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TIP PROJECT: R-4705

CONTRACT: C204721

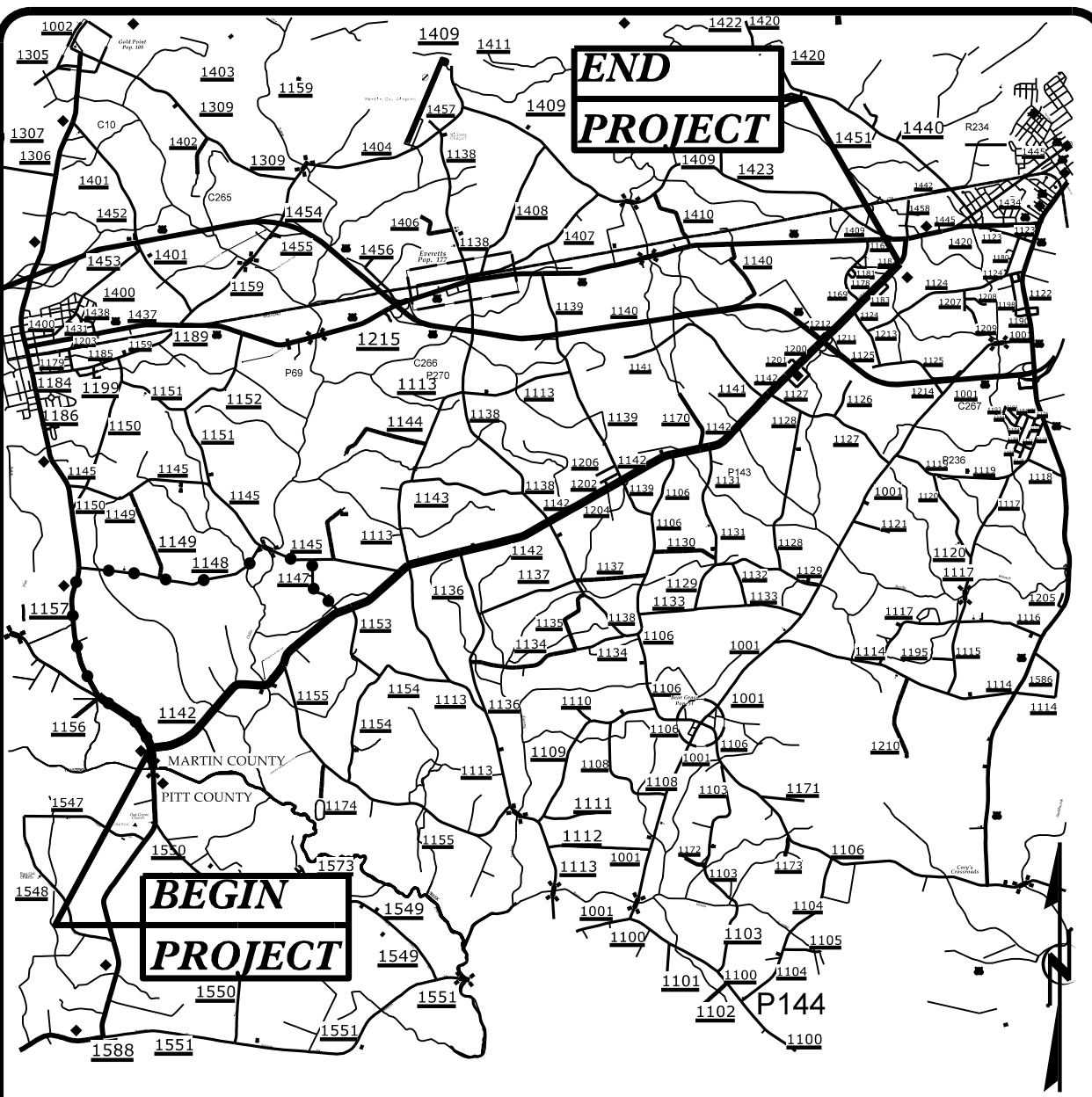
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MARTIN COUNTY

LOCATION: SR 1142 (PRISON CAMP RD.) FROM NC 903 TO SR 1182 (EAST COLLEGE RD.)

TYPE OF WORK: GRADING, DRAINAGE, PAVING & CULVERT.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-4705	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38932.1.FD1	STP-1142(011)	PE	
38932.2.2	STP-1142(011)	ROW & UTIL.	
38932.3.3	1142011	CONST.	

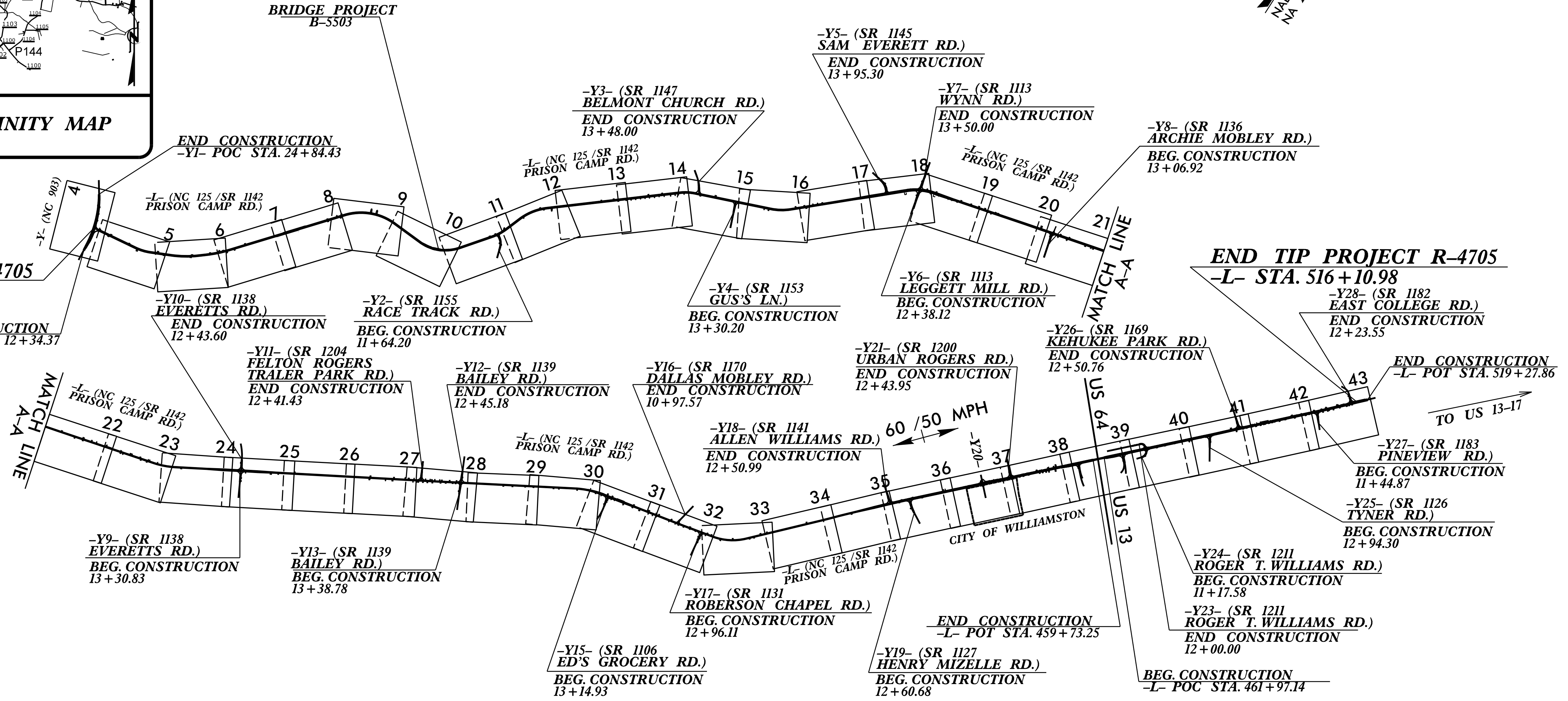


See Sheet I-A for Index of Sheets
See Sheet I-B for Conventional Plan Sheet Symbols

VICINITY MAP



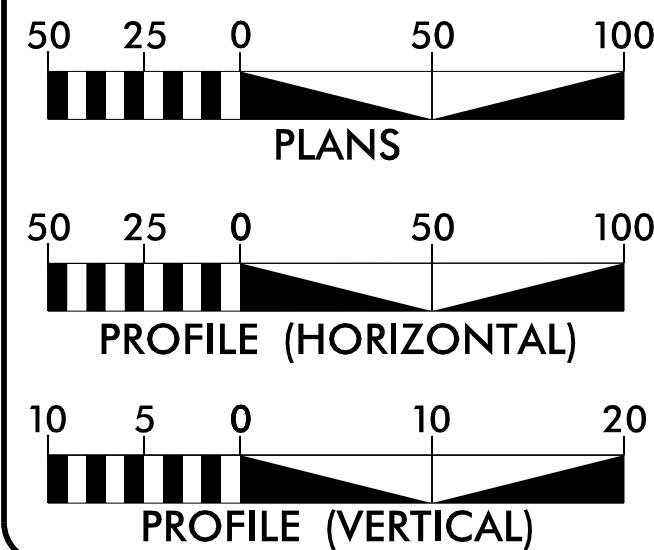
BEGIN TIP PROJECT R-4705
-L- STA. 10 + 00.00
-Y1- STA. 17 + 57.38
BEG. CONSTRUCTION
-Y1- POT STA. 12 + 34.37



END TIP PROJECT R-4705
-L- STA. 516 + 10.98
-Y28- (SR 1182 EAST COLLEGE RD.)
END CONSTRUCTION
12 + 23.55

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2022 = 6,600
ADT 2040 = 8,600
K = 60 %
D = 10 %
T = 4 % *
V = 60 /**50 MPH
* TTST = 1% DUAL = 3%
FUNC. CLASS = RURAL
MINOR COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-4705 = 9.543 MILES
TOTAL LENGTH TIP PROJECT R-4705 = 9.543 MILES

Prepared in the Office of:
WETHERILL ENGINEERING
1223 Jones Franklin Rd., Raleigh, N.C. 27606
License No. F-0377
Bus: 919.851.8077 Fax: 919.851.8107

Prepared for:
**DIVISION OF HIGHWAYS
DIVISION 1**
113 Airport Drive, Suite 100
Edenton, NC 27832

2018 STANDARD SPECIFICATIONS
RIGHT OF WAY DATE:
DECEMBER 5, 2018
LETTING DATE:
JUNE 21, 2022

EDWARD G. WETHERILL, PE
PROJECT ENGINEER
BOB A. MAY, PE
PROJECT DESIGN ENGINEER

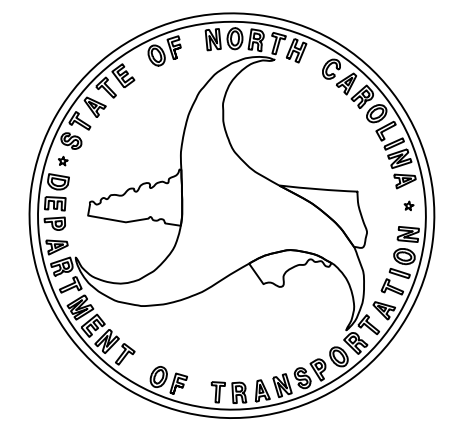
NCDOT CONTACT: **JOHN S. ABEL, JR.**
DIVISION PROJECT MANAGER

HYDRAULICS ENGINEER

4/7/2022
Matthew L. Barney
Professional Engineer
Seal 053425

ROADWAY DESIGN ENGINEER

4/7/2022
Bob A. May
Professional Engineer
Seal 21116



PROJECT REFERENCE NO. <i>R-4705</i>	SHEET NO. <i>1A</i>
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ROADWAY DESIGN
ENGINEER
4/25/2022

Paul H. Mann
Professional Engineer

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

SHEET NUMBER	INDEX OF SHEETS SHEET	2018 ROADWAY ENGLISH STANDARD DRAWINGS	EFF. 01-16-2018 REV.
1	TITLE SHEET	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:	
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS		
1B	CONVENTIONAL SYMBOLS	STD.NO. TITLE	
2A-1 THRU 2A-3	PAVEMENT SCHEDULE AND TYPICAL SECTIONS	DIVISION 2 - EARTHWORK	
2C-1 THRU 2C-4	SPECIAL DETAILS	200.02 Method of Clearing - Method II	
2D-1	DRAINAGE DETAILS	225.02 Guide for Grading Subgrade - Secondary and Local	
2G-1	GEOTECHNICAL DETAILS	225.04 Method of Obtaining Super-elevation - Two Lane Pavement	
3B-1 THRU 3B-2	ROADWAY SUMMARIES	225.06 Method of Grading Sight Distance at Intersections	
3D-1 THRU 3D-13	DRAINAGE SUMMARIES	275.01 Rock Plating, "Use Detail in Lieu of Standard"	
3G-1	GEOTECHNICAL SUMMARIES	DIVISION 3 - PIPE CULVERTS	
3P-1 THRU 3P-2	PARCEL INDEX SHEET	300.01 Method of Pipe Installation	
4 THRU 72	PLAN AND PROFILE SHEET	310.10 Driveway Pipe Construction	
RW01 THRU RW43	SURVEY CONTROL SHEETS, CENTERLINE COORDINATE SHEETS AND ROW SHEETS	DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
TMP-1 THRU TMP-77	TRAFFIC MANAGEMENT PLANS	560.01 Method of Shoulder Construction - High Side of Super-elevated Curve - Method I	
PMP-1 THRU PMP-25	PAVEMENT MARKING PLANS	DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
EC-1 THRU EC-83	EROSION CONTROL PLANS	654.01 Pavement Repairs	
RF-1	REFORESTATION PLANS	DIVISION 8 - INCIDENTALS	
UC-1 THRU UC-61	UTILITIES CONSTRUCTION PLANS	815.02 Subsurface Drain	
UD-1 THRU UD-41	UTILITIES BY OTHERS PLANS	838.01 Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew	
X-1	CROSS-SECTION SUMMARY SHEET	838.11 Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew	
X-1A THRU X-1H	CROSS-SECTION SUMMARY SHEETS	838.33 Reinforced Concrete Endwall - for Single 66" Pipe 90 Skew	
X-2 THRU X-231	CROSS-SECTIONS	838.45 Notes for Reinforced Concrete Endwall - Std. Dwg 838.21 thru 838.40	
C-1 THRU C-5	CULVERT PLANS	838.63 Reinforced Brick Endwall - for Single 66" Pipe 90 Skew	
		838.75 Notes for Reinforced Brick Endwall - Std. Dwg 838.51 thru 838.70	
		838.80 Precast Endwalls - 12" thru 72" Pipe 90 Skew	
		840.00 Concrete Base Pad for Drainage Structures	
		840.01 Brick Catch Basin - 12" thru 54" Pipe	
		840.02 Concrete Catch Basin - 12" thru 54" Pipe	
		840.03 Frame, Grates and Hood - for Use on Standard Catch Basin	
		840.14 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	
		840.25 Anchorage for Frames - Brick or Concrete or Precast	
		840.27 Brick Grated Drop Inlet Type 'B' - 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	
		840.45 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	
		848.03 Driveway Turnout - Drop Curb Type	
		848.04 Street Turnout	
		862.01 Guardrail Placement	
		862.02 Guardrail Installation	
		862.03 Structure Anchor Units	
		876.02 Guide for Rip Rap at Pipe Outlets	
		876.04 Drainage Ditches with Class 'B' Rip Rap	

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 METHOD II.

SUPERELEVATION:
ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:
ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

SIDE ROADS:
THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

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. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:
STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

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

TEMPORARY SHORING:
SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE EDGEcombe-MERTIN EMC, DIMINION ENERGY, CENTURYLINK, SUDDENLINK, DUKE ENERGY, MARTIN COUNTY AND TOWN OF WILLIAMSTON.
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.

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	○ EP
Computed Property Corner	-----
Property Monument	□ ECM
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	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	▬

HYDROLOGY:

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

RAILROADS:

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

RIGHT OF WAY & 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 R/W Marker	○ R W ▲
New Control of Access Line with Concrete C/A Marker	○ C/A
Existing Control of Access	○ C/A
New 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	○ S
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.*)	---ZUTL---
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.

8/17/99

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN, MEMO DATED 1/31/2018)	
C1	PROP. APPROX. 1½" 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 TO EXCEED 1½" IN DEPTH.
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E3	PROP. APPROX. 8" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E4	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
R1	EXIST. CONCRETE CURB
R2	EXIST. CONCRETE ISLAND
R3	2'-6" CONCRETE CURB & GUTTER
R4	EXPRESSWAY GUTTER
R5	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING ASPHALT PAVEMENT, 1½" DEPTH
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL.)

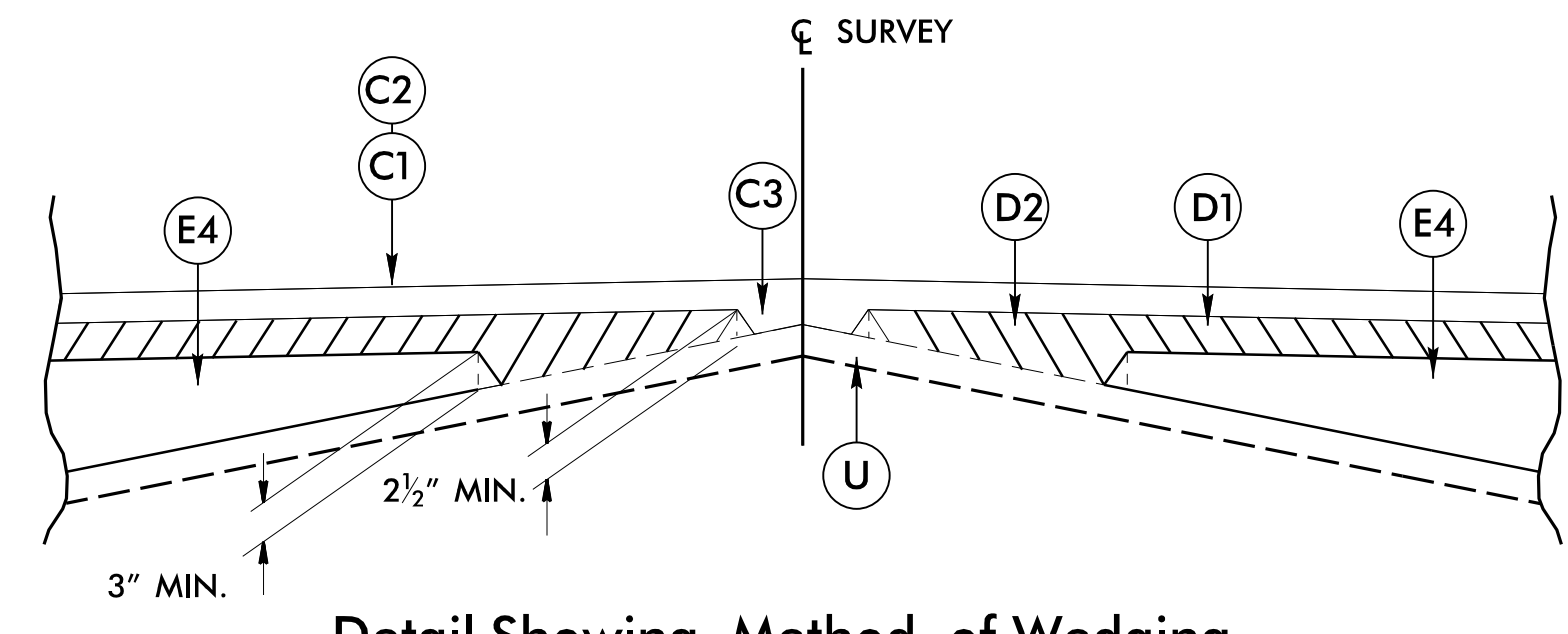
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

WETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

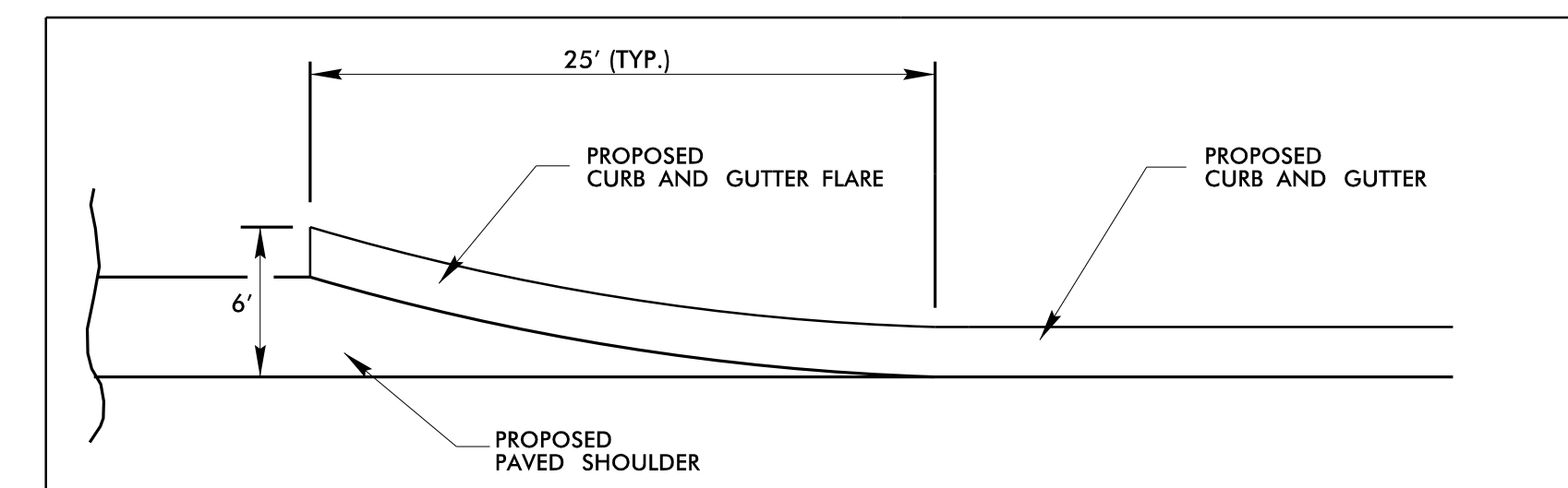
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO. R-4705	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER 4/7/2022 	PAVEMENT DESIGN ENGINEER 4/8/2022

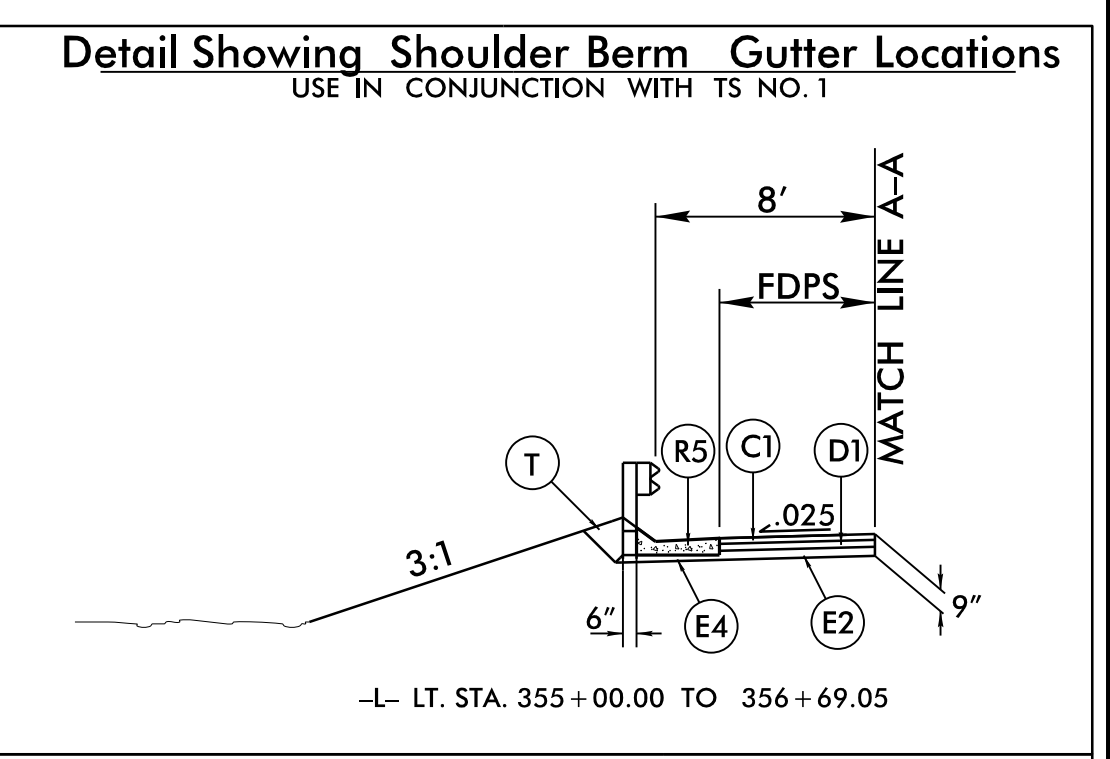
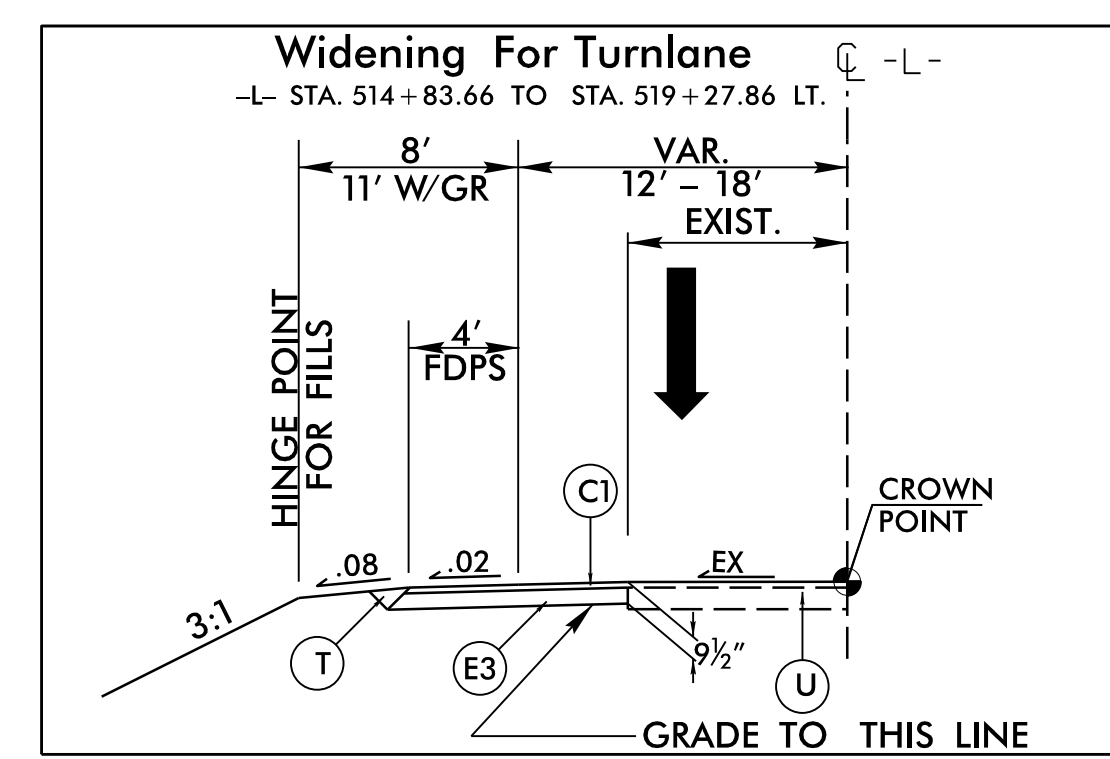


Detail Showing Method of Wedging

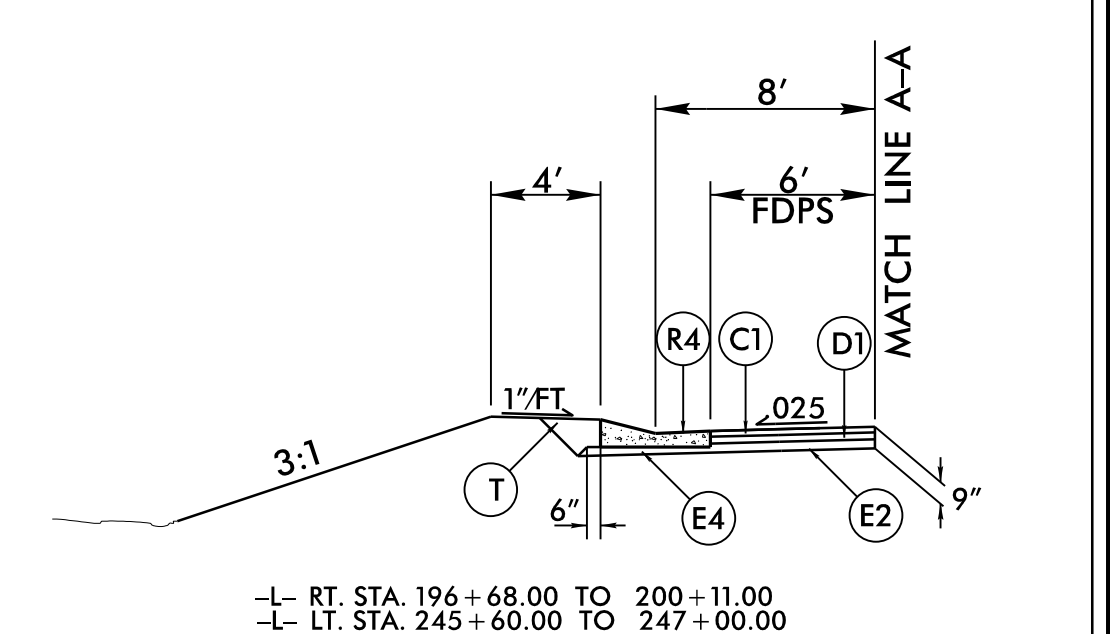


Detail Showing Approach Flare of Curb and Gutter

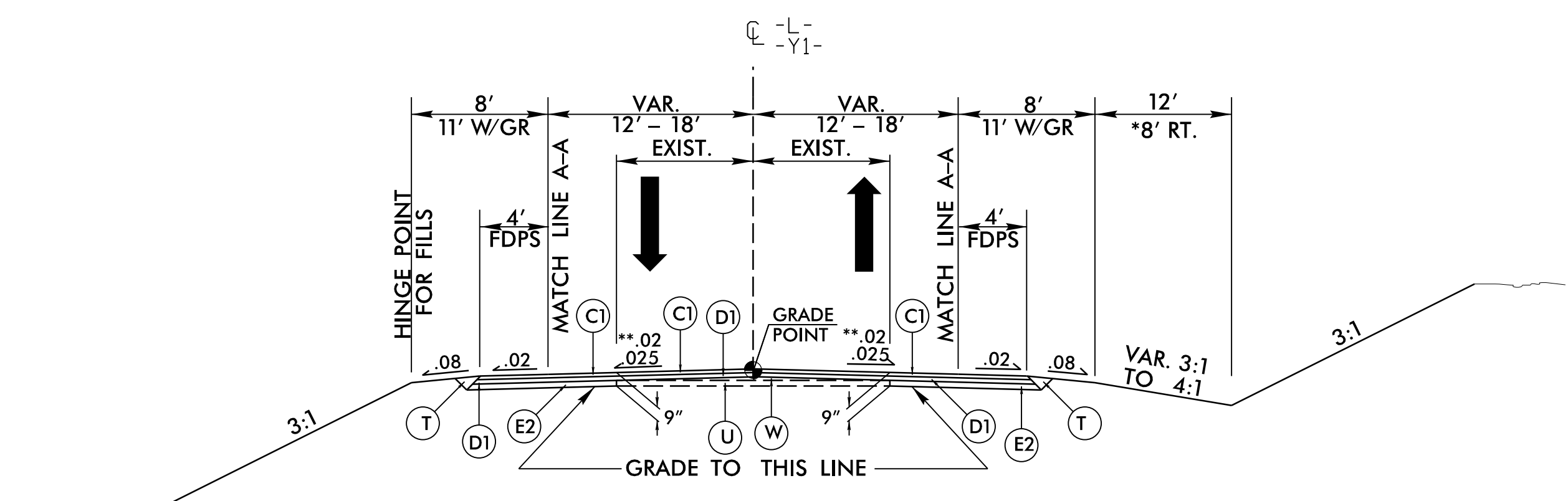
NOTE: DRAWING NOT TO SCALE



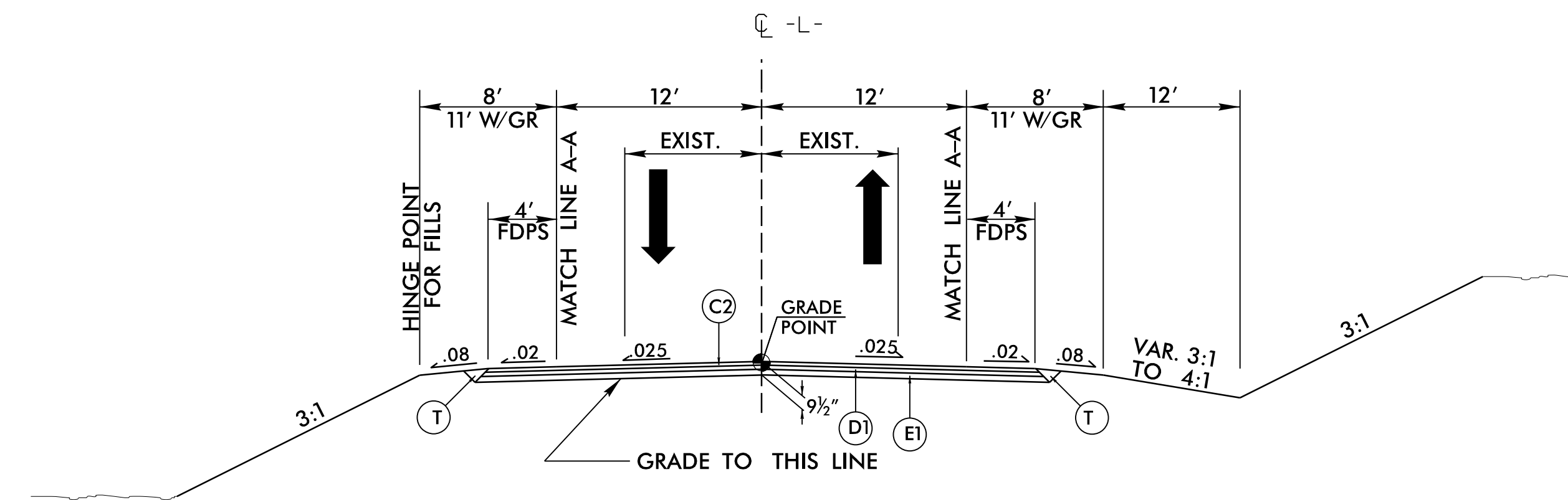
Detail Showing Shoulder Berm Gutter Locations



Detail Showing Expressway Gutter Locations



TYPICAL SECTION NO. 1



TYPICAL SECTION NO. 2

- USE TYPICAL SECTION NO. 1
- L- STA. 10+18.13 TO STA. 53+44.00
 - L- STA. 53+97.00 TO STA. 68+00.00
 - L- STA. 75+50.00 TO STA. 84+01.97
 - L- STA. 91+47.97 TO STA. 108+00.00
 - L- STA. 110+50.00 TO STA. 200+00.00
 - L- STA. 200+00.00 TO STA. 222+00.00
 - L- STA. 222+00.00 TO STA. 325+00.00
 - *-L- STA. 325+00.00 TO STA. 359+50.00
 - *-L- STA. 359+89.00 TO STA. 393+35.00
 - *-L- STA. 393+35.00 TO STA. 411+79.77
 - *-YL- STA. 12+34.37 TO STA. 24+84.37
 - L- STA. 455+5363 TO STA. 459+73.25 (BEG. EXIST. BRIDGE)
 - **L- STA. 461+97.14 (END EXIST. BRIDGE) TO STA. 471+00.00

NOTE: MILL EXISTING PAVEMENT 1½" AND RESURFACE WITH 1½" S9.5B -L- STA. 84+01.97 TO 91+41.97

- USE TYPICAL SECTION NO. 2
- L- STA. 53+44.00 TO STA. 53+97.00
 - L- STA. 68+00.00 TO STA. 75+50.00
 - L- STA. 108+00.00 TO STA. 110+50.00
 - L- STA. 359+50.00 TO STA. 359+89.00
 - L- STA. 393+35.00 TO STA. 393+73.00

