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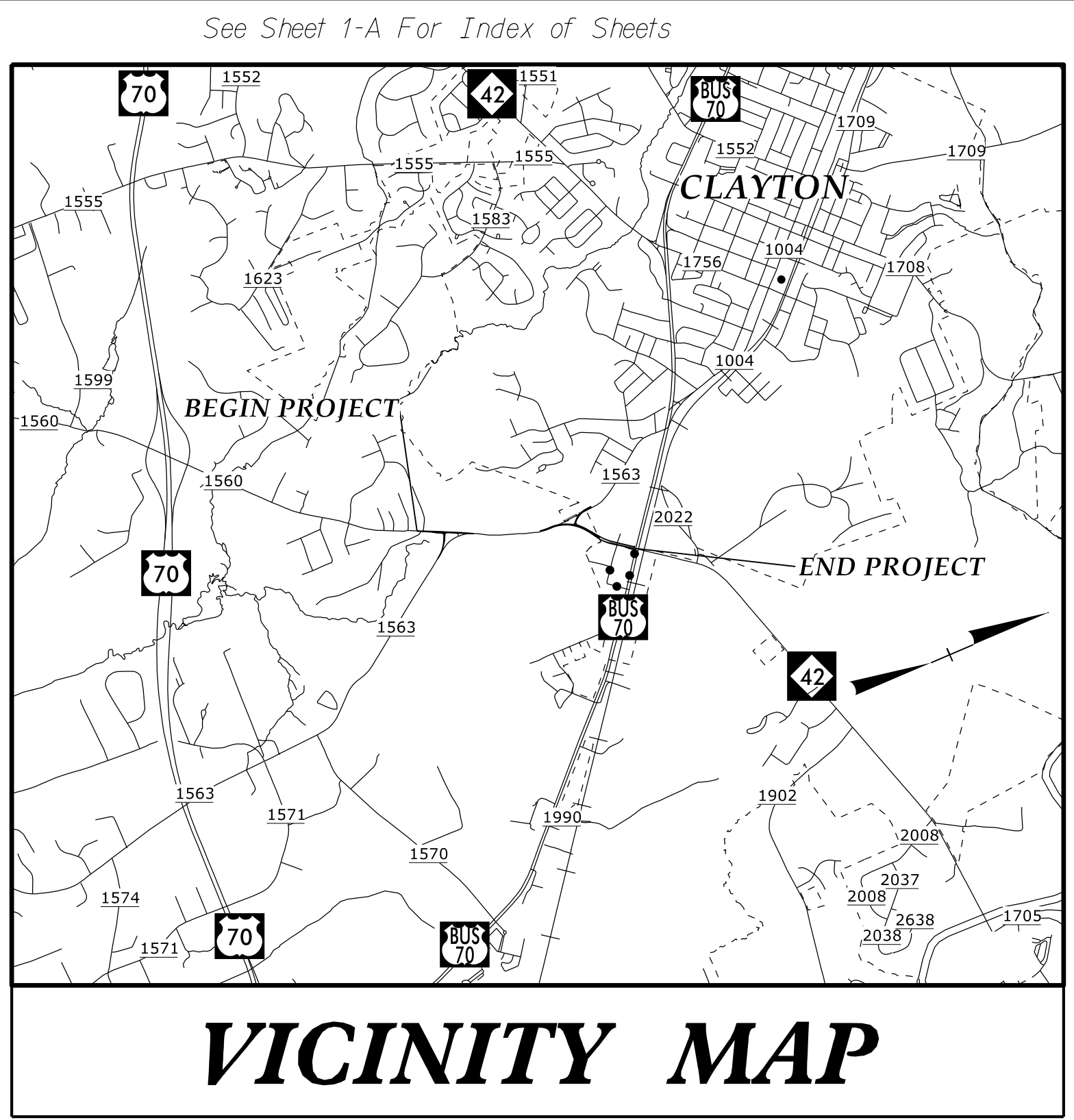
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-6223	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
49502	NA	PE	
48811.2.1	1560005	RW&UTILITY	
48811.3.1	1560005	CONST.	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JOHNSTON COUNTY

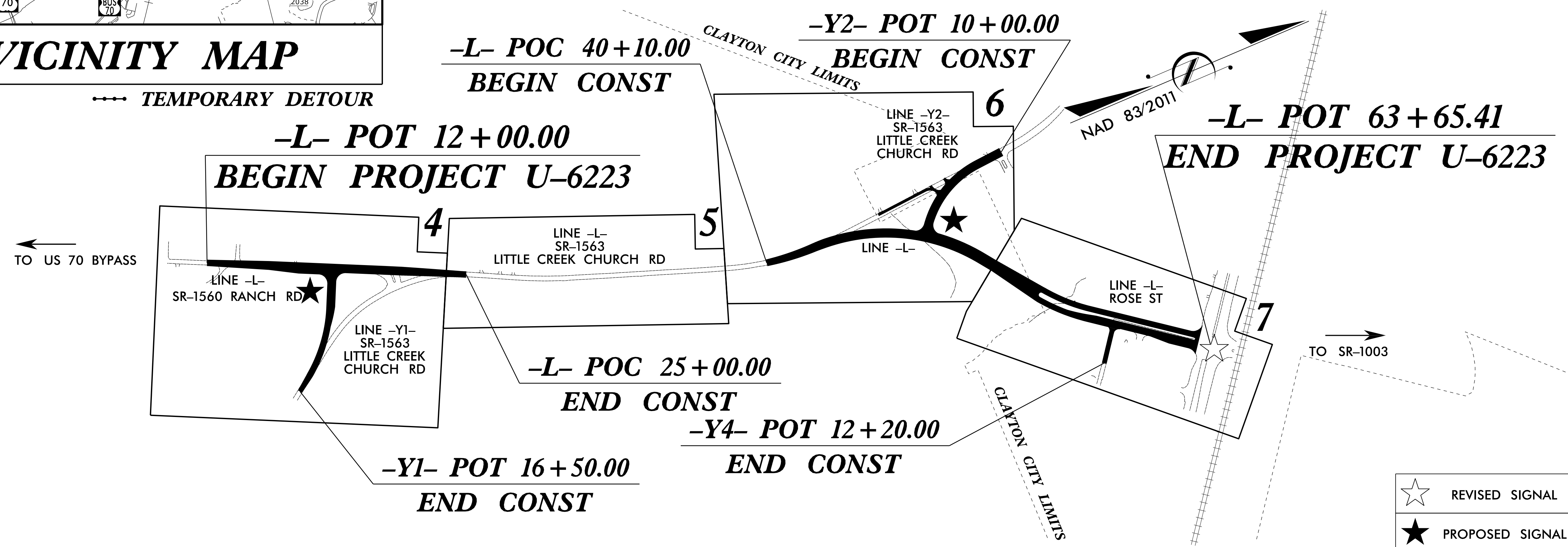
LOCATION: NEW LOCATION FROM SR-1560 (RANCH ROAD)
TO THE US-70 BUS & NC-42 INTERSECTION.

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



VICINITY MAP

--- TEMPORARY DETOUR

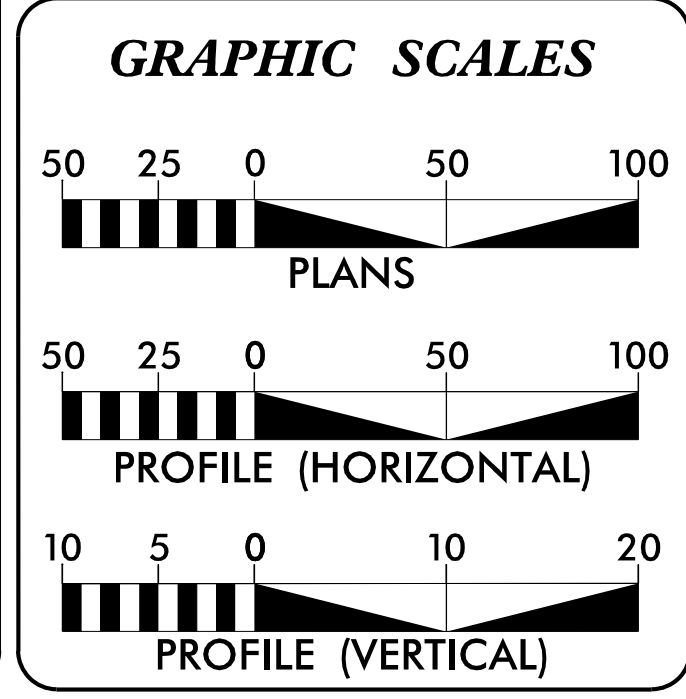


☆ REVISED SIGNAL
★ PROPOSED SIGNAL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

TIP PROJECT: U-6223

CONTRACT: C204729



DESIGN DATA

ADT 2022 = 6300
ADT 2045 = 25800

K = 9 %
D = 55 %
T = 3 % *
V = 50 MPH
* TTST=1% DUAL=2%

FUNCTIONAL CLASS
MINOR ARTERIAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-6223 = 0.692 MILES
TOTAL LENGTH TIP PROJECT U-6223 = 0.692 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
Division 4 DDC
509 Ward Blvd., Wilson NC, 27895

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 22, 2021

LETTING DATE:
JULY 19, 2022

KEVIN BOWEN, PE
PROJECT ENGINEER

D. R. ETHRIDGE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

05/17/2022

DocuSigned by:
William G. Chitt
SIGNATURE:

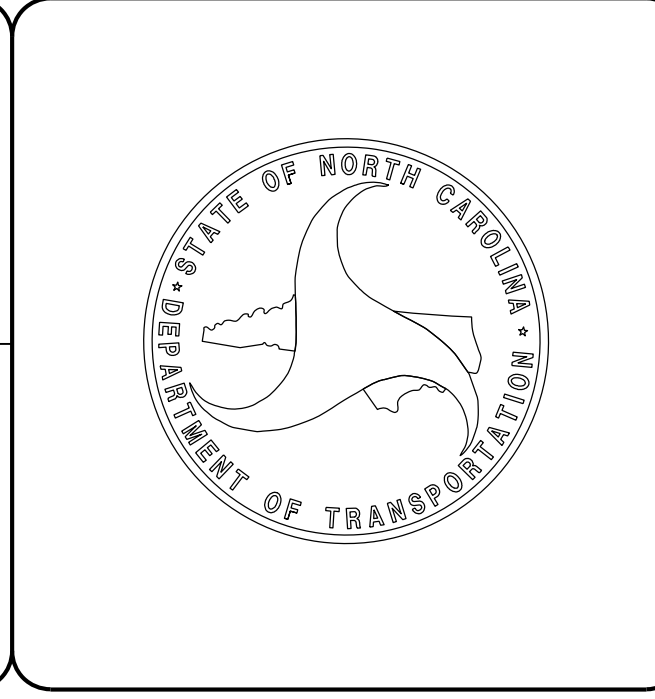
Seal: WILLIAM G. CHITT, P.E., SEAL 022000

ROADWAY DESIGN ENGINEER

05/17/2022

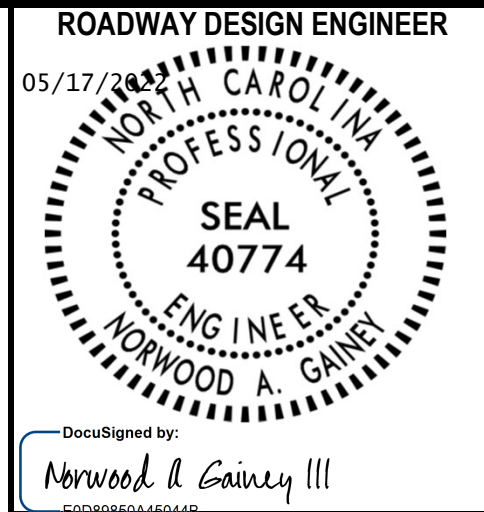
DocuSigned by:
Norwood A. Gentry III
SIGNATURE:

Seal: NORWOOD A. GENTRY III, P.E., SEAL 040774



STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PROJ. REFERENCE NO. U-6223	SHEET NO. I-A
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SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-3	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2C-1	SPECIAL DETAIL - DETAIL OF REINFORCED CONCRETE ENDWALL
2C-2	SPECIAL DETAIL - SPECIAL DI
2C-3 THRU 2C-5	SPECIAL DETAILS - CURB RAMPS
2C-6 THRU 2C-7	SPECIAL DETAILS - GUARDRAIL INSTALLATION
2C-8	SPECIAL DETAIL - PEDESTRIAN SAFETY RAIL
2N-1	NOISE WALL ENVELOPE
3B-1	ROADWAY SUMMARIES - GUARDRAIL, EARTHWORK, PARCEL INDEX, RIP RAP & GEOTEXTILE FOR DRAINAGE, AND REMOVAL OF EXISTING ASPHALT PAVEMENT.
3D-1 THRU 3D-4	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARIES
4 THRU 9	PLAN & PROFILE SHEETS
RW-1 THRU RW-7	SURVEY CONTROL, EXISTING CENTERLINES RIGHT OF WAY, EASEMENTS AND PROPERTY TIES
TMP-1 THRU TMP-9	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-4	PAVEMENT MARKING PLANS
EC-1 THRU EC-11	EROSION CONTROL PLANS
RF-1	REFORESTATION PLANS
SIGN-1 THRU SIGN-5	SIGNING PLANS
SIG-1.0 THRU SIG-5.0	SIGNAL PLANS
SCP-1 THRU SCP-8	
UC-1 THRU UC-10	UTILITY CONSTRUCTION PLANS
UBO-1 THRU UBO-7	UTILITIES BY OTHERS PLANS
X-1	CROSS-SECTION INDEX
X-1A	CROSS-SECTION SUMMARY
X-2 THRU X-31	CROSS-SECTIONS
W-1 THRU W-3	RETAINING WALL PLANS
NW-1 THRU NW-3	NOISE WALL PLANS

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:

- DIVISION 2 - EARTHWORK
 - 200.03 METHOD OF CLEARING - METHOD III
 - 225.02 GUIDE FOR GRADING SUBGRADE - SECONDARY AND LOCAL
 - 225.04 METHOD OF OBTAINING SUPERELEVATION - TWO LANE PAVEMENT
 - 225.06 METHOD OF GRADING SIGHT DISTANCE AT INTERSECTIONS
- DIVISION 3 - PIPE CULVERTS
 - 300.01 METHOD OF PIPE INSTALLATION
 - 310.10 DRIVEWAY PIPE CONSTRUCTION
- DIVISION 5 - SUBGRADE, BASES AND SHOULDERS
 - 560.01 METHOD OF SHOULDER CONSTRUCTION - HIGH SIDE OF SUPERELEVATED CURVE - METHOD I
- DIVISION 6 - ASPHALT BASES AND PAVEMENTS
 - 654.01 PAVEMENT REPAIRS
- DIVISION 8 - INCIDENTALS
 - 815.02 SUBSURFACE DRAIN
 - 840.00 CONCRETE BASE PAD FOR DRAINAGE STRUCTURES
 - 840.01 BRICK CATCH BASIN - 12" THRU 54" PIPE
 - 840.02 CONCRETE CATCH BASIN - 12" THRU 54" PIPE
 - 840.03 FRAME, GRATES AND HOOD - FOR USE ON STANDARD CATCH BASIN
 - 840.14 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
 - 840.18 CONCRETE GRATED DROP INLET TYPE 'B' - 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
 - 840.27 BRICK GRATED DROP INLET TYPE 'B' - 12" THRU 36" PIPE
 - 840.35 TRAFFIC BEARING GRATED DROP INLET - FOR CAST IRON DOUBLE FRAME AND GRATES
 - 840.45 PRECAST DRAINAGE STRUCTURE
 - 840.46 TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE
 - 840.66 DRAINAGE STRUCTURE STEPS
 - 840.71 CONCRETE AND BRICK PIPE PLUG
 - 840.72 PIPE COLLAR
 - 846.01 CONCRETE CURB, GUTTER AND CURB & GUTTER
 - 848.01 CONCRETE SIDEWALK
 - 848.02 DRIVEWAY TURNOUT - RADIUS TYPE
 - 848.04 STREET TURNOUT
 - 848.05 CURB RAMP - PROPOSED CURB & GUTTER
 - 852.04 METHOD FOR PLACEMENT OF DROP INLETS IN GRASSED MEDIAN - USING 1'-6" CURB AND GUTTER
 - 857.01 PRECAST REINFORCED CONCRETE BARRIER - 41" SINGLE FACED
 - 862.01 GUARDRAIL PLACEMENT
 - 862.02 GUARDRAIL INSTALLATION
 - 876.02 GUIDE FOR RIP RAP AT PIPE OUTLETS
 - 876.04 DRAINAGE DITCHES WITH CLASS 'B' RIP RAP

GENERAL NOTES: 2018 SPECIFICATIONS

- GRADE LINE:**
- GRADING AND SURFACING OR RESURFACING AND WIDENING:**
 - THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.
- CLEARING:**
 - CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
- SUPERELEVATION:**
 - ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04. USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.
- SHOULDER CONSTRUCTION:**
 - ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01
- SIDE ROADS:**
 - THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.
- SUBSURFACE DRAINS:**
 - SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.
- DRIVEWAYS:**
 - DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3 FOOT RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- 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 WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.
- SUBSURFACE PLANS:**
 - NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.
- UTILITIES:**
 - UTILITY OWNERS ON THIS PROJECT ARE:
PIEDMONT NATURAL GAS, CENTURYLINK/LUMEN, DUKE ENERGY, CHARTER SPECTRUM, TOWN OF CLAYTON POWER AND TOWN OF CLAYTON WATER & SEWER.
 - 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.

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	-----

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

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	----- RW
New Right of Way Line with Pin and Cap	----- RW
New Right of Way Line with Concrete or Granite RW Marker	----- RW
New Control of Access Line with Concrete CA Marker	----- CA
Existing Control of Access	----- CA
New Control of Access	----- CA
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	○

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	⊠
U/G Power Cable Hand Hole	-----
H-Frame Pole	●
U/G Power Line LOS B (S.U.E.*)	----- P
U/G Power Line LOS C (S.U.E.*)	----- P
U/G Power Line LOS D (S.U.E.*)	----- P

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊙
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	-----
U/G Telephone Cable LOS B (S.U.E.*)	----- 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	-----
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

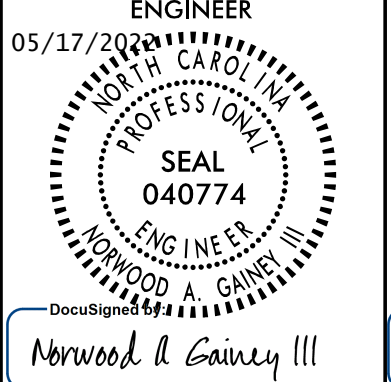
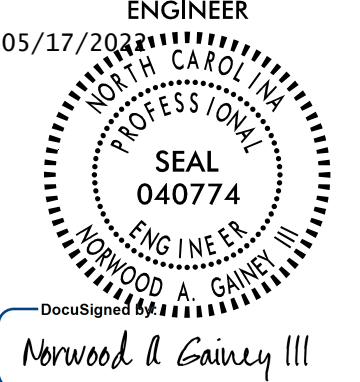
SANITARY SEWER:

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:

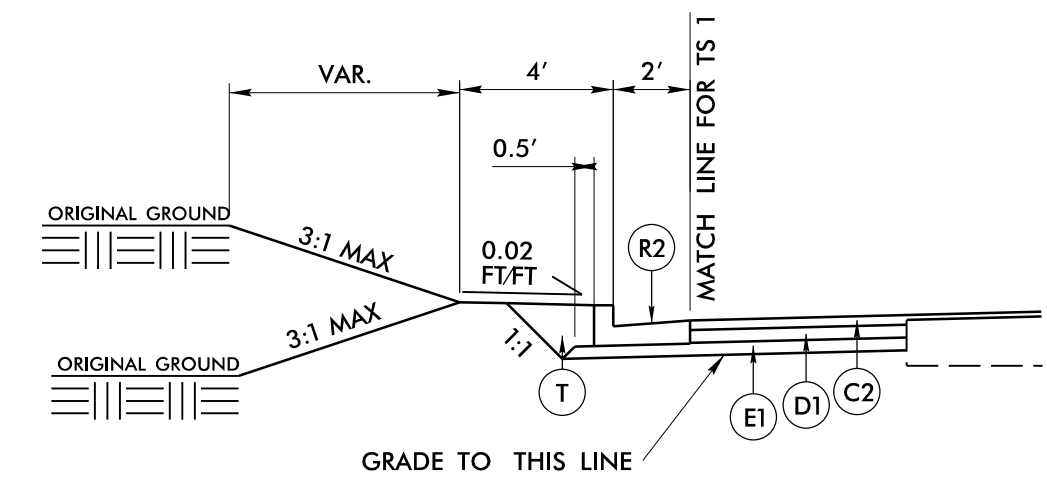
Utility Pole	●
Utility Pole with Base	⊠
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	----- 7UTL
U/G Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	⊠ UST
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	⊕
U/G Test Hole LOS A (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

PAVEMENT SCHEDULE

PROJECT REFERENCE NO. U-6223	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER 05/17/2022 	PAVEMENT DESIGN ENGINEER 05/17/2022 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD.	E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD.	S1	PROPOSED 5' x 4" CONCRETE SIDEWALK
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD. IN EACH OF TWO LAYERS.	E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" OR GREATER THAN 5.5" IN DEPTH.	T	EARTH MATERIAL.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YARD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2" DEPTH.	R1	PROPOSED 1'-6" CONCRETE CURB AND GUTTER	U	EXISTING PAVEMENT.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD.	R2	PROPOSED 2'-6" CONCRETE CURB AND GUTTER	W1	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4" IN DEPTH.	R3	PROPOSED PRECAST REINFORCED CONCRETE BARRIER 41" SINGLE FACED (STD. 857.01)	NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.	

