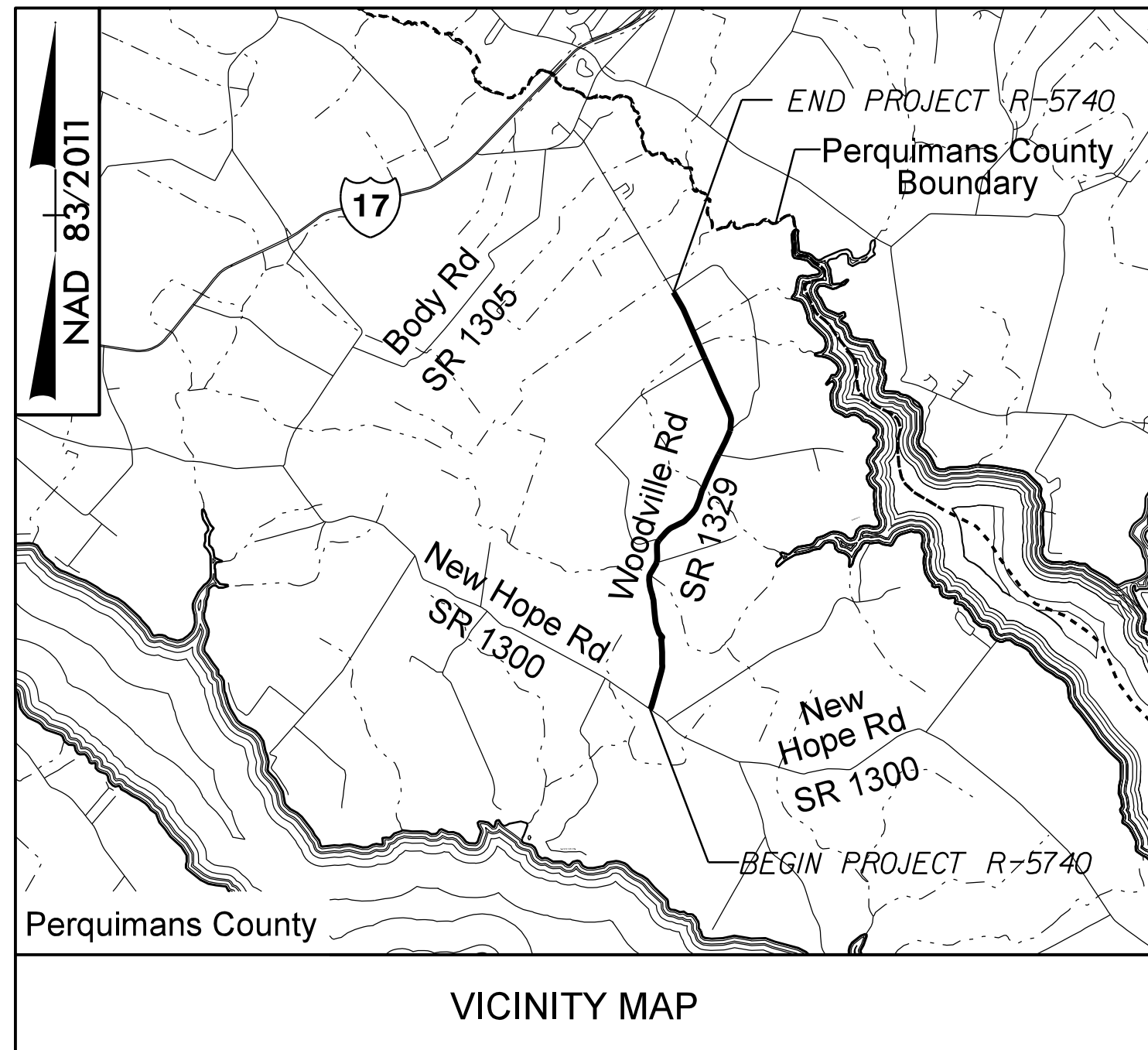


See Sheet 1A For Index of Sheets



VICINITY MAP

FINAL PLANS

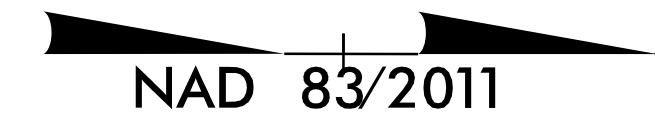
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PERQUIMANS COUNTY

**LOCATION: SR 1329 (WOODVILLE ROAD) FROM SR 1300 (NEW HOPE ROAD)
TO SR 1331 (RED BANKS ROAD - NORTH END)**

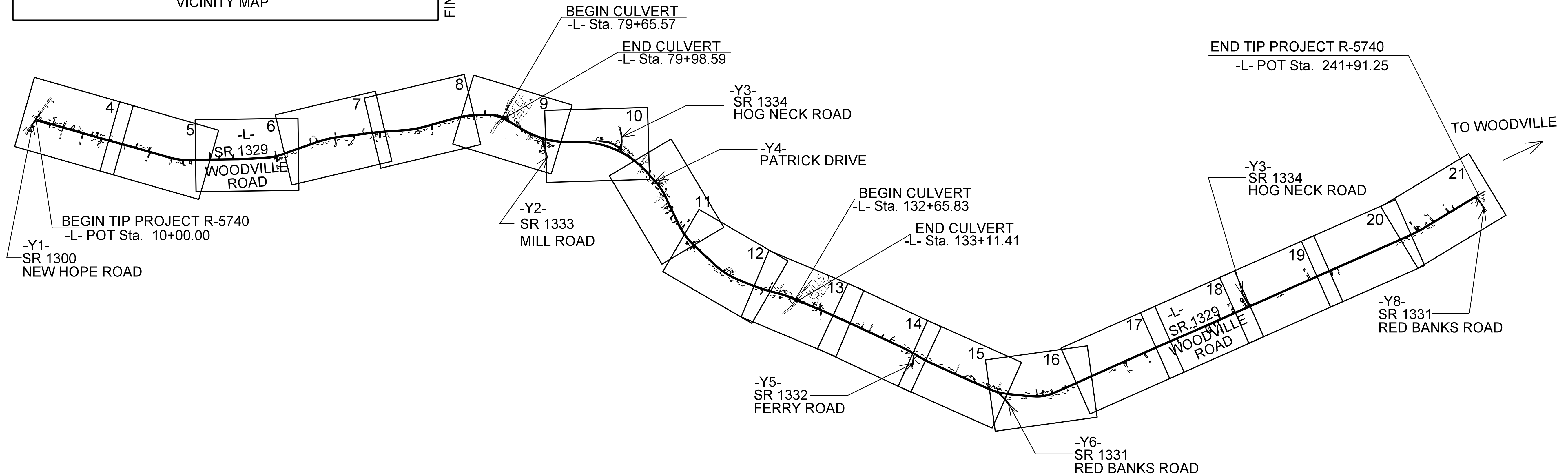
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND CULVERTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5740	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50198.1.1		PE	
50198.2.1		RAW	
50198.2.2		UTILITIES	
50198.3.1		CONSTRUCTION	



TIP PROJECT: R-5740

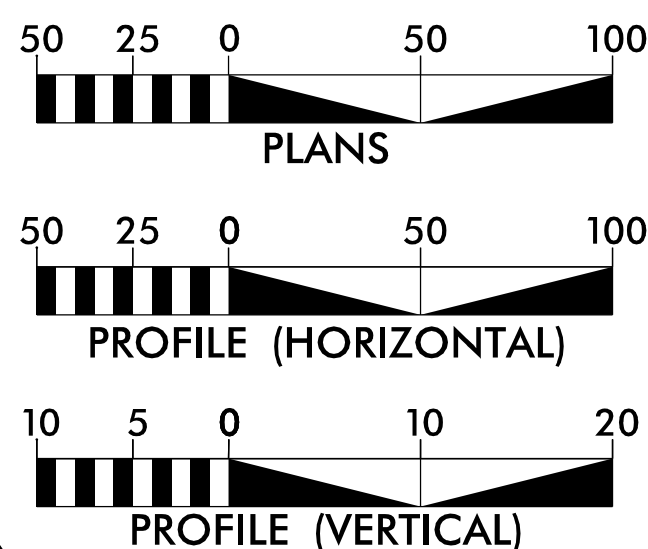
CONTRACT: C204593



**** HORIZONTAL DESIGN EXCEPTION IS REQUIRED**

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

GRAPHIC SCALES



DESIGN DATA

ADT 2016 = 1,400
V = 60 MPH **

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5740 = 4.377 MILES
LENGTH STRUCTURE TIP PROJECT R-5740 = 0.015 MILES
TOTAL LENGTH TIP PROJECT R-5740 = 4.392 MILES

NCDOT CONTACT: BARRY HOBBS, PE, DIVISION PROJECT MANAGER

Prepared in the Office of:

ATKINS

1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEE #F-0326

2018 STANDARD SPECIFICATIONS

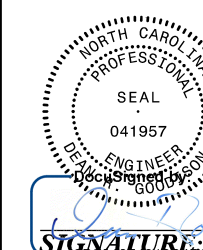
RIGHT OF WAY DATE:
JULY 2017

LETTING DATE:
FEBRUARY 16, 2021

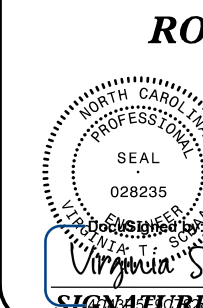
VIRGINIA T. SCHAAR, PE
PROJECT ENGINEER

BRYCE REID, EI
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

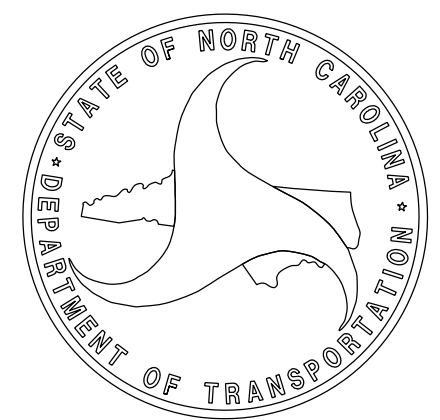


SIGNATURE: 11/6/2020 P.E.



SIGNATURE: 11/5/2020 P.E.

ROADWAY DESIGN ENGINEER



PROJECT REFERENCE NO. <i>R-5740</i>	SHEET NO. <i>1A</i>
--	------------------------

ROADWAY DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, WEDGING DETAIL AND MILLING DETAIL
2C-1	DETAIL FOR W-BEAM GUARDRAIL
3B-1	SUMMARY OF GUARDRAIL, EARTHWORK SUMMARY, PAVEMENT REMOVAL SUMMARY
3D-1 THRU 3D-6	DRAINAGE SUMMARIES
3P-1	PARCEL INDEX
4 THRU 31	PLAN AND PROFILE SHEETS
RW01 THRU RW021	RIGHT OF WAY PLAN SHEETS
TMP-1 THRU TMP-5	TRAFFIC MANAGEMENT PLANS
EC-1 THRU EC-39	EROSION CONTROL PLANS
UC-1 THRU UC-30	UTILITY CONSTRUCTION PLANS
UD-1 THRU UD-19	UTILITY BY OTHERS PLANS
X-1A THRU X-1D	CROSS SECTION INDEX SHEET AND SUMMARIES
X-1 THRU X-86	CROSS SECTIONS
C-1 THRU C-8	STRUCTURE PLANS

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 11.

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.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

GUARDRAIL:

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

TEMPORARY SHORING:

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

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE

Power: ALBEMARLE ELECTRIC MEMBERSHIP COOP; Telephone: CENTURYLINK;

Water: PERQUIMANS COUNTY

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.

EFF. 01-16-2018
REV.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method 11
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method 1
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.11	Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.80	Precast Endwalls - 12" thru 72" Pipe 90 Skew
840.00	Concrete Base Pad for Drainage Structures
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
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps
848.03	Driveway Turnout - Drop Curb Type
850.01	Concrete Paved Ditches
862.01	Guardrail Placement
862.02	Guardrail Installation
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

12/2/2016

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Computed Property Corner	-----
Property Monument	□ EDM
Parcel/Sequence Number	①23
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	---WLB---
Proposed Wetland Boundary	WLB
Existing Endangered Animal Boundary	---EAB---
Existing Endangered Plant Boundary	---EPB---
Existing Historic Property Boundary	---HPB---
Known Contamination Area: Soil	☠-S-☠
Potential Contamination Area: Soil	☠-S-☠
Known Contamination Area: Water	☠-W-☠
Potential Contamination Area: Water	☠-W-☠
Contaminated Site: Known or Potential	☠?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ 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	---T---
Proposed Guardrail	---T---
Existing Cable Guiderail	---T---
Proposed Cable Guiderail	---T---
Equality Symbol	⊕
Pavement Removal	⊠

VEGETATION:

Single Tree	☼
Single Shrub	☼

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

Hedge	-----
Woods Line	-----
Orchard	☼ ☼ ☼ ☼
Vineyard	-----

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	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:


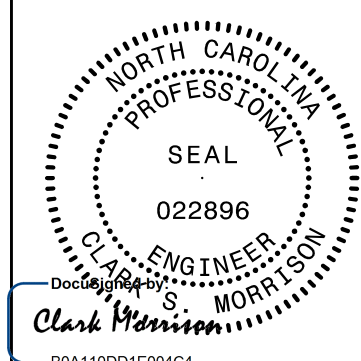
Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	---G---
U/G Gas Line LOS C (S.U.E.*)	---G---
U/G Gas Line LOS D (S.U.E.*)	---G---
Above Ground Gas Line	---A/G Gas---

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---

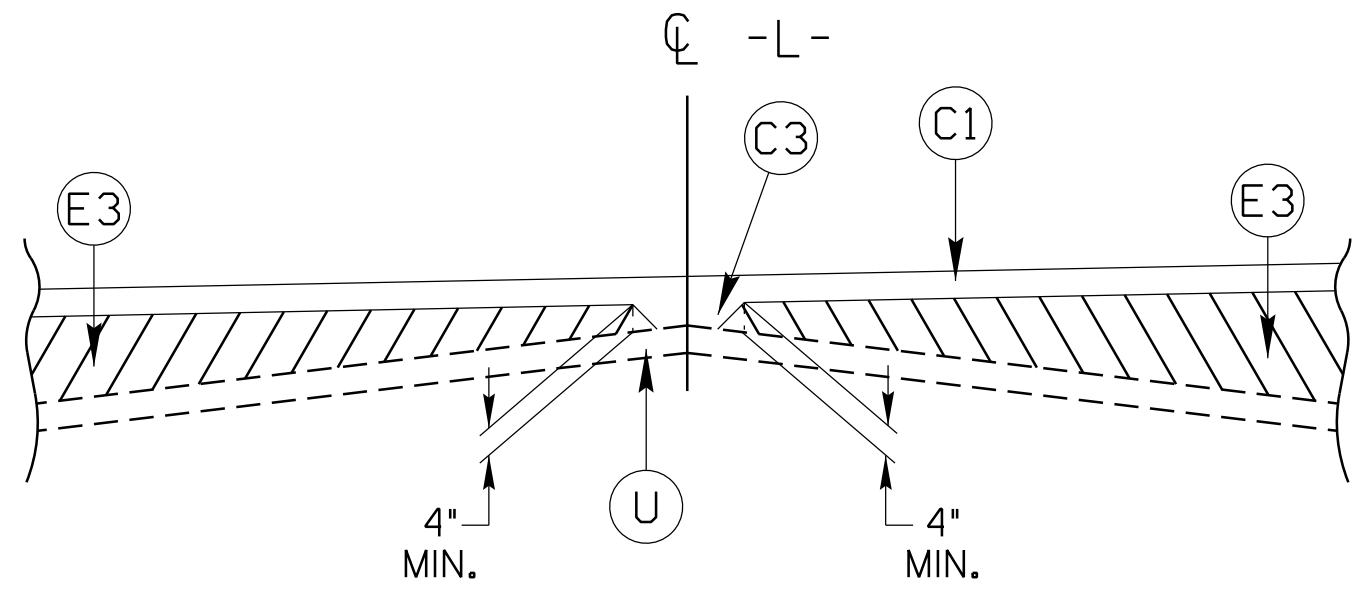
MISCELLANEOUS:

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.	⊠
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.

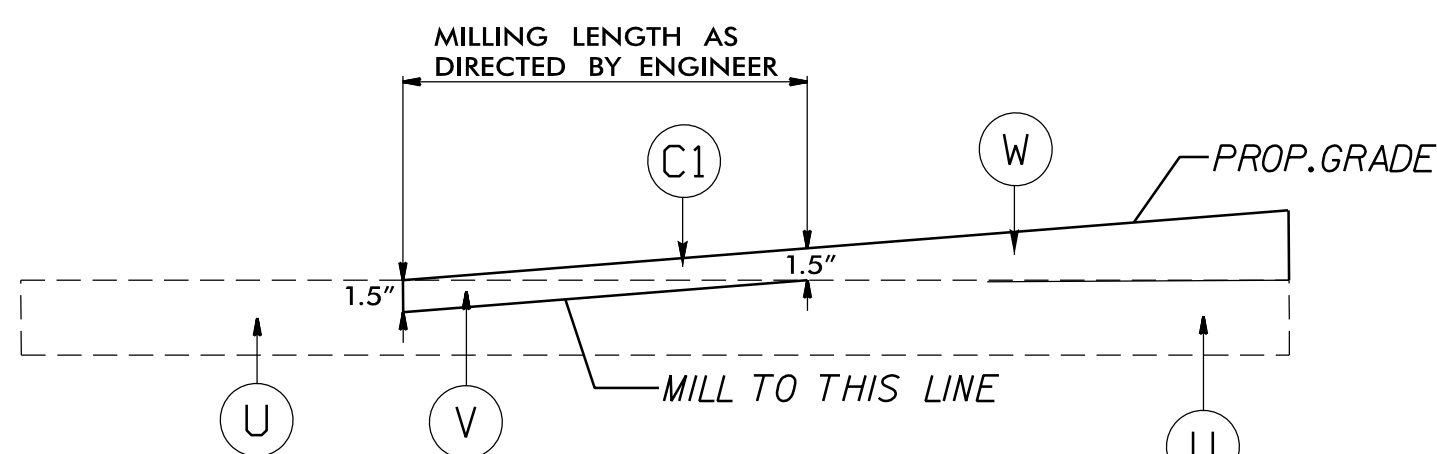
PROJECT REFERENCE NO. R-5740	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER Virginia J. Schlar	PAVEMENT DESIGN ENGINEER Clark Morrison
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

FINAL PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
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 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E3	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 4" OR GREATER THAN 5 1/2" IN DEPTH.
J1	PROP. 8" AGGREGATE BASE COURSE
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	VARIABLE DEPTH MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAILS)

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

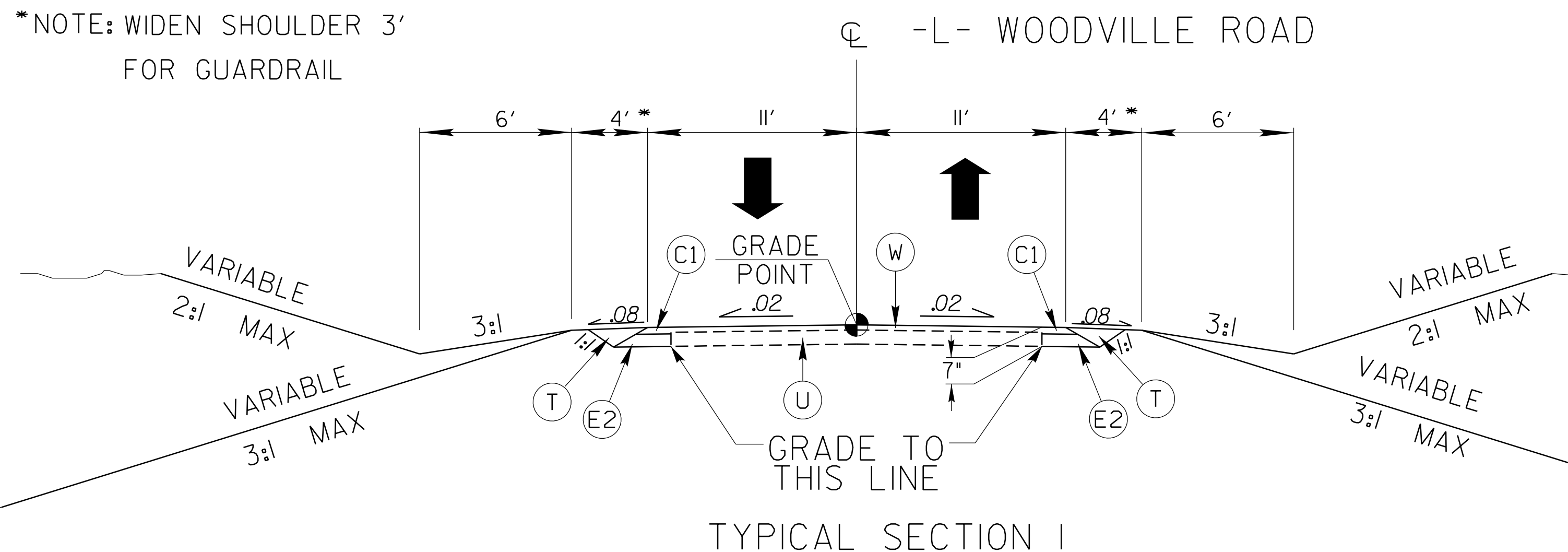


DETAIL #1 SHOWING METHOD OF WEDGING



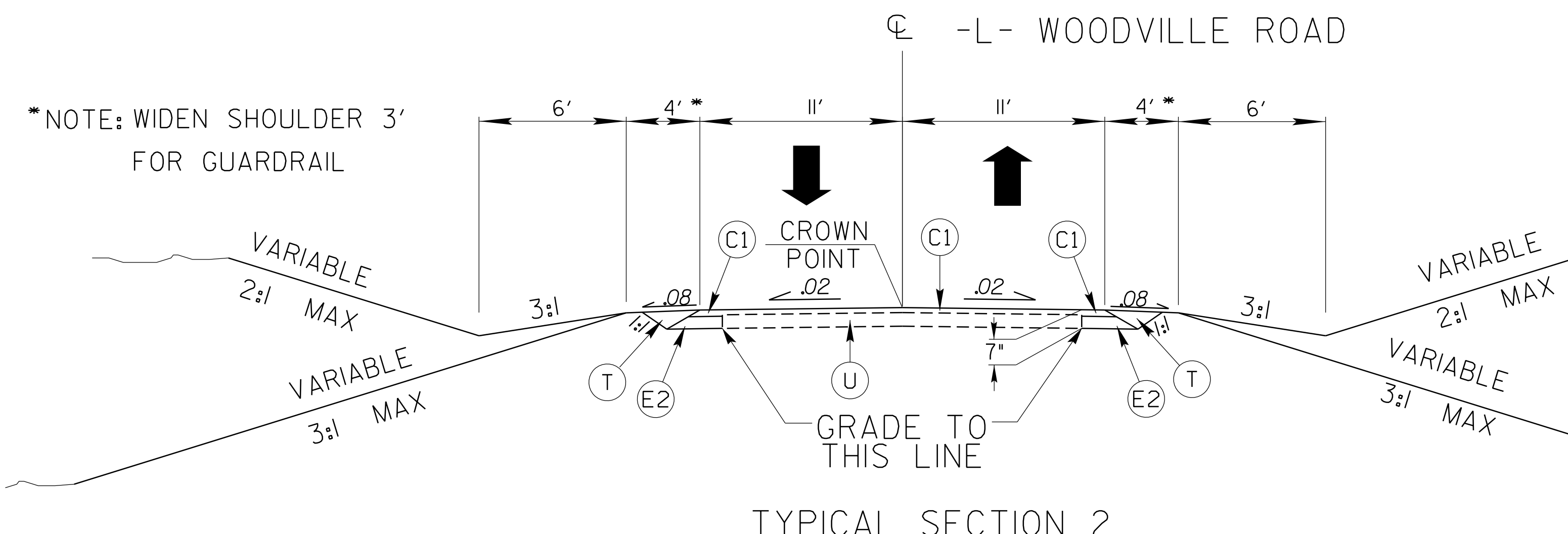
DETAIL #2 FOR INCIDENTAL MILLING

*NOTE: WIDEN SHOULDER 3' FOR GUARDRAIL



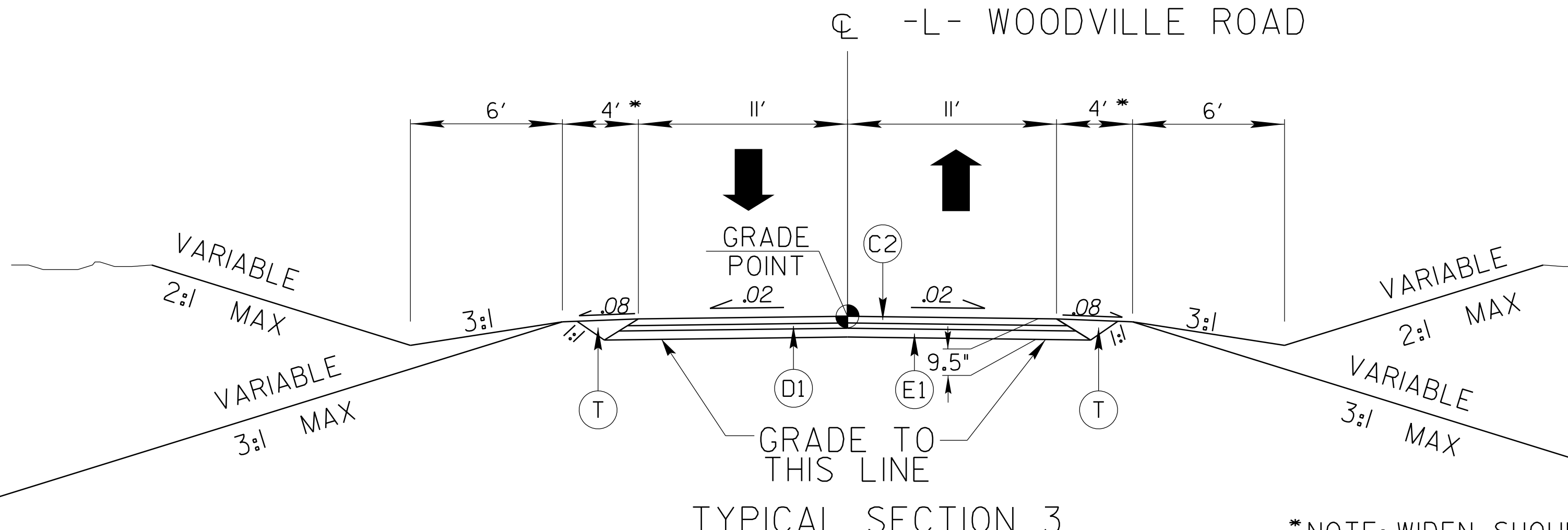
TYPICAL SECTION 1
 -L- STA. 10+00.00 TO -L- STA. 15+00.00 -L- STA. 147+00.00 TO -L- STA. 156+00.00
 -L- STA. 76+00.00 TO -L- STA. 77+50.00 -L- STA. 168+00.00 TO -L- STA. 175+00.00
 -L- STA. 101+00.00 TO -L- STA. 129+00.00 -L- STA. 227+00.00 TO -L- STA. 241+82.08
 -L- STA. 135+00.00 TO -L- STA. 135+50.00

*NOTE: WIDEN SHOULDER 3' FOR GUARDRAIL



TYPICAL SECTION 2
 -L- STA. 15+00.00 TO -L- STA. 76+00.00 -L- STA. 156+00.00 TO -L- STA. 168+00.00
 -L- STA. 135+50.00 TO -L- STA. 147+00.00 -L- STA. 175+00.00 TO -L- STA. 227+00.00

*NOTE: WIDEN SHOULDER 3' FOR GUARDRAIL

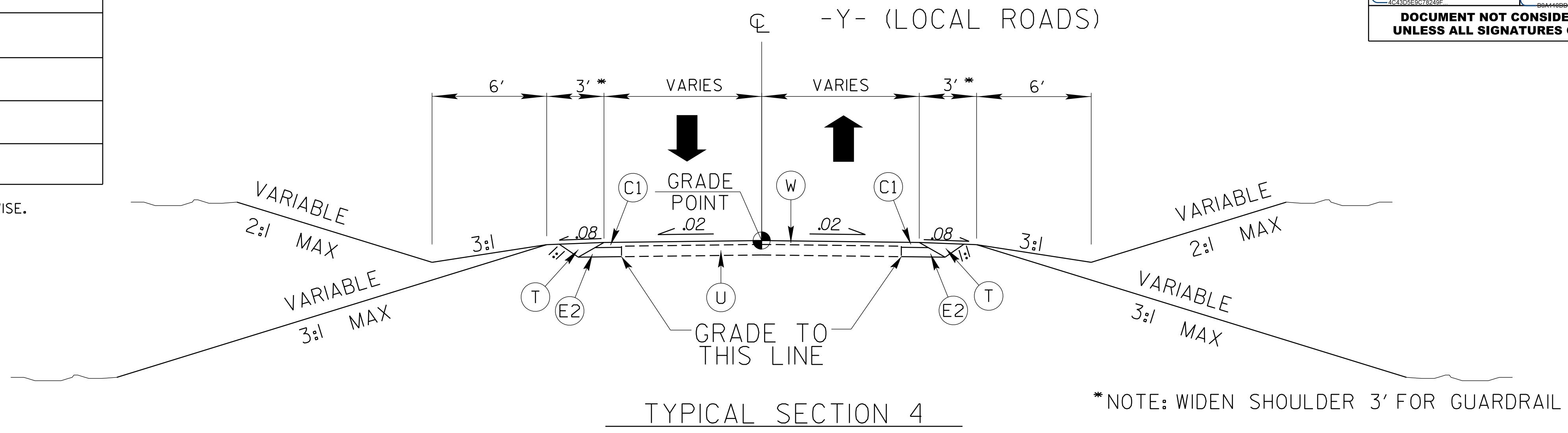


TYPICAL SECTION 3
 -L- STA. 77+50.00 TO -L- STA. 101+00.00
 -L- STA. 129+00.00 TO -L- STA. 135+00.00

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
E2	PROP. APPROX. 5/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
J1	PROP. 8" AGGREGATE BASE COURSE
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAILS)

