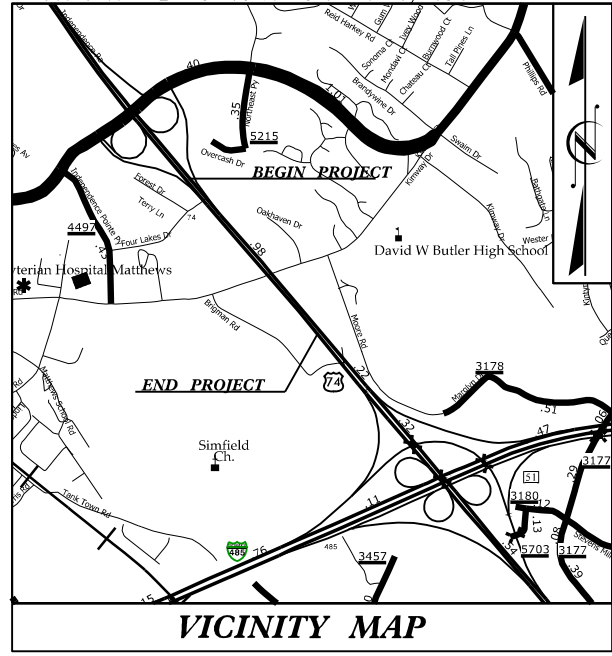


**TIP PROJECT: U-2509AD**

See Sheet 1-B For Conventional Plan Symbols



**VICINITY MAP**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**MECKLENBURG COUNTY**

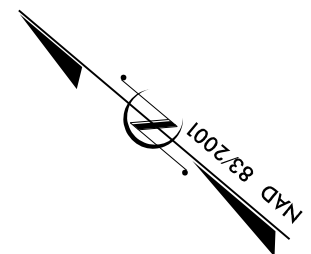
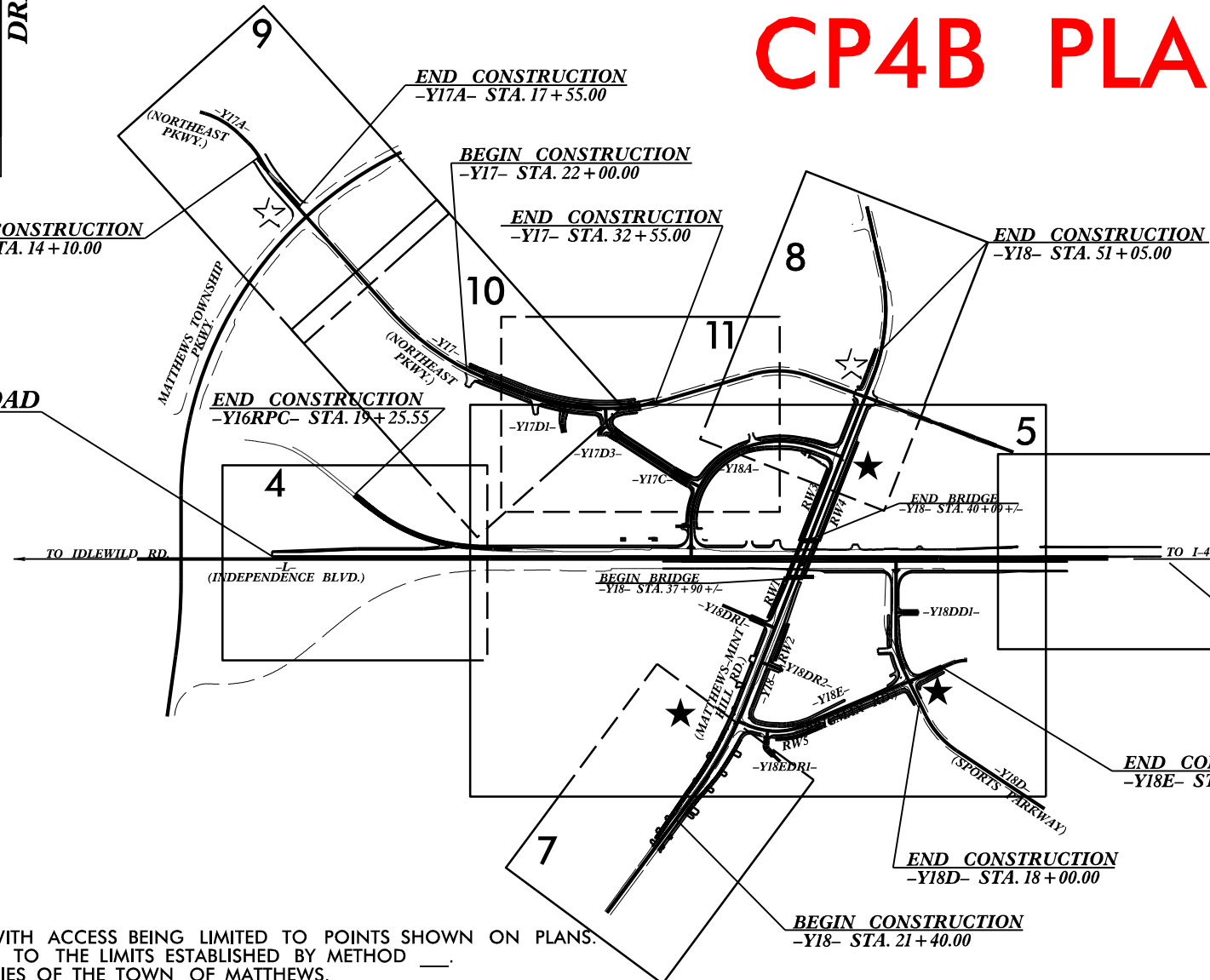
**LOCATION: MATTHEWS-MINT HILL RD/INDEPENDENCE BLVD. INTERSECTION. CONSTRUCT INTERCHANGE FOR MATTHEWS-MINT HILL RD.**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURE, RETAINING WALLS, & SIGNALS.**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2509AD	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38965.1.1	NHS-74(70)	PE	

**CP4B PLANS 1/9/24**

**END TIP PROJECT U-2509AD**  
**-L- STA. 542 + 41.11**

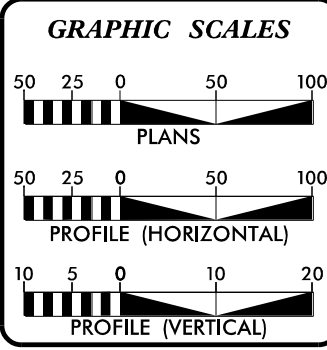


★ PROPOSED TRAFFIC SIGNAL  
☆ REVISED TRAFFIC SIGNAL

INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS SHOWN ON PLANS. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD \_\_\_\_ THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE TOWN OF MATTHEWS.

**CONTRACT:**



**DESIGN DATA**

ADT 2028 =	86,810
ADT 2048 =	125,625
K =	12 %
D =	60 %
T =	4 % *
V =	50 MPH
* TTST =	1% DUAL = 3%
FUNC. CLASS =	ARTERIAL

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT U-2509AD =	0.907 MILES
TOTAL LENGTH TIP PROJECT U-2509AD =	0.907 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

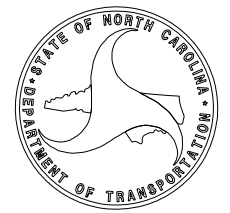
Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2024 STANDARD SPECIFICATIONS  
**RIGHT OF WAY DATE:**  
JULY 31, 2024  
**LETTING DATE:**  
JULY 18, 2028

**BOB A. MAY, PE**  
PROJECT ENGINEER  
**JONATHAN HEFNER, PE**  
PROJECT DESIGN ENGINEER

**NCDOT CONTACT:**  
**BRYAN KEY, PE**  
PMU PROJECT MANAGER

**HYDRAULICS ENGINEER**  
  
**ROADWAY DESIGN ENGINEER**



\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$USERNAME\$\$\$\$\$

# 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	-MLB-
Proposed Wetland Boundary	-MLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Existing Historic Property Boundary	-HPB-
Known Contamination Area: Soil	-s-s-
Potential Contamination Area: Soil	-?s-?
Known Contamination Area: Water	-w-w-
Potential Contamination Area: Water	-?w-?
Contaminated Site: Known or Potential	☠☠

## BUILDINGS AND OTHER CULTURE:

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

## HYDROLOGY:

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

## RAILROADS:

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

Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

## RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	◆
Exist Permanent Easement Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	⊕
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	-----
New Right of Way Line with Pin and Cap	○
New Right of Way Line with Concrete or Granite R/W Marker	△
New Control of Access Line with Concrete C/A Marker	○
Existing Control of Access	○
New Control of Access	○
Existing Easement Line	-----
New Temporary Construction Easement	-----
New Temporary Drainage Easement	-----
New Permanent Drainage Easement	-----
New Permanent Drainage / Utility Easement	-----
New Permanent Utility Easement	-----
New Temporary Utility Easement	-----
New Aerial Utility Easement	-----

## ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-C-
Proposed Slope Stakes Fill	-F-
Proposed Curb Ramp	CR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	-----

## VEGETATION:

Single Tree	○
Single Shrub	○

Hedge	-----
Woods Line	-----
Orchard	○
Vineyard	□ Vineyard

## EXISTING STRUCTURES:

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

## UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊕
Power Transformer	⊕
U/G Power Cable Hand Hole	○
H-Frame Pole	●
U/G Power Line LOS B (S.U.E.*)	-----
U/G Power Line LOS C (S.U.E.*)	-----
U/G Power Line LOS D (S.U.E.*)	-----

## TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Pedestal	□
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	○
U/G Telephone Cable LOS B (S.U.E.*)	-----
U/G Telephone Cable LOS C (S.U.E.*)	-----
U/G Telephone Cable LOS D (S.U.E.*)	-----
U/G Telephone Conduit LOS B (S.U.E.*)	-----
U/G Telephone Conduit LOS C (S.U.E.*)	-----
U/G Telephone Conduit LOS D (S.U.E.*)	-----
U/G Fiber Optics Cable LOS B (S.U.E.*)	-----
U/G Fiber Optics Cable LOS C (S.U.E.*)	-----
U/G Fiber Optics Cable LOS D (S.U.E.*)	-----

## WATER:

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

## TV:

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

## GAS:

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

## MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line LOS B (S.U.E.*)	-----
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	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.

5/26/20

SDATES \$TIMES \$DCNS

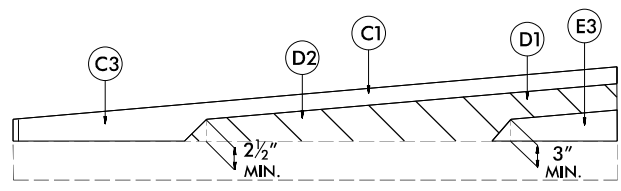
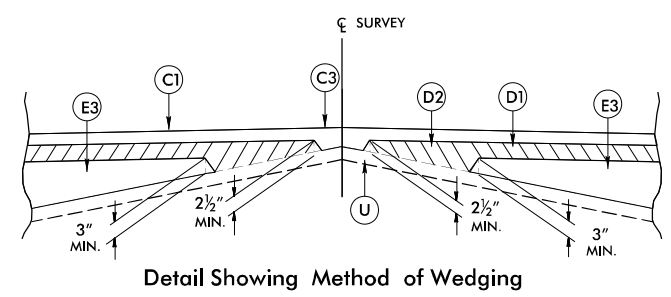
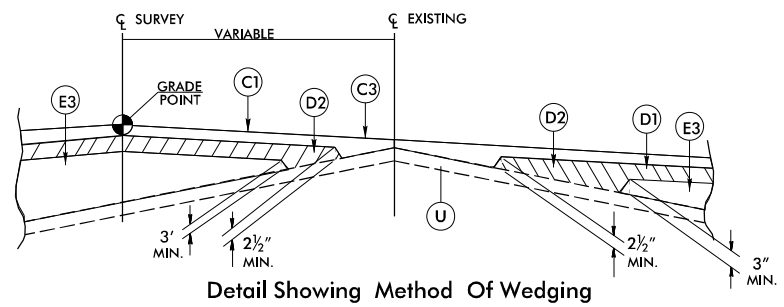
# PAVEMENT SCHEDULE

(PRELIMINARY PAVEMENT DESIGN)

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R2	2'-6" CONCRETE CURB AND GUTTER.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	R3	5" MONOLITHIC CONCRETE ISLAND (KEYED-IN)
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	R4	4" CONCRETE ISLAND COVER
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	S1	4" CONCRETE SIDEWALK.
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.	S2	6" CONCRETE MULTI-USE PATH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	T	EARTH MATERIAL.
E2	PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.
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 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.	V	MILLING BITUMINOUS PAVEMENT. 1½" DEPTH.
R1	1'-6" CONCRETE CURB AND GUTTER.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL SHEET No. 2A-1)

NOTE: NO PAVEMENT DESIGN HAS BEEN PROVIDED AT THIS TIME.

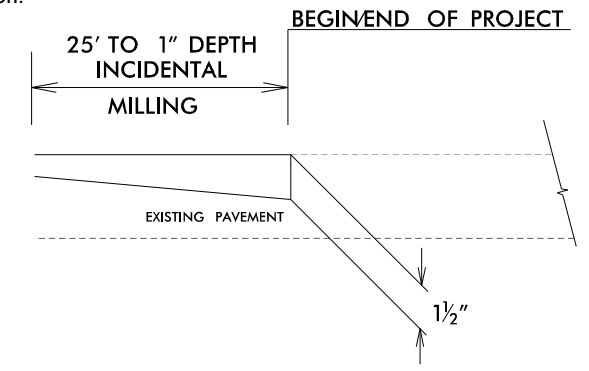
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



Wedging Detail For Resurfacing

**NOTES TO CONTRACTOR**

Perform the work in accordance with Section 607 of the January 2024 North Carolina Department of Transportation Standard Specifications for Roads and Structures. Resurfacing will be accomplished at the same time as the milling operation.