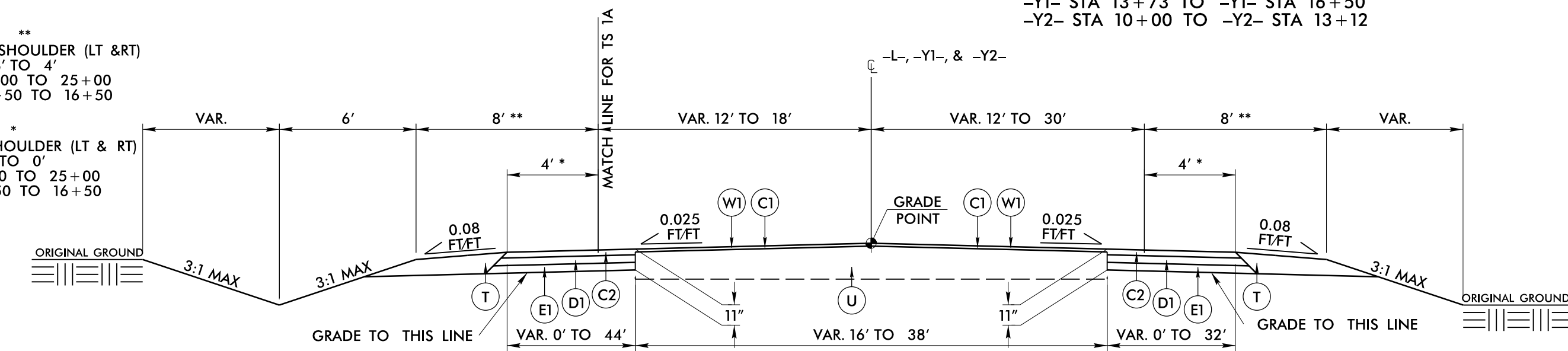
USE TYPICAL SECTION NO. 1A IN CONJUNCTION WITH TYPICAL SECTIONS NO. 1
-L- STA 17+60.03 TO -L- STA 21+46.50 LEFT



TYPICAL SECTION NO. 1A

VAR. TOTAL SHOULDER (LT & RT)
8' TO 4'
-L- 24+00 TO 25+00
-Y1- 15+50 TO 16+50

VAR. PAVED SHOULDER (LT & RT)
4' TO 0'
-L- 24+00 TO 25+00
-Y1- 15+50 TO 16+50

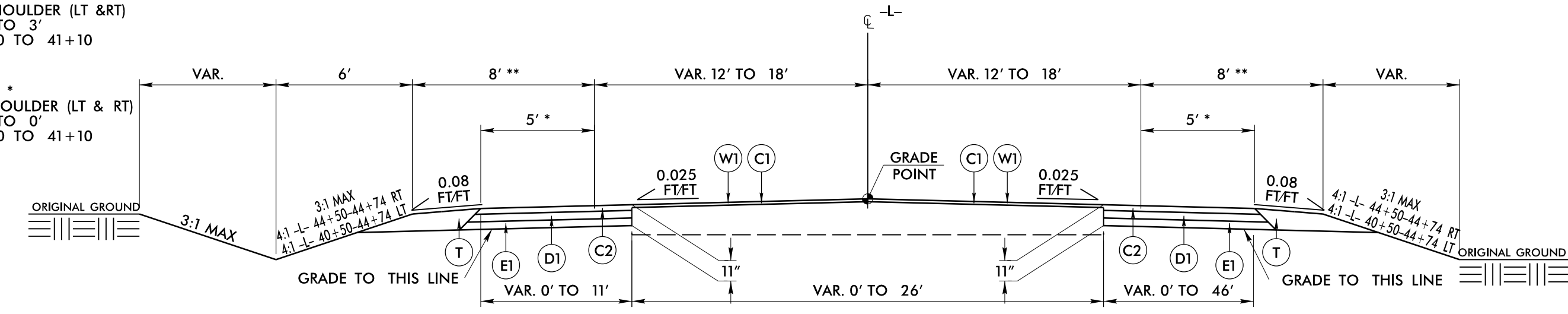


TYPICAL SECTION NO. 1

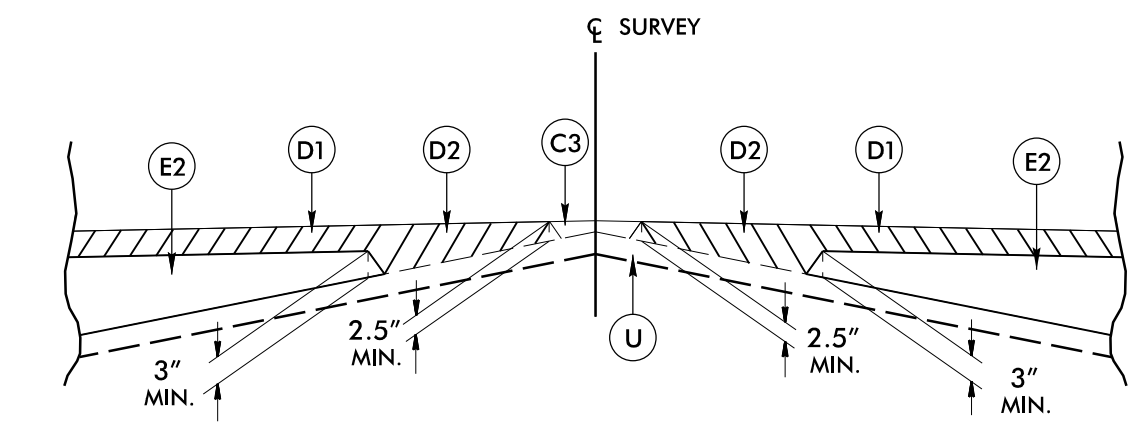
USE TYPICAL SECTION NO. 2
-L- STA 40+10 TO -L- STA 44+74

VAR. TOTAL SHOULDER (LT & RT)
8' TO 3'
-L- 40+10 TO 41+10

VAR. PAVED SHOULDER (LT & RT)
5' TO 0'
-L- 40+10 TO 41+10

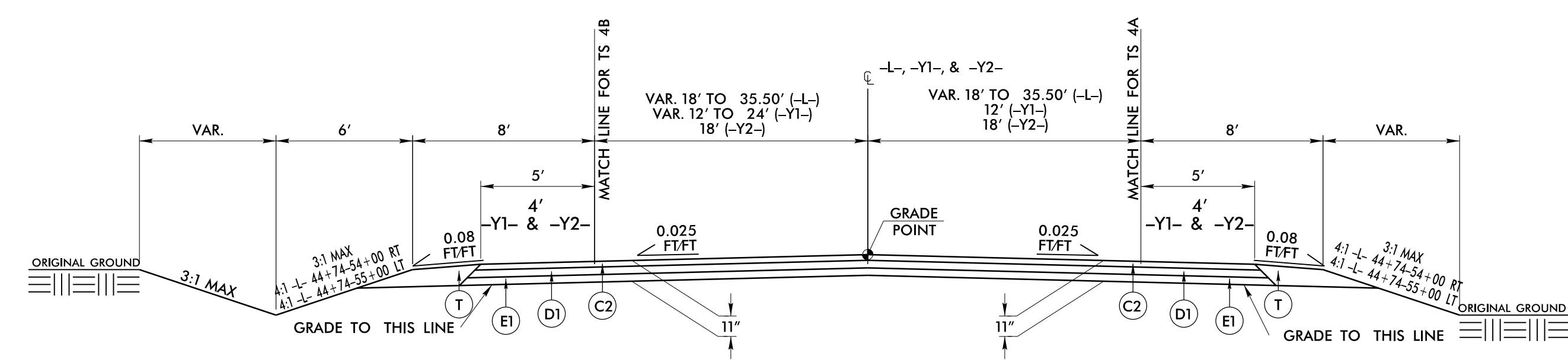


TYPICAL SECTION NO. 2



Detail Showing Method of Wedging 1

USE TYPICAL SECTION NO. 3
-L- STA 44+74 TO -L- STA 54+68.5
-Y1- STA 10+30 TO -Y1- STA 13+73
-Y2- STA 13+12 TO -Y2- STA 15+72



TYPICAL SECTION NO. 3

REVISIONS

6/2/99

26-APR-2022 13:51
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Revision 4 DDC

6/2/99

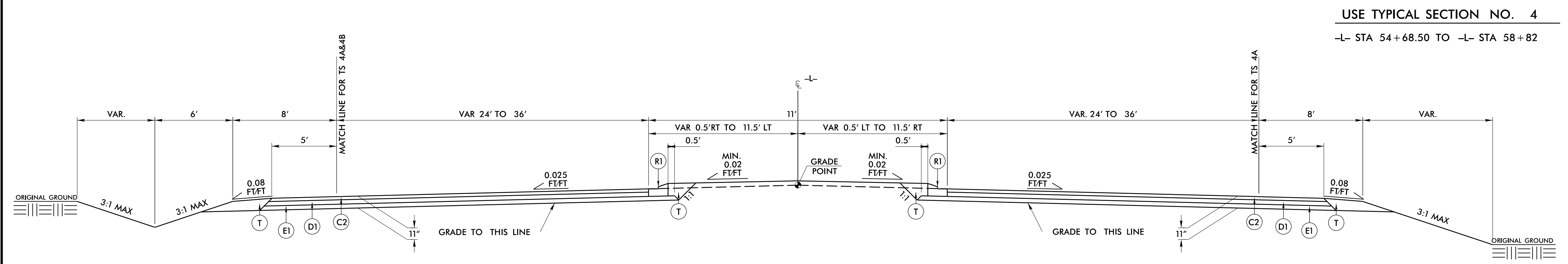
REVISIONS

PROJECT REFERENCE NO. U-6223	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER 06/09/2022 SEAL 040774 NORWOOD A. GAINY III	PAVEMENT DESIGN ENGINEER 06/09/2022 SEAL 040774 NORWOOD A. GAINY III

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

PAVEMENT SCHEDULE	
C1	1.5" S9.5C
C2	3" S9.5C
C3	VAR S9.5C
D1	4" I19.0C
D2	VAR I19.0C
E1	4" B25.0C
E2	VAR B25.0C
R1	1'-6" C&G
R2	2'-6" C&G
R3	SFCB
S1	SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W1	WEDGING

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

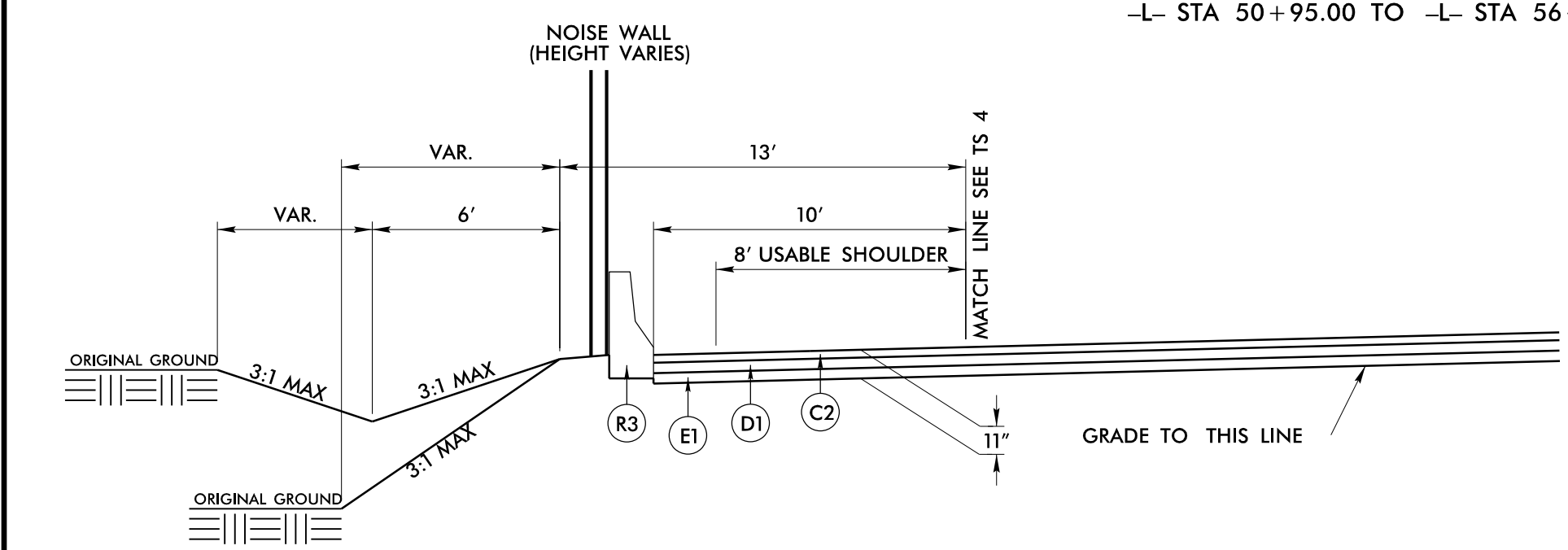


TYPICAL SECTION NO. 4

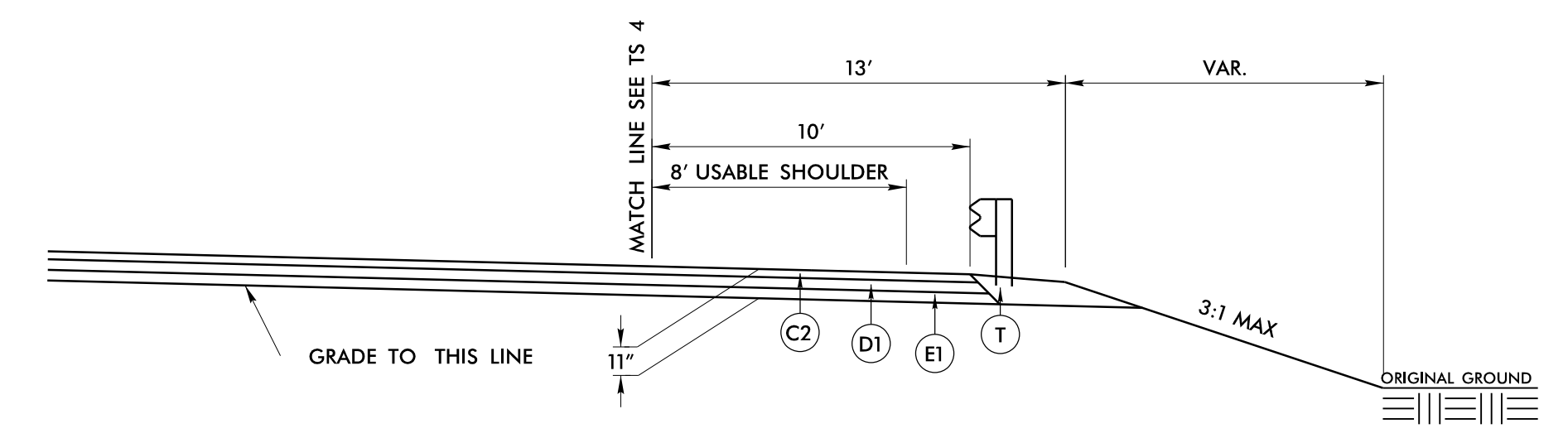
USE TYPICAL SECTION NO. 4B IN CONJUNCTION WITH TYPICAL SECTIONS NO. 3 & 4
-L- STA 50+95.00 TO -L- STA 56+42.59 LEFT

USE TYPICAL SECTION NO. 4
-L- STA 54+68.50 TO -L- STA 58+82

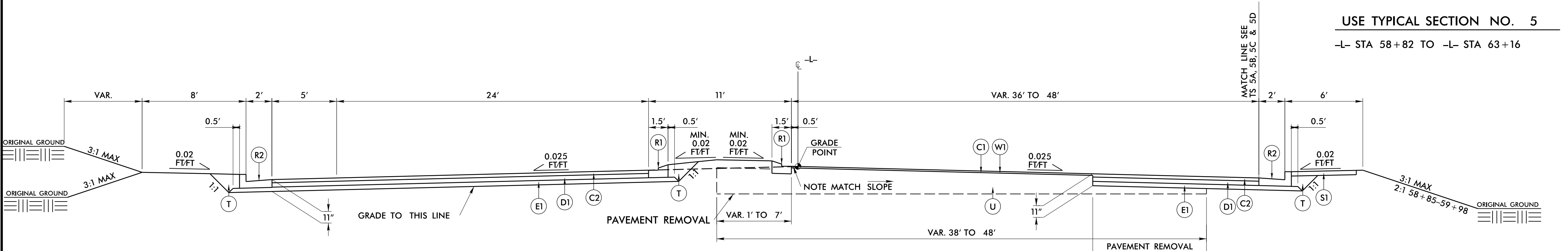
USE TYPICAL SECTION NO. 4A IN CONJUNCTION WITH TYPICAL SECTIONS NO. 3 & 4
-L- STA 52+70.00 TO -L- STA 56+01.25 RIGHT
-L- STA 56+42.59 TO -L- STA 58+28.84 LEFT



TYPICAL SECTION NO. 4B



TYPICAL SECTION NO. 4A



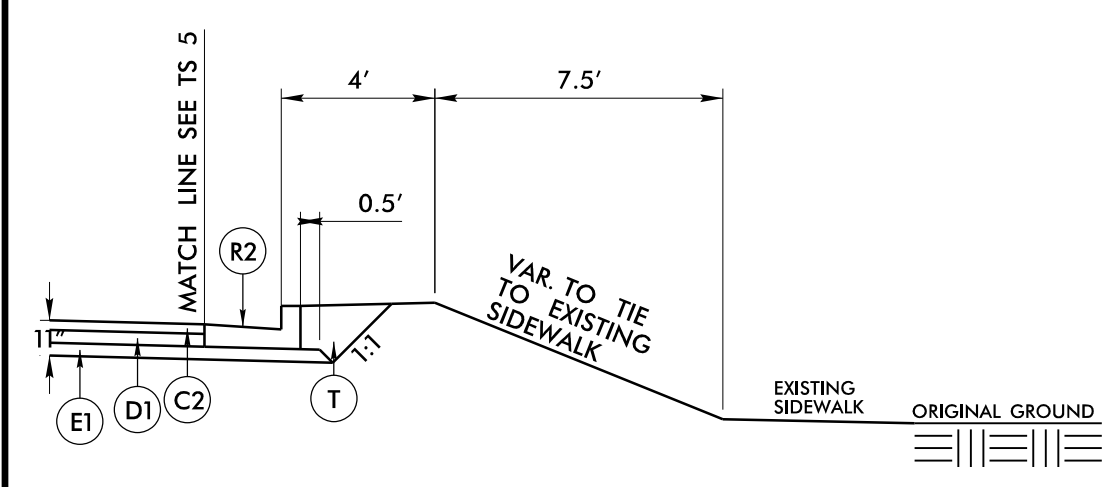
TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5A IN CONJUNCTION WITH TYPICAL SECTIONS NO. 5
-L- STA 60+33 TO -L- STA 60+93

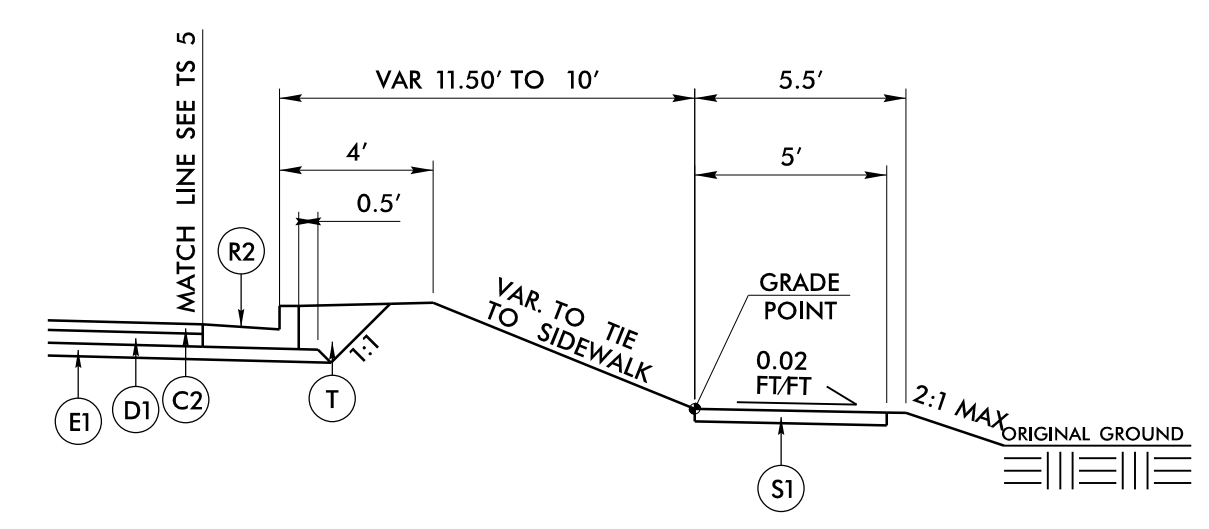
USE TYPICAL SECTION NO. 5B IN CONJUNCTION WITH TYPICAL SECTIONS NO. 5
-L- STA 60+93 TO -L- STA 61+25

USE TYPICAL SECTION NO. 5C IN CONJUNCTION WITH TYPICAL SECTIONS NO. 5
-L- STA 61+25 TO -L- STA 61+93.67

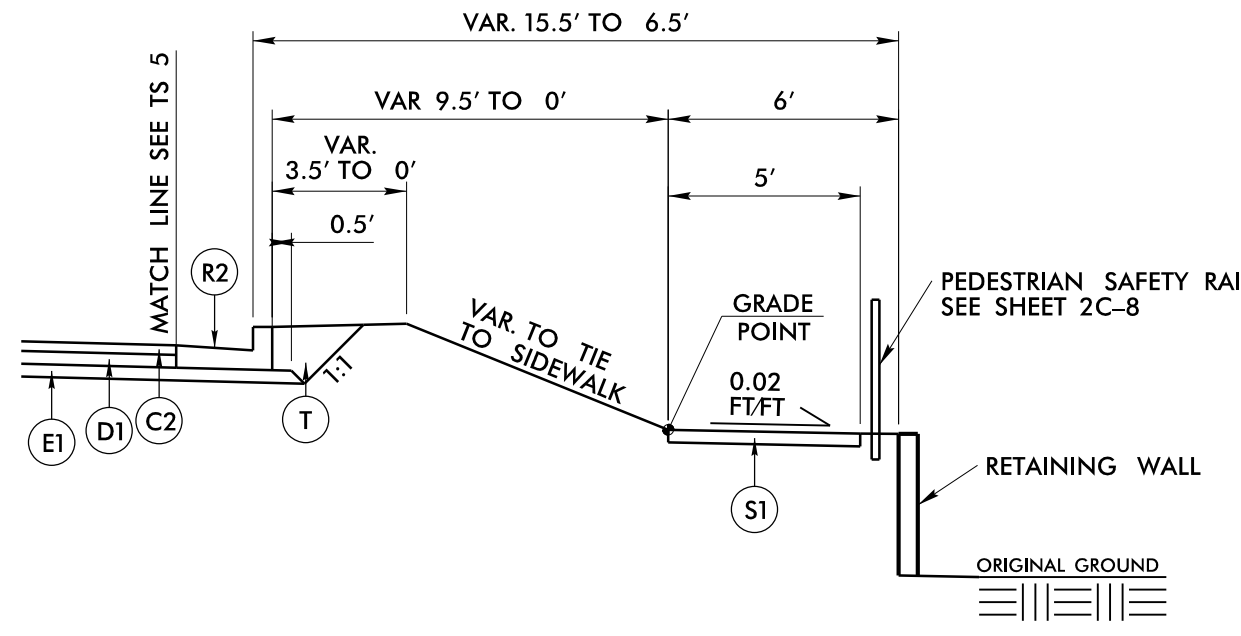
USE TYPICAL SECTION NO. 5D IN CONJUNCTION WITH TYPICAL SECTIONS NO. 5
-L- STA 61+93.67 TO -L- STA 62+55



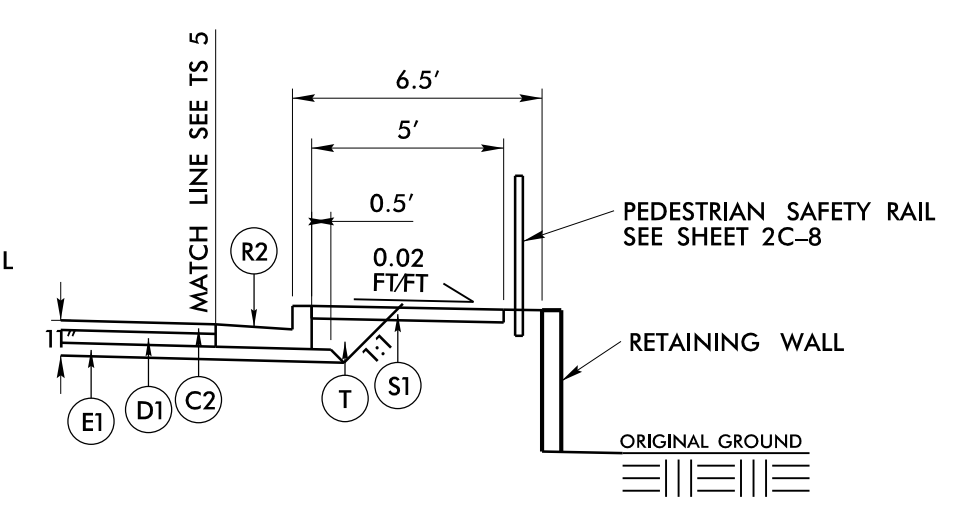
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TYPICAL SECTION NO. 5B



TYPICAL SECTION NO. 5C



TYPICAL SECTION NO. 5D

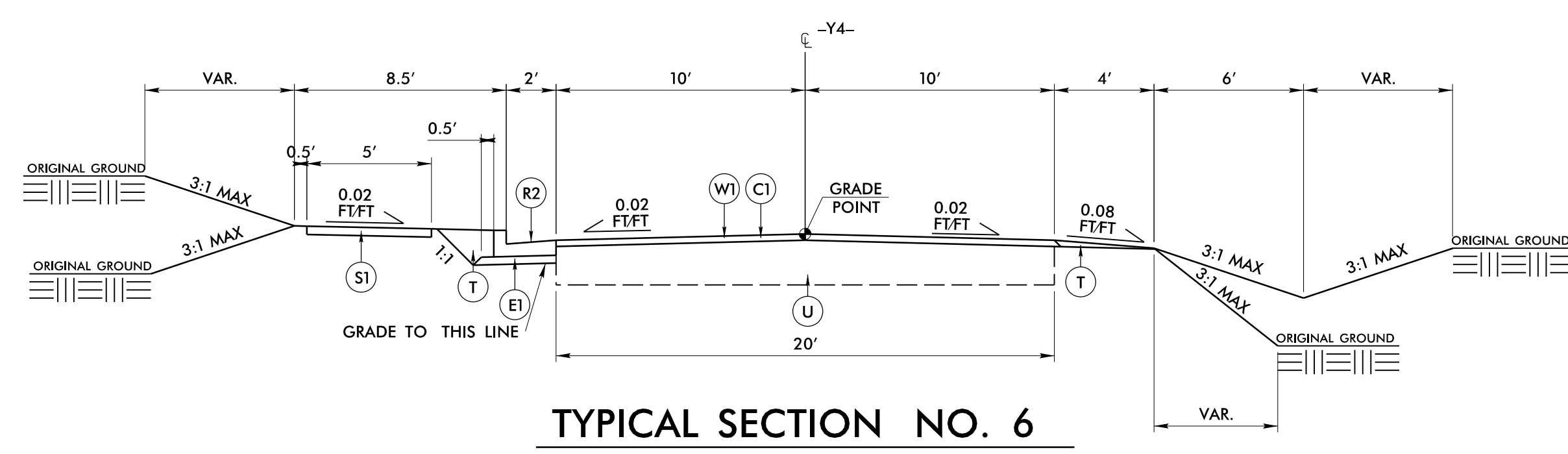
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Division 4 - DDC

6/2/99

REVISIONS

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USE TYPICAL SECTION NO. 6
-Y4- STA 10+35 TO -Y4- STA 12+20



TYPICAL SECTION NO. 6

PROJECT REFERENCE NO. U-6223	SHEET NO. 2A-3
ROADWAY DESIGN ENGINEER 05/17/2018 SEAL 040774 NORWOOD A. GAINEY III	PAVEMENT DESIGN ENGINEER 05/17/2018 SEAL 040774 NORWOOD A. GAINEY III