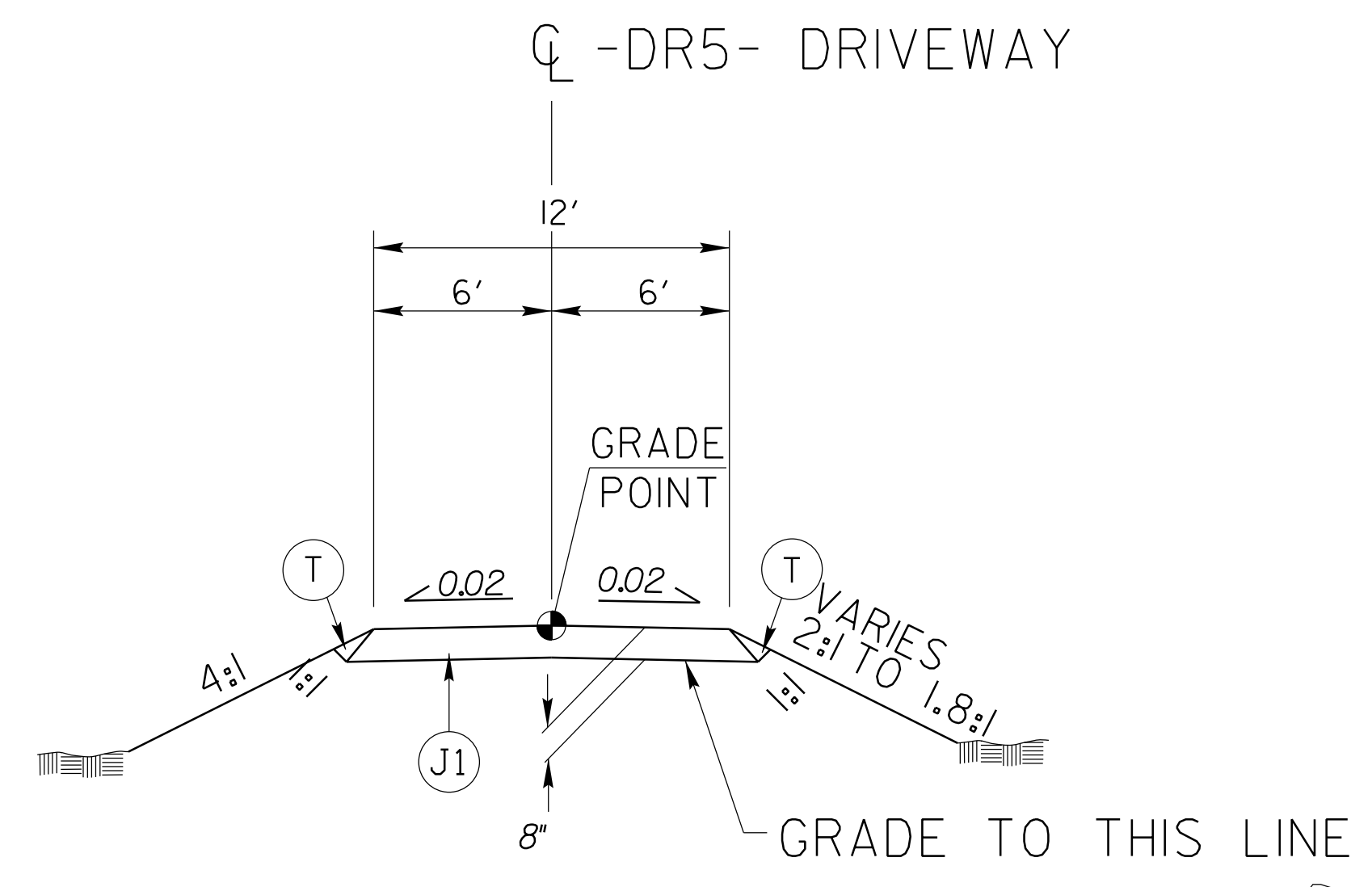
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

PROJECT REFERENCE NO. R-5740	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER <i>Virginia Schmitt</i>	PAVEMENT DESIGN ENGINEER <i>Clark Morrish</i>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

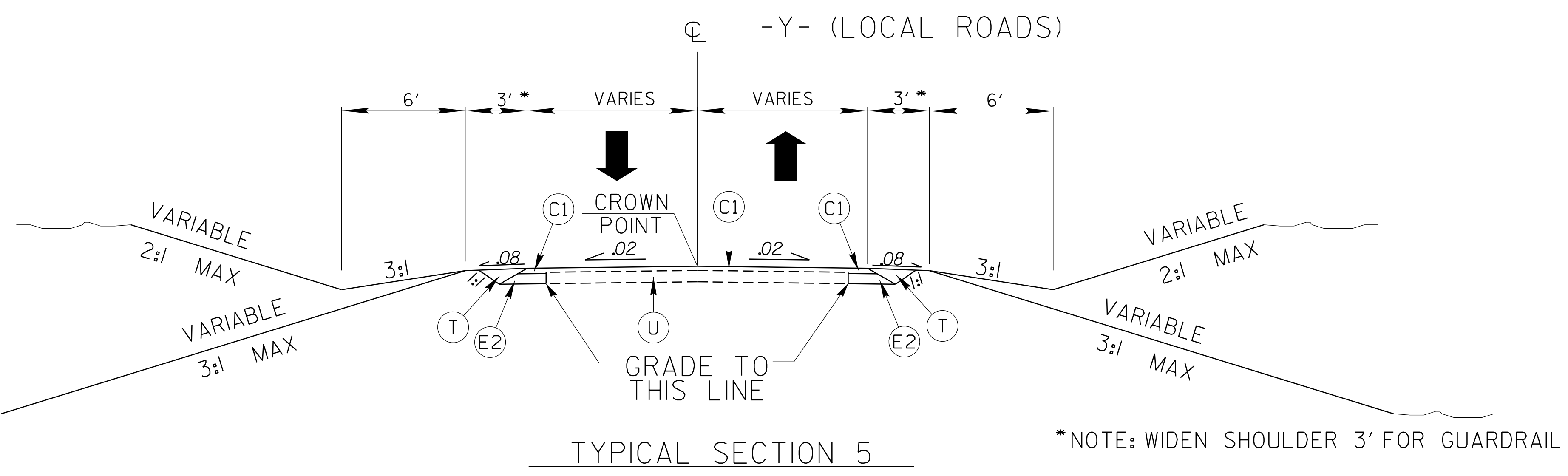


-Y2- STA. 10+85.78 TO -Y2- STA. 11+00.00
 -Y3- STA. 12+60.00 TO -Y3- STA. 13+69.22

*NOTE: WIDEN SHOULDER 3' FOR GUARDRAIL



-DR5- Sta. 10+11.00 THRU 10+90.00



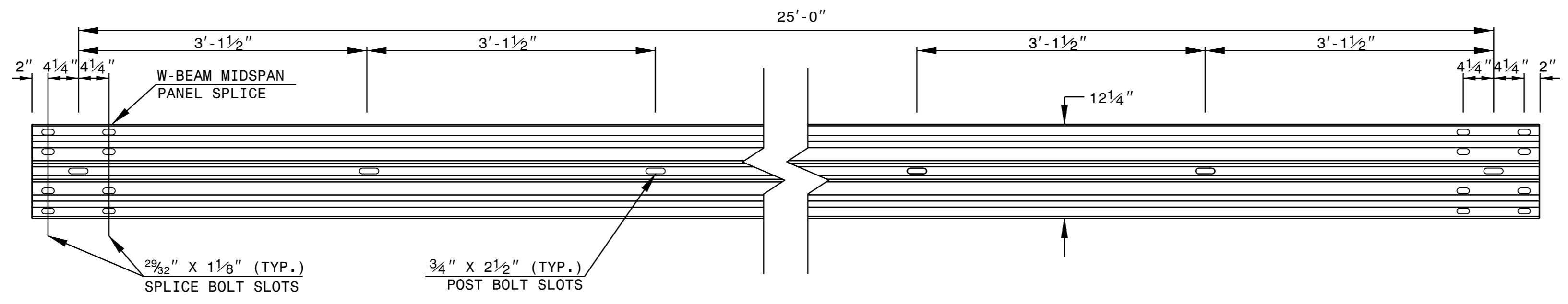
-Y1- STA. 10+52.07 TO -Y1- STA. 11+87.20
 -Y4- STA. 10+00.00 TO -Y4- STA. 10+24.01
 -Y5- STA. 10+00.00 TO -Y5- STA. 10+71.04
 -Y6- STA. 10+00.00 TO -Y6- STA. 10+90.00
 -Y7- STA. 11+62.63 TO -Y7- STA. 12+00.75
 -Y8- STA. 10+00.00 TO -Y8- STA. 10+40.37

*NOTE: WIDEN SHOULDER 3' FOR GUARDRAIL

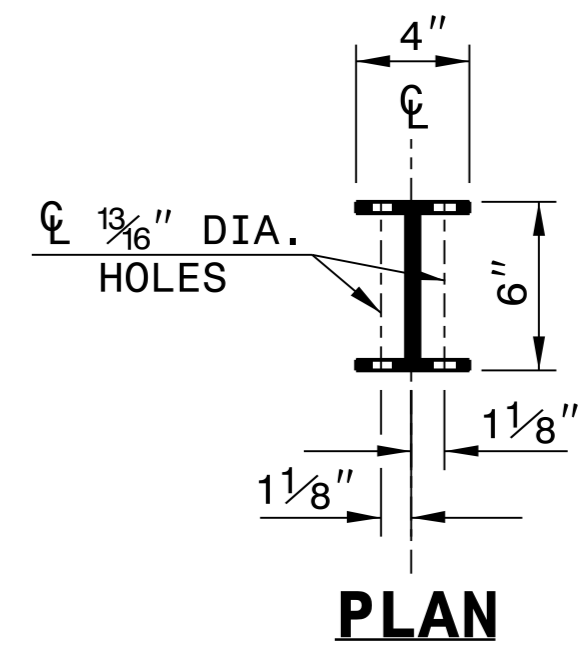
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

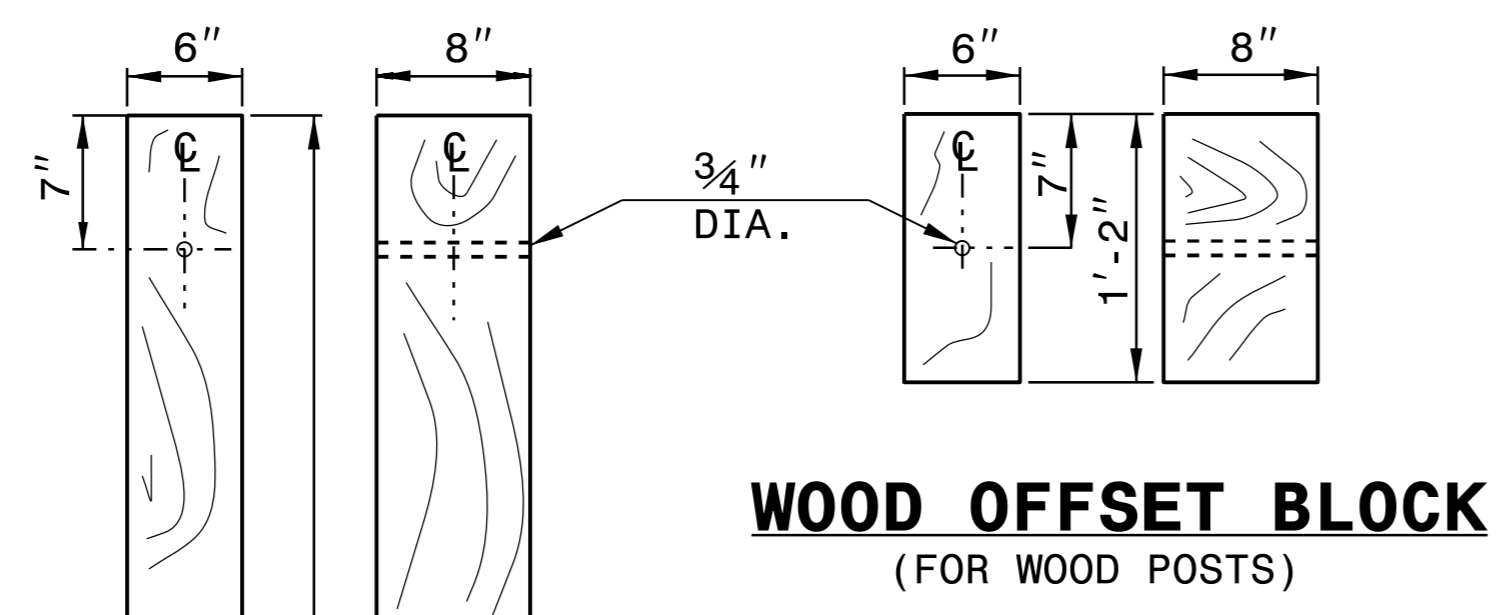
SHEET 6 OF 8
862D02



STANDARD W-BEAM GUARDRAIL



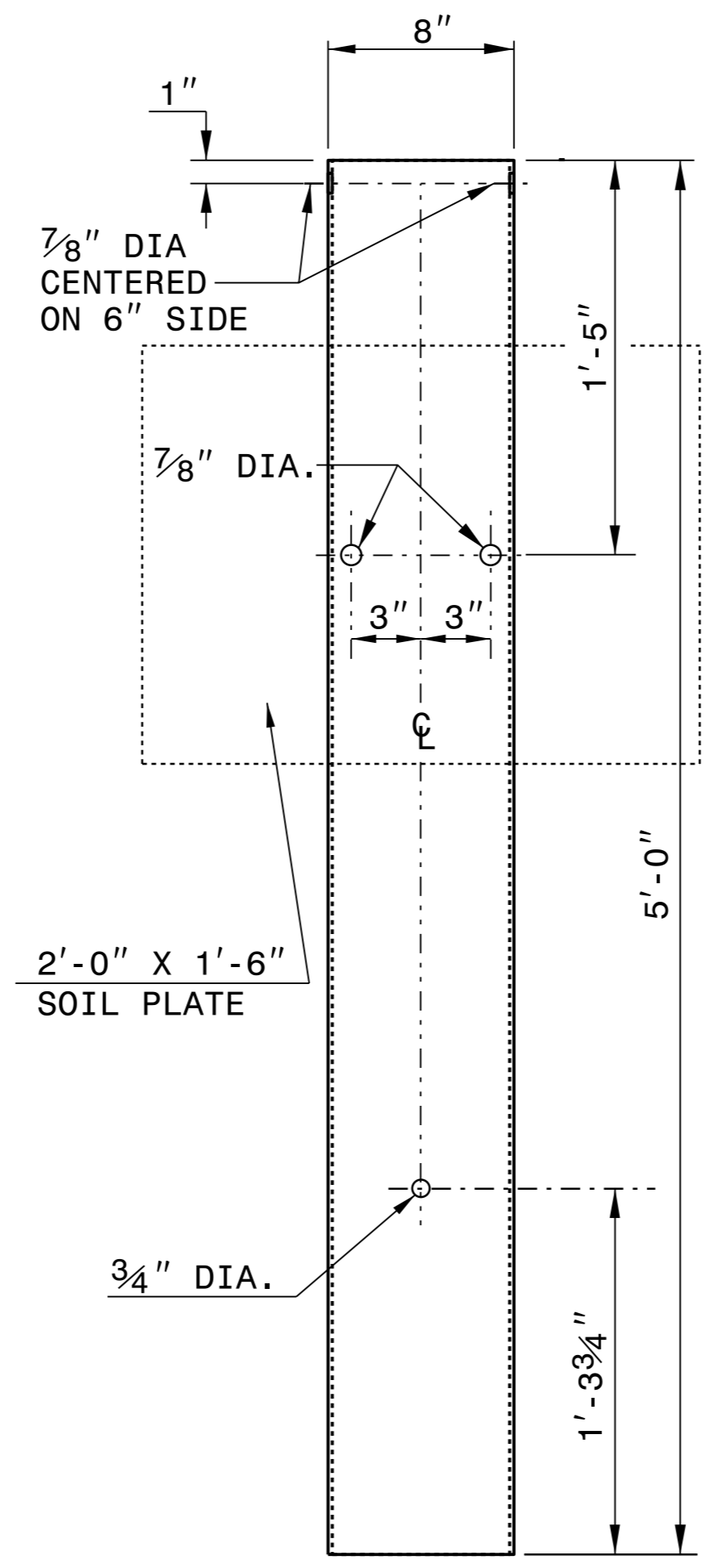
PLAN



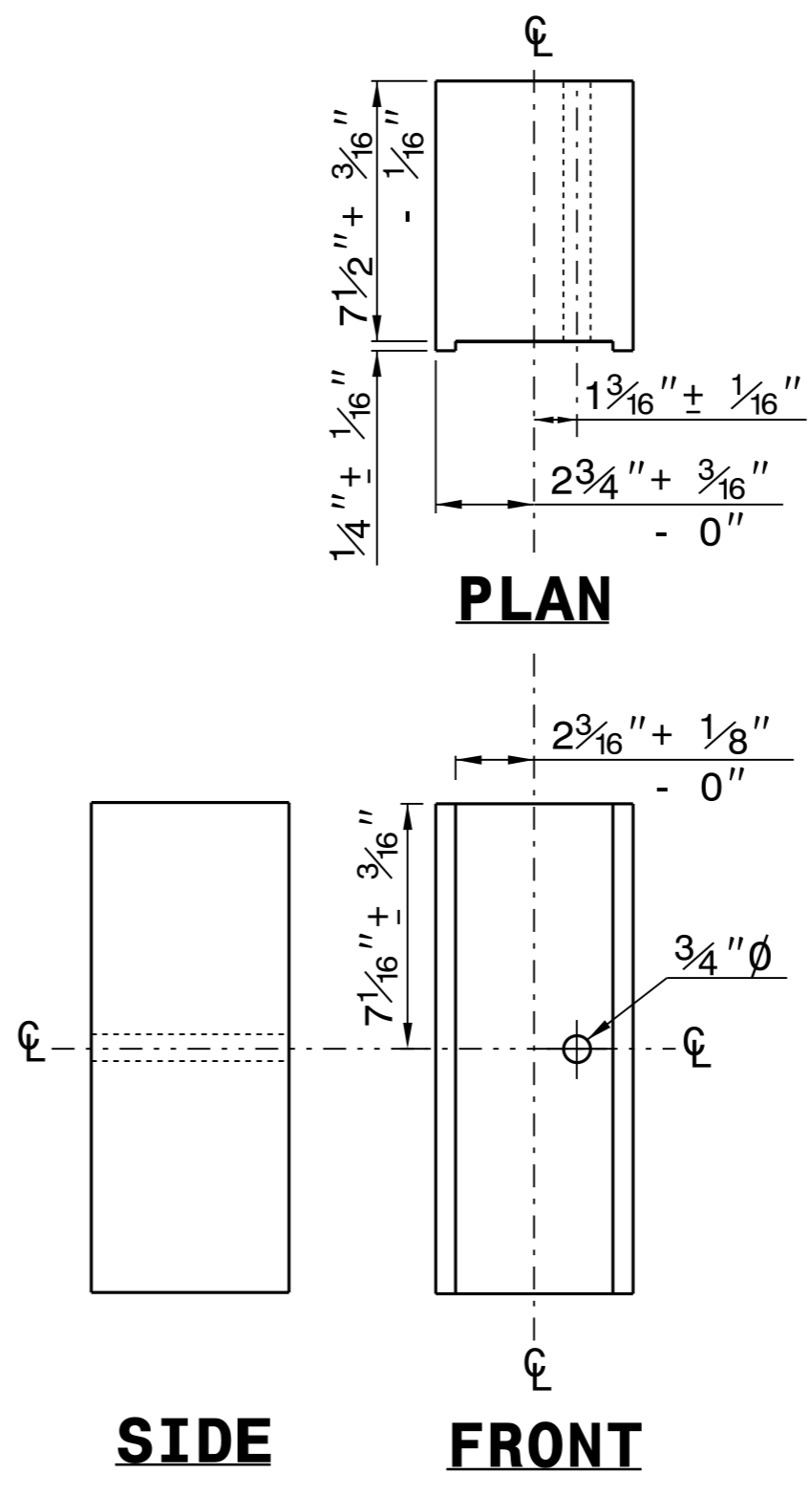
**WOOD OFFSET BLOCK
(FOR WOOD POSTS)**

**STANDARD
LINE POST**

**SHORT WOOD
BREAKAWAY POST**



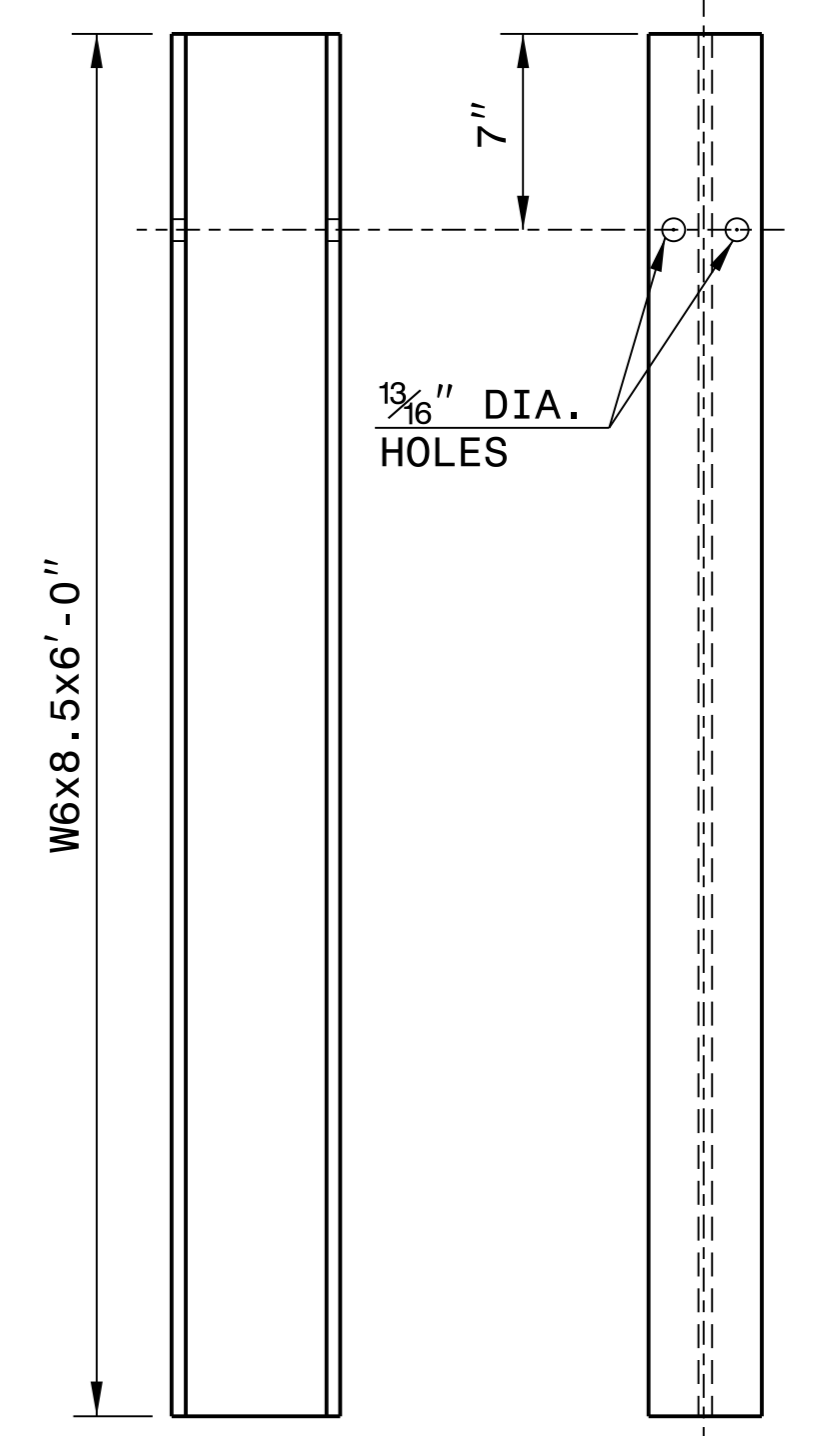
**STEEL TUBE
TS 6"x8"x0.1875"**



SIDE

FRONT

**ROUTED
OFFSET BLOCK**



SIDE

FRONT

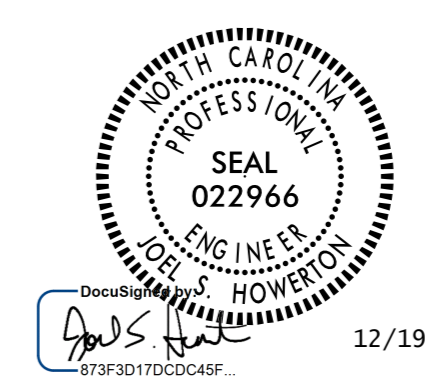
"W6" STEEL POST

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02

SYSTEM PARTS



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

SEE TITLE BLOCK

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

12/06/07

COMPUTED BY: BDR DATE: 11/5/19
 CHECKED BY: VTS DATE: 11/5/19

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. R-5740
 SHEET NO. 3B-1

SUMMARY OF EARTHWORK

STATION	STATION	UNCL. EXCAV.	EMBANK. + %	BORROW	WASTE
-L-					
10+00.00	40+00.00	2,126	1,363	0	763
40+00.00	70+00.00	3,666	1,770	0	1,896
70+00.00	100+00.00	6,680	6,837	157	0
100+00.00	130+00.00	3,498	3,156	0	342
130+00.00	160+00.00	4,839	2,508	0	2,330
160+00.00	190+00.00	2,878	2,700	0	178
190+00.00	220+00.00	3,918	1,848	0	2,079
220+00.00	241+91.25	2,506	1,851	0	655
-DR5-					
10+00.00	10+90.00	2	157	155	0
PROJECT TOTAL:		30,111	22,190	312	8,234
REPLACE TOP SOIL ON BORROW PIT (5%)				16	
GRAND TOTAL:		30,111	22,190	328	8,234
SAY:		30,120		330	

-L- PAVEMENT STRUCTURE VOLUME = 19 CY

PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	AREA (SY)
-L- (CL)	93+84	97+50	810.95
-L- (CL)	97+95	98+41	22.01
TOTAL:			832.96
SAY:			840

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
 W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
 G = GATING IMPACT ATTENUATOR TYPE 350
 NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS								IMPACT ATTENUATOR TYPE 350			SINGLE FACED GUARDRAIL	REMOVE AND RESET EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS						
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	XI MOD	XI	GREU TL-3	M-350	B-77	CAT-1	VI MOD	MOD B-77	AT-1	EA	G	NG											
																									EA					G	NG				
-L-	78+80.08	80+80.09	RT	200'			79+56.67 (CULVERT)	80+03.50 (CULVERT)	4'	7'	50'	50'																							
-L-	78+84.25	80+46.75	LT	162.5'			80+07.88 (CULVERT)	79+60.62 (CULVERT)	4'	7'	50'	50'																							
-L-	131+75.36	133+87.86	RT	212.5'			132+53.16 (CULVERT)	133+10.06 (CULVERT)	4'	7'	50'	50'																							
-L-	131+82.86	134+07.86	LT	225'			133+27.34 (CULVERT)	132+63.37 (CULVERT)	4'	7'	50'	50'																							
SUBTOTAL				800'																															
LESS 8 GREU TL-3 @ 50' EACH				400'																															
PROJECT TOTALS				400'																															
																										ADDITIONAL GUARDRAIL POSTS = 5									

D:\FEB-2000_09\2005740_rdy_psh_3B-1.dgn
 \$\$\$\$\$\$DATE\$\$\$\$\$
 \$\$\$\$\$\$TIME\$\$\$\$\$

LUS10426

COMPUTED BY: Mohammad Innab DATE: 1/30/2020
CHECKED BY: Dean Goodison DATE: 1/30/2020

PROJECT NO. R-5740 SHEET NO. 3D-1

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: LINE & STATION, SIZE, THICKNESS OR GAUGE, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), 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, CONCRETE TRANSITIONAL SECTION, OPEN THROAT, CONCRETE BRIDGE APPROACH, DRIVEWAY, DRIVEWAY D.I., FRAME FOR DRIVEWAY, ANGLED VANE GRATES, PREFORMED SCOUR HOLE, FLOWABLE FILL, CONCRETE COLLARS, CONCRETE AND BRICK PIPE PLUG, PIPE REMOVAL, ABBREVIATIONS, and REMARKS.

SHEET TOTALS

488 460 296 44 96 208 64 272 11.400

LUSH10426

COMPUTED BY: Mohammad Innab DATE: 1/30/2020
CHECKED BY: Dean Goodison DATE: 1/30/2020

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. R-5740 SHEET NO. 3D-2

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, R.C. Pipe Class III, IV, V, Endwalls, Quantities for Drainage Structures, Frame, Grates, and Hood, and Remarks.

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 material descriptions.

SHEET TOTALS

Summary row for SHEET TOTALS with values for various columns: 52, 80, 524, 416, 132, 152, 44, 152, 384, 13,000, 1, 1, 1, 1.

COMPUTED BY: Mohammad Innab DATE: 1/30/2020
CHECKED BY: Dean Goodison DATE: 1/30/2020

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. R-5740 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, SIZE, THICKNESS OR GAUGE, OFFSET, STRUCTURE NUMBER, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), 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, CONCRETE TRANSITIONAL SECTION, OPEN THROAT C.B. STD., CONCRETE BRIDGE APPROACH D.I. STD., D.I. STD., D.I. FRAME AND GRATES STD., G.D.I. TYPE "A", G.D.I. TYPE "B", G.D.I. TYPE "D", G.D.I. (W.S. FLAT) FRAME WITH GRATES STD., G.D.I. (W.S. SAG) FRAME W/ GRATE STD., G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD., G.D.I. (N.S. SAG) FRAME W/ GRATE STD., G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD., DRIVEWAY D.I. STD., FRAME W/ GRATE FOR DRIVEWAY STD., J.B. STD., ANGLED VANE GRATES AND FRAMES STD., PREFORMED SCOUR HOLE (PER EACH), FLOWABLE FILL, CONCRETE COLLARS CL. "B" STD., CONCRETE AND BRICK PIPE PLUG STD., PIPE REMOVAL, ABBREVIATIONS, and REMARKS.

SHEET TOTALS

LUSH10426

COMPUTED BY: Mohammad Innab DATE: 1/30/2020
CHECKED BY: Dean Goodison DATE: 1/30/2020

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. R-5740 SHEET NO. 3D-4

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, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), 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, CONCRETE TRANSITIONAL SECTION, OPEN THROAT, CONCRETE BRIDGE APPROACH, DRIVEWAY, FRAME FOR DRIVEWAY, ANGLED VANE GRATES, PREFORMED SCOUR HOLE, FLOWABLE FILL, CONCRETE COLLARS, CONCRETE AND BRICK PIPE PLUG, PIPE REMOVAL, 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.