NOTE: UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS

U-2509AD

RDY 2A-1

NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
MECKLENBURG COUNTY



ROADWAY DESIGN UNIT  
ROADWAY DESIGN  
ENGINEER

**INCOMPLETE PLANS**  
DO NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PAVEMENT DESIGN  
ENGINEER

PREPARED BY  
**ETHERILL**  
ENGINEERING

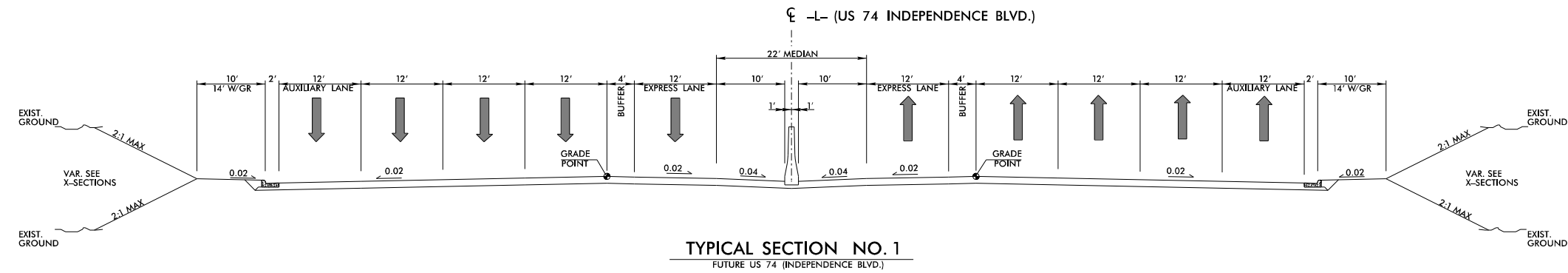
WE Design your Tomorrow ...

1223 Jones Franklin Road  
Raleigh, NC 27606  
(919) 851-8077

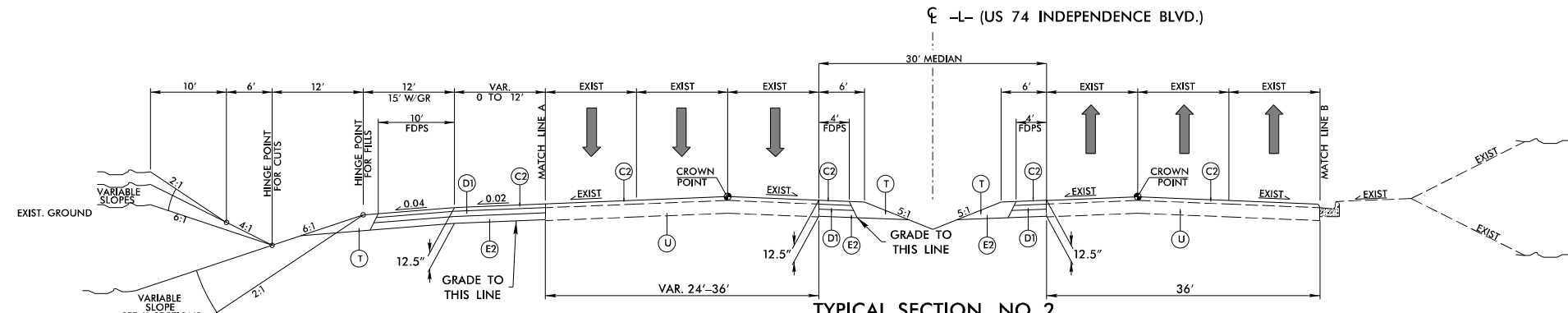
NC License F-0377

5/26/20

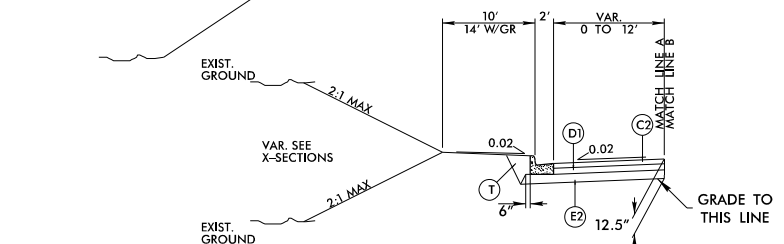
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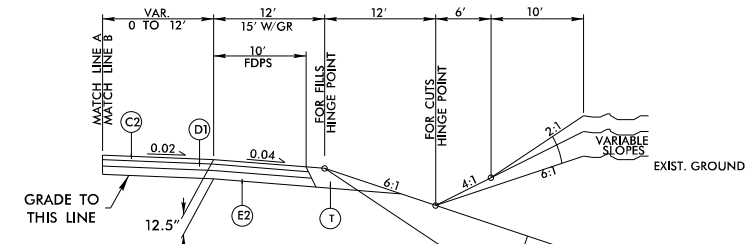
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FUTURE US 74 (INDEPENDENCE BLVD.)



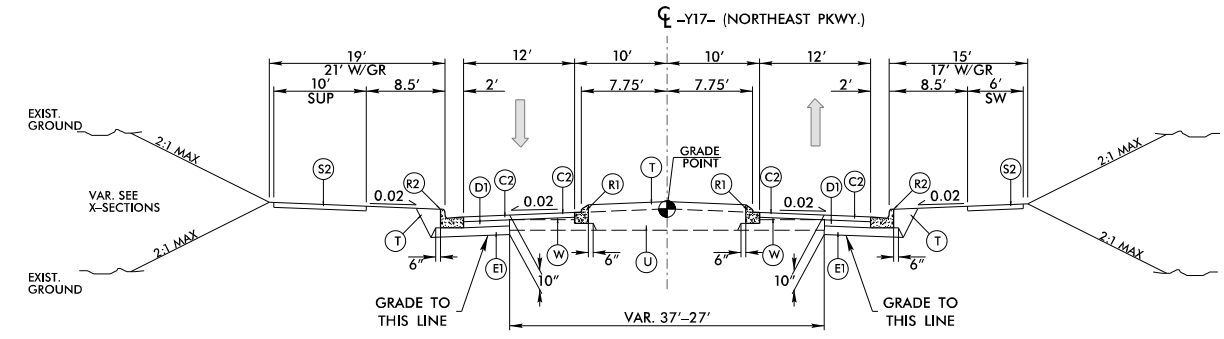
**TYPICAL SECTION NO. 2**  
USE TYPICAL SECTION NO. 2  
-L- STA. 542+41.11 TO -L- STA. 590+30.00 MED. LT.  
-L- STA. 563+43.78 TO -L- STA. 585+23.28 MED. RT.



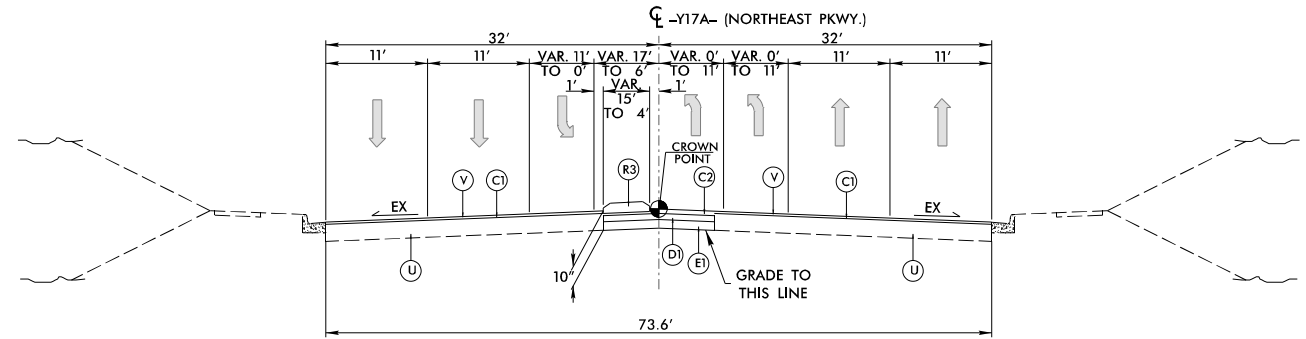
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USE PARTIAL TYPICAL SECTION NO. 1  
-L- STA. 569+74.41 TO -L- STA. 572+24.63 LT.  
-L- STA. 569+13.78 TO -L- STA. 572+13.78 RT.



**PARTIAL TYPICAL SECTION NO. 2**  
USE PARTIAL TYPICAL SECTION NO. 2  
-L- STA. 542+41.11 TO -L- STA. 569+74.41 LT.  
-L- STA. 572+13.78 TO -L- STA. 582+65.78 RT.  
-L- STA. 579+32.65 TO -L- STA. 590+30.00 LT.



**TYPICAL SECTION NO. 3**  
USE TYPICAL SECTION NO. 3  
-Y17- STA. 22+00.00 TO -Y17- STA. 23+45.30  
-Y17- STA. 31+49.67 TO -Y17- STA. 31+55.00

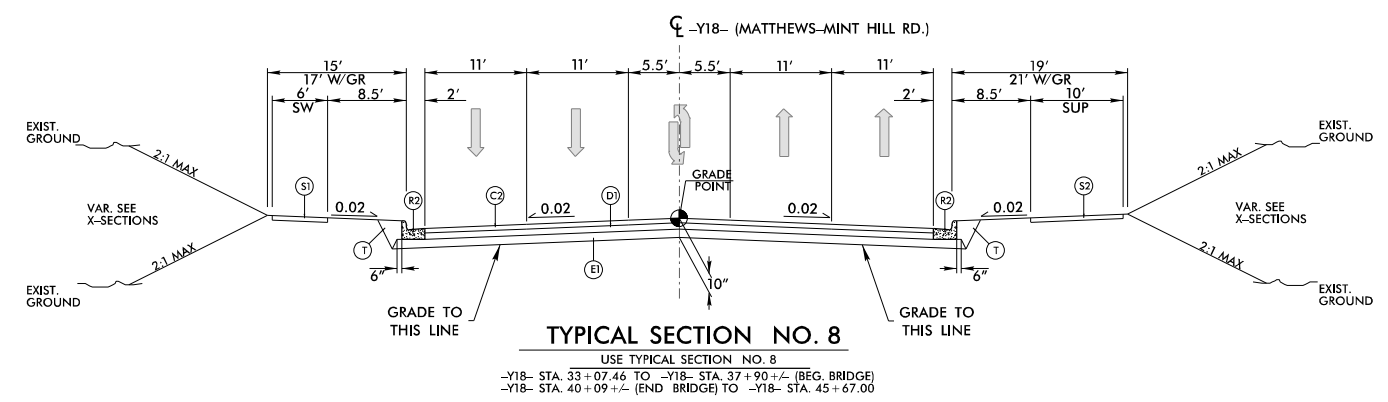
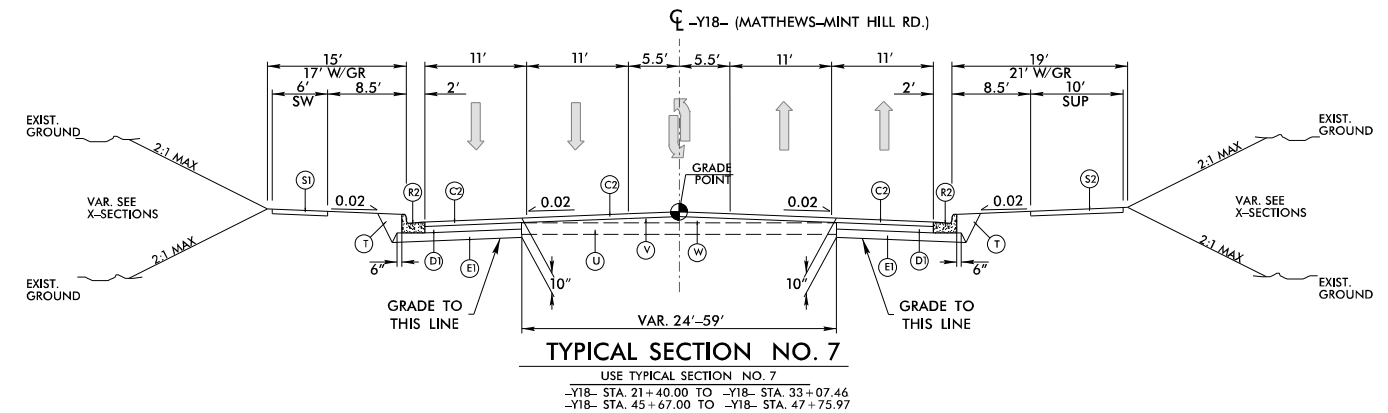
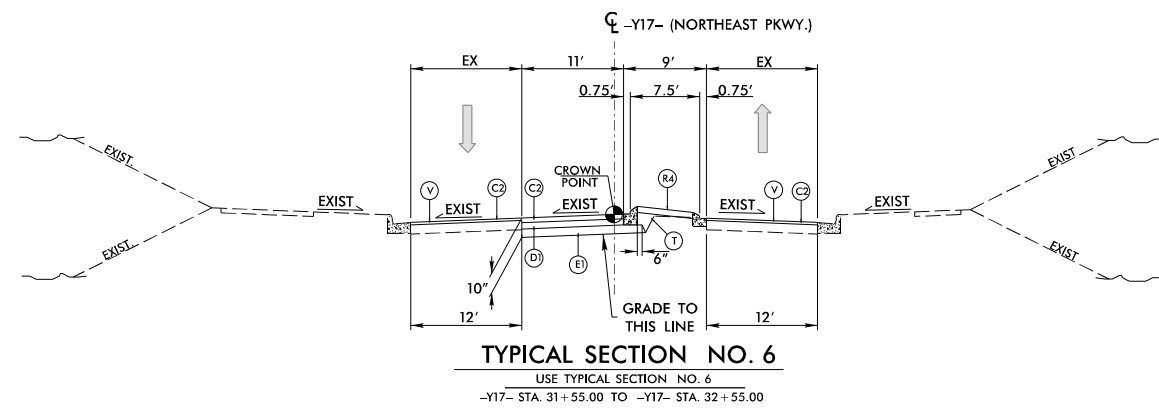
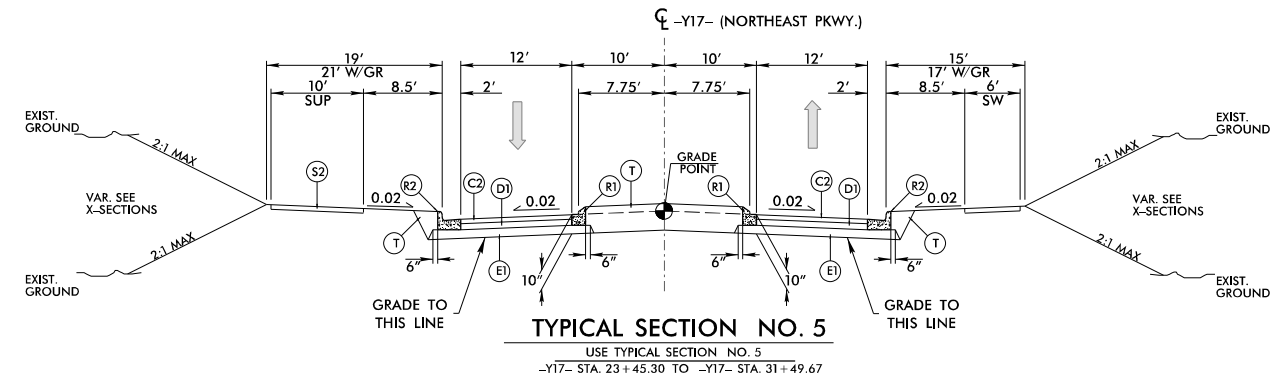