REVISIONS

3/24/2022
 11:58:00 AM
 4705_Pd.dwg - 02a - 1.dgn
 USER: RMB

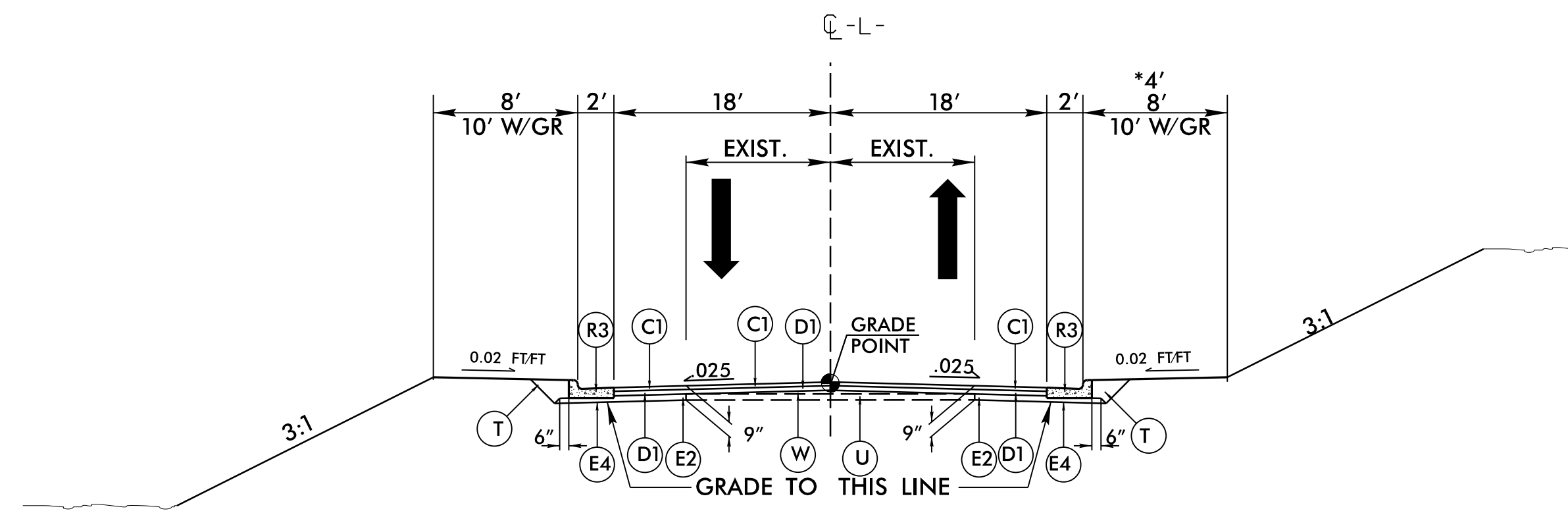
8/17/99

WETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

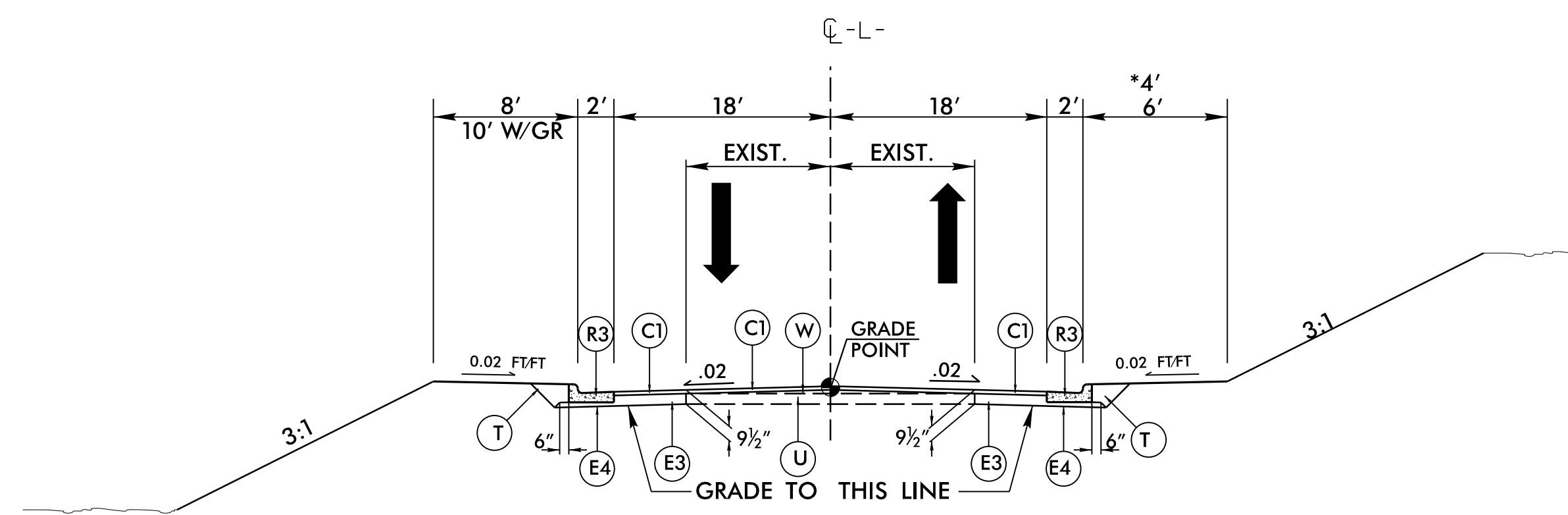
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

PROJECT REFERENCE NO. R-4705	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER 4/7/2022	PAVEMENT DESIGN ENGINEER 4/7/2022



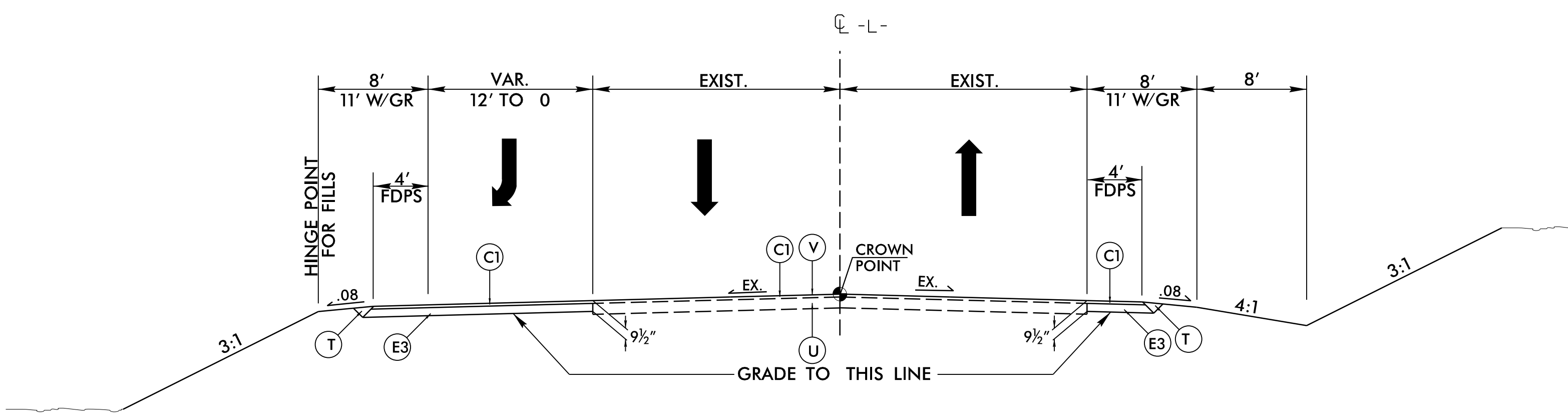
TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
 *-L- STA. 411+79.77 TO STA. 420+00.00
 -L- STA. 420+50.00 TO STA. 447+50.00
 *-L- STA. 447+50.00 TO STA. 451+00.00
 -L- STA. 451+00.00 TO STA. 455+53.63



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4
 *-L- STA. 471+00.00 TO STA. 473+00.00
 -L- STA. 473+00.00 TO STA. 516+10.98



TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5
 -L- STA. 516+10.98 TO STA. 519+27.86

PVMT. SCHEDULE	
C1	1 1/2" TYPE S9.5B
C2	3" TYPE S9.5B
C3	VAR. DEPTH S9.5B
D1	2 1/2" I19.0C
D2	VAR. DEPTH I19.0C
E1	4" B25.0C,
E2	5" B25.0C
E3	8" B25.0C
E4	VAR. DEPTH B25.0C
R1	EX. CONC. CURB
R2	EX. CONC. ISLD.
R3	2'-6" C&G
R4	EXPR. GUTTER
T	EARTH MATERIAL
U	EX. PAV.
V	MILLING
W	WEDGING

REVISIONS

3/24/2022
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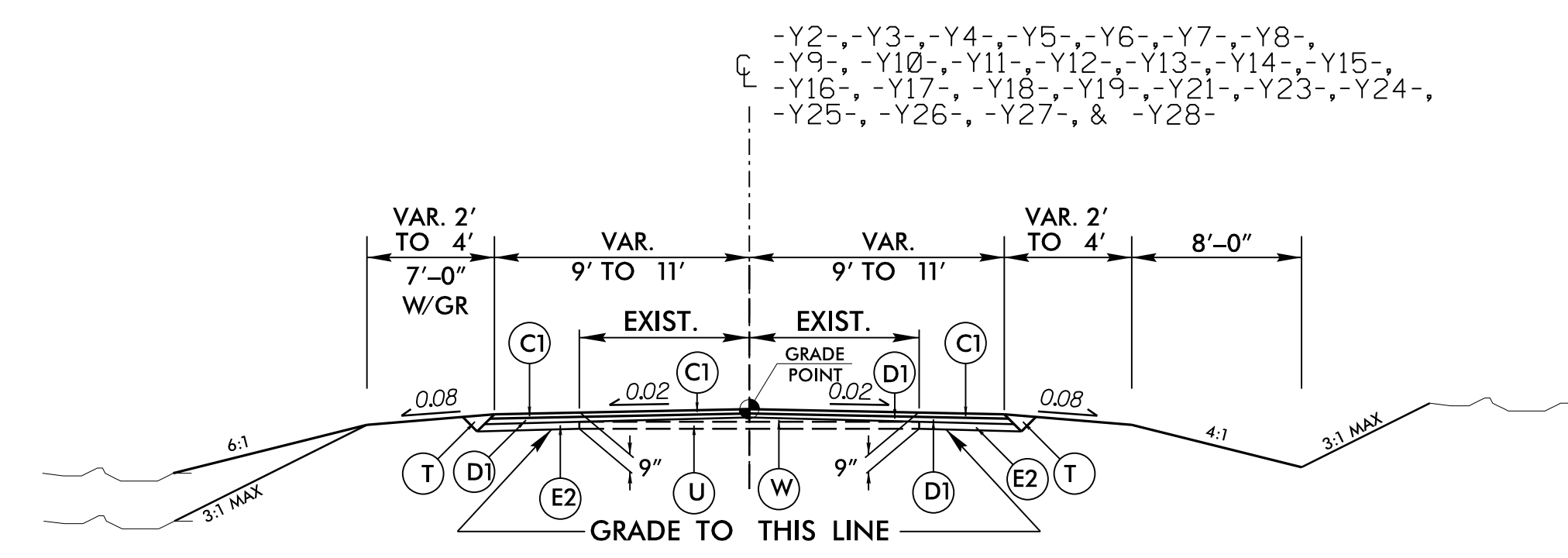
8/17/99

WETHERILL ENGINEERING
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 Raleigh, N.C. 27606
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

**DOCUMENT NOT CONSIDERED FINAL
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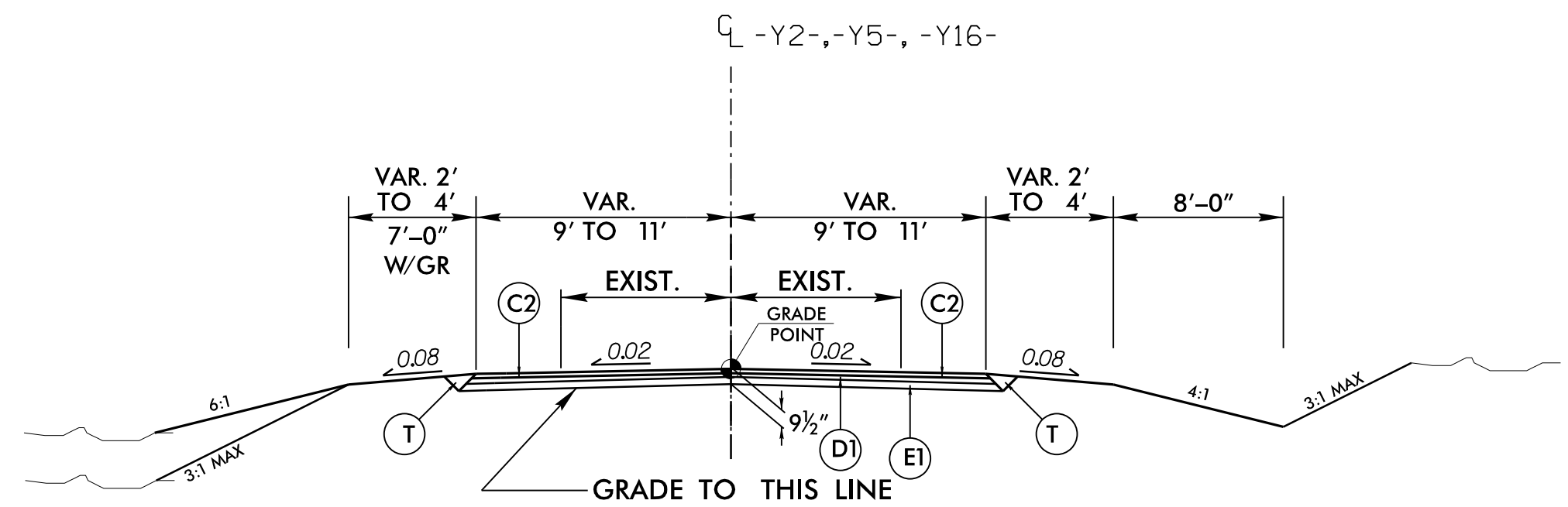
PROJECT REFERENCE NO. R-4705	SHEET NO. 2A-3
ROADWAY DESIGN ENGINEER 4/7/2022	PAVEMENT DESIGN ENGINEER 4/8/2022



TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6

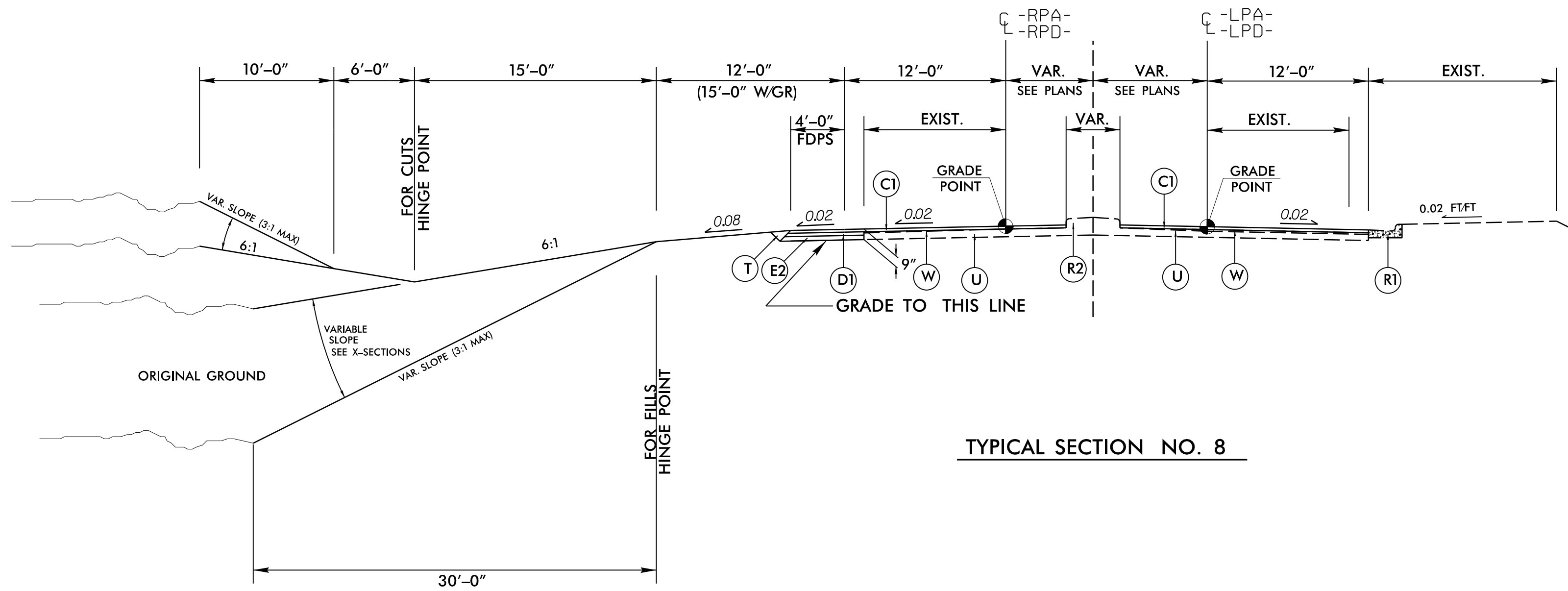
-Y2- STA. 11+64.20 TO STA. 13+00.00	-Y13- STA. 13+38.78 TO STA. 15+71.55
-Y3- STA. 10+12.35 TO STA. 12+61.34	-Y15- STA. 13+14.83 TO STA. 15+21.48
-Y4- STA. 13+30.20 TO STA. 15+55.02	
-Y5- STA. 12+50.00 TO STA. 13+95.30	-Y17- STA. 12+96.41 TO STA. 15+28.92
-Y6- STA. 12+89.43 TO STA. 15+28.57	-Y18- STA. 10+18.08 TO STA. 12+50.99
-Y7- STA. 10+18.65 TO STA. 13+50.00	-Y19- STA. 12+60.68 TO STA. 15+48.54
-Y8- STA. 13+06.92 TO STA. 15+34.34	-Y21- STA. 10+18.00 TO STA. 12+43.95
-Y9- STA. 13+30.83 TO STA. 15+59.55	-Y23- STA. 10+18.29 TO STA. 11+99.41
-Y10- STA. 10+18.00 TO STA. 12+43.60	-Y24- STA. 11+17.58 TO STA. 13+25.89
-Y11- STA. 10+12.01 TO STA. 12+41.43	-Y25- STA. 12+94.30 TO STA. 15+41.54
-Y12- STA. 10+12.05 TO STA. 12+45.18	-Y26- STA. 10+18.06 TO STA. 12+50.76
	-Y27- STA. 11+44.87 TO STA. 13+76.24
	-Y28- STA. 10+18.02 TO STA. 12+23.55



TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 7

-Y2- STA. 13+00.00 TO STA. 15+12.41
-Y5- STA. 10+18.00 TO STA. 12+50.00
-Y16- STA. 10+12.00 TO STA. 10+97.57



TYPICAL SECTION NO. 8

USE TYPICAL SECTION NO. 8

-RPA- STA. 12+25.00 TO STA. 14+10.83
-RPD- STA. 13+85.00 TO STA. 14+86.66 (REVERSE TYP.)
-LPD- STA. 12+16.07 TO STA. 13+17.71 (REVERSE TYP.)
-LPA- STA. 12+60.00 TO STA. 14+11.18

REVISIONS

3/24/2022
4705_RdD_psh_02a-3.dgn
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PVMT - SCHEDULE

C1	1 1/2" TYPE S9.5B
C2	3" TYPE S9.5B
C3	VAR. DEPTH S9.5B
D1	2 1/2" I19.0C
D2	VAR. DEPTH I19.0C
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E4	VAR. DEPTH B25.0C
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R4	EXPR. GUTTER
T	EARTH MATERIAL
U	EX. PAV.
W	WEDGING

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

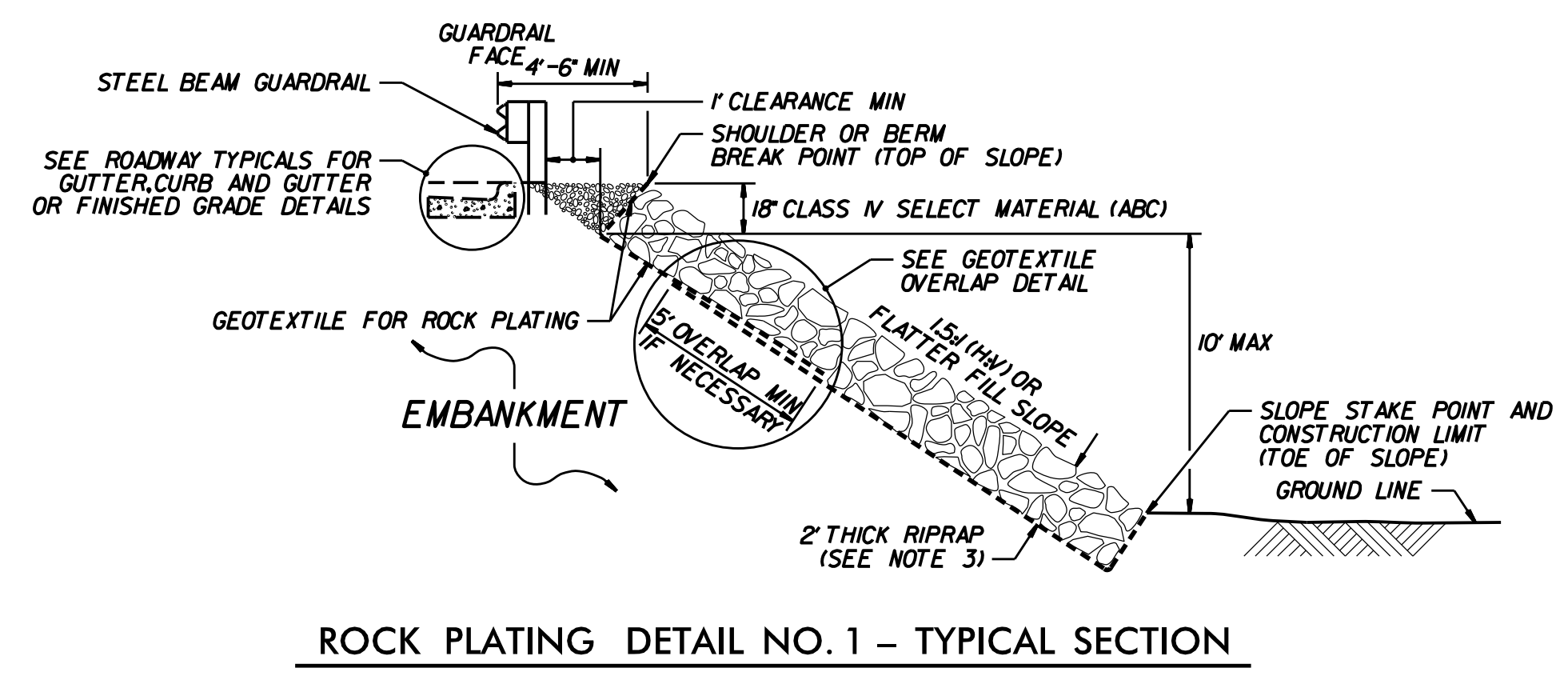
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
ROCK PLATING

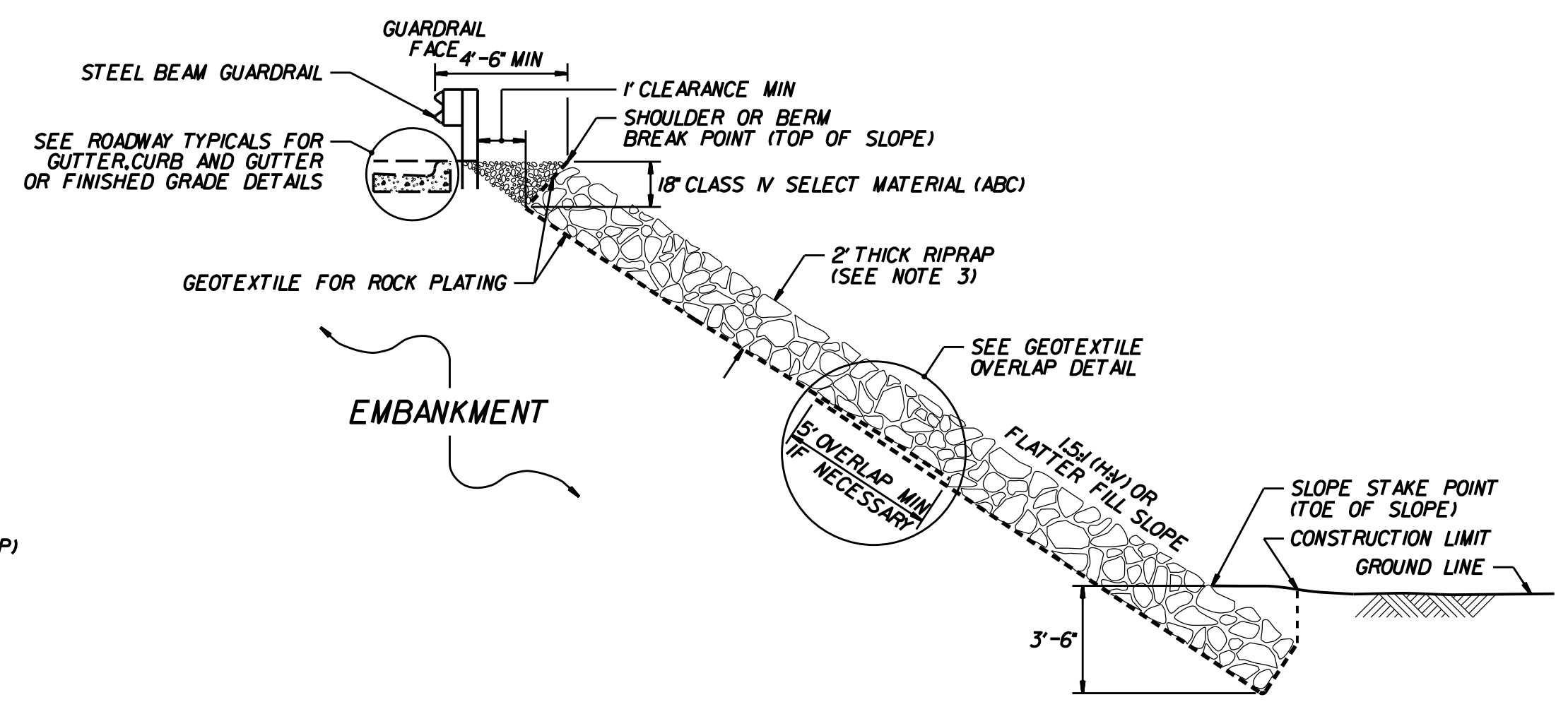
ROADWAY DETAIL DRAWING FOR
ROCK PLATING

SHEET 1 OF 1
275D01

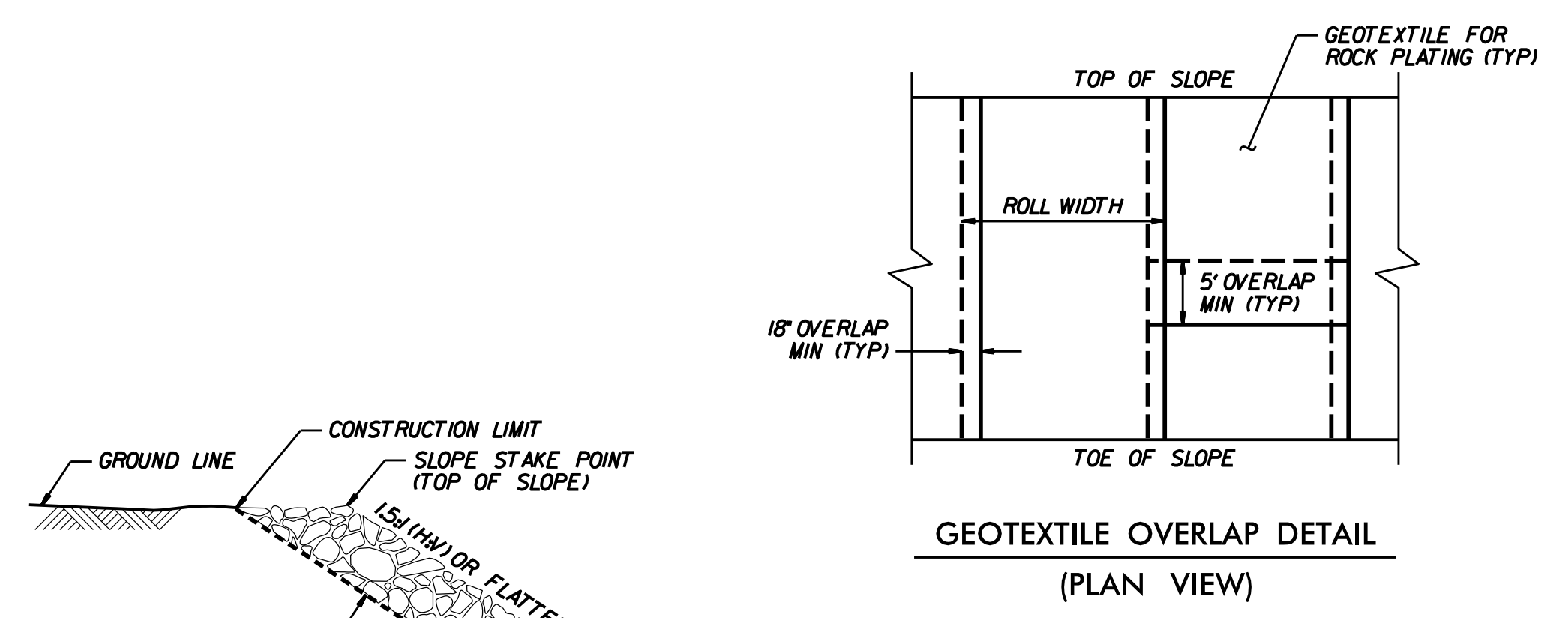
SHEET 1 OF 1
275D01



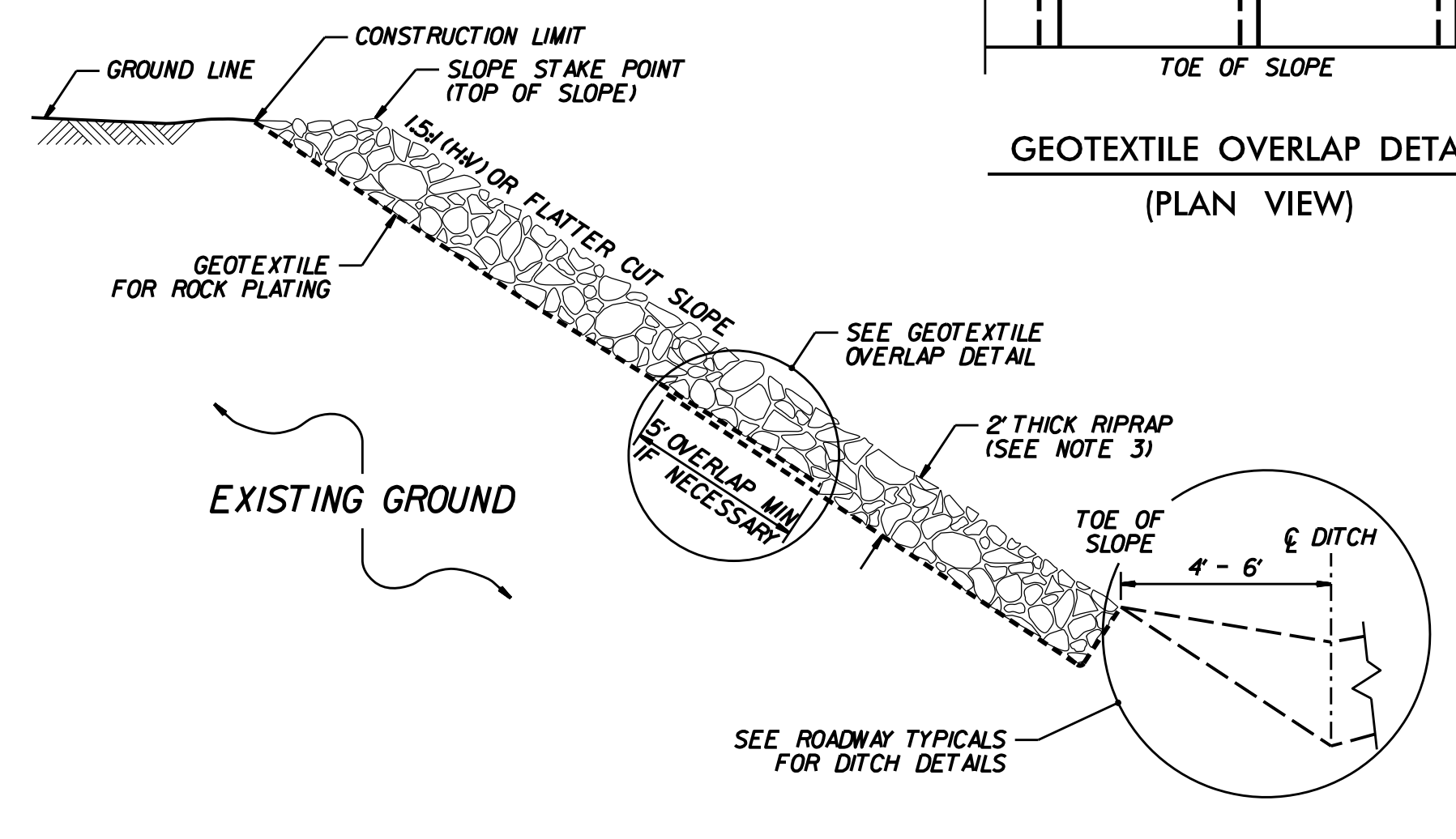
ROCK PLATING DETAIL NO. 1 - TYPICAL SECTION



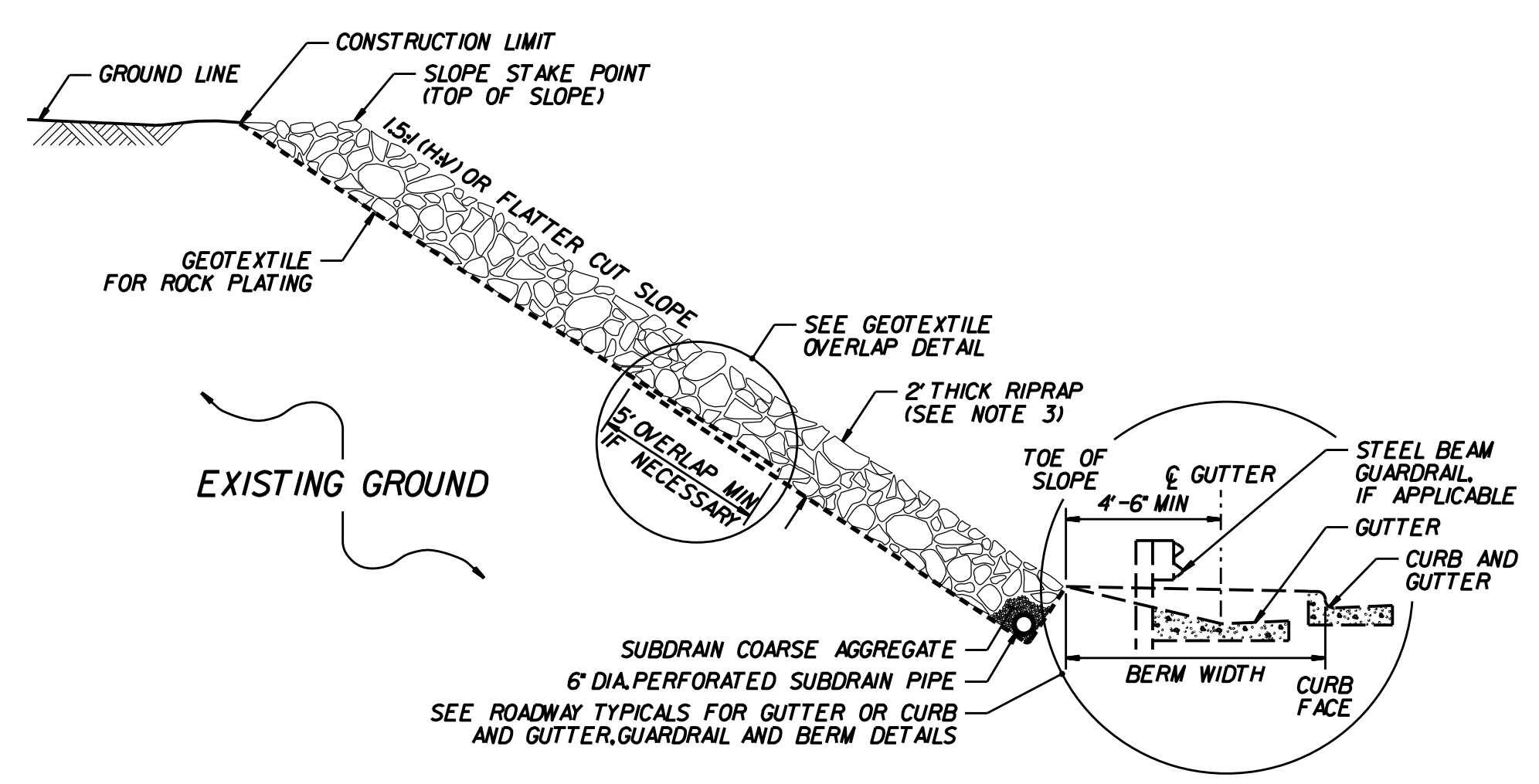
ROCK PLATING DETAIL NO. 2 - TYPICAL SECTION



GEOTEXTILE OVERLAP DETAIL (PLAN VIEW)

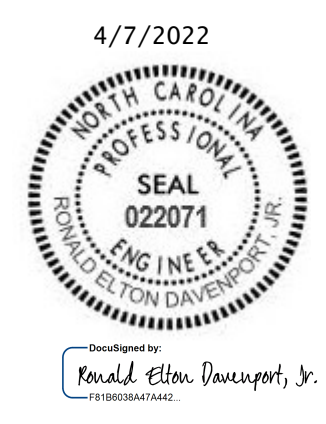


ROCK PLATING DETAIL NO. 3 - TYPICAL SECTION



ROCK PLATING DETAIL NO. 4 - TYPICAL SECTION

- NOTES:**
1. SEE ROADWAY PLANS AND SUMMARY SHEETS FOR ROCK PLATING LOCATIONS.
 2. FOR ROCK PLATING, SEE SECTION 275 OF THE STANDARD SPECIFICATIONS.
 3. USE CLASS I, 2 OR B RIPRAP UNLESS REQUIRED OTHERWISE IN THE ROADWAY SUMMARY SHEETS.



CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6900 FAX 919-250-4119

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ORIGINAL BY: S. HIDDEN	DATE: 03-11-22
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FILE SPEC.:	

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02

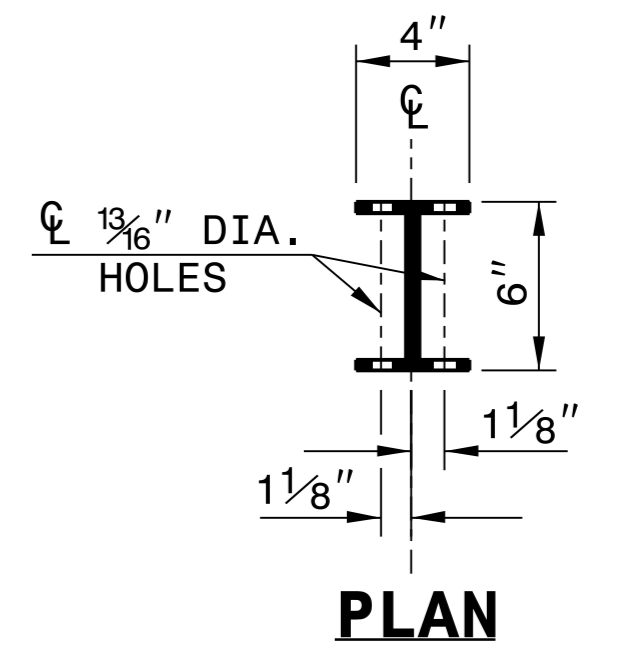
STATE OF NORTH CAROLINA
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ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

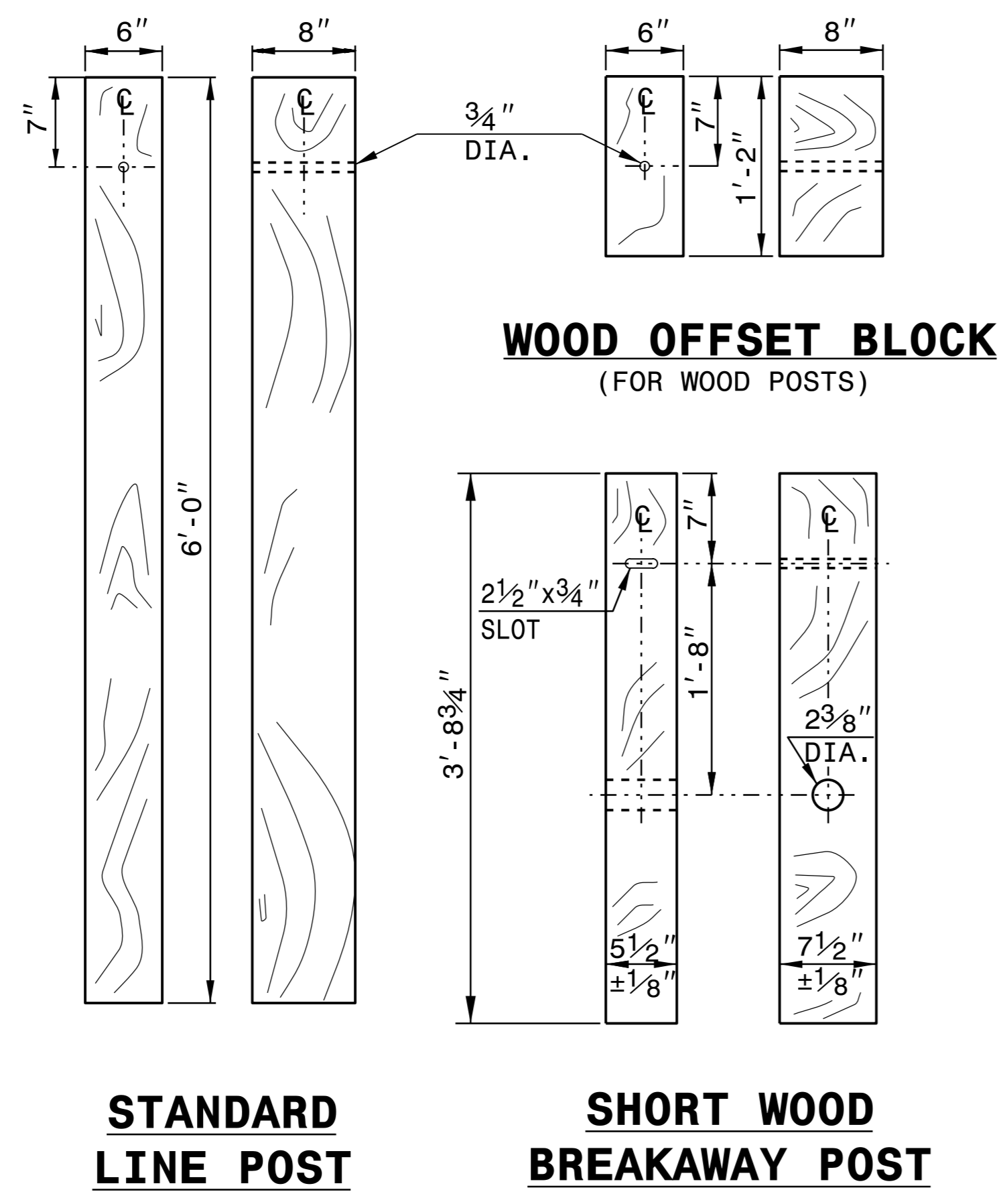
SHEET 6 OF 8
862D02



STANDARD W-BEAM GUARDRAIL



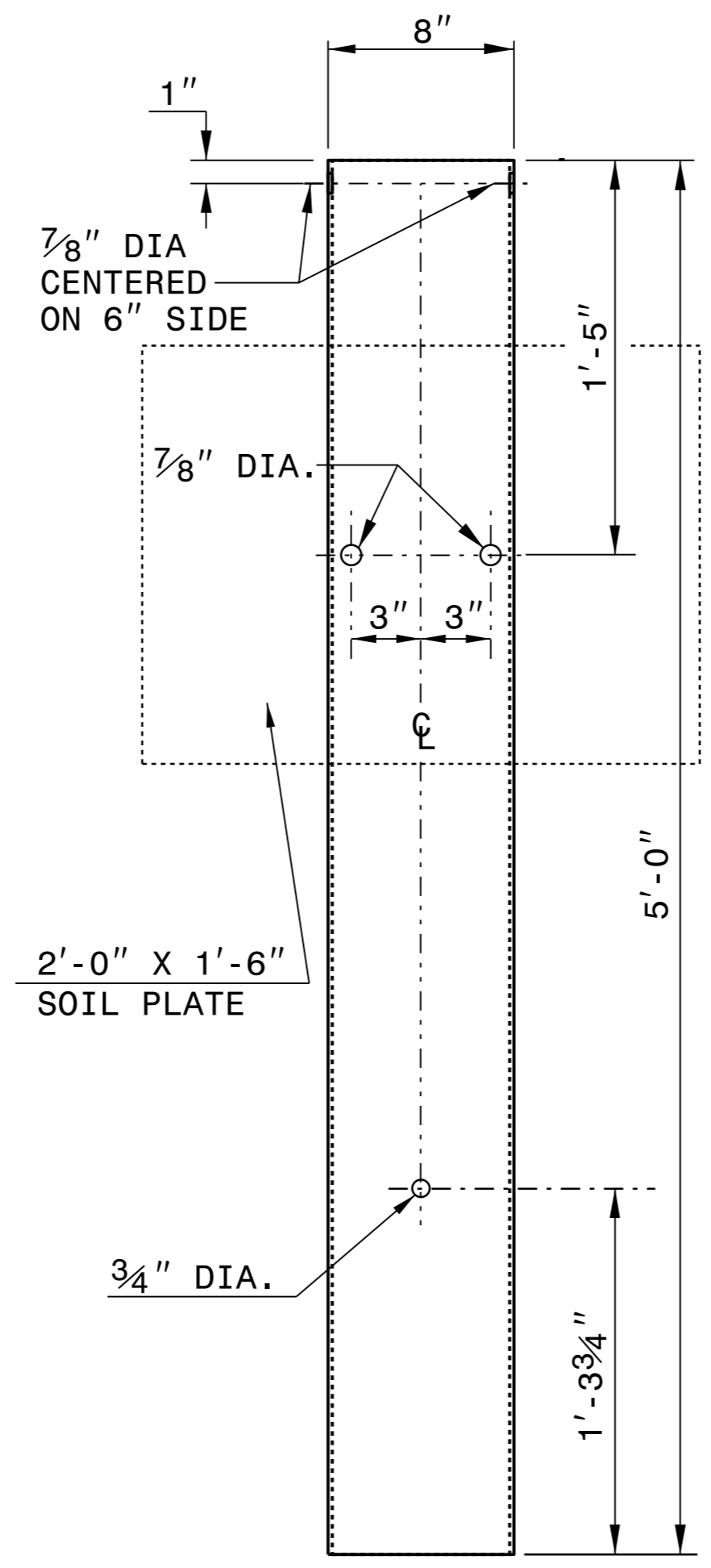
PLAN



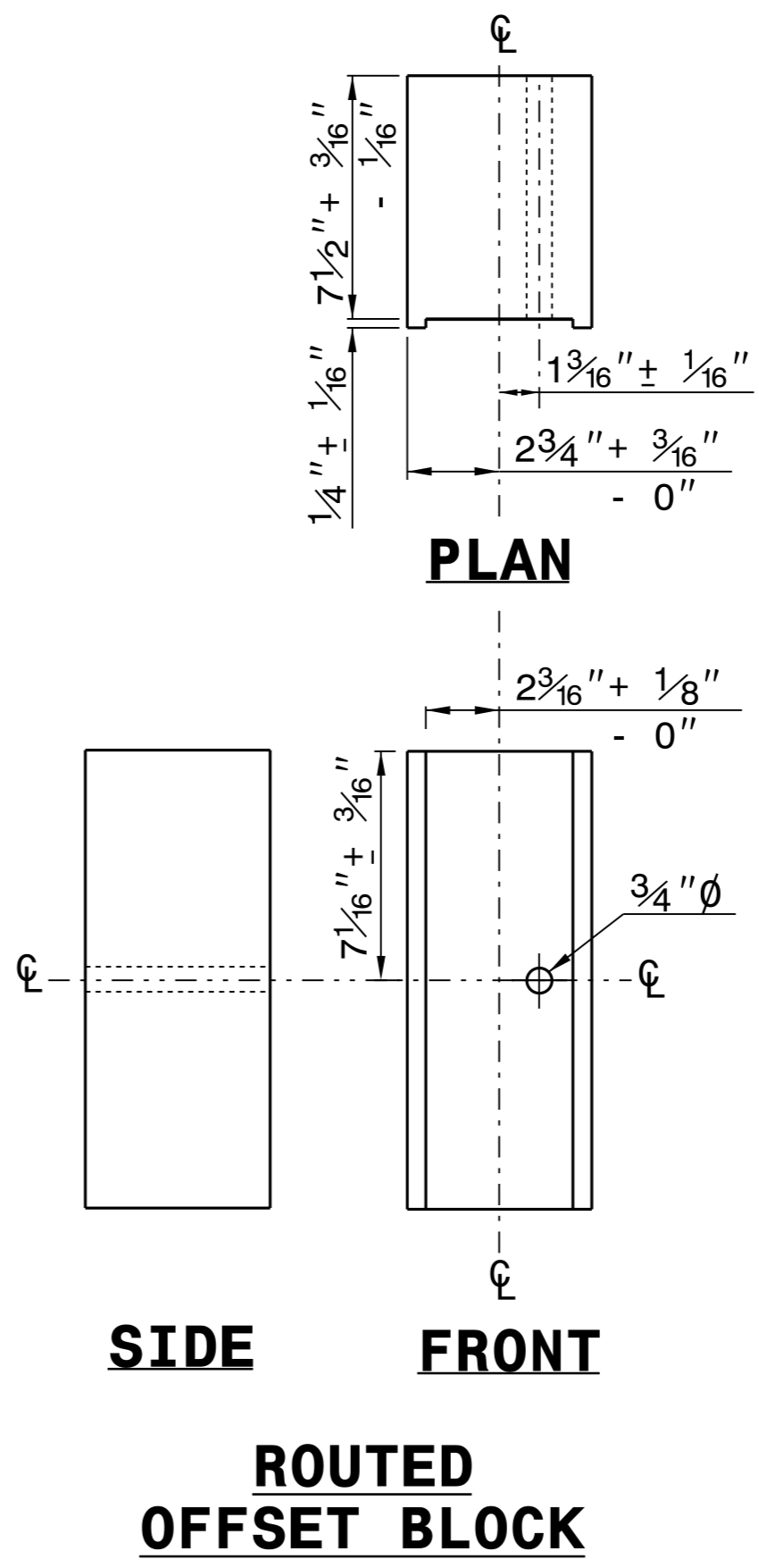
**WOOD OFFSET BLOCK
(FOR WOOD POSTS)**

**STANDARD
LINE POST**

**SHORT WOOD
BREAKAWAY POST**



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

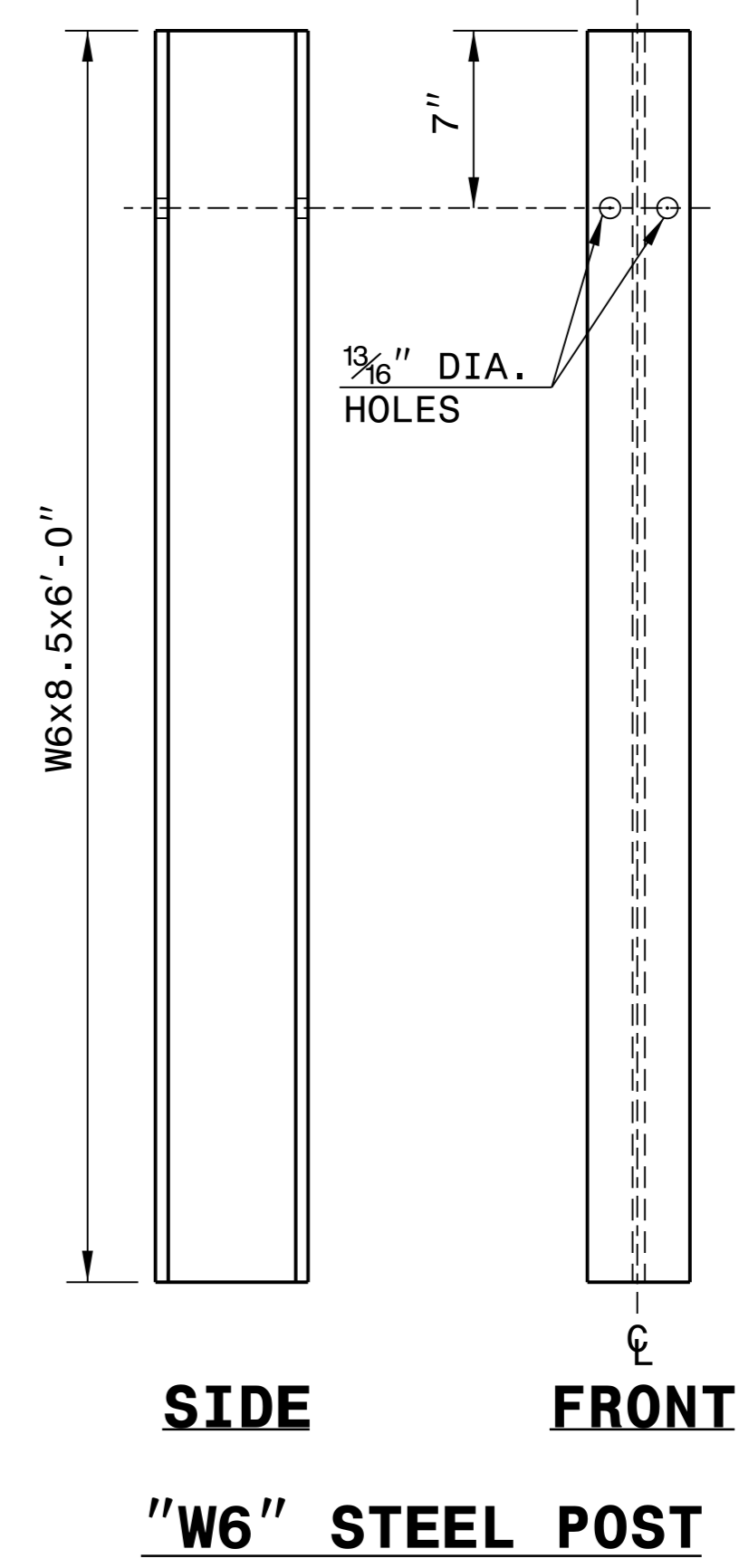


PLAN

SIDE

FRONT

**ROUTED
OFFSET BLOCK**



SIDE

FRONT

"W6" STEEL POST

SYSTEM PARTS



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AND DEVELOPMENT UNIT**
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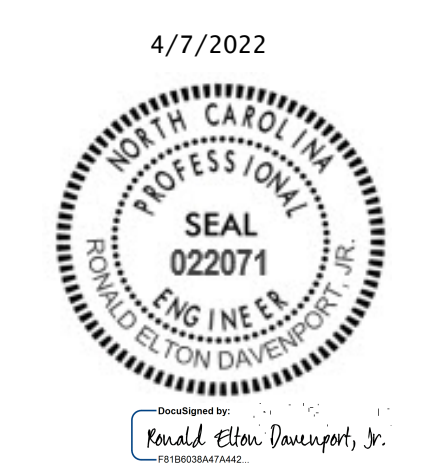
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FILE SPEC.:	

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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
<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 11 1/2" 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. 		
<p>PLAN VIEW</p> <p>GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE</p>		
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.		

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
<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 11 1/2" 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. 		
<p>PLAN VIEW</p> <p>GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER</p>		
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.		



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AND DEVELOPMENT UNIT**
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MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.:	

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

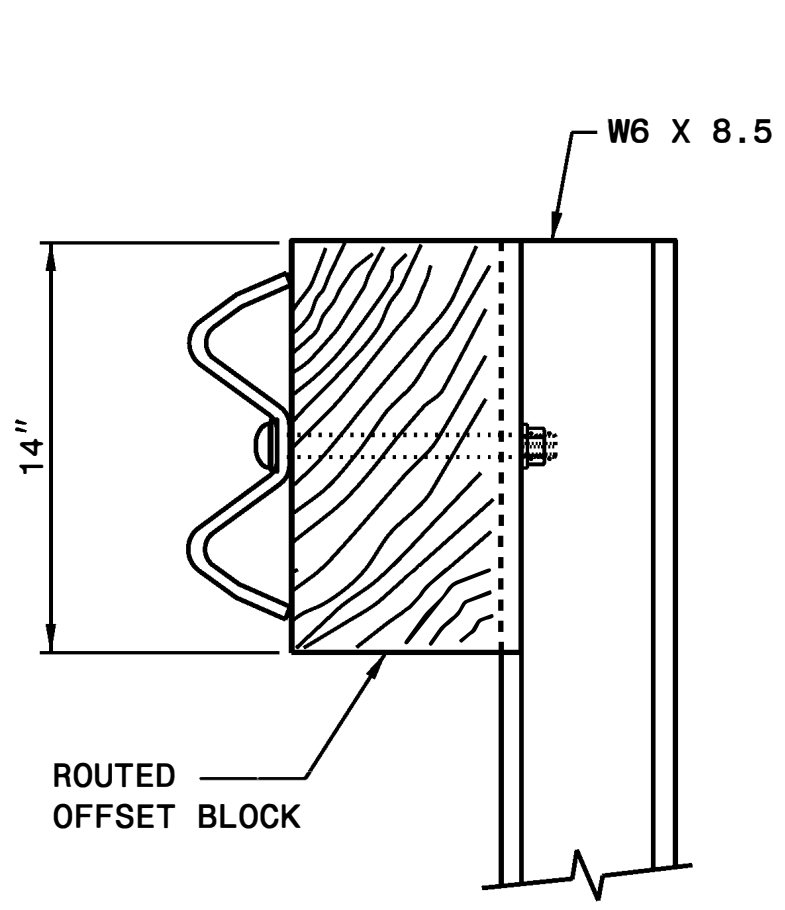
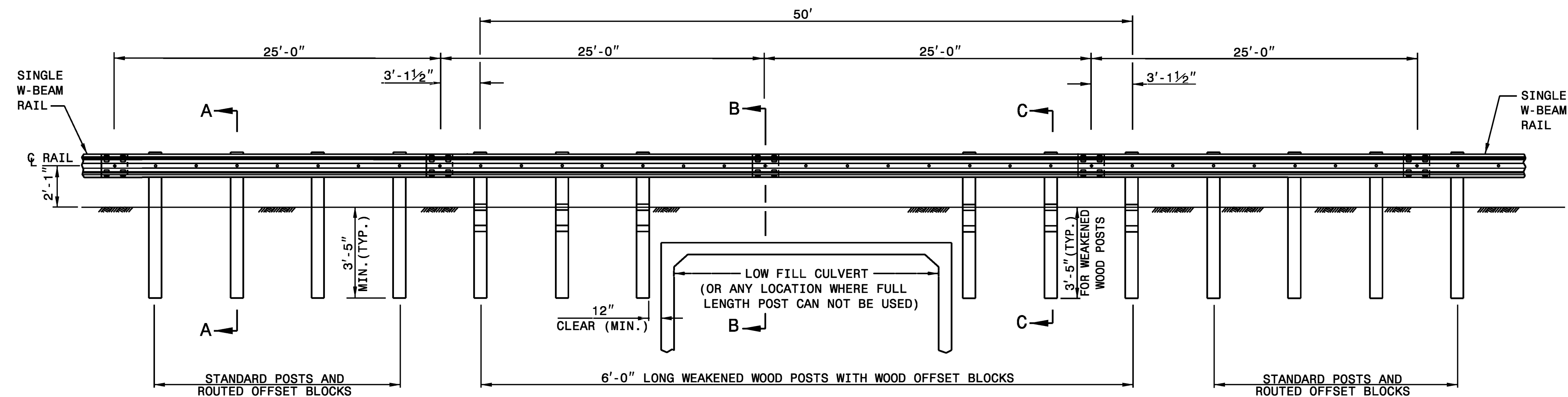
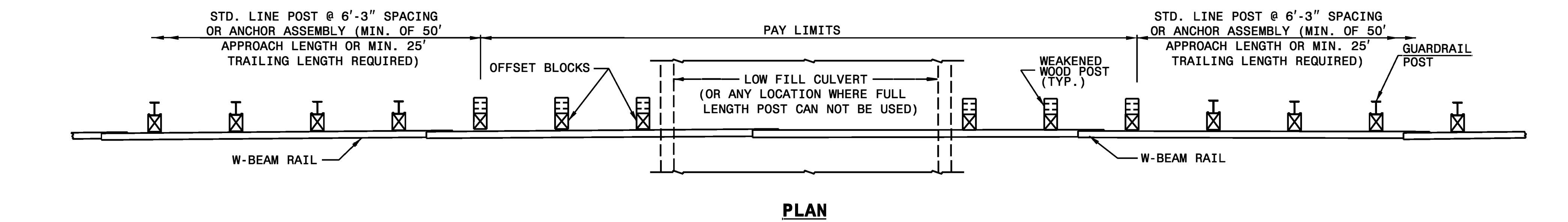
SPECIAL DETAIL FOR
GUARDRAIL PLACEMENT
25'-0" CLEAR SPAN

SHEET - OF -
862D01

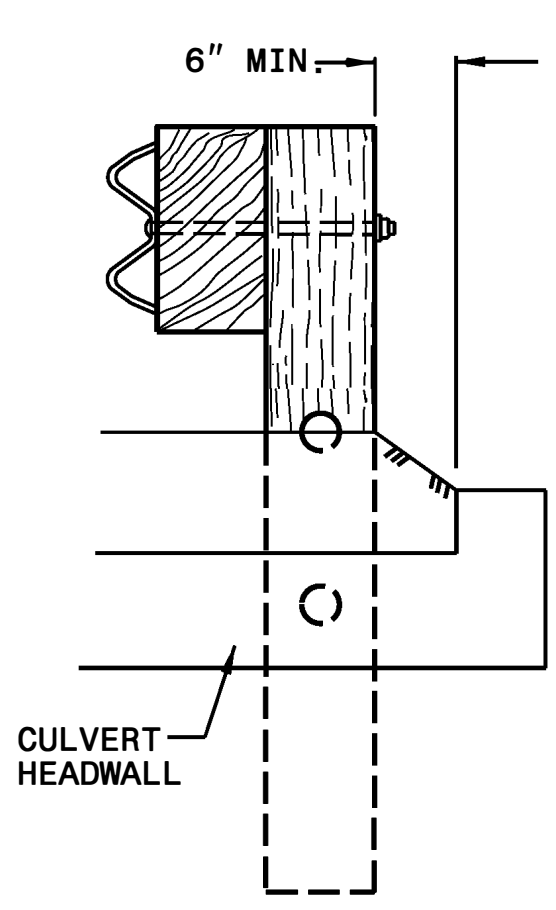
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

SPECIAL DETAIL FOR
GUARDRAIL PLACEMENT
25'-0" CLEAR SPAN

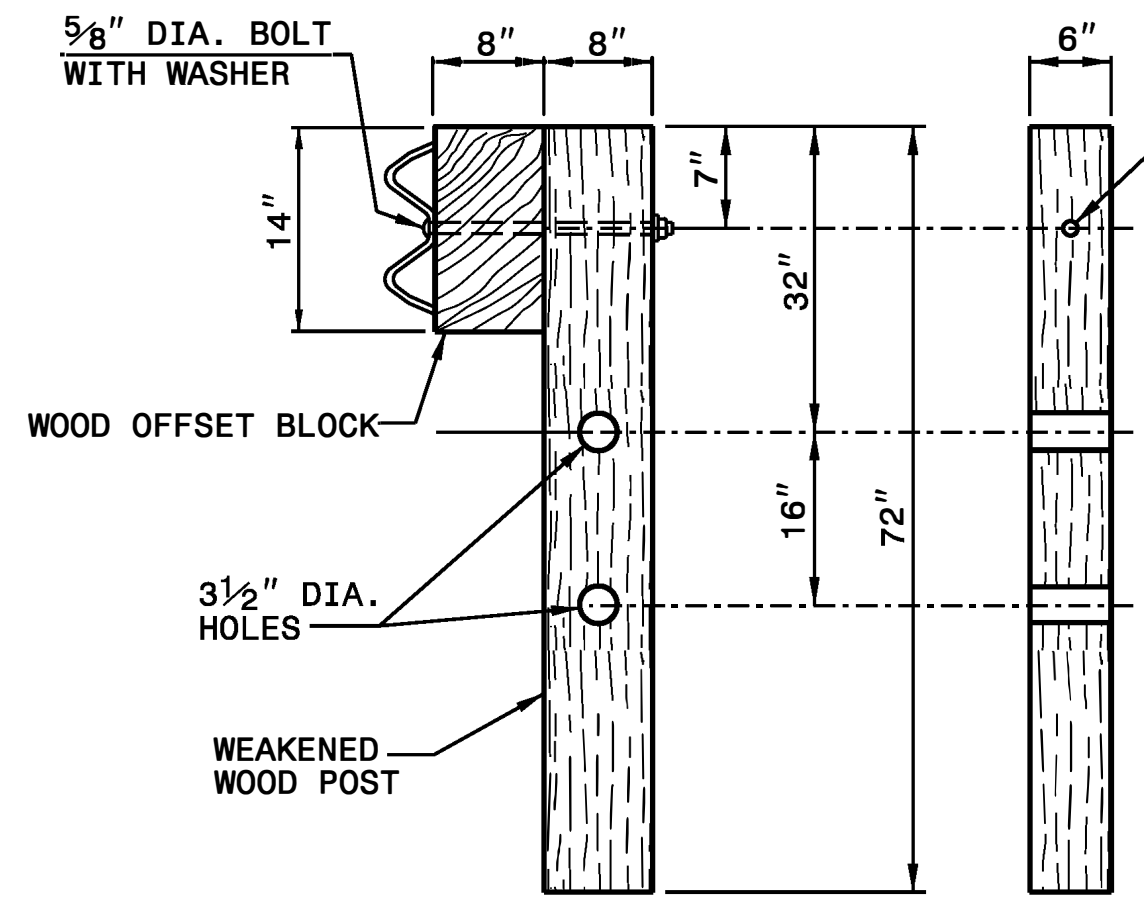
SHEET - OF -
862D01



SECTION A-A

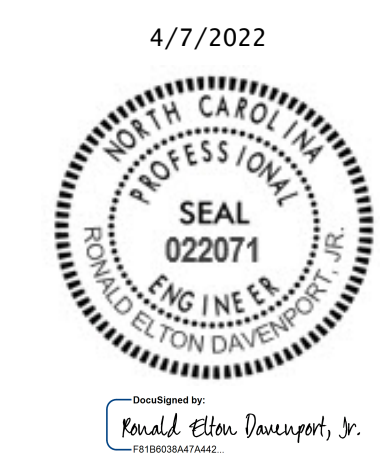


SECTION B-B



SECTION C-C FRONT WEAKENED WOOD POST

- GENERAL NOTES:
1. LAP RAIL IN THE DIRECTION OF TRAFFIC FLOW.
 2. SEE ROADWAY PLANS FOR LOCATIONS AND CONTINUATION OF RAIL OR END SECTIONS.
 3. MINIMUM DISTANCE OF 5 FEET BEHIND THE GUARDRAIL SHOULD BE CLEAR OF ANY FIXED-OBJECT HAZARDS THAT COULD SNAG AN IMPACTING VEHICLE.



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25'-0" CLEAR SPAN GUARDRAIL PLACEMENT

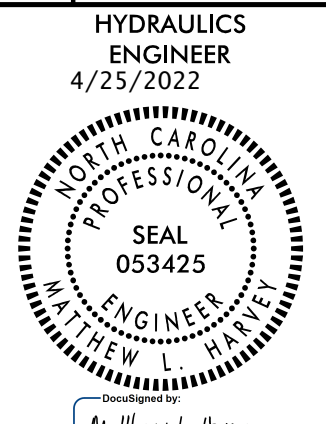
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MODIFIED BY: _____	DATE: _____
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FILE SPEC.: _____	

DRAINAGE DETAILS

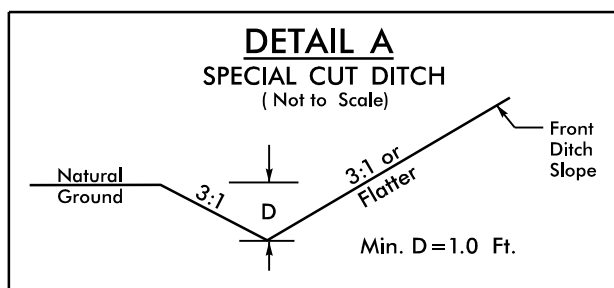
(NOT TO SCALE)

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1223 Jones Franklin Rd.
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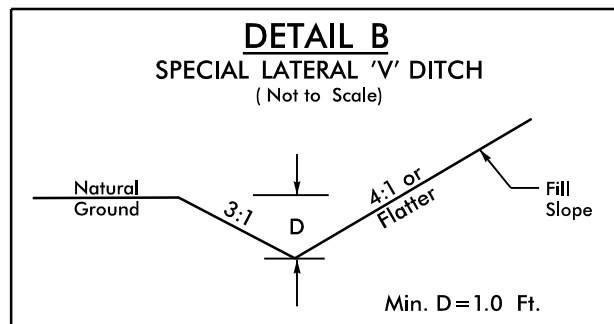
PROJECT REFERENCE NO. **R-4705** SHEET NO. **2D-1**



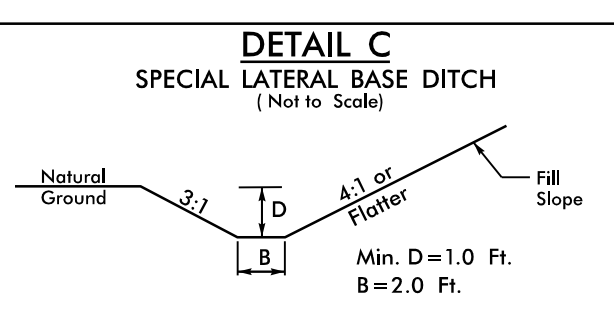
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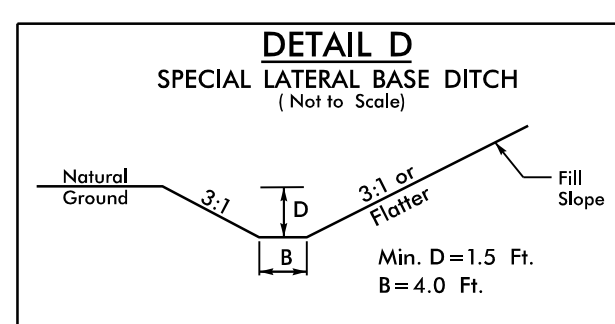
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FROM STA. 11+00 TO STA. 15+24 -L- RT
FROM STA. 31+82 TO STA. 32+42 -L- RT
FROM STA. 32+20 TO STA. 32+50 -L- LT
FROM STA. 54+80 TO STA. 58+00 -L- LT
FROM STA. 55+50 TO STA. 56+50 -L- RT
FROM STA. 58+00 TO STA. 62+00 -L- LT
FROM STA. 58+50 TO STA. 62+50 -L- RT
FROM STA. 64+08 TO STA. 67+00 -L- RT
FROM STA. 93+35 TO STA. 97+00 -L- LT
FROM STA. 93+50 TO STA. 99+50 -L- RT
FROM STA. 110+50 TO STA. 114+05 -L- RT
FROM STA. 123+25 TO STA. 124+75 -L- RT
FROM STA. 124+80 TO STA. 126+00 -L- RT
FROM STA. 124+70 TO STA. 125+00 -L- LT
FROM STA. 134+50 TO STA. 136+50 -L- RT
FROM STA. 133+50 TO STA. 137+50 -L- LT
FROM STA. 137+50 TO STA. 138+96 -L- LT
FROM STA. 11+00 TO STA. 13+00 -Y3- LT
FROM STA. 11+00 TO STA. 13+00 -Y3- RT
FROM STA. 146+00 TO STA. 148+50 -L- LT
FROM STA. 161+00 TO STA. 165+75 -L- RT
FROM STA. 178+50 TO STA. 179+65 -L- RT
FROM STA. 12+50 TO STA. 13+50 -Y5- RT
FROM STA. 12+40 TO STA. 14+85 -Y6- LT
FROM STA. 12+40 TO STA. 14+85 -Y6- RT
FROM STA. 10+45 TO STA. 12+50 -Y7- LT
FROM STA. 207+50 TO STA. 212+99 -L- RT
FROM STA. 210+50 TO STA. 212+99 -L- LT
FROM STA. 226+50 TO STA. 233+40 -L- RT
FROM STA. 233+00 TO STA. 235+33 -L- LT
FROM STA. 240+00 TO STA. 241+37 -L- RT
FROM STA. 240+50 TO STA. 241+37 -L- LT
FROM STA. 249+00 TO STA. 257+01 -L- RT
FROM STA. 13+00 TO STA. 14+50 -Y9- RT
FROM STA. 265+00 TO STA. 268+50 -L- RT
FROM STA. 10+50 TO STA. 12+00 -Y10- LT
FROM STA. 10+39 TO STA. 12+41 -Y11- RT
FROM STA. 10+34 TO STA. 12+38 -Y11- LT
FROM STA. 353+25 TO STA. 354+50 -L- LT
FROM STA. 355+00 TO STA. 356+00 -L- RT
FROM STA. 358+50 TO STA. 359+50 -L- LT
FROM STA. 358+50 TO STA. 359+75 -L- RT
FROM STA. 378+00 TO STA. 380+00 -L- LT
FROM STA. 377+00 TO STA. 384+50 -L- RT
FROM STA. 390+50 TO STA. 393+40 -L- RT
FROM STA. 393+45 TO STA. 397+00 -L- RT
FROM STA. 406+25 TO STA. 409+00 -L- RT
FROM STA. 406+25 TO STA. 406+88 -L- LT
FROM STA. 10+50 TO STA. 11+00 -Y18- LT
FROM STA. 10+48 TO STA. 11+50 -Y26- LT
FROM STA. 12+71 TO STA. 15+25 -Y19- LT
FROM STA. 469+67 TO STA. 470+25 -L- RT.