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

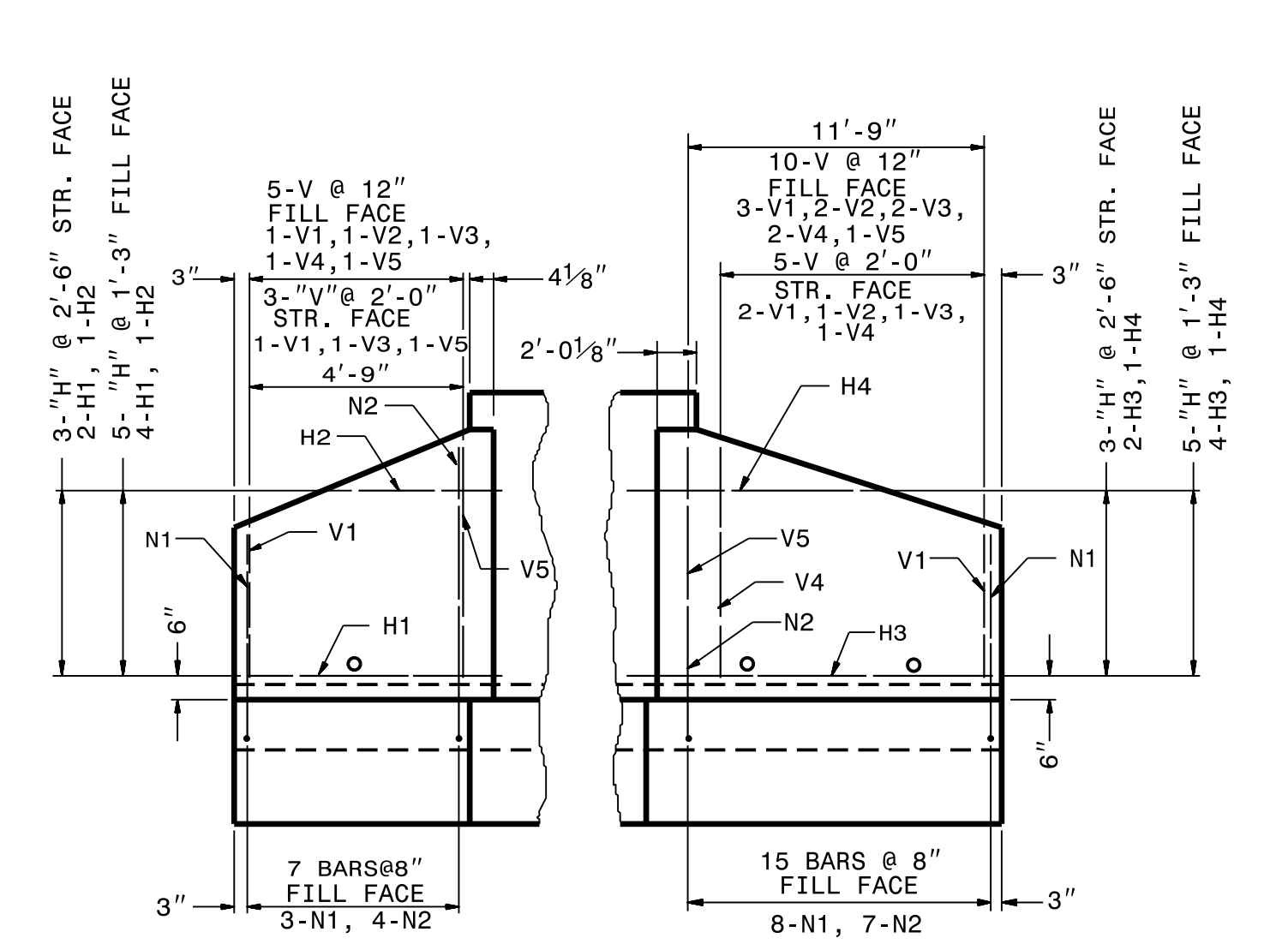
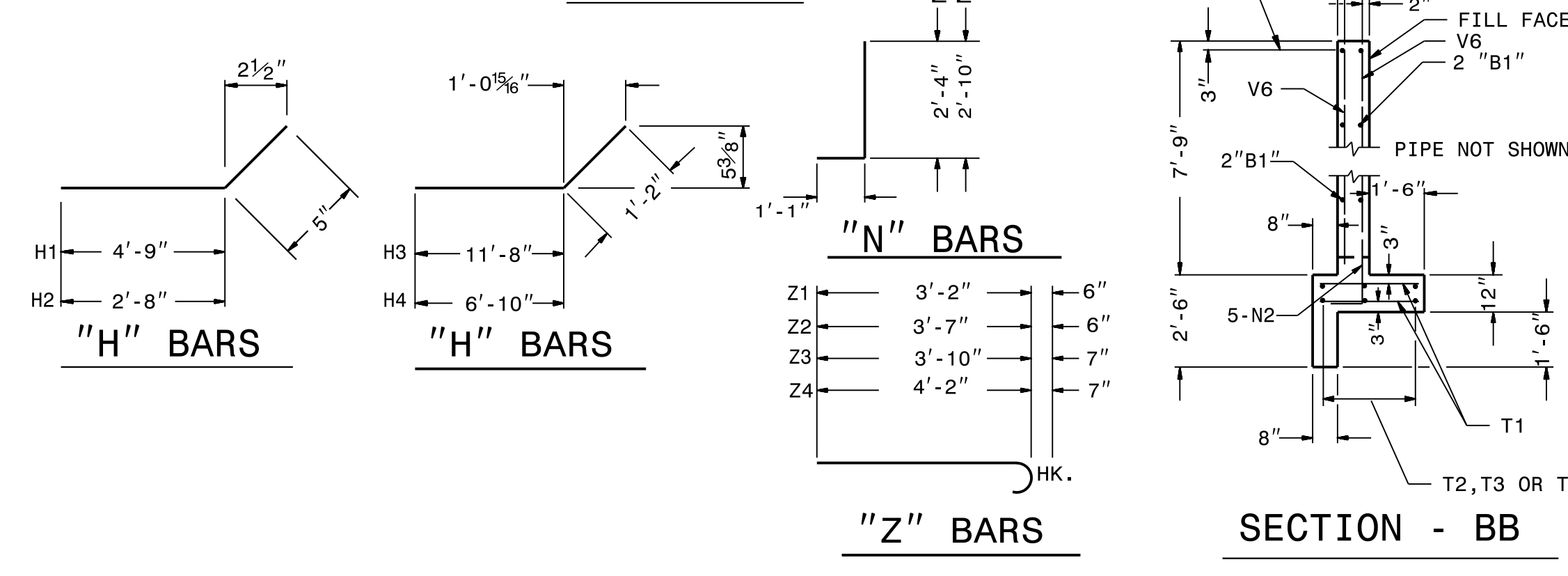
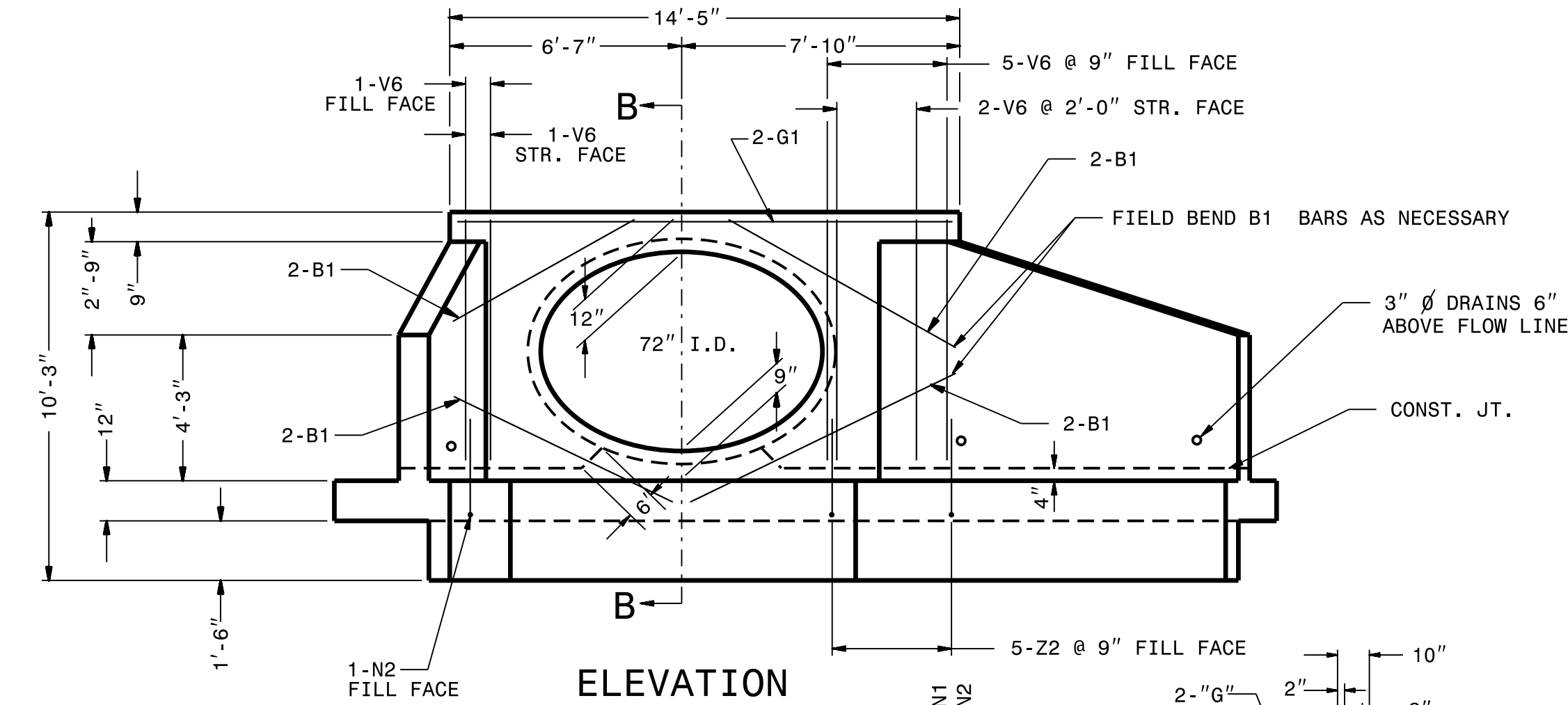
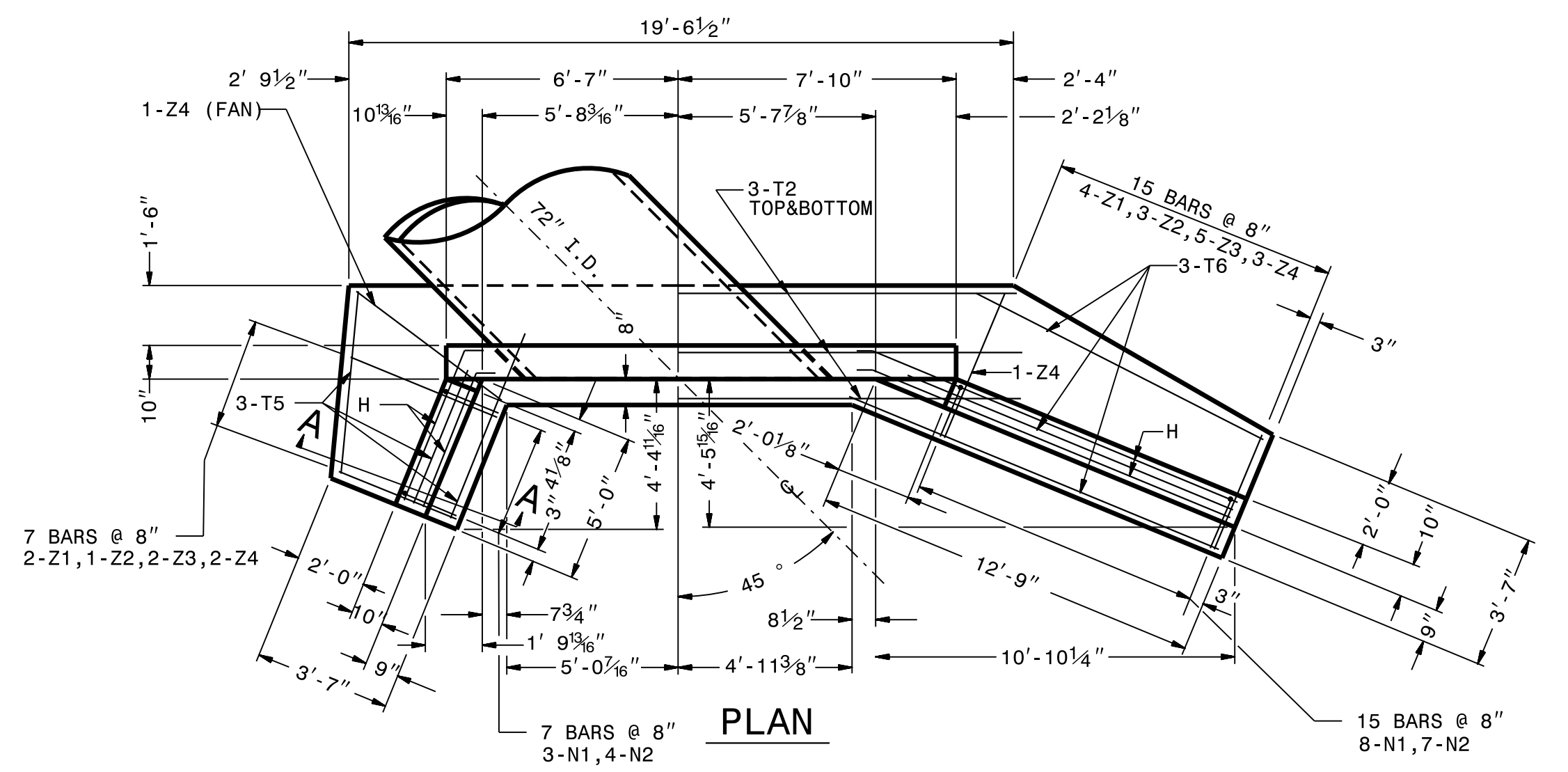
PAVEMENT SCHEDULE	
C1	1.5" S9.5C
C2	3" S9.5C
C3	VAR S9.5C
D1	4" I19.0C
D2	VAR I19.0C
E1	4" B25.0C
E2	VAR B25.0C
R1	1'-6" C&G
R2	2'-6" C&G
R3	SFCB
S1	SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W1	WEDGING

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

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

ENGLISH DETAIL DRAWING FOR
REINFORCED CONCRETE ENDWALL
FOR SINGLE 72" PIPE 45° OR 135° SKEW

SHEET 1 OF 1
838D43



NOTES:
ALL CONCRETE TO BE CLASS "A".
ALL REINFORCING STEEL TO BE ASTM A615-GRADE 60.
ALL REINFORCING STEEL TO BE DEFORMED BARS. WHERE SPLICING OF REINFORCEMENT IS NECESSARY, BARS ARE TO BE LAPPED 45 DIAMETERS. ALL DIMENSIONS RELATIVE TO REINFORCEMENT ARE TO CENTERS OF BARS.
THE FOOTING, CURTAIN WALL AND 4" OF WALL ARE TO BE POURED IN ONE OPERATION ALLOWING NO TIME FOR INITIAL SET TO TAKE PLACE BETWEEN THEM. THE REMAINING WALL SHALL THEN BE POURED IN ONE OPERATION.
ALL EXPOSED CORNERS ARE TO BE CHAMFERED 1".
3" DIAMETER DRAINS TO BE PLACED IN WALL AS SHOWN AND BE 6" ABOVE NORMAL FLOW LINE.
ALL MATERIAL AND WORKMANSHIP AS PER N.C. DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

BILL OF MATERIAL FOR ENDWALL

REINFORCING STEEL		PIPES		
BAR	SIZE	LENGTH	NO.	WEIGHT
Z1	#4	3'-8"	6	15
Z2	#4	4'-1"	4	11
Z3	#5	4'-5"	7	32
Z4	#5	4'-9"	6	30
N1	#4	3'-5"	11	25
N2	#5	3'-11"	17	69
V1	#4	3'-10"	7	10
V2	#4	4'-6"	4	12
V3	#4	5'-1"	5	17
V4	#4	5'-8"	4	15
V5	#4	6'-3"	3	13
V6	#4	7'-3"	9	44
H1	#4	5'-3"	6	21
H2	#4	3'-2"	2	4
H3	#4	12'-10"	6	51
H4	#4	8'-0"	2	11
G1	#7	14'-1"	2	58
T1	#4	2'-6"	56	94
T2	#4	19'-2"	6	77
T5	#4	5'-3"	3	11
T6	#4	10'-0"	3	20
B1	#4	6'-6"	8	35
REINFORCING STEEL LBS.		683		
CONC./C.M. CU. YDS.		10.0		
CONC./R.C. CU. YDS.		9.4		

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

ENGLISH DETAIL DRAWING FOR
REINFORCED CONCRETE ENDWALL
FOR SINGLE 72" PIPE 45° OR 135° SKEW

SHEET 1 OF 1
838D43

26-NOV-2019 07:35 S:\Contracts\Special Details\english\hydro\endwalls.dgn Jhowerston AT CSD-320965



DocuSigned by:
Ron Davenport

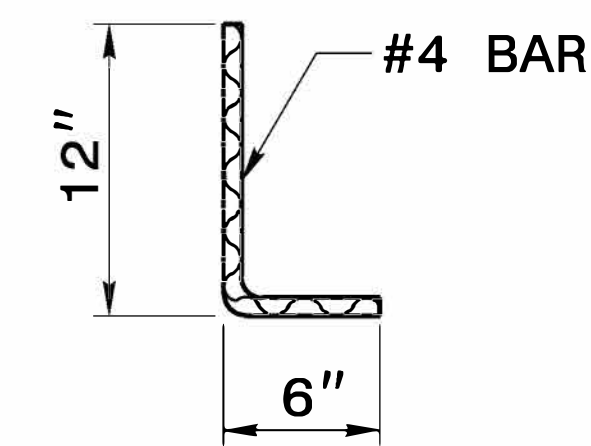
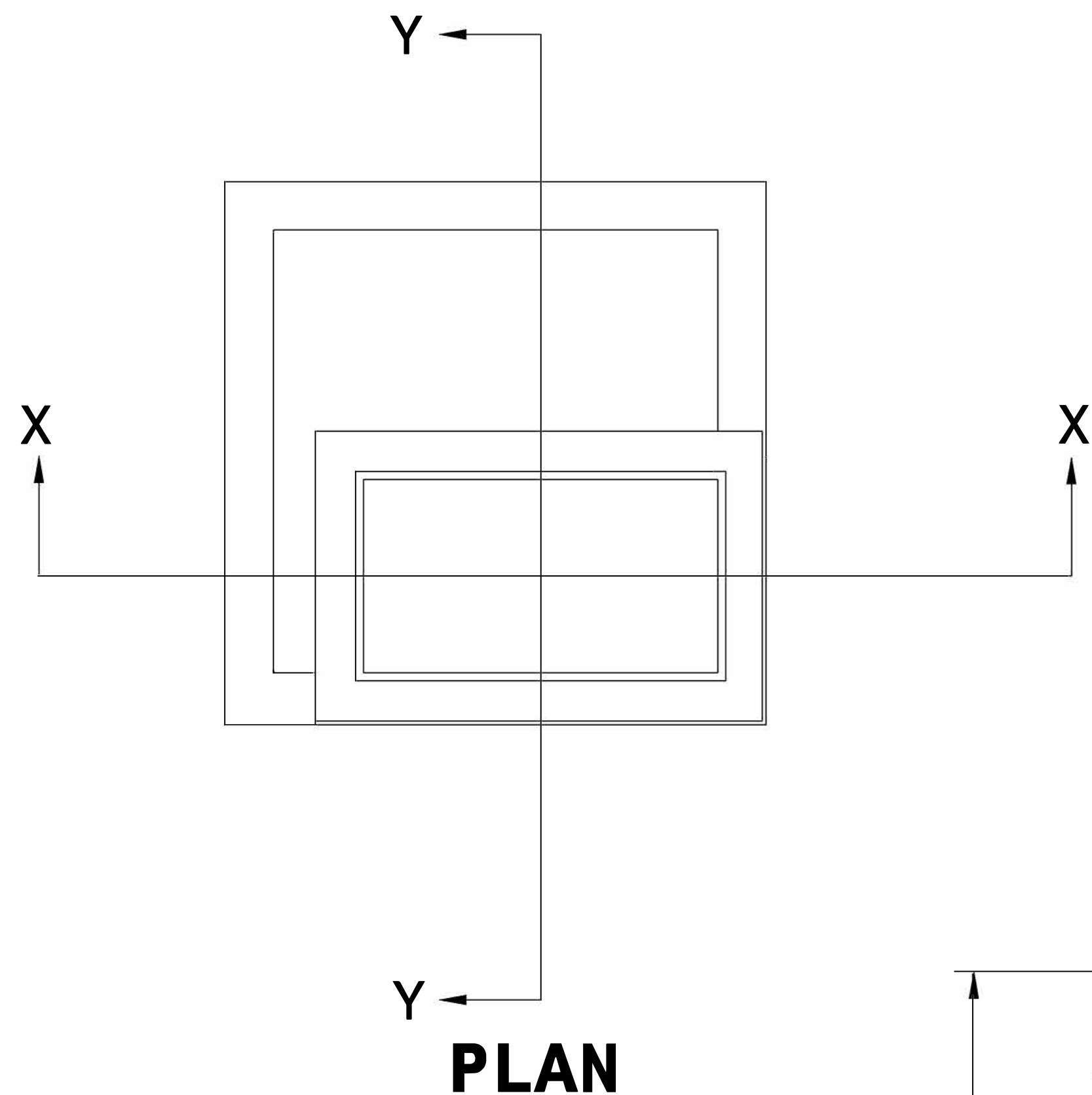
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

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

**DETAIL OF REINFORCED
CONCRETE ENDWALL FOR
72" DIAMETER PIPE - 45° SKEW**

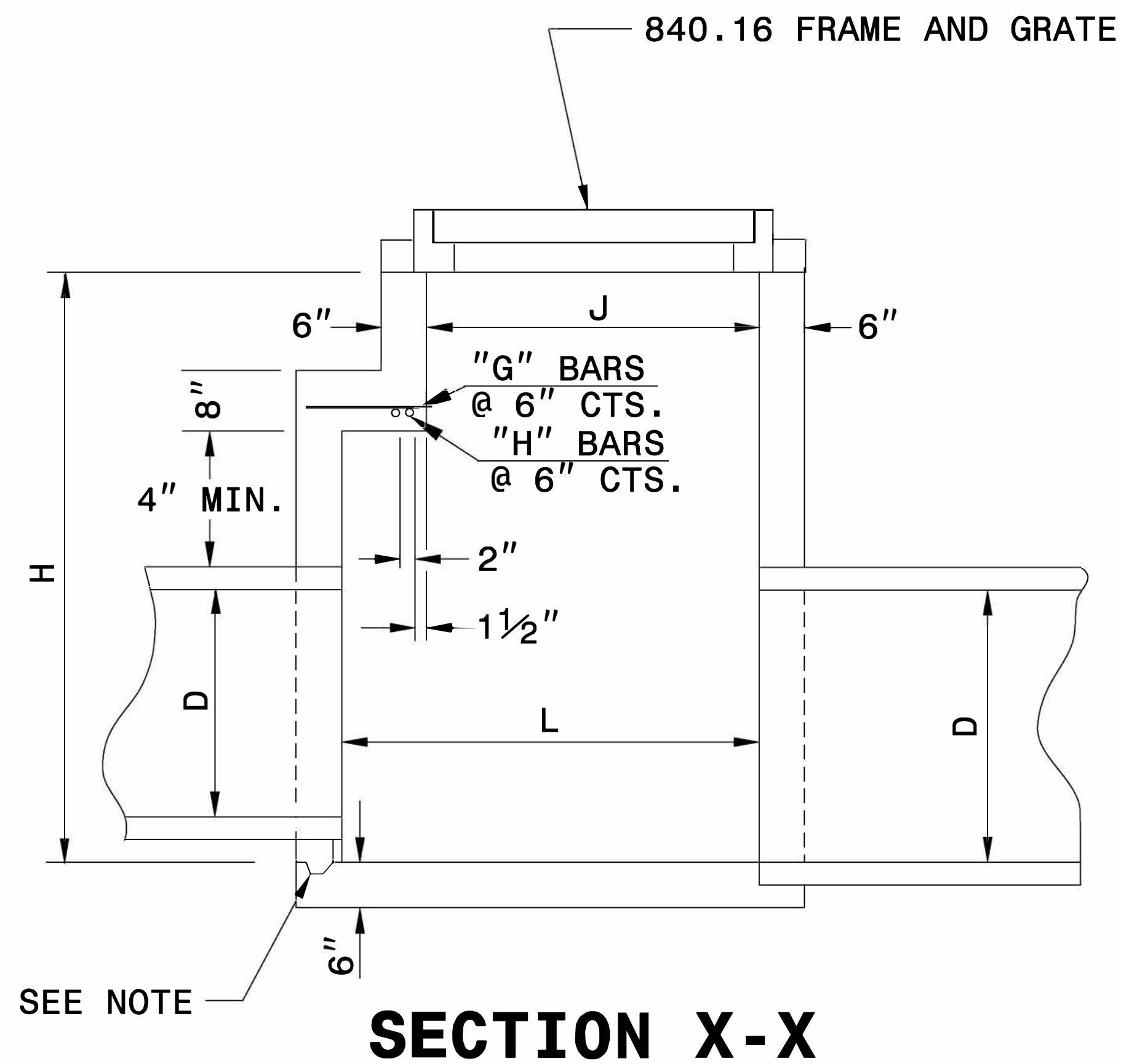
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MODIFIED BY: nbritt DATE: 05-28-10
CHECKED BY: DATE:
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DRAWING NOT TO SCALE



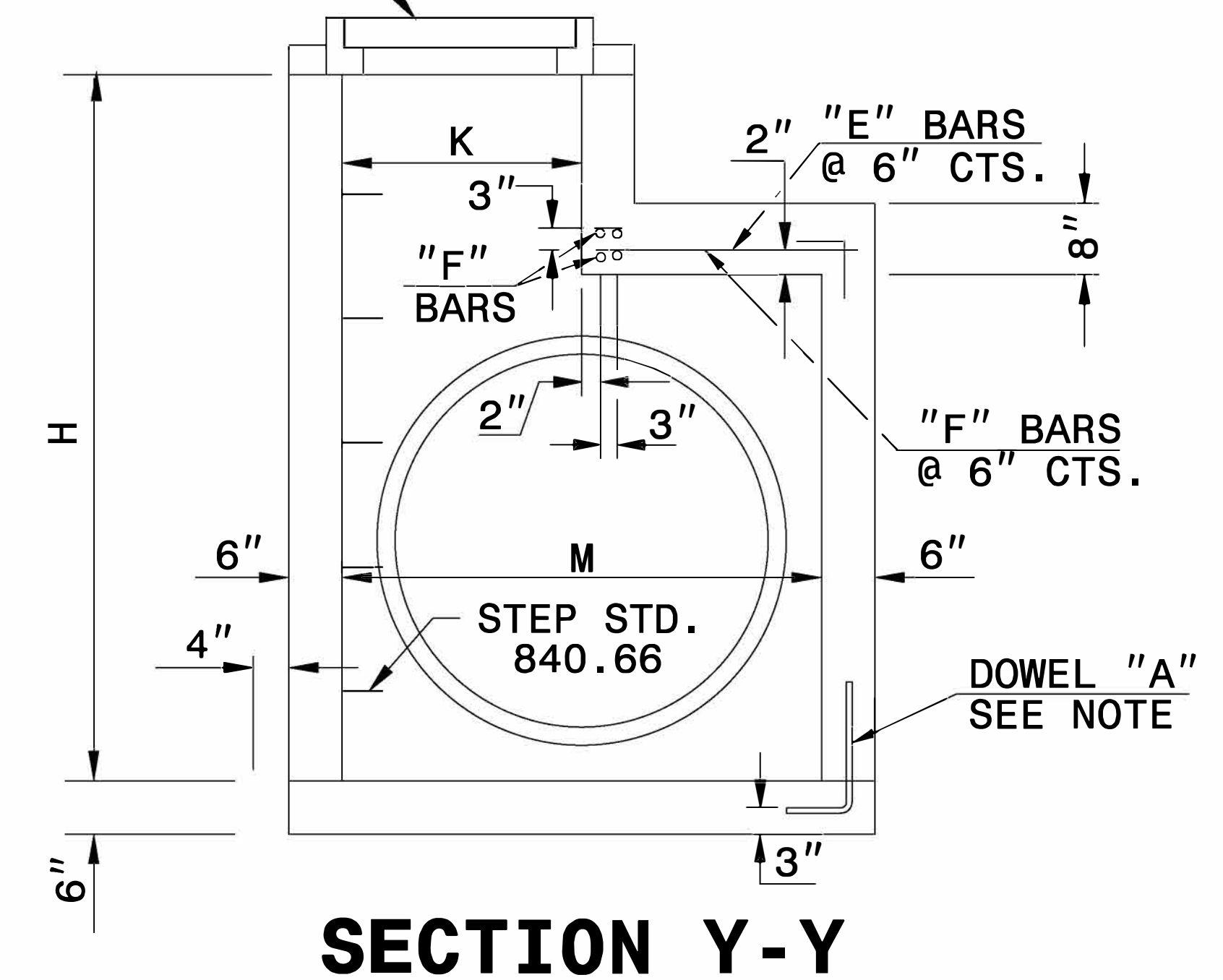
DOWEL

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL 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.
 INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
 INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
 CHAMFER ALL EXPOSED CORNERS 1".
 DRAWING NOT TO SCALE.
 DIMENSIONS MAY BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER.