LSH10426

COMPUTED BY: Mohammad Innab DATE: 1/30/2020
CHECKED BY: Dean Goodison DATE: 1/30/2020

PROJECT NO. R-5740 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)

Main data table with columns for Line & Station, Offset, Structure Number, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), R.C. Pipe Class III, IV, V, Endwalls, Reinforced Endwalls, Drainage Structure, Quantities for Drainage Structures, Frame, Grates, and Hood, Concrete Transitional Section, and Pipe Removal. Includes a grid for pipe dimensions and materials.

ABBREVIATIONS table with entries: C.A.A. CORRUGATED ALUMINIUM ALLOY, C.B. CATCH BASIN, C.S. CORRUGATED STEEL, D.I. DROP INLET, G.D.I. GRATED DROP INLET, H.D.P.E. HIGH DENSITY POLYETHYLENE, J.B. JUNCTION BOX, M.H. MANHOLE, N.S. NARROW SLOT, P.V.C. POLYVINYL CHLORIDE, R.C. REINFORCED CONCRETE, T.B.D.I. TRAFFIC BEARING DROP INLET, T.B.J.B. TRAFFIC BEARING JUNCTION BOX, W.S. WIDE SLOT

SHEET TOTALS and PROJECT TOTALS summary row.

12/06/07

COMPUTED BY: BDR DATE: 11/5/19
CHECKED BY: VTS DATE: 11/5/19

PROJECT REFERENCE NO. SHEET NO.
R-5740 3P-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX

PARCEL NO.	SHEET NO.	PROPERTY OWNER NAME
1	4	CHOI, WON SEOK
2	4	CHAPPELL, JOSHUA & MATTHEW
3	4	ALEXANDER, JAMIE S.
4	4	WINSLOW, BARBARA B.
5	4	SINGLETARY, DALE E. & TRINA C.
6	4	MORSE, DONALD
7	4	CHAPPELL, WILLIAM W. & ETHEL S.
8	4	DONNELLY, NICHOLAS P.
9	4	HOPKINS, WILLIAM E.
10	4	JOHANNES, EDWIN
11	4	RICKS, WILLIAM E. & BILLIE
12	4 & 5	EDWARDS, GARY L. & RUBY T.
13	4 & 5	CHAPPELL, WILLIAM W. & ETHEL S.
14	4 & 5	DIVERS III, WILLIAM
15	5	WHITE, OPAL V., ESTATE
16	5	HARRIS, DONNA, ET AL
17	5	STAHEL, ERVIN D. & DONNA B.
18	5 & 6	GODFREY, DORIS R., TRUSTEE
19	5	PERRY, FRANCES L.
20	5	ALBEMARLE ELECTRIC MEM CORP
21	5 & 6	CHAPPEL, TINA C.
22	6	GODFREY, ABE
23	6	BUTT, ANNETTE RAE
24	6	JACOBS, JOHN, ESTATE
25	6, 7 & 8	BUTT JR, H H
26	6, 7, 8 & 9	WEAVER, LAURA
27	7	MITCHELL, CLAUDINE J.
28	7	BUTT JR, H H
29	7 & 8	BUTT, ERICKA
30	8	BUTT, CARL H.
31	8	THOMAS, GLORIA B.
32	8 & 9	BANKS, THELMA
33	8 & 9	THOMAS, GLORIA B.
34	9	HYMAN, SHEILA L.
35	9	JOHNSON, KATHERINE F.
36	9	GODFREY, JOHN R. & DONNA
37	9 & 10	GODFREY, LIZZIE W.

PARCEL INDEX

PARCEL NO.	SHEET NO.	PROPERTY OWNER NAME
38	9	MORTON, CATHERINE E.
41	9, 10 & 11	GODFREY, LIZZIE W.
43	10 & 11	KEMP, WILLIAM M. JR & DELORUS M.
44	10 & 11	ROMANCHOCK, KIRK L. & MICA R.
45	11	GREGORY, MAKITTA W. & MCLEAN, DALE F.
46	11	SCISM, THOMAS B. & SUSAN A.
47	11	JOHNSON, RICKY L.
48	11	MOSS, JONATHAN S.
49	11	HARDEN, JAMES A. JR & JOYCE B.
50	11	GAY, BATTY
51	11	THORNTON, BETTY
52	11	GARRETT, DAVID L.
53	11	FIVE C'S, INC.
54	11	DUNCAN, RONNIE W. JR
56	11 & 12	SAWYER, MARGARET A.
57	11	US CELLULAR
58	11, 12 & 13	JONES, JEAN S.
60	12	UMPHLETT, UNA LEE & NETTIE
61	12	TORRUELLA, SHARON E.
62	12	BUNDY, BONNIE
64	12	GOZA, ROBERT
65	12 & 13	GOZA, ROBERT N. & SHERRIE L.
66	13	EDWARDS, RALPH G. JR
67	13	KERBY, JASON L.
68	13	FERREL, MAXINE C. & HENRY C. JR
69	13	GARNER, MISSOURI B., ET AL
69A	13 & 14	ALTON, MELVIN & CHAPPELL, SYBIL BATEMAN
70	13	LANE, AMY
72	13	MCPHERSON, JONATHAN P.
73	13	MCKELLAR, KAREN C. & RICHARD A.
74	13 & 14	FERREL, MAXINE & MCKELLAR, KAREN
75	14	CHAPPELL, RONALD E.
76	14	GREEN, JEREMY T. & AMANDA L.
77	14	BROWN, WALTER P. & KAREN L.
78	14	GURGANUS, EDDIE M.
79	14 & 15	CHAFFIN, ELIZABETH S.
80	14, 15 & 16	JW JONES LUMBER COMPANY

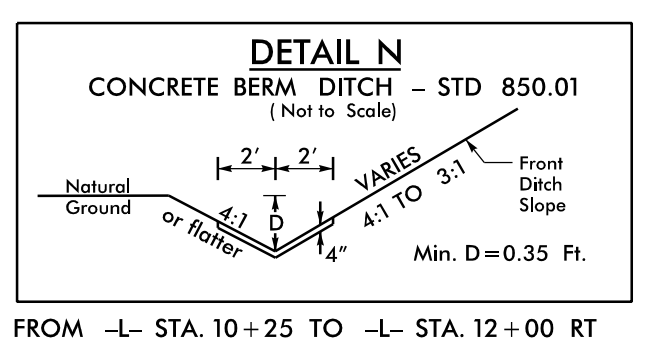
PARCEL INDEX

PARCEL NO.	SHEET NO.	PROPERTY OWNER NAME
81	15	CHILDS, MARK
83	15 & 16	SMITH, PERRY
84	16	THOMAS, FREDDIE L.
85	16 & 17	KEMP, WILBERT M. JR & DELORUS M.
86	16	THOMAS, GLENN L., ESTATE
87	16	HOLLOWELL, SUZETTE
88	16	WHITE, WILLIAM L.
90	16	FREEMAN, DOROTHY
91	16	GODFREY, LOUIS
92	16	PETTAWAY, LINDA MAE
93	16	WHIDBEE, WILLIAM H. & ANNIE
94	16, 17 & 18	CALE, SYBIL & MISSOURI B.
95	17 & 18	GODFREY, CURTIS L.
96	18	WILSON, QUINTON W.
97	18	MALLORY, CLARA D.
98	18	GODFREY, MOUNTRAY P
99	18 & 19	STOKELY, JAMES R. JR
100	18	WILSON, KEITH S.
101	18 & 19	WILSON, ESSIE B & STEPHANIE
102	19, 20 & 21	GODFREY, DORIS R.
103	19 & 20	GODFREY, ABE L. & JOBINA W.
105	20 & 21	MURPHY, BETTY W.
106	21	BURKE, TRAVIS B.
107	21	BURKE, TRAVIS B.
109	21	SMITH, TAMARA
110	21	WEEKS, CLYDE O. & LINDA P.
111	21	BURKE, TRAVIS B.

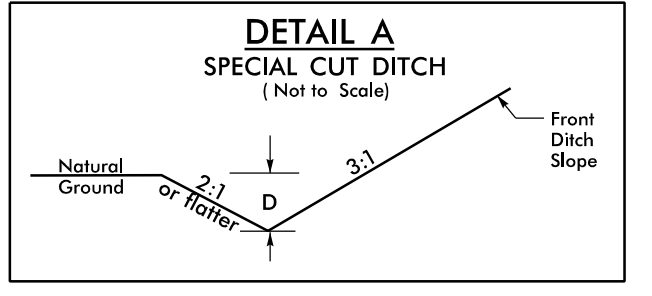
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PROJECT REFERENCE NO. R-5740	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	

-L-	
PI Sta 12+81.40	PI Sta 19+35.80
$\Delta = 0^{\circ} 57' 00.7" (LT)$	$\Delta = 0^{\circ} 30' 35.4" (LT)$
$D = 0^{\circ} 49' 19.3"$	$D = 0^{\circ} 34' 22.6"$
$L = 115.59'$	$L = 88.98'$
$T = 57.80'$	$T = 44.49'$
$R = 6,970.00'$	$R = 10,000.00'$
$SE = N.C.$	$SE = EXIST$

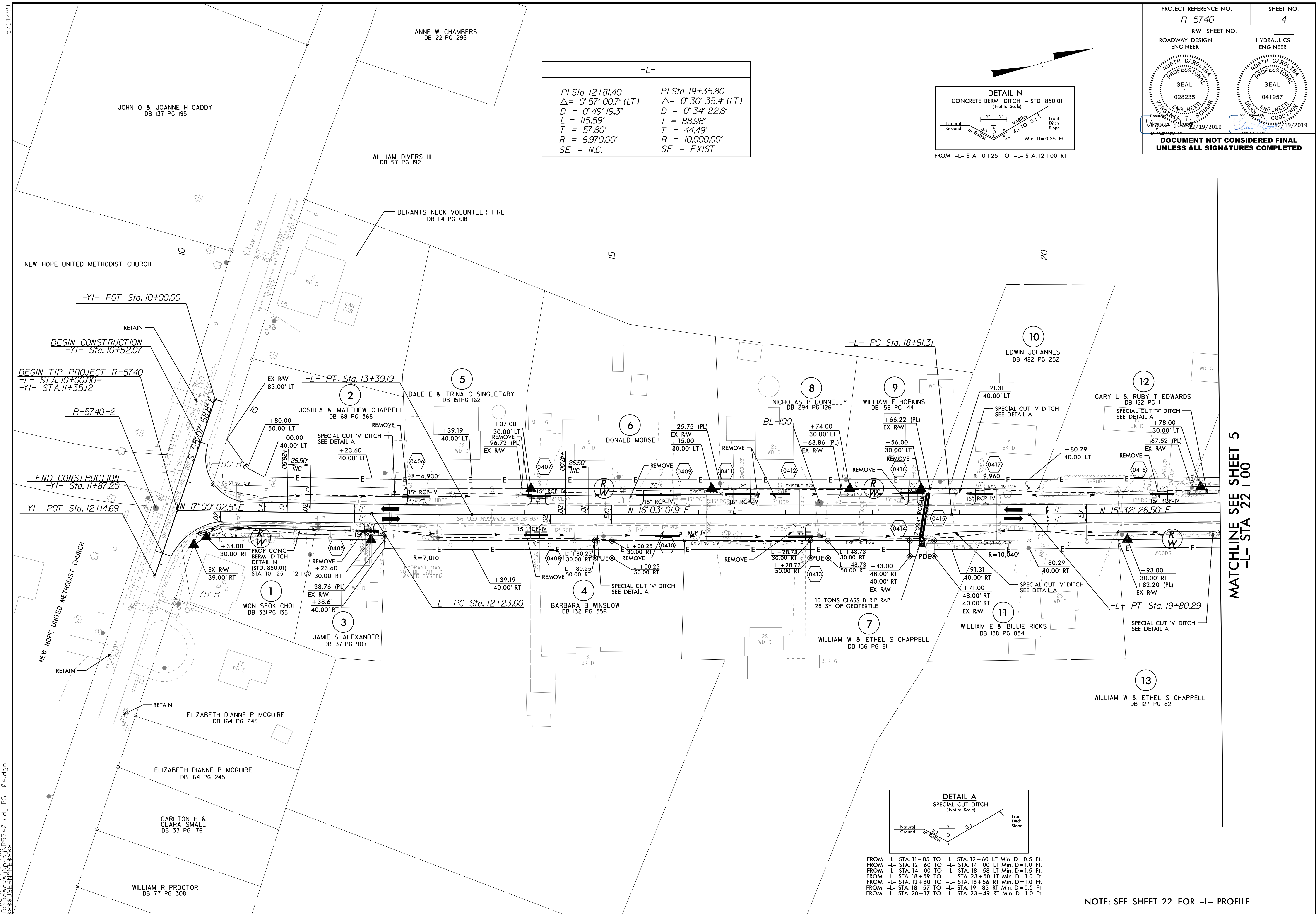


FROM -L- STA. 10+25 TO -L- STA. 12+00 RT



FROM -L- STA. 11+05 TO -L- STA. 12+60 LT Min. D=0.5 Ft.
 FROM -L- STA. 12+60 TO -L- STA. 14+00 LT Min. D=1.0 Ft.
 FROM -L- STA. 14+00 TO -L- STA. 18+58 LT Min. D=1.5 Ft.
 FROM -L- STA. 18+59 TO -L- STA. 23+50 LT Min. D=1.0 Ft.
 FROM -L- STA. 12+60 TO -L- STA. 18+56 RT Min. D=1.0 Ft.
 FROM -L- STA. 18+57 TO -L- STA. 19+83 RT Min. D=0.5 Ft.
 FROM -L- STA. 20+17 TO -L- STA. 23+49 RT Min. D=1.0 Ft.

NOTE: SEE SHEET 22 FOR -L- PROFILE



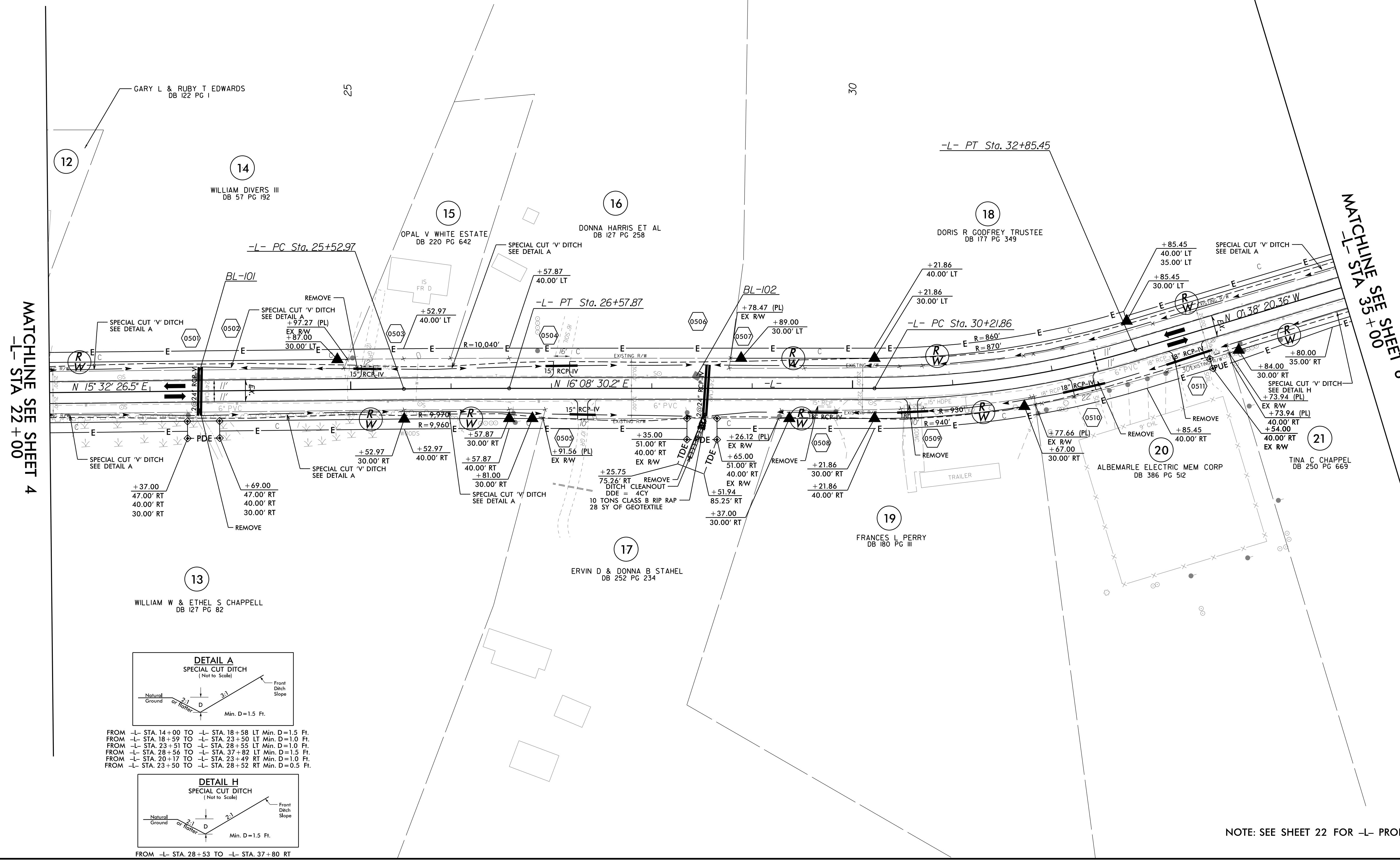
MATCHLINE SEE SHEET 5
-L- STA 22+00

16-DEC-2019 12:15 RE740_rdu_psh_04.dgn

5/14/19

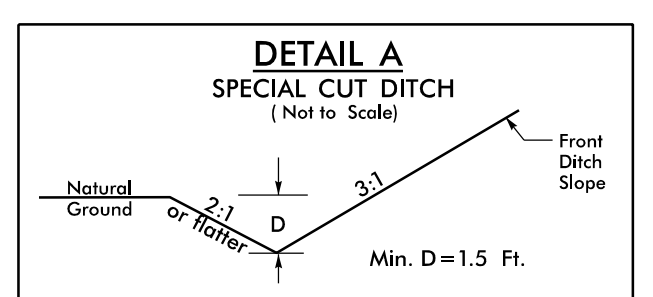
PROJECT REFERENCE NO. R-5740		SHEET NO. 5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			

-L-	
PI Sta 26+05.42	PI Sta 31+54.61
$\Delta = 0^\circ 36' 03.7" (RT)$	$\Delta = 16^\circ 46' 50.5" (LT)$
$D = 0' 34' 22.6"$	$D = 6' 21' 58.3"$
$L = 104.90'$	$L = 263.59'$
$T = 52.45'$	$T = 132.75'$
$R = 10,000.00'$	$R = 900.00'$
$SE = EXIST$	$SE = EXIST$

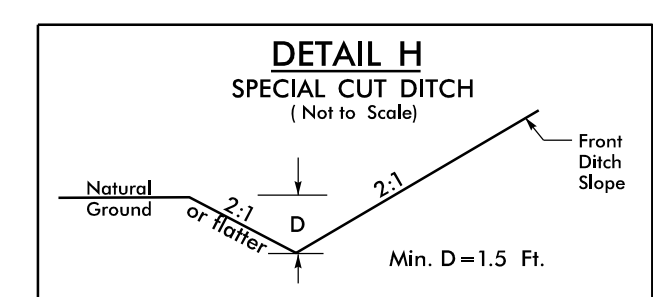


MATCHLINE SEE SHEET 4
-L- STA 22+00

MATCHLINE SEE SHEET 6
-L- STA 35+00



- FROM -L- STA. 14+00 TO -L- STA. 18+58 LT Min. D=1.5 Ft.
- FROM -L- STA. 18+59 TO -L- STA. 23+50 LT Min. D=1.0 Ft.
- FROM -L- STA. 23+51 TO -L- STA. 28+55 LT Min. D=1.0 Ft.
- FROM -L- STA. 28+56 TO -L- STA. 37+82 LT Min. D=1.5 Ft.
- FROM -L- STA. 20+17 TO -L- STA. 23+49 RT Min. D=1.0 Ft.
- FROM -L- STA. 23+50 TO -L- STA. 28+52 RT Min. D=0.5 Ft.



FROM -L- STA. 28+53 TO -L- STA. 37+80 RT

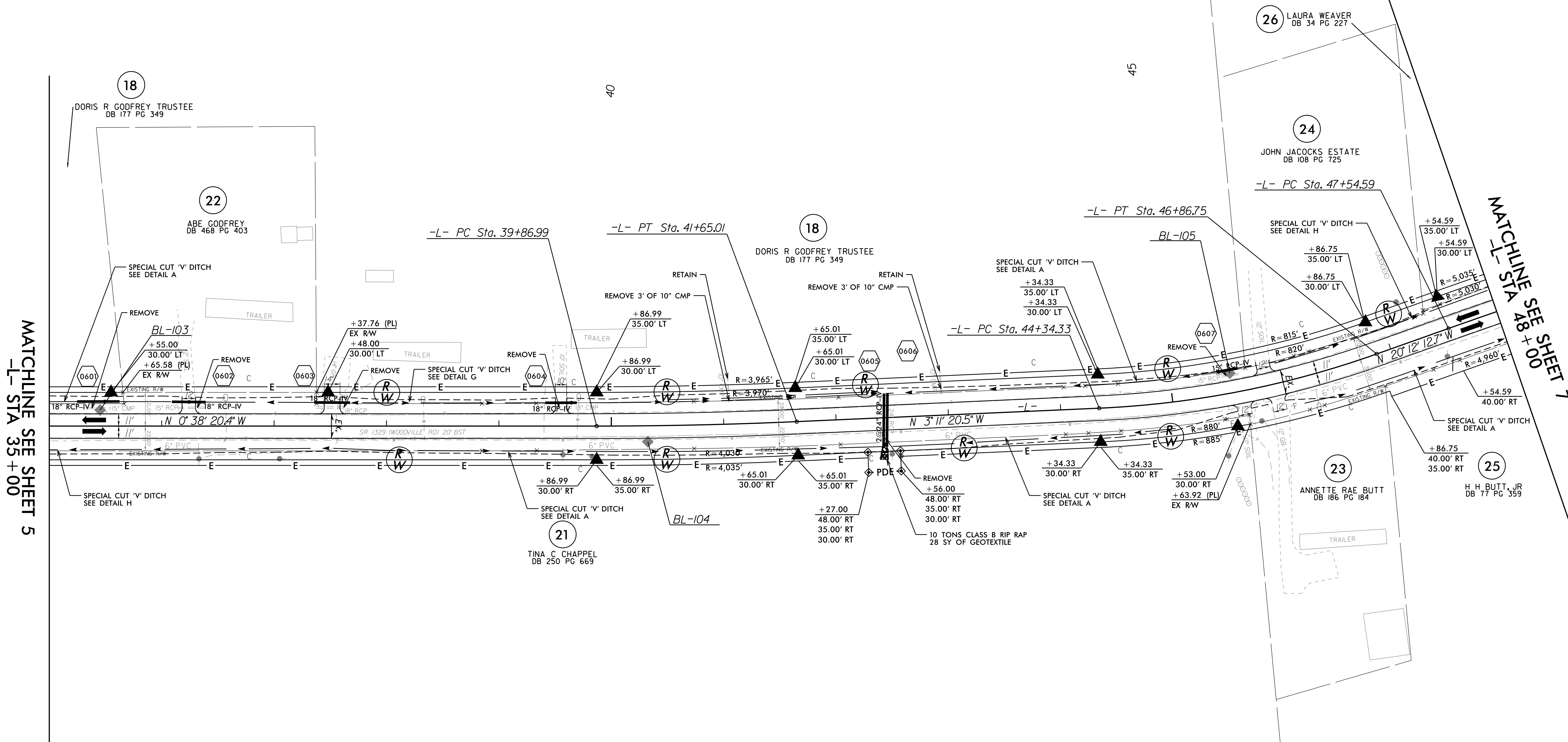
NOTE: SEE SHEET 22 FOR -L- PROFILE

R:\6-DEC-2019 12:17\RE740_rdu_PSH_05.dgn

5/14/19

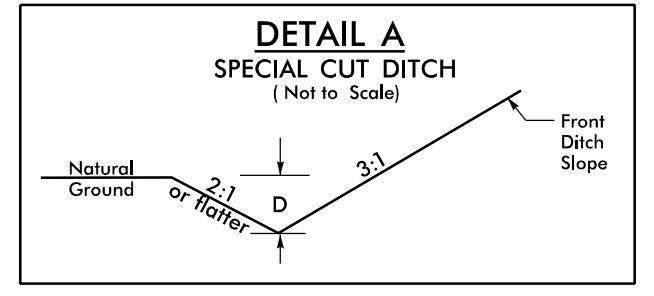
PROJECT REFERENCE NO. R-5740	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-L-	
PI Sta 40+76.02 Δ = 2° 33' 00.2" (LT) D = 1' 25' 56.6" L = 178.03' T = 89.03' R = 4,000.00' SE = EXIST	PI Sta 45+61.48 Δ = 17° 00' 52.2" (LT) D = 6' 44' 26.4" L = 252.42' T = 127.14' R = 850.00' SE = EXIST

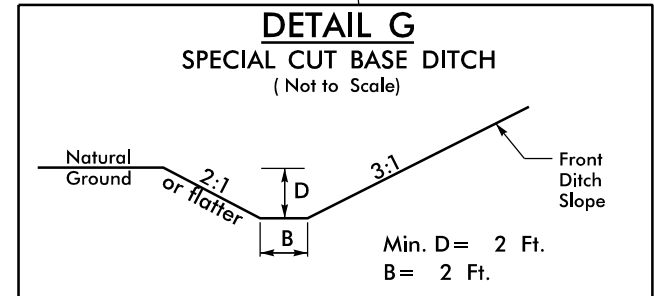


MATCHLINE SEE SHEET 5
-L- STA 35+00

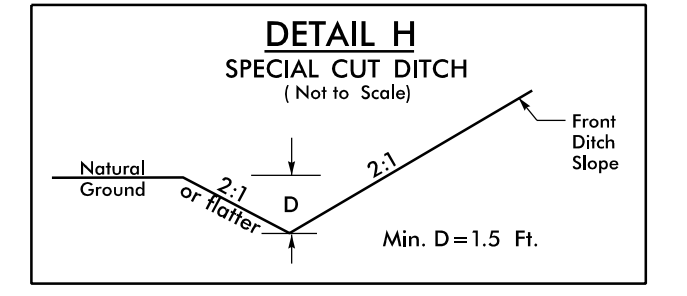
MATCHLINE SEE SHEET 7
-L- STA 48+00



FROM -L- STA. 28+56 TO -L- STA. 37+82 LT Min. D=1.5 Ft.
 FROM -L- STA. 37+82 TO -L- STA. 40+50 LT Min. D=1.0 Ft.
 FROM -L- STA. 42+44 TO -L- STA. 45+75 LT Min. D=1.0 Ft.
 FROM -L- STA. 37+80 TO -L- STA. 42+43 RT Min. D=1.0 Ft.
 FROM -L- STA. 42+44 TO -L- STA. 45+00 RT Min. D=1.0 Ft.
 FROM -L- STA. 46+14 TO -L- STA. 54+81 RT Min. D=1.0 Ft.



FROM -L- STA. 40+50 TO -L- STA. 42+43 LT
 Min. D = 2 Ft.
 B = 2 Ft.



FROM -L- STA. 45+97 TO -L- STA. 54+84 LT
 FROM -L- STA. 28+53 TO -L- STA. 37+80 RT
 Min. D=1.5 Ft.