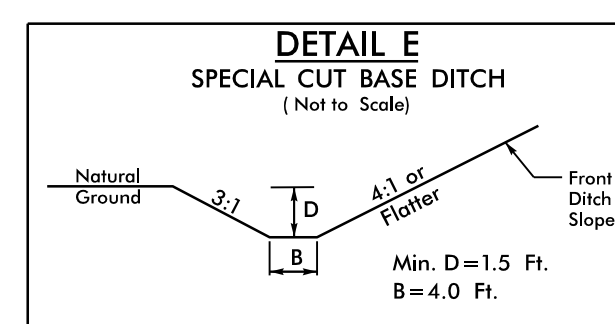
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FROM STA. 20+12 TO STA. 21+50 -Y1- RT
FROM STA. 22+25 TO STA. 25+00 -Y1- RT
FROM STA. 21+50 TO STA. 25+50 -L- RT
FROM STA. 105+70 TO STA. 108+00 -L- LT
FROM STA. 138+96 TO STA. 144+50 -L- RT
FROM STA. 448+85 TO STA. 451+00 -L- RT



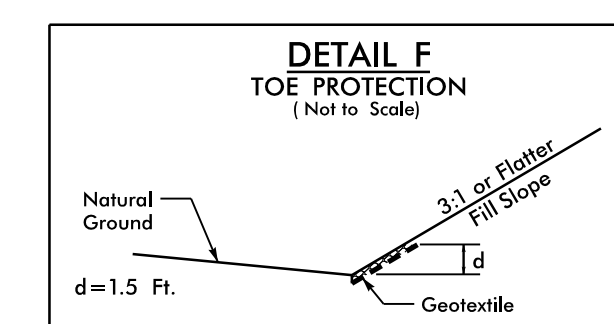
FROM STA. 12+35 TO STA. 17+00 -Y1- RT
FROM STA. 10+50 TO STA. 19+00 -L- LT
FROM STA. 21+65 TO STA. 31+80 -L- LT
FROM STA. 105+70 TO STA. 108+00 -L- LT
FROM STA. 138+96 TO STA. 144+50 -L- RT
FROM STA. 448+85 TO STA. 451+00 -L- RT



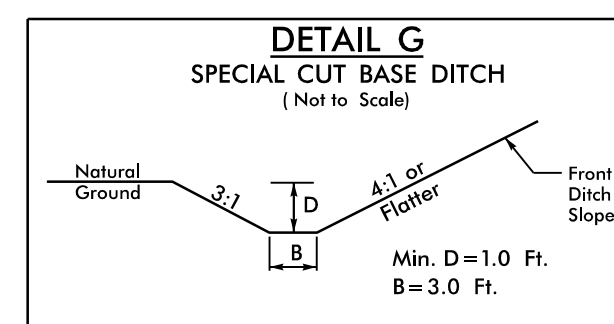
FROM STA. 15+24 TO STA. 21+48 -L- RT



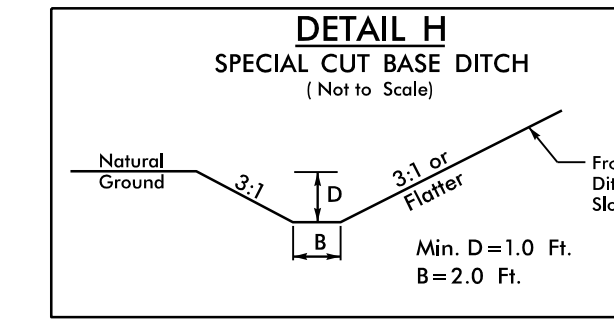
FROM STA. 62+50 TO STA. 64+02 -L- RT
FROM STA. 165+80 TO STA. 167+65 -L- RT



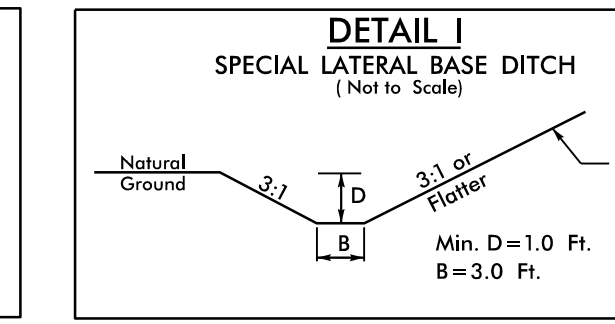
FROM STA. 73+18 TO STA. 83+00 -L- RT
FROM STA. 74+80 TO STA. 77+80 -L- LT
FROM STA. 78+25 TO STA. 83+50 -L- LT



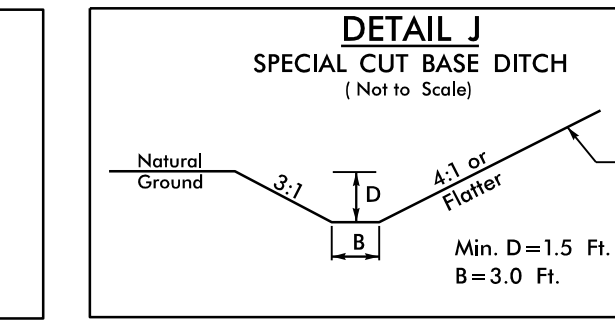
FROM STA. 62+00 TO STA. 62+50 -L- LT
FROM STA. 62+50 TO STA. 63+85 -L- LT
FROM STA. 64+15 TO STA. 71+00 -L- LT
FROM STA. 113+88 TO STA. 115+00 -L- LT
FROM STA. 179+65 TO STA. 188+05 -L- RT
FROM STA. 179+50 TO STA. 185+40 -L- LT
FROM STA. 13+50 TO STA. 15+25 -Y13- LT



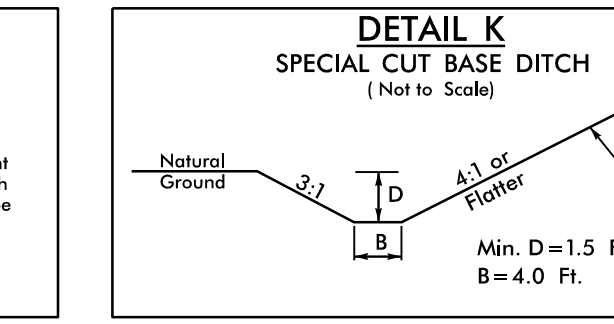
FROM STA. 32+50 TO STA. 37+50 -L- LT
FROM STA. 32+42 TO STA. 39+20 -L- RT
FROM STA. 40+50 TO STA. 51+80 -L- LT
FROM STA. 40+00 TO STA. 52+30 -L- RT
FROM STA. 100+50 TO STA. 105+70 -L- LT
FROM STA. 114+05 -L- RT DRIVEWAY
FROM STA. 115+05 TO STA. 124+35 -L- LT
FROM STA. 138+96 TO STA. 145+50 -L- RT
FROM STA. 148+60 TO STA. 160+00 -L- LT
FROM STA. 153+87 TO STA. 161+00 -L- LT
FROM STA. 160+00 TO STA. 165+75 -L- LT
FROM STA. 165+80 TO STA. 174+65 -L- RT
FROM STA. 167+65 TO STA. 174+65 -L- RT
FROM STA. 188+05 TO STA. 192+10 -L- RT
FROM STA. 186+25 TO STA. 192+50 -L- LT
FROM STA. 197+03 TO STA. 207+00 -L- LT
FROM STA. 194+00 TO STA. 220+20 -L- RT
FROM STA. 212+99 TO STA. 223+25 -L- LT
FROM STA. 212+99 TO STA. 222+00 -L- RT
FROM STA. 223+50 TO STA. 232+50 -L- LT
FROM STA. 227+55 TO STA. 239+50 -L- RT
FROM STA. 235+33 TO STA. 240+00 -L- LT
FROM STA. 241+37 TO STA. 245+30 -L- LT
FROM STA. 247+00 TO STA. 252+90 -L- LT
FROM STA. 253+00 TO STA. 262+00 -L- LT
FROM STA. 267+15 TO STA. 274+40 -L- LT
FROM STA. 275+50 TO STA. 303+80 -L- LT
FROM STA. 276+00 TO STA. 317+00 -L- RT
FROM STA. 312+26 TO STA. 313+00 -L- RT
FROM STA. 315+80 TO STA. 317+00 -L- RT
FROM STA. 10+39 TO STA. 12+41 -Y11- RT
FROM STA. 10+40 TO STA. 12+00 -Y12- LT
FROM STA. 313+67 TO STA. 316+50 -L- LT
FROM STA. 332+00 TO STA. 332+00 -L- LT
FROM STA. 324+95 TO STA. 338+75 -L- RT
FROM STA. 338+00 TO STA. 353+23 -L- LT
FROM STA. 339+08 TO STA. 352+69 -L- RT
FROM STA. 367+00 TO STA. 372+00 -L- RT
FROM STA. 393+65 TO STA. 406+00 -L- LT
FROM STA. 406+88 TO STA. 414+50 -L- LT



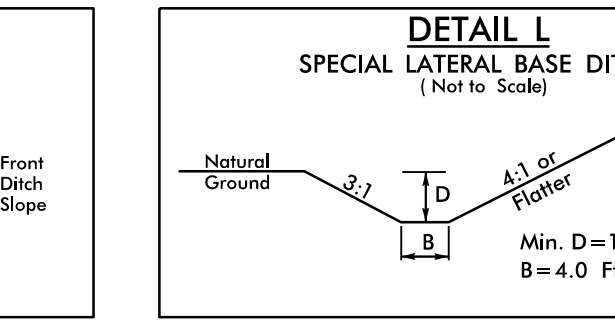
FROM STA. 359+85 TO STA. 367+00 -L- RT
FROM STA. 359+75 TO STA. 368+40 -L- LT
FROM STA. 390+50 TO STA. 393+59 -L- LT
FROM STA. 476+00 TO STA. 480+00 -L- LT



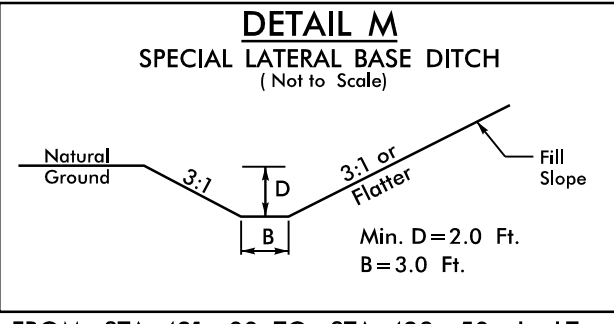
FROM STA. 105+30 TO STA. 110+50 -L- RT
FROM STA. 146+00 TO STA. 148+00 -L- RT
FROM STA. 148+60 TO STA. 152+80 -L- RT
FROM STA. 241+37 TO STA. 249+00 -L- RT
FROM STA. 262+50 TO STA. 267+15 -L- LT
FROM STA. 303+80 TO STA. 312+50 -L- LT
FROM STA. 12+62 TO STA. 14+50 -Y19- RT



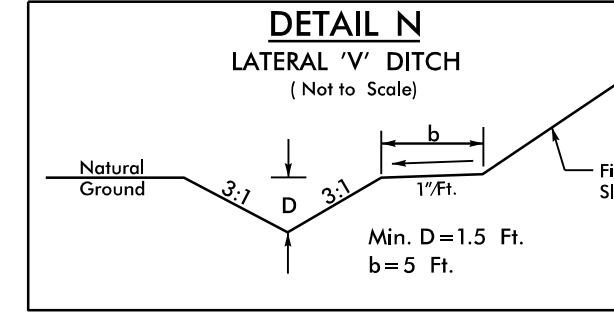
FROM STA. 115+05 TO STA. 122+94 -L- RT



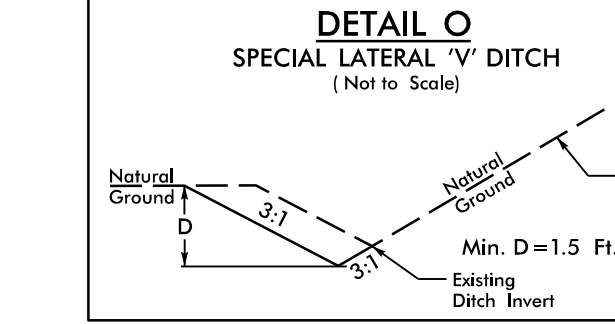
FROM STA. 12+25 TO STA. 13+00 -Y2- LT
FROM STA. 325+00 TO STA. 332+00 -L- LT



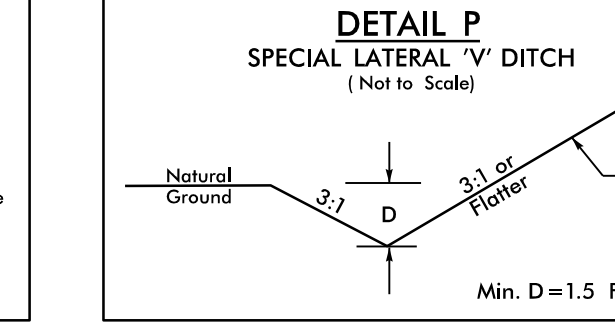
FROM STA. 421+00 TO STA. 428+50 -L- LT
FROM STA. 480+00 TO STA. 490+66 -L- LT



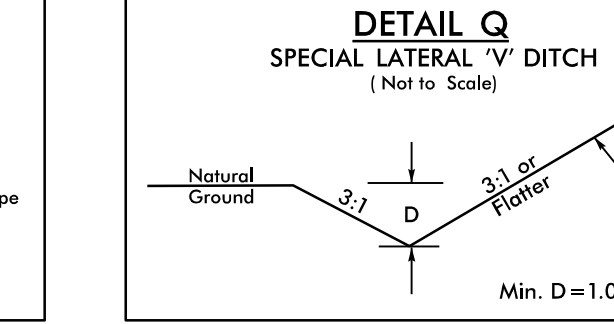
FROM STA. 452+00 TO STA. 455+88 -L- LT



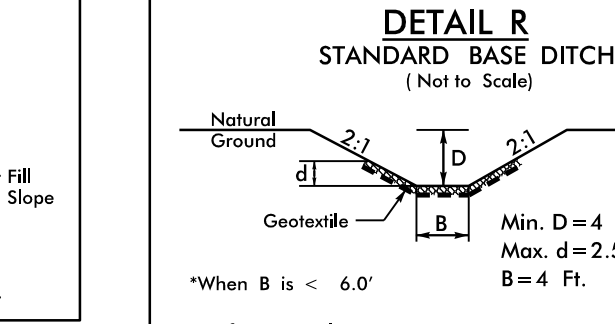
FROM STA. 452+00 TO STA. 454+44 -L- RT



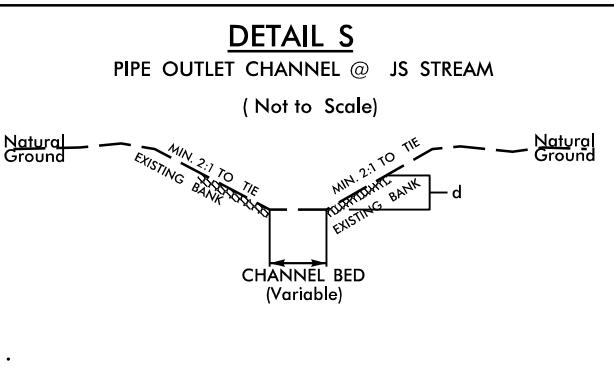
FROM STA. 485+50 TO STA. 489+50 -L- RT
FROM STA. 492+50 TO STA. 494+50 -L- LT
FROM STA. 498+75 TO STA. 503+40 -L- RT
FROM STA. 504+00 TO STA. 506+00 -L- RT
FROM STA. 507+00 TO STA. 507+50 -L- RT
FROM STA. 509+00 TO STA. 513+00 -L- RT
FROM STA. 510+00 TO STA. 512+50 -L- LT




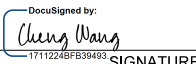
FROM STA. 491+50 TO STA. 494+00 -L- RT
FROM STA. 495+00 TO STA. 498+65 -L- RT
FROM STA. 513+58 TO STA. 516+50 -L- RT

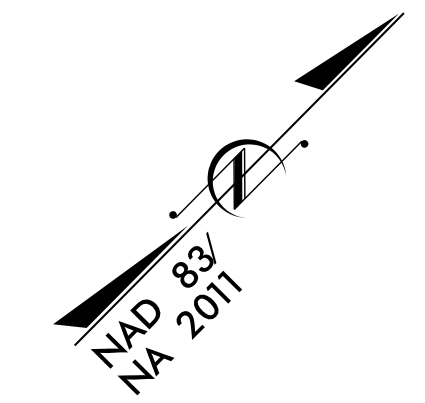
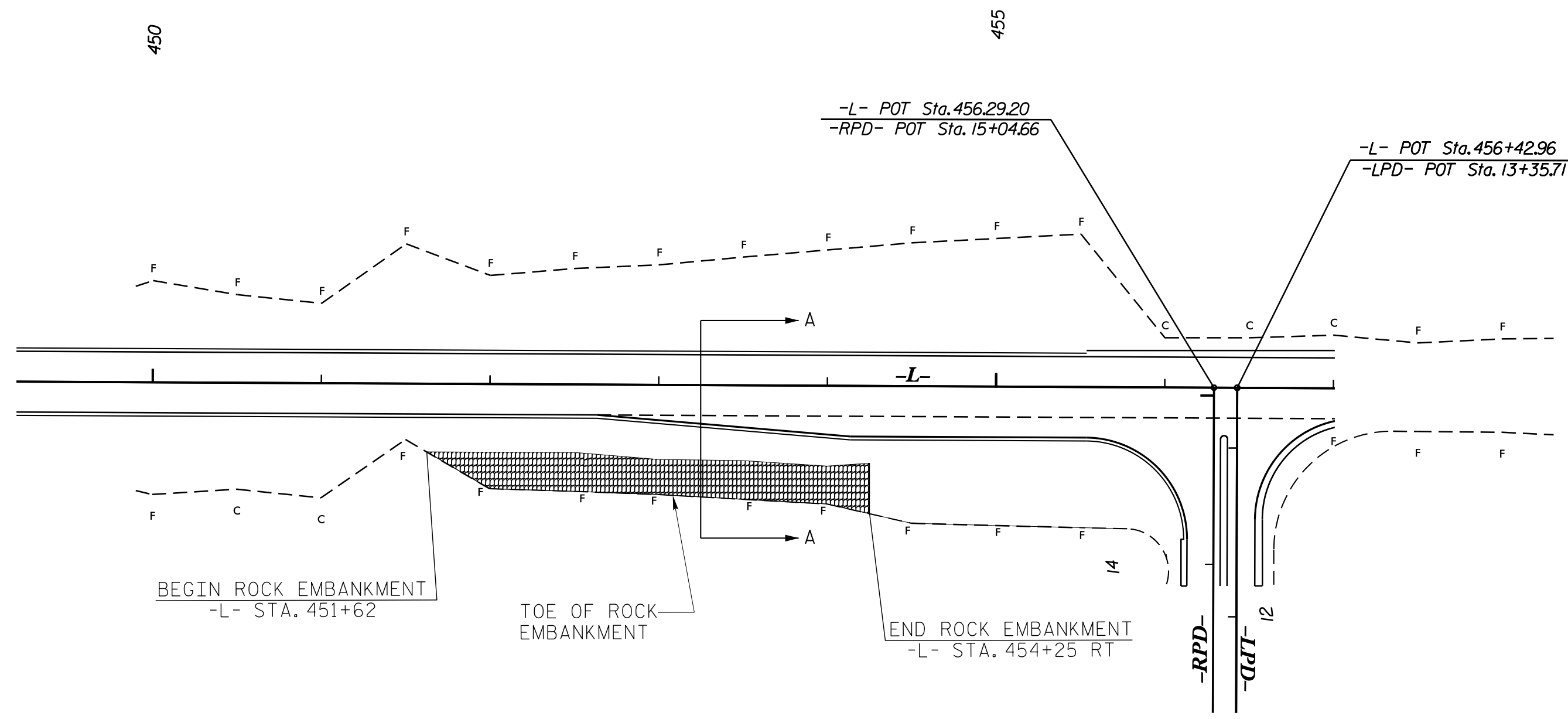


FROM STA. 438+50 -L- RT.



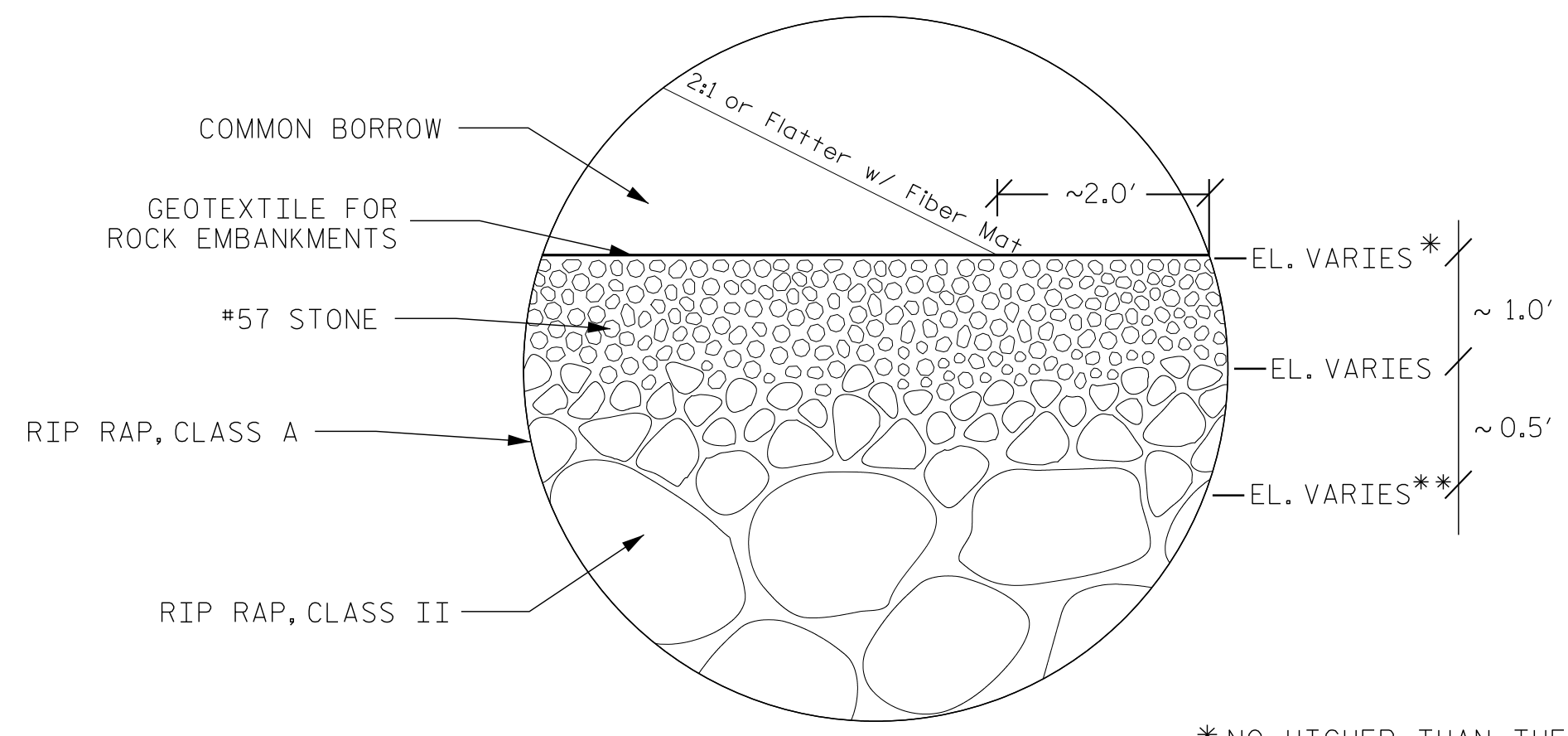
STA. 22+00 -Y1- LT; L=14'; d=3.0'
STA. 21+47 -L- RT; L=14'; d=3.0'
STA. 115+05 -L- RT; L=12'; d=2.0'
STA. 124+71 -L- LT; L=14'; d=3.0'
STA. 148+56 -L- LT; L=14'; d=3.0'
STA. 324+92 -L- RT; L=16'; d=2.5'
STA. 359+80 -L- RT; L=20'; d=4.0'
STA. 379+43 -L- RT; L=16'; d=4.0'
STA. 393+45 -L- RT; L=20'; d=4.0'
STA. 498+69 -L- RT; L=12'; d=4.0'
STA. 513+45 -L- RT; L=14'; d=3.5'

PROJECT REFERENCE NO. R-4705		SHEET NO. 2G-1	
GEOTECHNICAL ENGINEER  CHENG WANG ENGINEER		ENGINEER	
SIGNATURE: 		DATE: 2/28/2022	



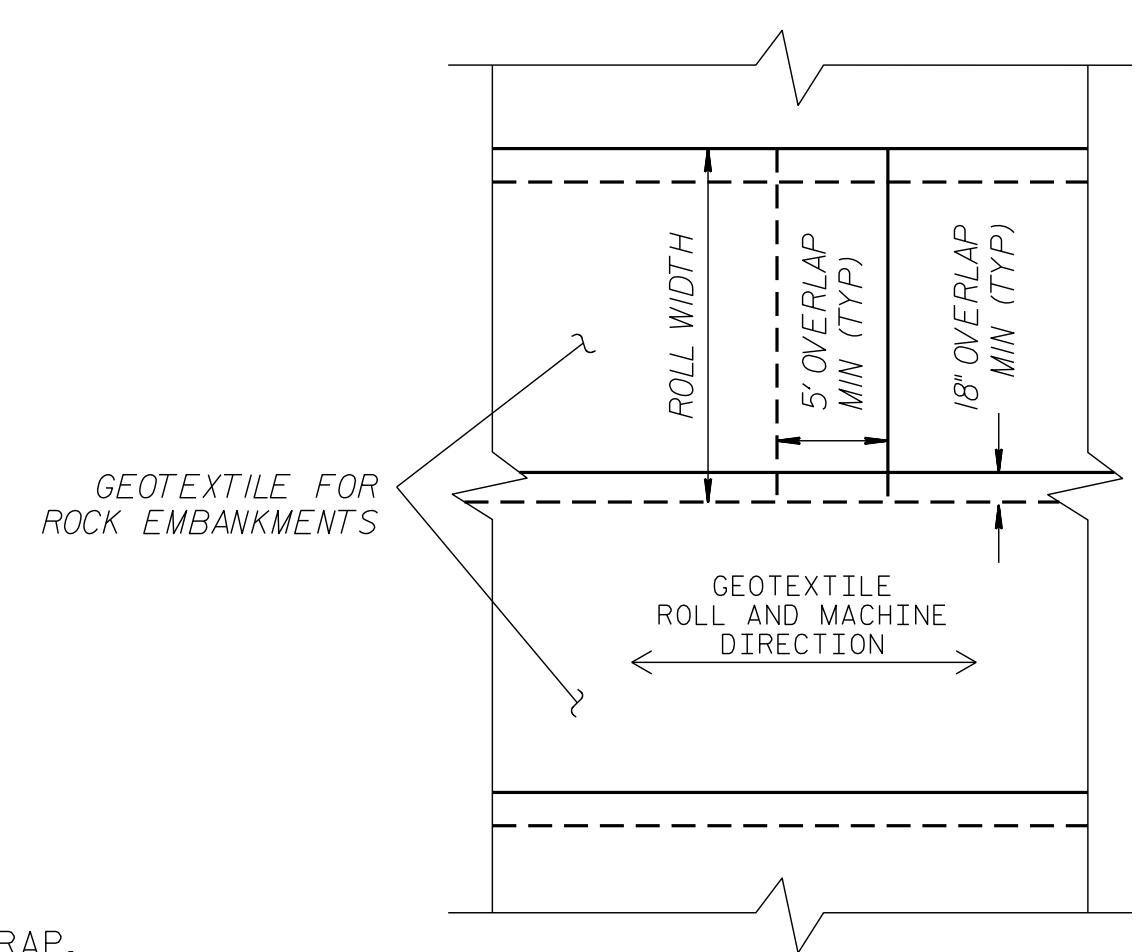
PLAN VIEW FOR LIMITS OF ROCK EMBANKMENTS
N.T.S.

ESTIMATED QUANTITIES		
RIP RAP, CLASS II	900	TONS
RIP RAP, CLASS A	100	TONS
#57 STONE	190	TONS
GEOTEXTILE FOR ROCK EMBANKMENTS	970	SY



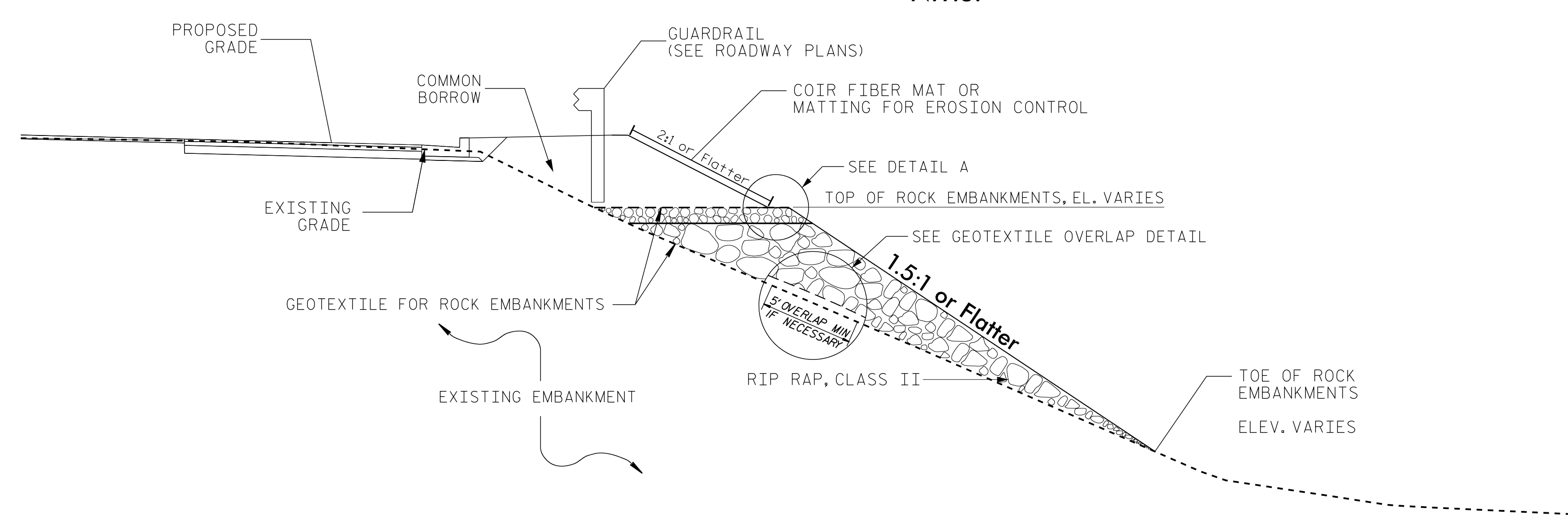
DETAIL A
N.T.S.

* NO HIGHER THAN THE BOTTOM OF THE GUARDRAIL POST.
** SEE TABLE FOR TOP OF RIP RAP, CLASS II ELEVATIONS



GEOTEXTILE FOR ROCK EMBANKMENTS OVERLAP DETAIL
(PLAN VIEW)

STATION	TOP OF RIP RAP, CLASS II ELEVATIONS
451+62 TO 452+25	±84'
452+25 TO 452+75	±85'
452+75 TO 453+25	±87'
453+25 TO 453+75	±88'
453+75 TO 454+25	±89'



ROCK EMBANKMENTS – TYPICAL SECTION A-A
N.T.S.

NOTES

FOR ROCK EMBANKMENTS, SEE ROCK EMBANKMENT SPECIAL PROVISION.

THE ESTIMATED QUANTITIES OF #57 STONE AND RIP RAP, CLASS A INCLUDE ADDITIONAL TONNAGES FOR FILLING GAPS BETWEEN MATERIALS UNDERNEATH.

PREPARED BY: T.T. WALKER	DATE: 03/2019
REVIEWED BY: P. ALTON, P.E.	DATE: 03/2019



NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL
ENGINEERING UNIT

ROCK EMBANKMENT DETAILS

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK
(IN CUBIC YARDS)

STATION	STATION	UNCL. EXCAV.	EMBANK. + %	BORROW	WASTE
-L- LT 10+00.00	-L- LT 57+00.00	4426	2214	0	2212
-Y1- 12+34.37	-Y1- 24+84.43	910	1879	969	0
SUBTOTALS:		5336	4093	969	2212
-L- LT 57+00.00	-L- LT 84+01.97	1210	5375	4437	272
SUBTOTALS:		1210	5375	4437	272
-L- LT 91+41.97	-L- LT 120+00.00	1898	3163	1902	637
SUBTOTALS:		1898	3163	1902	637
-L- LT 120+00.00	-L- LT 150+00.00	2310	2581	773	502
-Y3- 10+16.47	-Y3- 12+61.34	171	74	0	97
SUBTOTALS:		2481	2655	773	599
-L- LT 150+00.00	-L- LT 180+00.00	3496	1520	0	1976
SUBTOTALS:		3496	1520	0	1976
-L- LT 180+00.00	-L- LT 210+00.00	2756	2649	367	474
-Y5- 10+22.00	-Y5- 13+95.30	773	66	0	707
-Y7- 10+22.80	-Y7- 13+50.00	28	499	471	0
SUBTOTALS:		3557	3214	838	1181
-L- LT 210+00.00	-L- LT 240+00.00	4311	1199	0	3112
SUBTOTALS:		4311	1199	0	3112
-L- LT 240+00.00	-L- LT 270+00.00	3855	1188	0	2667
SUBTOTALS:		3855	1188	0	2667
-L- LT 270+00.00	-L- LT 300+00.00	4146	1750	0	2396
-Y10- 10+00.00	-Y10- 12+43.60	165	69	0	96
SUBTOTALS:		4311	1819	0	2492
-L- LT 300+00.00	-L- LT 330+00.00	4542	2018	0	2524
-Y11- 10+00.00	-Y11- 12+41.43	68	125	57	0
-Y12- 10+16.06	-Y12- 12+45.18	131	54	0	77
SUBTOTALS:		4741	2197	57	2601
-L- LT 330+00.00	-L- LT 360+00.00	3668	3383	0	285
SUBTOTALS:		3668	3383	0	285
-L- LT 360+00.00	-L- LT 390+00.00	4361	964	0	3397
-Y16- 10+16.00	-Y16- 10+97.57	152	0	0	152
SUBTOTALS:		4513	964	0	3549
-L- LT 390+00.00	-L- LT 420+00.00	4782	1069	0	3713
-Y18- 10+18.07	-Y18- 12+50.99	220	40	0	180
SUBTOTALS:		5002	1109	0	3893
-L- LT 420+00.00	-L- LT 459+73.25	1288	6133	5573	728
-Y21- 10+18.00	-Y21- 12+43.95	65	3	0	62
SUBTOTALS:		1353	6136	5573	790
-L- LT 461+97.14	-L- LT 490+00.00	2731	2305	932	1358
-Y23- 10+18.29	-Y23- 12+00.00	7	599	592	0
SUBTOTALS:		2738	2904	1524	1358
-L- LT 490+00.00	-L- LT 519+27.86	1415	1410	52	57
-Y26- 10+18.06	-Y26- 12+50.76	118	50	0	68
-Y28- 10+18.03	-Y28- 12+23.55	153	35	0	18
SUBTOTALS:		1686	1495	52	243

SUMMARY OF EARTHWORK
(IN CUBIC YARDS)

STATION	STATION	UNCL. EXCAV.	EMBANK. + %	BORROW	WASTE
-L- RT 10+00.00	-L- RT 57+00.00	4553	5013	1762	1302
SUBTOTALS:		4553	5013	1762	1302
-L- RT 57+00.00	-L- RT 84+01.97	1903	2943	1676	636
SUBTOTALS:		1903	2943	1676	636
-L- RT 91+41.97	-L- RT 120+00.00	2274	2139	633	768
-Y2- 11+64.20	-Y2- 15+08.41	22	918	896	0
SUBTOTALS:		2296	3057	1529	768
-L- RT 120+00.00	-L- RT 150+00.00	3461	1036	0	2425
SUBTOTALS:		3461	1036	0	2425
-L- RT 150+00.00	-L- RT 180+00.00	3422	1725	0	1697
-Y4- 13+30.20	-Y4- 15+51.02	123	14	0	109
SUBTOTALS:		3545	1739	0	1806
-L- RT 180+00.00	-L- RT 210+00.00	2195	2135	426	486
-Y6- 12+89.43	-Y6- 15+24.41	278	31	0	247
SUBTOTALS:		2473	2166	426	733
-L- RT 210+00.00	-L- RT 240+00.00	2958	1518	0	1440
-Y8- 13+06.92	-Y8- 15+30.34	312	23	0	289
SUBTOTALS:		3270	1541	0	1729
-L- RT 240+00.00	-L- RT 270+00.00	2364	2445	457	376
SUBTOTALS:		2364	2445	457	376
-L- RT 270+00.00	-L- RT 300+00.00	1936	2188	252	0
-Y9- 13+30.83	-Y9- 15+55.55	87	11	0	76
SUBTOTALS:		2023	2199	252	76
-L- RT 300+00.00	-L- RT 330+00.00	3643	1880	0	1763
-Y13- 13+38.78	-Y13- 15+67.53	138	81	0	57
SUBTOTALS:		3781	1961	0	1820
-L- RT 330+00.00	-L- RT 360+00.00	2610	1503	0	1107
-Y15- 13+14.93	-Y15- 15+17.48	93	50	0	43
SUBTOTALS:		2703	1553	0	1150
-L- RT 360+00.00	-L- RT 390+00.00	2979	1246	0	1733
-Y17- 12+96.11	-Y17- 15+24.91	152	25	0	127
SUBTOTALS:		3131	1271	0	1860
-L- RT 390+00.00	-L- RT 420+00.00	3254	1354	0	1900
-Y19- 12+60.68	-Y19- 15+48.54	1135	239	0	896
SUBTOTALS:		4389	1593	0	2796
-L- RT 420+00.00	-L- RT 459+73.25	443	6475	6186	154
-RPD- 13+8714	-RPD- 14+86.66	15	258	243	0
SUBTOTALS:		458	6733	6429	154
-L- RT 461+97.14	-L- RT 490+00.00	1345	4193	3547	699
-RPA- 12+25.00	-RPA- 13+94.83	20	279	259	0
-Y24- 11+17.58	-Y24- 13+25.89	35	25	0	10
-Y25- 12+94.30	-Y25- 15+41.54	87	23	0	64
SUBTOTALS:		1487	4520	3806	773
-L- RT 490+00.00	-L- RT 519+27.86	1538	1371	267	434
-Y27- 11+44.87	-Y27- 13+76.24	138	41	0	97
SUBTOTALS:		1676	1412	267	531

SUMMARY OF EARTHWORK
(IN CUBIC YARDS)

STATION	STATION	UNCL. EXCAV.	EMBANK. + %	BORROW	WASTE
PROJECT SUBTOTALS:		97669	83596	32729	46802
LOSS DUE TO CLEARING & GRUBBING		(-) 200		(+) 200	(-) 200
WASTE IN LIEU OF BORROW				(-) 22321	(-) 22321
PROJECT TOTALS:		97469	83596	10608	24281
EST 5% TO REPLACE TOP SOIL ON BORROW PIT				(+) 530	
GRAND TOTALS:		97469	83596	11138	24281
SAY:		102500		12000	

UNDERCUT EXCAVATION (CONTINGENCY) = 2250 CY
 SHALLOW UNDERCUT = 12500 CY
 UNCLASSIFIED EXCAVATION FROM LOCATIONS LISTED BELOW, ACCEPTABLE BUT NOT TO BE INCLUDED IN TOP 3' OF EMBANKMENT OR BACKFILL.
 -L- STA. 47+25 TO 53+25
 -L- STA. 92+75 TO 96+25
 -L- STA. 257+25 TO 259+75
 -L- STA. 388+75 TO 392+75

PAVEMENT STR. VOL. = 49,282 CY

Earthwork quantities are calculated by the Roadway Designer. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineer.

REMOVAL OF EXISTING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AREA (SY)
-L- 53+44	-L- 53+97	CL	133.52
-L- 67+67	-L- 74+50	LT	1660.61
-L- 100+75	-L- 102+45	RT	950.61
-L- 108+00	-L- 110+50	LT	299.19
-L- 185+60	-L- 187+75	LT	626.45
-L- 359+50	-L- 359+89	CL	89.16
-L- 393+35	-L- 393+73	CL	75.99
TOTAL			3835.54
SAY			4000.00

RAL-VS077

COMPUTED BY: MLH DATE: 10/09/2018
CHECKED BY: BAM DATE: 4/19/2020

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. R-4705 SHEET NO. 3D-1

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

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

Table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), C. S. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, GRAPE TYPE, and REMARKS. Includes a SHEET TOTALS row at the bottom.