SECTION X-X

840.16 FRAME AND GRATE



SECTION Y-Y

MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE DROP INLET (BASED ON MIN. HEIGHT, H)

DIMENSIONS OF BOX AND PIPE						REINFORCING STEEL - NO. 4 BARS								CU YDS CONC. IN BOX				DEDUCTIONS FOR ONE PIPE		
PIPE D	SPAN J	WIDTH K	SPAN L	WIDTH M	HEIGHT H	BARS E NO.	BARS E LENGTH	BARS F NO.	BARS F LENGTH	BARS G NO.	BARS G LENGTH	BARS H NO.	BARS H LENGTH	TOTAL LBS.	BOTTOM SLAB	H TOTAL	H PER FT HT	TOTAL	C.S.	R.C.
12"	3'-0"	2'-0"	3'-8"	2'-0"	3'-9"	—	—	—	—	—	—	—	—	—	0.362	0.926	0.247	1.288	0.015	0.024
15"	3'-0"	2'-0"	3'-8"	2'-0"	4'-0"	—	—	—	—	—	—	—	—	—	0.362	0.988	0.247	1.350	0.023	0.036
18"	↗	↗	↗	2'-0"	4'-3"	—	—	—	—	—	—	—	—	—	0.362	1.050	0.247	1.412	0.033	0.049
24"	↗	↗	↗	2'-10"	4'-9"	8	1'-5"	6	4'-9"	—	—	—	—	27	0.444	1.362	0.278	1.806	0.059	0.085
30"	↗	↗	↗	3'-8"	3'-5"	8	2'-0"	7	4'-9"	—	—	—	—	33	0.502	1.644	0.288	2.146	0.092	0.127
36"	↗	↗	↗	4'-0"	4'-0"	8	2'-5"	8	4'-11"	4	0'-9"	2	4'-11"	47	0.560	1.931	0.321	2.525	0.132	0.178
42"	↗	↗	↗	4'-10"	4'-10"	10	3'-1"	9	5'-7"	—	—	—	—	67	0.704	2.500	0.370	3.282	0.180	0.243
48"	↗	↗	↗	5'-4"	5'-4"	11	3'-7"	10	6'-1"	—	—	—	—	87	0.823	3.013	0.407	3.920	0.235	0.317
54"	↗	↗	↗	6'-0"	6'-0"	12	4'-1"	11	6'-7"	—	—	—	—	107	0.951	3.589	0.444	4.677	0.297	0.401
60"	↗	↗	↗	6'-6"	6'-6"	13	4'-9"	12	7'-3"	—	—	—	—	135	1.311	4.539	0.494	5.775	0.367	0.495
66"	↗	↗	↗	7'-2"	7'-2"	14	5'-4"	14	7'-10"	—	—	—	—	168	1.136	5.061	0.537	6.506	0.444	0.599
72"	3'-0"	2'-0"	7'-8"	7'-8"	8'-9"	15	5'-11"	15	8'-5"	4	4'-3"	8	8'-5"	199	1.500	5.860	0.580	7.473	0.528	0.713

05/17/2022

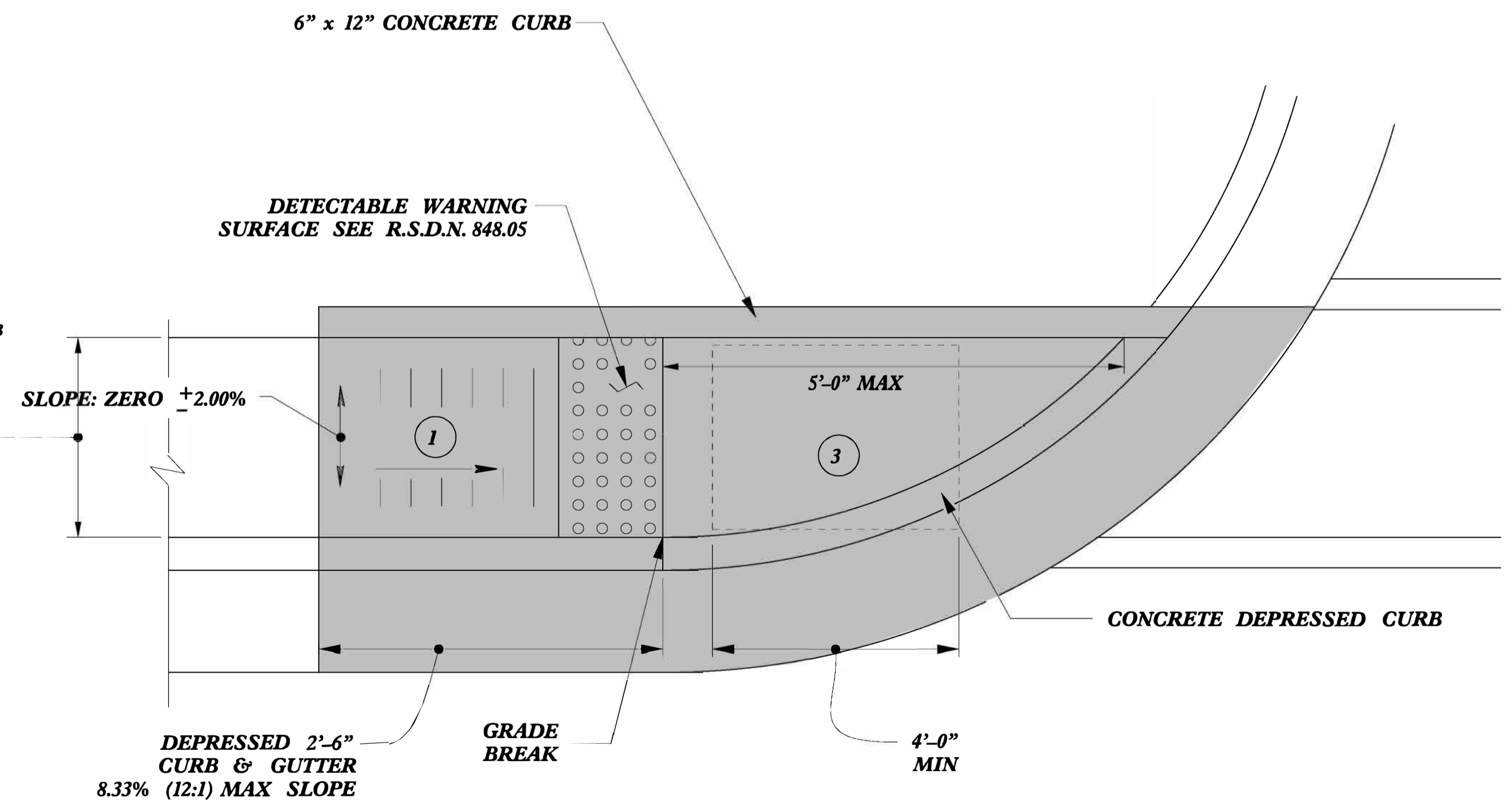
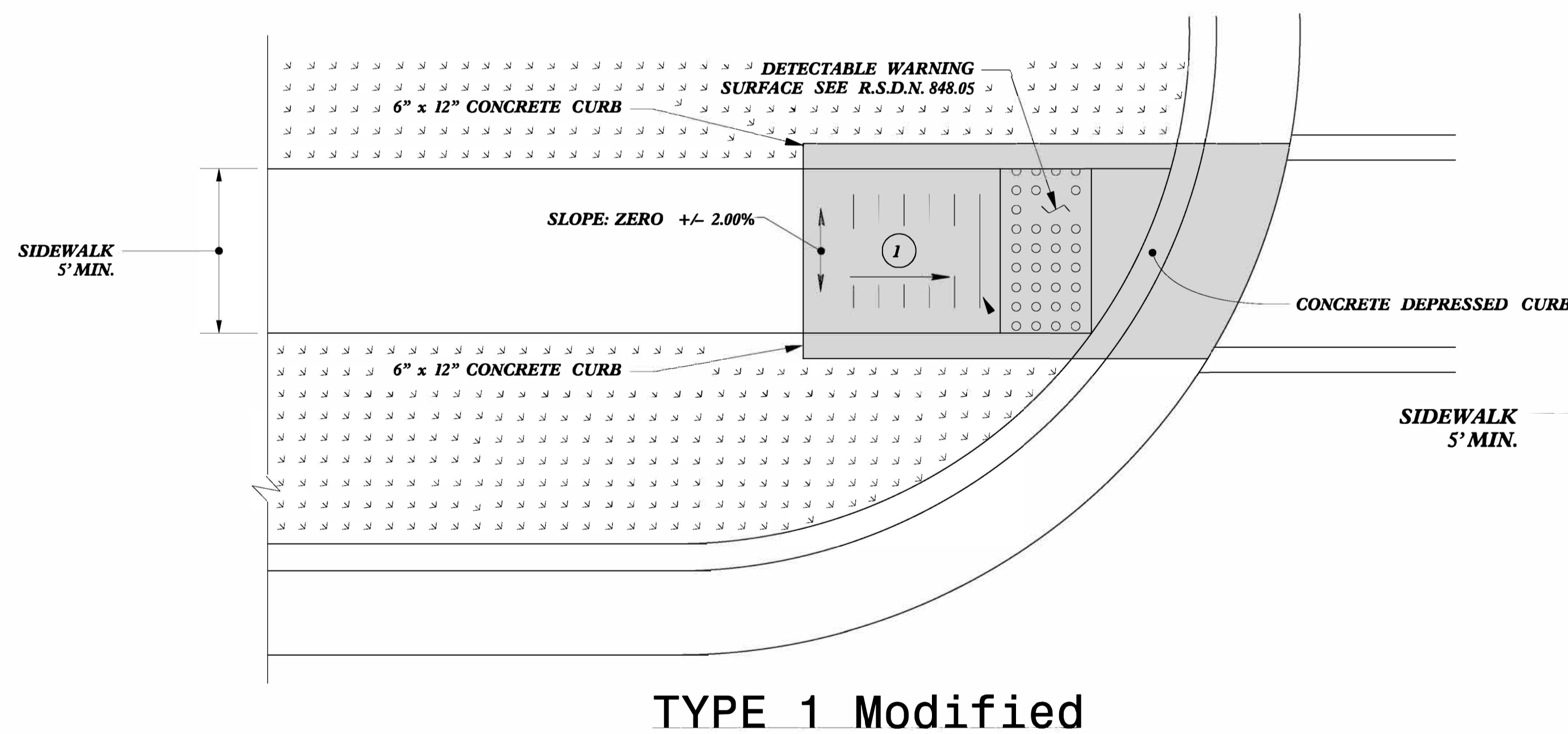
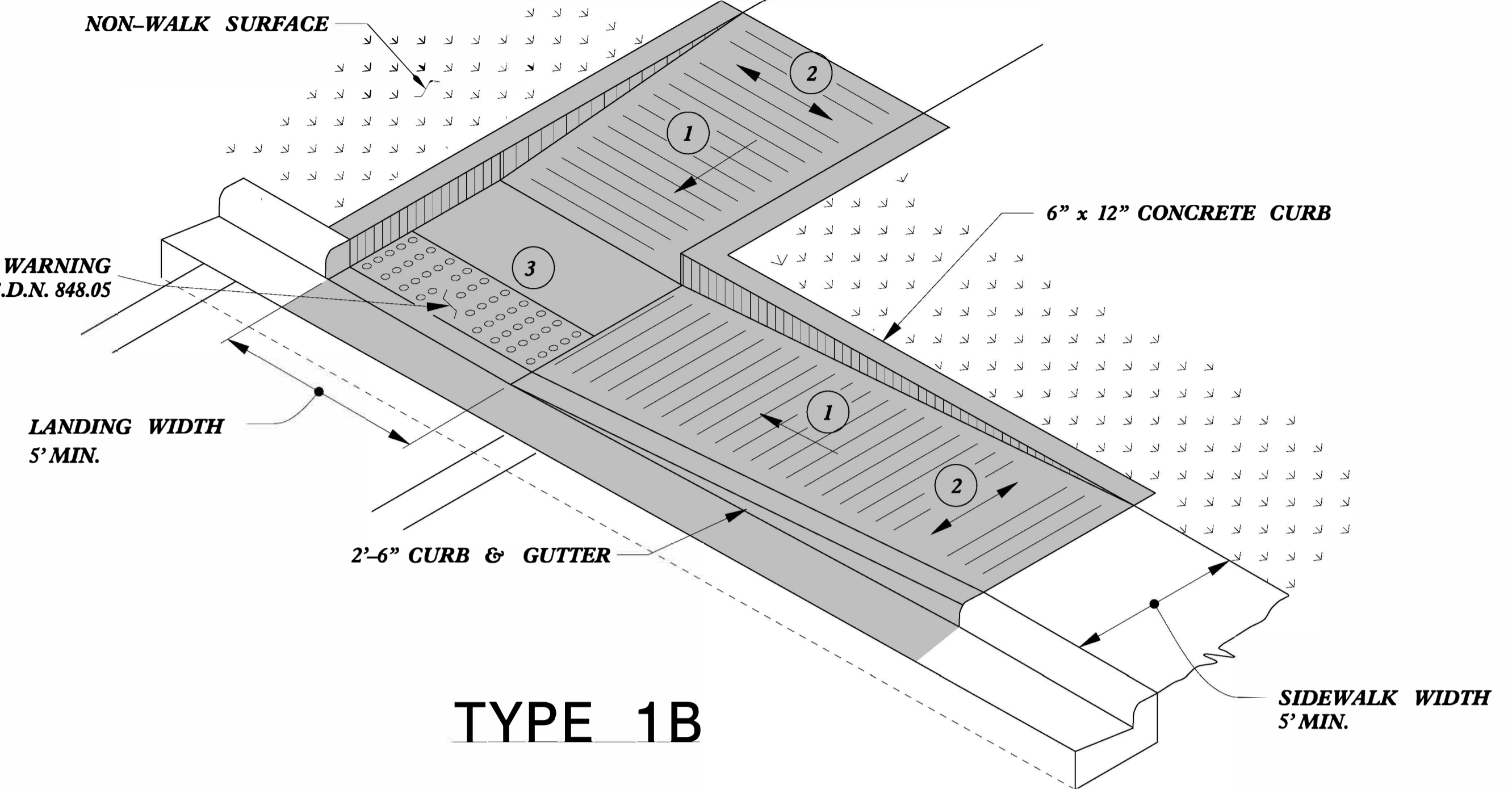
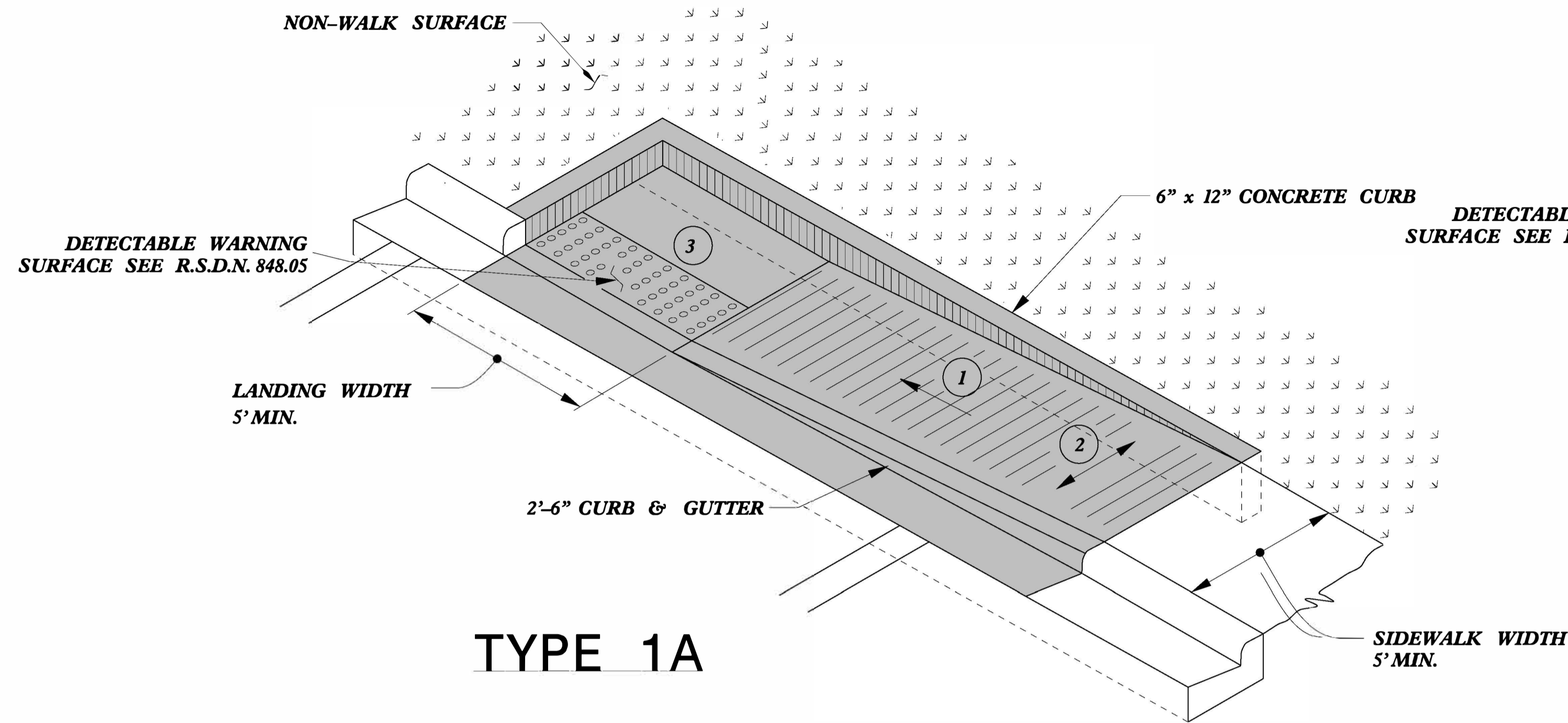


DocuSigned by:
Ren Davernport
F818038A47A442

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SPECIAL DI

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 MODIFIED BY: rnbritt DATE: 08-25-09
 CHECKED BY: DATE:
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- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

PAY LIMITS FOR 1 CURB RAMP

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

05/17/2022



DocuSigned by:
Ron Davenport
F81B0038A47A442

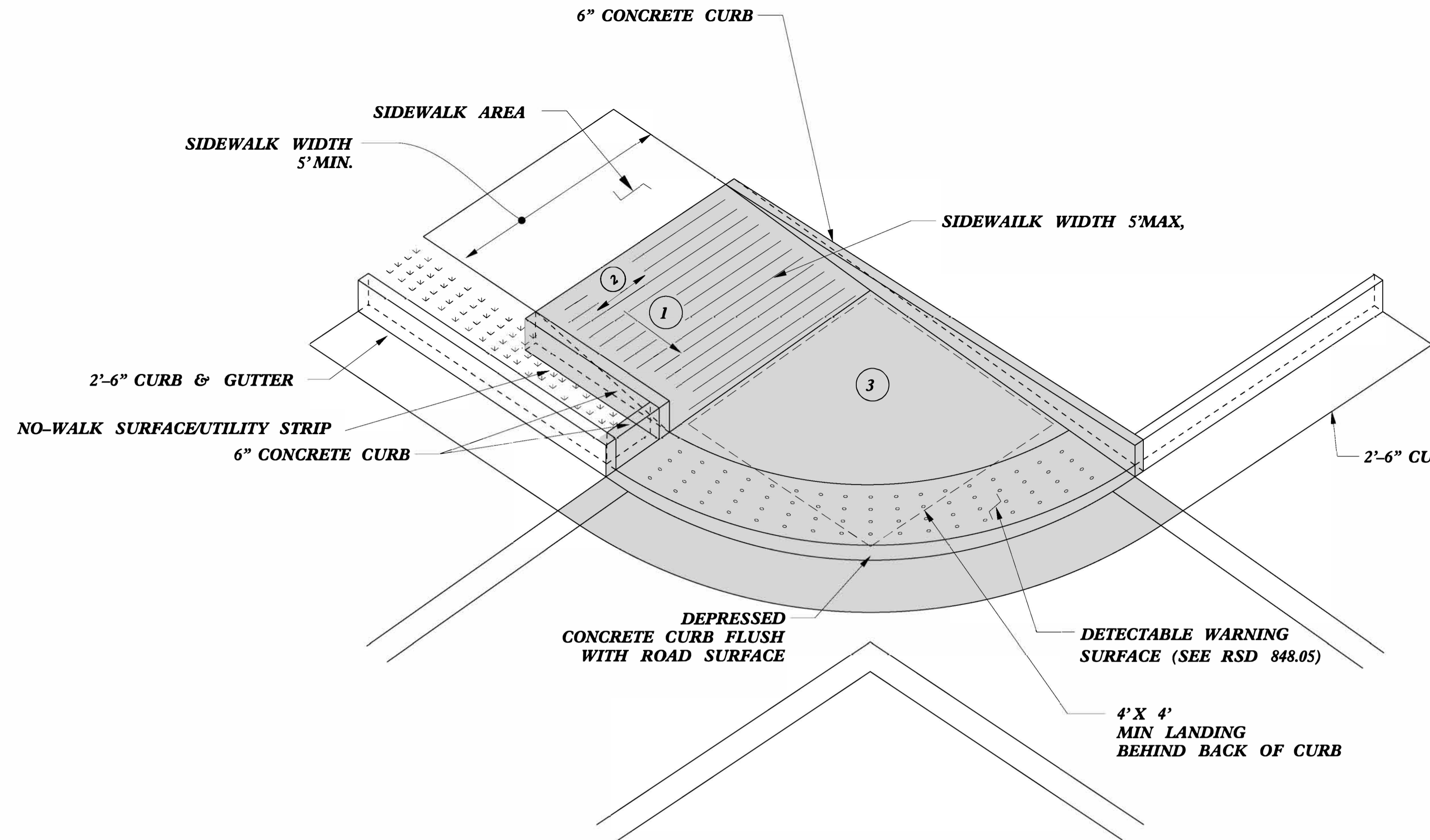
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AND DEVELOPMENT UNIT**
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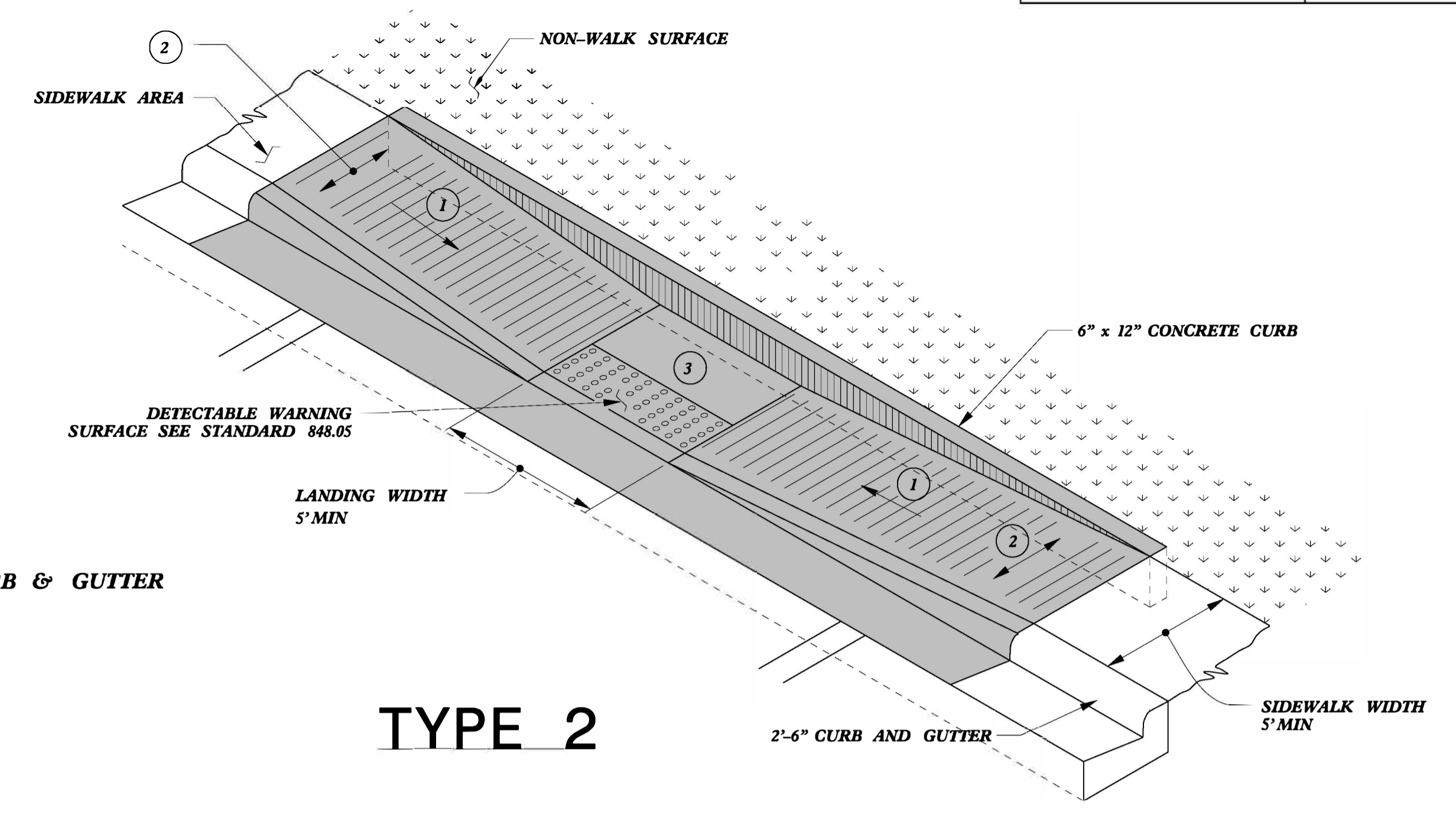
CURB RAMPS
Directional Ramps