NOTE: SEE SHEETS 22 & 23 FOR -L- PROFILE

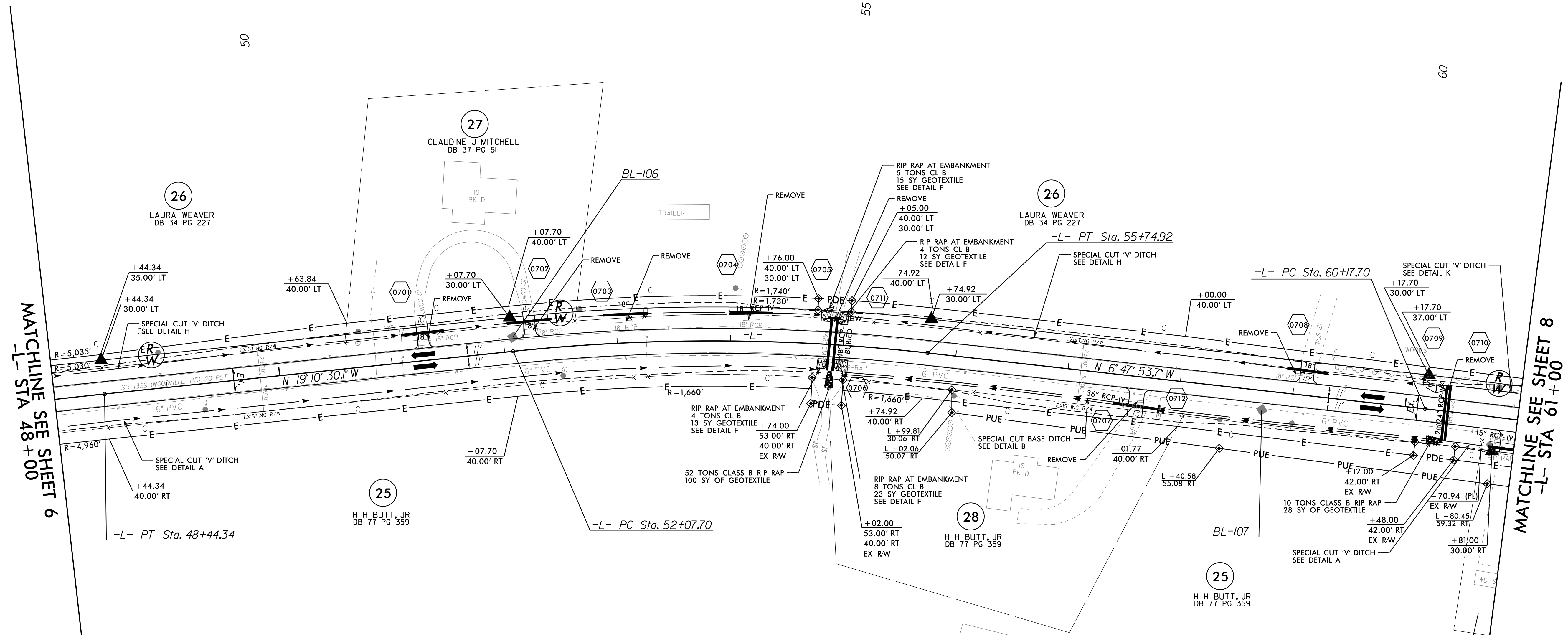
R:\8-DEC-2019 11:00 RE740_r.dwg_PSH_06.dgn
\$\$\$\$\$

5/14/19

PROJECT REFERENCE NO. R-5740	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

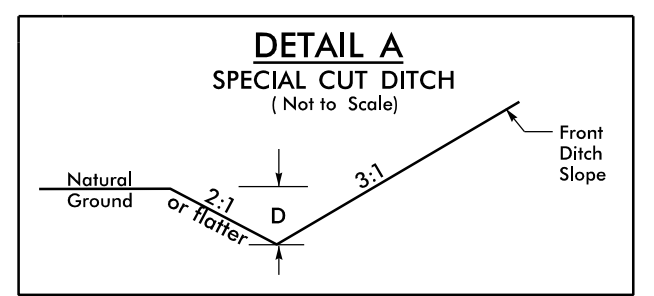
BM #2 (TBM 2)
 NAIL SET IN 22" PINE TREE
 -L- STA. 60+97.81 (33.70' LT)
 N 891279 E 2792259
 EL = 8.58'

-L-	
PI Sta 47+99.47	PI Sta 53+92.03
$\Delta = 1^{\circ} 01' 42.6" (RT)$	$\Delta = 12^{\circ} 22' 36.5" (RT)$
$D = 1^{\circ} 08' 45.3"$	$D = 3^{\circ} 22' 13.2"$
$L = 89.75'$	$L = 367.23'$
$T = 44.88'$	$T = 184.33'$
$R = 5,000.00'$	$R = 1,700.00'$
SE = EXIST	SE = EXIST

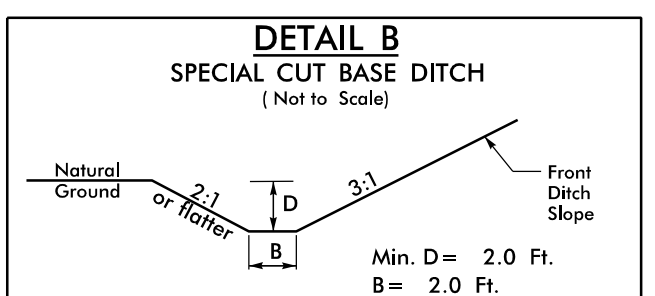


MATCHLINE SEE SHEET 6
-L- STA 48+00

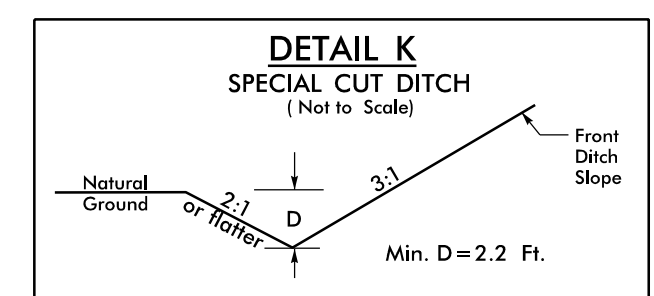
MATCHLINE SEE SHEET 8
-L- STA 61+00



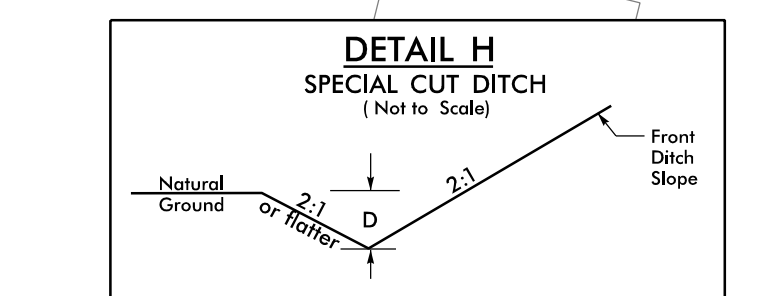
FROM -L- STA. 46+14 TO -L- STA. 54+81 RT Min. D=1.0 Ft.
 FROM -L- STA. 60+37 TO -L- STA. 74+20 RT Min. D=1.0 Ft.



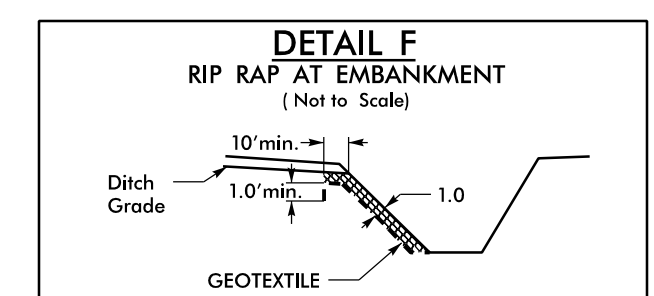
FROM -L- STA. 55+05 TO -L- STA. 60+36 RT



FROM -L- STA. 60+37 TO -L- STA. 72+50 LT



FROM -L- STA. 45+97 TO -L- STA. 54+84 LT Min. D=1.5 Ft.
 FROM -L- STA. 55+00 TO -L- STA. 60+36 LT Min. D=1.0 Ft.



FROM -L- STA. 54+84 TO STA. 54+90 LT
 FROM -L- STA. 54+94 TO STA. 55+00 LT
 FROM -L- STA. 54+81 TO STA. 54+85 RT
 FROM -L- STA. 54+93 TO STA. 55+05 RT

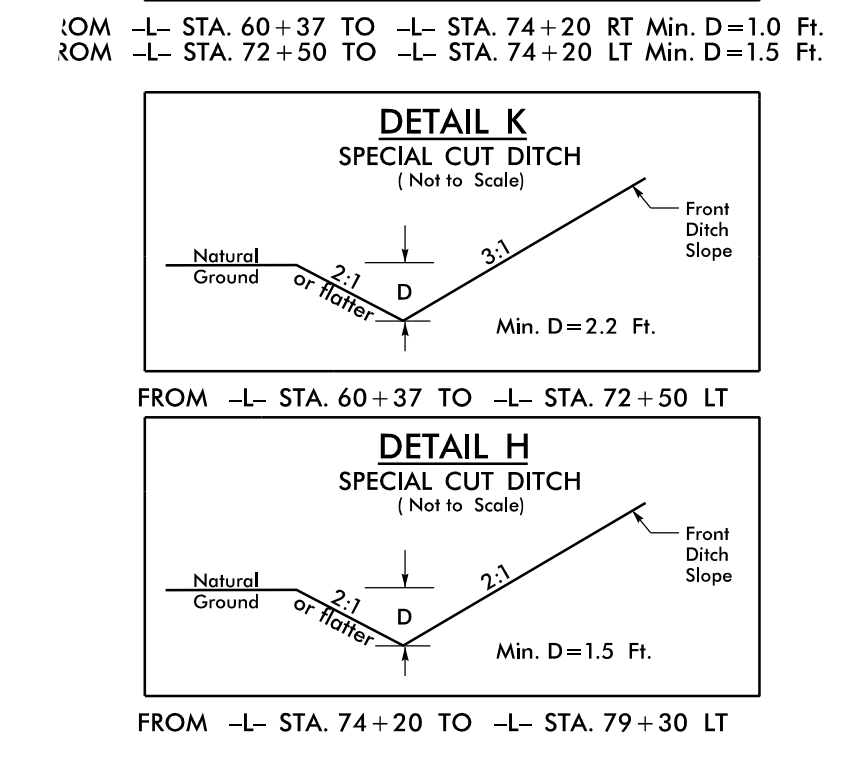
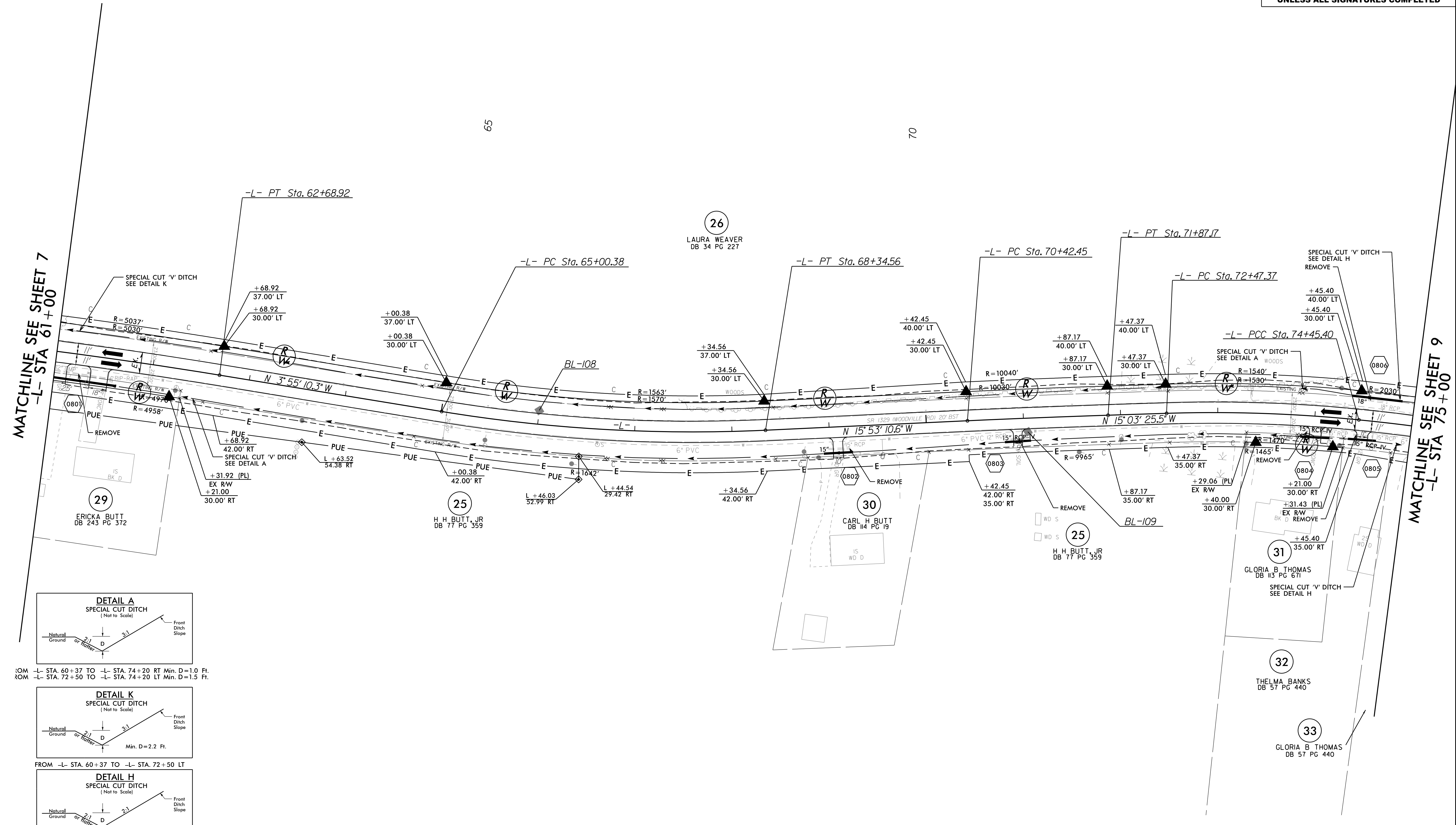
NOTE: SEE SHEET 23 FOR -L- PROFILE

16-DEC-2019 15:24 R5740_rdy_psh_07.dgn

5/14/19

-L-			
PI Sta 61+43.34 Δ = 2° 52' 43.3" (RT) D = 1° 08' 45.3" L = 251.2' T = 125.63' R = 5,000.00' SE = EXIST	PI Sta 66+68.08 Δ = 1° 58' 00.3" (LT) D = 3° 34' 51.6" L = 334.17' T = 167.70' R = 1,600.00' SE = EXIST	PI Sta 71+4.81 Δ = 0° 49' 45.1" (RT) D = 0° 34' 22.6" L = 144.72' T = 72.36' R = 10,000.00' SE = EXIST	PI Sta 73+46.53 Δ = 7° 33' 51.0" (RT) D = 3° 49' 11.0" L = 198.03' T = 99.16' R = 1,500.00' SE = EXIST

PROJECT REFERENCE NO. R-5740	SHEET NO. 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



NOTE: SEE SHEETS 23 & 24 FOR -L- PROFILE

16-DEC-2019 15:26 RE740_r.dwg_PSH_08.dgn

5/14/99

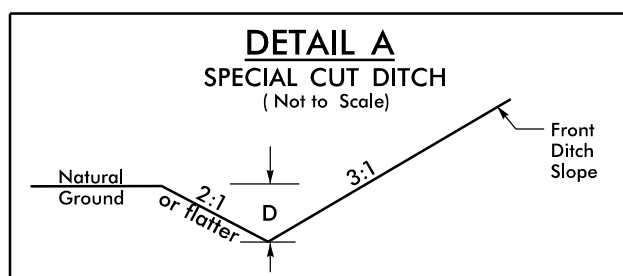
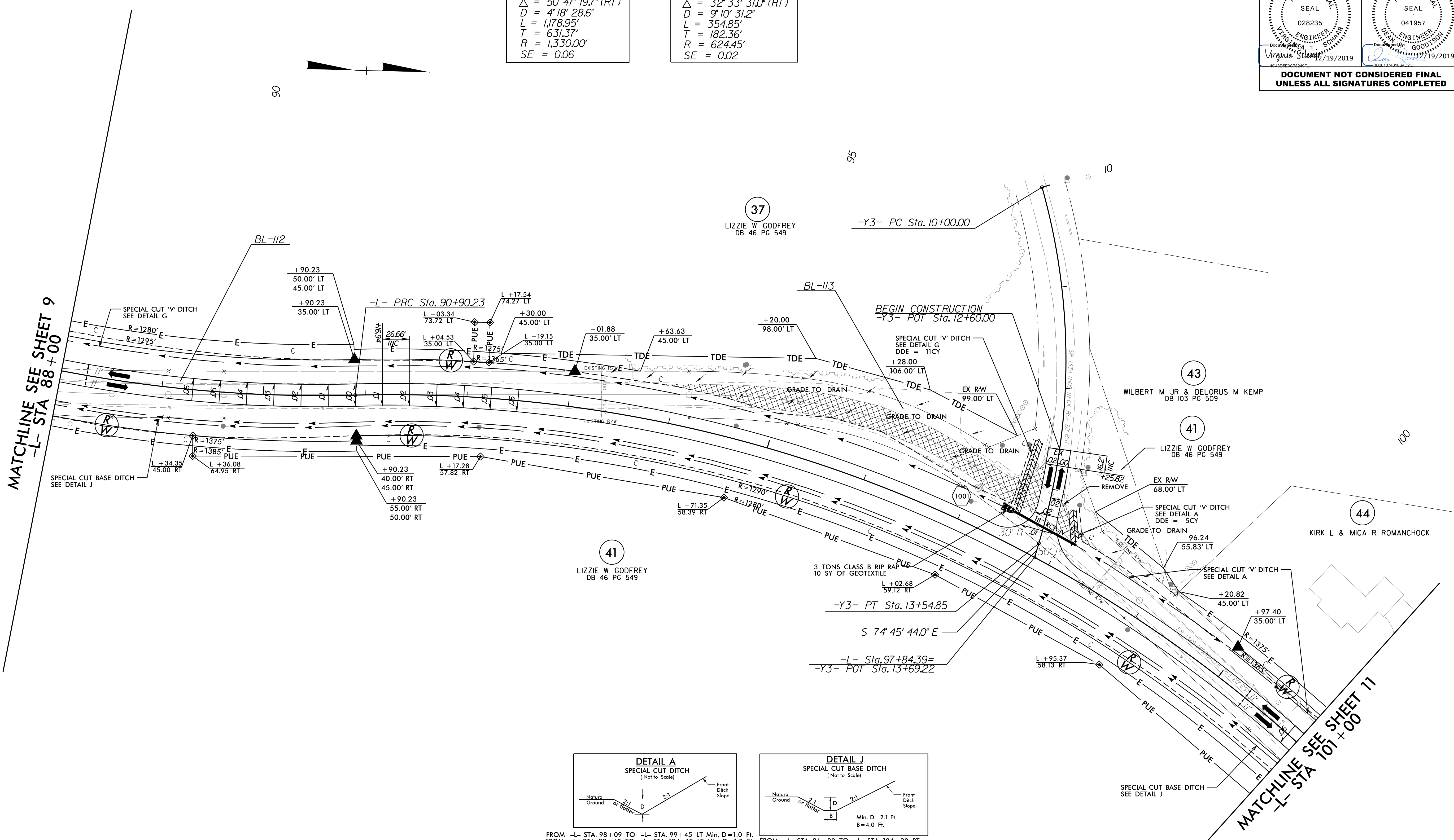
PROJECT REFERENCE NO. R-5740	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-L-

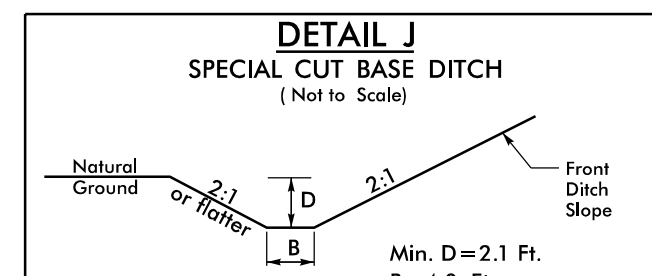
PI Sta 97+21.60
 $\Delta = 50' 47' 19.7''$ (RT)
 $D = 4' 18' 28.6''$
 $L = 1,178.95'$
 $T = 631.37'$
 $R = 1,330.00'$
 $SE = 0.06$

-Y3-

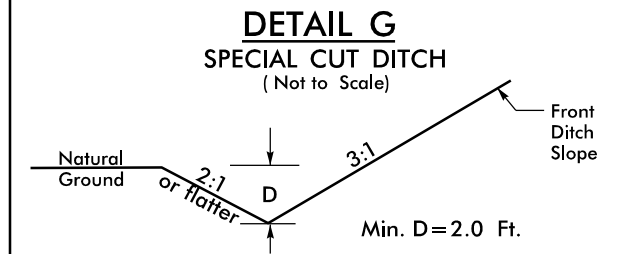
PI Sta 11+82.36
 $\Delta = 32' 33' 31.0''$ (RT)
 $D = 9' 10' 31.2''$
 $L = 354.85'$
 $T = 182.36'$
 $R = 624.45'$
 $SE = 0.02$



FROM -L- STA. 98+09 TO -L- STA. 99+45 LT Min. D=1.0 Ft.
 FROM -L- STA. 99+45 TO -L- STA. 104+19 LT Min. D=1.0 Ft.
 FROM -Y3- STA. 13+16 TO -Y3- STA. 13+47 LT Min. D=1.0 Ft.



FROM -L- STA. 86+80 TO -L- STA. 104+30 RT



FROM -L- STA. 82+70 TO -L- STA. 97+45 LT
 FROM -Y3- STA. 12+60 TO -Y3- STA. 13+31 RT

NOTE: SEE SHEETS 24 & 25 FOR -L- PROFILE
 SEE SHEET 31 FOR -Y3- PROFILE

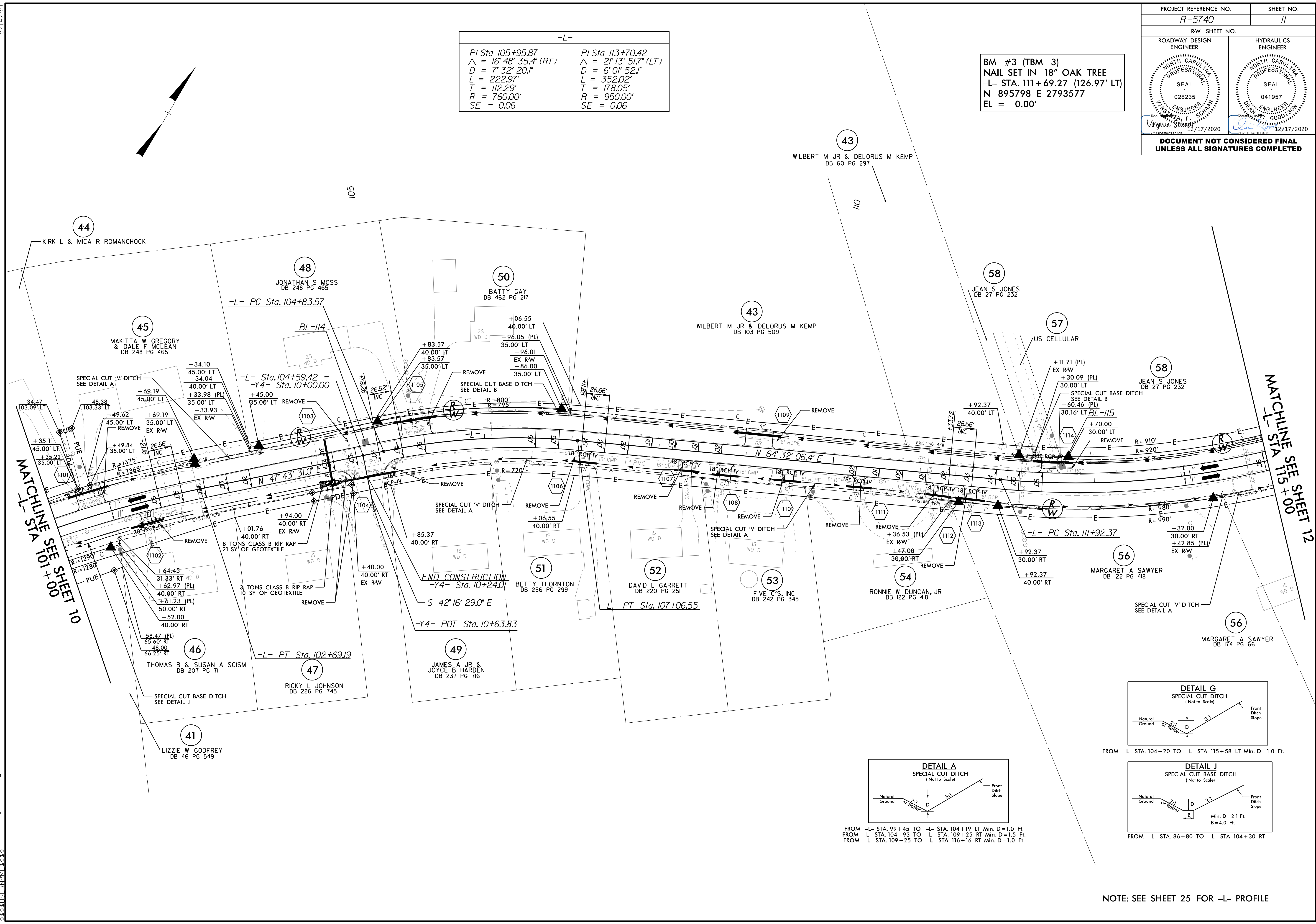
R16-DEC-2019 15:52 R5740-L-rd-L_PSH-10.dgn

5/14/19

PROJECT REFERENCE NO. R-5740	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

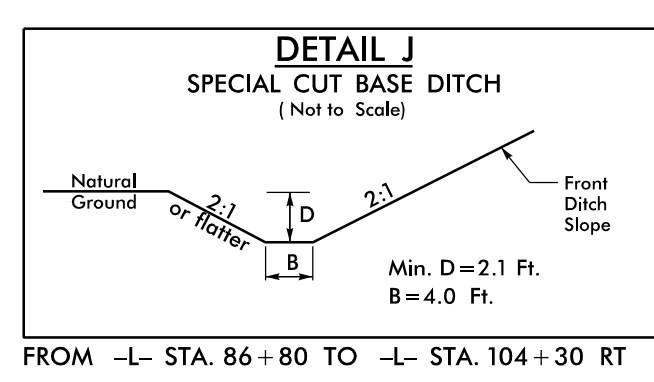
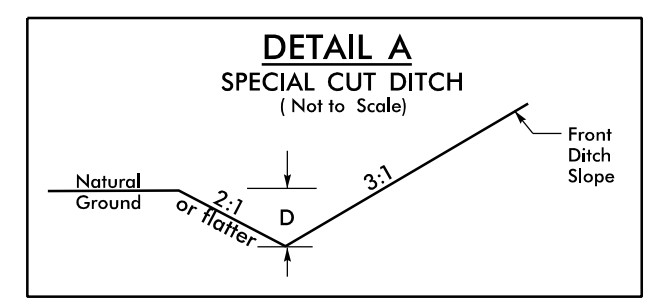
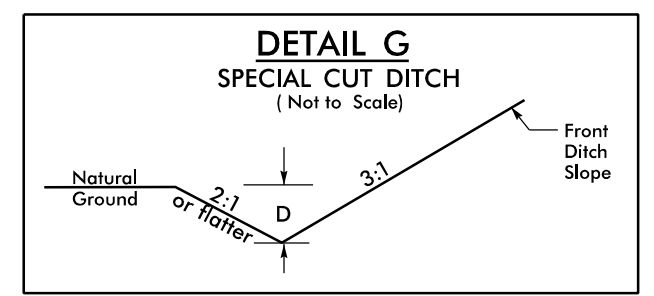
-L-	
PI Sta 105+95.87 Δ = 16° 48' 35.4" (RT) D = 7' 32" 20.1" L = 222.97' T = 112.29' R = 760.00' SE = 0.06	PI Sta 113+70.42 Δ = 2° 13' 51.7" (LT) D = 6' 01" 52.1" L = 352.02' T = 178.05' R = 950.00' SE = 0.06

BM #3 (TBM 3)
NAIL SET IN 18" OAK TREE
-L- STA. 111+69.27 (126.97' LT)
N 895798 E 2793577
EL = 0.00'



MATCHLINE SEE SHEET 10
-L- STA. 101+00

MATCHLINE SEE SHEET 12
-L- STA. 115+00



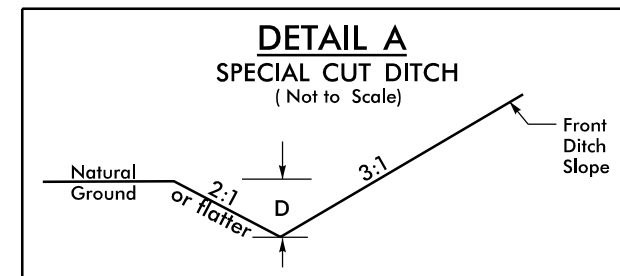
NOTE: SEE SHEET 25 FOR -L- PROFILE

R17_DEC-2020 11:29 R5740_rdy_PSH-11.dgn

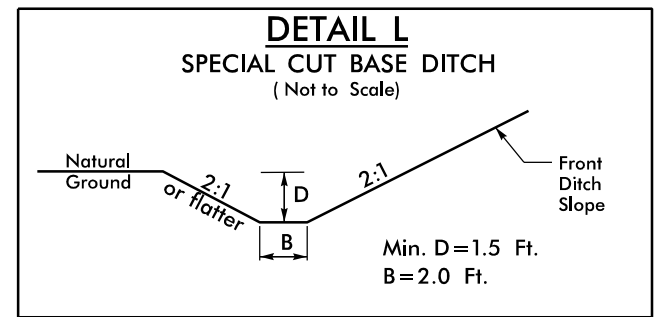
5/14/19

PROJECT REFERENCE NO. R-5740	SHEET NO. 12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

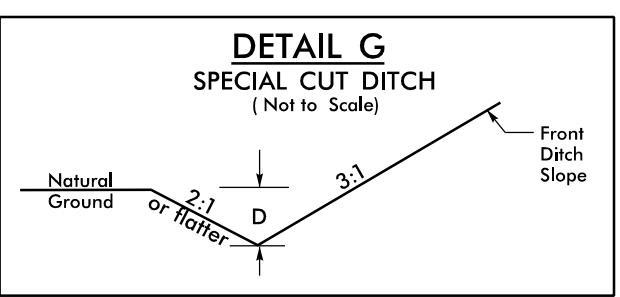
-L-
 PI Sta 121+70.65
 $\Delta = 20' 40' 30.6" (LT)$
 $D = 5' 06' 56.5"$
 $L = 404.15'$
 $T = 204.30'$
 $R = 1120.00'$
 $SE = 0.06$



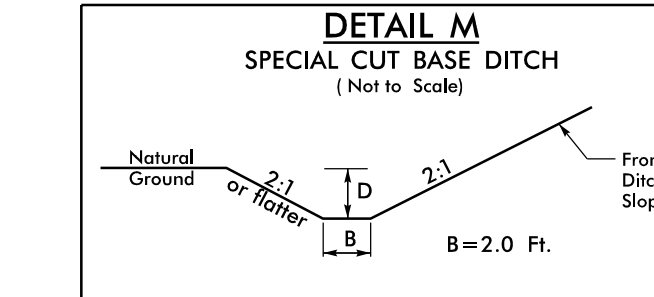
FROM -L- STA. 109+25 TO -L- STA. 116+16 RT Min. D=1.0 Ft.
 FROM -L- STA. 116+16 TO -L- STA. 122+08 RT Min. D=1.5 Ft.



