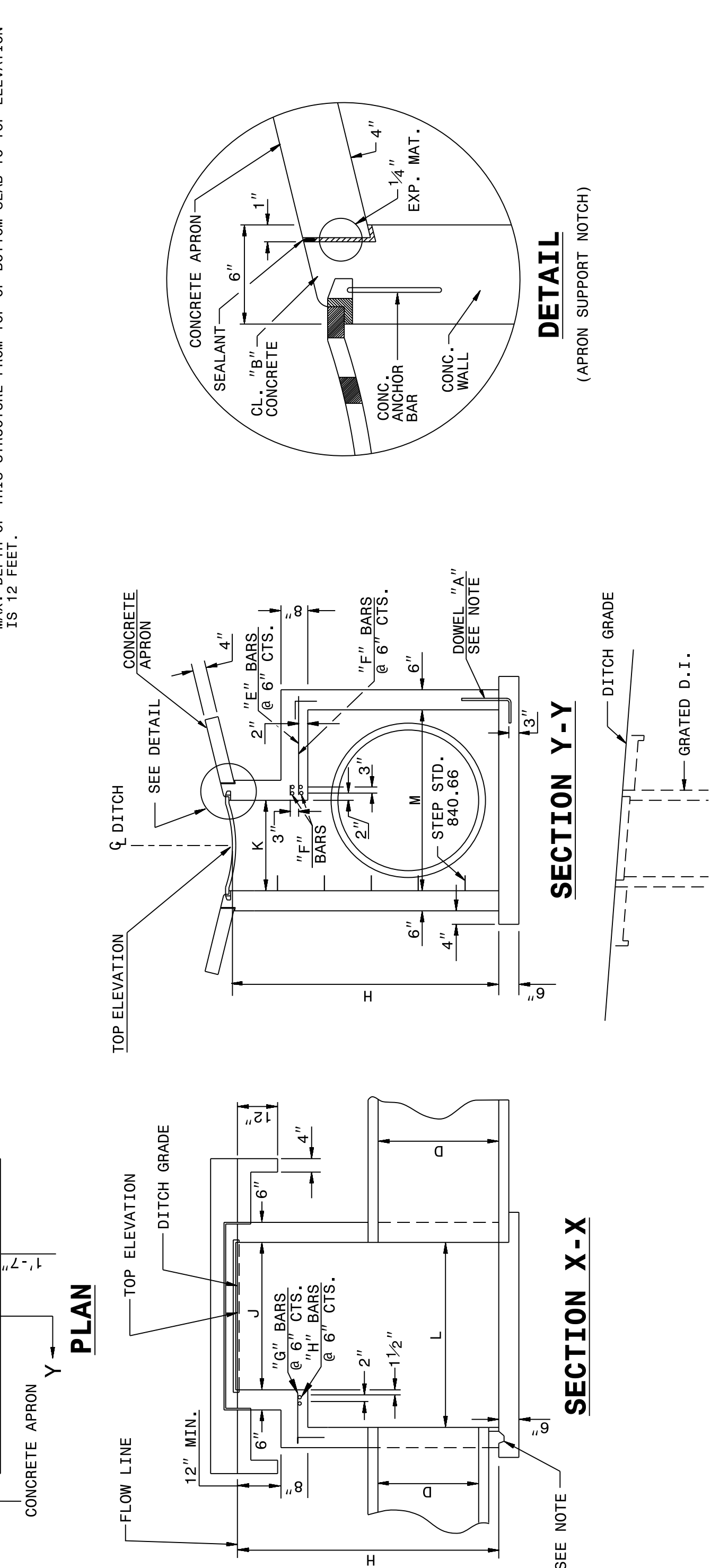
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ENGLISH DETAIL DRAWING FOR
CONCRETE GRATED DROP INLET TYPE 'A'
MINIMUM DEPTH
12" THRU 72" PIPE

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.