**TYPICAL SECTION NO. 4**  
USE TYPICAL SECTION NO. 4  
-Y17A- STA. 14+10.00 TO -Y17A- STA. 17+55.00

PAVEMENT SCHEDULE (PRELIMINARY PAVEMENT DESIGN)	
C1	1 1/2" S9.5C
C2	3" S9.5C
C3	VAR. S9.5C
D1	4" I19.5C
D2	VAR. I19.5C
E1	3" B25.0C
E2	5 1/2" B25.0C
E3	VAR. B25.0C
R1	1'-6" C & G
R2	2'-6" C & G
R3	5" CONC. ISL. KEYED-IN
R4	4" ISLAND COVER
S1	4" SIDEWALK
S2	6" CONC. SUP
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	1 1/2" MILLING

**U-2509AD**  
RDY 2A-2  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
MECKLENBURG COUNTY  
ROADWAY DESIGN UNIT  
ROADWAY DESIGN ENGINEER  
**INCOMPLETE PLANS**  
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED  
PAVEMENT DESIGN ENGINEER  
PREPARED BY  
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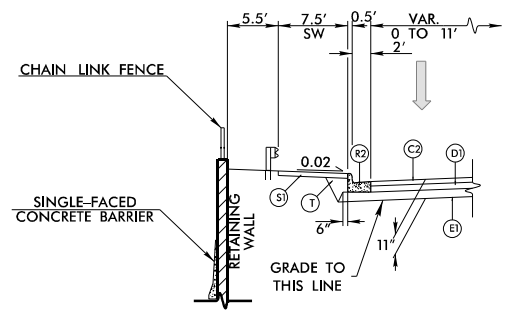
5/26/20



PAVEMENT SCHEDULE (PRELIMINARY PAVEMENT DESIGN)		U-2509AD	
C1	1 1/2" S9.5C	RDY	2A-3
C2	3" S9.5C	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION MECKLENBURG COUNTY	
C3	VAR. S9.5C	ROADWAY DESIGN UNIT ROADWAY DESIGN ENGINEER	
D1	4" I19.5C	INCOMPLETE PLANS DO NOT USE FOR FINAL APPROVAL DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
D2	VAR. I19.0C	PAVEMENT DESIGN ENGINEER	
E1	3" B25.0C	PREPARED BY <b>WETHERILL ENGINEERING</b>	
E2	5 1/2" B25.0C	WE Design your Tomorrow ... 1223 Jones Franklin Road Raleigh, NC 27606 (919) 851-8077 NC License F-0377	
E3	VAR. B25.0C		
R1	1'-6" C & G		
R2	2'-6" C & G		
R3	5" CONC. ISL. KEYED-IN		
R4	4" ISLAND COVER		
S1	4" SIDEWALK		
S2	6" CONC. SUP		
T	EARTH MATERIAL		
U	EXIST. PAVEMENT		
V	1 1/2" MILLING		

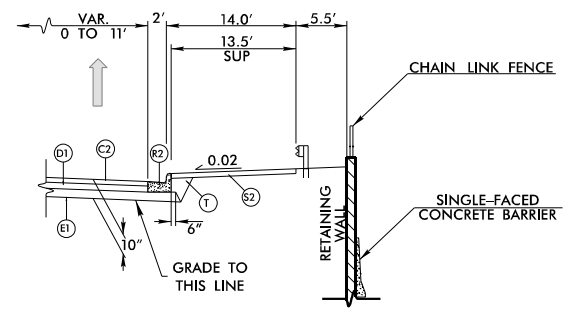
SDATES \$TIMES \$DCNS

5/26/20



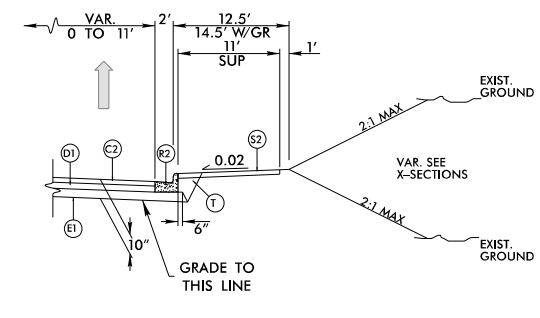
**PARTIAL TYPICAL SECTION NO. 8A**

USE PARTIAL TS NO. 8A IN CONJUNCTION W/TS NO. 8  
-Y18- STA. 35+37.23 TO -Y18- STA. 37+80.31 LT.  
-Y18- STA. 39+84.26 TO -Y18- STA. 44+08.25 LT.



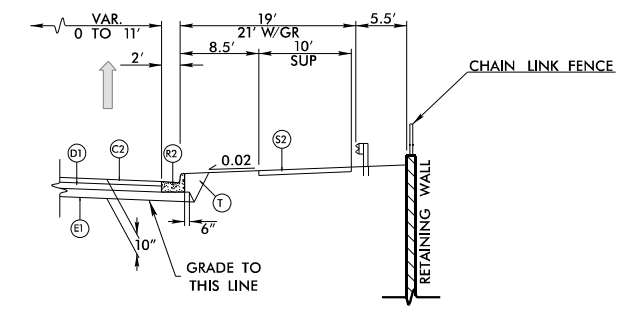
**PARTIAL TYPICAL SECTION NO. 8B**

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-Y18- STA. 40+21.59 TO -Y18- STA. 46+00.00 RT.



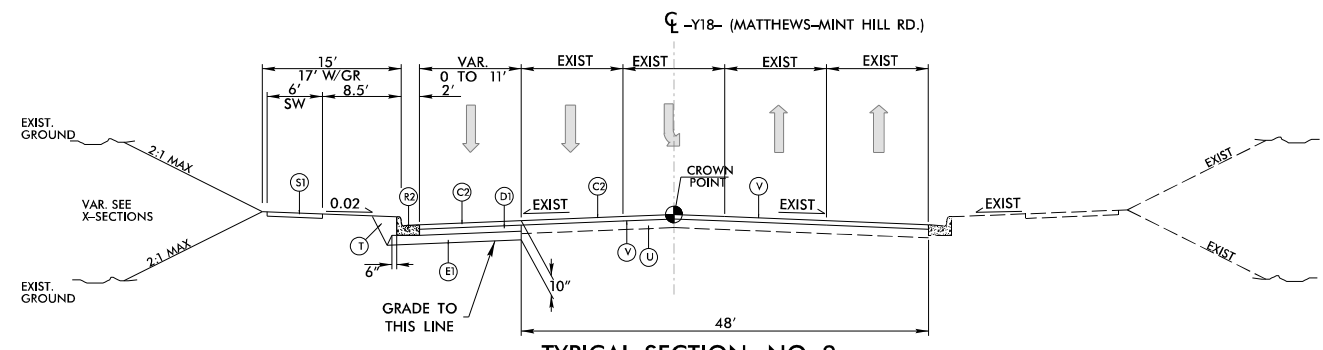
**PARTIAL TYPICAL SECTION NO. 8C**

USE PARTIAL TS NO. 8C IN CONJUNCTION W/TS NO. 7  
-Y18- STA. 21+40.00 TO -Y18- STA. 29+00.00 RT.  
-Y18- STA. 46+00.00 TO -Y18- STA. 48+01.08 RT.



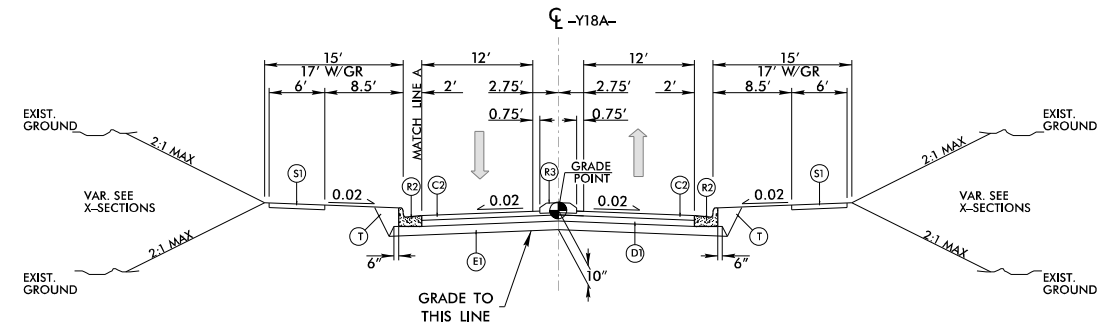
**PARTIAL TYPICAL SECTION NO. 8D**

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-Y18- STA. 33+35.00 TO -Y18- STA. 35+50.00 RT.



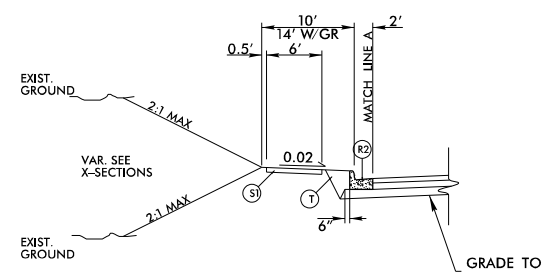
**TYPICAL SECTION NO. 9**

USE TYPICAL SECTION NO. 9  
-Y18- STA. 47+75.97 TO -Y18- STA. 51+05.00



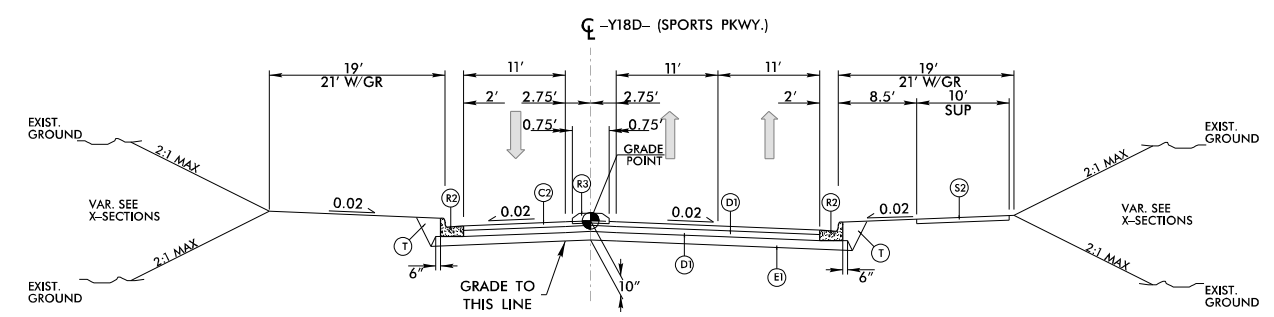
**TYPICAL SECTION NO. 10**

USE TYPICAL SECTION NO. 10  
-Y18A- STA. 10+51.00 TO -Y18A- STA. 22+37.58



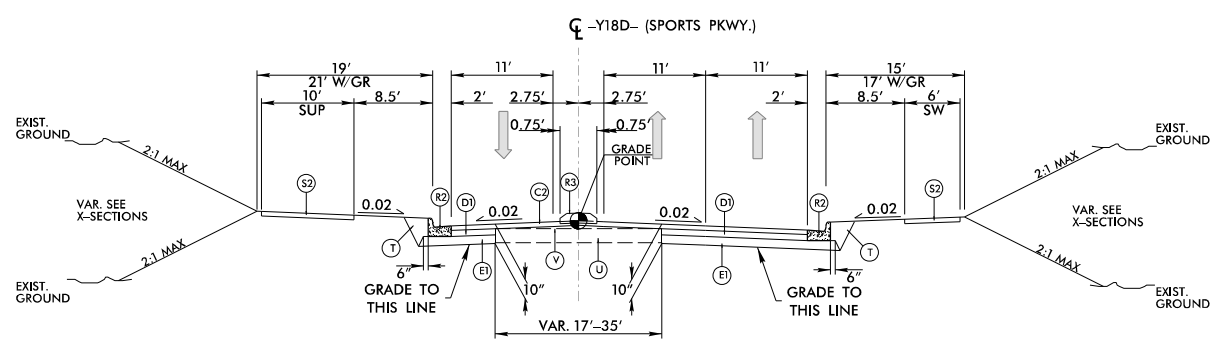
**PARTIAL TYPICAL SECTION NO. 10A**

USE PARTIAL TS NO. 10A IN CONJUNCTION W/TS NO. 10  
-Y18A- STA. 11+34.49 TO -Y18A- STA. 13+50.00 LT.