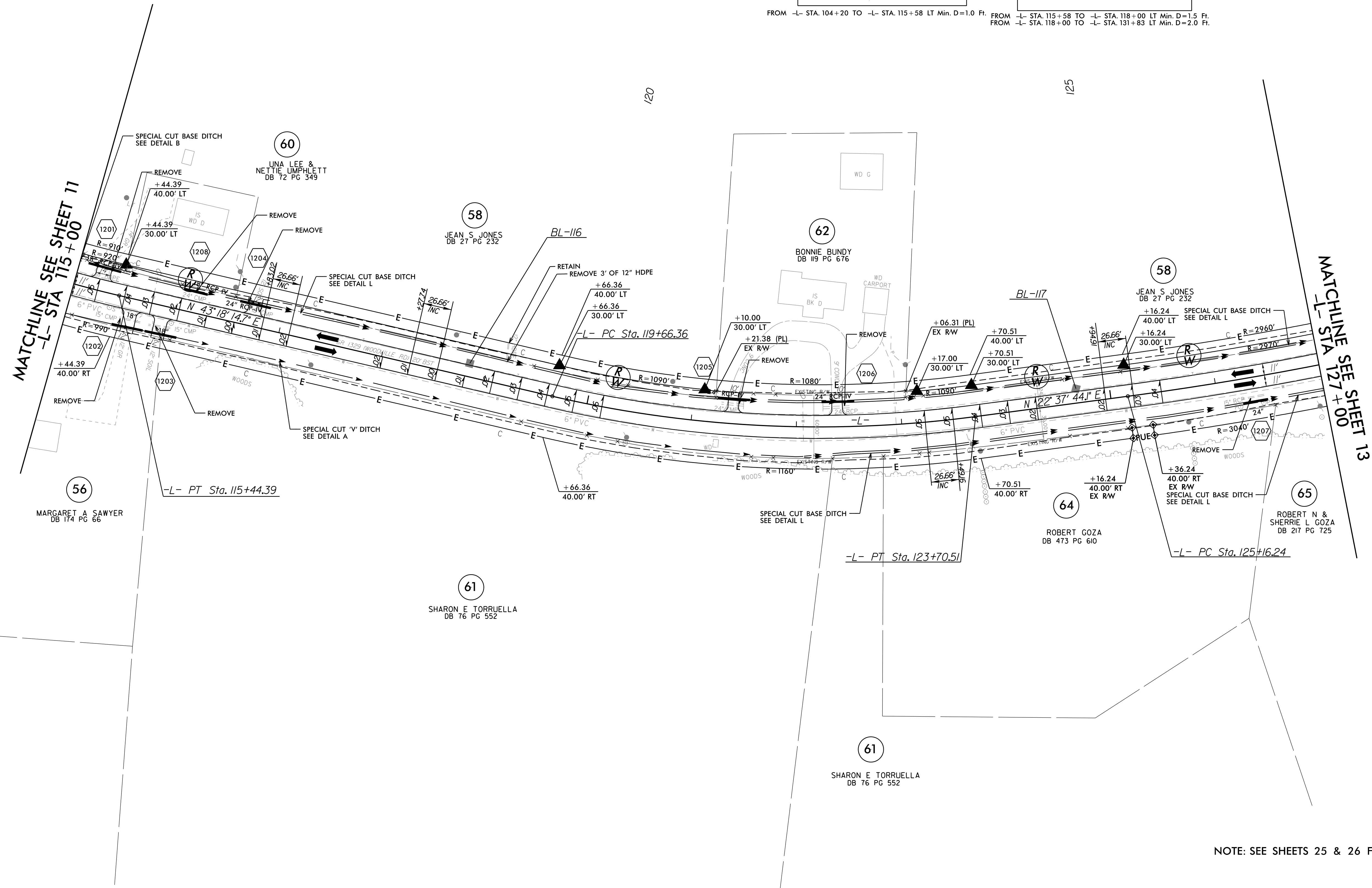
FROM -L- STA. 122+08 TO -L- STA. 131+83 RT



FROM -L- STA. 104+20 TO -L- STA. 115+58 LT Min. D=1.0 Ft.




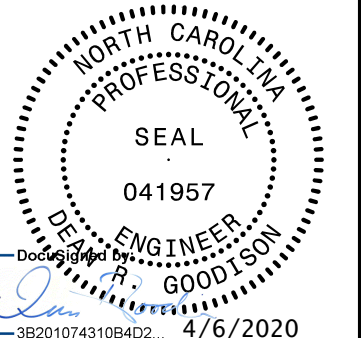
FROM -L- STA. 115+58 TO -L- STA. 118+00 LT Min. D=1.5 Ft.
 FROM -L- STA. 118+00 TO -L- STA. 131+83 LT Min. D=2.0 Ft.



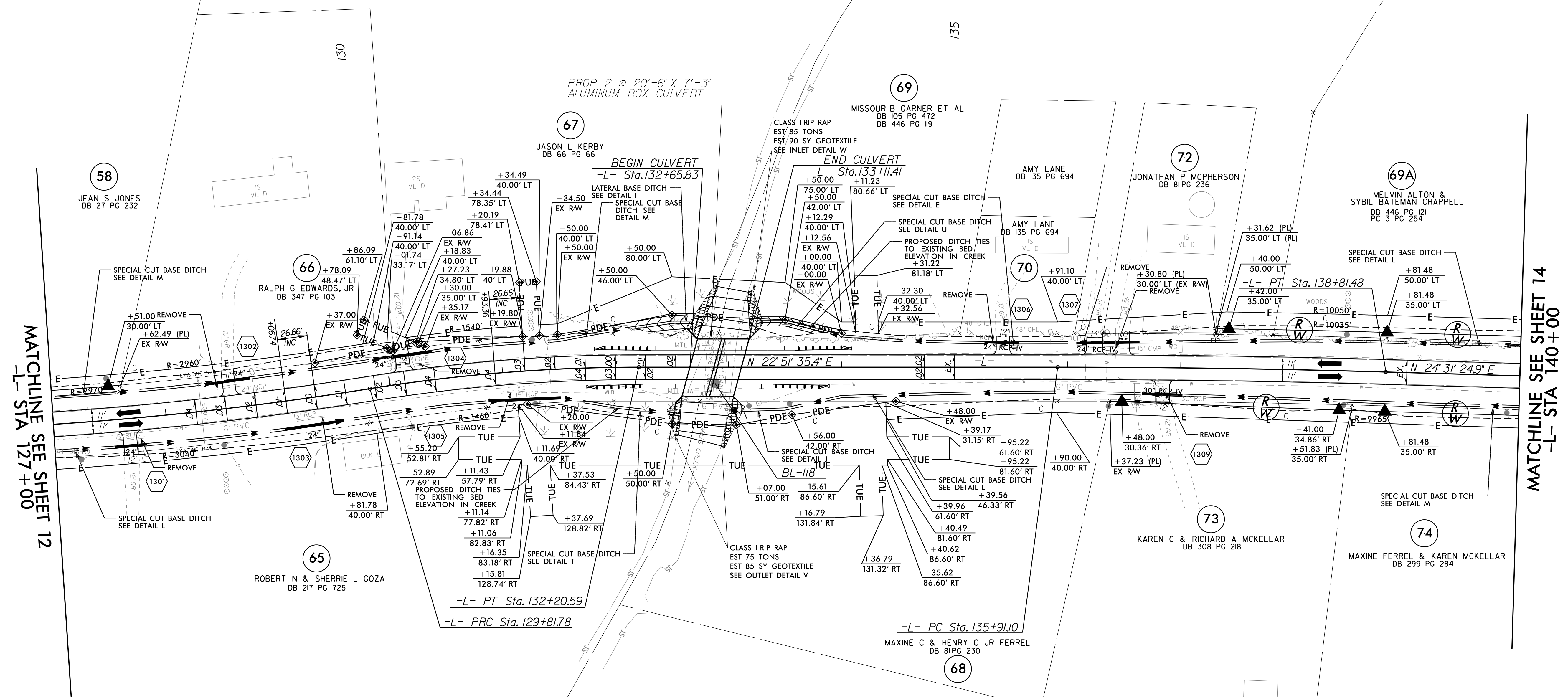
NOTE: SEE SHEETS 25 & 26 FOR -L- PROFILE

R:\18-DEC-2019 11:03 R5740_r.dwg_PSH-12.dgn

5/14/19

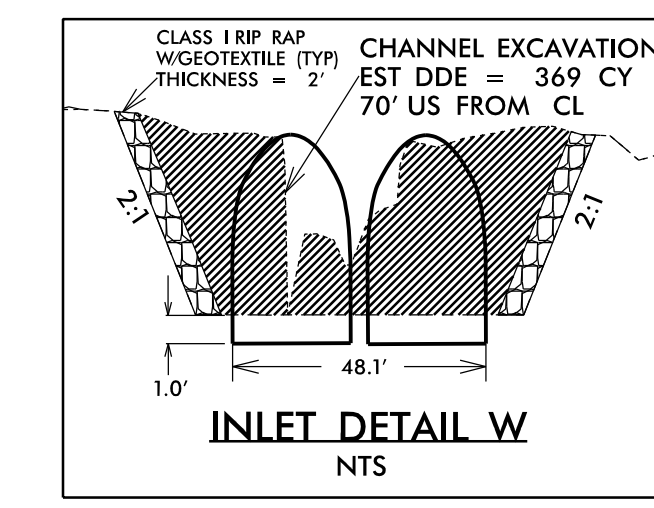
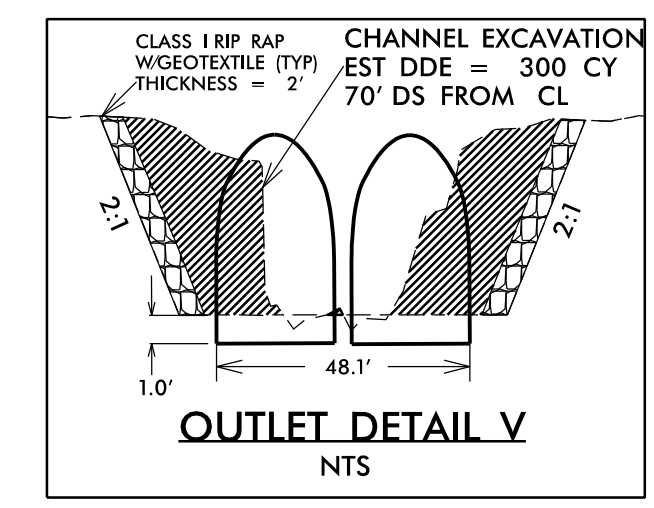
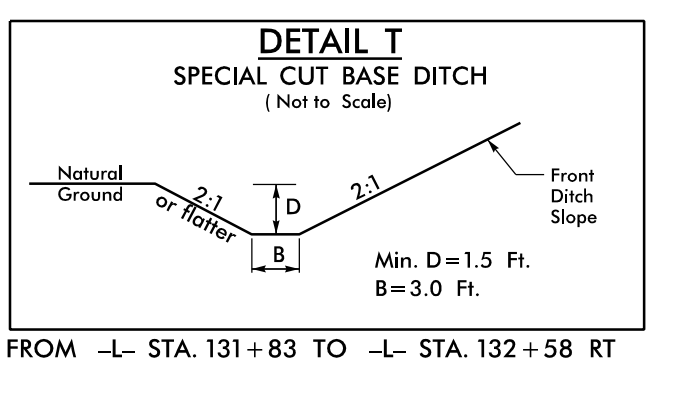
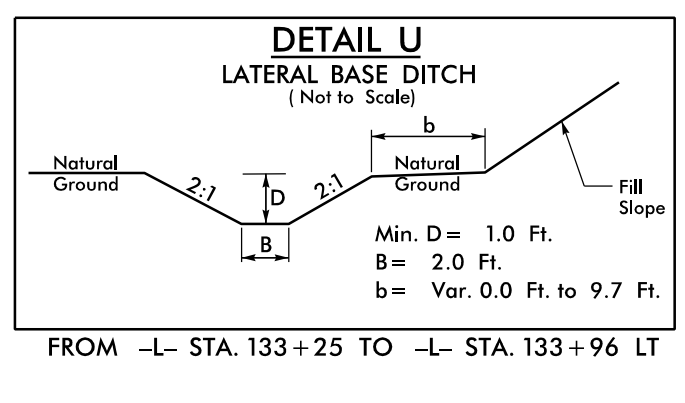
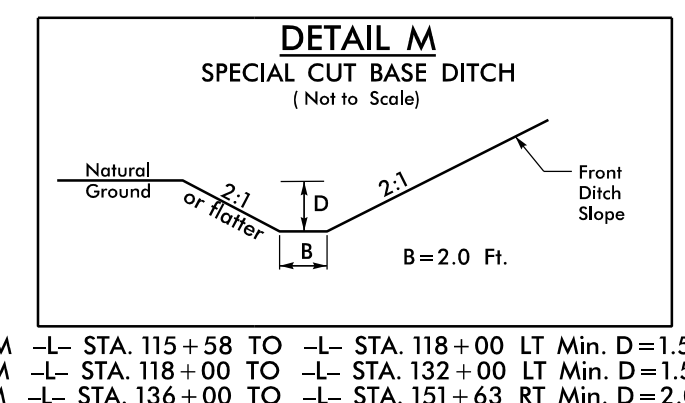
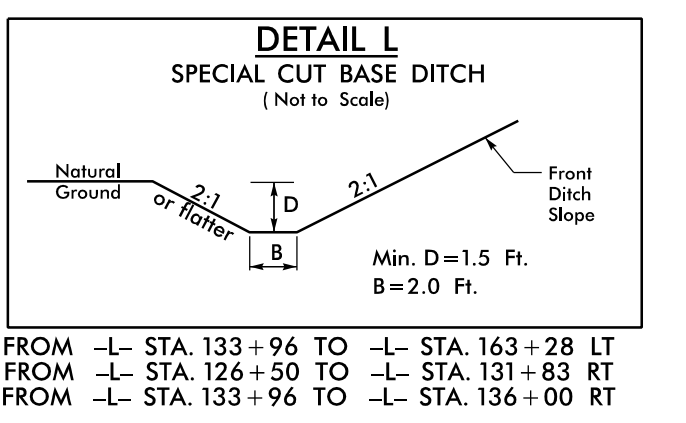
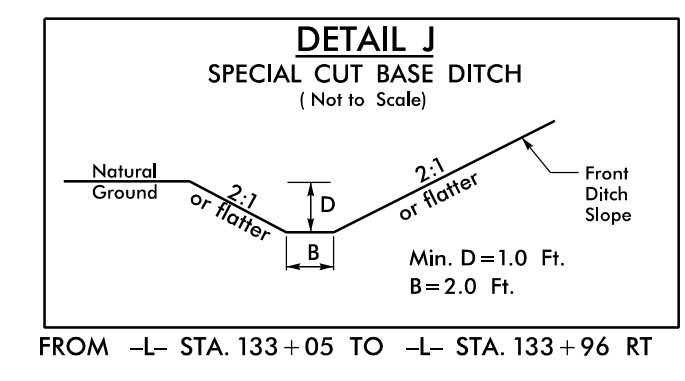
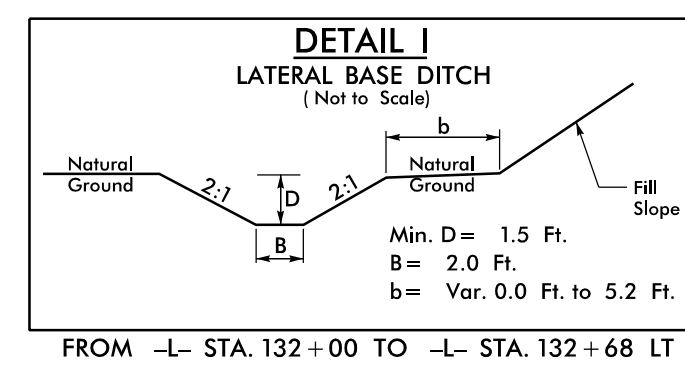
PROJECT REFERENCE NO. R-5740		SHEET NO. 13	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
			
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			

-L-		
PI Sta 127+49.48	PI Sta 131+01.44	PI Sta 137+36.30
$\Delta = 8^{\circ} 53' 27.8" (LT)$	$\Delta = 9^{\circ} 07' 19.1" (RT)$	$\Delta = 1^{\circ} 39' 49.5" (RT)$
$D = 1^{\circ} 54' 35.5"$	$D = 3^{\circ} 49' 11.0"$	$D = 0^{\circ} 34' 22.6"$
$L = 465.54'$	$L = 238.81'$	$L = 290.38'$
$T = 233.24'$	$T = 119.66'$	$T = 145.20'$
$R = 3,000.00'$	$R = 1,500.00'$	$R = 10,000.00'$
$SE = 0.04$	$SE = 0.06$	$SE = EXIST$



MATCHLINE SEE SHEET 12
-L- STA 127+00

MATCHLINE SEE SHEET 14
-L- STA 140+00



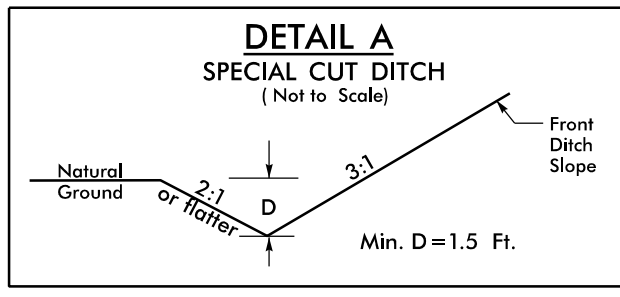
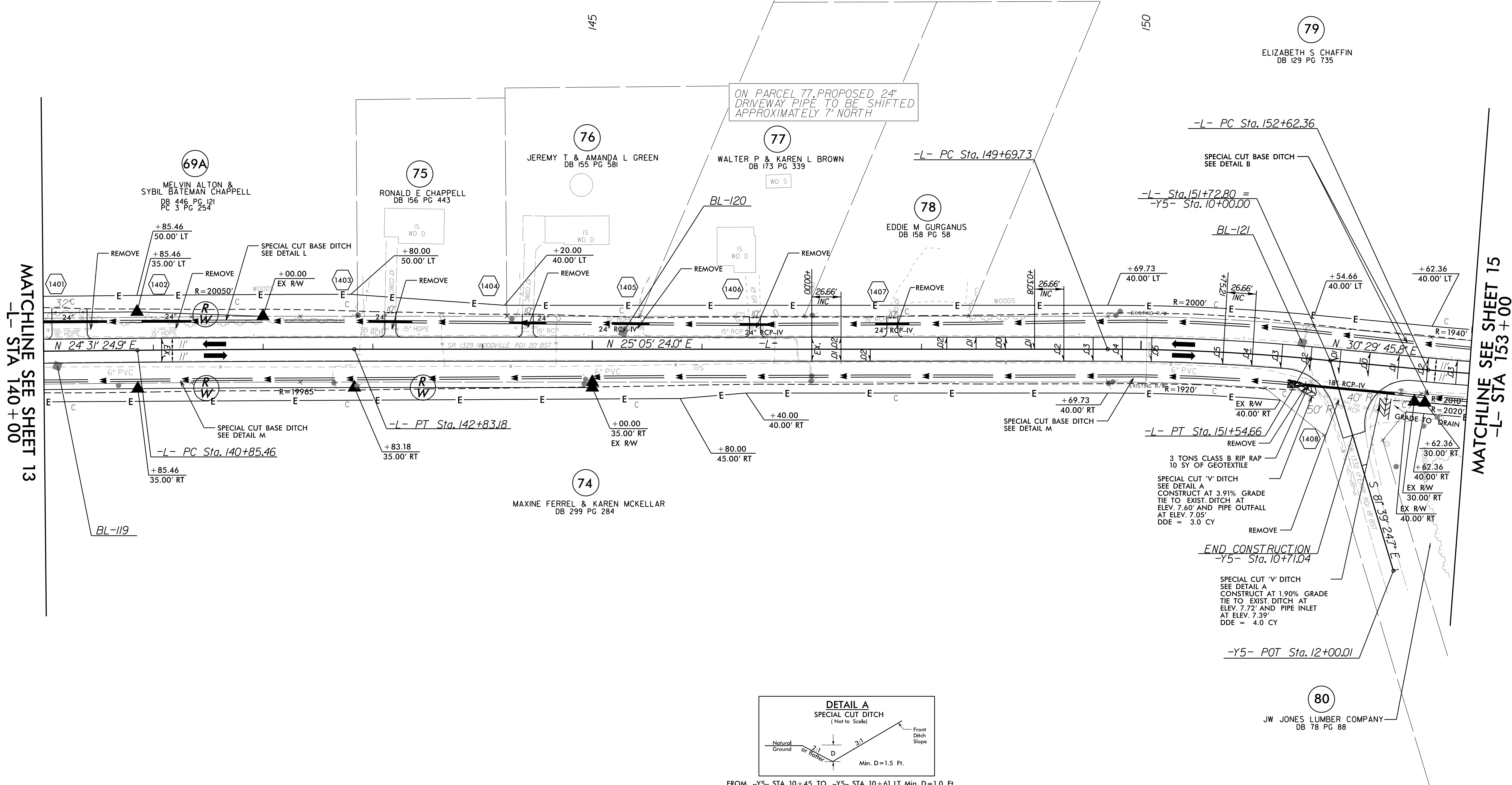
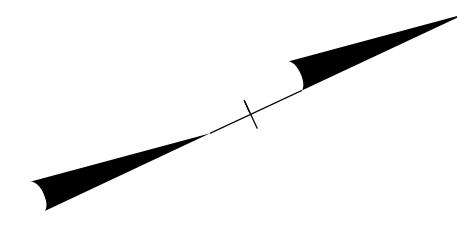
NOTE: SEE SHEET 26 FOR -L- PROFILE

06-APR-2020 13:24 R5740_rdy_PSH_13.dgn

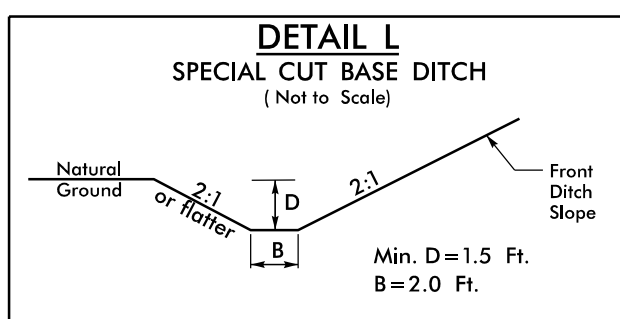
5/14/19

PROJECT REFERENCE NO. R-5740		SHEET NO. 14	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

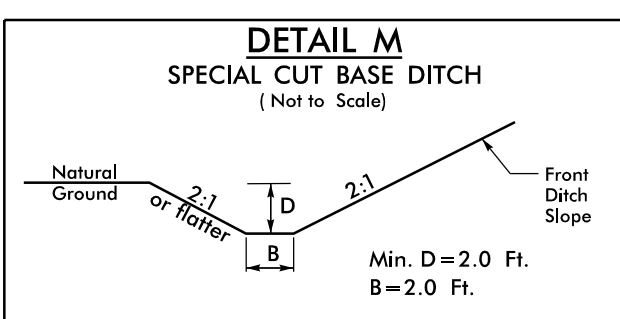
-L-	
PI Sta 141+84.32	PI Sta 150+62.26
$\Delta = 0^{\circ} 33' 59.1''$ (RT)	$\Delta = 5^{\circ} 24' 21.8''$ (RT)
$D = 0^{\circ} 17' 11.3''$	$D = 2^{\circ} 55' 23.7''$
$L = 197.72'$	$L = 184.93'$
$T = 98.86'$	$T = 92.54'$
$R = 20,000.00'$	$R = 1,960.00'$
SE = EXIST	SE = 0.06



FROM -Y5- STA. 10+45 TO -Y5- STA. 10+61 LT Min. D=1.0 Ft.
FROM -Y5- STA. 10+15 TO -Y5- STA. 10+25 RT Min. D=1.0 Ft.



FROM -L- STA. 133+96 TO -L- STA. 163+28 LT
FROM -L- STA. 152+22 TO -L- STA. 161+71 RT



FROM -L- STA. 136+00 TO -L- STA. 151+63 RT

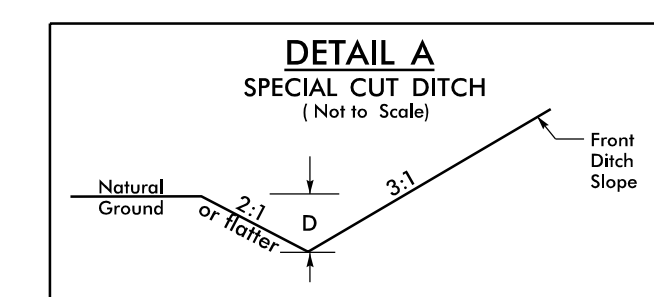
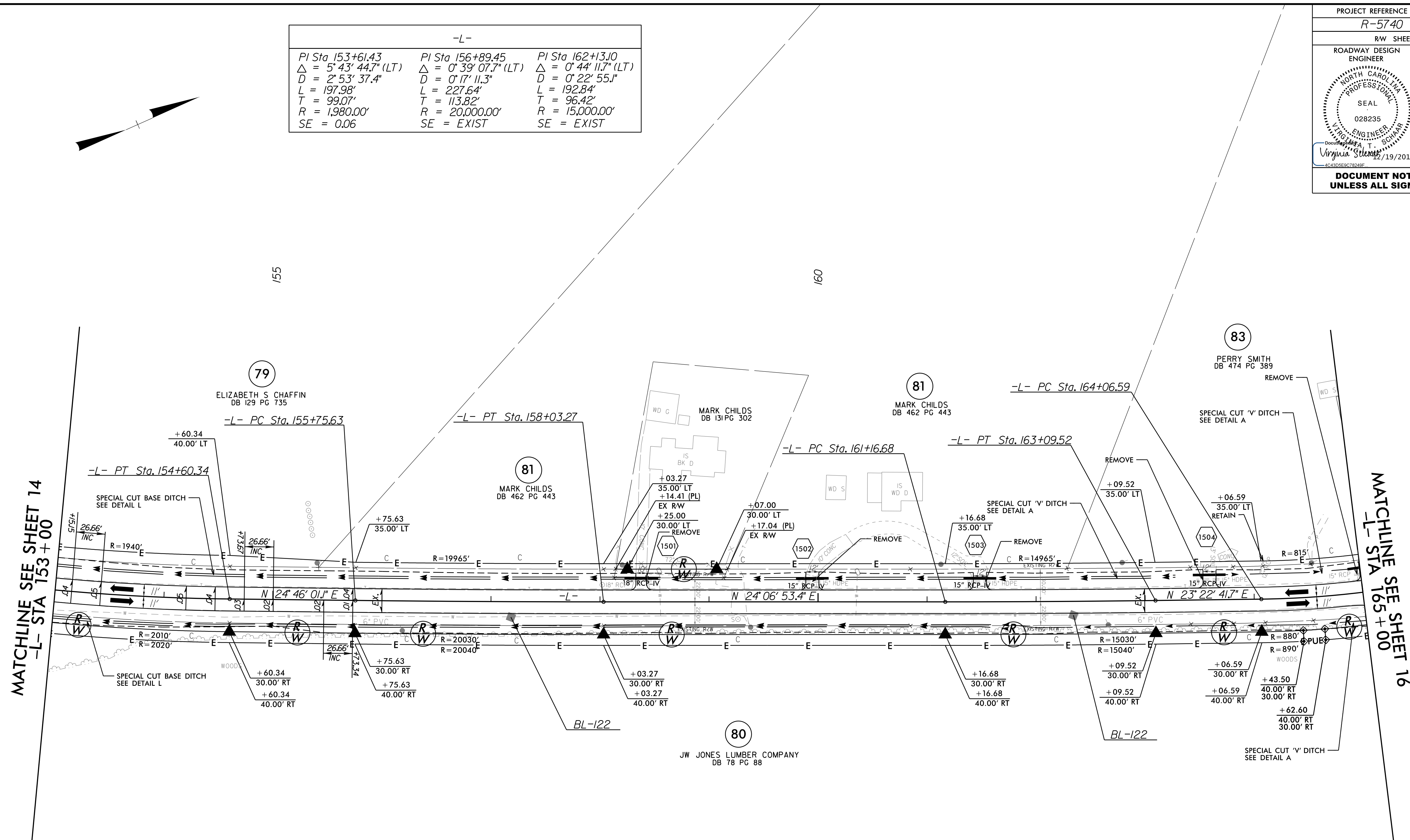
NOTE: SEE SHEETS 26 & 27 FOR -L- PROFILE

R:\6-DEC-2019 16:15 R5740_rdl_PSH_14.dgn

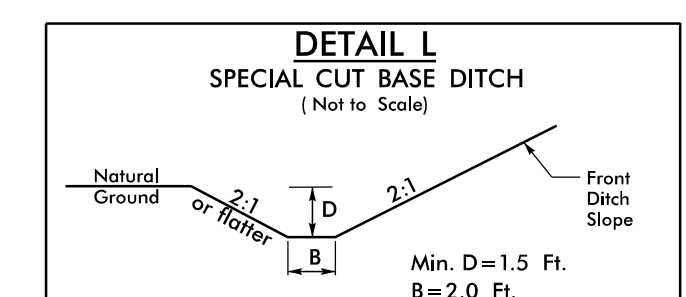
5/14/19

PROJECT REFERENCE NO. R-5740	SHEET NO. 15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-L-		
PI Sta 153+61.43	PI Sta 156+89.45	PI Sta 162+13.10
$\Delta = 5^{\circ} 43' 44.7" (LT)$	$\Delta = 0^{\circ} 39' 07.7" (LT)$	$\Delta = 0^{\circ} 44' 11.7" (LT)$
$D = 2^{\circ} 53' 37.4"$	$D = 0^{\circ} 17' 11.3"$	$D = 0^{\circ} 22' 55.1"$
$L = 197.98'$	$L = 227.64'$	$L = 192.84'$
$T = 99.07'$	$T = 113.82'$	$T = 96.42'$
$R = 1,980.00'$	$R = 20,000.00'$	$R = 15,000.00'$
$SE = 0.06$	$SE = EXIST$	$SE = EXIST$



FROM -L- STA. 163+28 TO -L- STA. 170+77 LT Min. D=1.5 Ft.
FROM -L- STA. 161+71 TO -L- STA. 165+00 RT Min. D=1.5 Ft.