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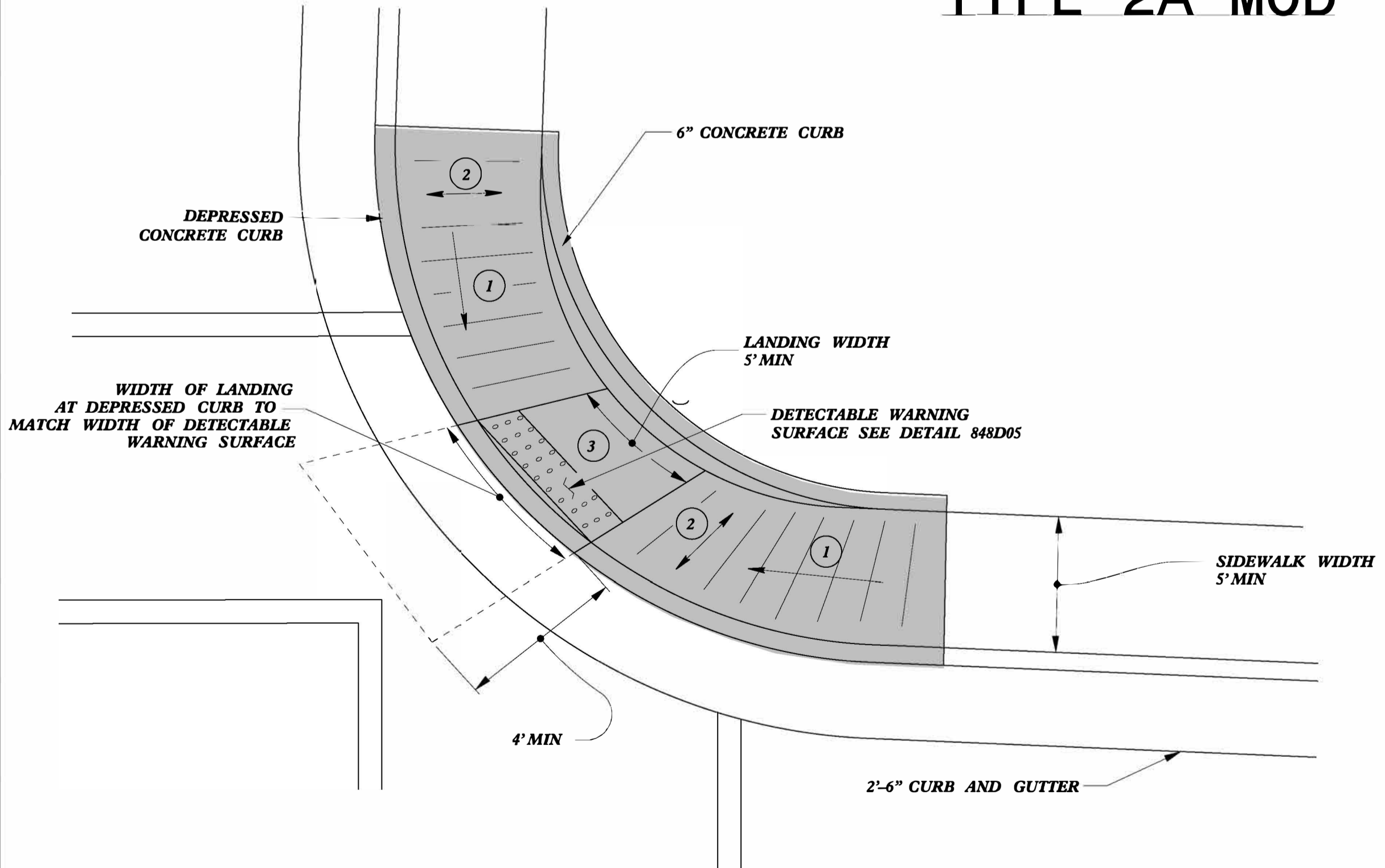
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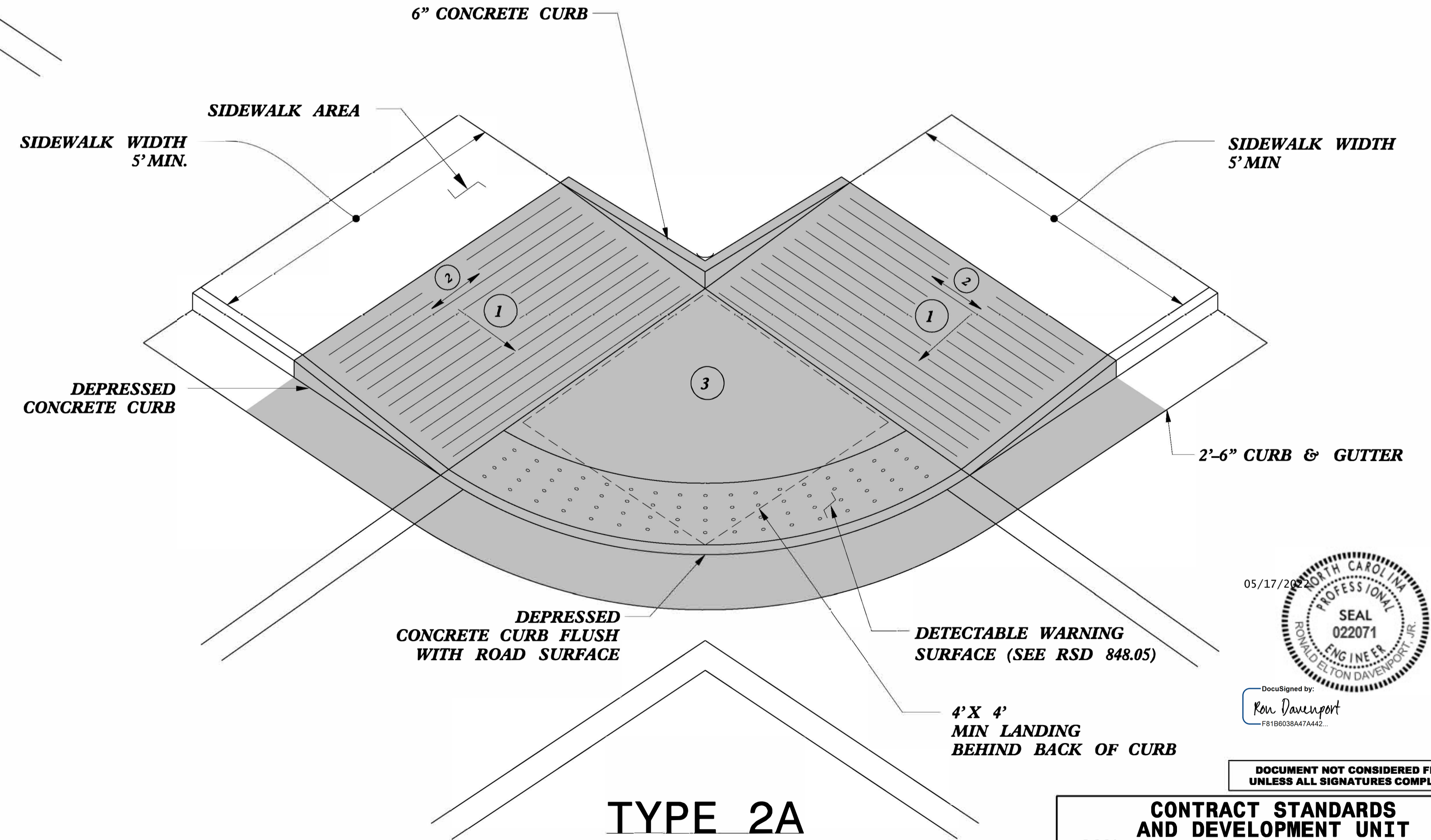
TYPE 2A MOD



TYPE 2



TYPE 2B



TYPE 2A

- 1** 8.33% (12:1) MAX RAMP SLOPE
- 2** CROSS SLOPE: 2.00%
- 3** CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

PAY LIMITS FOR 1 CURB RAMP



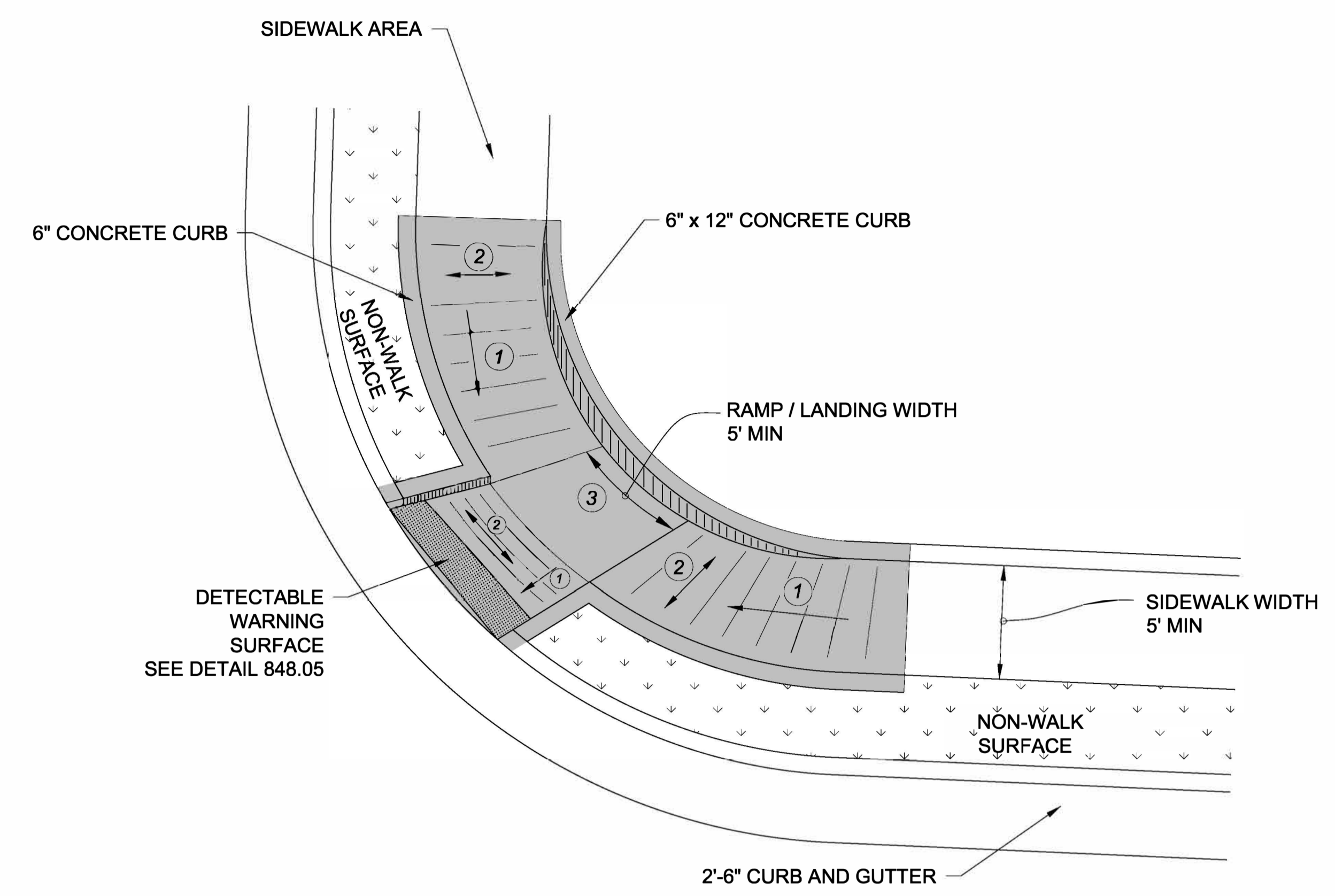
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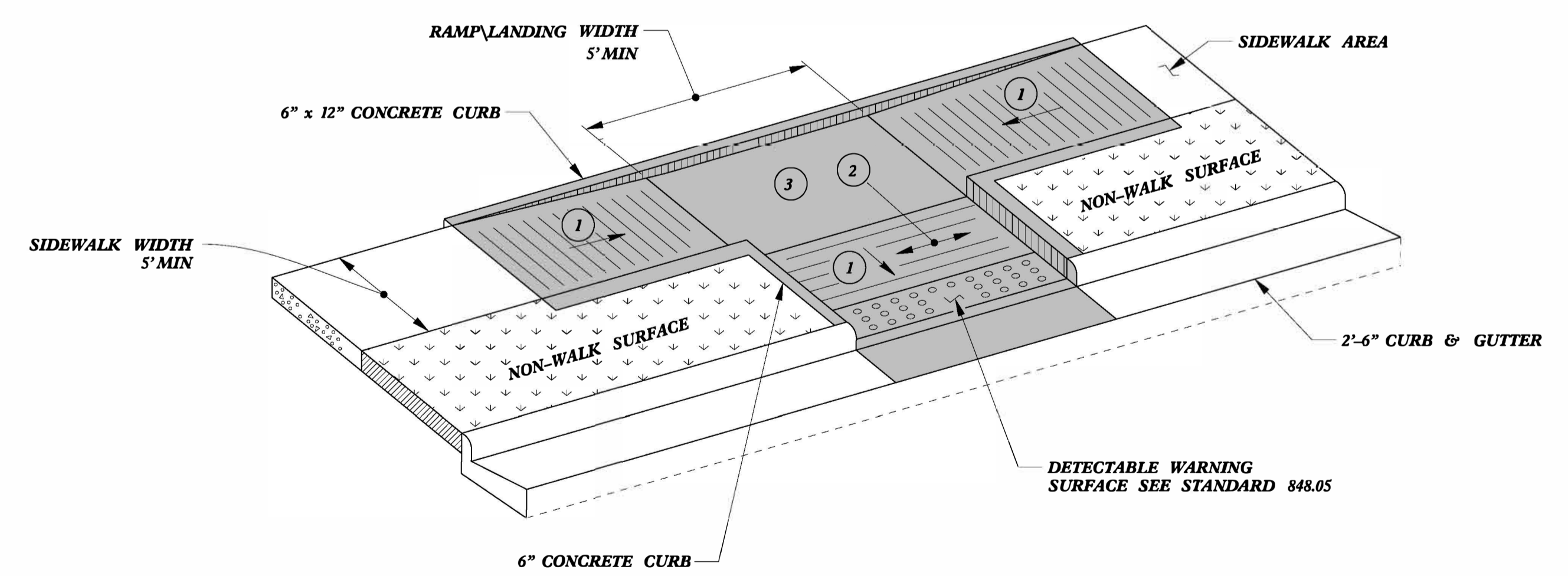
CURB RAMPS

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC. stds/2012CurbRamp/CurbRampDetails.dgn

PAY LIMITS FOR 1 CURB RAMP



**TYPE 3 MODIFIED
INSTALLATION IN A RADIUS**



TYPE 3

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

05/17/2022



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Ren Davenport
F81B0038A47A442

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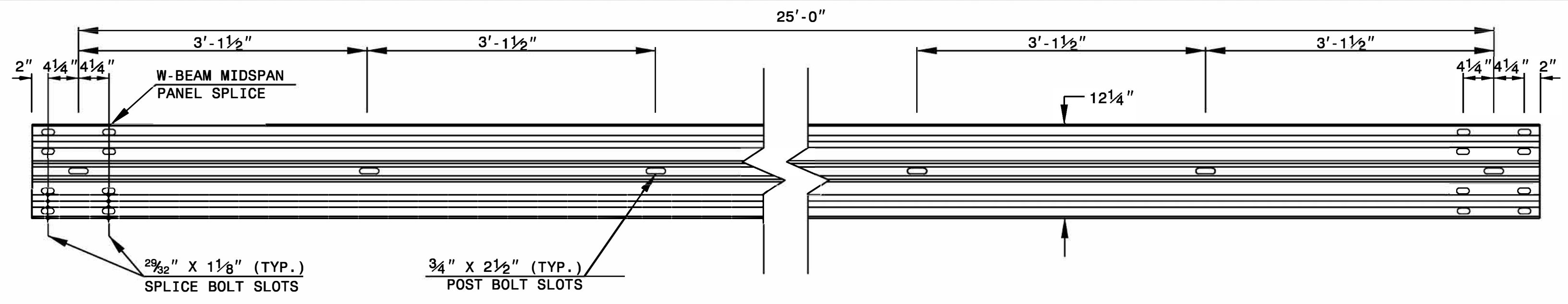
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
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MODIFIED BY:	DATE:
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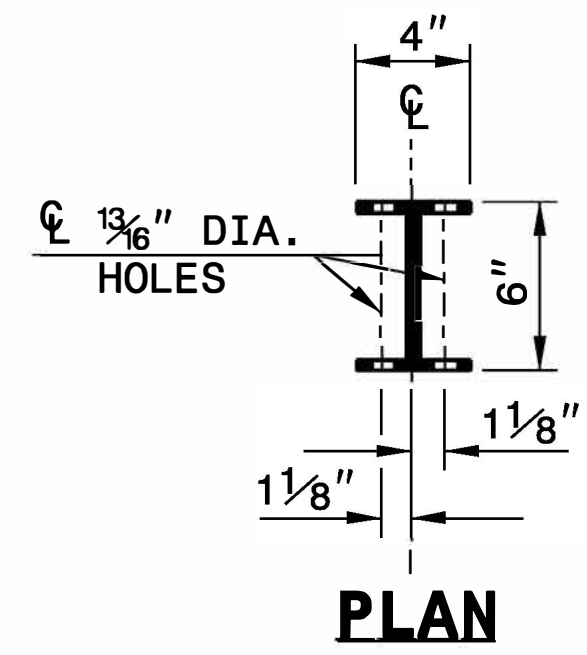
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