**TYPICAL SECTION NO. 11**

USE TYPICAL SECTION NO. 11  
-Y18D- STA. 10+51.00 TO -Y18D- STA. 16+61.30



**TYPICAL SECTION NO. 12**

USE TYPICAL SECTION NO. 12  
-Y18D- STA. 16+94.35 TO -Y18D- STA. 18+00.00

PAVEMENT SCHEDULE (PRELIMINARY PAVEMENT DESIGN)	
C1	1 1/2" S9.5C
C2	3" S9.5C
C3	VAR. S9.5C
D1	4" I19.5C
D2	VAR. I19.0C
E1	3" B25.0C
E2	5 1/2" B25.0C
E3	VAR. B25.0C
R1	1'-6" C & G
R2	2'-6" C & G
R3	5" CONC. ISL. KEYED-IN
R4	4" ISLAND COVER
S1	4" SIDEWALK
S2	6" CONC. SUP
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	1 1/2" MILLING

**U-2509AD**  
RDY 2A-4  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
MECKLENBURG COUNTY

ROADWAY DESIGN UNIT  
ROADWAY DESIGN ENGINEER

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

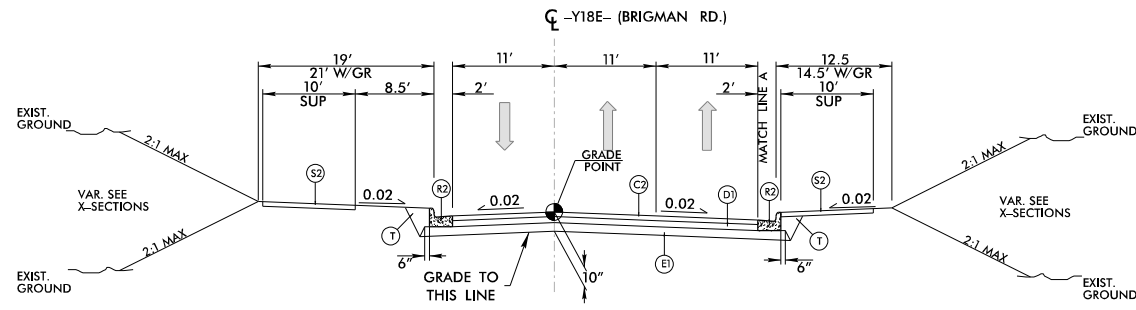
PAVEMENT DESIGN ENGINEER

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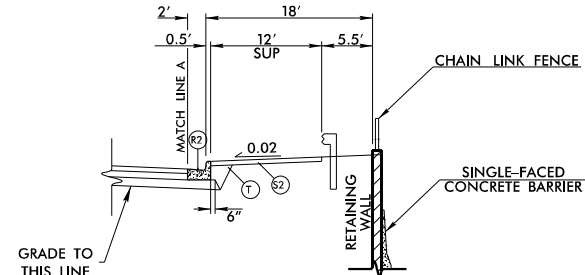
SDATES \$TIMES \$DCONS

5/26/20



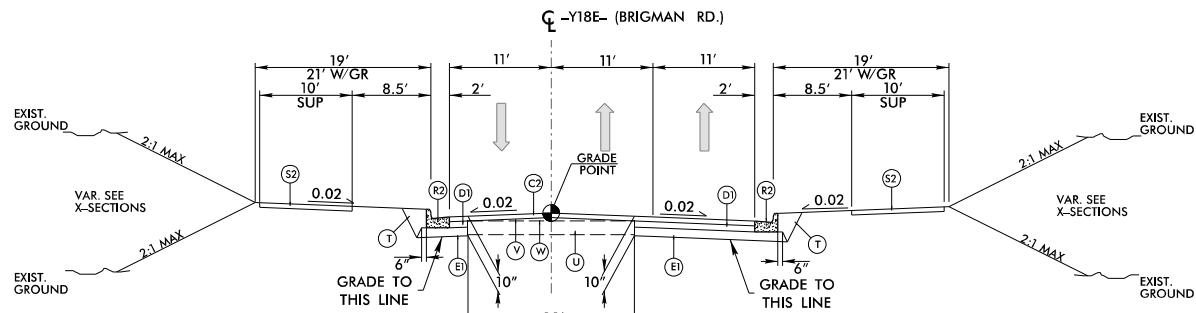
**TYPICAL SECTION NO. 13**

USE TYPICAL SECTION NO. 13  
-Y18E- STA. 10+35.75 TO -Y18E- STA. 11+49.93



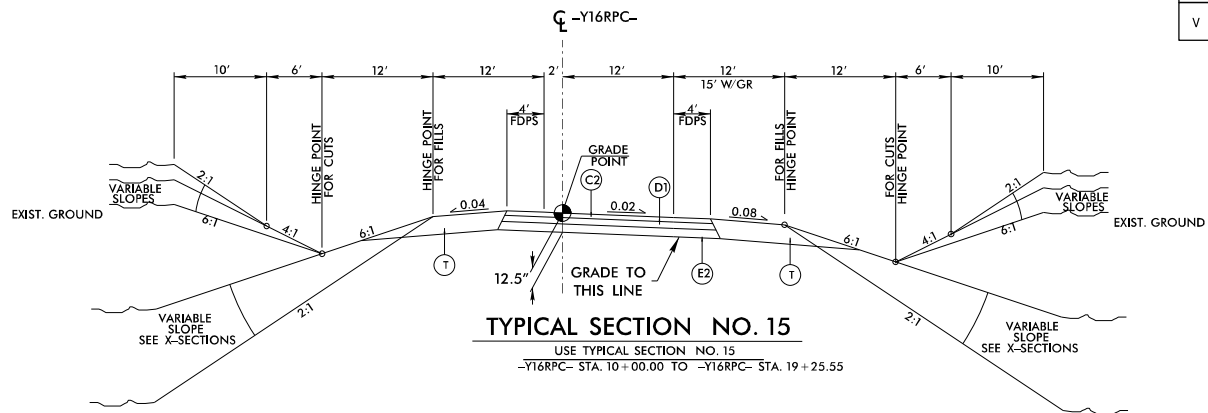
**PARTIAL TYPICAL SECTION NO. 13A**

USE PARTIAL TS NO. 13A IN CONJUNCTION W/TS NO. 13  
-Y18E- STA. 12+10.00 TO -Y18E- STA. 14+55.00 RT.



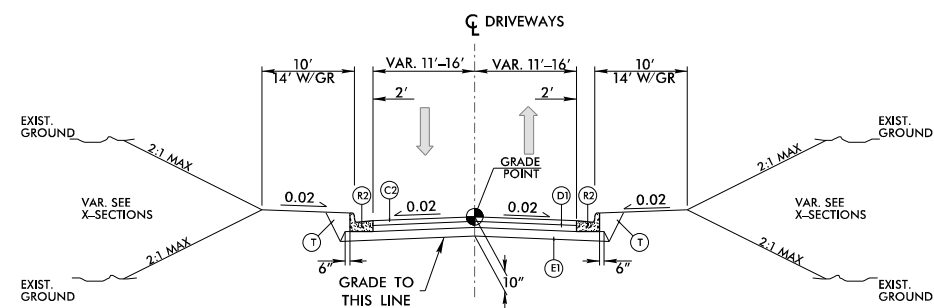
**TYPICAL SECTION NO. 14**

USE TYPICAL SECTION NO. 14  
-Y18E- STA. 11+49.93 TO -Y18E- STA. 21+75.00



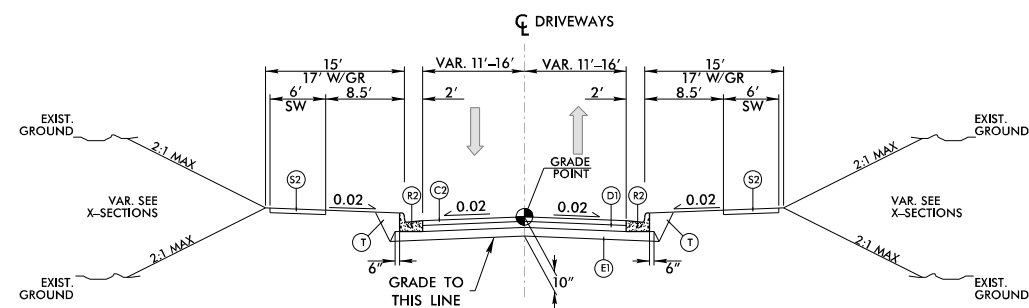
**TYPICAL SECTION NO. 15**

USE TYPICAL SECTION NO. 15  
-Y16RPC- STA. 10+00.00 TO -Y16RPC- STA. 19+25.55



**TYPICAL SECTION NO. 16**

USE TYPICAL SECTION NO. 16  
-Y17D1- STA. 10+22.00 TO -Y17D1- STA. 11+51.86  
-Y17D3- STA. 10+15.00 TO -Y17D3- STA. 10+72.15  
-Y18ADR1- STA. 10+33.57 TO -Y18ADR1- STA. 10+70.25  
-Y18DR1- STA. 11+65.00 TO -Y18DR1- STA. 12+74.22  
-Y18DR2- STA. 10+35.75 TO -Y18DR2- STA. 11+10.00  
-Y18DD1- STA. 10+13.75 TO -Y18DD1- STA. 11+20.00  
-Y18EDR1- STA. 10+22.00 TO -Y18EDR1- STA. 11+50.00



**TYPICAL SECTION NO. 17**

USE TYPICAL SECTION NO. 17  
-Y17C- STA. 10+22.00 TO -Y17C- STA. 16+79.21

PAVEMENT SCHEDULE (PRELIMINARY PAVEMENT DESIGN)	
C1	1 1/2" S9.5C
C2	3" S9.5C
C3	VAR. S9.5C
D1	4" I19.5C
D2	VAR. I19.0C
E1	3" B25.0C
E2	5 1/2" B25.0C
E3	VAR. B25.0C
R1	1'-6" C & G
R2	2'-6" C & G
R3	5" CONC. ISL. KEYED-IN
R4	4" ISLAND COVER
S1	4" SIDEWALK
S2	6" CONC. SUP
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	1 1/2" MILLING

**U-2509AD**

**RDY 2A-5**

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
MECKLENBURG COUNTY



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PAVEMENT DESIGN ENGINEER

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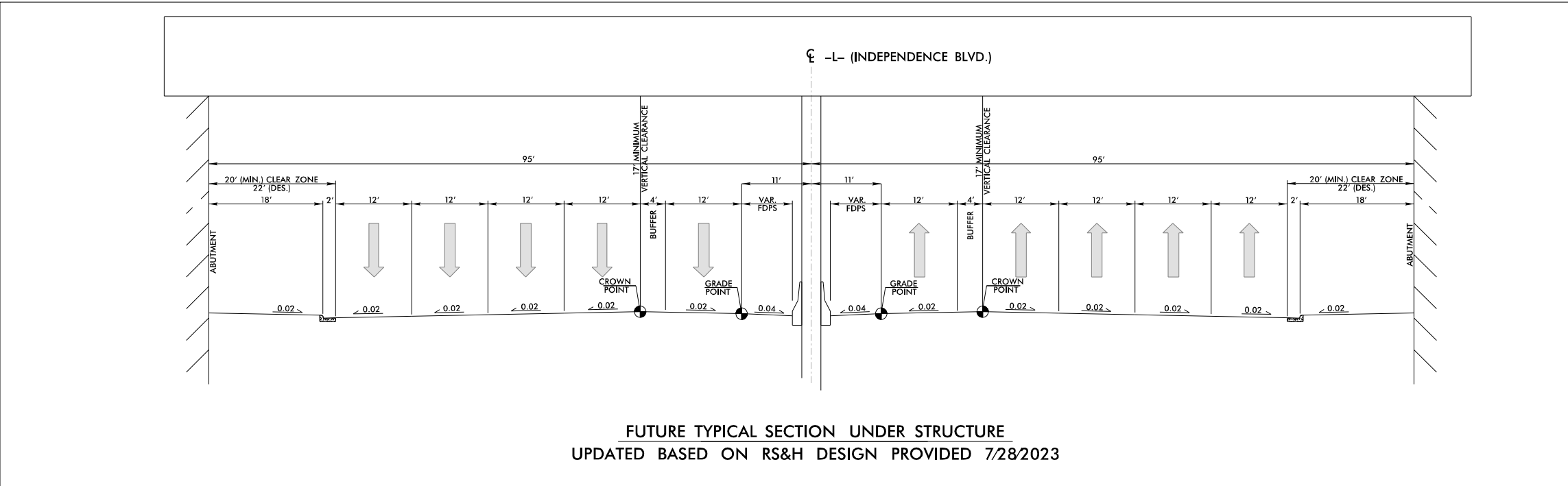
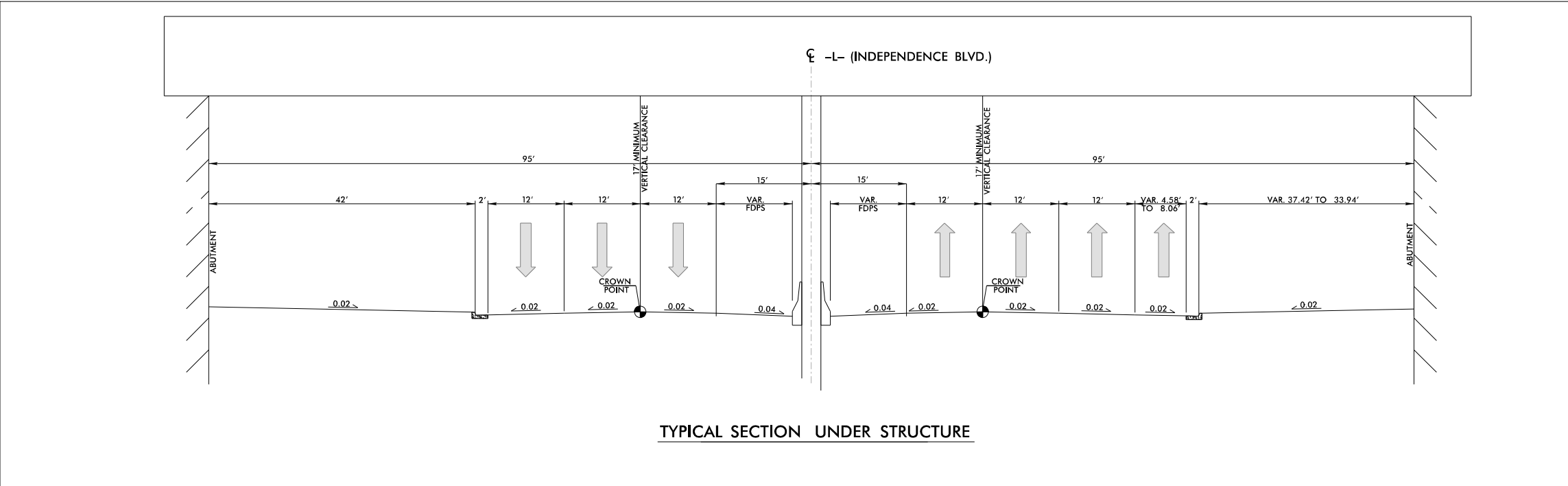
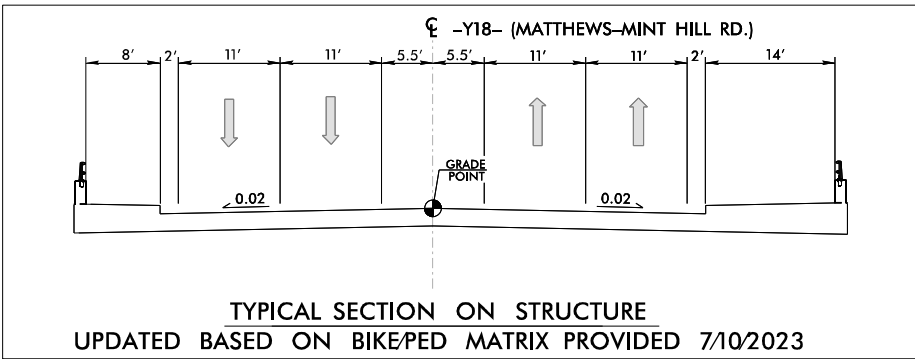
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RDY 2A-6