FROM -L- STA. 133+50 TO -L- STA. 163+28 LT
FROM -L- STA. 152+22 TO -L- STA. 161+71 RT

NOTE: SEE SHEET 27 FOR -L- PROFILE

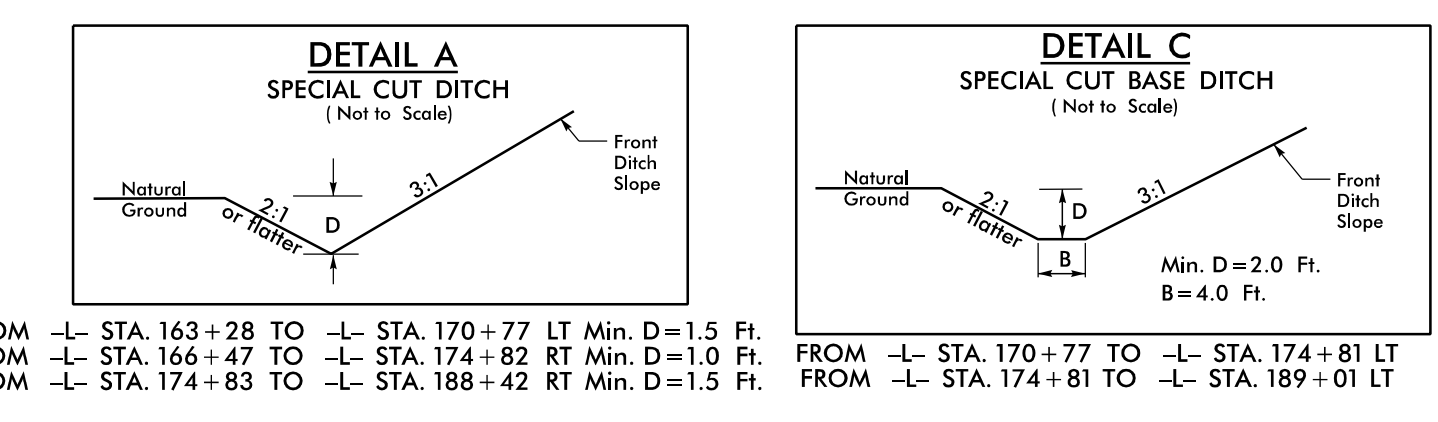
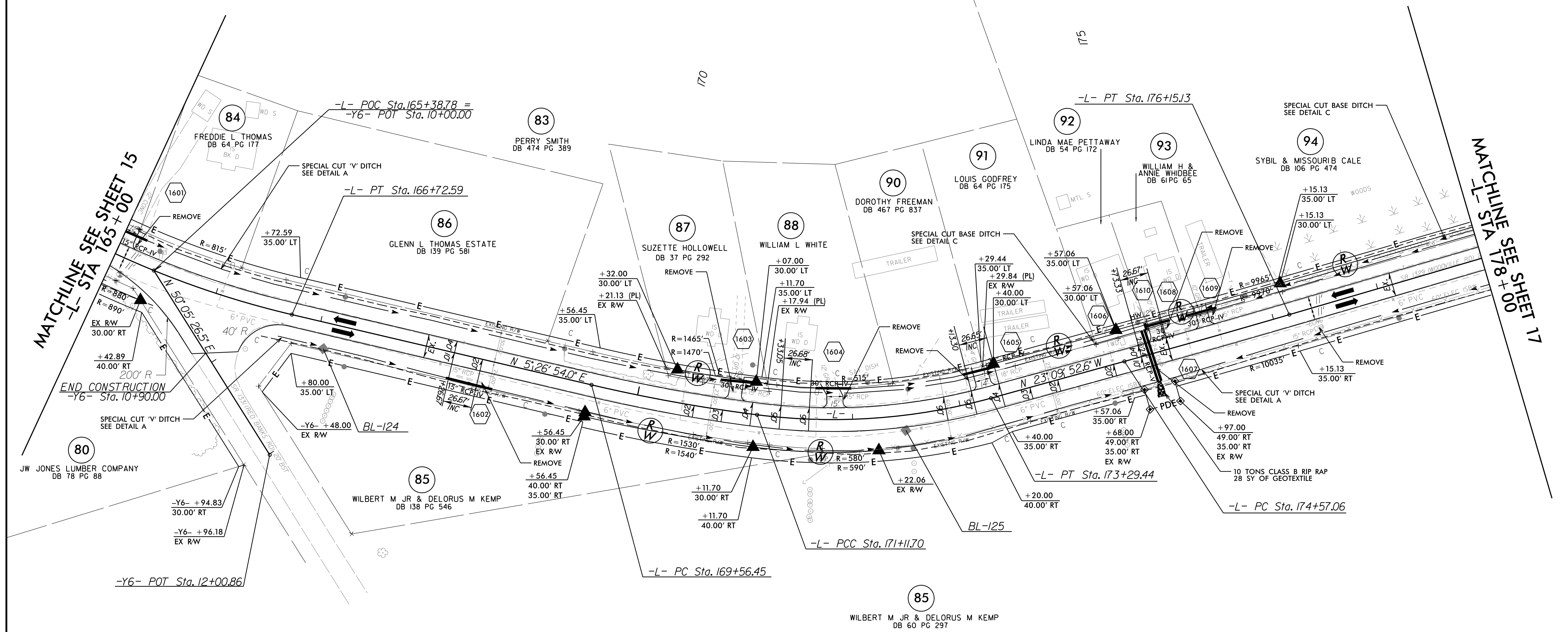
R:\16-DEC-2019 16:19 R5740_r.dwg_PSH-15.dgn

5/14/19

-L-			
PI Sta 165+40.68	PI Sta 170+34.14	PI Sta 172+22.01	PI Sta 175+36.10
$\Delta = 17^{\circ} 55' 47.7" (LT)$	$\Delta = 5^{\circ} 55' 47.6" (LT)$	$\Delta = 22^{\circ} 40' 59.0" (LT)$	$\Delta = 0^{\circ} 54' 20.5" (LT)$
$D = 6^{\circ} 44' 26.4"$	$D = 3^{\circ} 49' 11.0"$	$D = 10^{\circ} 25' 02.7"$	$D = 0^{\circ} 34' 22.6"$
$L = 266.00'$	$L = 155.24'$	$L = 217.74'$	$L = 158.07'$
$T = 134.09'$	$T = 77.69'$	$T = 110.32'$	$T = 79.04'$
$R = 850.00'$	$R = 1,500.00'$	$R = 550.00'$	$R = 10,000.00'$
SE = EXIST	SE = 0.06	SE = 0.06	SE = EXIST

BM #4 (TBM 4)
 NAIL SET IN 24" SWEET GUM TREE
 -L- STA. 168+44.02 (65.96' RT)
 N 900657 E 2796206
 EL = 10.42'

PROJECT REFERENCE NO. R-5740	SHEET NO. 16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	



FROM -L- STA. 163+28 TO -L- STA. 170+77 LT Min. D=1.5 Ft.
 FROM -L- STA. 166+47 TO -L- STA. 174+82 RT Min. D=1.0 Ft.
 FROM -L- STA. 174+83 TO -L- STA. 188+42 RT Min. D=1.5 Ft.

FROM -L- STA. 170+77 TO -L- STA. 174+81 LT
 FROM -L- STA. 174+81 TO -L- STA. 189+01 LT

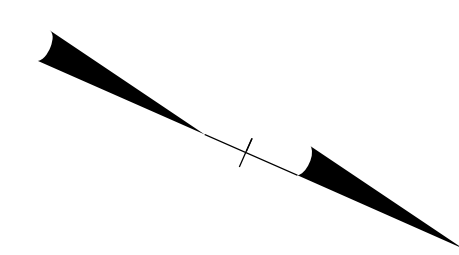
NOTE: SEE SHEET 27 FOR -L- PROFILE

16-DEC-2019 16:23 R5740_r.dwg_PSH-16.dgn

5/14/19

PROJECT REFERENCE NO. R-5740	SHEET NO. 17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-L-	
PI Sta 182+90.09 Δ = 0° 14' 20.4" (RT) D = 0° 17' 11.3" L = 83.42' T = 41.71' R = 20,000.00' SE = EXIST	PI Sta 189+95.48 Δ = 0° 32' 13.2" (RT) D = 0° 17' 11.3" L = 187.45' T = 93.73' R = 20,000.00' SE = EXIST



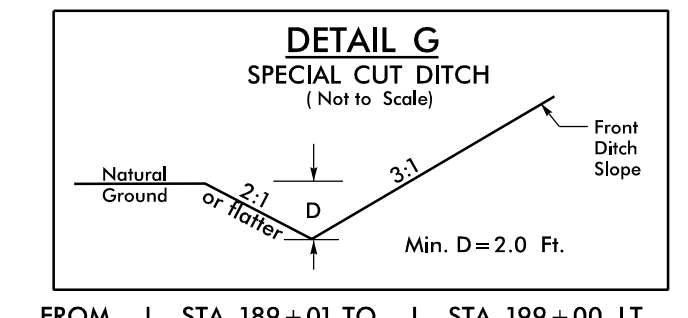
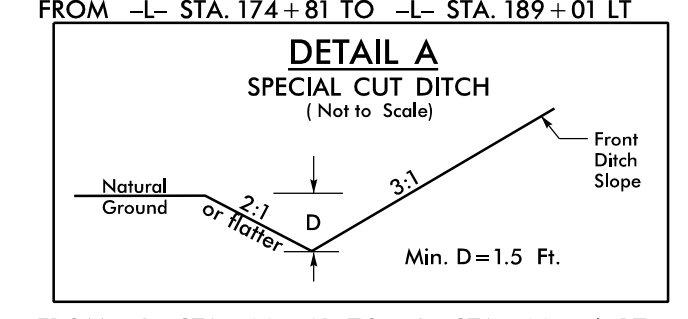
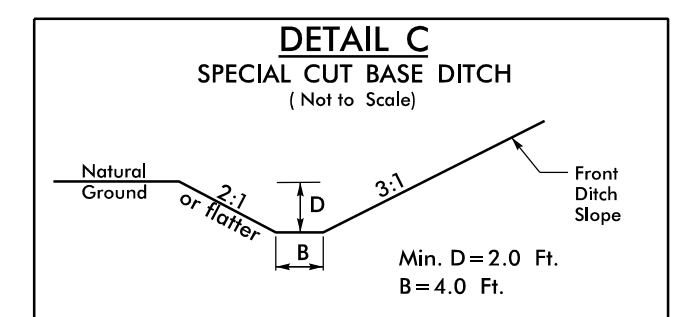
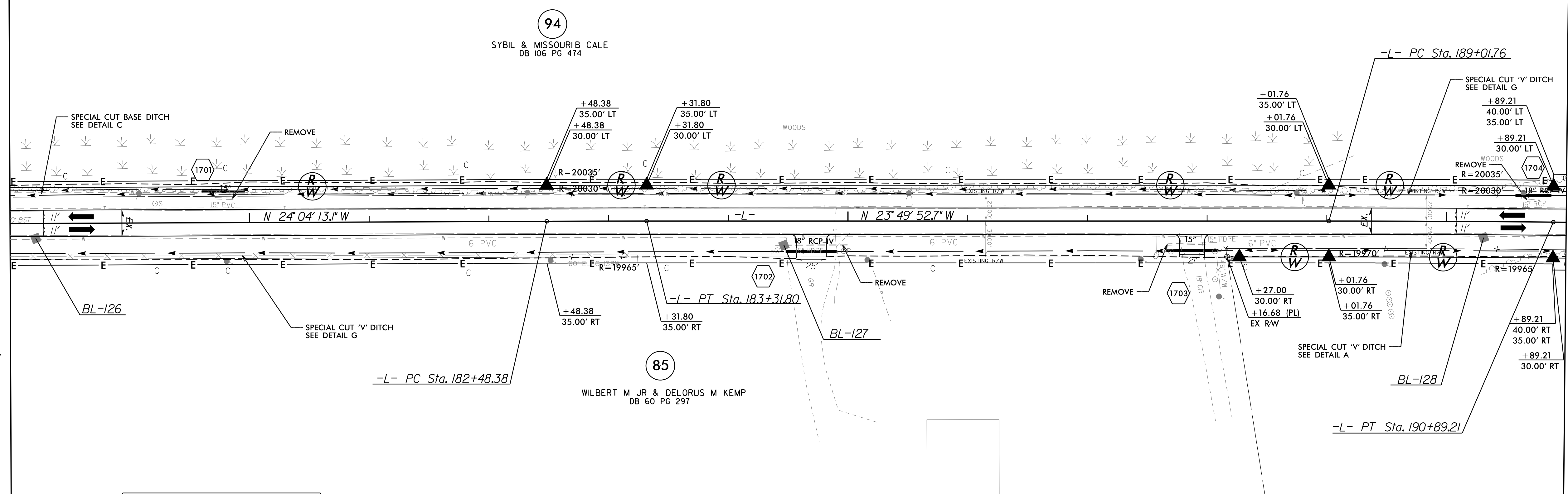
180

185

190

MATCHLINE SEE SHEET 16
-L- STA 178+00

MATCHLINE SEE SHEET 18
-L- STA 191+00



95
CURTIS L. GODFREY
DB 129 PG 735

NOTE: SEE SHEET 28 FOR -L- PROFILE

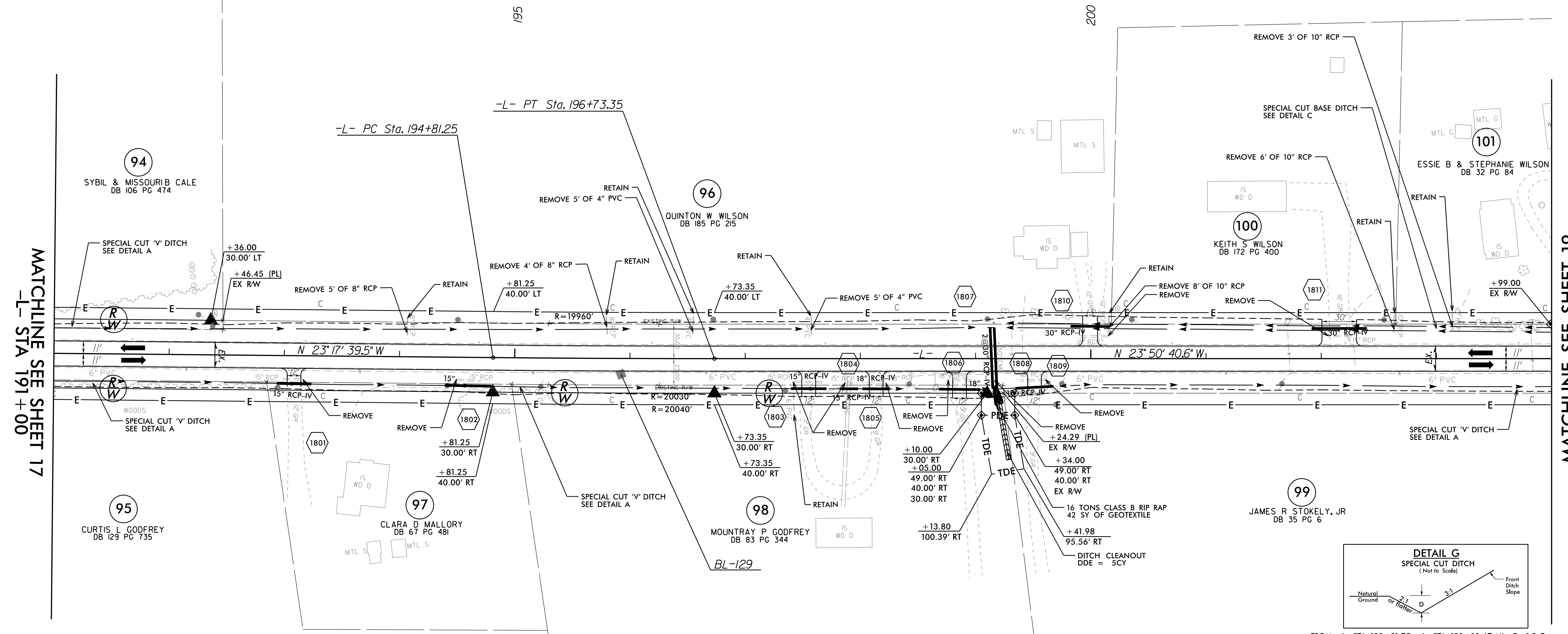
R:\6-DEC-2019 16:25 R5740-rd-j_PSH-17.dgn
\$\$\$\$\$

5/14/19

PROJECT REFERENCE NO. R-5740		SHEET NO. 18	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

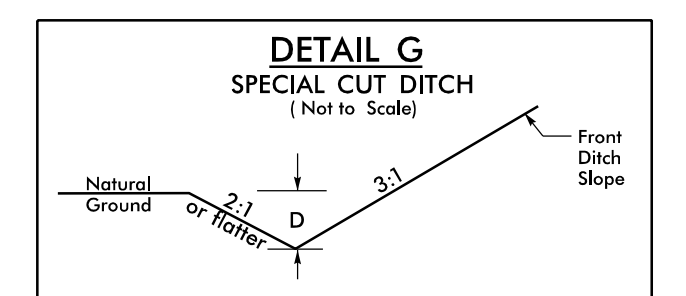
-L-

PI Sta 195+77.30
 $\Delta = 0^\circ 33' 01.2" (LT)$
 $D = 0' 17' 11.3"$
 $L = 192.10'$
 $T = 96.05'$
 $R = 20,000.00'$
 SE = EXIST

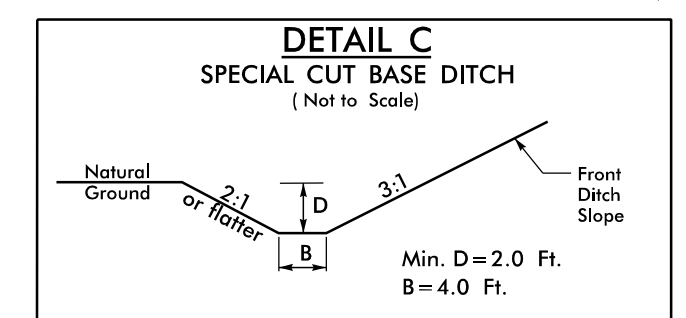


MATCHLINE SEE SHEET 17
-L- STA 191+00

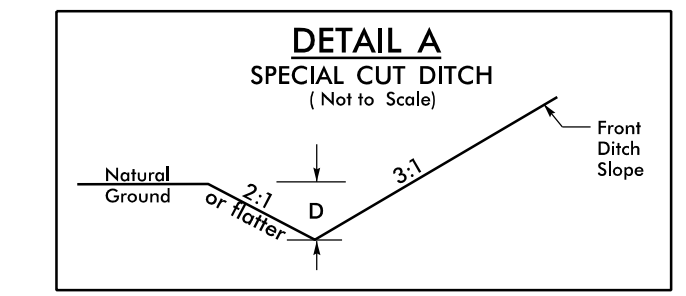
MATCHLINE SEE SHEET 19
-L- STA 204+00



FROM -L- STA. 189+01 TO -L- STA. 193+00 LT Min. D=1.5 Ft.
FROM -L- STA. 193+00 TO -L- STA. 199+00 LT Min. D=2.0 Ft.



FROM -L- STA. 199+15 TO -L- STA. 204+00 LT



FROM -L- STA. 188+42 TO -L- STA. 199+16 RT Min. D=1.5 Ft.
FROM -L- STA. 199+17 TO -L- STA. 205+00 RT Min. D=1.0 Ft.
FROM -L- STA. 205+00 TO -L- STA. 211+53 RT Min. D=1.5 Ft.

NOTE: SEE SHEET 28 FOR -L- PROFILE

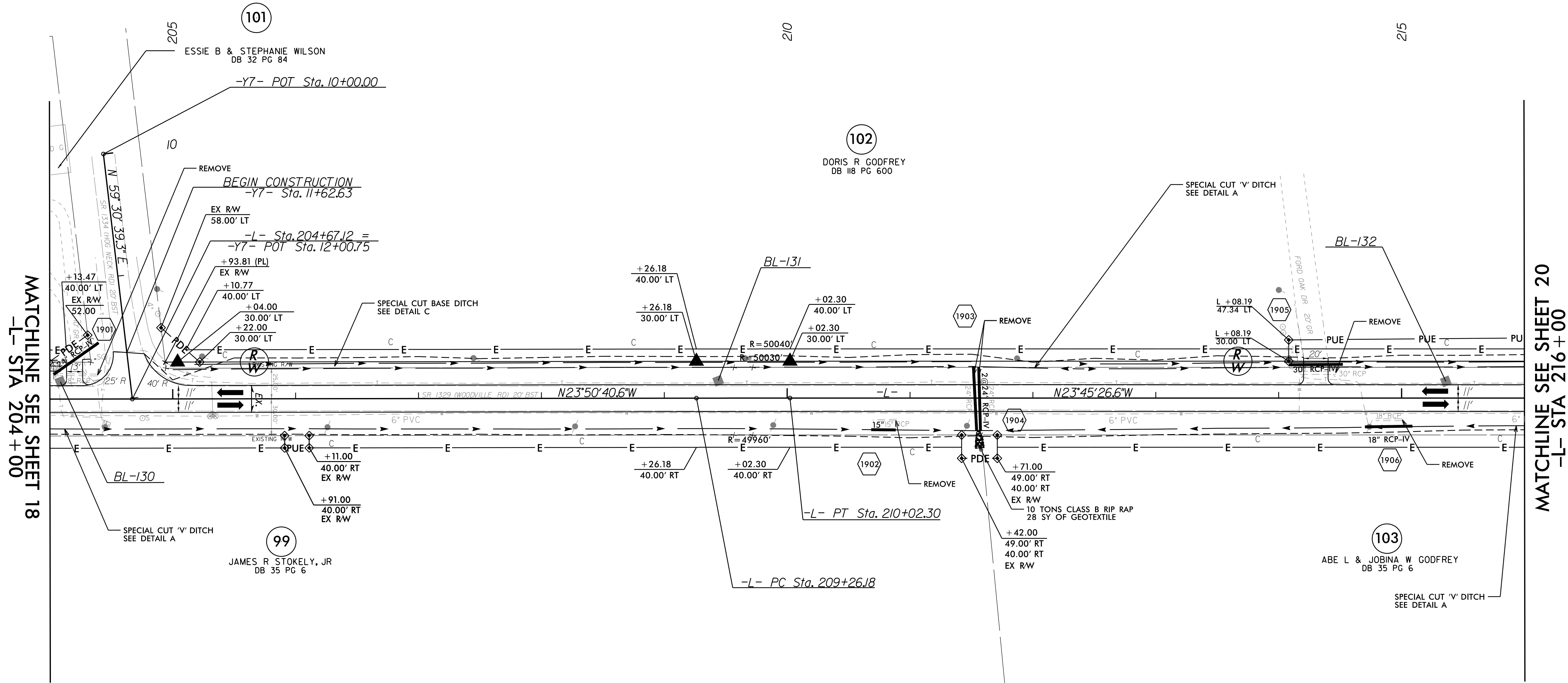
R18-DEC-2019 10:08 R5740-L-rdy_PSH-18.dgn

5/14/19

PROJECT REFERENCE NO. R-5740		SHEET NO. 19	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

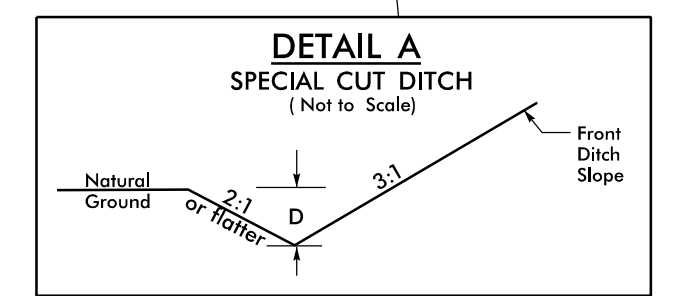
-L-

PI Sta 209+64.24
 $\Delta = 0^{\circ}05'14.0''$ (RT)
 $D = 0^{\circ}06'52.5''$
 $L = 76.12'$
 $T = 38.06'$
 $R = 50,000.00'$
 $SE = EXIST$

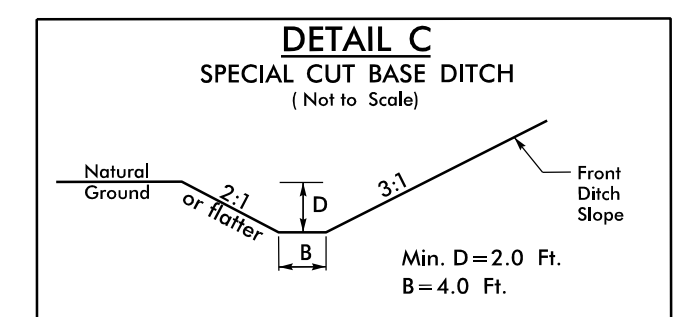


MATCHLINE SEE SHEET 18
-L- STA 204+00

MATCHLINE SEE SHEET 20
-L- STA 216+00



FROM -L- STA. 199+17 TO -L- STA. 205+00 RT Min. D=1.0 Ft.
 FROM -L- STA. 205+00 TO -L- STA. 211+53 RT Min. D=1.5 Ft.
 FROM -L- STA. 211+58 TO -L- STA. 212+37 LT Min. D=1.5 Ft.
 FROM -L- STA. 211+59 TO -L- STA. 217+40 RT Min. D=1.0 Ft.



FROM -L- STA. 205+04 TO -L- STA. 211+51 LT
 FROM -L- STA. 212+37 TO -L- STA. 219+21 LT

NOTE: SEE SHEETS 28 & 29 FOR -L- PROFILE

R:\6-DEC-2019 16:31\195740_r.dwg_PSH_19.dgn

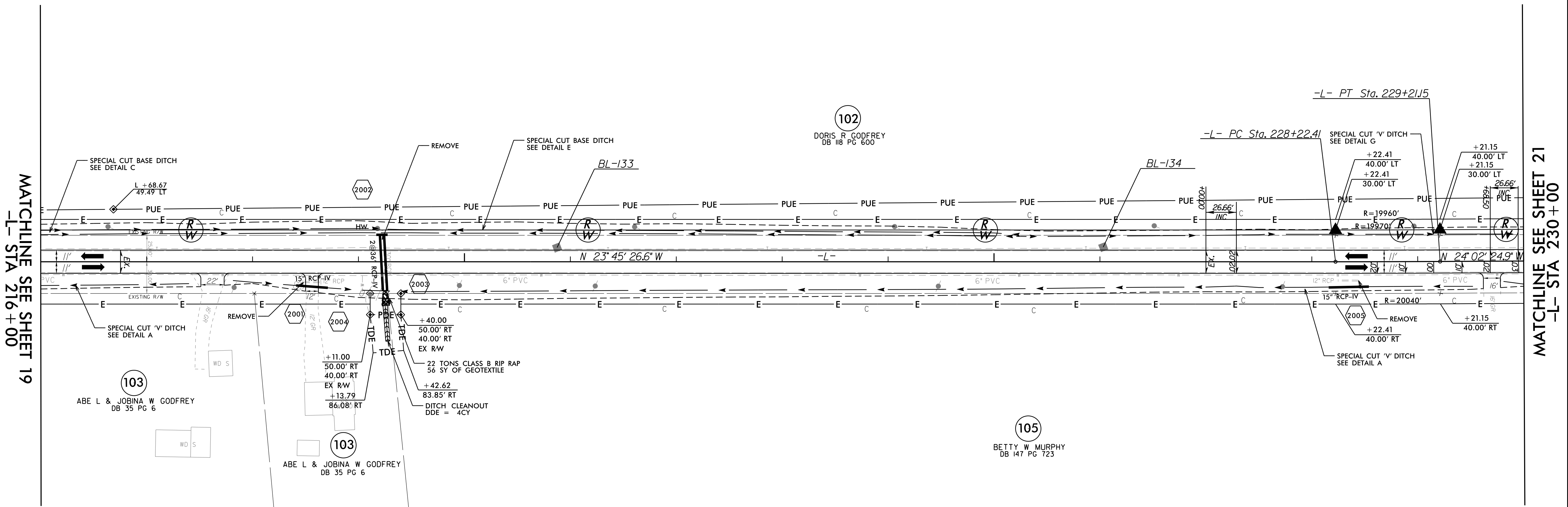
5/14/19

PROJECT REFERENCE NO. R-5740	SHEET NO. 20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-L-

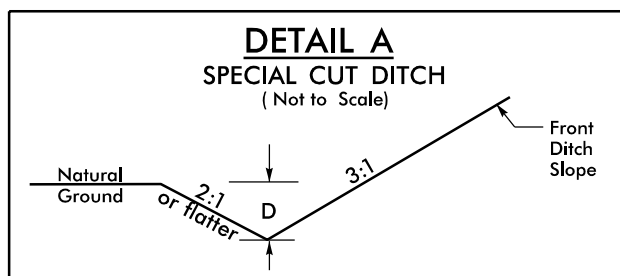
PI Sta 228+71.78
 $\Delta = 0^\circ 16' 58.3" (LT)$
 $D = 0' 17' 11.3"$
 $L = 98.74'$
 $T = 49.37'$
 $R = 20,000.00'$
 SE = EXIST

BM #5 (TBM 5)
 NAIL SET IN POLE
 -L- STA. 221+22.92 (22.73' RT)
 N 905539 E 2794203
 EL = 8.8757'

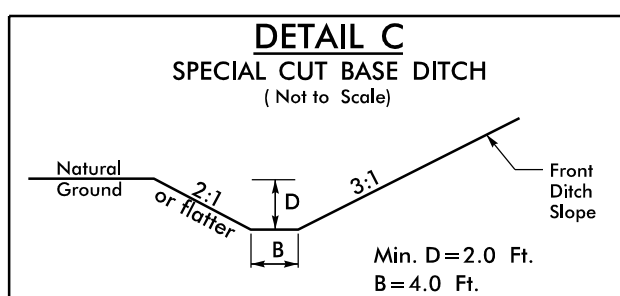


MATCHLINE SEE SHEET 19
-L- STA 216+00

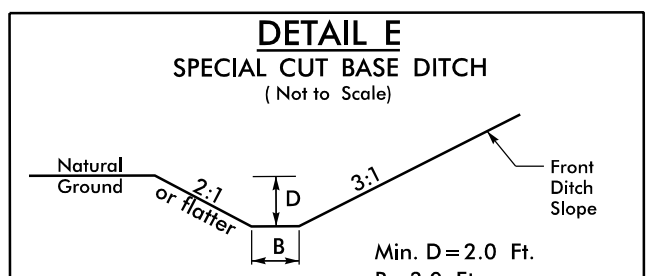
MATCHLINE SEE SHEET 21
-L- STA 230+00



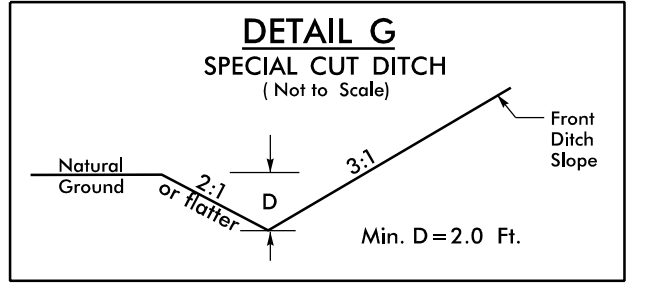
FROM -L- STA. 211+59 TO -L- STA. 217+40 RT Min. D=1.0 Ft.
 FROM -L- STA. 217+82 TO -L- STA. 219+22 RT Min. D=1.0 Ft.
 FROM -L- STA. 219+23 TO -L- STA. 229+52 RT Min. D=1.0 Ft.
 FROM -L- STA. 229+81 TO -L- STA. 231+43 RT Min. D=1.0 Ft.