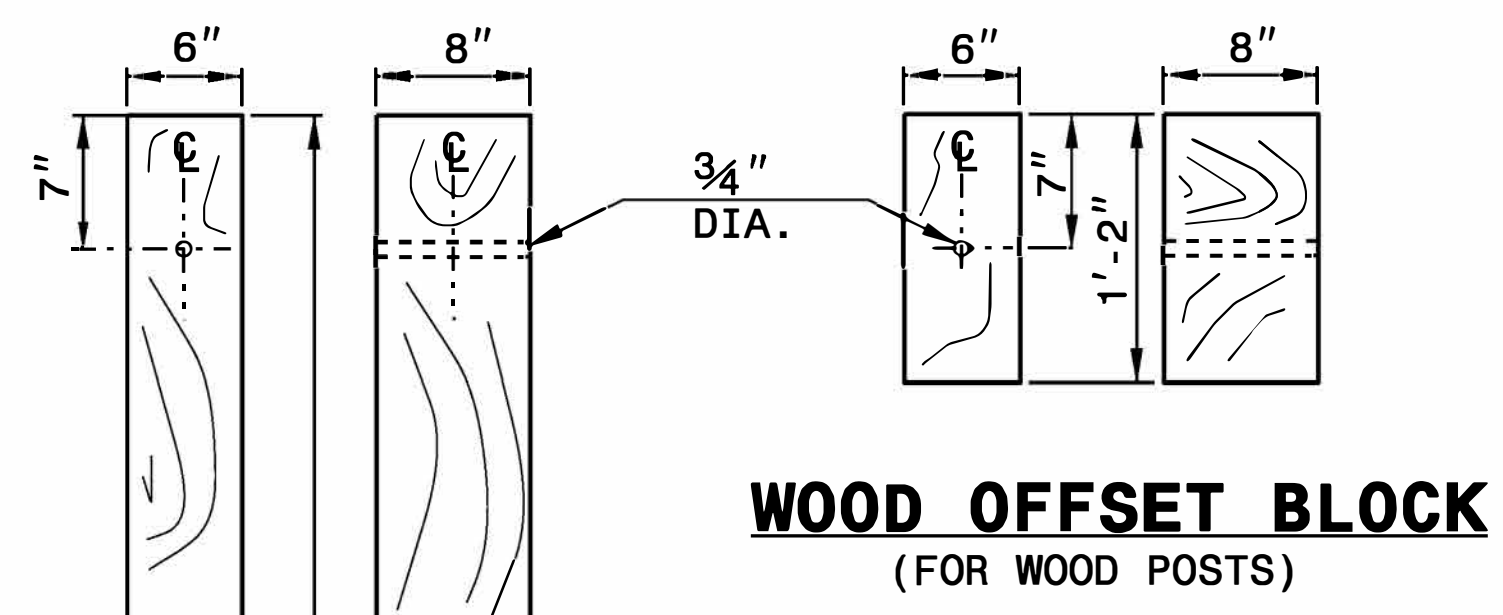
SHEET 6 OF 8
862D02



STANDARD W-BEAM GUARDRAIL



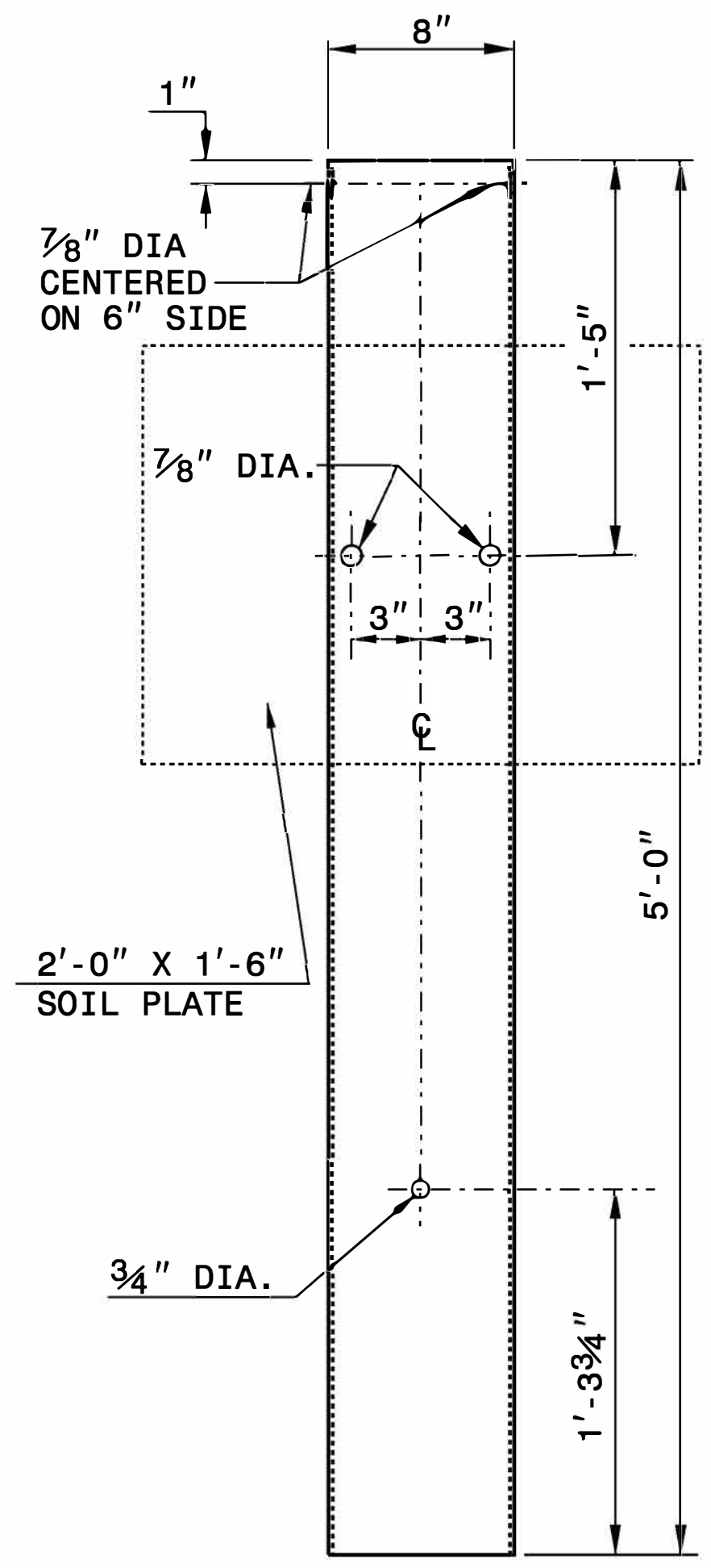
PLAN



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

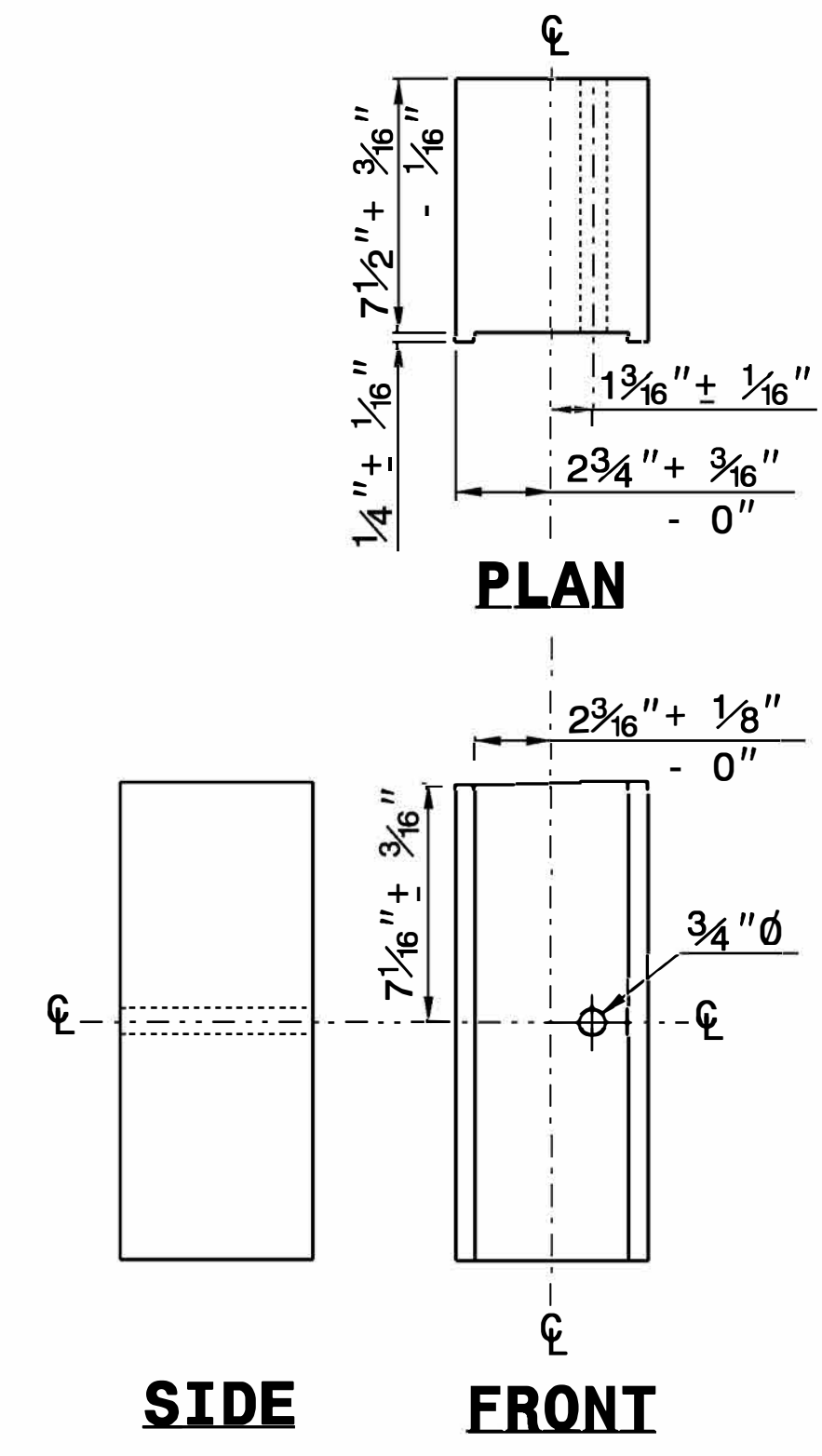
**STANDARD
LINE POST**

**SHORT WOOD
BREAKAWAY POST**



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

SYSTEM PARTS

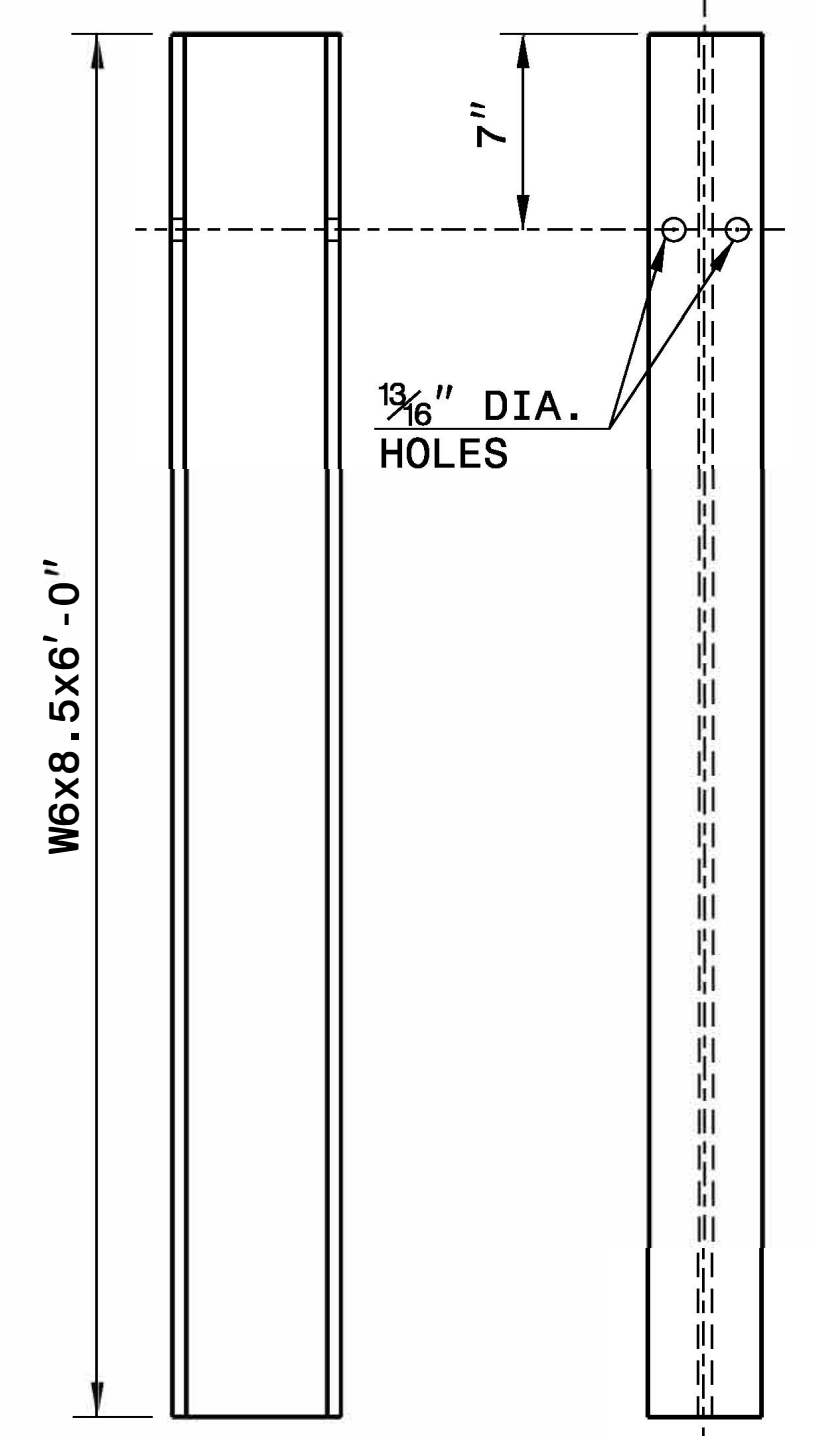


PLAN

SIDE

FRONT

**ROUTED
OFFSET BLOCK**



SIDE

FRONT

"W6" STEEL POST

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02

05/17/2022



DocuSigned by:
Kevin Davenport
F81B0038A74442

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

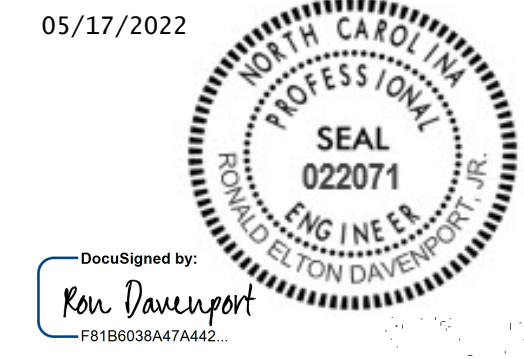
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MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.:	

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 Jhowerton AT: CSU-212855

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
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> </div> <div style="width: 45%;"> <p>NOTE:</p> <ul style="list-style-type: none"> **POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER. *THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT. -SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" X 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB. -MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER). -LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW. -SEE SHEET 3 FOR POST SECTIONS 1 THRU 9. </div> </div>		
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE		

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
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> </div> <div style="width: 45%;"> <p>NOTE:</p> <ul style="list-style-type: none"> **POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER. *THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT. -SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" X 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB. -MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER). -LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW. -SEE SHEET 3 FOR POST SECTIONS 1 THRU 9. </div> </div>		
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER		



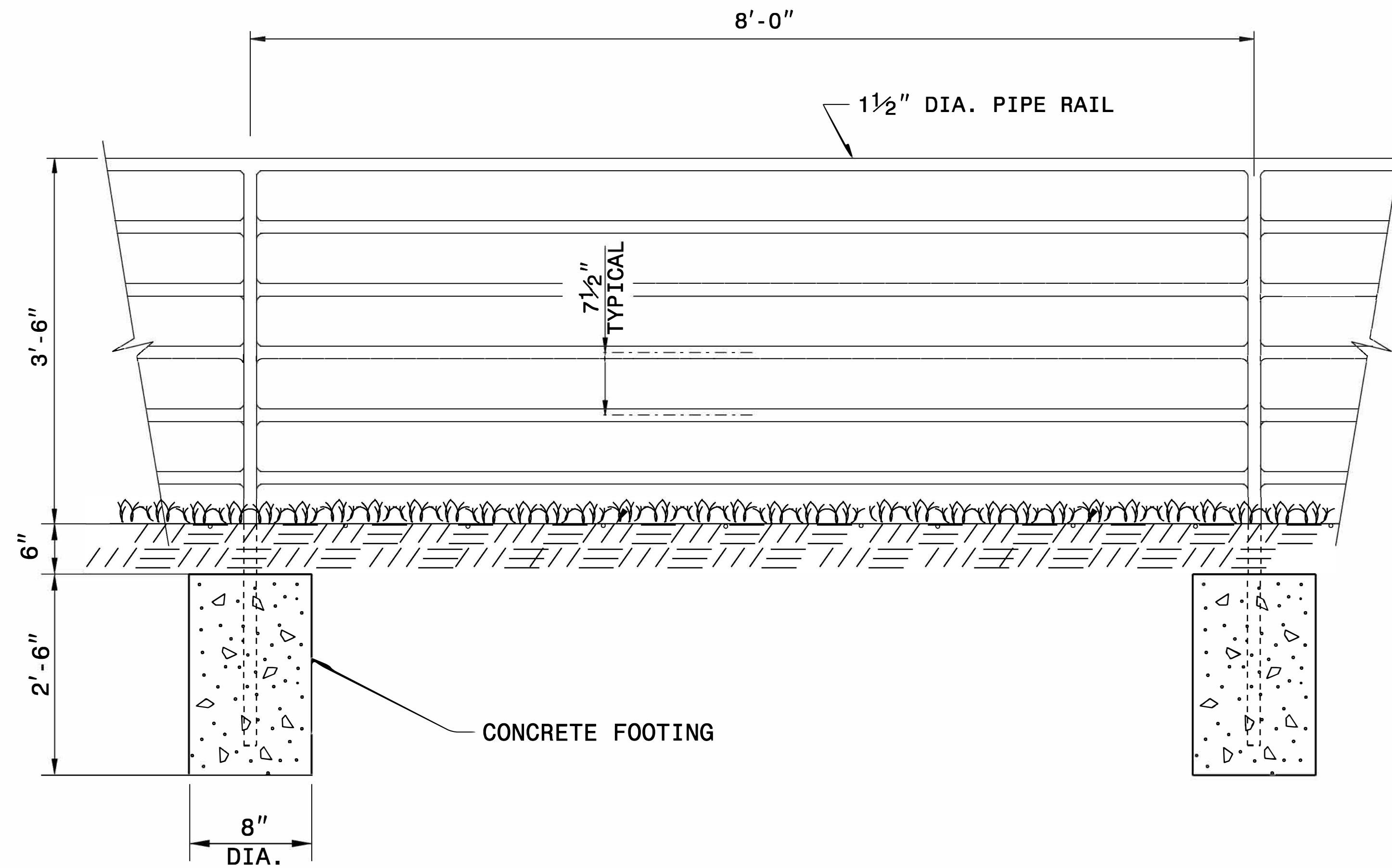
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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.:	



ELEVATION OF HANDRAIL

NOTES:

CONSTRUCT PROPOSED STEEL PIPE RAIL OF 1 1/2" DIAMETER SCHEDULE 40 PLAIN END GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A53.

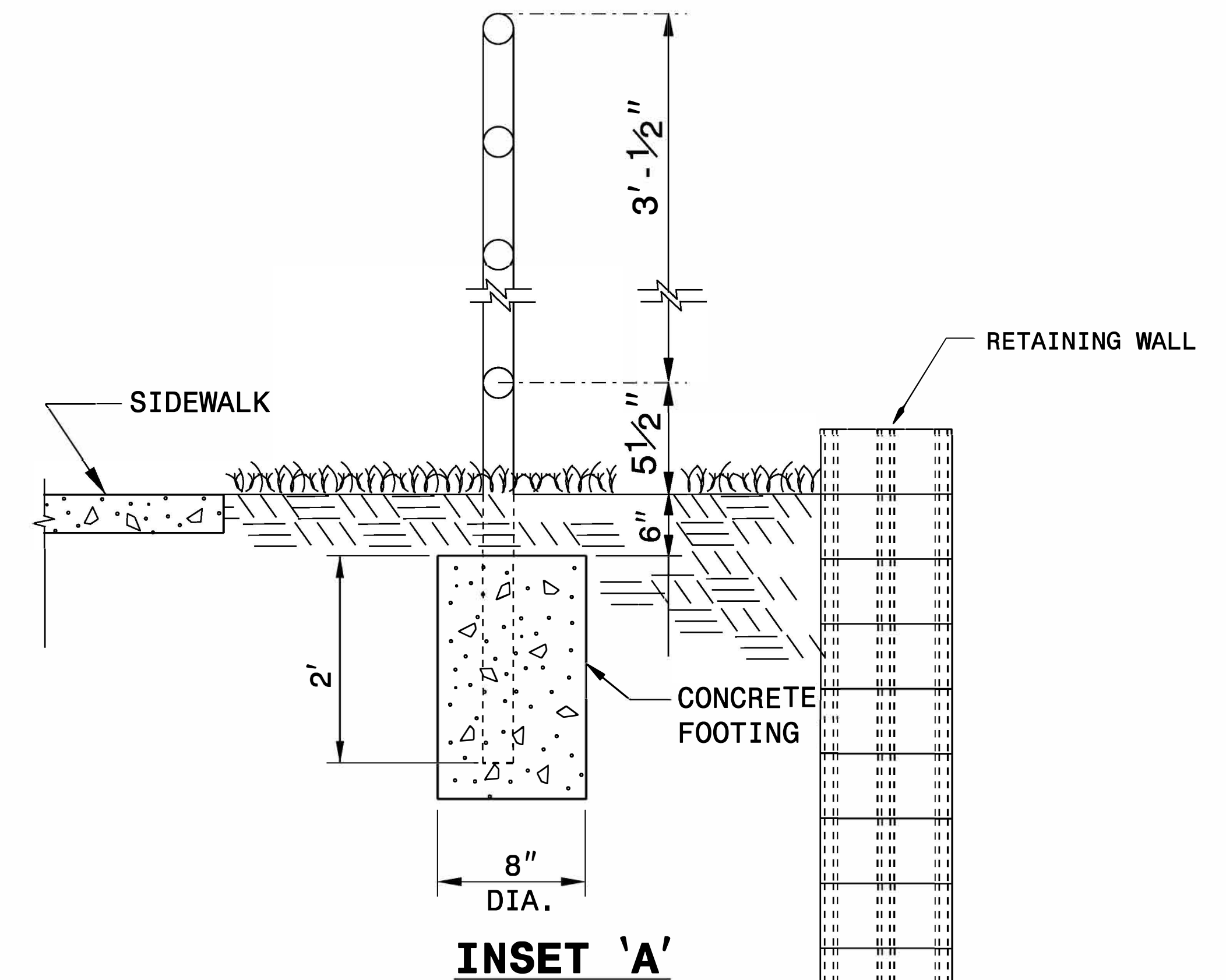
REPAIR GALVANIZING IN ACCORDANCE WITH SECTION 1076 OF THE NCDOT STANDARD SPECIFICATIONS.

PAINT, IF REQUIRED BY THE ENGINEER, IN ACCORDANCE WITH SECTION 1080 OF THE STANDARD SPECIFICATIONS.

WELD IN ACCORDANCE WITH ARTICLE 1072-18 OF THE STANDARD SPECIFICATIONS.

USE CLASS 'B' CONCRETE FOR HANDRAIL FOOTINGS.

PLACEMENT OF HANDRAIL IN RELATION TO RETAINING WALL AND SIDEWALK MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.



INSET 'A'

05/18/2022



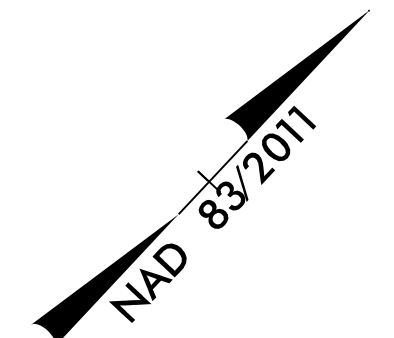
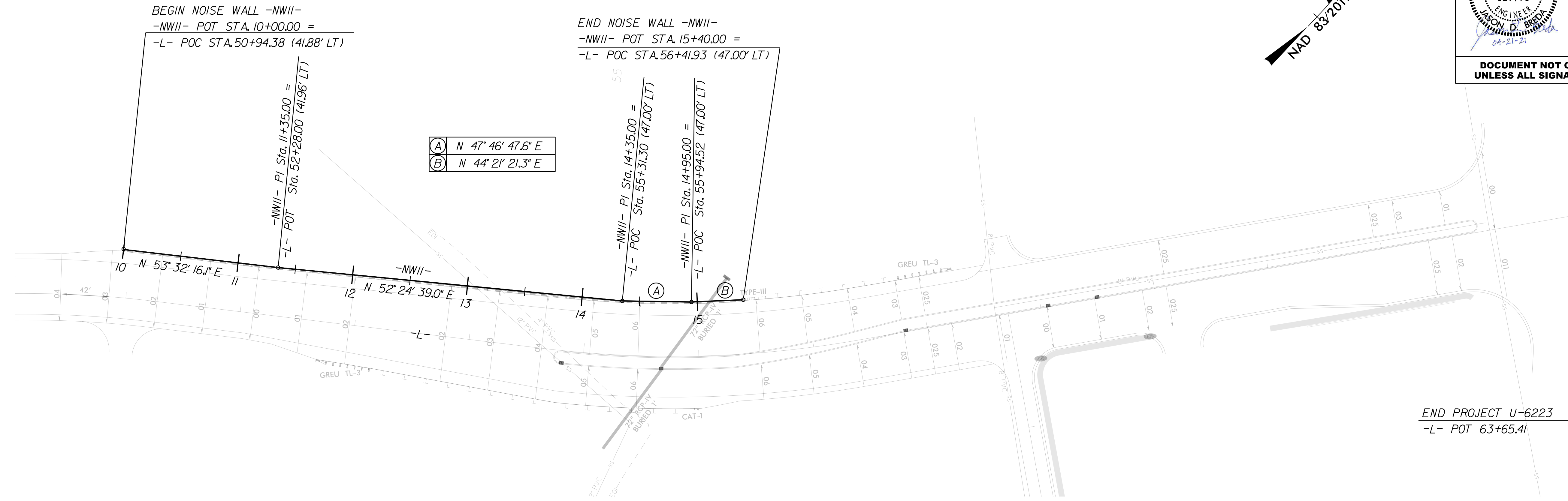
DocuSigned by:
Ron Davenport
F8186038A47A442

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950 FAX 919-250-4119	
PROPOSED PEDESTRIAN SAFETY RAIL	
ORIGINAL BY: E.E. WARD	DATE: 12-99
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: jhowerton/handrail adjacent to sidewalk.dgn	

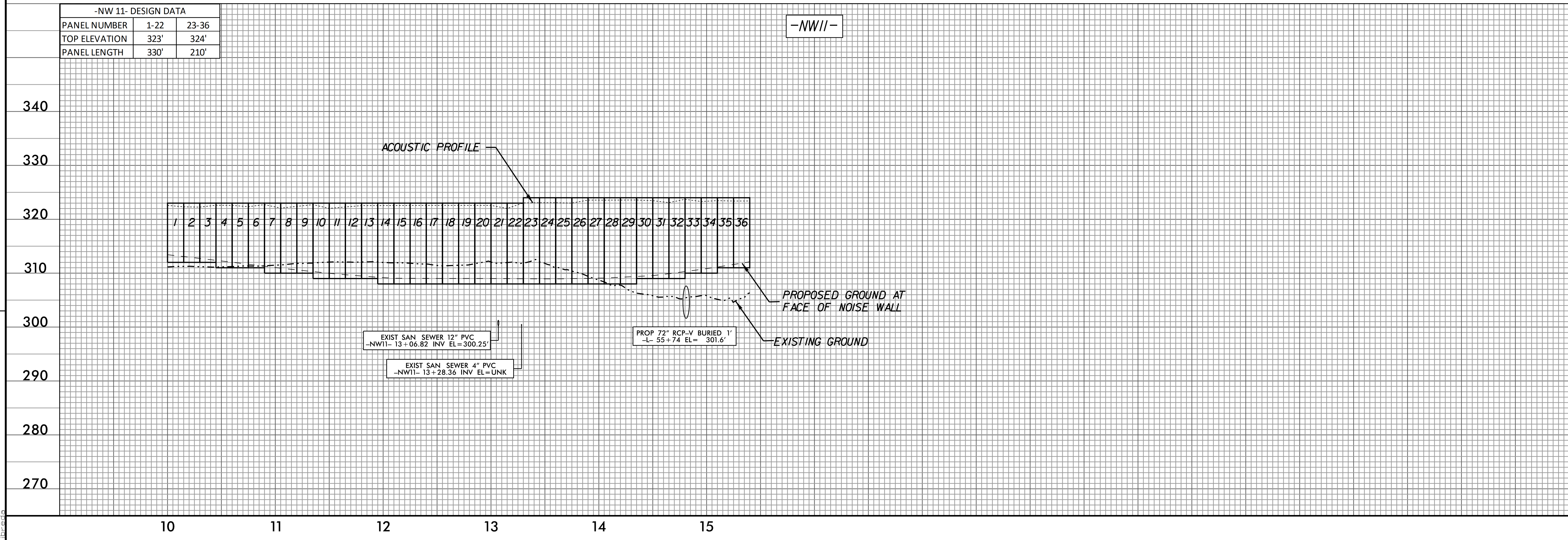
PLAN AND PROFILE OF NOISE WALL -NW11-

PROJECT REFERENCE NO. U-6223	SHEET NO. 2N-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