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION MECKLENBURG COUNTY



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PAVEMENT DESIGN ENGINEER

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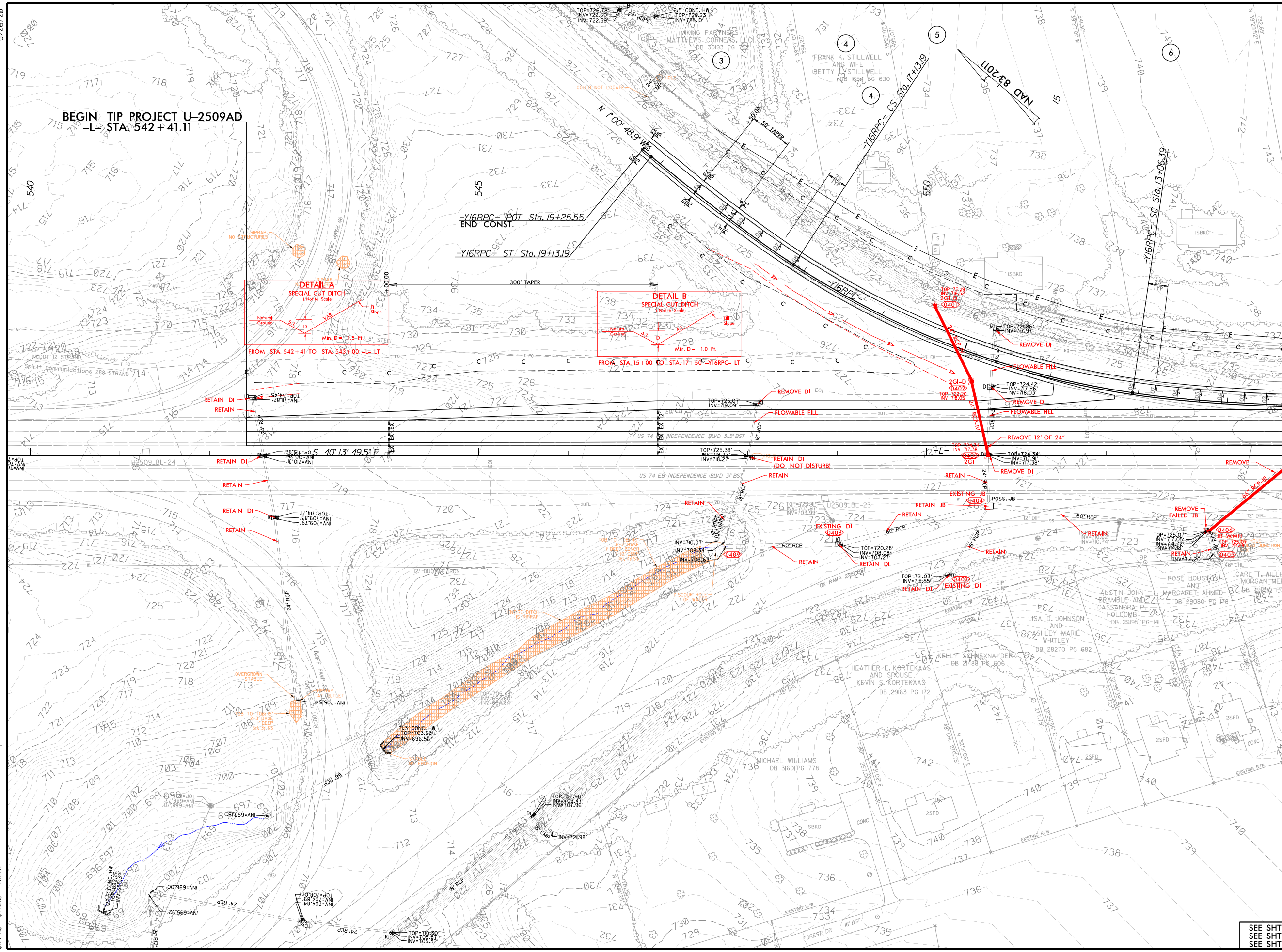
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SDATES \$TIMES \$DCONS



5/26/20  
SDATES \$TIMES \$DGN\$



MATCHLINE SEE SHT. 5 -L- 554 + 00.00

SEE SHT. 2B-1 FOR CURVE DATA  
SEE SHT. 12 & 13 FOR -L- PROFILE  
SEE SHT. 16 FOR -Y16RPPC- PROFILE

**U-2509AD**  
 RBY 4  
 NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 MECKLENBURG COUNTY

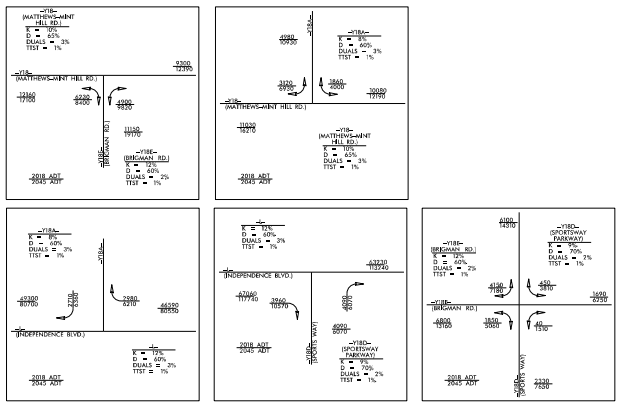
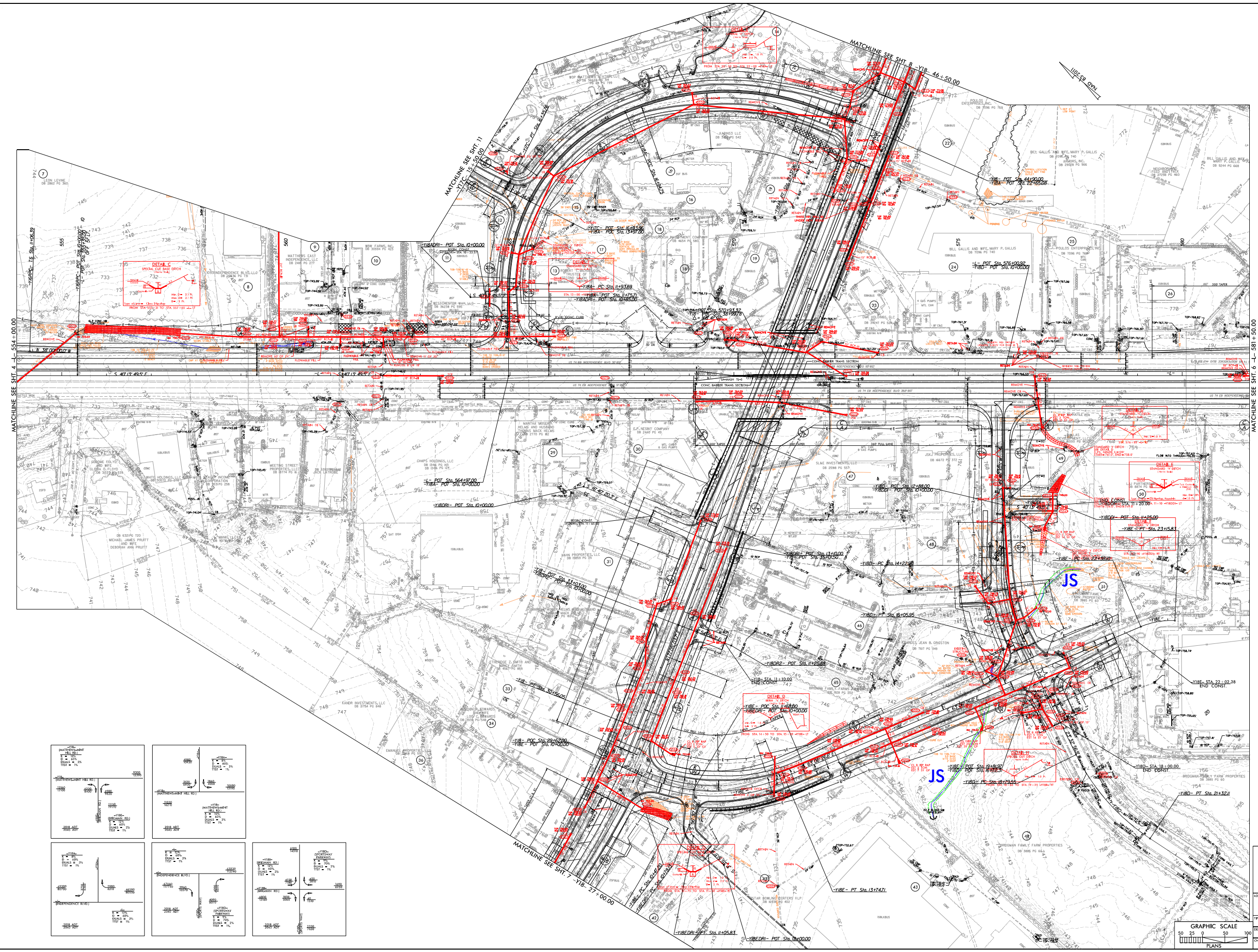
ROADWAY DESIGN UNIT  
 ROADWAY DESIGN  
 ENGINEER

INCOMPLETE PLANS  
 DOCUMENT NOT CONSIDERED FINAL  
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HYDRAULICS  
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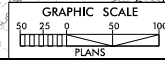
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\* EXISTING TRAFFIC SIGNAL  
 \* TO BE REMOVED  
 \* PROPOSED TRAFFIC SIGNAL  
 SEE SHT 20-4 FOR CURVE DATA  
 SEE SHT 13 THRU 15 FOR -L- PROFILE  
 SEE SHT 20 FOR -YTC- PROFILE  
 SEE SHT 16 & 17 FOR -YB- PROFILE  
 SEE SHT 19 FOR -YBDR- PROFILE  
 SEE SHT 21 FOR -YBDR2- PROFILE  
 SEE SHT 20 FOR -YBDR3- PROFILE  
 SEE SHT 21 FOR -YBDR4- PROFILE  
 SEE SHT 21 FOR -YBDR5- PROFILE  
 SEE SHT 21 FOR -YBDR6- PROFILE

LOCATION:  
 MATTHEWS-MINT HILL RD. INDEPENDENCE  
 RVDG INTERSECTION. CONSTRUCT PROPOSED  
 INTERCHANGE FOR MATTHEWS-MINT HILL RD.  
 PROJECT NO.: U-2509AD COUNTY: MECKLENBURG  
 DESIGNED BY: WETHERILL ENGINEERING, INC.  
 CHECKED BY: DATE:

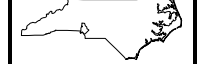


5/26/20

U-2509AD

RDY 6

NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
MECKLENBURG COUNTY



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ROADWAY DESIGN  
ENGINEER

**INCOMPLETE PLANS**  
DOCUMENT NOT CONSIDERED FINAL  
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HYDRAULICS  
ENGINEER

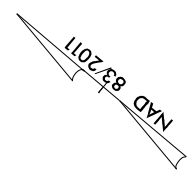
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END TIP PROJECT U-2509AD  
-L- STA. 590+30.00