RAL-WS077

COMPUTED BY: MLH DATE: 10/09/2018
CHECKED BY: BAM DATE: 4/19/2020

PROJECT NO. R-4705 SHEET NO. 3D-2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

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

Table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, INVERT ELEVATION, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), C. S. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, GRAPE TYPE, and REMARKS. Includes sub-headers for various pipe types and materials.

RAL-VS077

COMPUTED BY: MLH DATE: 10/09/2018
CHECKED BY: BAM DATE: 4/19/2020

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. R-4705 SHEET NO. 3D-3

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

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

Table with columns for Line & Station, Offset, Structure Number, Invert Elevations, Slope, Pipe Material (Drainage, C.S., R.C. Class III, R.C. Class IV, R.C. Class V), Pipe Size, Endwalls, Drainage Structures, Frame/Grates, and Remarks. Includes a 'SHEET TOTALS' row at the bottom.

RAL-VS077

COMPUTED BY: MLH DATE: 10/09/2018
CHECKED BY: BAM DATE: 4/19/2020

PROJECT NO. R-4705 SHEET NO. 3D-5

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

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

Main data table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, Drainage Pipe, C. S. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, and REMARKS. Includes a SHEET TOTALS row at the bottom.

ABBREVIATIONS table listing codes like C.A.A., C.B., C.S., D.I., G.D.I., H.D.P.E., J.B., M.H., N.S., P.V.C., R.C., T.B.D.I., T.B.J.B., W.S. and their corresponding descriptions.

RAL-VS077

COMPUTED BY: MLH DATE: 10/09/2018
CHECKED BY: BAM DATE: 4/19/2020

PROJECT NO. R-4705 SHEET NO. 3D-6

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

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

Table with columns for Line & Station, Offset, Structure Number, Drainage Pipe, C.S. Pipe, R.C. Pipe Class III, R.C. Pipe Class IV, R.C. Pipe Class V, Quantities for Drainage Structures, Frame, Grates, and Hood, and Abbreviations. Includes a SHEET TOTALS row at the bottom.

RAL-VS077

COMPUTED BY: MLH DATE: 10/09/2018
CHECKED BY: BAM DATE: 4/19/2020

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. R-4705 SHEET NO. 3D-7

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

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

Table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), C. S. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, ENDWALLS, REINFORCED ENDWALLS, DRAINAGE STRUCTURE, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, GRADE TYPE, and REMARKS. Includes a SHEET TOTALS row at the bottom.

RAL-VS077

COMPUTED BY: MLH DATE: 10/09/2018
CHECKED BY: BAM DATE: 4/19/2020

PROJECT NO. R-4705 SHEET NO. 3D-8

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

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

Table with columns for Line & Station, Offset, Structure Number, Invert Elevations, Pipe Material (Drainage, C.S., R.C. Class III, IV, V), Quantities, Frame/Grates, and Remarks. Includes a SHEET TOTALS row at the bottom.

ABBREVIATIONS table listing terms like C.A.A., C.B., C.S., D.I., G.D.I., H.D.P.E., J.B., M.H., N.S., P.V.C., R.C., T.B.D.I., T.B.J.B., W.S. and their corresponding descriptions.

RAL-VS077

COMPUTED BY: MLH DATE: 10/09/2018
CHECKED BY: BAM DATE: 4/19/2020

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. R-4705 SHEET NO. 3D-9

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

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

Main data table with columns: LINE & STATION, OFFSET, STRUCTURE NUMBER, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), C. S. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, ENDWALLS, REINFORCED ENDWALLS, DRAINAGE STRUCTURE, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, GRADE TYPE, and REMARKS.

SHEET TOTALS 248 288 52 116 16 24 1072 224 44 8 172 44 52 3400 19 0.9 16 3 7 6 1 2 1 1 20 316

RAL-VS077

COMPUTED BY: MLH DATE: 10/09/2018
CHECKED BY: BAM DATE: 4/19/2020

PROJECT NO. R-4705 SHEET NO. 3D-10

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

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

Table with columns for LINE & STATION, SIZE, THICKNESS OR GAUGE, OFFSET, STRUCTURE NUMBER, TOPOGRAPHY, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, PIPE TYPE (Drainage Pipe, C.S. PIPE, R.C. PIPE CLASS III, IV, V), QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, and REMARKS. Includes a SHEET TOTALS row at the bottom.

RAL-VS077

COMPUTED BY: MLH DATE: 10/09/2018
CHECKED BY: BAM DATE: 4/19/2020

PROJECT NO. R-4705 SHEET NO. 3D-11

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

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

Table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), C. S. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, and REMARKS. Includes a SHEET TOTALS row at the bottom.

COMPUTED BY: CW DATE: 3/20
 CHECKED BY: DATE:

PROJECT NO. R-4705 SHEET NO. 3G-1

(12-17-19)

**STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS**

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	20000
				TOTAL LF:	20000

*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
VARIES			1	12	12000	27000	43000		
CONTINGENCY			1	12	500	1000	1000		
TOTAL CY/TONS/SY:					12500	28000**	44000**	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.

SUMMARY OF ROCK PLATING

LINE	Beginning Slope (H:V)	Approx. Station	Ending Slope (H:V)	Approx. Station	Location LT/RT	Rock Plating Detail No. 1/2/3/4	Riprap Class* 1/2/B	Rock Plating SY
-L-	2:1	454+25	2:1	456+02	RT	2		900
							TOTAL SY:	900

*Use Class 1, 2 or B riprap if riprap class is not shown for rock plating location.

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS **PARCEL INDEX SHEET**

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4	STEPHEN L. WILLIAMS, JOYCE D. WILLIAMS
2	4	STEPHEN L. WILLIAMS, JOYCE D. WILLIAMS
3	4	EULA MAE ROEBUCK, ET AL
4	4	JOSEPH VINCENT GEDRIMAS
5	4,5,6,7	WORLEY MOORE WARREN
6	4,5,6,7	WORLEY & TYLER WARREN
7	5	JAMES JACKSON JR.
8	5	CORNELIUS LITTLE
9	5	JAMES SPRUILL
10	5	RICARDO ORE
11	6,7	WILBERT WILLIAMS
12	7,8	WILLIAM THOMAS BROWN, JR.
13	8,9	ROBERSON FARMS
14	8,9	ROBERSON FARMS
15	9,10	NYSSA BURDICK ETALS
16	9,10	NYSSA BURDICK ETALS
17	10,11	WORLEY MOORE & KIMBERLY WARREN
18	10,11	DOROTHY MIZELLE HEIRS
19	11	ALFRED L. RODGERS
20	11	RODGERS FAMILY DECLARATION OF TRUST
21	11,12	ERNEST AND PEGGY RODGERS
22	11,12	DOROTHY MIZELLE HEIRS
24	12	PERCY & DARLENE MIZELLE WITH SHIRLEY M. WATFORD (LE)
25	12,13,14	POPE & POPE NC LLC
26	12	PERCY R. MIZELL
27	12,13	THURSTAN JAMES
28	13	DONALD E. AYERS
29	13	REGINALD WATSON
30	13,14	THOMAS VOLK
31	14,15	FRANK W. JACKSON
32	14	JOHNNY & FAY RODGERS
33	14	KEEP 1 INVESTMENTS LLC
34	14	GREGORY G. SANDERLIN
35	14	LINDA CARTER, ET AL
36	14	LINDA SHORT
37	14	RONNIE L. PEELE
38	14	ANTHONY BYRD JR.
39	14	EDDIE SHELTON PEELE
40	14	IGNACIA GARCIA
41	14	MARJORIE CRANDELL DANIELS
42	14	RINARDO L. REDDICK
43	14,15	WILLIAM & JANICE G. SWAIN
44	15	JOSEPHY & SAMUEL ROEBUCK
45	15,16	JOSEPHY & SAMUEL ROEBUCK
46	15,16	JOHNNIE MIZELLE
47	16	REGINALD & RODERICK KEARNEY
48	16	TROY L. BOWEN
49	16,17,18	TROY L. BOWEN
50	16,17	TERRY LYNN ROBERSON
51	17	JOHN O. RAGSDALE IV
52	17	ALLIE BULLOCK HIERS
53	17	TROY L. BOWEN
54	17,18	LEON W. WYNNE
55	18	DANIEL & PATRICIA ANNE OMERRY
56	18	LEON W. WYNNE
57	18	FRANK W. JACKSON
58	18	THOMAS WYNN, JR.
59	18	TONY & MARION HODGES
60	18	WILLIAM & JANICE G. SWAIN LLC
61	18,19	CHRISTIAN CHAPEL CHURCH

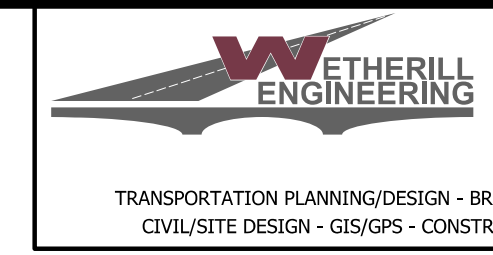
PARCEL No.	SHEET No.	PROPERTY OWNER NAME
62	18,19	TROY L. BOWEN
63	18	DANIEL E. CLARK, JANE M. CLARK
64	19	LEE INVESTMENT PROPERTIES LLC
65	19	KENNETH W. BEACH
66	19	RICHARD L. SMITH, JONI B. SMITH
67	19	FRANK W. JACKSON, PEGGY W. AYERS
68	19,20,21	CELIA CLARK WARD
69	19	ANGELA G. WATERS
70	19,20	LEON W. WYNNE JR
71	20	JAMES MICHAEL POSTON, ELIZABETH N. POSTON
72	20	DONALD E. AYERS, JACKIE T. AYERS
73	20	TROY L. BOWEN, DEBBIE ANN BOWEN
74	20,21	MICHAEL DUANE ELLIOT, NICOLE HOPKINS ELLIOT
75	21	ERNEST NELSON MOBLEY
76	21	MICHAEL DUANE ELLIOT, NICOLE HOPKINS ELLIOT
77	21	ERNEST NELSON MOBLEY
78	21	ABBY MICHELLE BROWN
79	21,22	OSCAR L. GLAZE
80	21,22,23	TROY L. BOWEN
81	22	OMA WILDWOOD JENKINS, BETTY K. JENNINGS
82	22	JOSEPH C. MOBLEY, CAROLYN MOBLEY
83	22,23	JOHN OUELETTE
84	23	JESSE SHELDON MOBLEY, JR.
85	23	ANGELA G. WATERS
86	23	ANGELA G. WATERS
87	23	STEPHEN WAYNE HARRISON
88	23	WILLIAM JASPER PERRY, ANNIE B. PERRY
89	23	MOSES L. LAWRENCE JR., MESA R. LAWRENCE
90	23	FAYE ARTENSAY WHITE
91	23	WILLIAM BRIAN DOUGHTY
92	23,24,25	RUFUS SYVESTER WYNNE, JR, LORI MOBLEY WYNN
93	23	LONNIE H. CRADDOCK JR., WANDA DEGENNARO
94	23	CLAUDE NELSON WALLACE, ETHEL MITCHELL WALLACE
95	23	CAREY STEWART
96	23,24,25	RUFUS SYVESTER WYNNE, JR, LORI MOBLEY WYNN
97	25	RUFUS S. WYNNE JR
98	25,26	RUFUS S. WYNNE JR
99	25,26	WEYERHAEUSER COMPANY
100	26,27	MARIE S. BARNHILL
101	26,27	MATTHEW WAYNE BROOKS
102	27	CLARENCE DAVIS POINTE
103	27	LEON WESLEY HUGHES JR
101A	27	LEON WESLEY HUGHES JR
104	27,28	LEON W. HUGHES, SR.
105	27	CARL FLOYD WEBB
106	27	WENDELL L. SCOTT
107	27,28	BARBARA JEAN HARRISON
108	28	JACQUELINE K. GARDENER
109	28	UNKNOWN OWNER
110	28	ROBERT & TINA SAVAGE
111	28	JIMMY RAY ROGERS
112	28	WESLEY ALTON PRIDGEN, JR.
113	28	UNKNOWN OWNER
114	28	WILLIAM L. COWAN
115	28	THELMA S. JONES LILLEY
116	28	PATSY SUE BRITT
117	28	CAROLINA TELEPHONE
118	28,29	JAMES LEROY STALLS
119	28	ROBBIE BRYANT BEACH
120	28	ROBBIE BRYANT BEACH

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
121	28	ROBBIE BRYANT BEACH
122	28	ELITE PROPERTY MANAGEMENT LLC
123	28	CHRSTOPHER KENT GURGANUS
124	28	TOMMY GIBSON
125	28	JKE FAMILY PROPERTIES, LLC
126	28,29	LEON HUGHS
127	29,30,31	BILLY S. BIGGS
128	29	POWELL PROPERTY VENTURES, LLC
129	29	DONNA R. HARDISON
130	29	CHESTER TAYLOR
131	29,30	JERRY W. CORNWELL
132	30	AGNES MARYANN SIMPSON
133	30	JAMES DILLION WHITAKER
134	30	EDGAR DENNIS HOLLIDAY JR
135	30	DONNA H WASZAK
136	30	GARY ARNAST
137	30	JANICE T HOLLIDAY ETALS
138	30,31	HERAMN HOLLIDAY
139	31	JANICE TAYLOR HOLLIDAY
140	31	DONALD CLARK BONDS
141	31	CORRONE BRYANT
142	31	UNKNOWN OWNER
143	31	JAMES ROGERSON, ET AL
144	31	MARTIN COUNTY
145	31	EDGAR DENNIS HOLLIDAY JR
146	31	STANLEY CRAIG GODWIN, MELISSA G. ONEAL
147	31	WILLIAM AND JANICE SWAIN LLC
148	31	EVAGELINE B. DANIELS
149	31,32	PHILLIP M. PEAKS
150	32	LEIGH H. ROGERSON
152	32	JAMES D. ROGERSON
153	32,33	NATHAN MIZELLE
154	32	JEFFREY L. DAVIS JR
155	32	DONTE R. RAYNOR
156	32	WILLIAM AND JANICE SWAIN LLC
157	32	JAMES RASCOE
158	32	ANGELA N. BOND
159	32	NATHAN MIZELLE
160	32	WILLIAM R. COE
161	32	NATHAN MIZELLE
162	32,33	NATHAN J. MIZELLE
163	33	MARK & ESTELLE EDMONSON
164	33,34	H. A. BOWEN HEIRS
165	33	TONY D. WEBB
166	33,34	H. A. BOWEN HEIRS
167	34,35	MRS. JOHN M. BOWEN HEIRS
168	34,35,36	MRS. JOHN M. BOWEN HEIRS
169	35,36	MELVIN J. BOWEN
170	36	J. MELVIN BOWEN
171	36	JENNIFER L. COUNCIL
172	36,37	STATE OF NORTH CAROLINA
173	36,37	PHYLLIS ROGERS, TRUSTEE
174	37	PAMELA D. HOLLIDAY
175	37	GERALDINE J. HOLLIDAY
176	37	JAMES HOLLIDAY, ET UX
177	37	RODNEY L. JONES, ET UX
178	37	HERLEY KEEL
179	37,38	PATRICIA A. BELCH
180	37	TD CAPITAL INVESTMENTS, LLC
181	37	GREGORIOS KARAGIOGIS, ET AL

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
182	37,38	CANTLE HOSPITALITY, LLC
183	38	MARIE B. ROGERSON
184	38	JOHNNIE F. BOWEN, JR.
185	38	DANIEL B. PEAKS
186	38	DANIEL B. PEAKS
187	38	GREGORY F. SPENCE, ET UX
188	38	DANIEL B. PEAKS
189	38	JAMES D. WHITAKER
190	38	ANTHONY B. BLAND
191	38,39	JESSE A. COUNCIL
192	38	KEITH DEWIGHT WHITAKER
193	38	BILLY S. BIGGS, ET UX
194	38	THEODORE BOWEN
195	38	KYLE MEEKS, ET UX
196	38	KYLE MEEKS, ET UX
197	38	KENNETH D. HAISLIP, ET UX
198	38	LARRY M. PEAKS
199	38,39	J. MELVIN BOWEN
200	39,40,41	MARY C. COPPAGE
201	40	LINDA B. SOCKRIDER
202	40	EVELYN C. BIGGS
203	40	FRANCES COUNCIL, HEIRS
204	40	LARRY W. COUNCIL
205	40	ARCHIE MIZELL, HEIRS
206	40,41	JEAN C. MATTHEWS
207	41	JENNIFER & JIMMIE COUNCIL
208	41	MILDRED T. DANIEL
209	41	CLYDE TYNER, HEIRS
210	41	MARY C. COPPAGE
211	41	TOWN OF WILLIAMSTON
212	41	NATHAN MIZELL
213	41,42	NATHAN MIZELL
214	41	JIMMIE R. COUNCIL, ET AL
215	41	JAMES H. ROBERSON
216	41,42	MARTIN COUNTY
217	42	WILLIAM R.& JANICE G. SWAIN, LLC
218	42	BARBARA B. ROGERS
219	42	NC DEPT OF TRANSPORTATION
220	42,43	MARTIN COUNTY
221	43	MARTIN COUNTY BOARD OF EDUCATION
222	43	PATTI H. TAYLOR
223	43	JONATHAN DURHAM
224	43	MARTIN COUNTY COMMUNITY COLLEGE
225	42	CHARLES C. GURGANUS, ET UX
226	42	CLYDE PEAKS, ET UX
227	42	GARLAND CRATT, ET UX
228	42	LEEANNE C. DAVIS
229	42	O. CARRANZA VILLEGAS, ET VIR
230	42	JEFFREY H. WHITLEY, ET UX
231	42	ROBERT C. WARREN, ET UX
232	42,43	BOBBY L. BELL
233	43	JAMES B. BOWEN, ET UX
234	43	HAZEL M. WHITLEY
235	43	NANCY D. COTTON
236	43	DANIEL M. BOWEN
237	43	GARY MICHAEL CASPER
238	43	RODERICK J. BASS
239	43	LETHA V. LEGGETT
240	43	TOWN OF WILLIAMSTON
241	43	HEIRS OF DOROTHY RHODES
242	43	JOSEPH D. & MAMIE C. KEEL

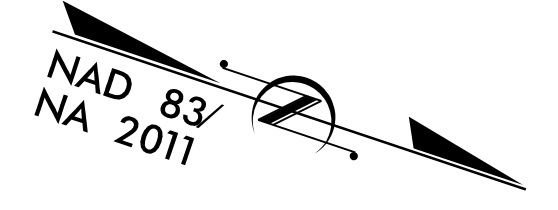
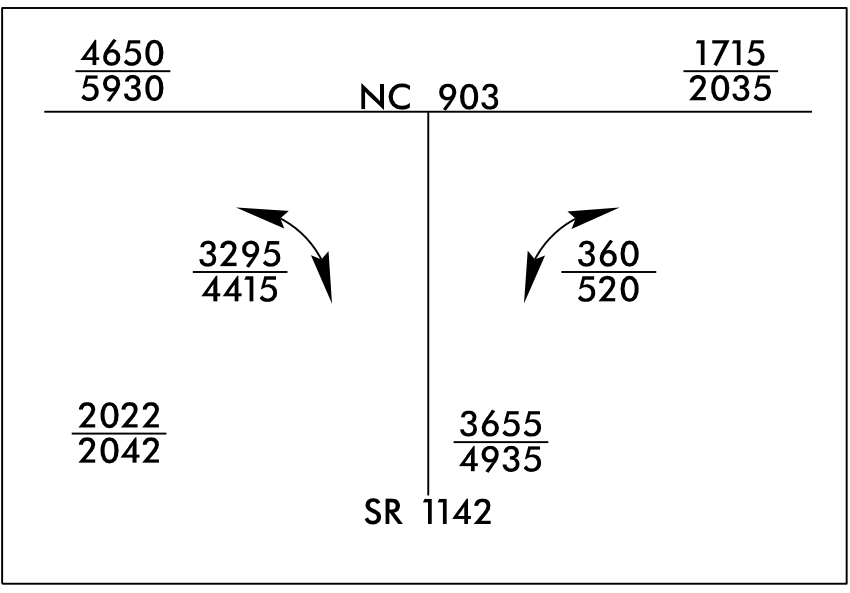


1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-4705	SHEET NO. 4
RW SHEET NO.	HYDRAULICS ENGINEER 4/7/2022
ROADWAY DESIGN ENGINEER 4/7/2022	SEAL 21116
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-Y1-
PI Sta 18+61.44
 $\Delta = 29^{\circ} 21' 33.3''$ (RT)
 $D = 2^{\circ} 39' 53.7''$
 $L = 1,101.69'$
 $T = 563.22'$
 $R = 2,150.00'$
 $DS = 60$ MPH
 $SE = 0.06$ FT/FT
 $RO =$ SEE PLANS



REVISIONS

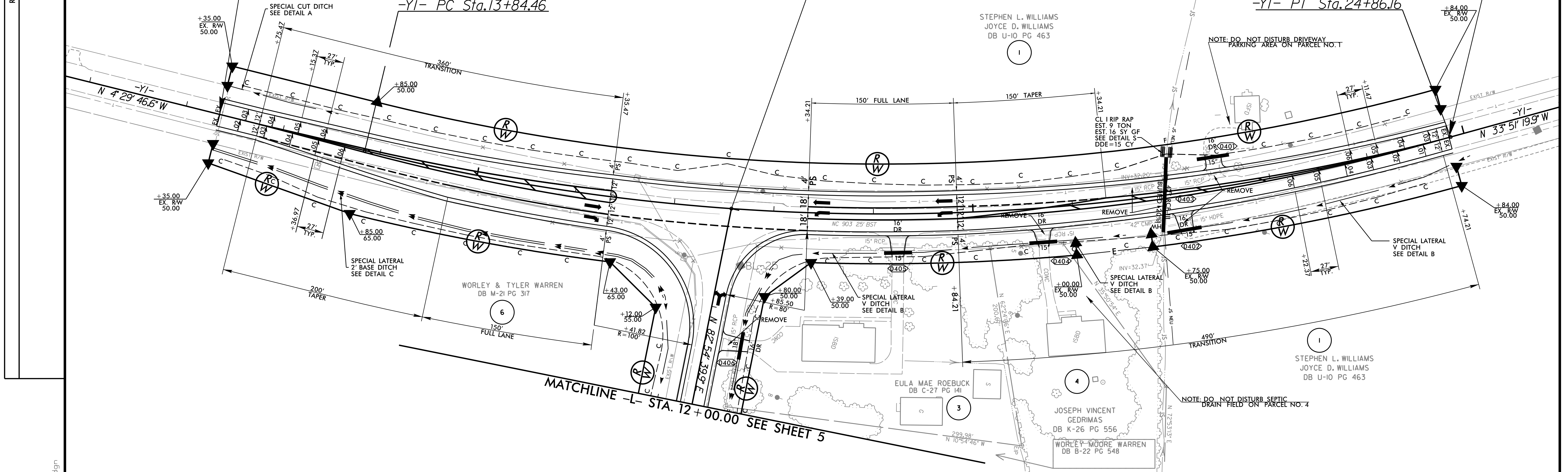
BEGIN PROJECT R-4705
-L- POT Sta. 10+00.00
-Y1- POC Sta. 17+57.38

BEG. CONSTRUCTION
-Y1- POT Sta. 12+34.37
-Y1- PC Sta. 13+84.46

END CONSTRUCTION
-Y1- POC Sta. 24+84.43
-Y1- PT Sta. 24+86.16

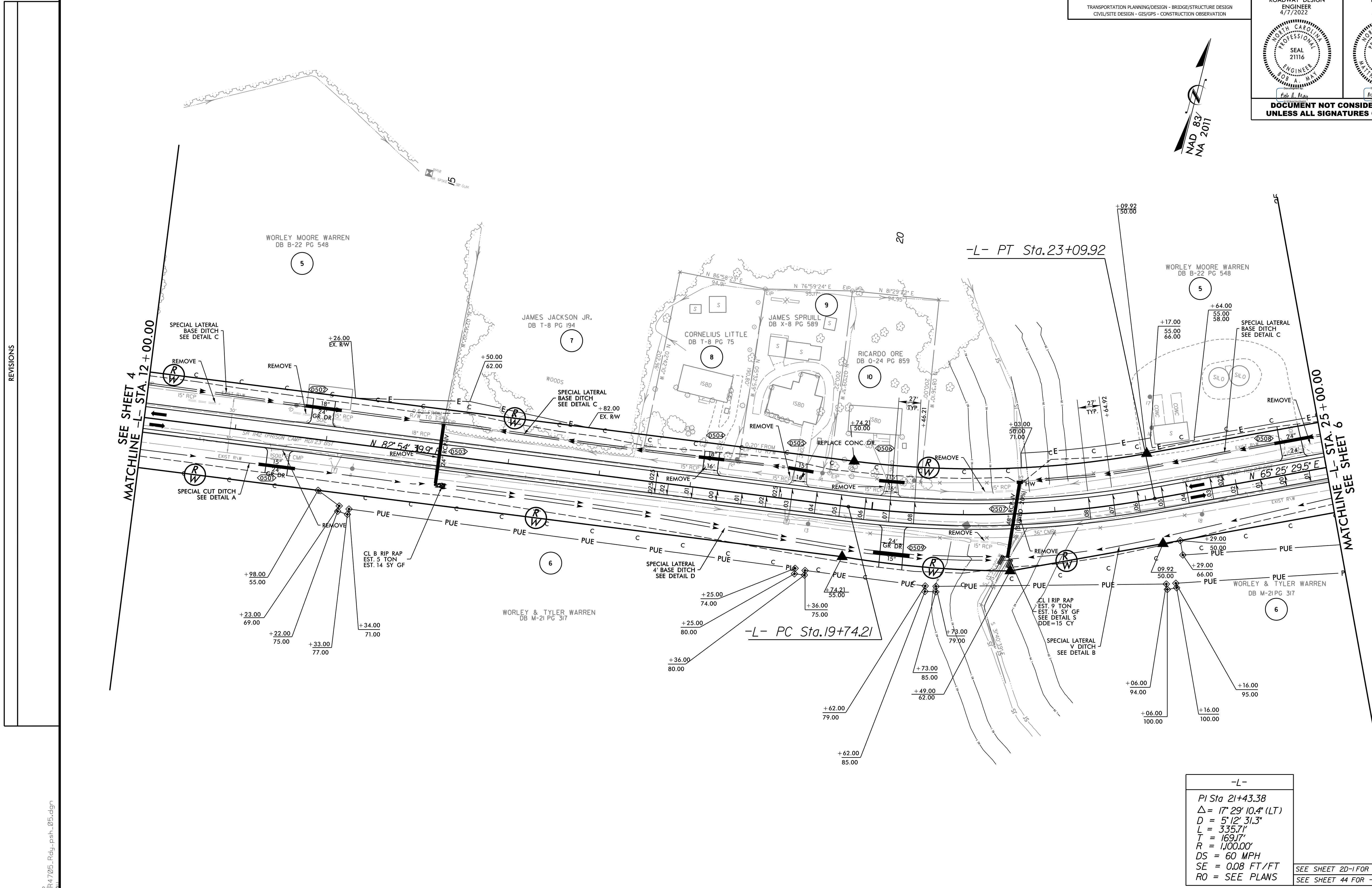
TO US 13-17

TO NC 903



SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 44 FOR -L- PROFILE
SEE SHEET 64 FOR -Y1- PROFILE

3/12/2022 14:47:05 Rcdy_psh_04.dgn



REVISIONS

SEE SHEET 4
MATCHLINE -L- STA. 12+00.00

MATCHLINE -L- STA. 25+00.00
SEE SHEET 6

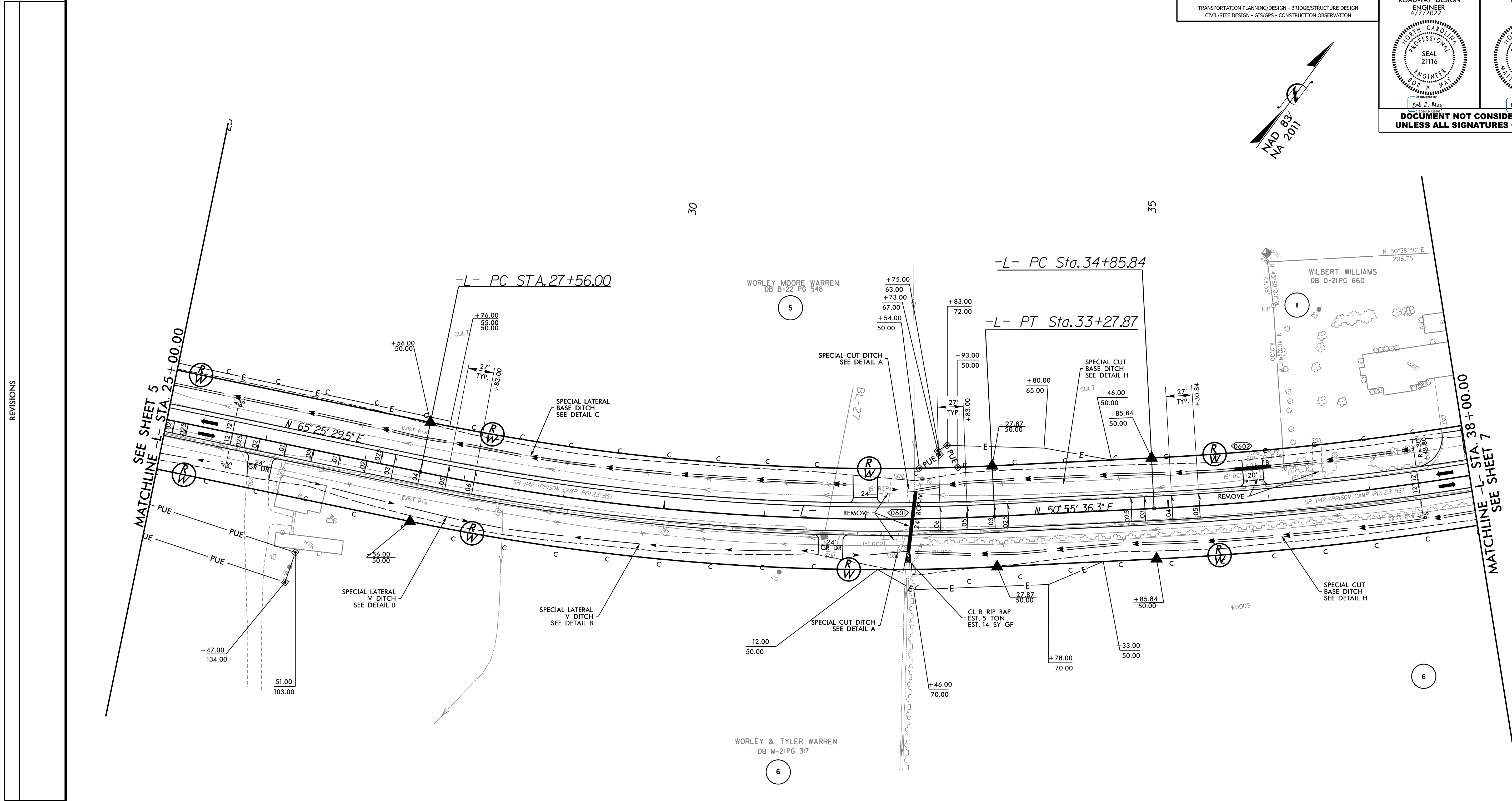
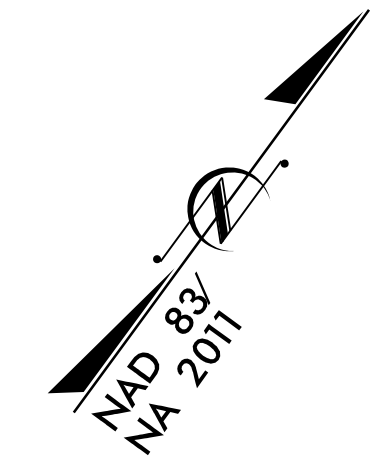
-L- PC Sta. 19+74.21

-L- PT Sta. 23+09.92

-L-

PI Sta 21+43.38
 $\Delta = 17' 29' 10.4''$ (LT)
 $D = 5' 12' 31.3''$
 $L = 335.71'$
 $T = 169.17'$
 $R = 1,100.00'$
 $DS = 60$ MPH
 $SE = 0.08$ FT/FT
 $RO =$ SEE PLANS

SEE SHEET 2D-1 FOR DITCH DETAILS
 SEE SHEET 44 FOR -L- PROFILE



REVISIONS

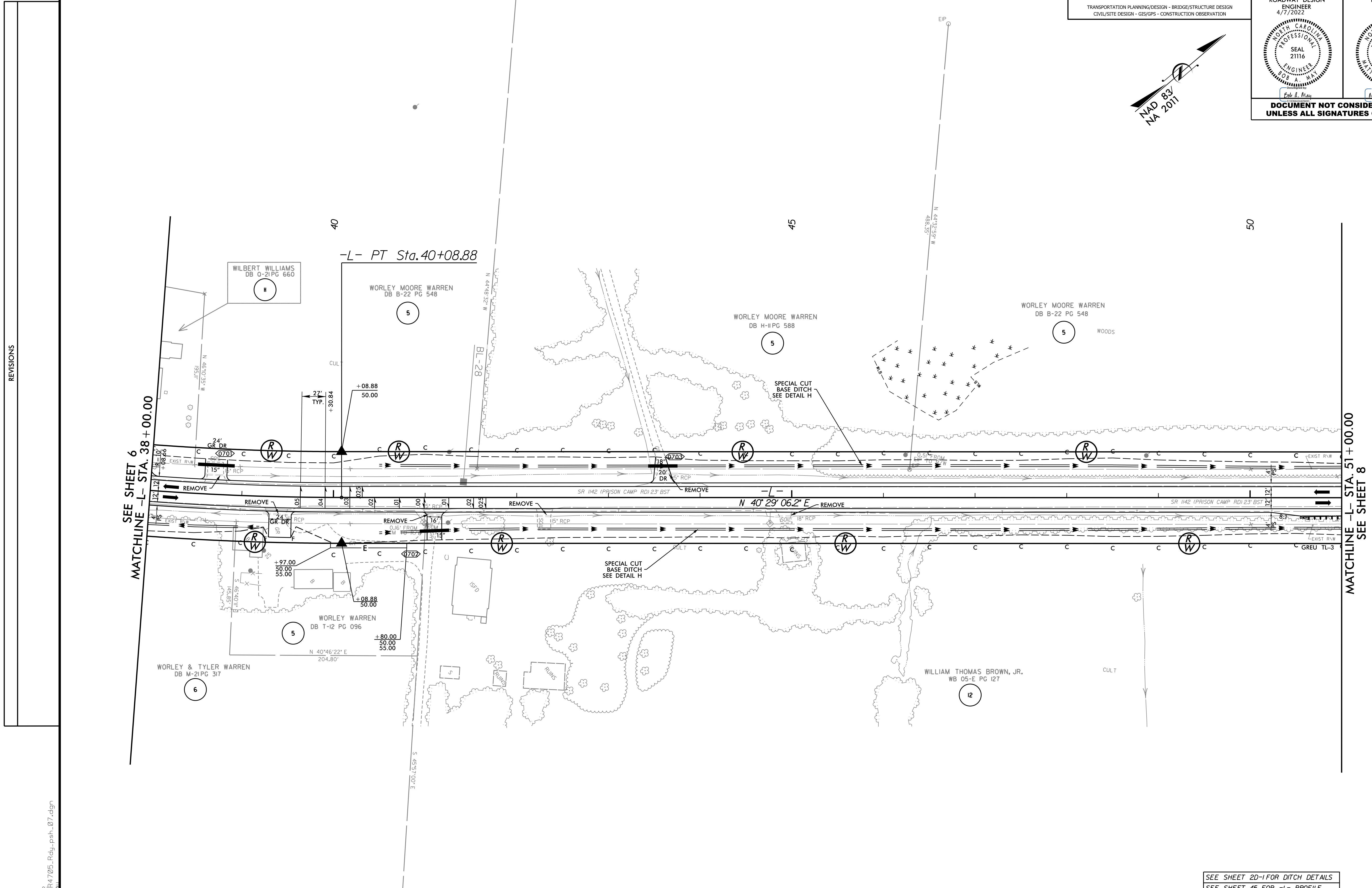
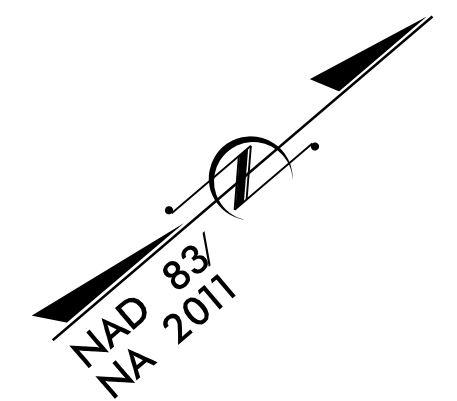
SEE SHEET 5
MATCHLINE -L- STA. 25+00.00

MATCHLINE -L- STA. 38+00.00
SEE SHEET 7

-L-	
PI Sta 30+43.47	PI Sta 37+48.09
$\Delta = 14^{\circ} 29' 53.2''$ (LT)	$\Delta = 10^{\circ} 26' 30.0''$ (LT)
$D = 2^{\circ} 32' 06.8''$	$D = 1^{\circ} 59' 46.9''$
$L = 571.87'$	$L = 523.03'$
$T = 287.47'$	$T = 262.24'$
$R = 2,260.00'$	$R = 2,870.00'$
$DS = 60$ MPH	$DS = 60$ MPH
$SE = 0.06$ FT/FT	$SE = 0.05$ FT/FT
$RO =$ SEE PLANS	$RO =$ SEE PLANS