END PROJECT U-6223
-L- POT 63+65.41

-NW 11- DESIGN DATA		
PANEL NUMBER	1-22	23-36
TOP ELEVATION	323'	324'
PANEL LENGTH	330'	210'



REVISIONS

8/17/99

2/APS/20/09/11
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jbrada

COMPUTED BY: Nick Moore, LG DATE: 8/23/21
 CHECKED BY: Jinyoung Park, PE DATE: 8/23/21

(12-17-19)

PROJECT NO.
U-6223

SHEET NO.
3G-1

**STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS**

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
-L-	23+75	25+00	LT	SD	125
-L-	41+00	55+75	LT and RT	SD	2950
-Y2-	10+00	16+00	LT and RT	SD	1200
CONTINGENCY					
TOTAL LF:					4275

*UD = Underdrain
 *BD = Blind Drain
 *SD = Subsurface Drain

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

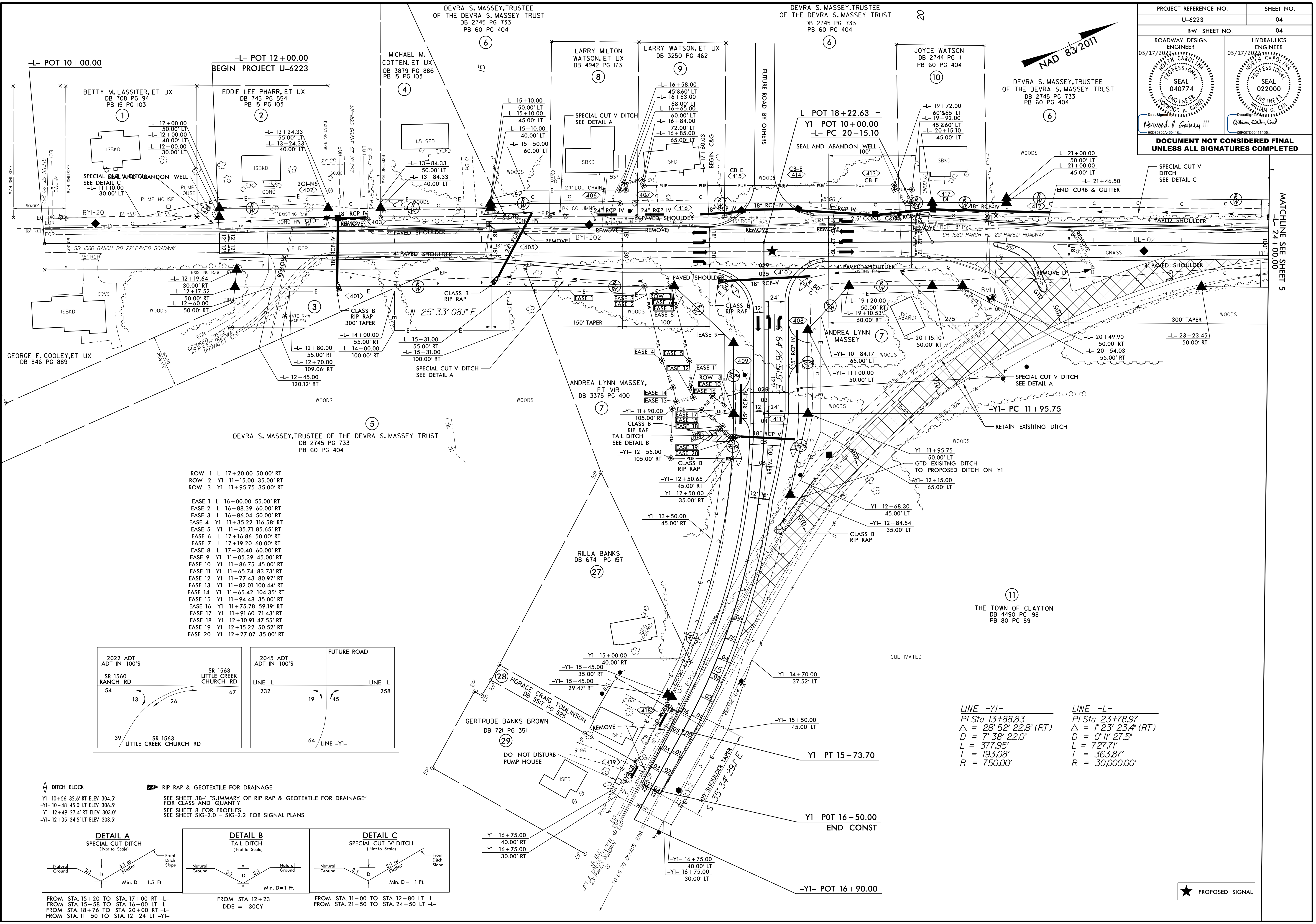
LINE	Station	Station	Aggregate Type* ASU(1/2)/ AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
-L-	58+75	62+75	ASU(1)	12	500	1075	1500		
-Y1-	13+75	16+50	ASU(1)	12	125	250	375		
-Y2-	11+25	13+25	ASU(1)	12	175	325	525		
CONTINGENCY			ASU(1)	12	500	1000	1500		
TOTAL CY/TONS/SY:					1300	2650**	3900**	0	0

*ASU(1/2) = Aggregate Subgrade (Type 1 or 2)

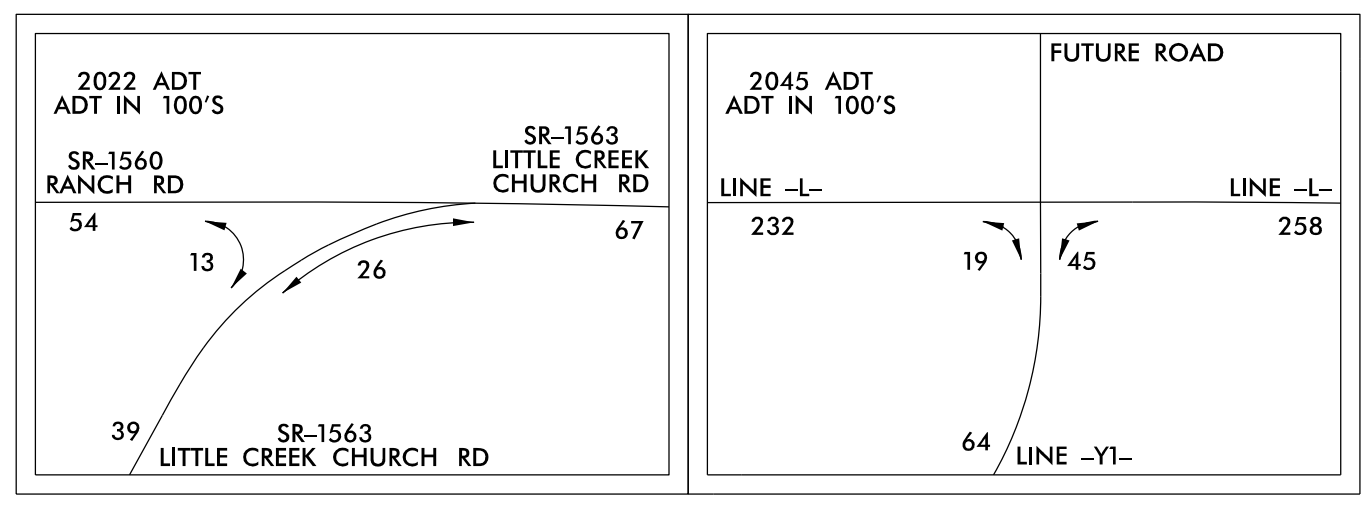
*AST = Aggregate Stabilization

**Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Soil Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.

PROJECT REFERENCE NO.	SHEET NO.
U-6223	04
RW SHEET NO.	04
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
05/17/2023	05/17/2023
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



- ROW 1 -L- 17+20.00 50.00' RT
- ROW 2 -Y1- 11+15.00 35.00' RT
- ROW 3 -Y1- 11+95.75 35.00' RT
- EASE 1 -L- 16+00.00 55.00' RT
- EASE 2 -L- 16+88.39 60.00' RT
- EASE 3 -L- 16+86.04 50.00' RT
- EASE 4 -Y1- 11+35.22 116.58' RT
- EASE 5 -Y1- 11+35.71 85.65' RT
- EASE 6 -L- 17+16.86 50.00' RT
- EASE 7 -L- 17+19.20 60.00' RT
- EASE 8 -L- 17+30.40 60.00' RT
- EASE 9 -Y1- 11+05.39 45.00' RT
- EASE 10 -Y1- 11+86.75 45.00' RT
- EASE 11 -Y1- 11+65.74 83.73' RT
- EASE 12 -Y1- 11+77.43 80.97' RT
- EASE 13 -Y1- 11+82.01 100.44' RT
- EASE 14 -Y1- 11+65.42 104.35' RT
- EASE 15 -Y1- 11+94.48 35.00' RT
- EASE 16 -Y1- 11+75.78 59.19' RT
- EASE 17 -Y1- 11+91.60 71.43' RT
- EASE 18 -Y1- 12+10.91 47.55' RT
- EASE 19 -Y1- 12+15.22 50.52' RT
- EASE 20 -Y1- 12+27.07 35.00' RT

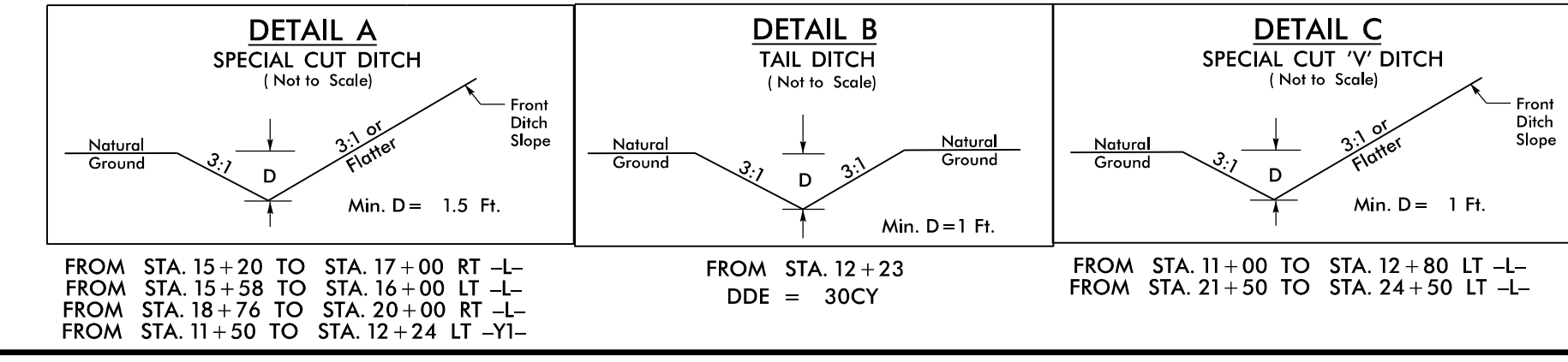


LINE -Y1-
 PI Sta 13+88.83
 $\Delta = 28^{\circ} 52' 22.8''$ (RT)
 D = 7' 38" 22.0"
 L = 377.95'
 T = 193.08'
 R = 750.00'

LINE -L-
 PI Sta 23+78.97
 $\Delta = 1^{\circ} 23' 23.4''$ (RT)
 D = 0' 11" 27.5"
 L = 727.71'
 T = 363.87'
 R = 30,000.00'

DITCH BLOCK
 -Y1- 10+56 32.6' RT ELEV 304.5'
 -Y1- 10+48 45.0' LT ELEV 306.5'
 -Y1- 12+49 27.4' RT ELEV 303.0'
 -Y1- 12+35 34.5' LT ELEV 303.5'

RIP RAP & GEOTEXTILE FOR DRAINAGE
 SEE SHEET 3B-1 "SUMMARY OF RIP RAP & GEOTEXTILE FOR DRAINAGE" FOR CLASS AND QUANTITY
 SEE SHEET 8 FOR PROFILES
 SEE SHEET SIG-2.0 - SIG-2.2 FOR SIGNAL PLANS



FROM STA. 15+20 TO STA. 17+00 RT -L-
 FROM STA. 15+58 TO STA. 16+00 LT -L-
 FROM STA. 18+76 TO STA. 20+00 RT -L-
 FROM STA. 11+50 TO STA. 12+24 LT -Y1-

FROM STA. 12+23
 DDE = 30CY

FROM STA. 11+00 TO STA. 12+80 LT -L-
 FROM STA. 21+50 TO STA. 24+50 LT -L-



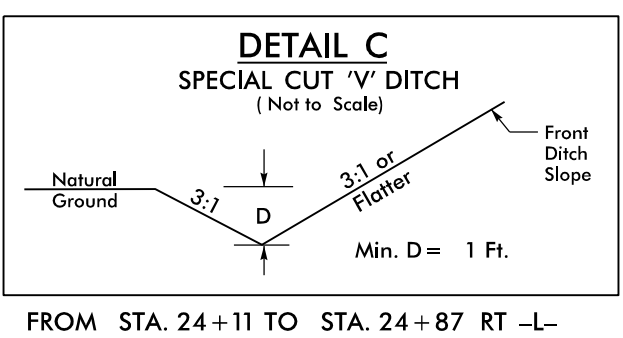
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 Division 4 DDC

REVISIONS

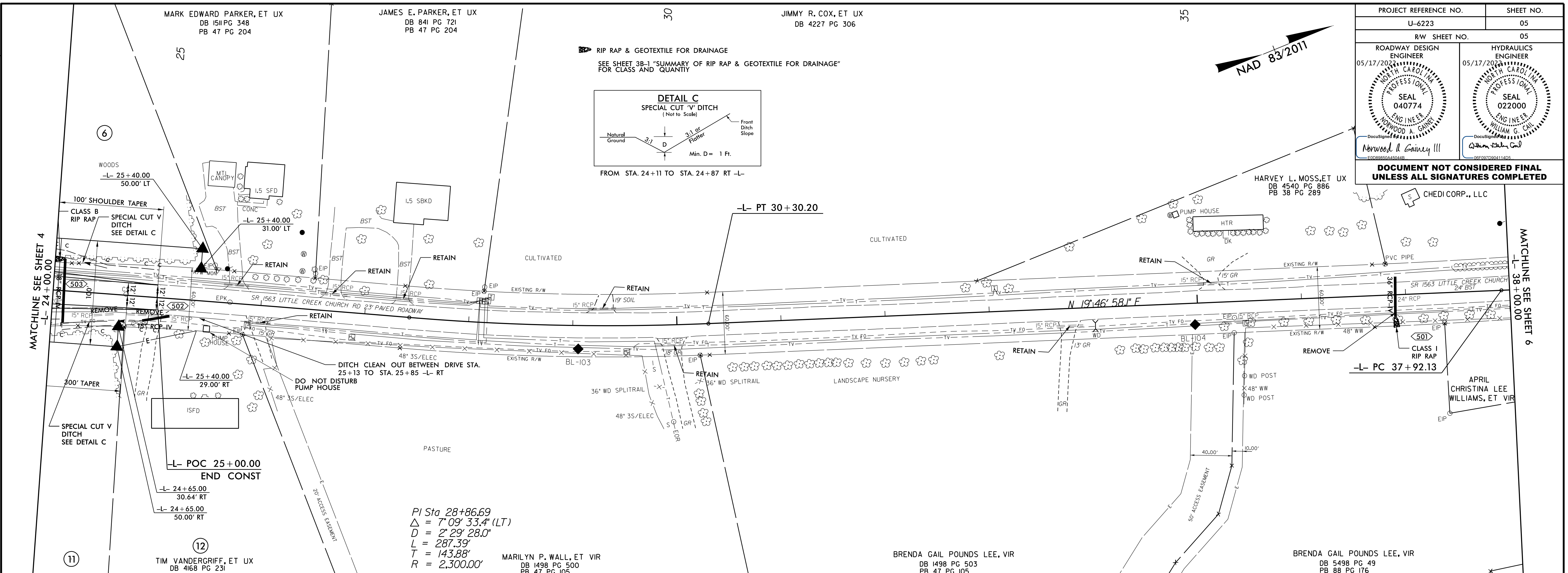
MATCHLINE SEE SHEET 5

PROJECT REFERENCE NO. U-6223	SHEET NO. 05
ROADWAY DESIGN ENGINEER 05/17/2022 SEAL 040774 NORWOOD A. GAINY III	HYDRAULICS ENGINEER 05/17/2022 SEAL 022000 WILLIAM G. CALDWELL
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

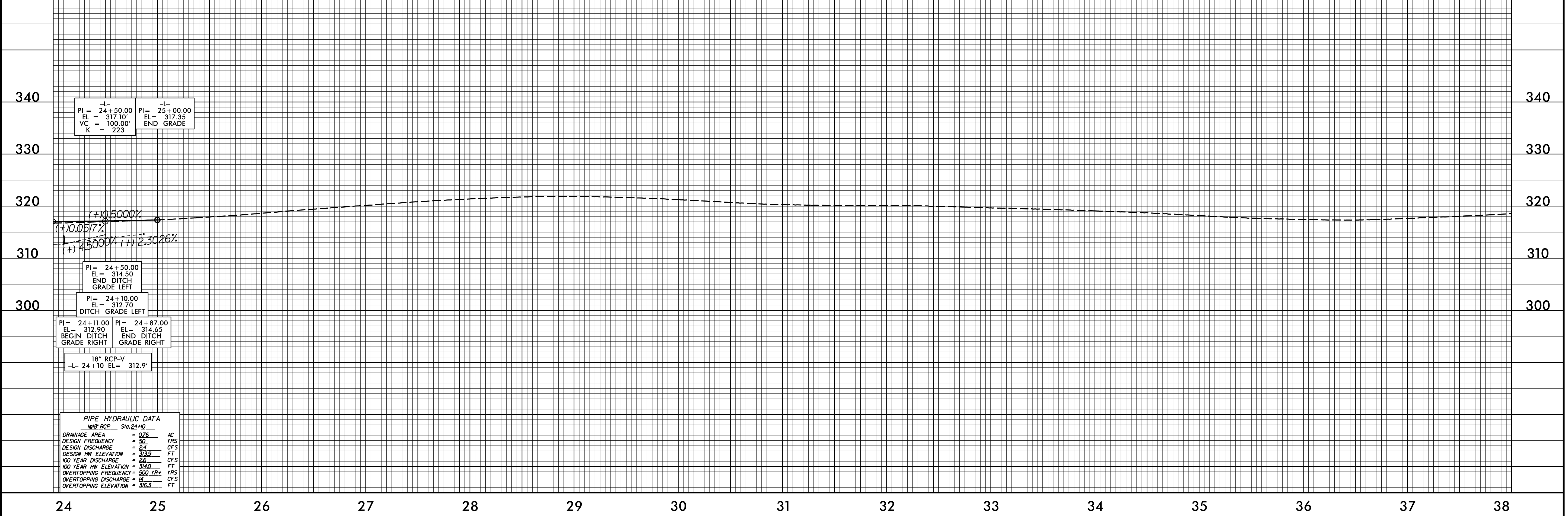
RIP RAP & GEOTEXTILE FOR DRAINAGE
SEE SHEET 3B-1 "SUMMARY OF RIP RAP & GEOTEXTILE FOR DRAINAGE"
FOR CLASS AND QUANTITY



FROM STA. 24+11 TO STA. 24+87 RT -L-



PI Sta 28+86.69
 $\Delta = 7^{\circ}09'33.4\"$ (LT)
 $D = 287.39'$
 $L = 287.39'$
 $T = 143.88'$
 $R = 2,300.00'$



PIPE HYDRAULIC DATA	
PIPE SIZE	36\"/>
DRAINAGE AREA	0.76 AC
DESIGN FREQUENCY	50 YRS
DESIGN DISCHARGE	24 CFS
DESIGN HW ELEVATION	313.3 FT
100 YEAR DISCHARGE	26 CFS
100 YEAR HW ELEVATION	314.0 FT
OVERTOPPING FREQUENCY	500 YRS
OVERTOPPING DISCHARGE	4 CFS
OVERTOPPING ELEVATION	316.3 FT

DDC4

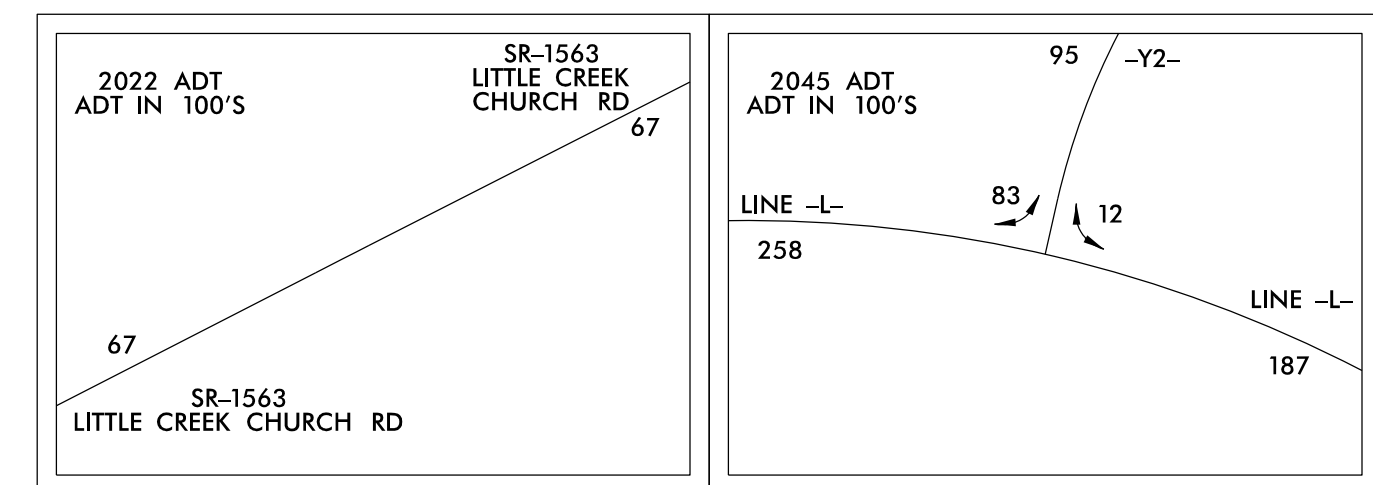
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 Division 4 DDC

PROJECT REFERENCE NO.	SHEET NO.
U-6223	06
RW SHEET NO.	06
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
05/17/2022	05/17/2022
SEAL 040774	SEAL 022000
NORWOOD L. GAINES III	WILLIAM G. CALDWELL

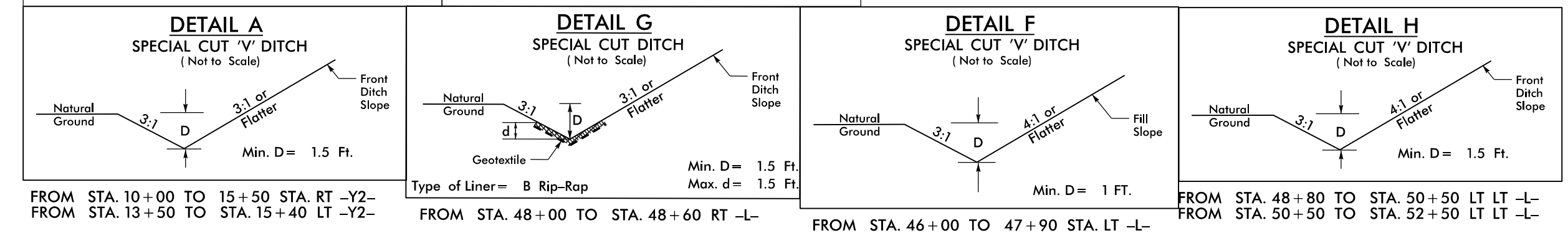
★ PROPOSED SIGNAL



LINE -L-
 PI Sta 40+26.69 PI Sta 47+25.63
 $\Delta = 19^\circ 42' 46.9''$ (LT) $\Delta = 53^\circ 43' 29.9''$ (RT)
 $D = 4' 14'' 38.9''$ $D = 6' 11'' 14.8''$
 $L = 464.48'$ $L = 868.29'$
 $T = 234.56'$ $T = 469.02'$
 $R = 1,350.00'$ $R = 926.00'$