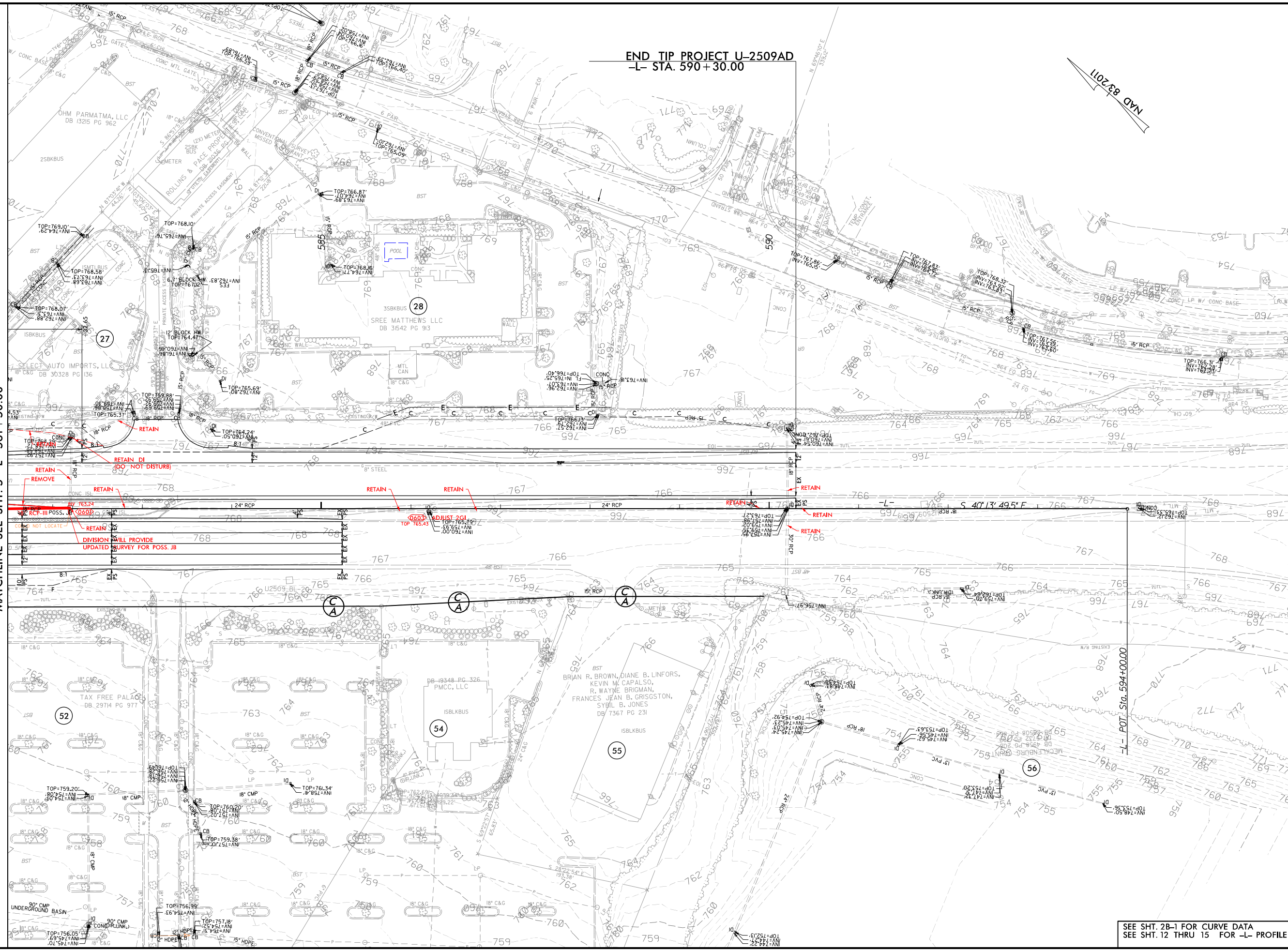


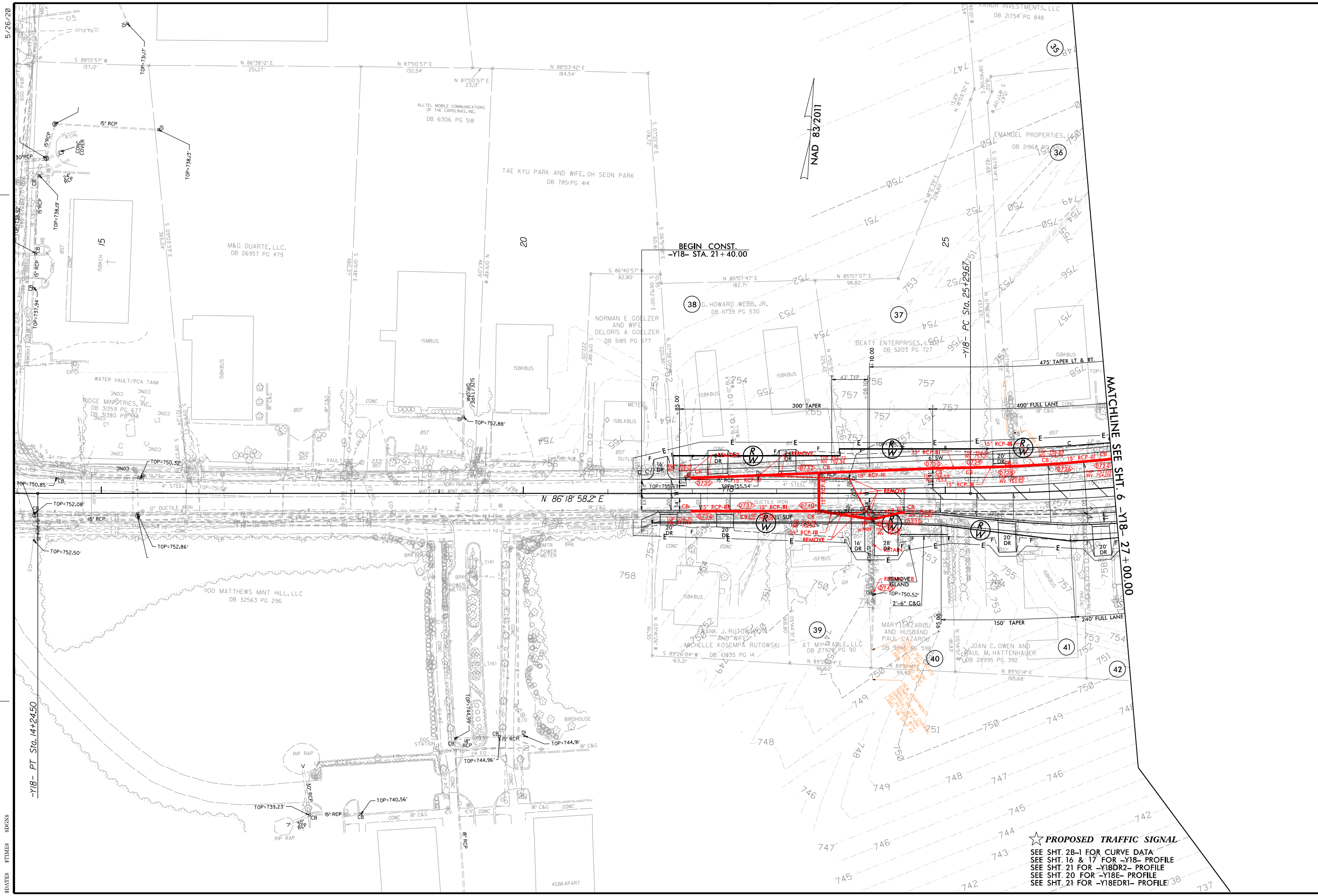
MATCHLINE SEE SHT. 5 -L- 581+50.00

-L- POT. Sta. 594+00.00

SEE SHT. 2B-1 FOR CURVE DATA  
SEE SHT. 12 THRU 15 FOR -L- PROFILE

SDATES \$TIMES \$DCNS





**U-2509AD**  
**RDY 7**  
 NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 MECKLENBURG COUNTY

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 ROADWAY DESIGN  
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HYDRAULICS  
 ENGINEER

PREPARED BY  
**ETHERILL**  
**ENGINEERING**

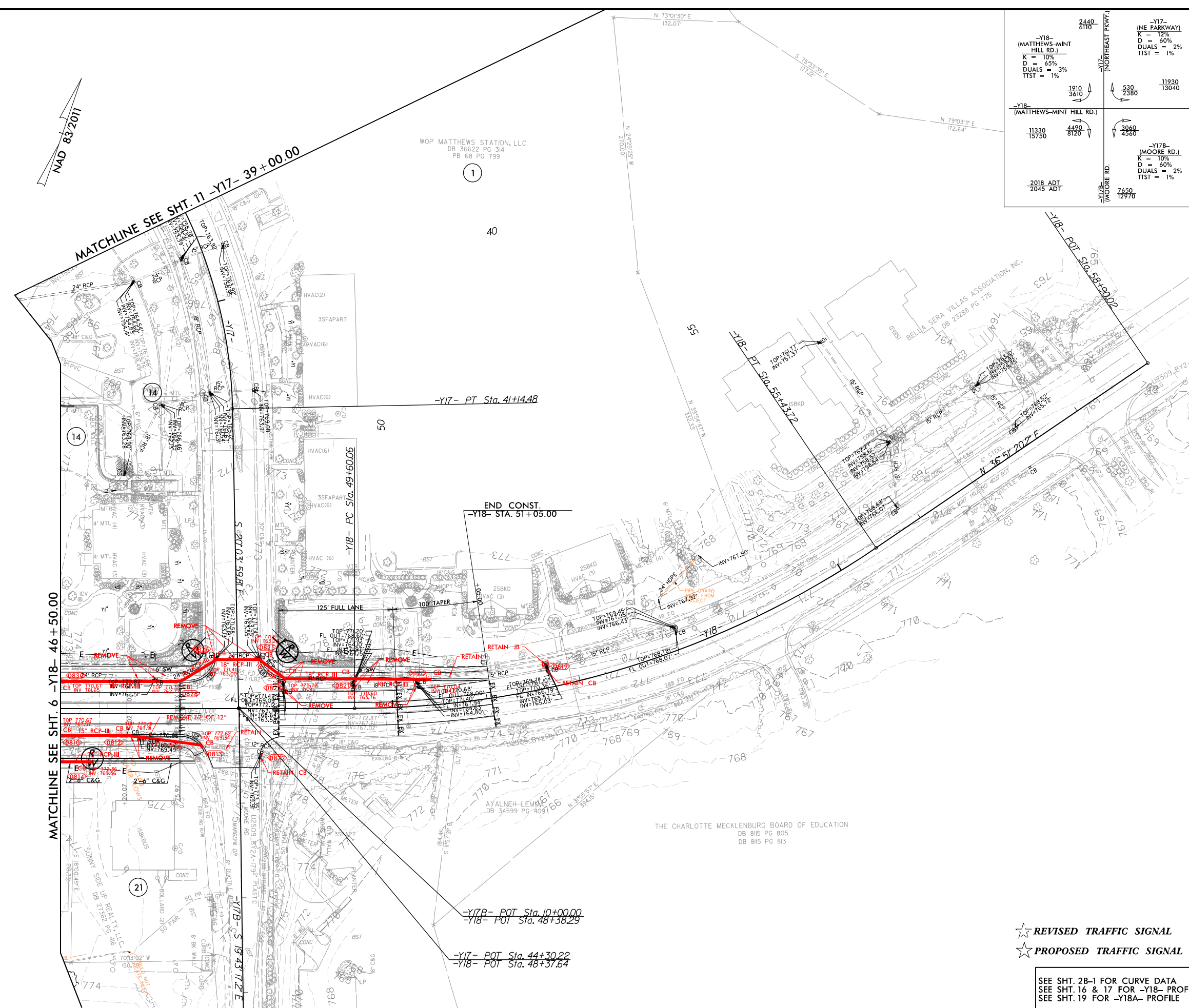
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**PROPOSED TRAFFIC SIGNAL**  
 SEE SHT. 2B-1 FOR CURVE DATA  
 SEE SHT. 16 & 17 FOR -Y18- PROFILE  
 SEE SHT. 21 FOR -Y18DR2- PROFILE  
 SEE SHT. 20 FOR -Y18E- PROFILE  
 SEE SHT. 21 FOR -Y18EDR1- PROFILE

SDATES \$TIMES \$DCGNS

5/26/20 SDXATES \$TIMES \$DCGNS

NAD 83 2011



-Y18- (MATTHEWS-MINT HILL RD.) K = 10% D = 65% DUALS = 3% TTST = 1%	-Y17- (NE PARKWAY) K = 12% D = 60% DUALS = 2% TTST = 1%
-Y18- (MATTHEWS-MINT HILL RD.) 11330 15750	-Y17B- (MOORE RD.) K = 10% D = 60% DUALS = 2% TTST = 1%
-2018 ADT 2045 ADT	1810 3610
	530 2380
	11930 13040
	3060 4560
	7650 12970