SEE SHEET 20-1 FOR DITCH DETAILS
 SEE SHEET 44 & 45 FOR -L- PROFILE

PROJECT REFERENCE NO. R-4705	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 4/7/2022 PAUL A. MAY	HYDRAULICS ENGINEER 4/7/2022 MATTHEW L. BARNEY
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REVISIONS

SEE SHEET 6
MATCHLINE -L- STA. 38+00.00

MATCHLINE -L- STA. 51+00.00
SEE SHEET 8

SEE SHEET 20-I FOR DITCH DETAILS
SEE SHEET 45 FOR -L- PROFILE

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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

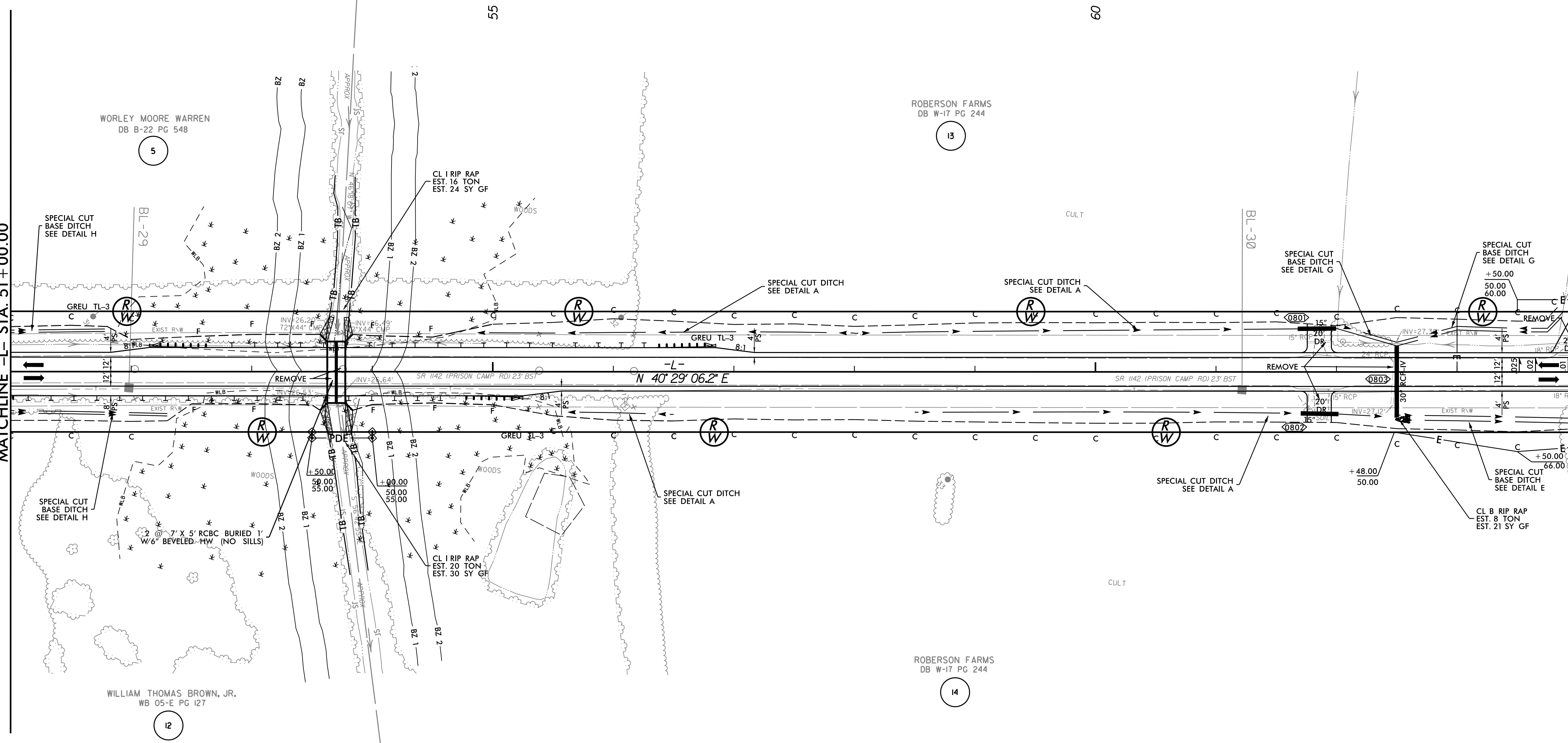
PROJECT REFERENCE NO. R-4705	SHEET NO. 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 4/7/2022	HYDRAULICS ENGINEER 4/7/2022
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



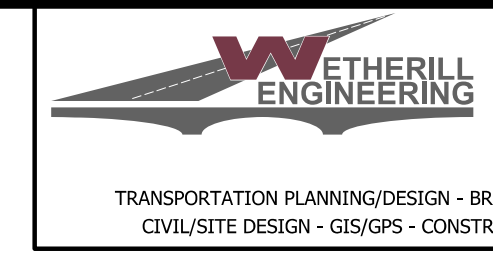
REVISIONS

SEE SHEET 7
MATCHLINE -L- STA. 51+00.00

MATCHLINE -L- STA. 64+00.00
SEE SHEET 9



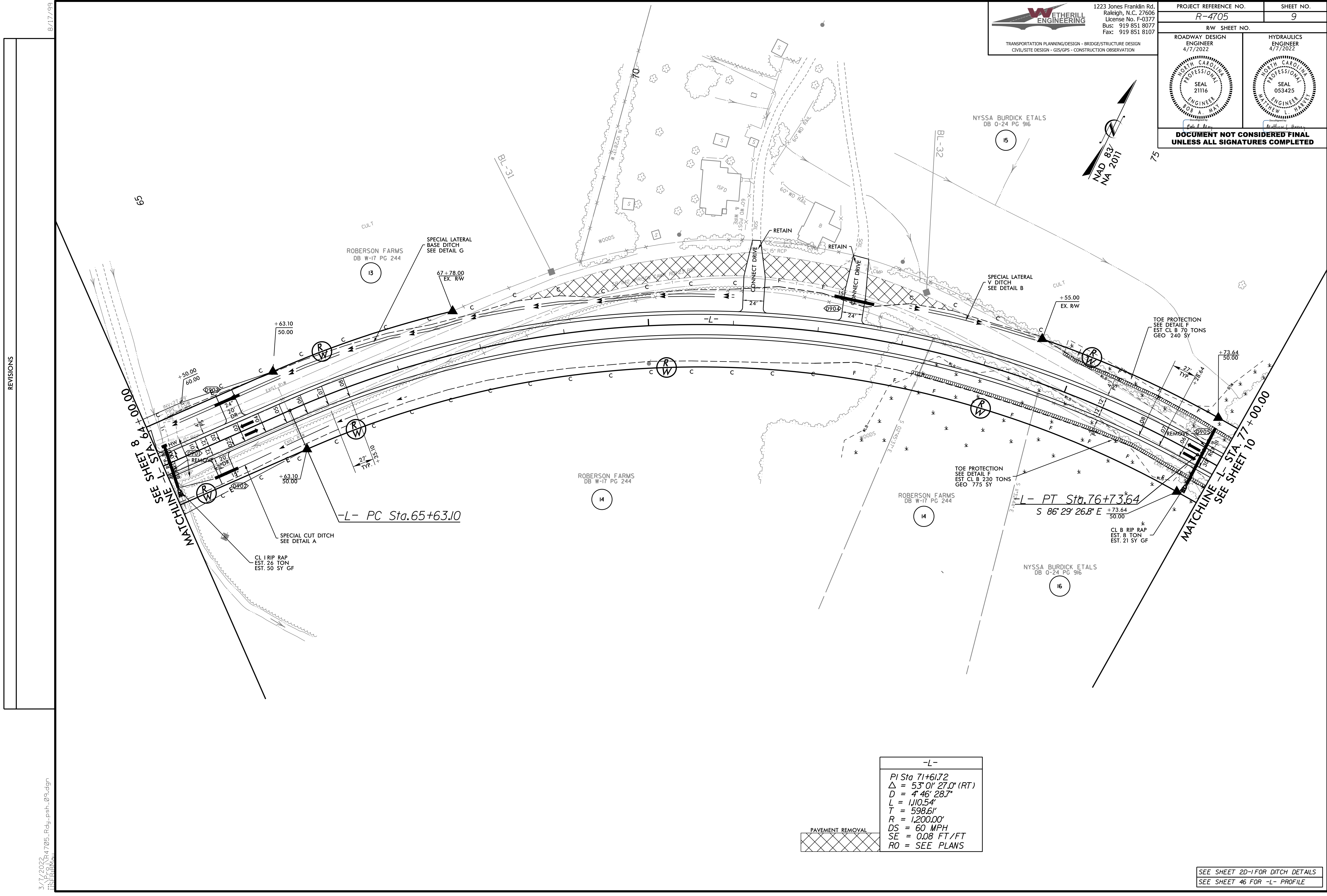
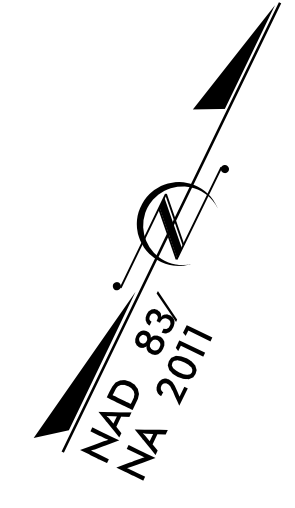
SEE SHEET 2D-1 FOR DITCH DETAILS
 SEE SHEET C1THRU C5 FOR CULVERT PLANS
 SEE SHEET 45 & 46 FOR -L- PROFILE



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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-4705		SHEET NO. 9
RW SHEET NO.		
ROADWAY DESIGN ENGINEER 4/7/2022	HYDRAULICS ENGINEER 4/7/2022	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

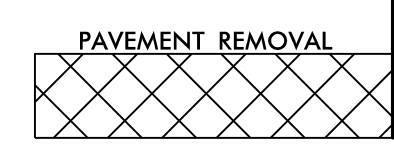


REVISIONS

MATCHLINE SEE SHEET 8
L- STA. 9+00.00

MATCHLINE L- STA. 77+00.00
SEE SHEET 10

-L-
PI Sta 71+61.72
$\Delta = 53^{\circ} 01' 27.0" (RT)$
$D = 4' 46" 28.7"$
$L = 1,110.54'$
$T = 598.6'$
$R = 1,200.00'$
$DS = 60 \text{ MPH}$
$SE = 0.08 \text{ FT/FT}$
$RO = \text{SEE PLANS}$



SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 46 FOR -L- PROFILE

3/7/2022
11:58:01 AM
3/7/2022 14:47:05.Rdy_psh_09.dgn

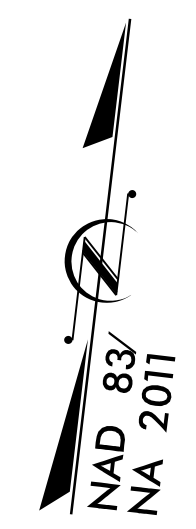
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 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

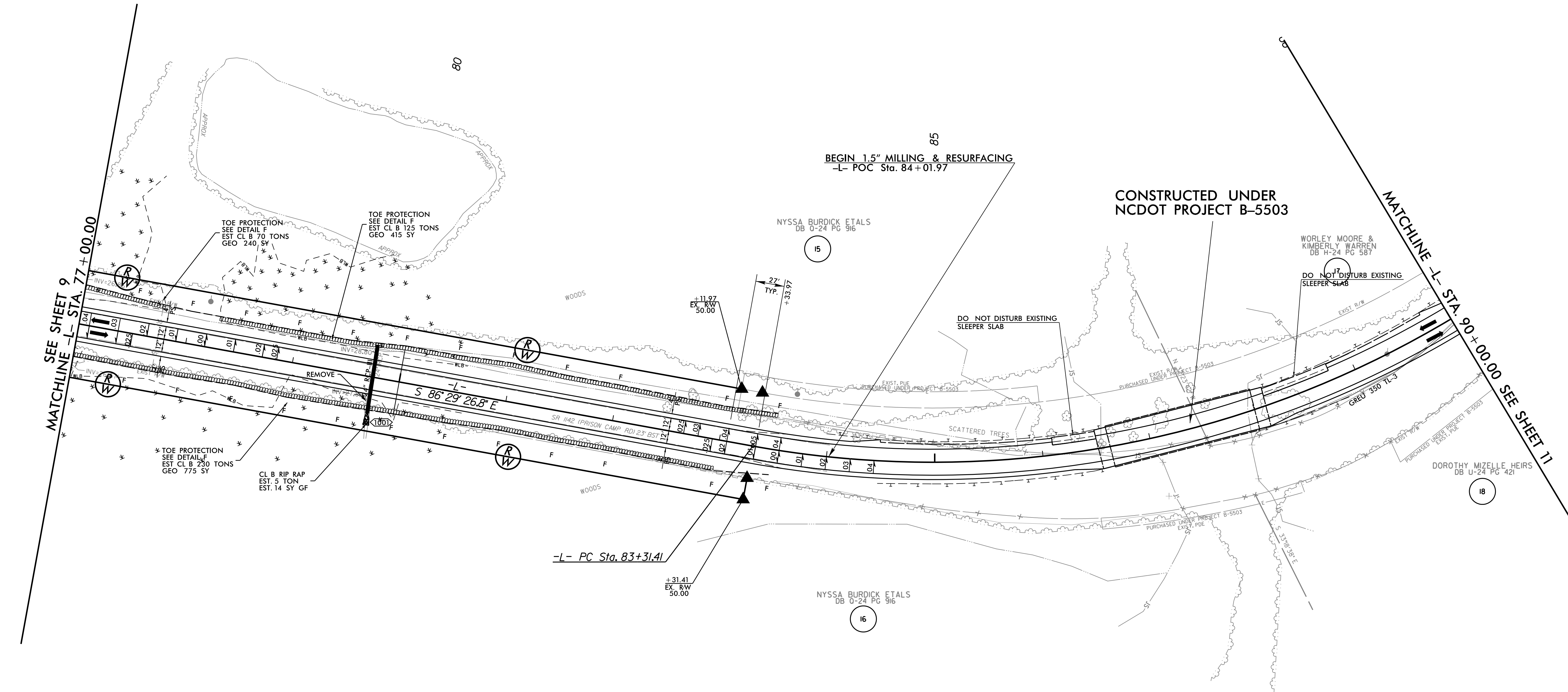
PROJECT REFERENCE NO. R-4705	SHEET NO. 10
ROADWAY DESIGN ENGINEER 4/7/2022	HYDRAULICS ENGINEER 4/7/2022

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

**DOCUMENT NOT CONSIDERED FINAL
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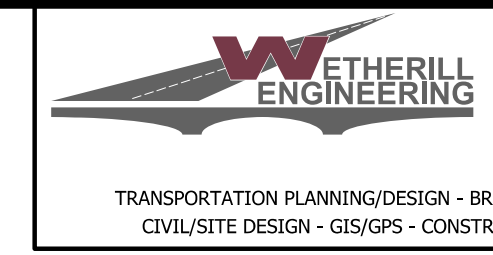
REVISIONS



SEE SHEET 9
MATCHLINE -L- STA. 77+00.00

MATCHLINE -L- STA. 90+00.00 SEE SHEET 11

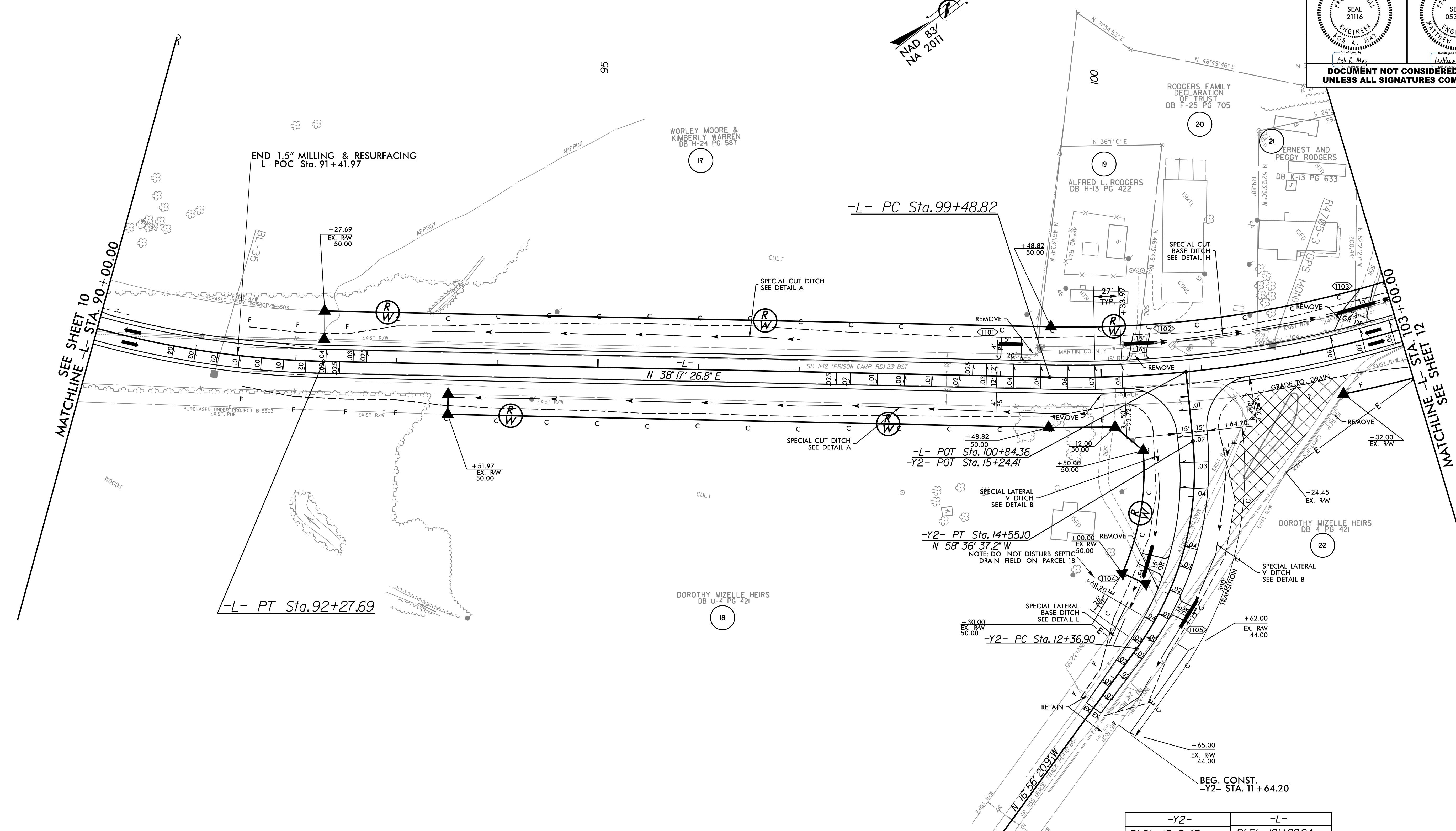
-L-	
PI Sta 88+17.79	
$\Delta = 55^{\circ}13'06.4"$ (LT)	
$D = 6^{\circ}09'39.0"$	
$L = 896.28'$	
$T = 486.38'$	
$R = 930.00'$	
$DS = 50$ MPH	
$SE = 0.08$ FT/FT	SEE SHEET 20-1 FOR DITCH DETAILS
$RO =$ SEE PLANS	SEE SHEET 46 & 47 FOR -L- PROFILE



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PROJECT REFERENCE NO. R-4705	SHEET NO. 11
ROADWAY DESIGN ENGINEER 4/7/2022	HYDRAULICS ENGINEER 4/7/2022

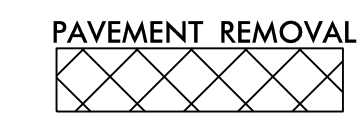
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 8/17/09
 3/7/2022
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 USER: BMEJ

-Y2-	-L-
PI Sta 13+51.07	PI Sta 101+28.04
$\Delta = 41' 40" 23.4" (LT)$	$\Delta = 18' 06" 12.1" (LT)$
$D = 19' 05" 54.9"$	$D = 5' 05" 34.6"$
$L = 218.20'$	$L = 355.46'$
$T = 114.18'$	$T = 179.22'$
$R = 300.00'$	$R = 1125.00'$
$DS = 60 \text{ MPH}$	$DS = 55 \text{ MPH}$
$SE = 0.08 \text{ FT/FT}$	$SE = 0.08 \text{ FT/FT}$
$RO = \text{SEE PLANS}$	$RO = \text{SEE PLANS}$

SEE SHEET 2D-1 FOR DITCH DETAILS
 SEE SHEET 47 FOR -L- PROFILE
 SEE SHEET 65 FOR -Y2- PROFILE

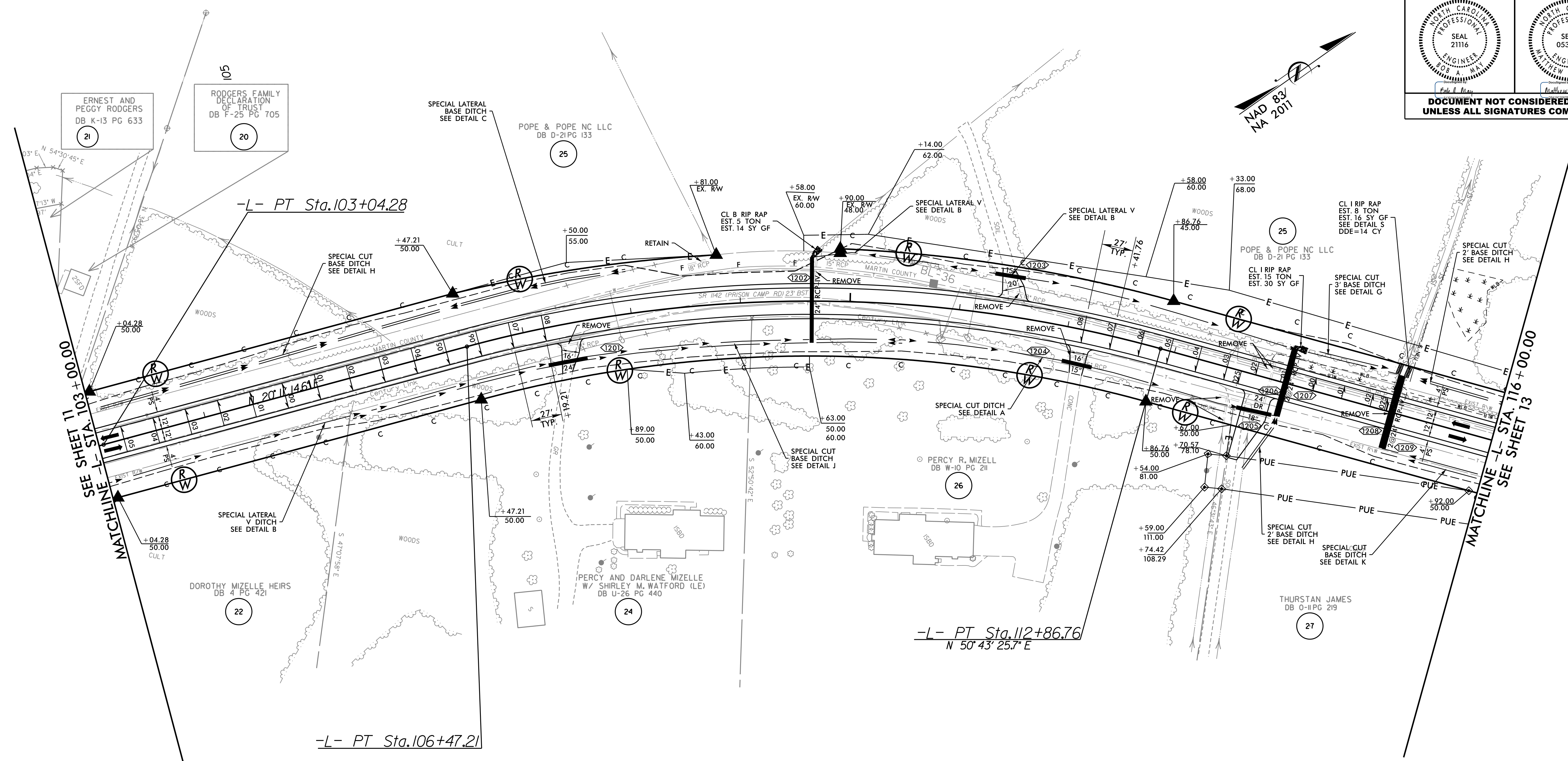


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TRANSPORTATION DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-4705	SHEET NO. 12
RW SHEET NO.	HYDRAULICS ENGINEER 4/7/2022
ROADWAY DESIGN ENGINEER 4/7/2022	SEAL 21116 BOB A. MAY
	SEAL 053425 MATTHEW L. HANEY

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SEE SHEET 11
MATCHLINE -L- STA. 103+00.00

MATCHLINE -L- STA. 116+00.00
SEE SHEET 13

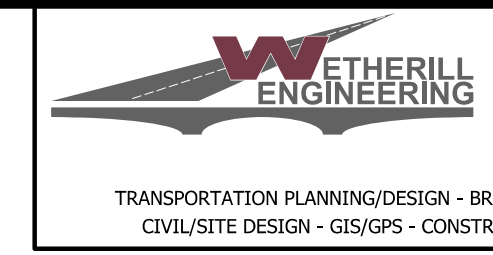
-L- PT Sta. 103+04.28

-L- PT Sta. 106+47.21

-L- PT Sta. 112+86.76
N 50° 43' 25.7" E

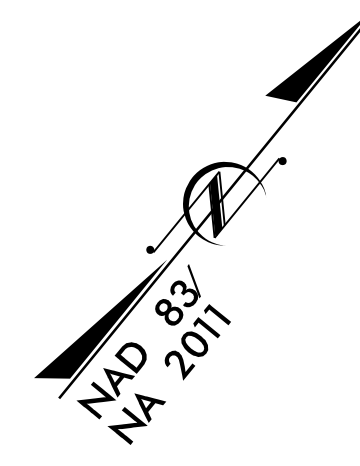
-L-
 PI Sta. 109+74.78
 $\Delta = 30^\circ 32' 11.1''$ (RT)
 $D = 4' 46' 28.7''$
 $L = 639.55'$
 $T = 327.57'$
 $R = 1,200.00'$
 $DS = 60$ MPH
 $SE = 0.08$ FT/FT
 $RO =$ SEE PLANS

SEE SHEET 2D-1 FOR DITCH DETAILS
 SEE SHEET 47 & 48 FOR -L- PROFILE

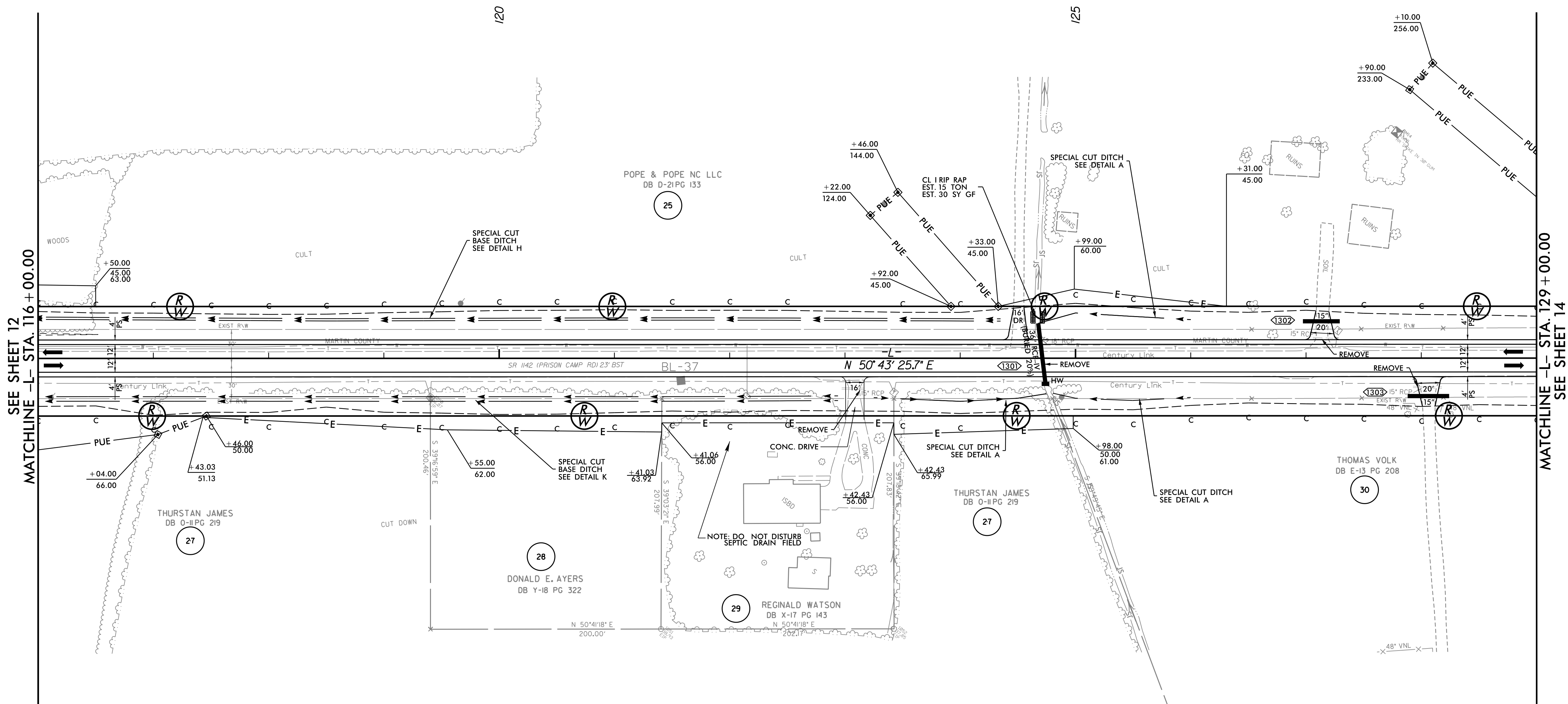


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PROJECT REFERENCE NO. R-4705	SHEET NO. 13
ROADWAY DESIGN ENGINEER 4/7/2022	HYDRAULICS ENGINEER 4/7/2022
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8/17/99
 8/17/99
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 3/7/2022
 11:58:00 AM
 14705_Rdy_psh_13.dgn

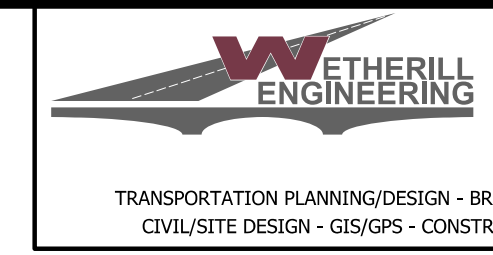


SEE SHEET 12
 MATCHLINE -L- STA. 116+00.00

MATCHLINE -L- STA. 129+00.00
 SEE SHEET 14

SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 4B FOR -L- PROFILE

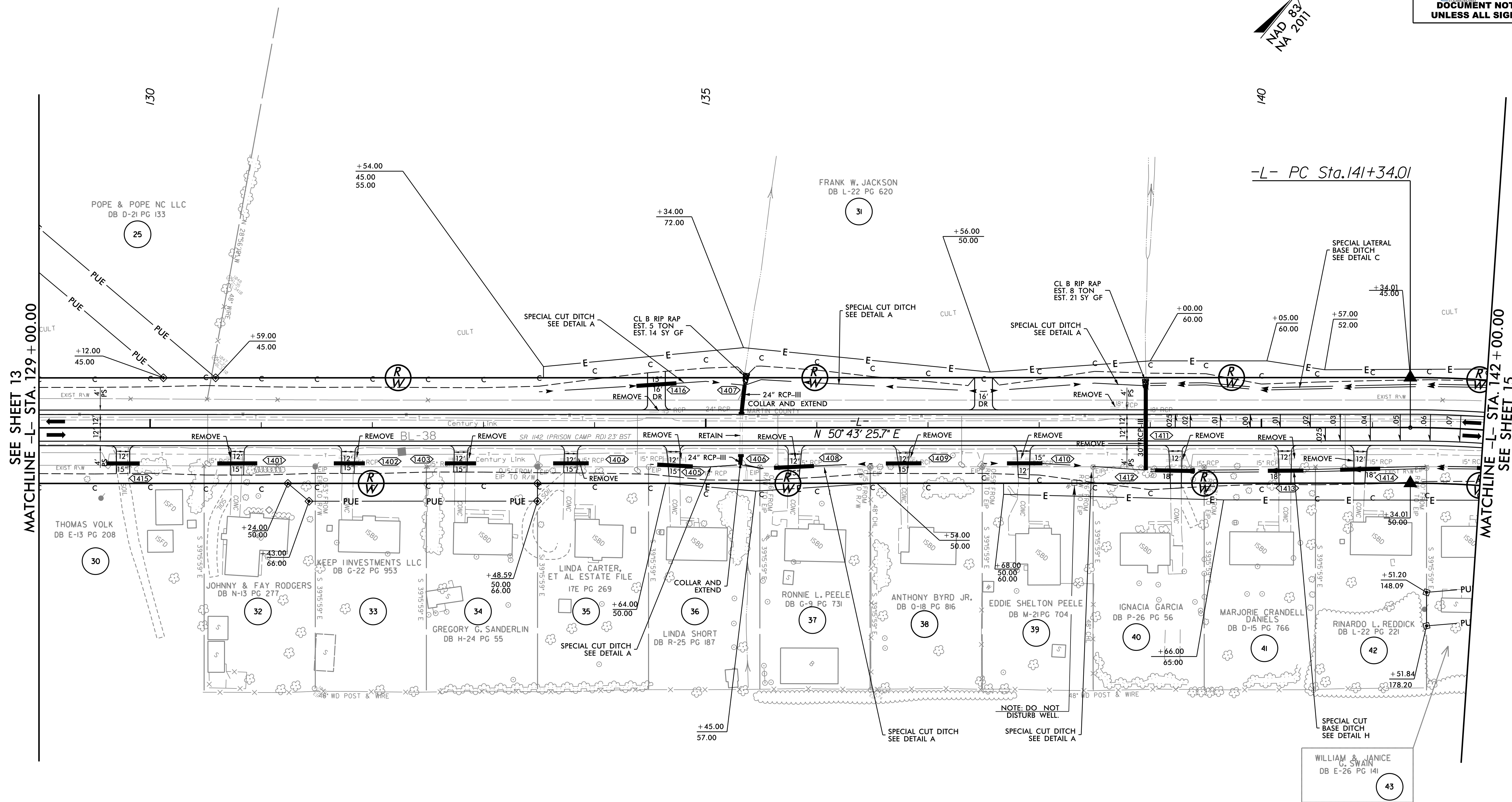
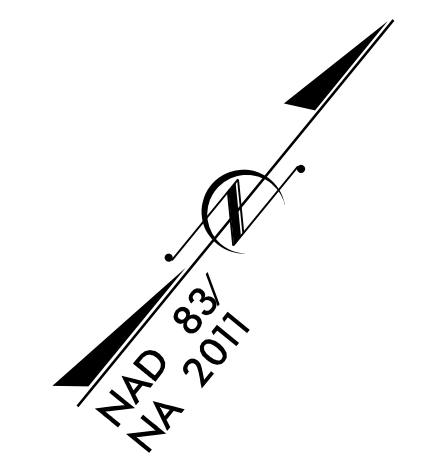
B/17/99



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TRANSPORTATION DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-4705	SHEET NO. 14
RW SHEET NO.	HYDRAULICS ENGINEER 4/7/2022
ROADWAY DESIGN ENGINEER 4/7/2022	ENGINEER SEAL 21116 BOB A. MAY
	ENGINEER SEAL 053425 MATTHEW L. HANEY
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	



SEE SHEET 13
MATCHLINE -L- STA. 129 + 00.00

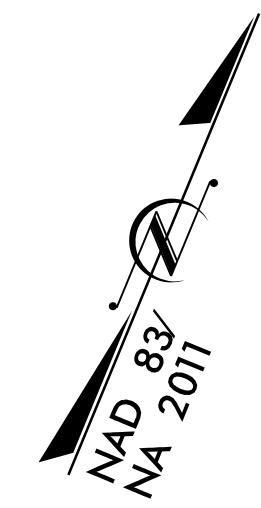
MATCHLINE -L- STA. 142 + 00.00
SEE SHEET 15