FROM -L- STA 212+37 TO -L- STA. 219+21 LT



FROM -L- STA. 219+39 TO -L- STA. 225+25 LT



FROM -L- STA. 225+25 TO -L- STA. 231+39 LT

NOTE: SEE SHEET 29 FOR -L- PROFILE

R:\DEC-2019\16534\RE740_rdy_PSH_20.dgn
11/15/2019 10:58:58 AM

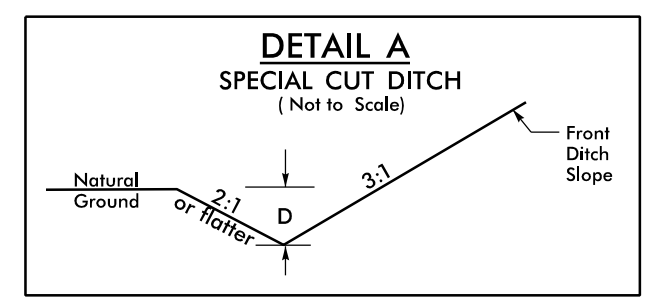
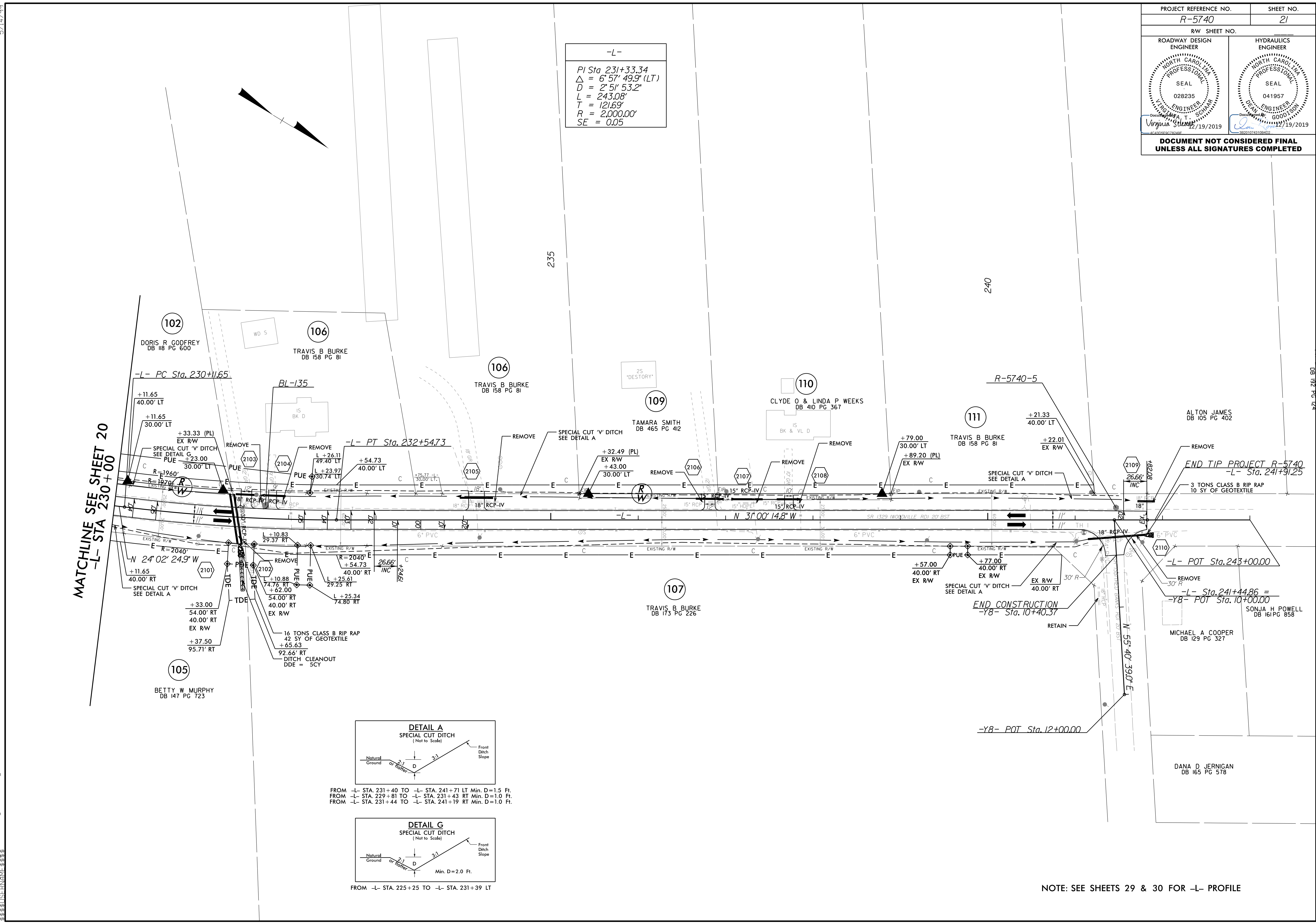
5/14/19

PROJECT REFERENCE NO. R-5740	SHEET NO. 21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

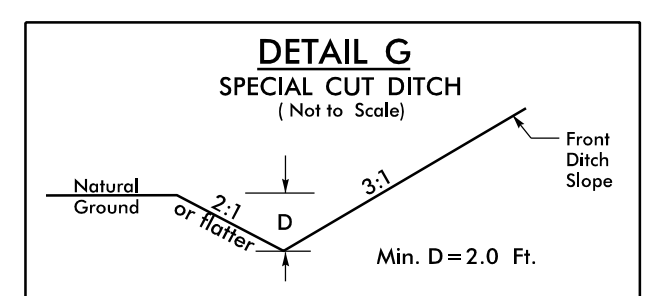
-L-

PI Sta 231+33.34
 $\Delta = 6'57.499'$ (LT)
 $D = 2'51.532''$
 $L = 243.08'$
 $T = 121.69'$
 $R = 2,000.00'$
 $SE = 0.05$

MATCHLINE SEE SHEET 20
-L- STA 230+00



FROM -L- STA. 231+40 TO -L- STA. 241+71 LT Min. D=1.5 Ft.
 FROM -L- STA. 229+81 TO -L- STA. 231+43 RT Min. D=1.0 Ft.
 FROM -L- STA. 231+44 TO -L- STA. 241+19 RT Min. D=1.0 Ft.



FROM -L- STA. 225+25 TO -L- STA. 231+39 LT

NOTE: SEE SHEETS 29 & 30 FOR -L- PROFILE

R16-DEC-2019 16:39 R5740_L-rd-j_PSH-21.dgn
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5/26/99

PROJECT REFERENCE NO. R-5740	SHEET NO. 22
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER

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

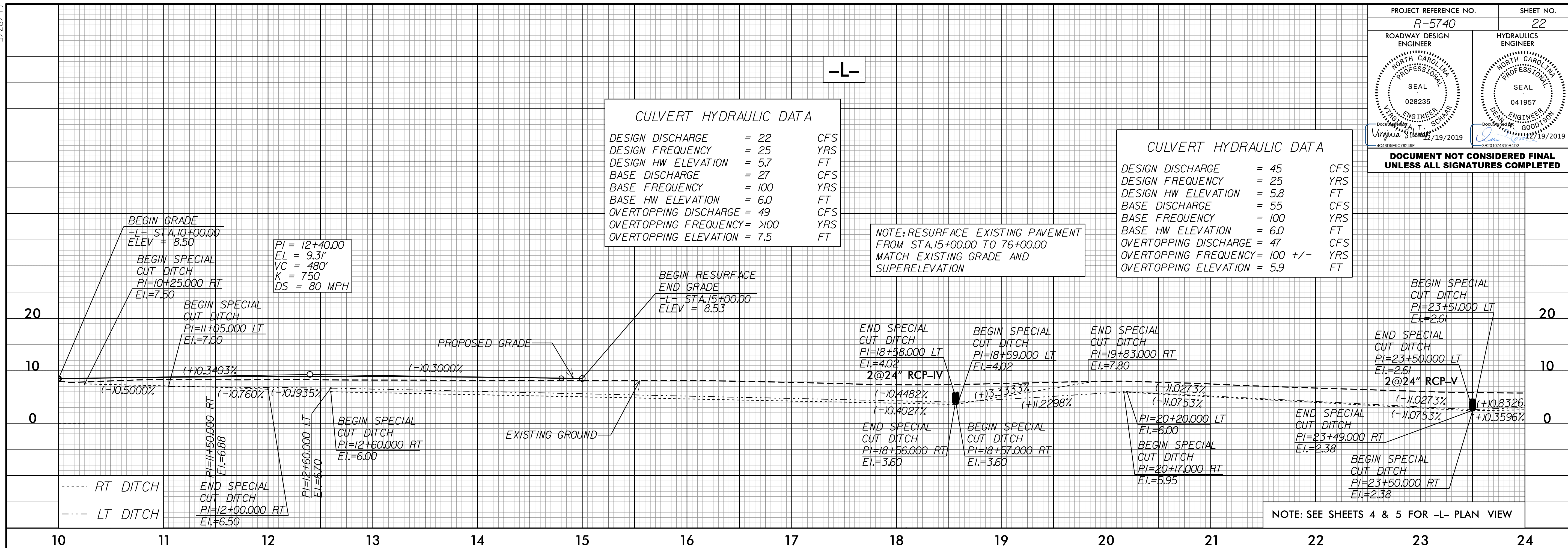
CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 22	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 5.7	FT
BASE DISCHARGE	= 27	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 6.0	FT
OVERTOPPING DISCHARGE	= 49	CFS
OVERTOPPING FREQUENCY	= >100	YRS
OVERTOPPING ELEVATION	= 7.5	FT

CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 45	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 5.8	FT
BASE DISCHARGE	= 55	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 6.0	FT
OVERTOPPING DISCHARGE	= 47	CFS
OVERTOPPING FREQUENCY	= 100 +/-	YRS
OVERTOPPING ELEVATION	= 5.9	FT

NOTE: RESURFACE EXISTING PAVEMENT FROM STA.15+00.00 TO 76+00.00 MATCH EXISTING GRADE AND SUPERELEVATION



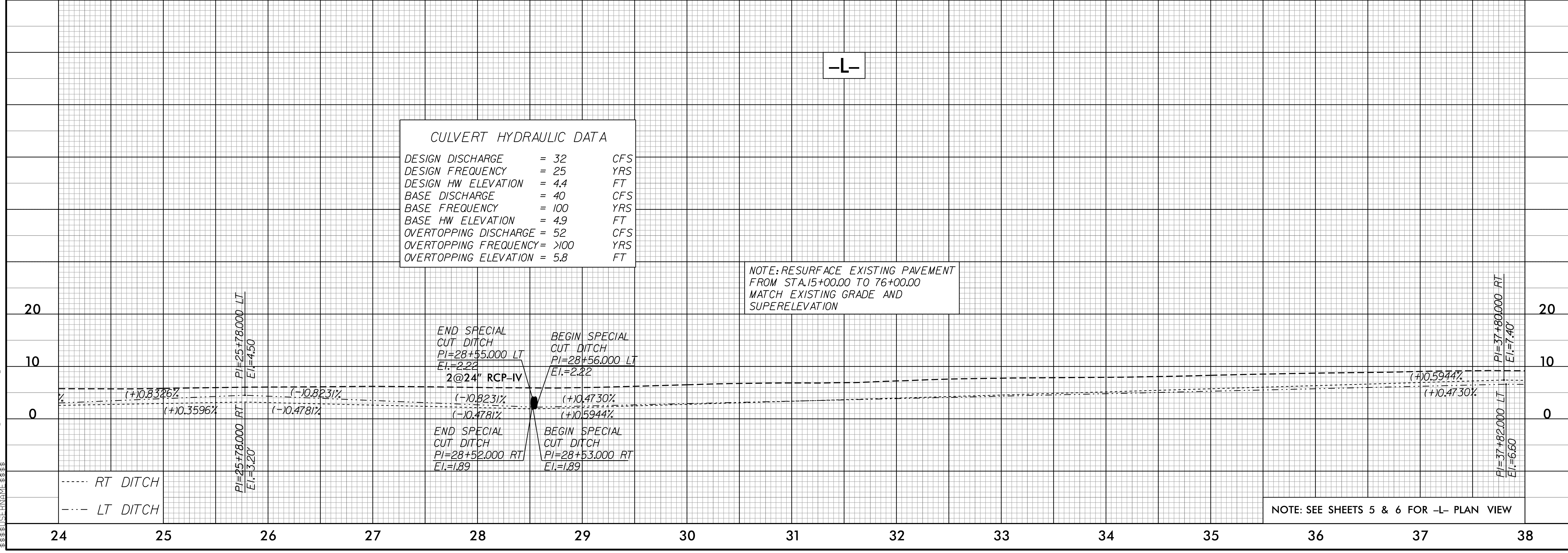
NOTE: SEE SHEETS 4 & 5 FOR -L- PLAN VIEW

-L-

CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 32	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 4.4	FT
BASE DISCHARGE	= 40	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 4.9	FT
OVERTOPPING DISCHARGE	= 52	CFS
OVERTOPPING FREQUENCY	= >100	YRS
OVERTOPPING ELEVATION	= 5.8	FT

NOTE: RESURFACE EXISTING PAVEMENT FROM STA.15+00.00 TO 76+00.00 MATCH EXISTING GRADE AND SUPERELEVATION



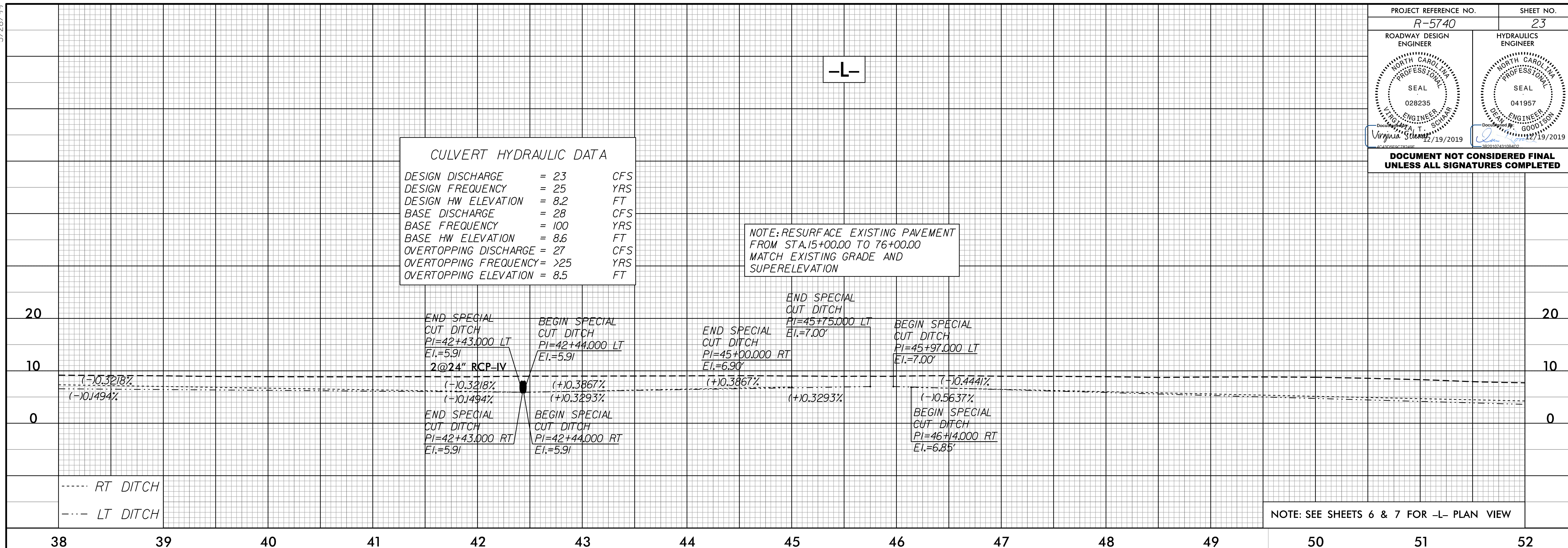
NOTE: SEE SHEETS 5 & 6 FOR -L- PLAN VIEW

17 DEC 2019 11:50 AM R5740_rdy_pfl_PSH.dgn

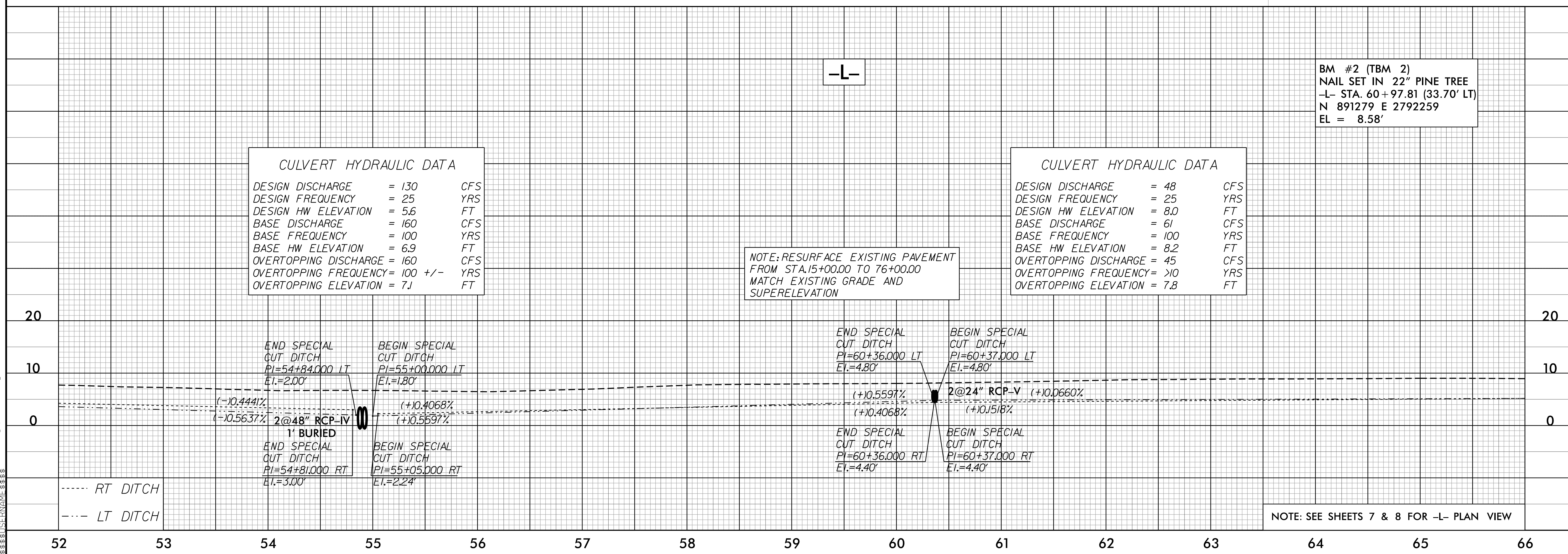
5/26/99

PROJECT REFERENCE NO. R-5740	SHEET NO. 23
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



NOTE: SEE SHEETS 6 & 7 FOR -L- PLAN VIEW



BM #2 (TBM 2)
 NAIL SET IN 22" PINE TREE
 -L- STA. 60+97.81 (33.70' LT)
 N 891279 E 2792259
 EL = 8.58'

NOTE: SEE SHEETS 7 & 8 FOR -L- PLAN VIEW

17 DEC 2019 11:50 AM R5740_rdy_pfl_PSH.dgn

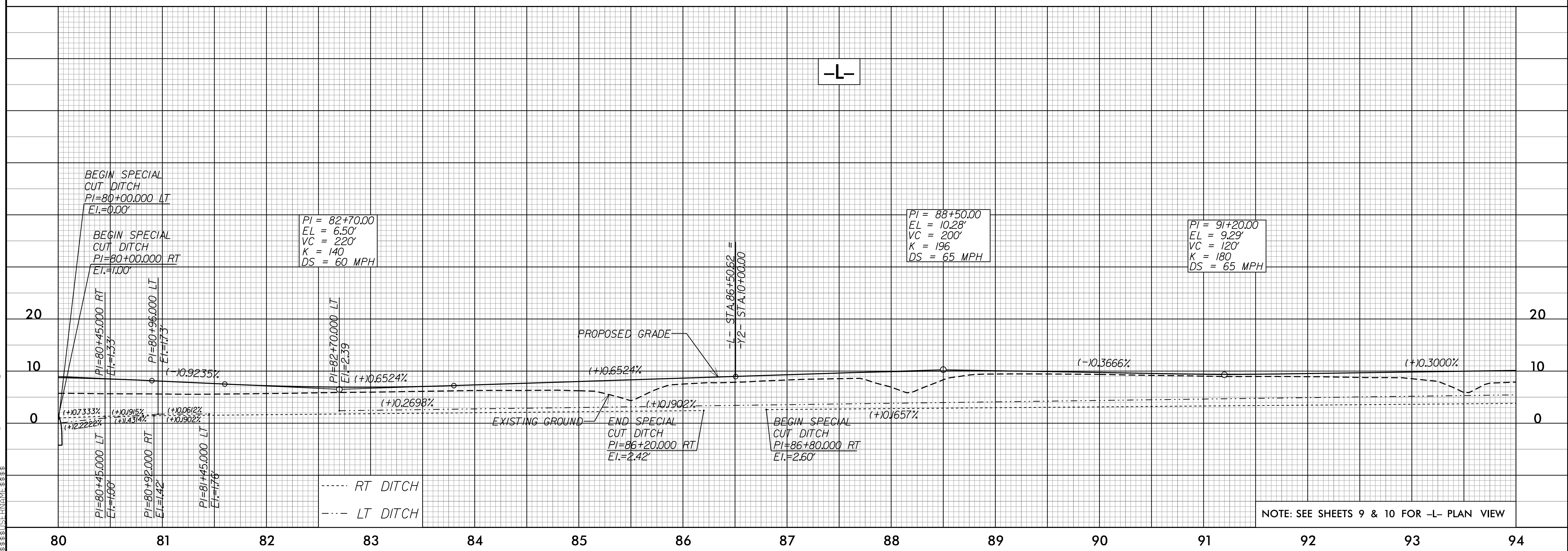
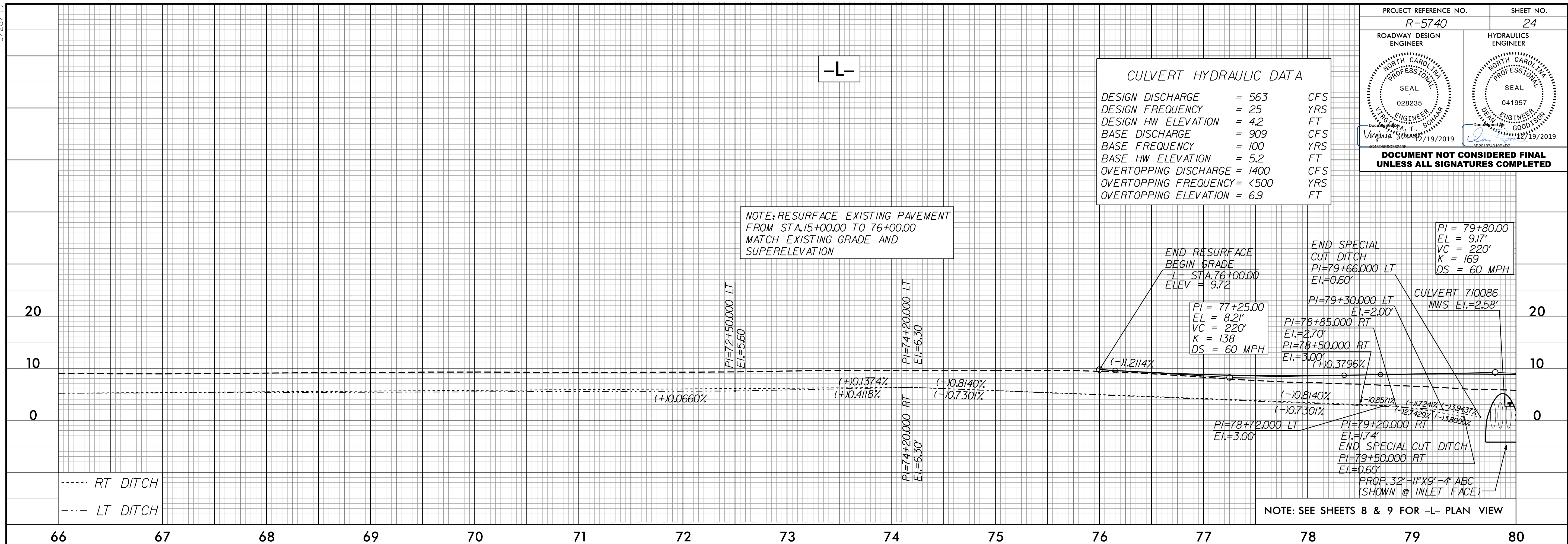
5/26/99

PROJECT REFERENCE NO. R-5740	SHEET NO. 24
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 563	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 4.2	FT
BASE DISCHARGE	= 909	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 5.2	FT
OVERTOPPING DISCHARGE	= 1400	CFS
OVERTOPPING FREQUENCY	= <500	YRS
OVERTOPPING ELEVATION	= 6.9	FT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



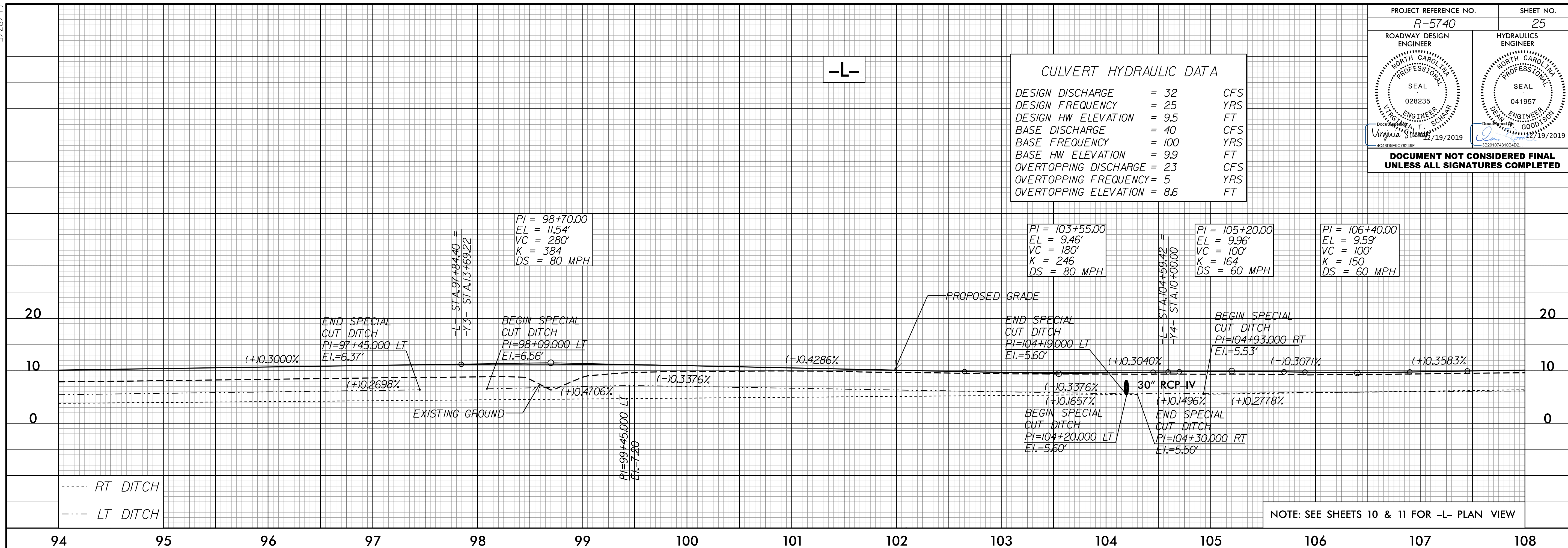
R:\DEC-2019\1:50\NR5740-rdy-pfl_PSH.dgn
5/26/99 10:58:56 AM

5/26/99

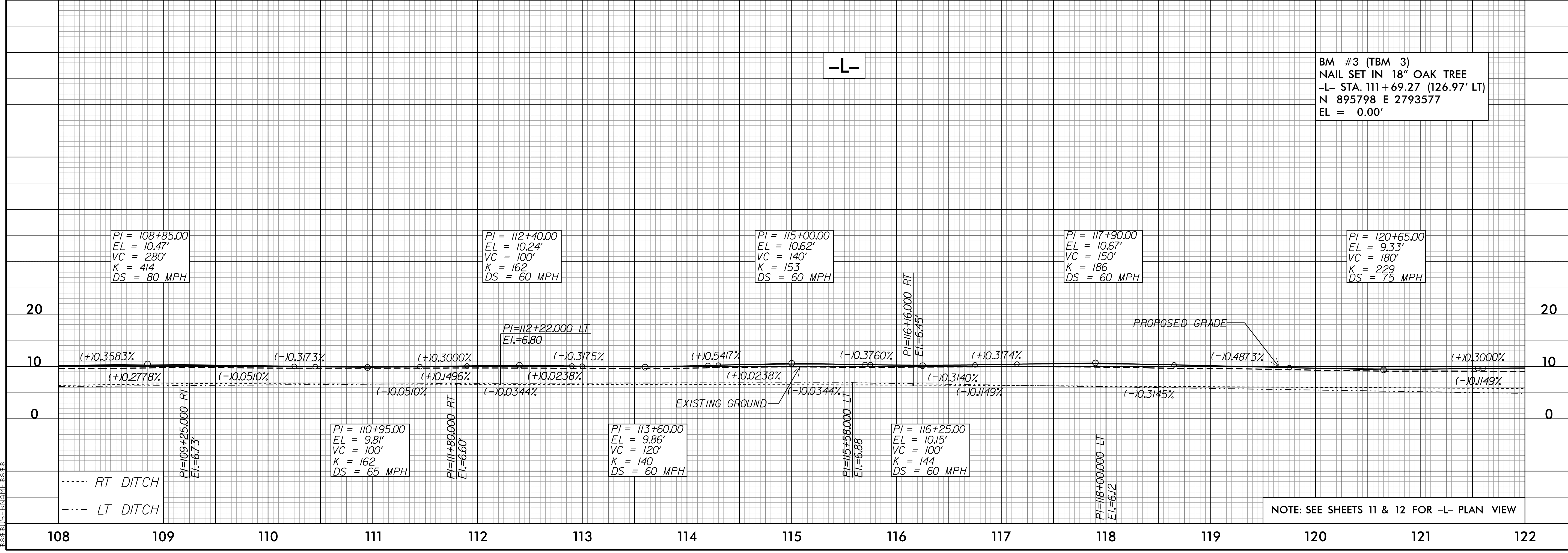
PROJECT REFERENCE NO. R-5740	SHEET NO. 25
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 028235 Virginia Street, Raleigh, NC 27601 12/19/2019	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 041957 12/19/2019

CULVERT HYDRAULIC DATA		
DESIGN DISCHARGE	= 32	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 9.5	FT
BASE DISCHARGE	= 40	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 9.9	FT
OVERTOPPING DISCHARGE	= 23	CFS
OVERTOPPING FREQUENCY	= 5	YRS
OVERTOPPING ELEVATION	= 8.6	FT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