**U-2509AD**

RDY 8

NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
MECKLENBURG COUNTY

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ROADWAY DESIGN  
ENGINEER

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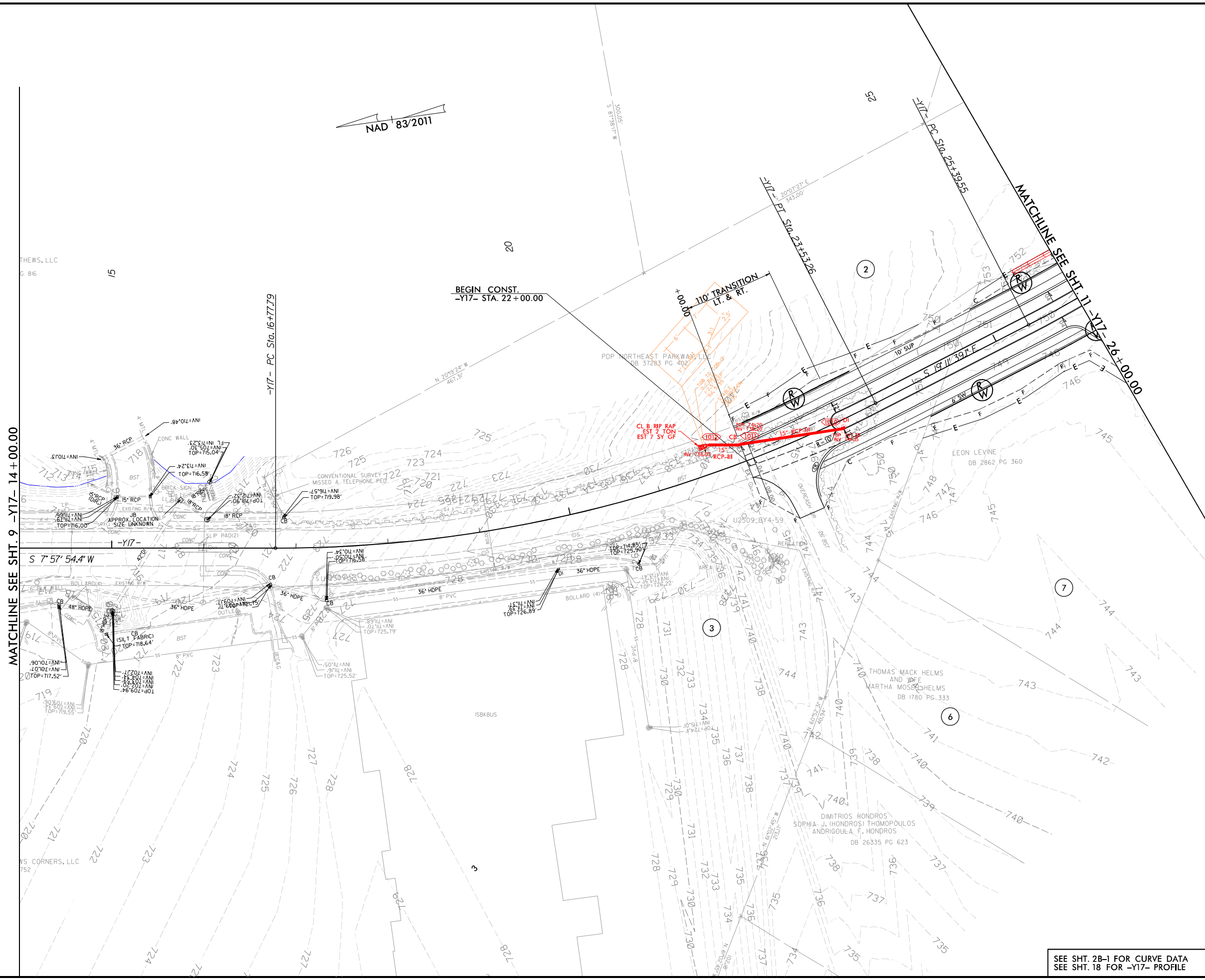
- ★ REVISED TRAFFIC SIGNAL
- ★ PROPOSED TRAFFIC SIGNAL

SEE SHT. 2B-1 FOR CURVE DATA  
SEE SHT. 16 & 17 FOR -Y18- PROFILE  
SEE SHT. 19 FOR -Y18A- PROFILE



5/26/20

SDATES \$TIMES \$DCGNS

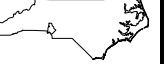


SEE SHT. 2B-1 FOR CURVE DATA  
 SEE SHT. 18 FOR -Y17- PROFILE

U-2509AD

RBY 10

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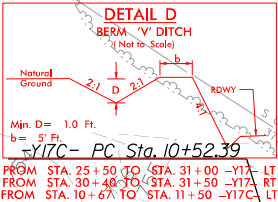
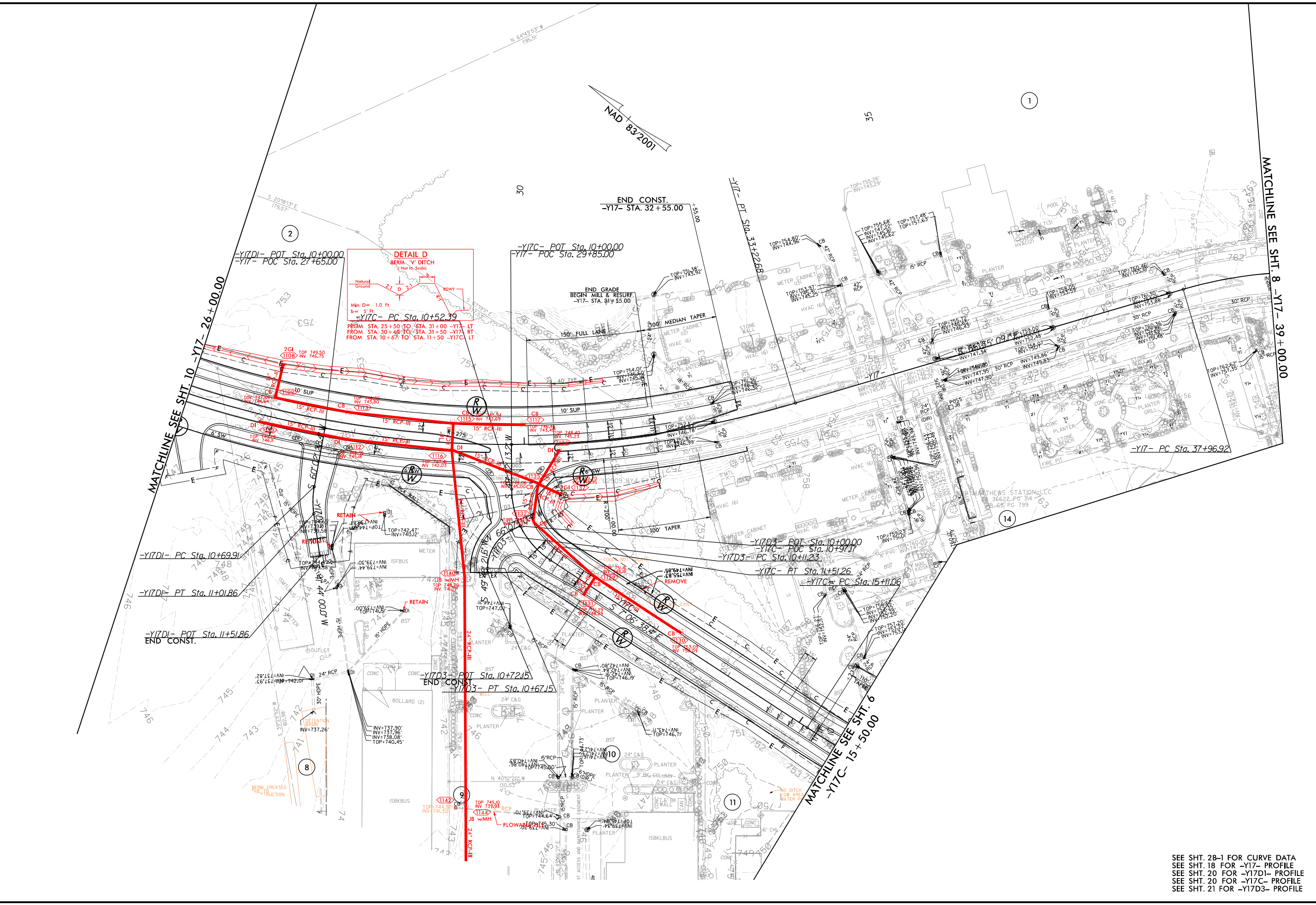
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 SEE SHT. 18 FOR -Y17- PROFILE  
 SEE SHT. 20 FOR -Y17D1- PROFILE  
 SEE SHT. 20 FOR -Y17C- PROFILE  
 SEE SHT. 21 FOR -Y17D3- PROFILE



5/26/20

### -L EB-

BM #4 ELEVATION = 723.86'  
 N 504942 E 1490526.2960  
 BL STATION: 106+84.02 196.10' RIGHT  
 RR SPIKE SET IN 1" DIA OAK

-L- GRADE ESTABLISHED & PROVIDED BY RS&H, USED TO ESTABLISH VERTICAL ALIGNMENT FOR -Y18- FOR INFORMATIONAL PURPOSES ONLY

PI = 538+30.00  
 EL = 711.9'  
 VC = 18'  
 K = 991

PI = 545+30.00  
 EL = 722.76'  
 VC = 150'  
 K = 243

PI = 547+60.00  
 EL = 727.98'  
 VC = 220'  
 K = 86

(+) 0.95%  
 END SPEC. CUT DITCH  
 -L- STA 543+00 LT  
 EL=715.13  
 BEG. SPEC. CUT DITCH  
 -L- STA 542+41 LT  
 EL=714.57

SEE SHTS. 4 THRU 6 FOR -L- ALIGNMENT.

### -L WB-

BM #4 ELEVATION = 723.86'  
 N 504942 E 1490526.2960  
 BL STATION: 106+84.02 196.10' RIGHT  
 RR SPIKE SET IN 1" DIA OAK

-L- GRADE ESTABLISHED & PROVIDED BY RS&H, USED TO ESTABLISH VERTICAL ALIGNMENT FOR -Y18- FOR INFORMATIONAL PURPOSES ONLY

PI = 539+65.00  
 EL = 713.55'  
 VC = 150'  
 K = 952

PI = 547+90.00  
 EL = 728.20'  
 VC = 180'  
 K = 87

(+) 0.95%  
 END SPEC. CUT DITCH  
 -L- STA 543+00 LT  
 EL=715.13  
 BEG. SPEC. CUT DITCH  
 -L- STA 542+41 LT  
 EL=714.57

SEE SHTS. 4 THRU 6 FOR -L- ALIGNMENT.

U-2509AD

RDY 12

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION MECKLENBURG COUNTY



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SDATES \$TIMES \$DCONS

5/26/20

### -L EB-

BM #3 ELEVATION = 764.06'  
N 502081 E 1492477  
BL STATION 72+25.53 101.02' LEFT  
CHISLED X IN CONC LP BASE

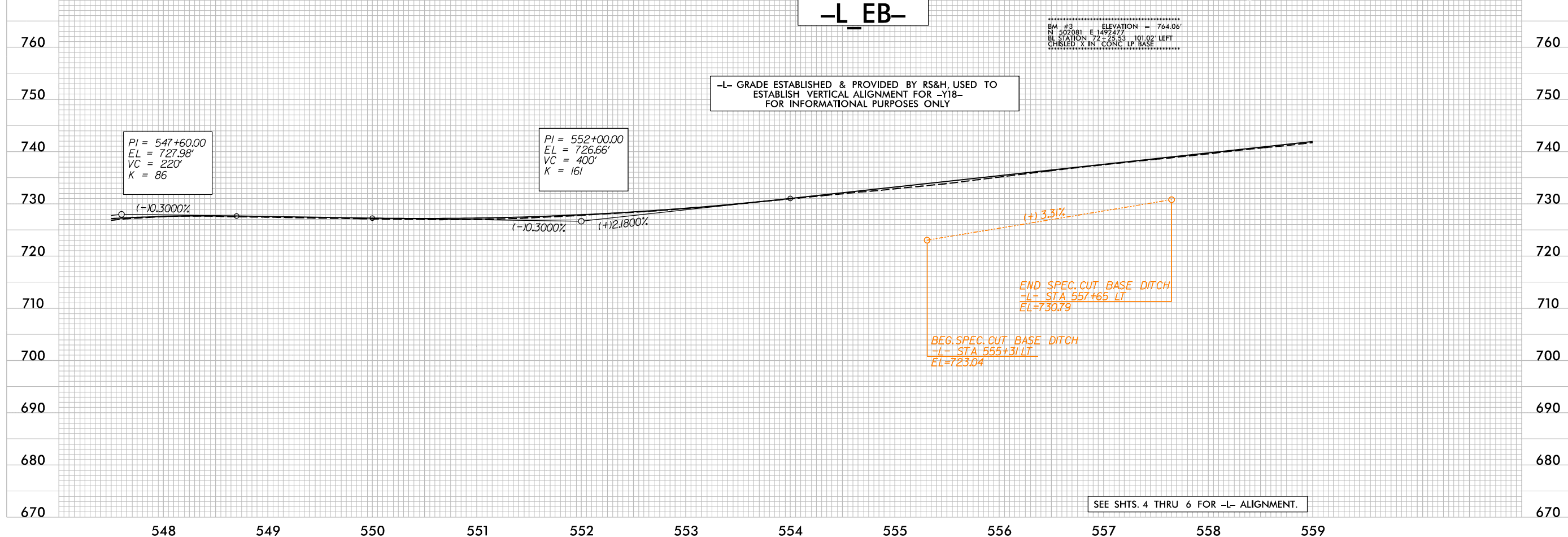
-L- GRADE ESTABLISHED & PROVIDED BY RS&H, USED TO ESTABLISH VERTICAL ALIGNMENT FOR -Y18- FOR INFORMATIONAL PURPOSES ONLY

PI = 547+60.00  
EL = 727.98'  
VC = 220'  
K = 86

PI = 552+00.00  
EL = 726.66'  
VC = 400'  
K = 161

(+3.31%  
END SPEC. CUT BASE DITCH  
-L- STA 557+65 LT  
EL=730.79  
BEG. SPEC. CUT BASE DITCH  
-L- STA 555+31 LT  
EL=723.04

SEE SHTS. 4 THRU 6 FOR -L- ALIGNMENT.