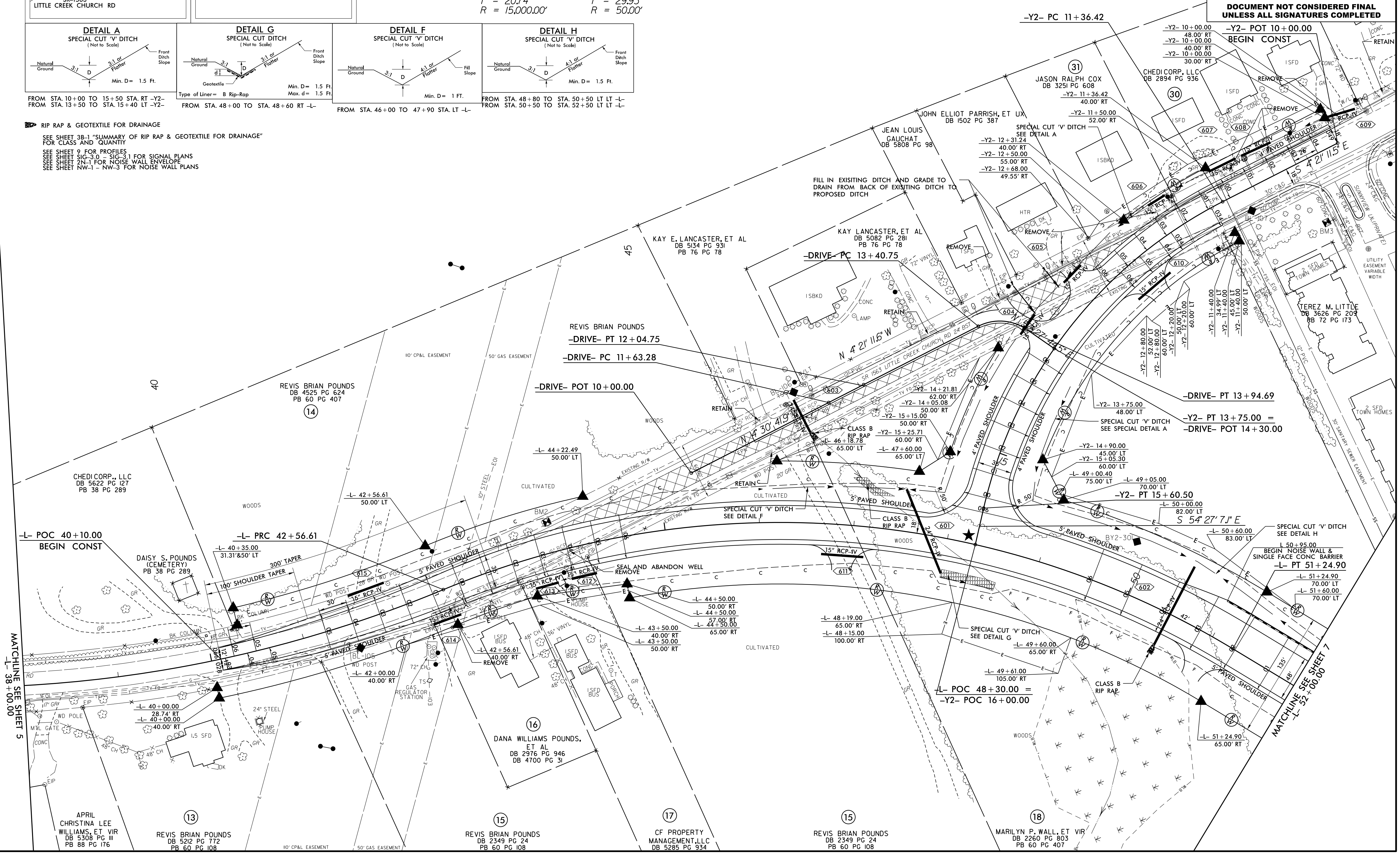
LINE -Y2-
 PI Sta 13+63.09
 $\Delta = 50^\circ 05' 55.5''$ (LT)
 $D = 11' 48' 48.8''$
 $L = 424.08'$
 $T = 226.67'$
 $R = 485.00'$

LINE -DRIVE-
 PI Sta 11+84.02 PI Sta 13+70.68
 $\Delta = 0^\circ 09' 30.3''$ (RT) $\Delta = 61^\circ 48' 56.1''$ (RT)
 $D = 0' 22' 55.1''$ $D = 114' 35' 29.6''$
 $L = 41.47'$ $L = 53.94'$
 $T = 20.74'$ $T = 29.93'$
 $R = 15,000.00'$ $R = 50.00'$



● RIP RAP & GEOTEXTILE FOR DRAINAGE

SEE SHEET 3B-1 "SUMMARY OF RIP RAP & GEOTEXTILE FOR DRAINAGE" FOR CLASS AND QUANTITY
 SEE SHEET 9 FOR PROFILES
 SEE SHEET SIG-3.0 - SIG-3.1 FOR SIGNAL PLANS
 SEE SHEET 2N-1 FOR NOISE WALL ENVELOPE
 SEE SHEET NW-1 - NW-3 FOR NOISE WALL PLANS



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 Division 4 DDC

MATCHLINE SEE SHEET 5

MATCHLINE SEE SHEET 7

APRIL CHRISTINA LEE WILLIAMS, ET VIR DB 5308 PG 113 PB 88 PG 176

REVIS BRIAN POUNDS DB 5212 PG 772 PB 60 PG 108

REVIS BRIAN POUNDS DB 2349 PG 24 PB 60 PG 108

CF PROPERTY MANAGEMENT, LLC DB 5285 PG 934

REVIS BRIAN POUNDS DB 2349 PG 24 PB 60 PG 108

MARILYN P. WALL, ET VIR DB 2260 PG 803 PB 60 PG 407

PROJECT REFERENCE NO.	SHEET NO.
U-6223	07
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
05/17/2022	05/17/2022

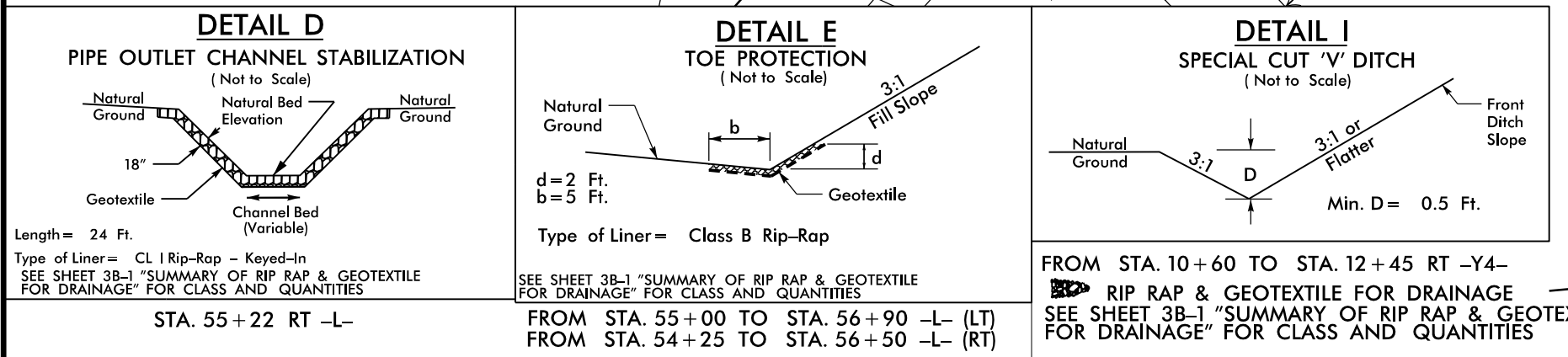
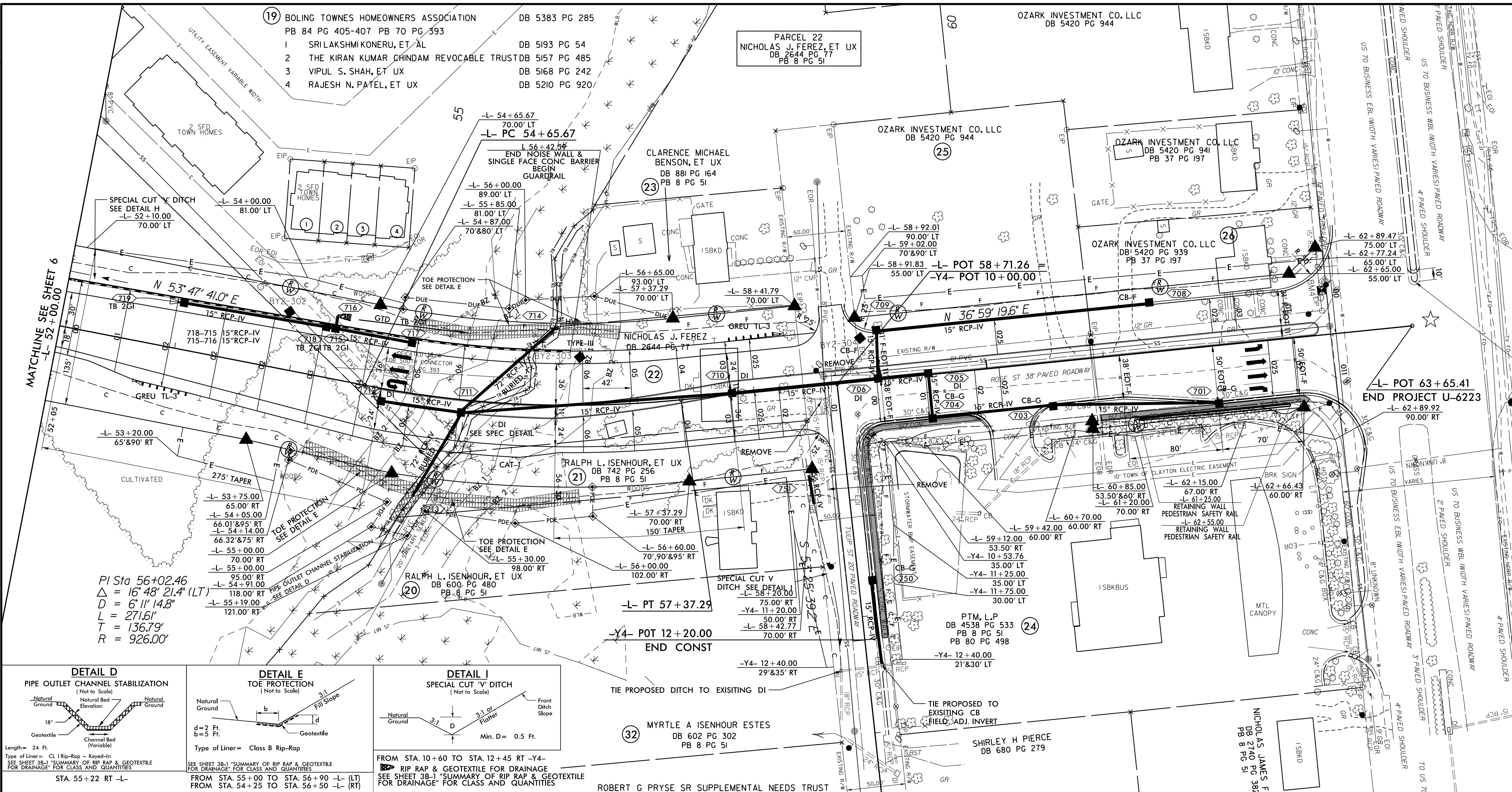
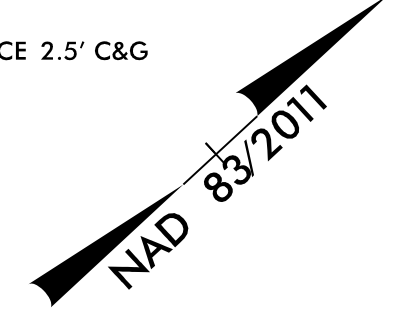
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

SEE SHEET 9 FOR PROFILE OF -Y4-
SEE SHEET SIG-4.0 - SIG-4.2 FOR SIGNAL PLANS
SEE SHEET 28-1 FOR NOISE WALL ENVELOPE
SEE SHEET NW-1 - NW-3 FOR NOISE WALL PLANS
SEE SHEET W-1 - W-3 FOR RETAINING WALL PLANS

NC 42 WB 44' PAVED ROADWAY
TO SR 1003 BUFFALO RD.
NC 42 EB 29' PAVED ROADWAY

REMOVED SIGNAL

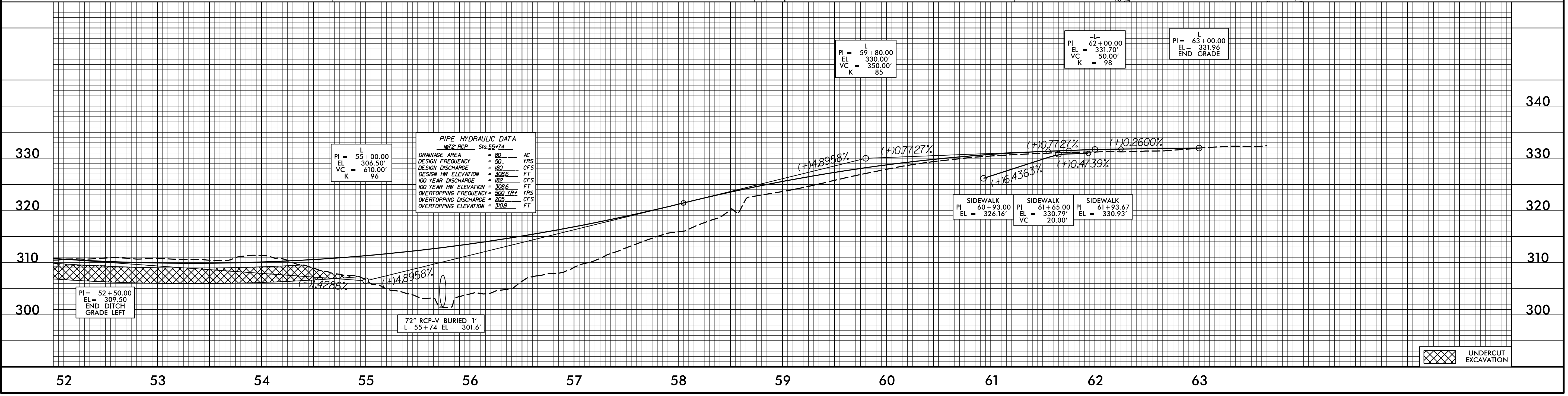
2022 ADT	401	US-70
2045 ADT	542	
ADT IN 100'S		
	12	200
	46	216
		NC-42
ROSE ST		261
28	6	442
187	26	
		51
		111
	246	US-70
	417	



TIE PROPOSED DITCH TO EXISTING DI

TIE PROPOSED TO EXISTING CB FIELD ADJ. INVERT

FROM STA. 10+60 TO STA. 12+45 RT -Y4-
RIP RAP & GEOTEXTILE FOR DRAINAGE
SEE SHEET 38-1 'SUMMARY OF RIP RAP & GEOTEXTILE FOR DRAINAGE' FOR CLASS AND QUANTITIES



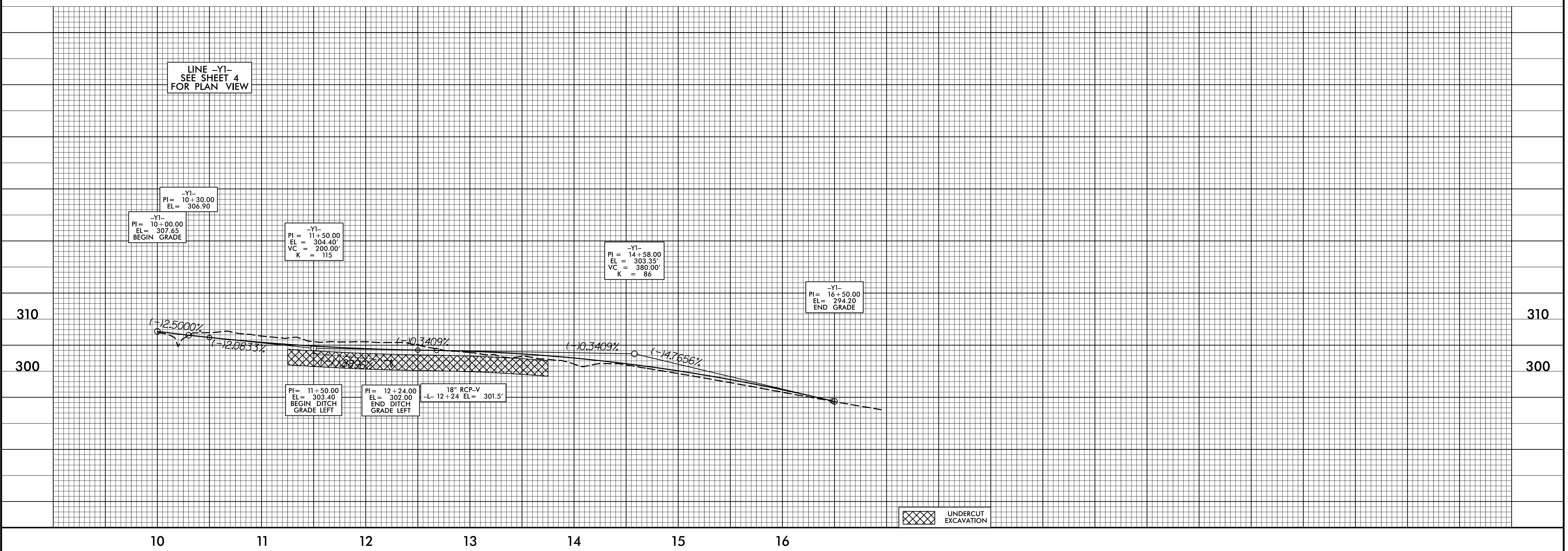
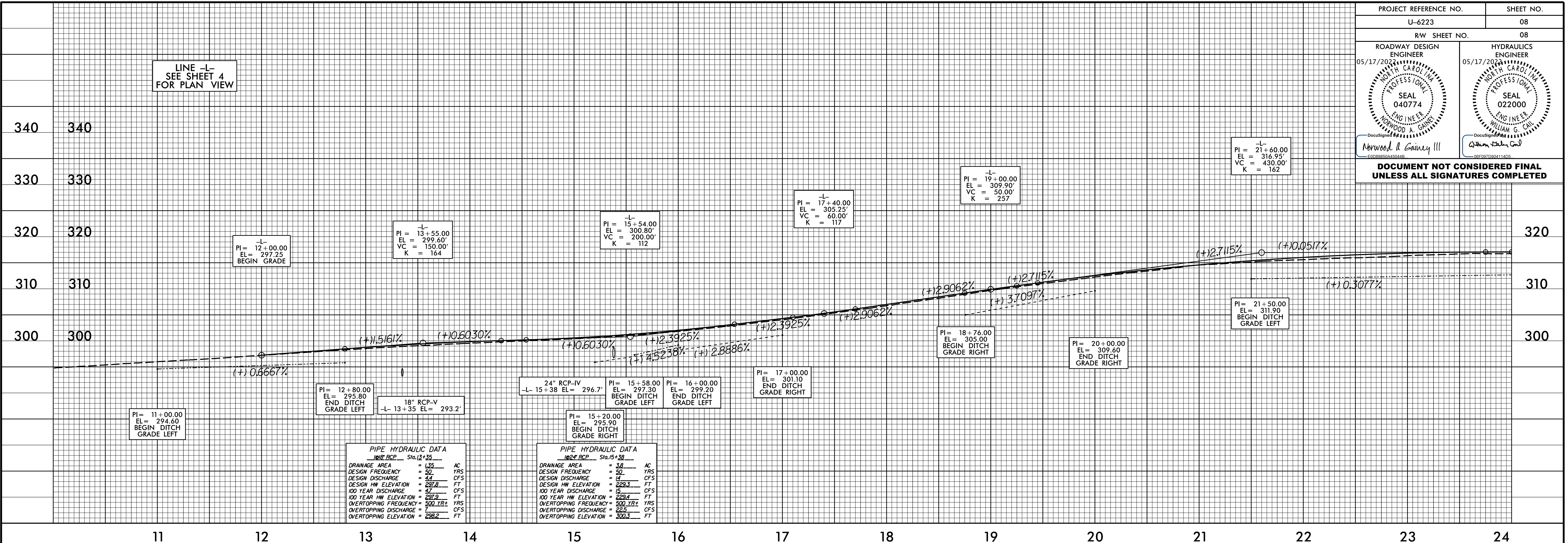
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PROJECT REFERENCE NO.	SHEET NO.
U-6223	08
RW SHEET NO.	08
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
05/17/2023	05/17/2023
SEAL 040774	SEAL 022000
NORWOOD H. GAINES III	WILLIAM G. CAULFIELD
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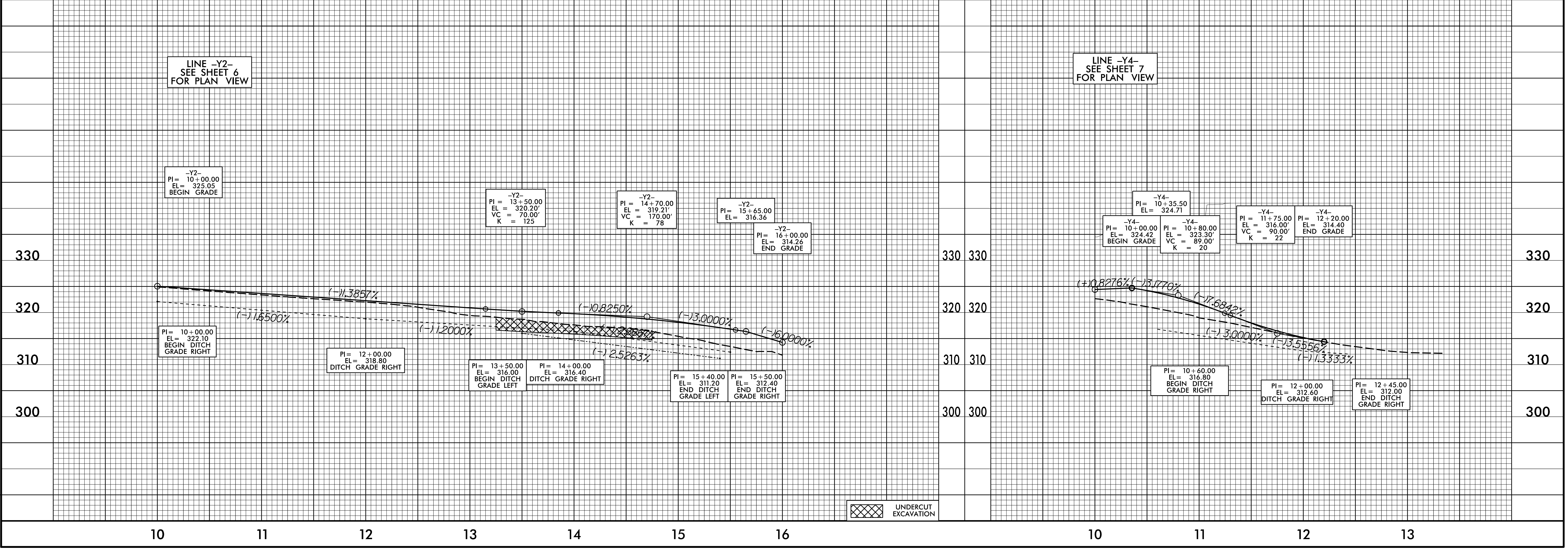
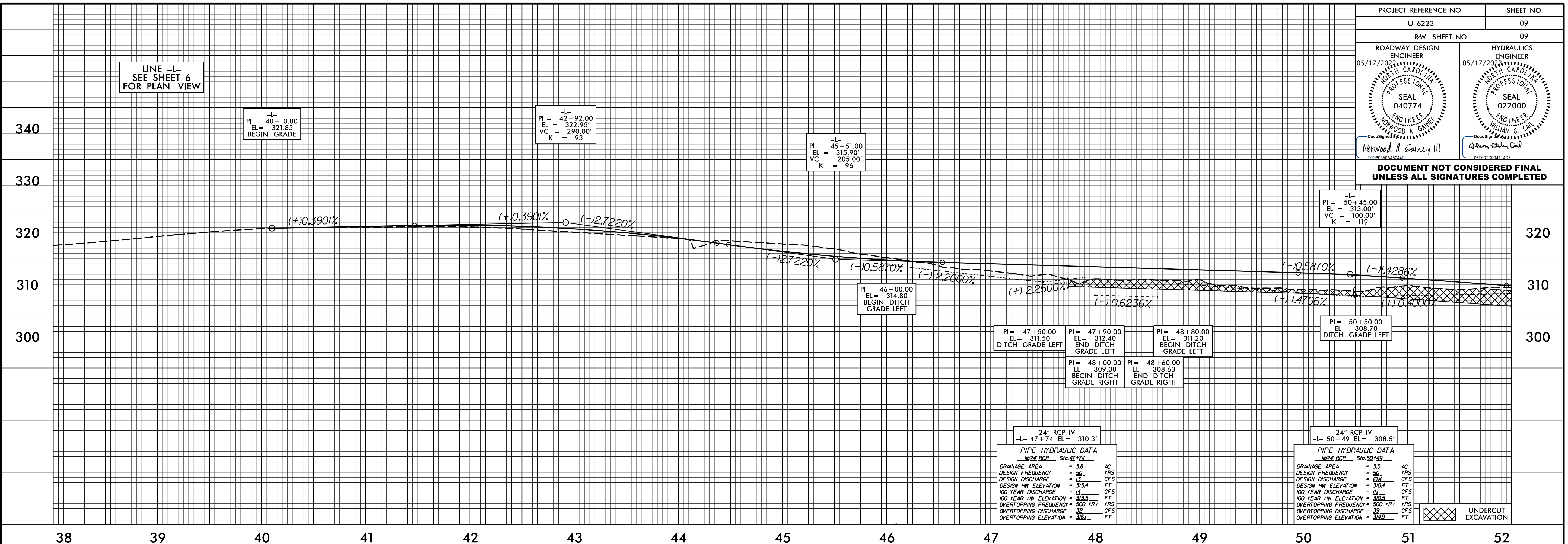
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PROJECT REFERENCE NO.	SHEET NO.
U-6223	09
RW SHEET NO.	
09	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
05/17/2024	05/17/2024
SEAL 040774	SEAL 022000
NORWOOD A. GAINES III	WILLIAM G. CALDWELL

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DDC4

5/17/2024