-L- PC Sta. 141+34.01

REVISIONS

SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 48 & 49 FOR -L- PROFILE

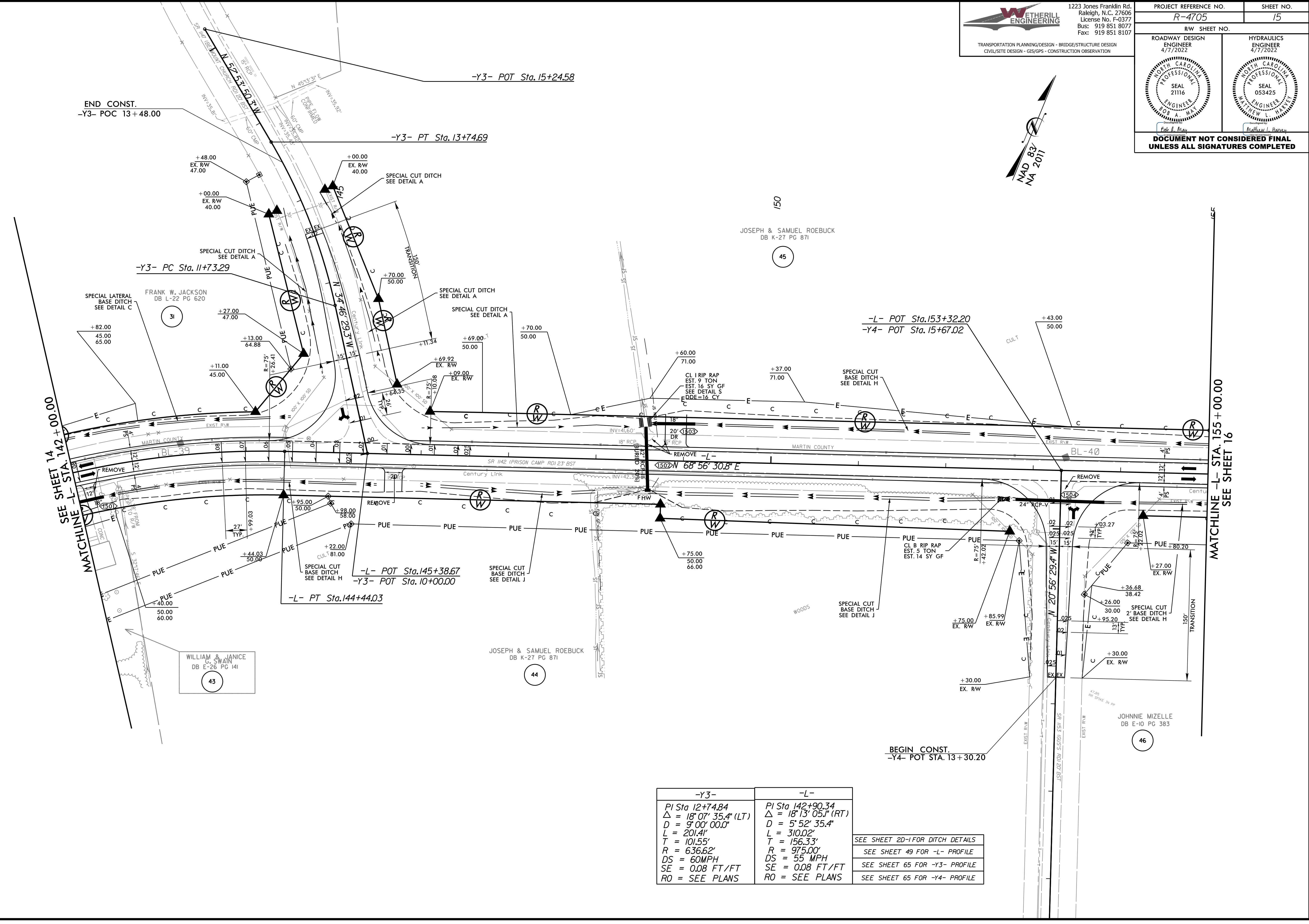
3/17/2022 14:47:05 Rcdy_psh_14.dgn



8/17/99

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3/7/2022 R4705_Rd4_psh_15.dgn



-Y3-	-L-
PI Sta 12+74.84	PI Sta 142+90.34
$\Delta = 18^{\circ} 07' 35.4''$ (LT)	$\Delta = 18^{\circ} 13' 05.1''$ (RT)
$D = 9^{\circ} 00' 00.0''$	$D = 5^{\circ} 52' 35.4''$
$L = 201.4'$	$L = 310.02'$
$T = 101.55'$	$T = 156.33'$
$R = 636.62'$	$R = 975.00'$
$DS = 60MPH$	$DS = 55 MPH$
$SE = 0.08 FT/FT$	$SE = 0.08 FT/FT$
$RO = SEE PLANS$	$RO = SEE PLANS$

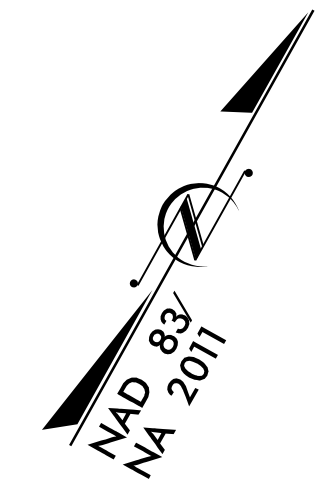
SEE SHEET 2D-1 FOR DITCH DETAILS
 SEE SHEET 49 FOR -L- PROFILE
 SEE SHEET 65 FOR -Y3- PROFILE
 SEE SHEET 65 FOR -Y4- PROFILE

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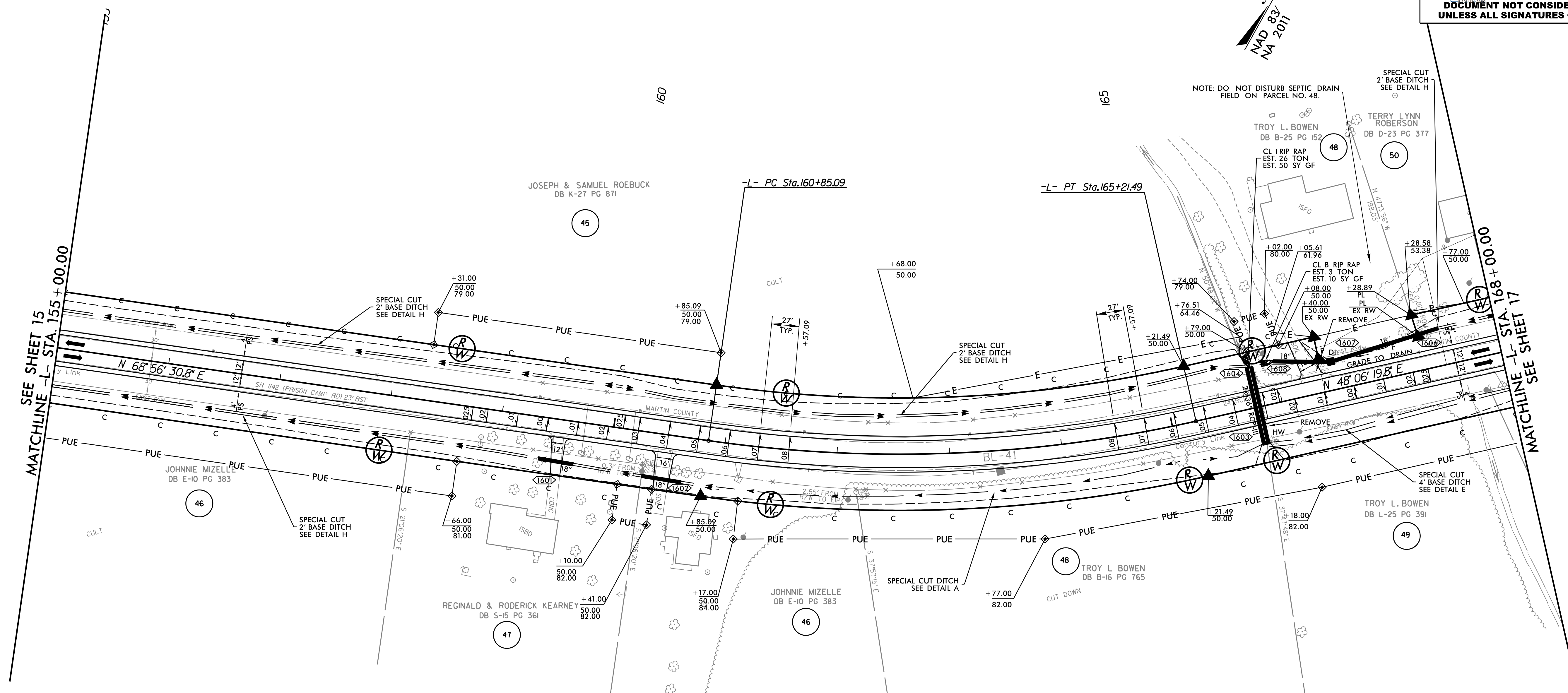
TRANSPORTATION DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-4705	SHEET NO. 16
RW SHEET NO.	HYDRAULICS ENGINEER 4/7/2022
ROADWAY DESIGN ENGINEER 4/7/2022	SEAL 21116 BOB A. WAT
	SEAL 053425 MATTHEW L. HARVEY

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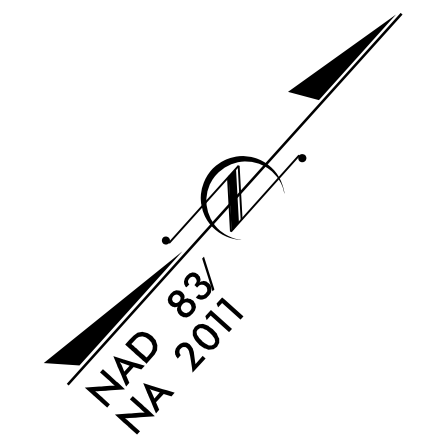
-L-
 PI Sta 163+05.73
 $\Delta = 20^\circ 50' 11.0''$ (LT)
 $D = 4^\circ 46' 28.7''$
 $L = 436.40'$
 $T = 220.64'$
 $R = 1,200.00'$
 $DS = 60$ MPH
 $SE = 0.08$ FT/FT
 $RO =$ SEE PLANS

SEE SHEET 20-I FOR DITCH DETAILS
 SEE SHEET 49 & 50 FOR -L- PROFILE

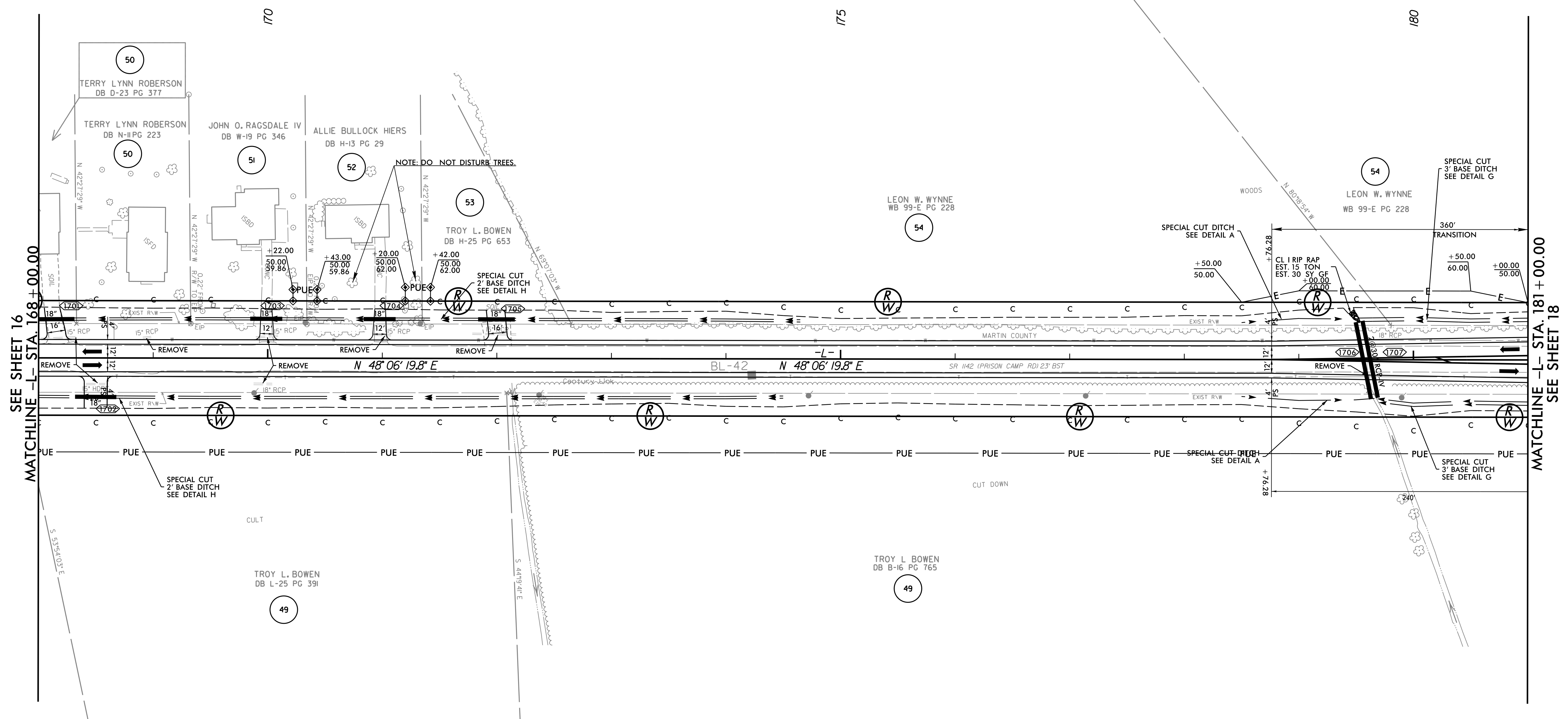
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-4705	SHEET NO. 17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 4/7/2022	HYDRAULICS ENGINEER 4/7/2022
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REVISIONS

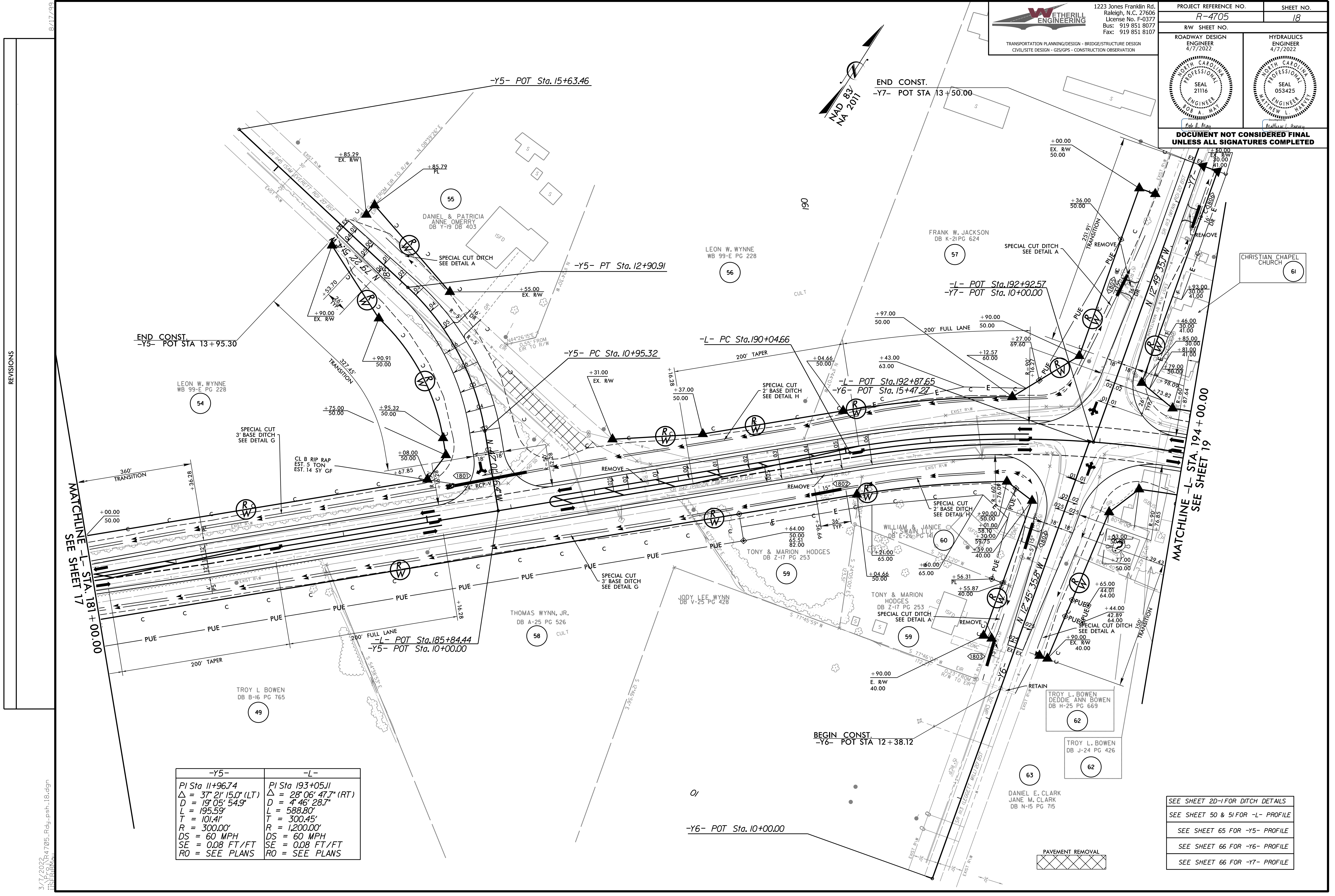


SEE SHEET 16
MATCHLINE -L- STA. 168+00.00

MATCHLINE -L- STA. 181+00.00
SEE SHEET 18

SEE SHEET 2D-1 FOR DITCH DETAILS
 SEE SHEET 50 FOR -L- PROFILE

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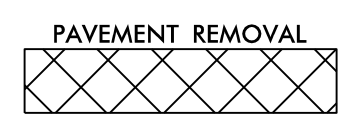
REVISIONS

MATCHLINE -L- STA. 181+00.00
SEE SHEET 17

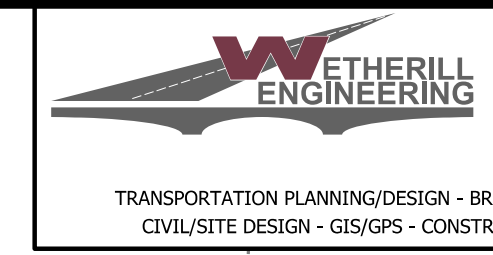
MATCHLINE -L- STA. 194+00.00
SEE SHEET 19

-Y5-	-L-
PI Sta 11+96.74	PI Sta 193+05.11
$\Delta = 37^\circ 21' 15.0''$ (LT)	$\Delta = 28^\circ 06' 47.7''$ (RT)
$D = 19^\circ 05' 54.9''$	$D = 4^\circ 46' 28.7''$
$L = 195.59'$	$L = 588.80'$
$T = 101.41'$	$T = 300.45'$
$R = 300.00'$	$R = 1,200.00'$
$DS = 60$ MPH	$DS = 60$ MPH
$SE = 0.08$ FT/FT	$SE = 0.08$ FT/FT
$RO =$ SEE PLANS	$RO =$ SEE PLANS

- SEE SHEET 2D-FOR DITCH DETAILS
- SEE SHEET 50 & 51 FOR -L- PROFILE
- SEE SHEET 65 FOR -Y5- PROFILE
- SEE SHEET 66 FOR -Y6- PROFILE
- SEE SHEET 66 FOR -Y7- PROFILE



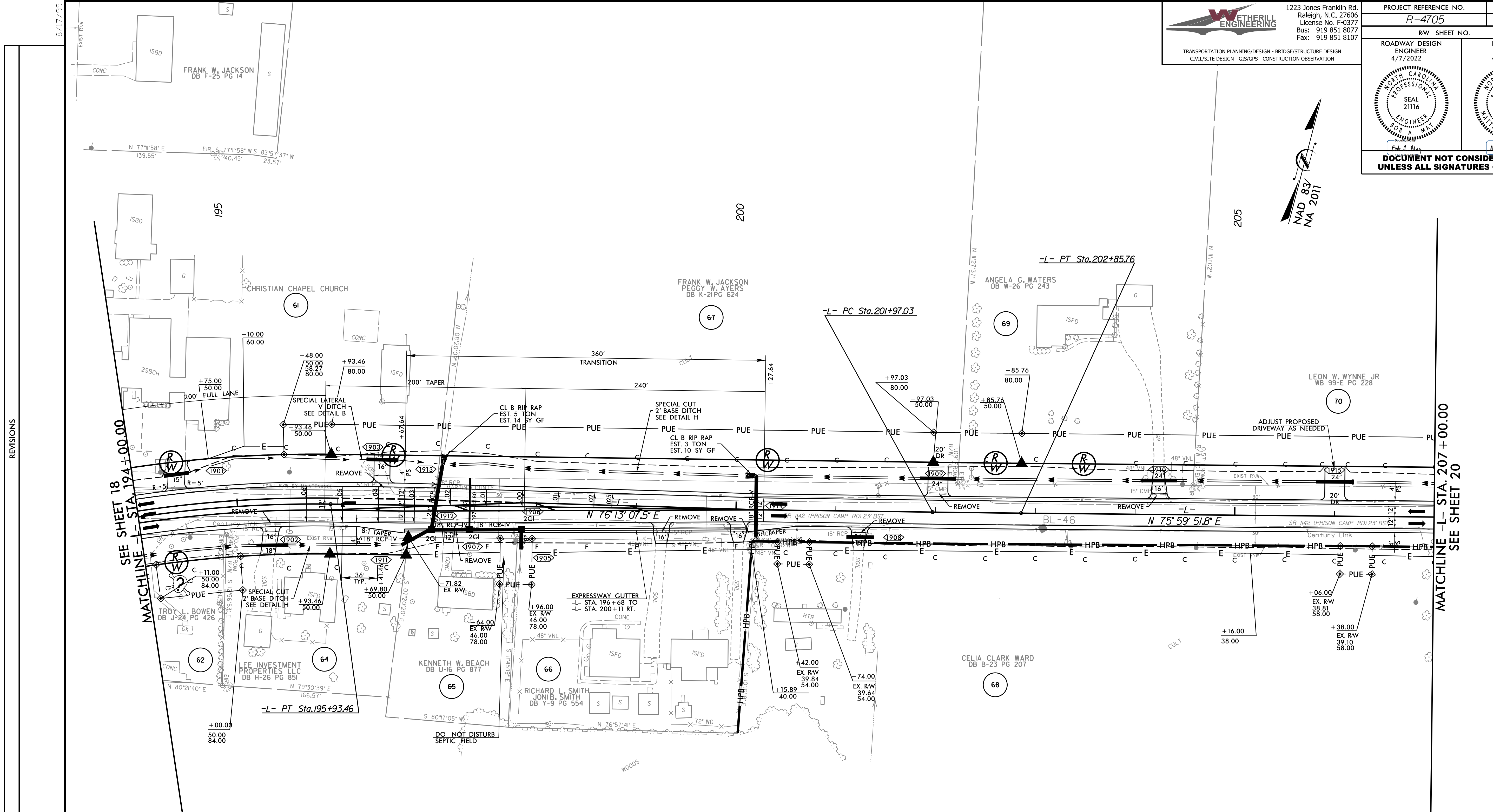
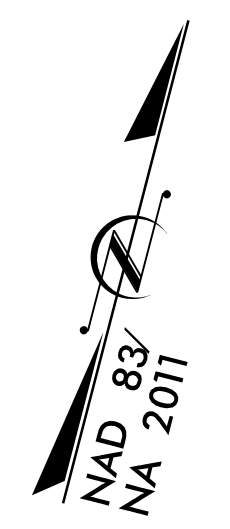
3/7/2022 14:47:05 Rdy_psh_18.dgn



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PROJECT REFERENCE NO. R-4705	SHEET NO. 19
RW SHEET NO.	HYDRAULICS ENGINEER 4/7/2022
ROADWAY DESIGN ENGINEER 4/7/2022	SEAL 21116 BOB A. MAY
	SEAL 053425 MATTHEW L. HARVEY
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REVISIONS

SEE SHEET 18
MATCHLINE - STA 194+00.00

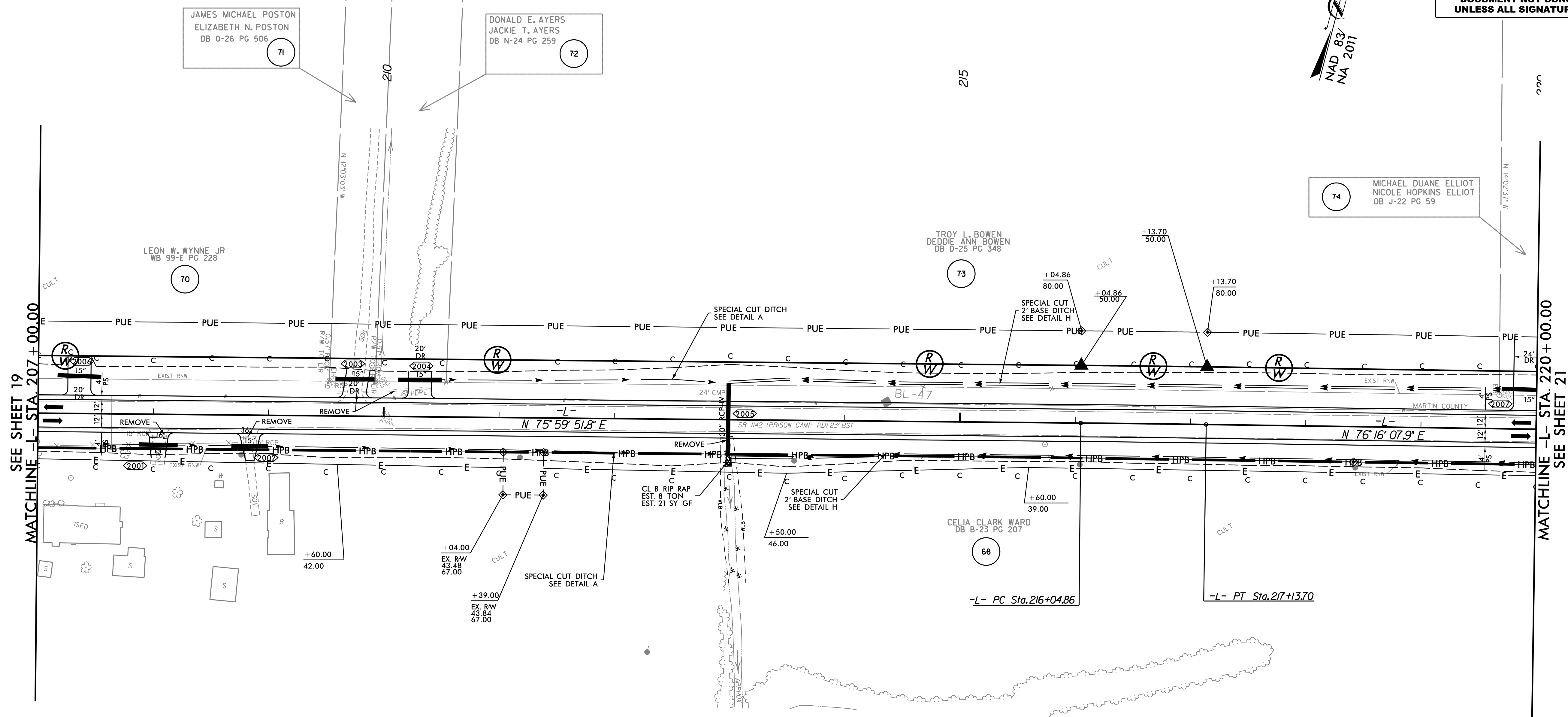
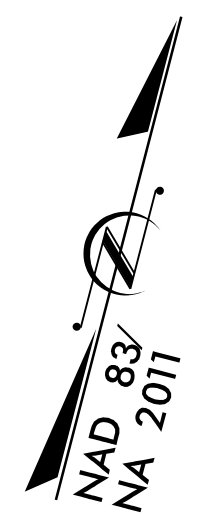
MATCHLINE - STA 207+00.00
SEE SHEET 20

-L-

PI Sta 202+41.40
 $\Delta = 0^{\circ} 13' 15.7''$ (LT)
 $D = 0^{\circ} 14' 56.8''$
 $L = 88.73'$
 $T = 44.36'$
 $R = 23,000.00'$
 $DS = 60$ MPH
 $SE = NC$
 $RO = N/A$

SEE SHEET 20 FOR DITCH DETAILS
 SEE SHEET 51 FOR -L- PROFILE

3/17/2022 14:47:05 Rdy_psh_19.dgn



REVISIONS

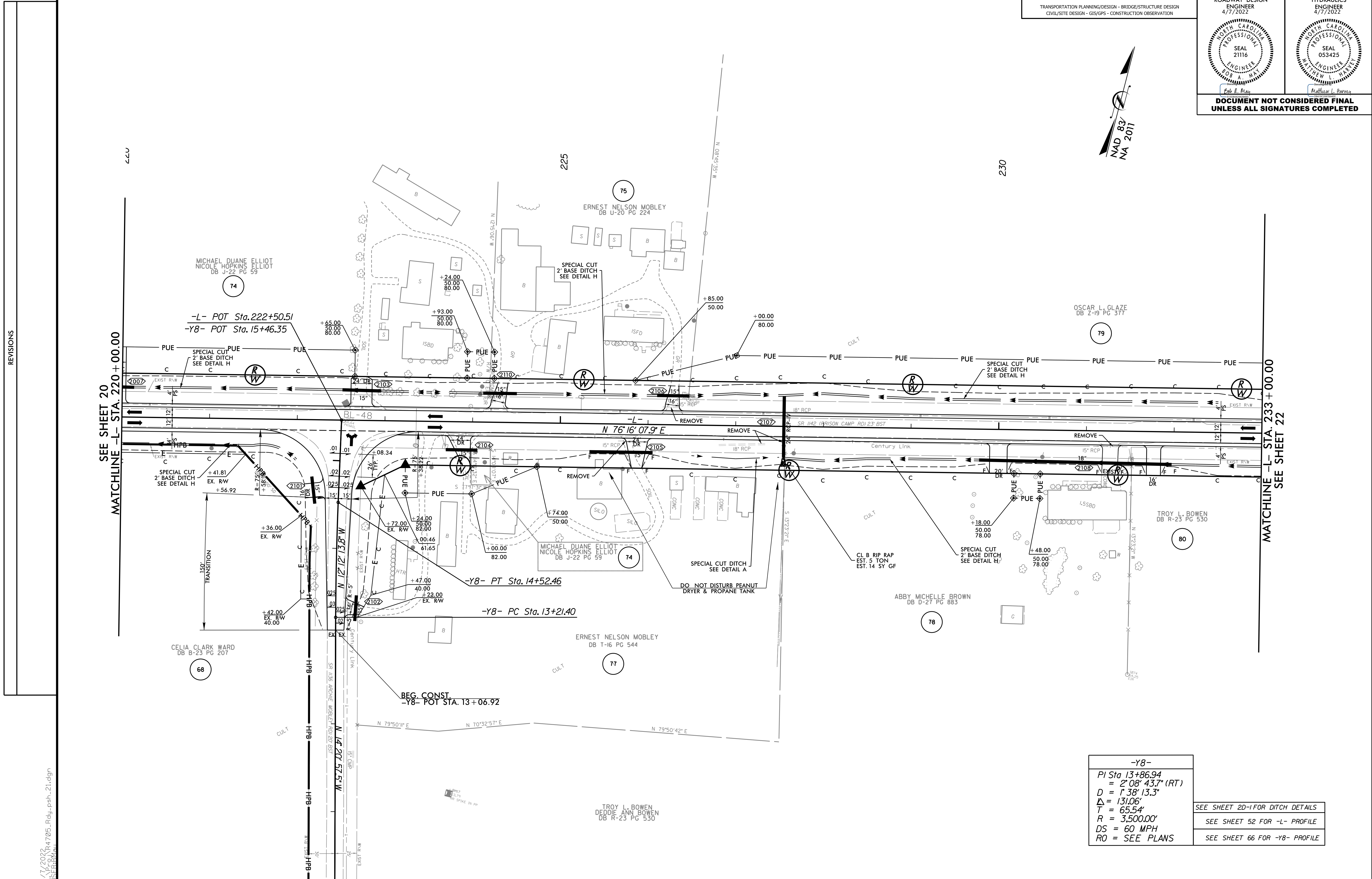
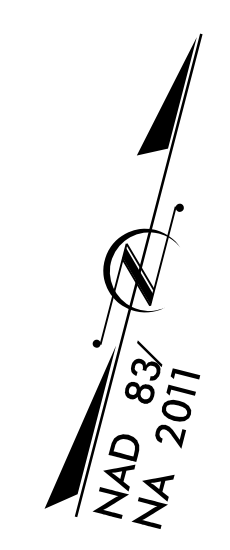
SEE SHEET 19
MATCHLINE -L- STA. 207 + 00.00

MATCHLINE -L- STA. 220 + 00.00
SEE SHEET 21

-L-
 PI Sta 216+59.28
 $\Delta = 0' 16' 16.1''$ (RT)
 D = 0' 14' 56.8"
 L = 108.84'
 T = 54.42'
 R = 23,000.00'
 DS = 60 MPH
 SE = NC
 RO = N/A

SEE SHEET 20-1 FOR DITCH DETAILS
 SEE SHEET 51 & 52 FOR -L- PROFILE

PROJECT REFERENCE NO. R-4705	SHEET NO. 21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 4/7/2022	HYDRAULICS ENGINEER 4/7/2022
 SEAL 21116 ENGINEER BOB A. WAY	 SEAL 053425 ENGINEER MATTHEW L. PARVEY
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



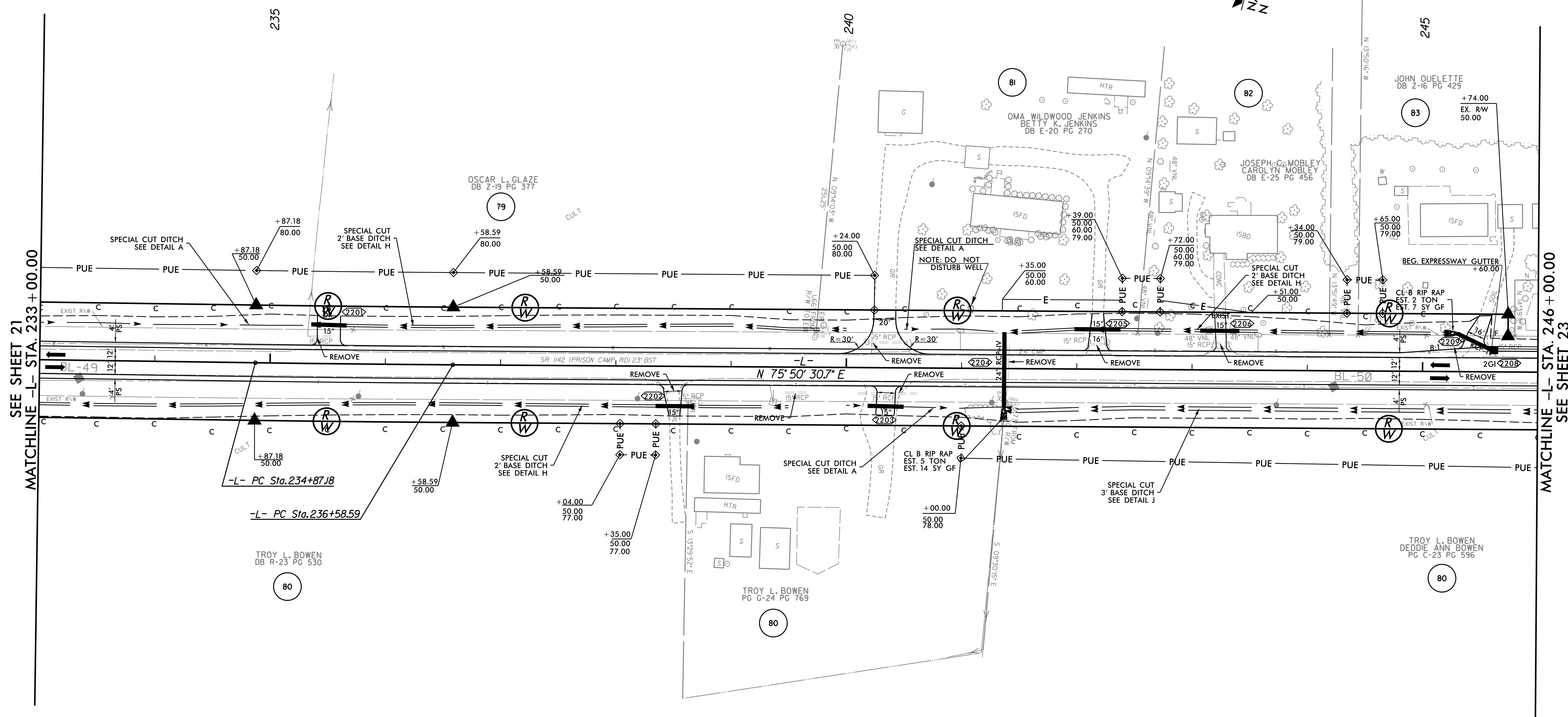
REVISIONS

SEE SHEET 20
MATCHLINE -L- STA. 220 + 00.00

MATCHLINE -L- STA. 233 + 00.00
SEE SHEET 22

-Y8-
PI Sta 13+86.94 = 2' 08' 43.7" (RT) D = 138' 13.3" Δ = 131.06' T = 65.54' R = 3,500.00' DS = 60 MPH RO = SEE PLANS

SEE SHEET 20-1 FOR DITCH DETAILS
SEE SHEET 52 FOR -L- PROFILE
SEE SHEET 66 FOR -Y8- PROFILE



REVISIONS

SEE SHEET 21
MATCHLINE -L- STA. 233 + 00.00

MATCHLINE -L- STA. 246 + 00.00
SEE SHEET 23

-L-
PI Sta 235+72.88
$\Delta = 0' 25' 37.2" (LT)$
$D = 0' 14' 56.8"$
$L = 171.4'$
$T = 85.70'$
$R = 23,000.00'$
$DS = 60 \text{ MPH}$
SE = NC
RO = N/A