DOWEL - A

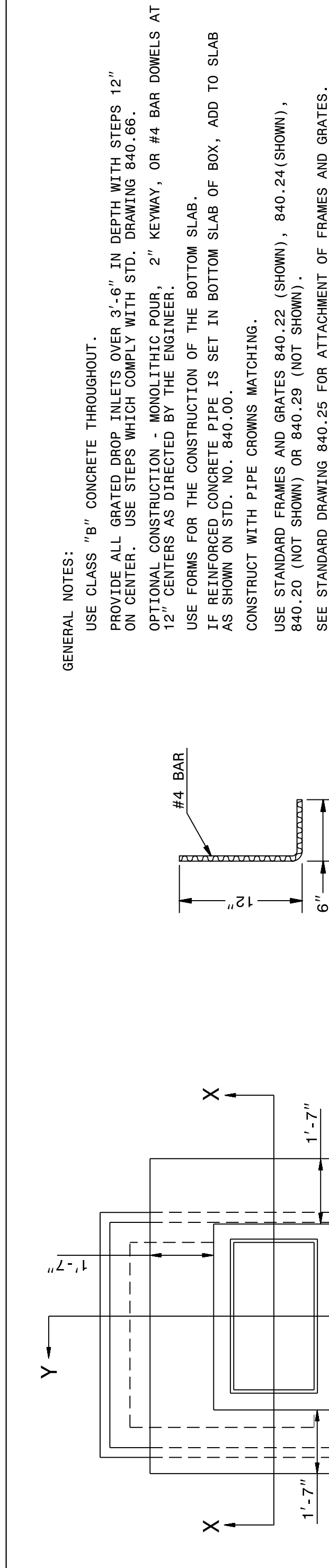


DETAIL
(APRON SUPPORT NOTCH)

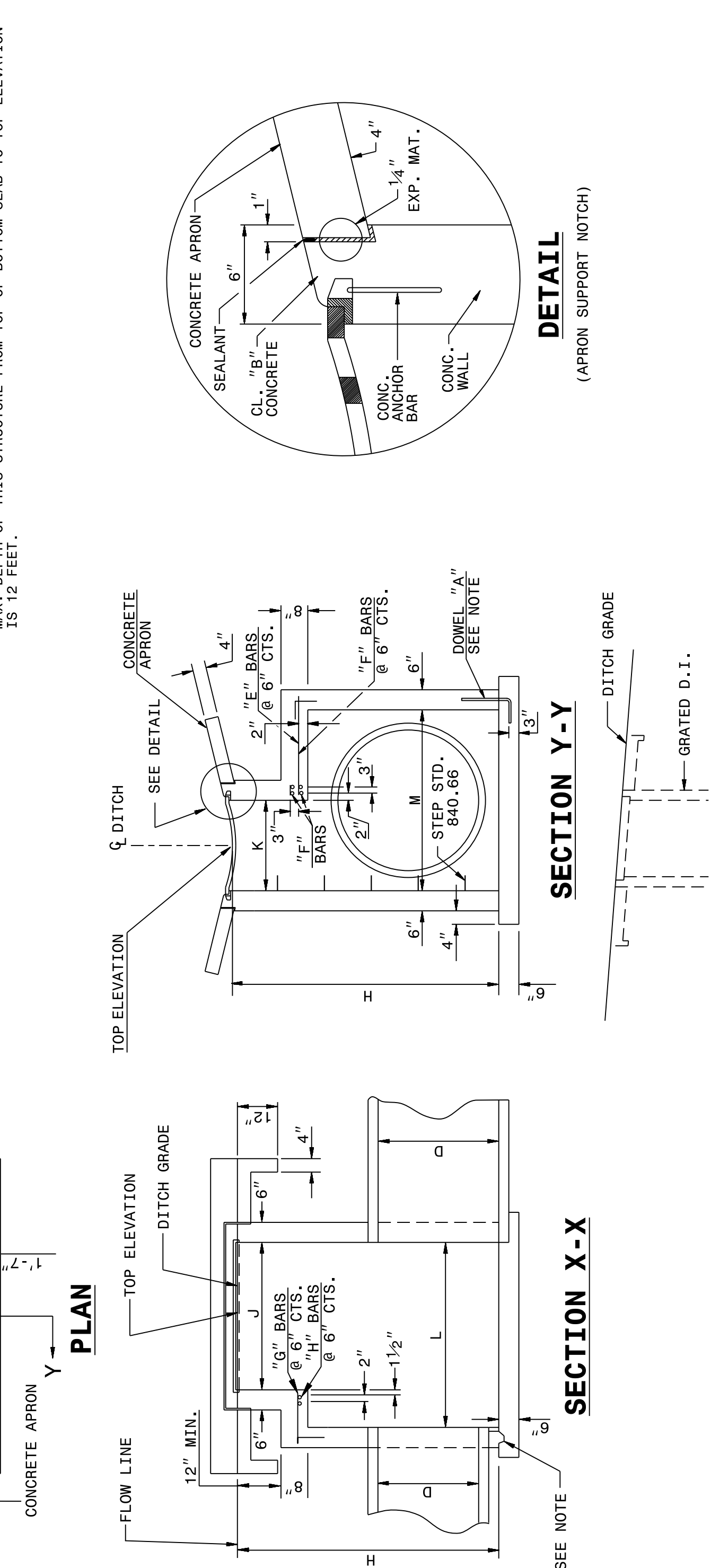
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ENGLISH DETAIL DRAWING FOR
CONCRETE GRATED DROP INLET TYPE 'A'
MINIMUM DEPTH
12" THRU 72" PIPE