NOTE: SEE SHEETS 10 & 11 FOR -L- PLAN VIEW



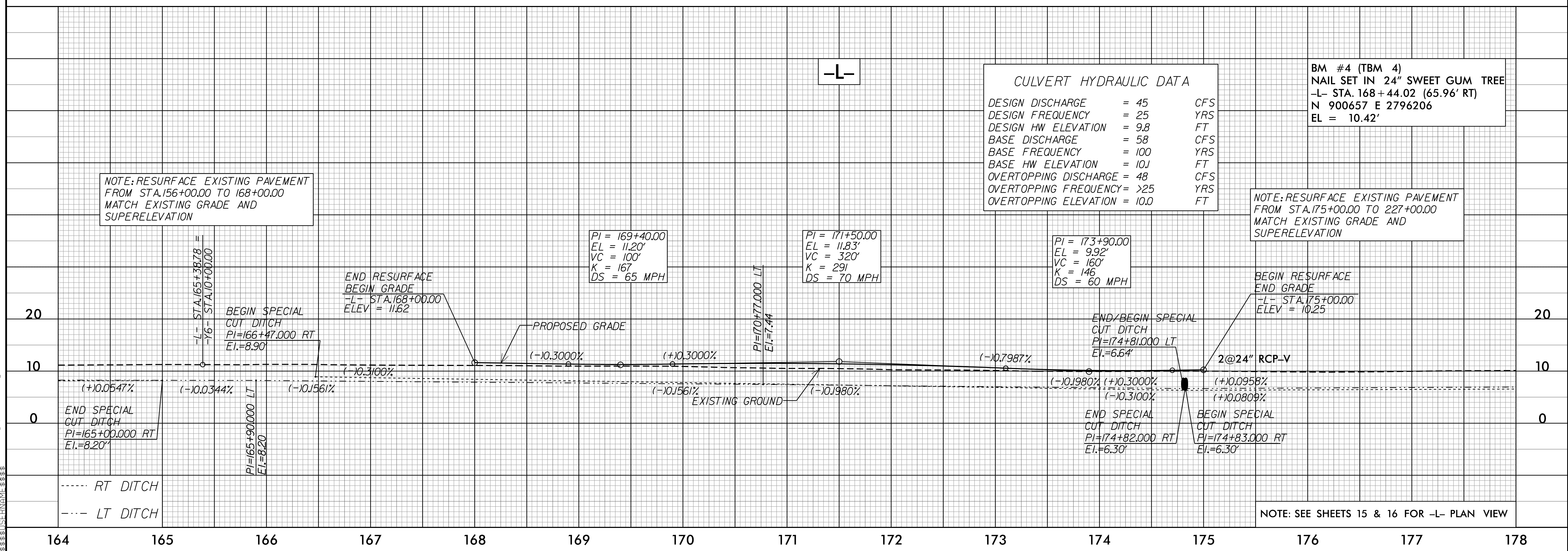
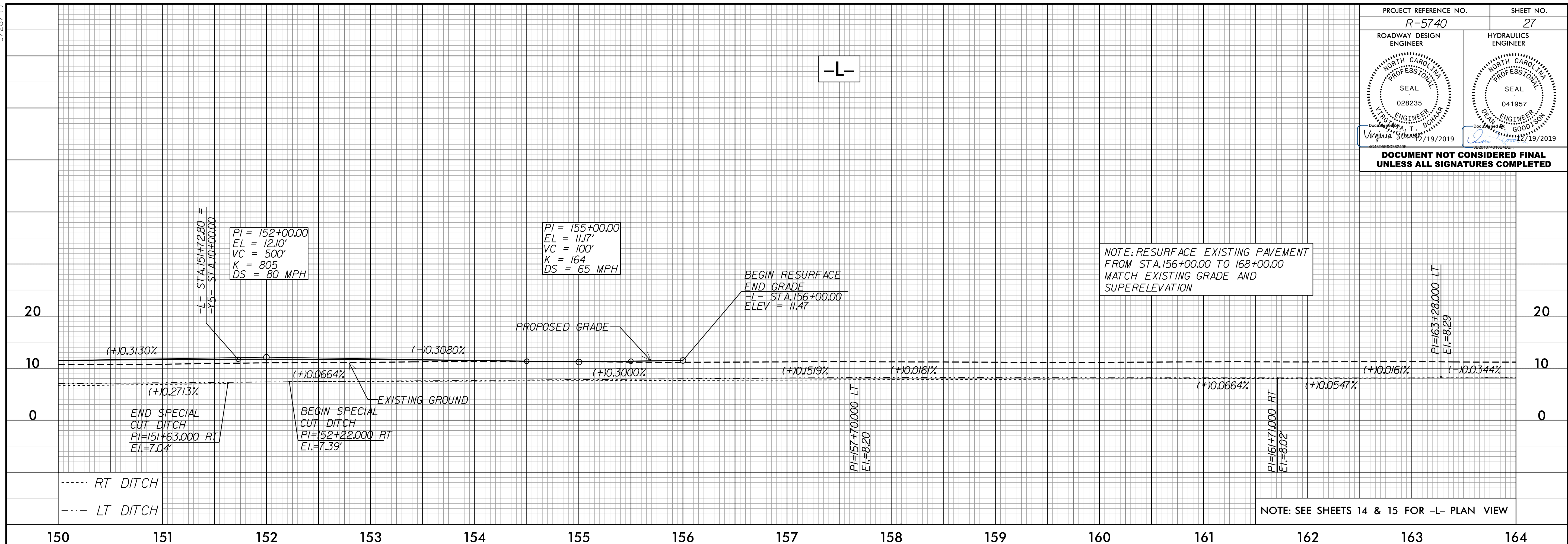
BM #3 (TBM 3)
NAIL SET IN 18" OAK TREE
-L- STA. 111+69.27 (126.97' LT)
N 895798 E 2793577
EL = 0.00'

NOTE: SEE SHEETS 11 & 12 FOR -L- PLAN VIEW

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5/26/99

5/26/99

PROJECT REFERENCE NO. R-5740	SHEET NO. 27
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

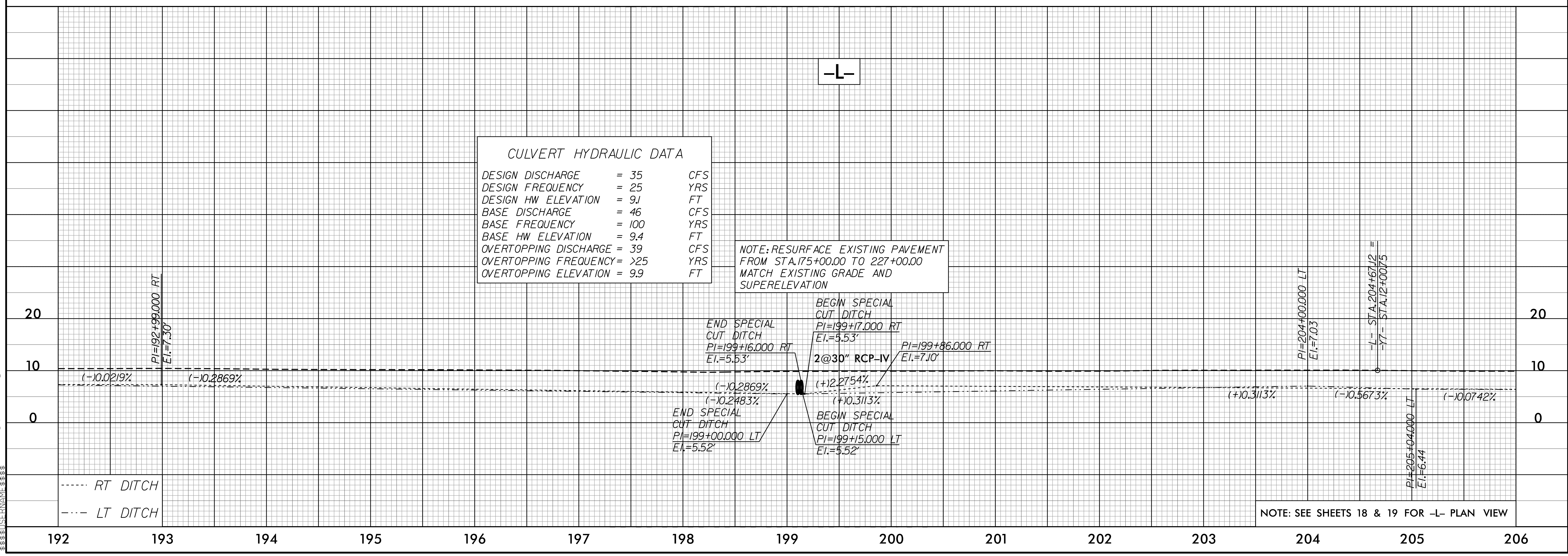
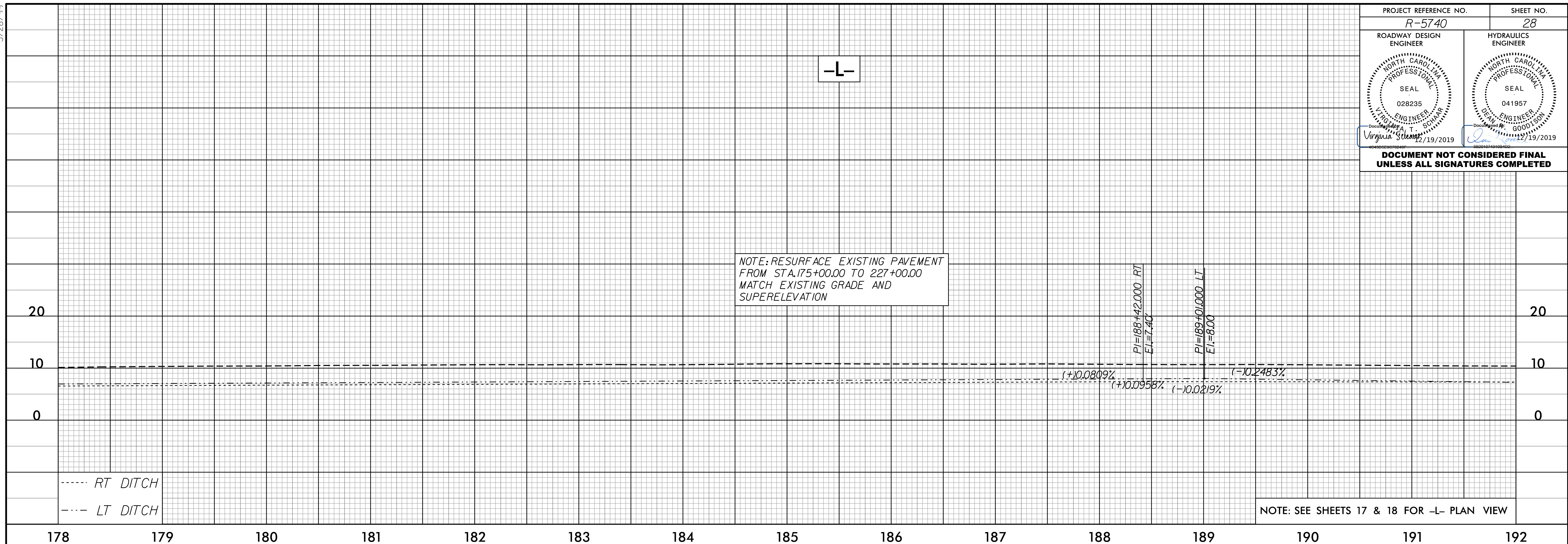


BM #4 (TBM 4)
 NAIL SET IN 24" SWEET GUM TREE
 -L- STA. 168 + 44.02 (65.96' RT)
 N 900657 E 2796206
 EL = 10.42'

17 DEC 2019 11:50 \\P5740-rdy-pf1_PSH.dgn
 \$\$\$\$361037814MPT\$\$\$\$

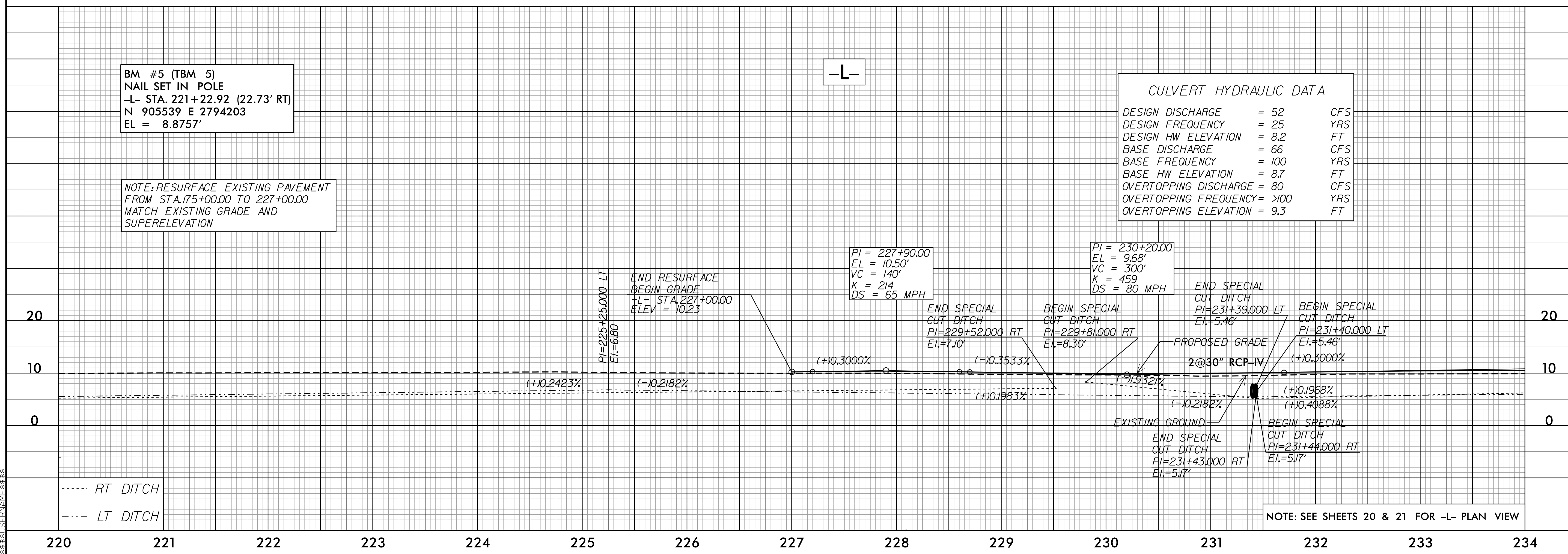
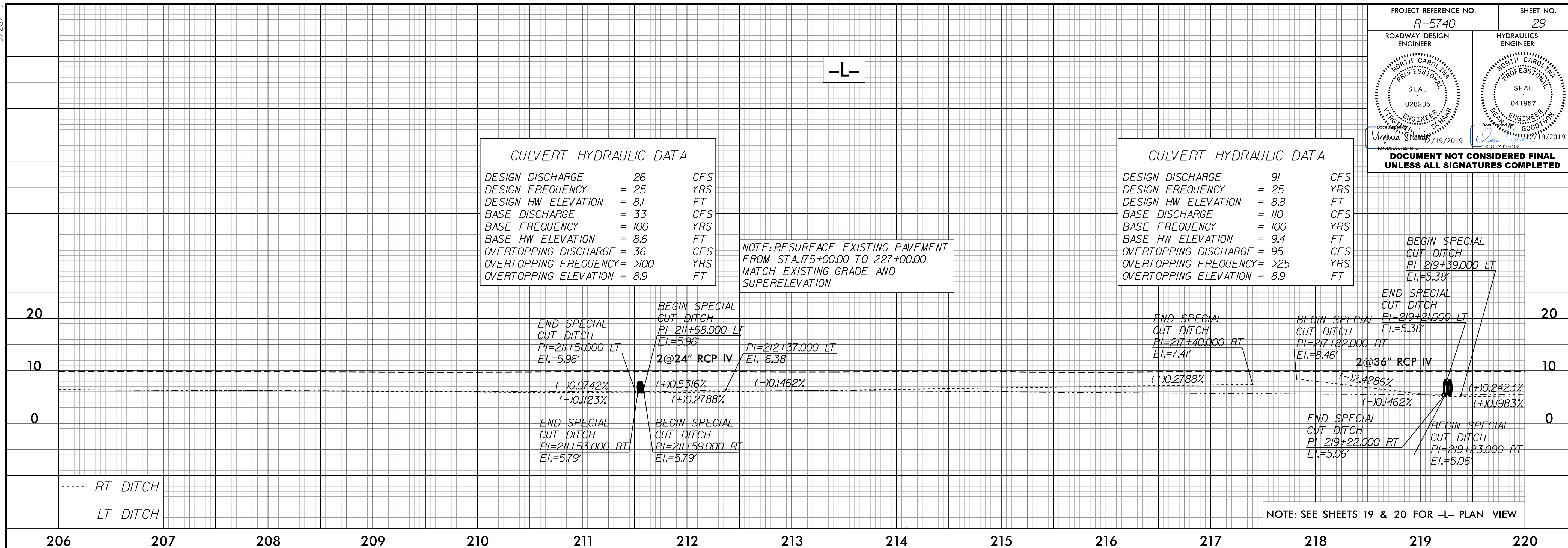
5/26/99

PROJECT REFERENCE NO. R-5740	SHEET NO. 28
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



17 DEC 2019 11:50 AM R5740_rdy_pfl_PSH.dgn

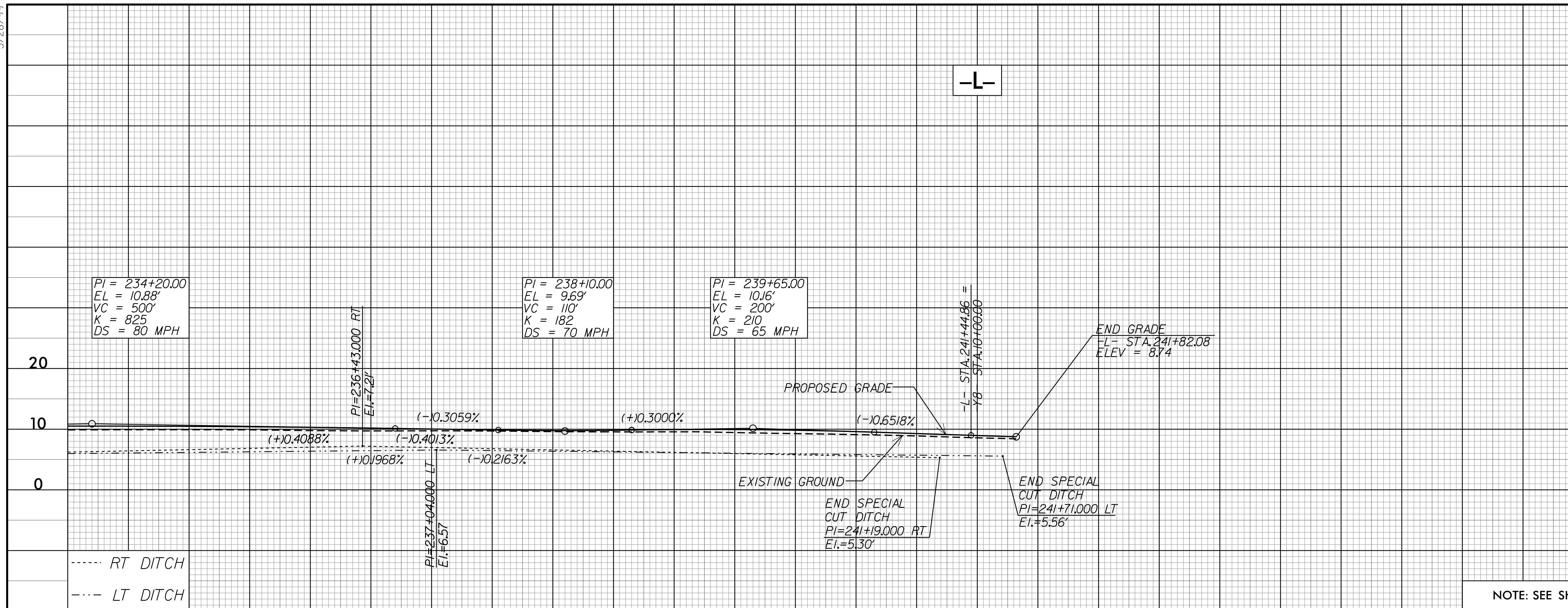
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



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5/26/99

PROJECT REFERENCE NO. R-5740		SHEET NO. 30	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			

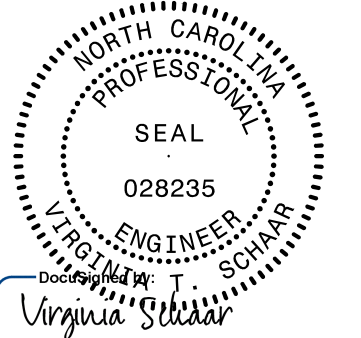
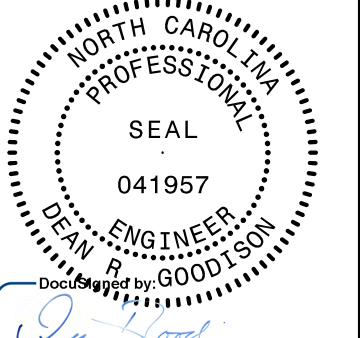


----- RT DITCH
 - - - - LT DITCH

NOTE: SEE SHEET 21 FOR -L- PLAN VIEW

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PROJECT REFERENCE NO. R-5740	SHEET NO. 31
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

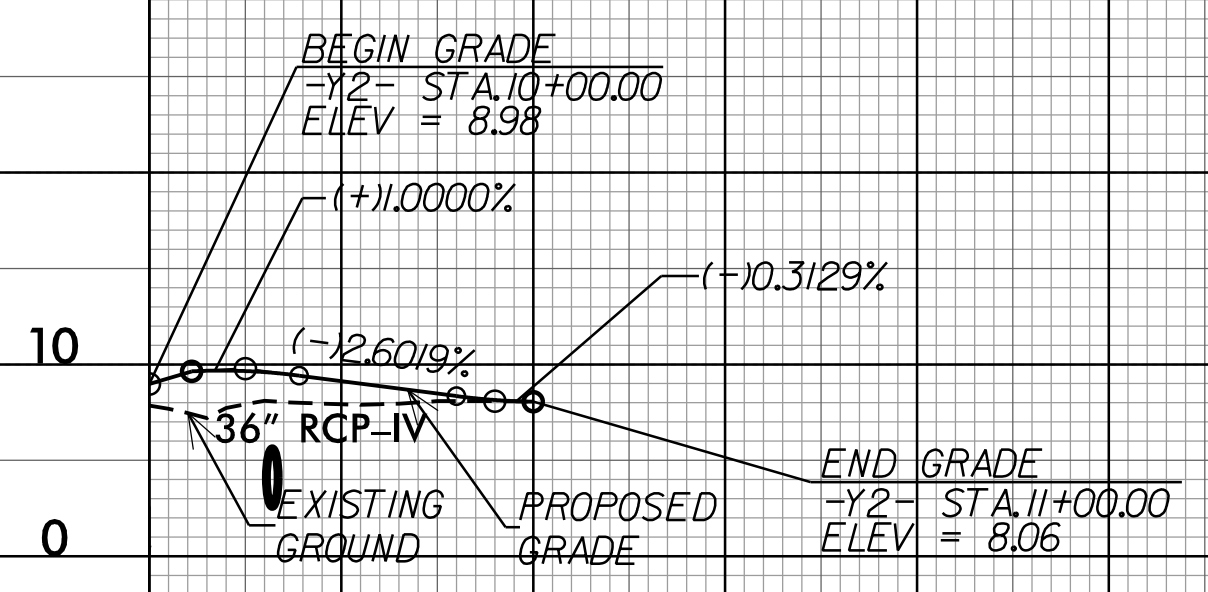
-Y2-

CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 45	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 6J	FT
BASE DISCHARGE	= 59	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 6.9	FT
OVERTOPPING DISCHARGE	= 74	CFS
OVERTOPPING FREQUENCY	= >100	YRS
OVERTOPPING ELEVATION	= 8J	FT

PI = 10+11.00
EL = 9.64'

PI = 10+25.00
EL = 9.78'
VC = 28'
K = 7.8
DS = 20 MPH



PI = 10+90.00
EL = 8.09'
VC = 20'
K = 8.7
DS = 10 MPH

----- RT DITCH
----- LT DITCH

NOTE: SEE SHEET 9 FOR -Y2- PLAN VIEW

10 11

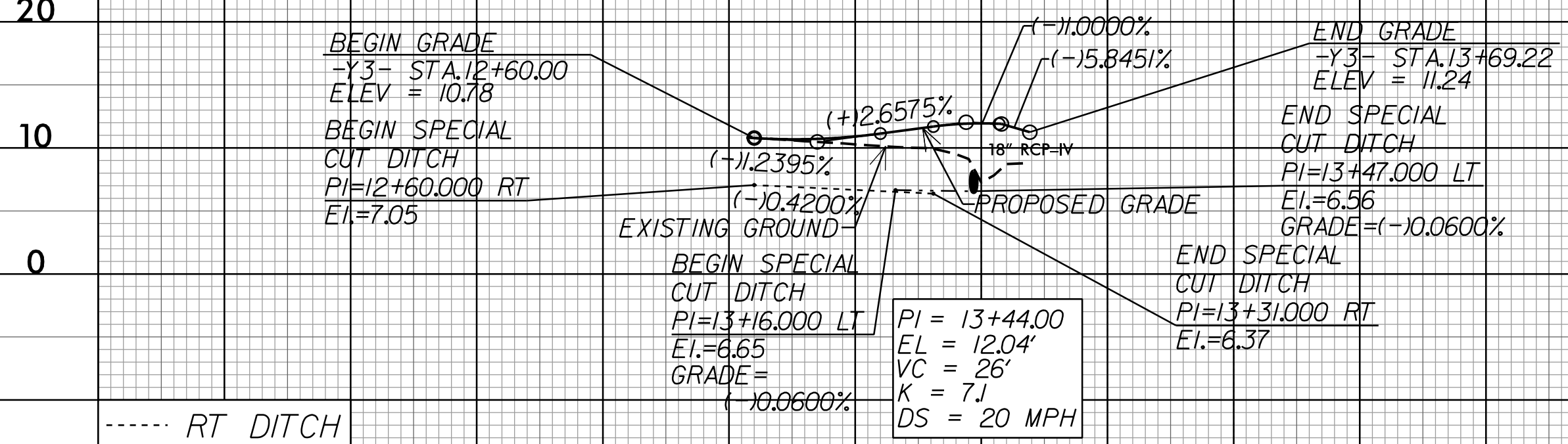
-Y3-

CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 3	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 7.6	FT
BASE DISCHARGE	= 4	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 7.9	FT
OVERTOPPING DISCHARGE	= 14	CFS
OVERTOPPING FREQUENCY	= >100	YRS
OVERTOPPING ELEVATION	= 10.6	FT

PI = 12+85.00
EL = 10.47'
VC = 50'
K = 12.8
DS = 15 MPH

PI = 13+57.99
EL = 11.90'

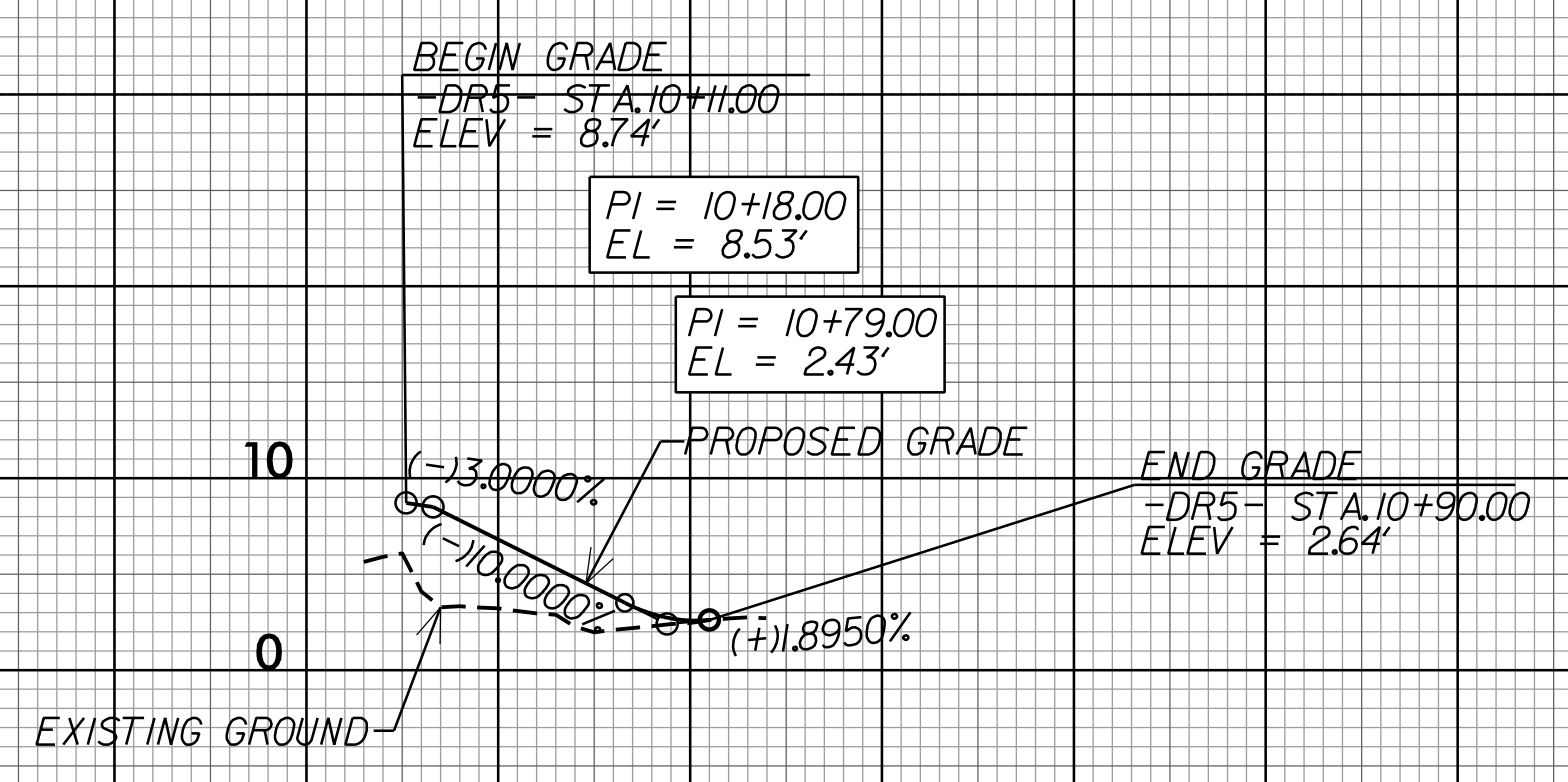


----- RT DITCH
----- LT DITCH

NOTE: SEE SHEET 10 FOR -Y3- PLAN VIEW

10 11 12 13

-DR5-



PI = 10+18.00
EL = 8.53'

PI = 10+79.00
EL = 2.43'

NOTE: SEE SHEET 9 FOR -DR5- PLAN VIEW

10 11

PC: JAN 2000, 20:27, R5740.rdy, p1_PSH.dgn