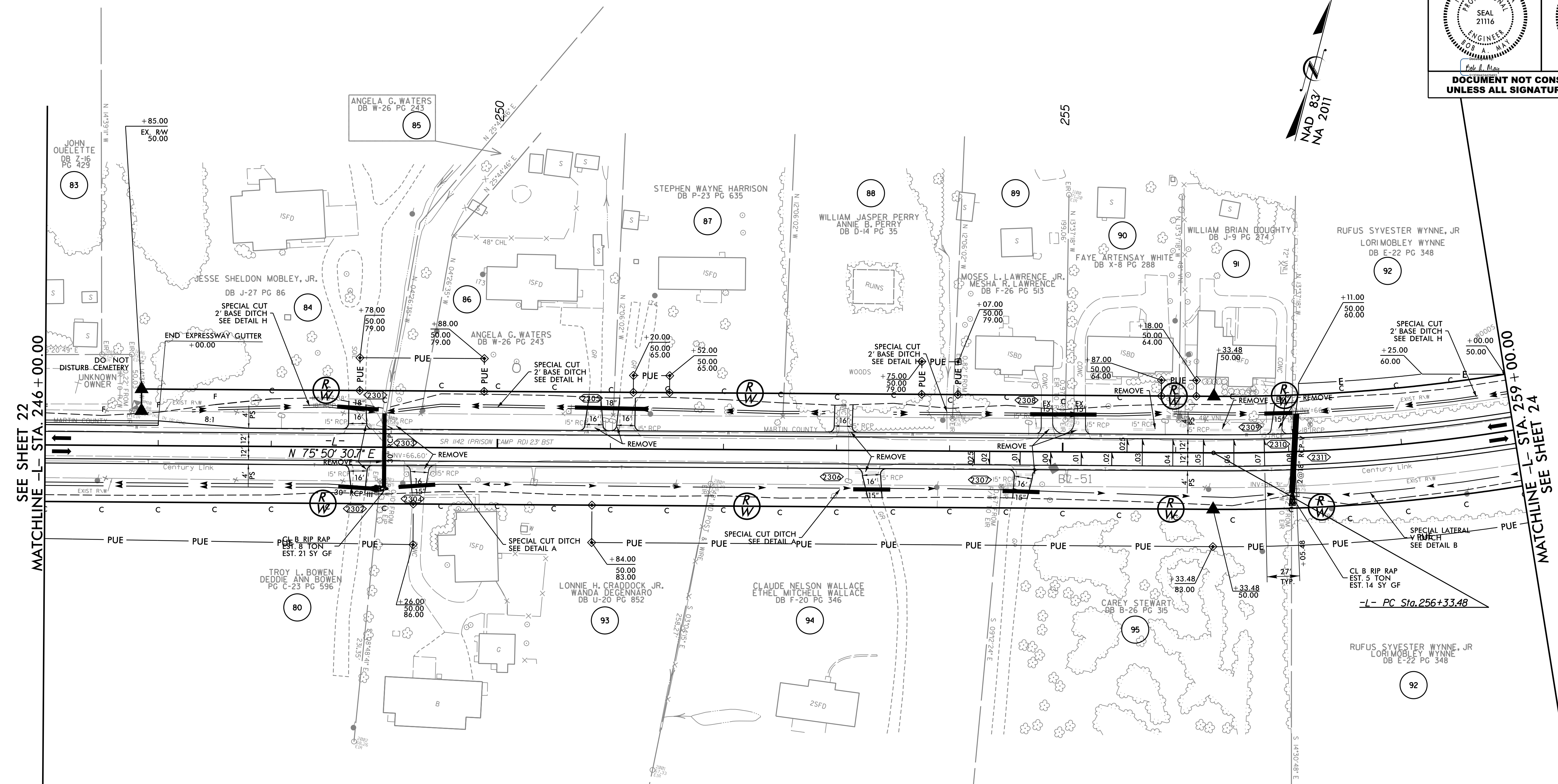
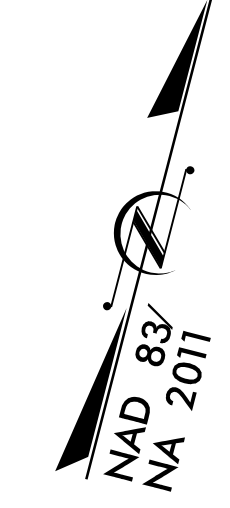
SEE SHEET 2D-1 FOR DITCH DETAILS
 SEE SHEET 52 & 53 FOR -L- PROFILE

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 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-4705	SHEET NO. 23
RW SHEET NO.	HYDRAULICS ENGINEER 4/7/2022
ROADWAY DESIGN ENGINEER 4/7/2022	SEAL 21116 BOB A. MAY
	SEAL 053425 WILLIAM L. HANEY

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



SEE SHEET 22
MATCHLINE -L- STA. 246 +00.00

MATCHLINE -L- STA. 259 +00.00
SEE SHEET 24

REVISIONS

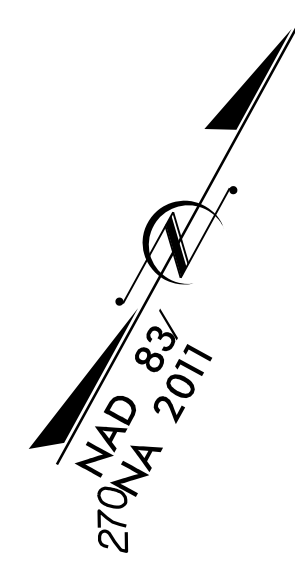
-L-	
PI Sta 258+51.55	
$\Delta = 15^{\circ} 22' 48.8''$ (LT)	
D = 3' 32' 51.8"	
L = 433.52'	
T = 218.07'	
R = 1,615.00'	
DS = 60 MPH	
SE = 0.08 FT/FT	SEE SHEET 20-1 FOR DITCH DETAILS
RO = SEE PLANS	SEE SHEET 53 FOR -L- PROFILE

B/17/99

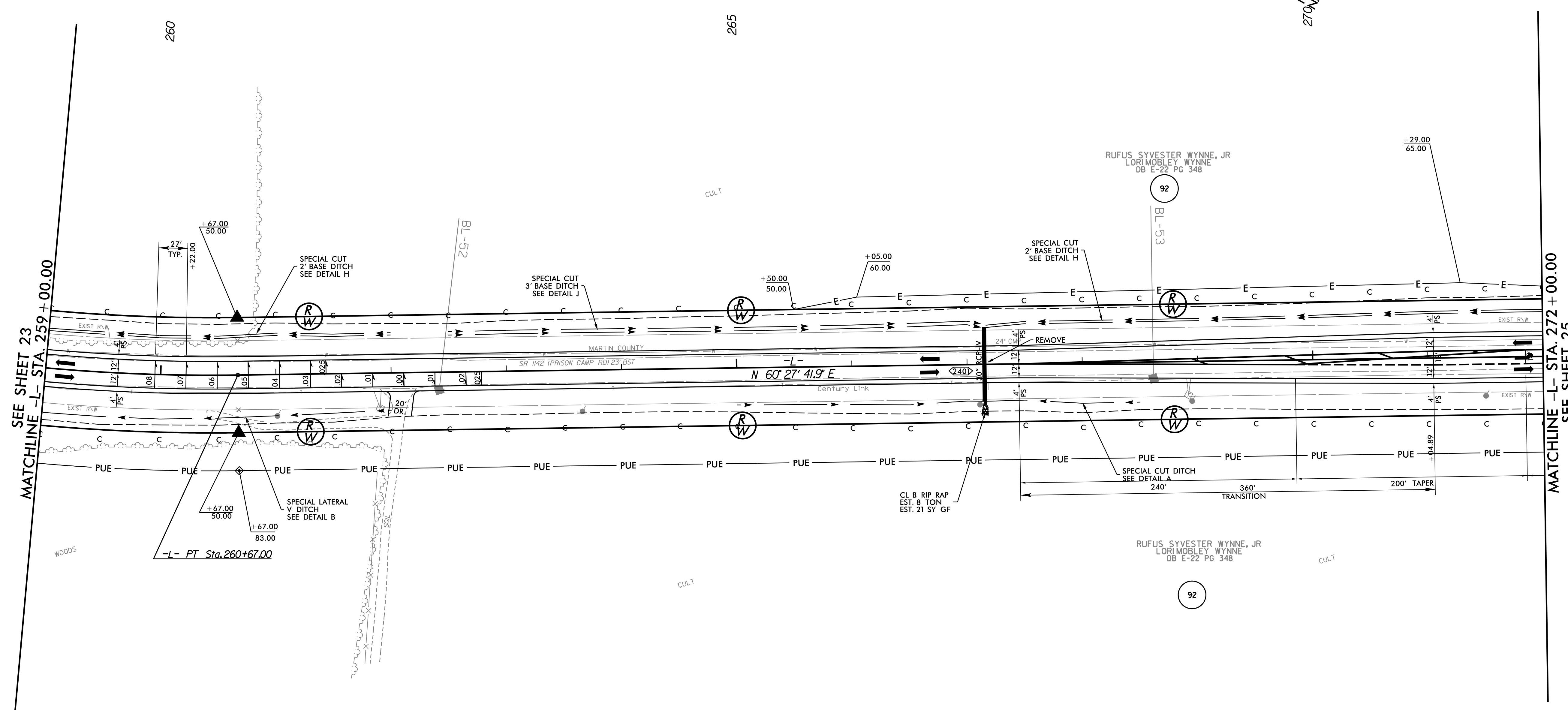
WETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-4705	SHEET NO. 24
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 4/7/2022	HYDRAULICS ENGINEER 4/7/2022
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REVISIONS



SEE SHEET 23
MATCHLINE -L- STA. 259 + 00.00

MATCHLINE -L- STA. 272 + 00.00
SEE SHEET 25

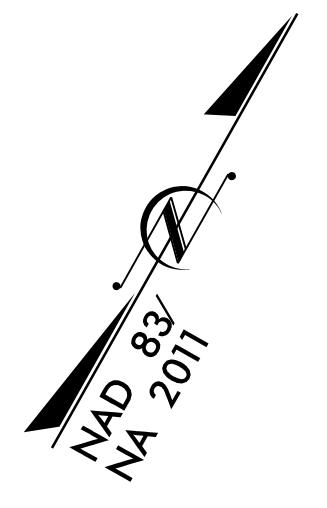
3/7/2022 14:47:05 Rdy_psh_24.dgn
USER:RDM

SEE SHEET 20-1 FOR DITCH DETAILS
SEE SHEET 53 & 54 FOR -L- PROFILE

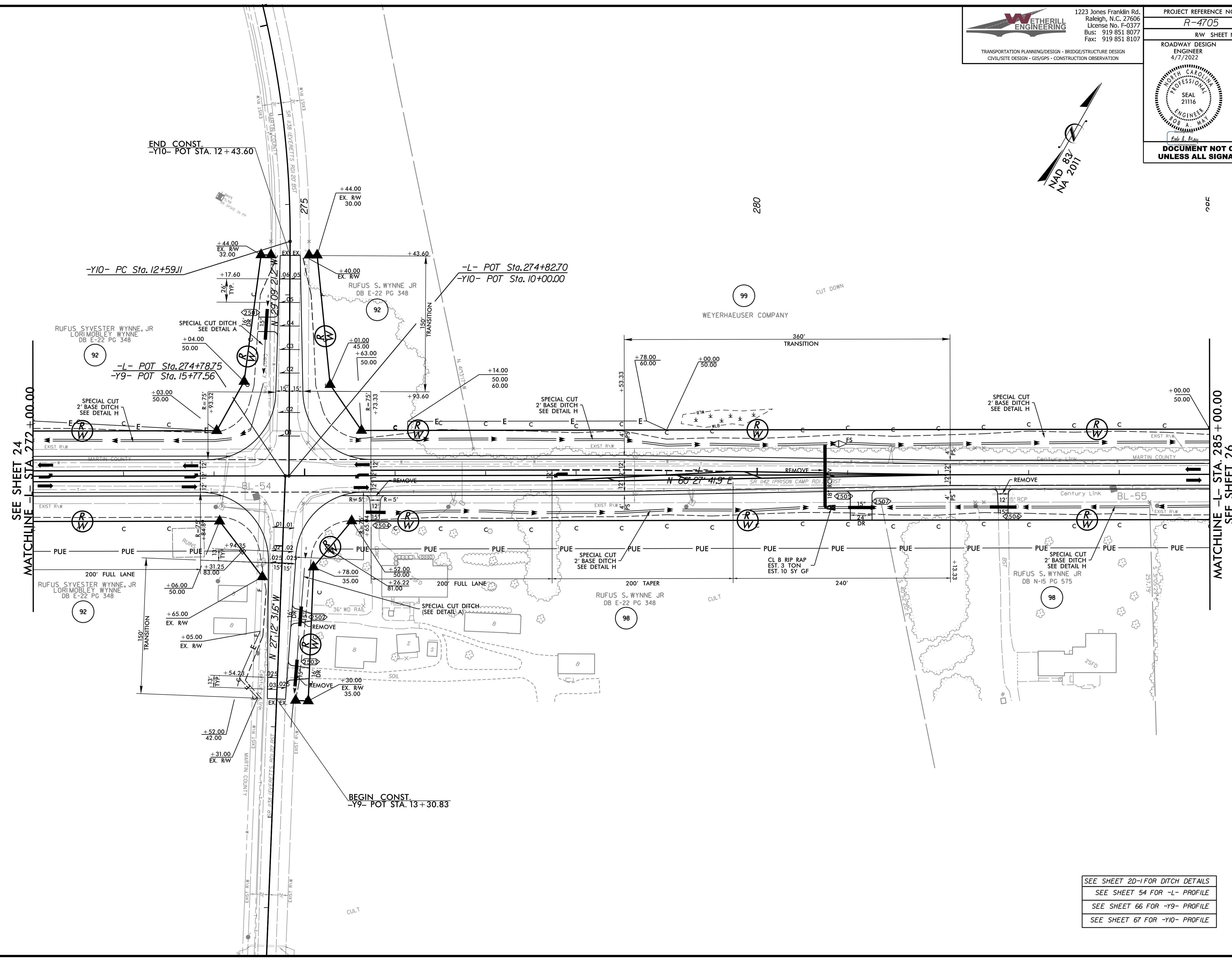
WETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No: F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-4705	SHEET NO. 25
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 4/7/2022	HYDRAULICS ENGINEER 4/7/2022
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	






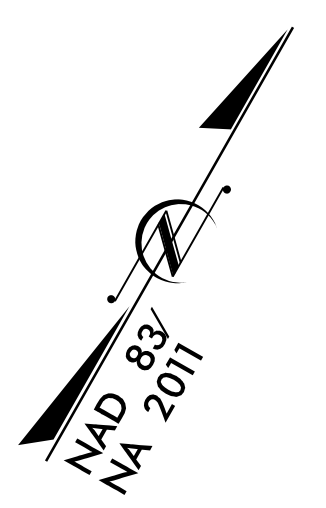
REVISIONS



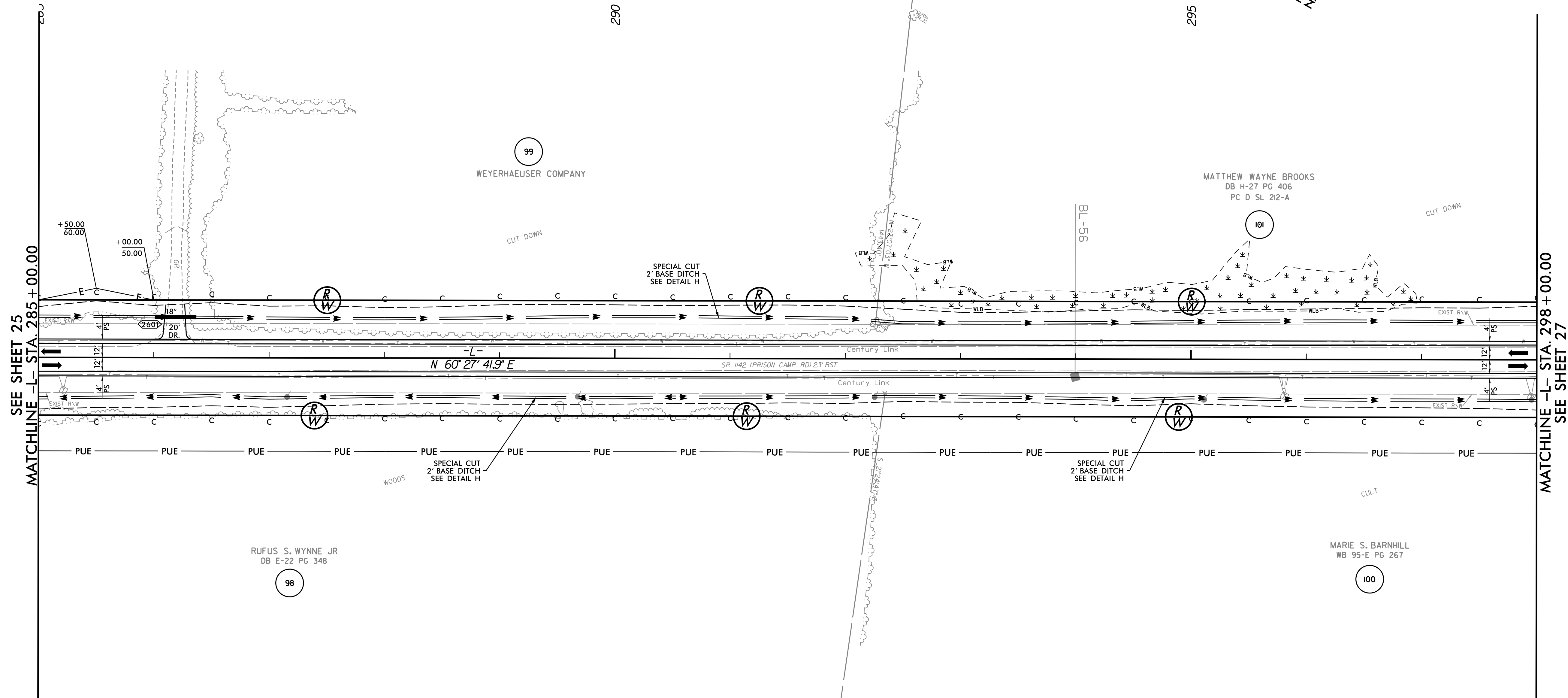
3/7/2022 4:47:05 Rdy_psh_25.dgn
 USER:RDM

SEE SHEET 20-1 FOR DITCH DETAILS
 SEE SHEET 54 FOR -L- PROFILE
 SEE SHEET 66 FOR -Y9- PROFILE
 SEE SHEET 67 FOR -Y10- PROFILE

		1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107	
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION		PROJECT REFERENCE NO. R-4705	SHEET NO. 26
ROADWAY DESIGN ENGINEER 4/7/2022		HYDRAULICS ENGINEER 4/7/2022	
			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



REVISIONS





SEE SHEET 25
 MATCHLINE -L- STA. 285 + 00.00

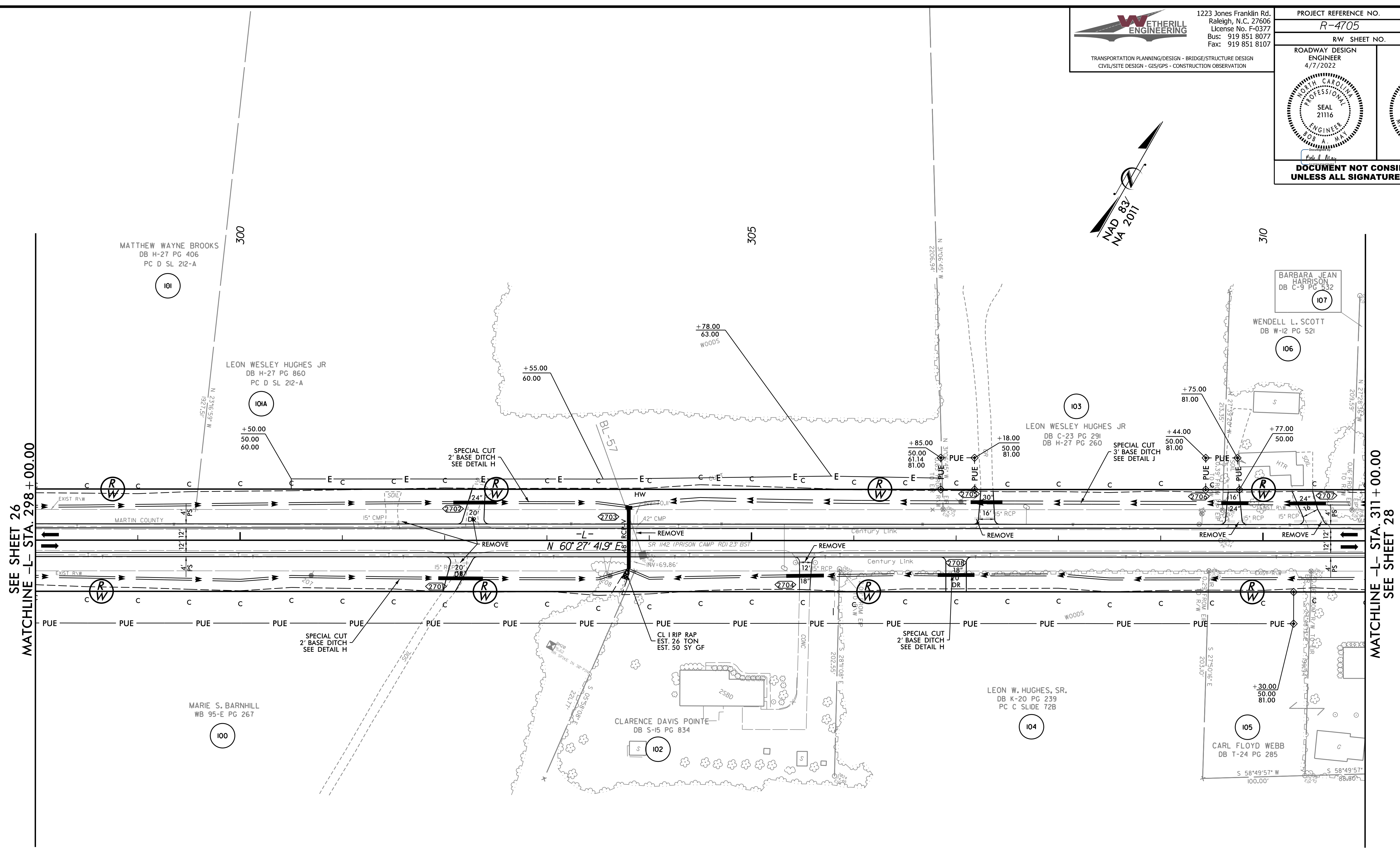
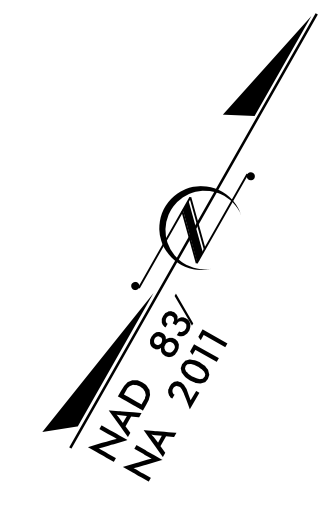
MATCHLINE -L- STA. 298 + 00.00
 SEE SHEET 27

SEE SHEET 2D-1 FOR DITCH DETAILS
 SEE SHEET 54 & 55 FOR -L- PROFILE

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 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-4705	SHEET NO. 27
RW SHEET NO.	HYDRAULICS ENGINEER 4/7/2022
ROADWAY DESIGN ENGINEER 4/7/2022	HYDRAULICS ENGINEER 4/7/2022
 BOB A. MAY ENGINEER SEAL 21116 NORTH CAROLINA PROFESSIONAL ENGINEER	 MATTHEW J. HARVEY ENGINEER SEAL 053425 NORTH CAROLINA PROFESSIONAL ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REVISIONS



SEE SHEET 26
MATCHLINE -L- STA. 298 +00.00

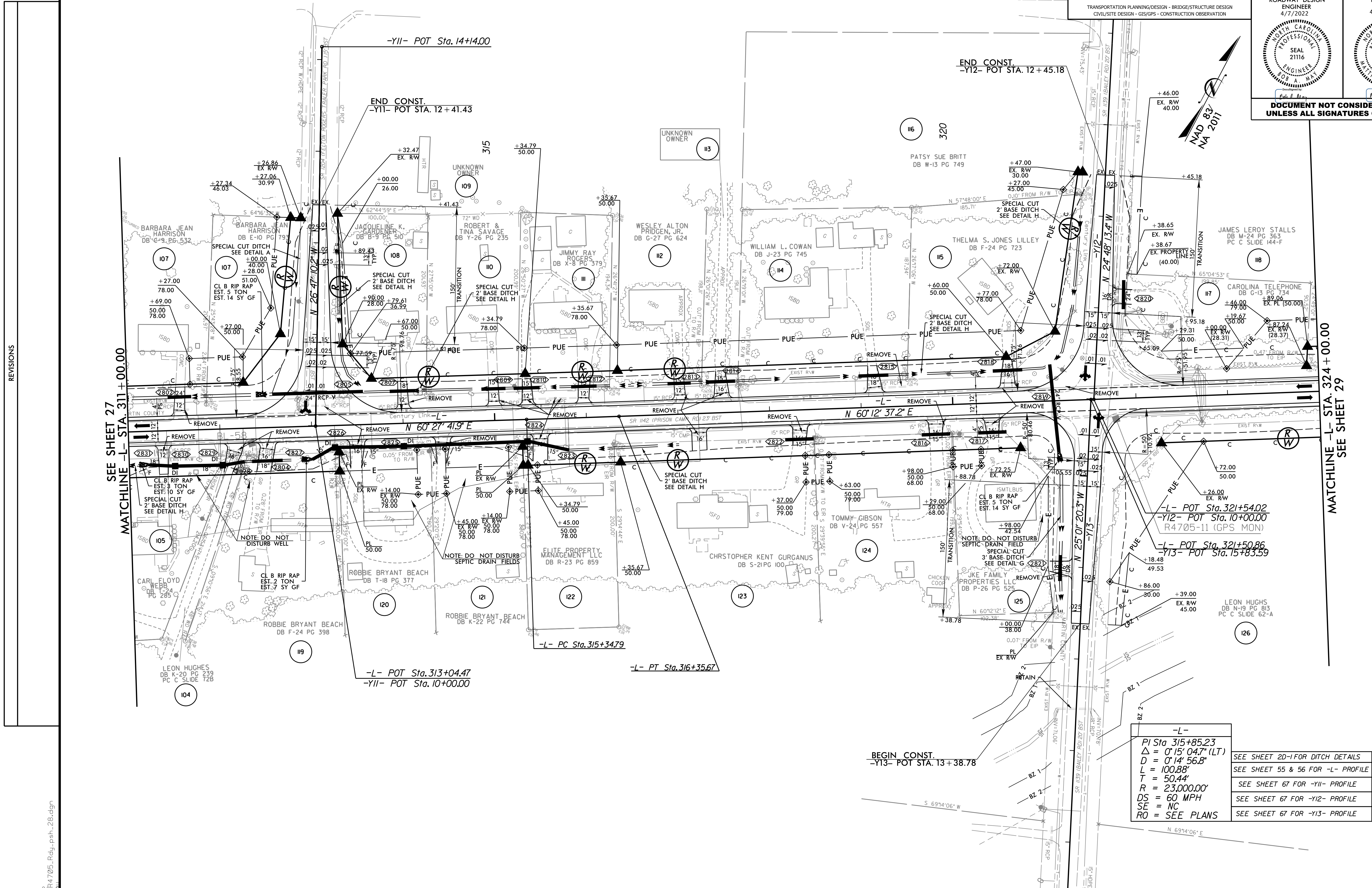
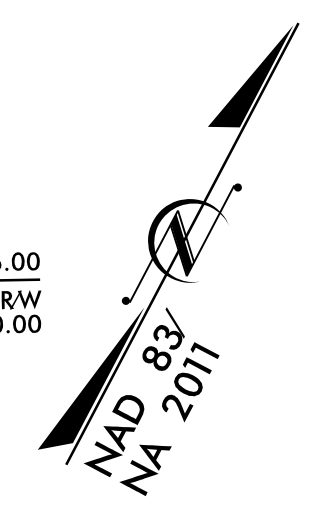
MATCHLINE -L- STA. 311 +00.00
SEE SHEET 28

SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 55 FOR -L- PROFILE

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TRANSPORTATION ENGINEERING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-4705	SHEET NO. 28
RW SHEET NO.	HYDRAULICS ENGINEER 4/7/2022
ROADWAY DESIGN ENGINEER 4/7/2022	SEAL 21116 ENGINEER BOB A. MAY
 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



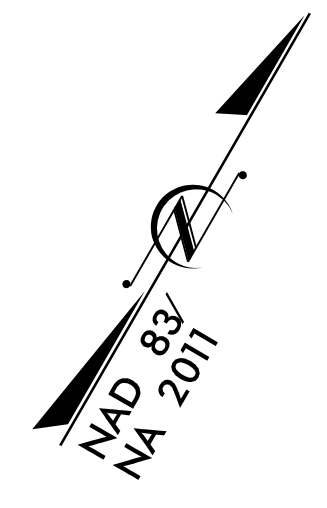
SEE SHEET 27
 MATCHLINE -L- STA 311 + 00.00

MATCHLINE -L- STA 324 + 00.00
 SEE SHEET 29

REVISIONS

BEGIN CONST.
 -Y13- POT STA. 13 + 38.78

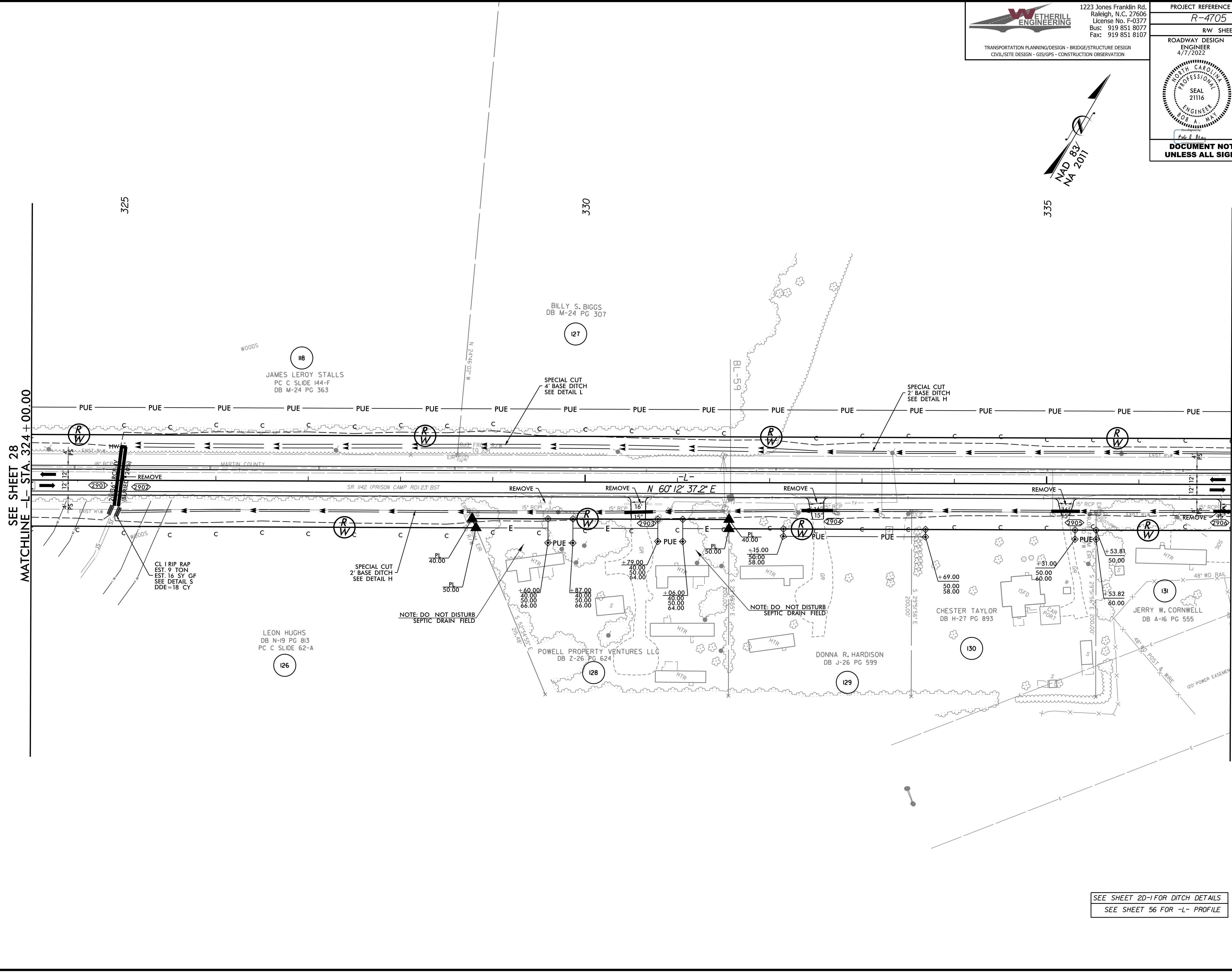
-L-	SEE SHEET 2D-1 FOR DITCH DETAILS
PI Sta 315+85.23	SEE SHEET 55 & 56 FOR -L- PROFILE
$\Delta = 0' 15' 04.7''$ (LT)	SEE SHEET 67 FOR -Y11- PROFILE
$D = 0' 14' 56.8''$	SEE SHEET 67 FOR -Y12- PROFILE
$L = 100.88'$	SEE SHEET 67 FOR -Y13- PROFILE
$T = 50.44'$	
$R = 23,000.00'$	
$DS = 60$ MPH	
$SE = NC$	
$RO =$ SEE PLANS	



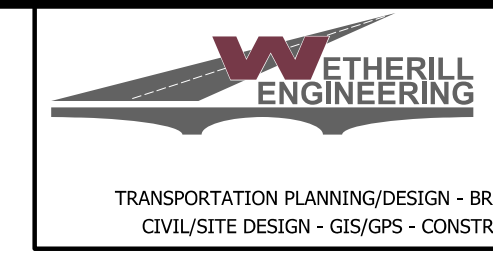
REVISIONS

SEE SHEET 28
MATCHLINE -L- STA. 324 + 00.00

MATCHLINE -L- STA. 337 + 00.00
SEE SHEET 30

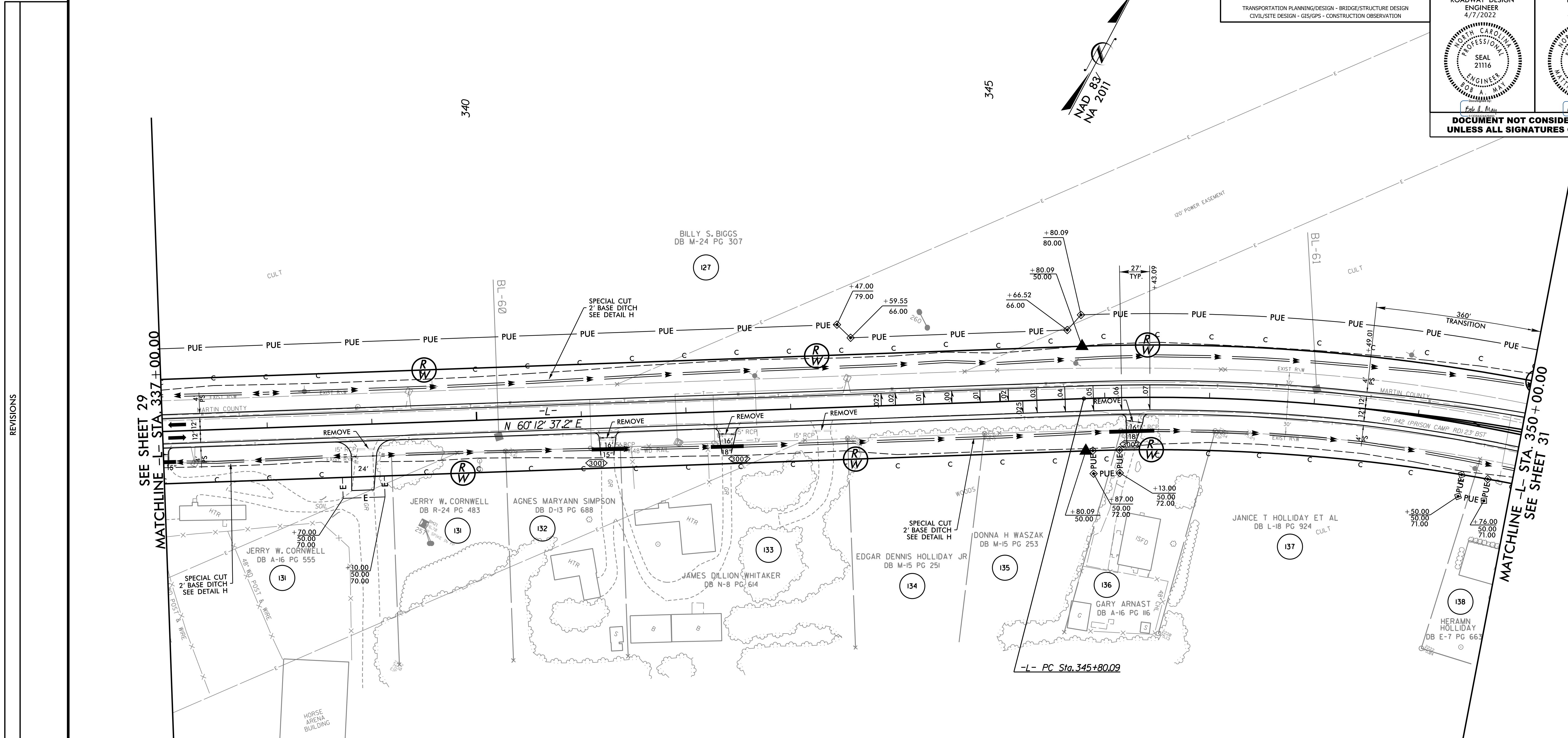
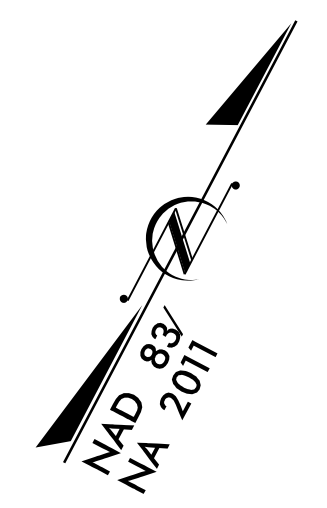


SEE SHEET 2D-I FOR DITCH DETAILS
SEE SHEET 56 FOR -L- PROFILE



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Fax: 919 851 8107

PROJECT REFERENCE NO. R-4705		SHEET NO. 30
RW SHEET NO.		
ROADWAY DESIGN ENGINEER 4/7/2022	HYDRAULICS ENGINEER 4/7/2022	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



REVISIONS

SEE SHEET 29
MATCHLINE -L- STA 337+00.00

MATCHLINE -L- STA 350+00.00
SEE SHEET 31

-L-	
PI Sta 348+81.53	
$\Delta = 18' 18' 50.7" (RT)$	
$D = 3' 03' 50.2"$	
$L = 597.73'$	
$T = 301.44'$	
$R = 1,870.00'$	
$DS = 60 MPH$	
$SE = 0.07 FT/FT$	
$RO = SEE PLANS$	
	SEE SHEET 20-1 FOR DITCH DETAILS
	SEE SHEET 56 & 57 FOR -L- PROFILE