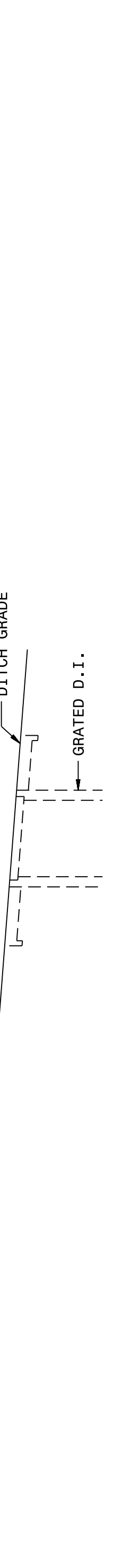
SHEET 2 OF 2
840d17



DOWEL - B1



DOWEL - B2

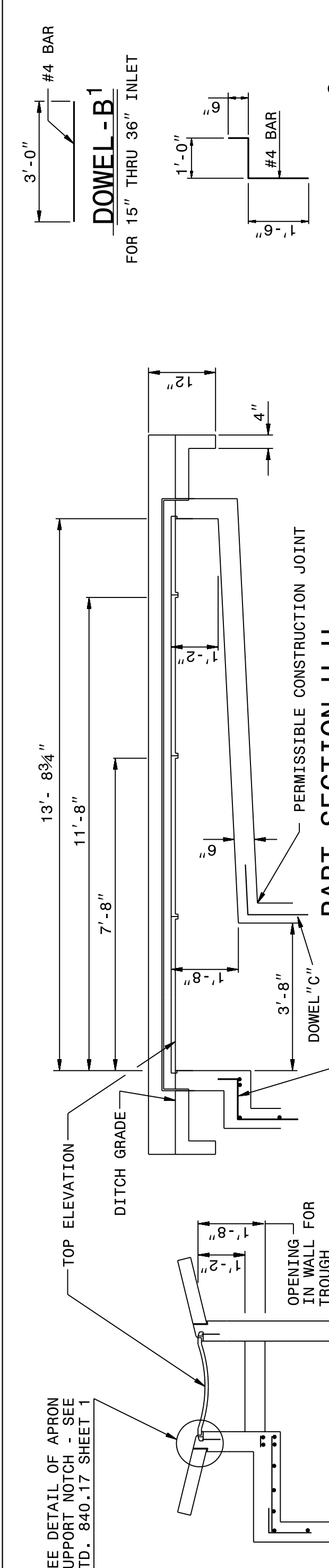


DOWEL - B3

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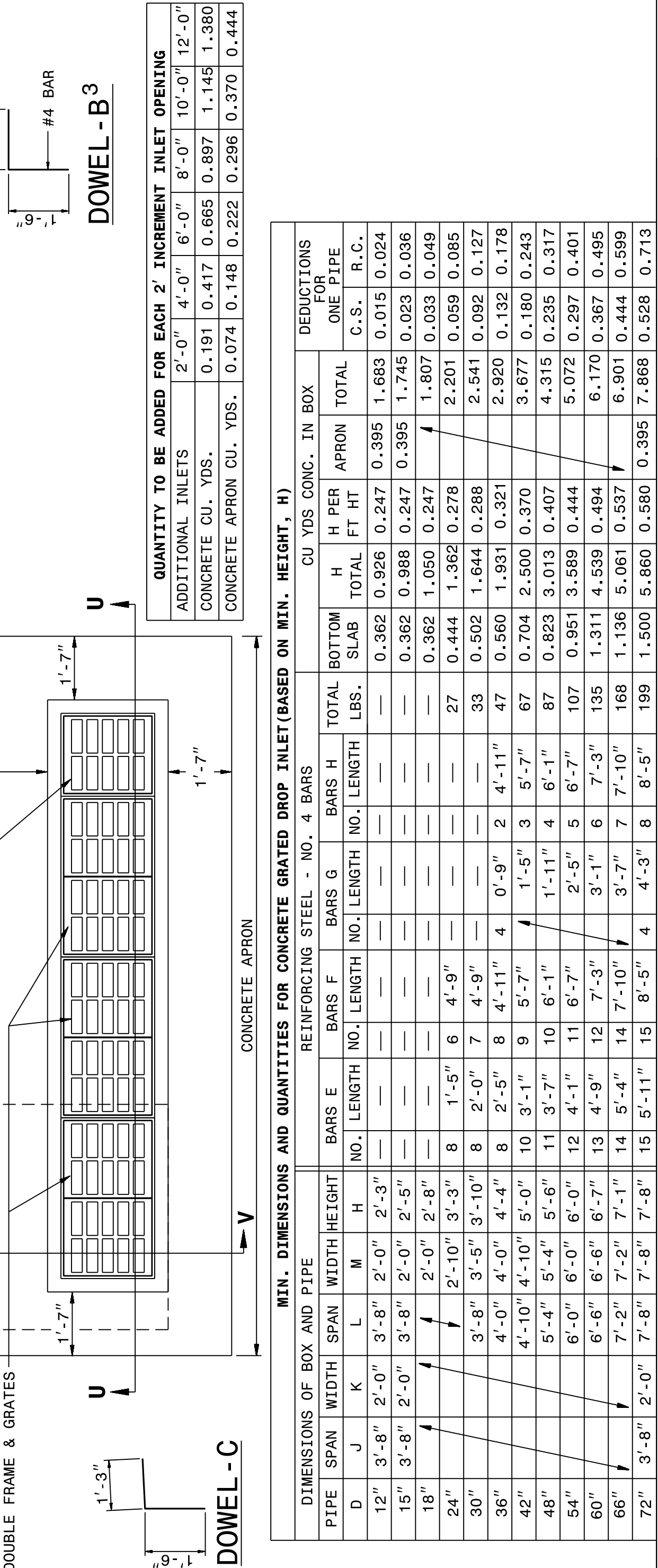
ENGLISH DETAIL DRAWING FOR
CONCRETE GRATED DROP INLET TYPE 'A'
12" THRU 72" PIPE

SHEET 2 OF 2
840d17



PART SECTION U-U

PART SECTION V-V



STATE OF
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RALEIGH, N.C.

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

SHEET 2 OF 2
840d17

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)

PIPE	DIMENSIONS OF BOX AND PIPE		REINFORCING STEEL - NO. 4 BARS				TOTAL BOTTOM SLAB		CU YDS CONC. IN BOX		DEDUCTIONS FOR ONE PIPE			
	SPAN	WIDTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	H	PER FT HT	APRON	TOTAL	C.S.	R.C.
12"	3'-8"	2'-0"	2'-0"	2'-3"	—	—	—	0.362	0.926	0.247	0.395	1.683	0.015	0.024
15"	3'-8"	2'-0"	2'-0"	2'-5"	—	—	—	0.362	0.988	0.247	0.395	1.745	0.023	0.036
18"	—	—	2'-0"	2'-8"	—	—	—	0.362	1.050	0.247	—	1.807	0.033	0.049
24"	—	—	2'-10"	3'-3"	8	1'-5"	6	4'-9"	—	—	27	0.444	1.362	0.278
30"	—	—	3'-5"	3'-10"	8	2'-0"	7	4'-9"	—	—	33	0.502	1.644	0.288
36"	—	—	4'-0"	4'-4"	8	2'-5"	8	4'-11"	4	0'-9"	2	4'-11"	1.931	0.321
42"	—	—	4'-10"	5'-0"	10	3'-1"	9	5'-7"	3	5'-7"	67	0.704	2.500	0.370
48"	—	—	5'-4"	5'-6"	11	3'-7"	10	6'-1"	4	6'-1"	87	0.823	3.013	0.407
54"	—	—	6'-0"	6'-0"	12	4'-1"	11	6'-7"	5	6'-7"	107	0.951	3.589	0.444
60"	—	—	6'-6"	6'-7"	13	4'-9"	12	7'-3"	6	7'-3"	135	1.311	4.539	0.494
66"	—	—	7'-2"	7'-1"	14	5'-4"	14	7'-10"	7	7'-10"	168	1.136	5.061	0.537
72"	—	—	7'-8"	7'-8"	15	5'-11"	15	8'-5"	8	8'-5"	199	1.500	5.860	0.580

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



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