### -L WB-

BM #3 ELEVATION = 764.06'  
N 502081 E 1492477  
BL STATION 72+25.53 101.02' LEFT  
CHISLED X IN CONC LP BASE

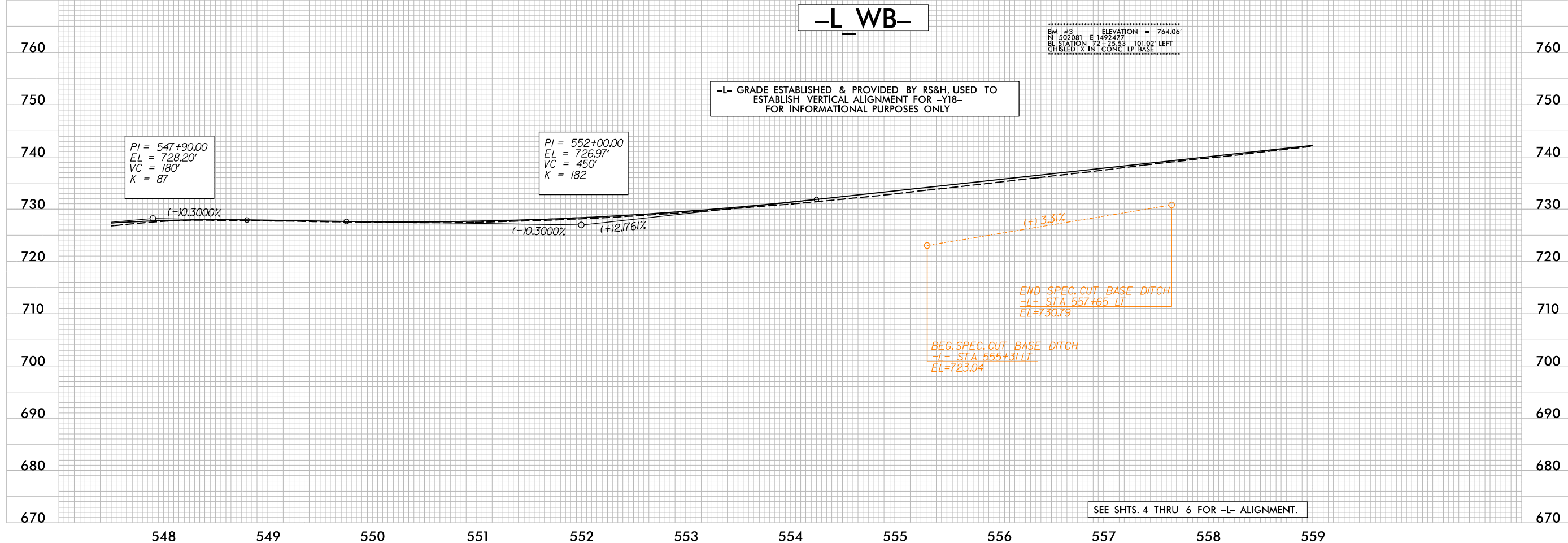
-L- GRADE ESTABLISHED & PROVIDED BY RS&H, USED TO ESTABLISH VERTICAL ALIGNMENT FOR -Y18- FOR INFORMATIONAL PURPOSES ONLY

PI = 547+90.00  
EL = 728.20'  
VC = 180'  
K = 87

PI = 552+00.00  
EL = 726.97'  
VC = 450'  
K = 182

(+3.31%  
END SPEC. CUT BASE DITCH  
-L- STA 557+65 LT  
EL=730.79  
BEG. SPEC. CUT BASE DITCH  
-L- STA 555+31 LT  
EL=723.04

SEE SHTS. 4 THRU 6 FOR -L- ALIGNMENT.



U-2509AD

RDY 13

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION MECKLENBURG COUNTY



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5/28/99

### -L\_EB-

-L- GRADE ESTABLISHED & PROVIDED BY RS&H, USED TO ESTABLISH VERTICAL ALIGNMENT FOR -Y18- FOR INFORMATIONAL PURPOSES ONLY

PI = 572+66.00  
EL = 771.70'  
VC = 1,240'  
K = 496

(+)2.1800% (-)0.3189%

SEE SHTS. 4 THRU 6 FOR -L- ALIGNMENT.

### -L\_WB-

-L- GRADE ESTABLISHED & PROVIDED BY RS&H, USED TO ESTABLISH VERTICAL ALIGNMENT FOR -Y18- FOR INFORMATIONAL PURPOSES ONLY

PI = 572+55.00  
EL = 771.69'  
VC = 1,200'  
K = 481

(+)2.1761% (-)0.3199%

SEE SHTS. 4 THRU 6 FOR -L- ALIGNMENT.

-L- STA 564+97.00  
-Y18A- STA 574+00.00

U-2509AD

RDY 14

NORTH CAROLINA  
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MECKLENBURG COUNTY



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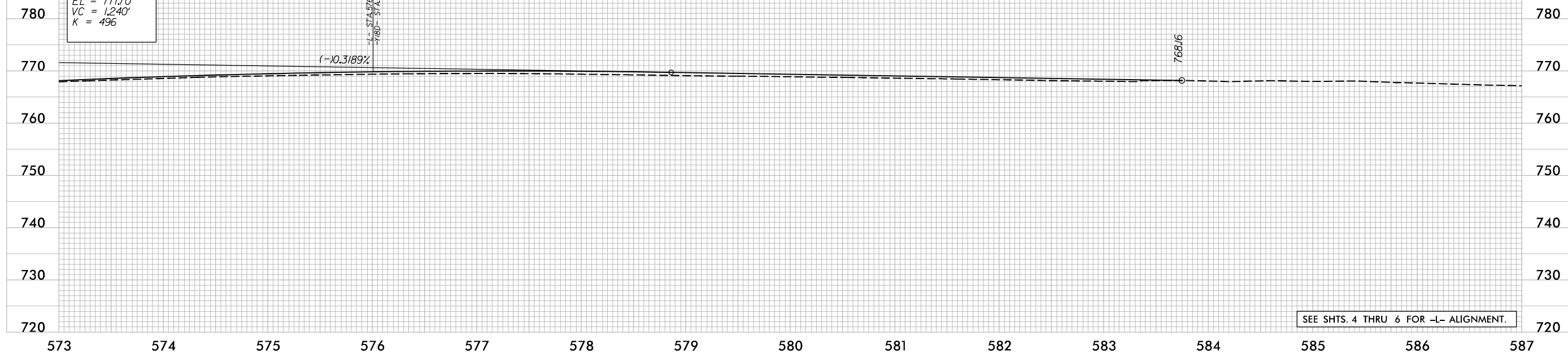
5/26/20  
5/28/99

### -L\_EB-

-L- GRADE ESTABLISHED & PROVIDED BY RS&H, USED TO ESTABLISH VERTICAL ALIGNMENT FOR -Y18- FOR INFORMATIONAL PURPOSES ONLY

PI = 572+66.00  
EL = 771.70'  
VC = 1,240'  
K = 496

-L- STA. 576+00.92  
-Y18D- STA. 10+00.000  
(-)0.3189%

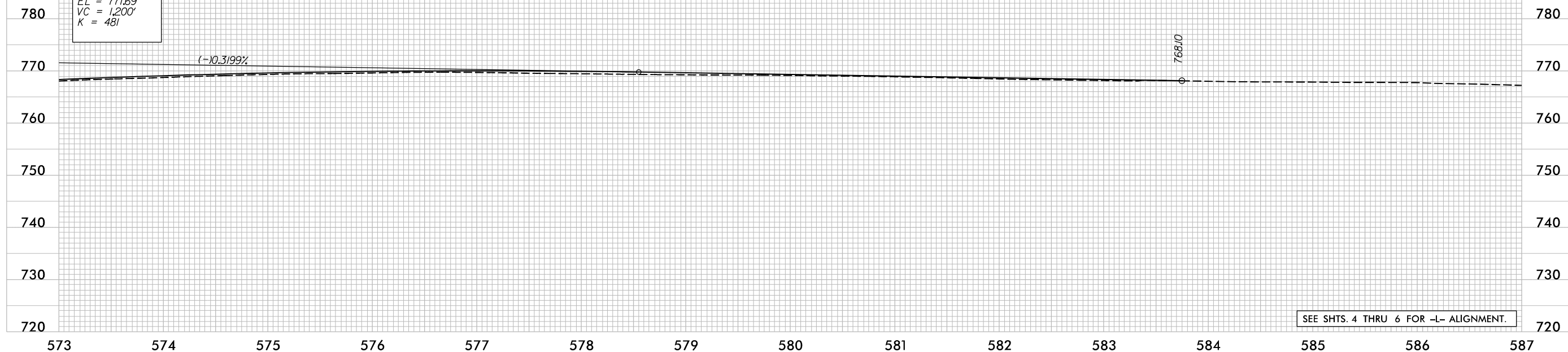


### -L\_WB-

-L- GRADE ESTABLISHED & PROVIDED BY RS&H, USED TO ESTABLISH VERTICAL ALIGNMENT FOR -Y18- FOR INFORMATIONAL PURPOSES ONLY

PI = 572+55.00  
EL = 771.69'  
VC = 1,200'  
K = 481

(-)0.3199%



U-2509AD  
RDY 15

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MECKLENBURG COUNTY  
ROADWAY DESIGN UNIT  
ROADWAY DESIGN  
ENGINEER

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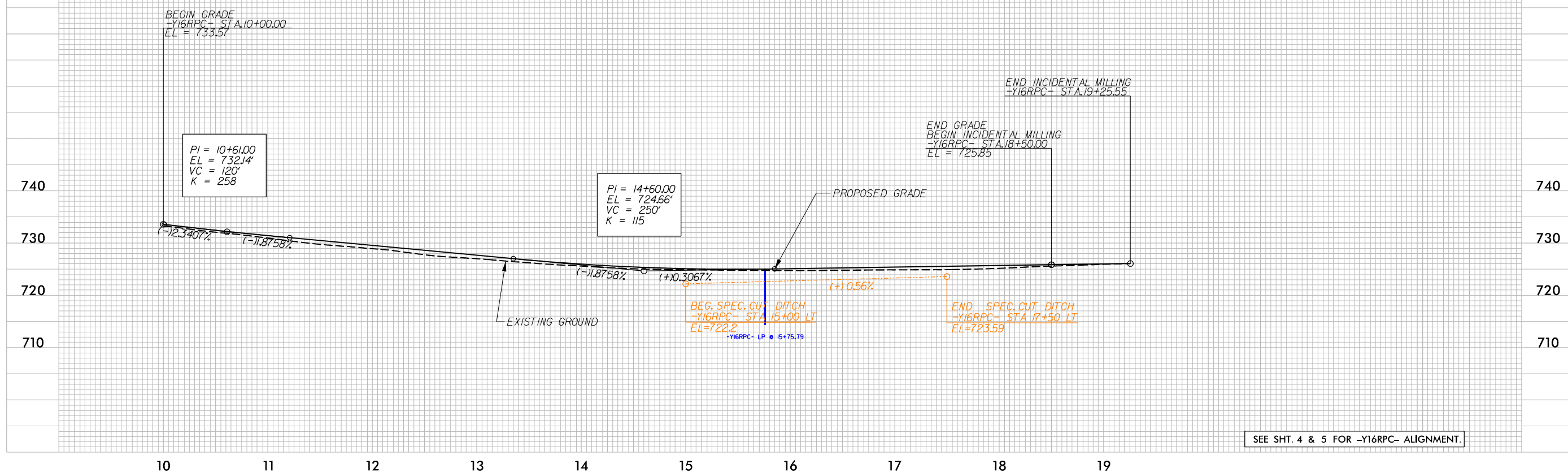
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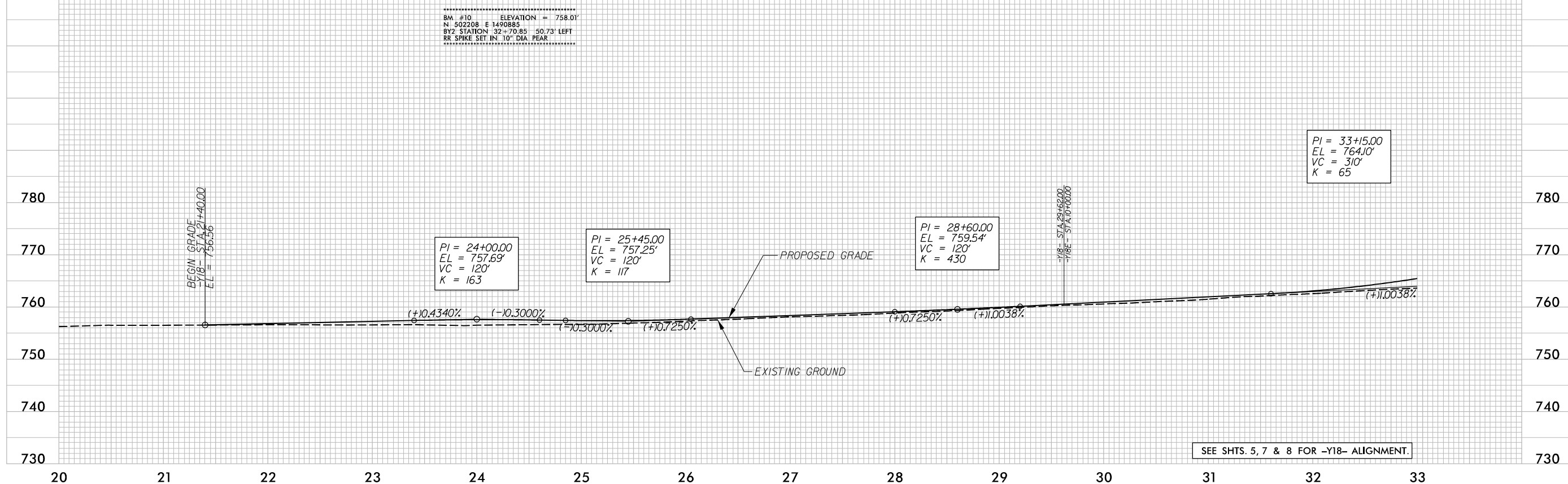
5/26/20

# -Y16RPC-



SEE SHT. 4 & 5 FOR -Y16RPC- ALIGNMENT.

# -Y18-



SEE SHTS. 5, 7 & 8 FOR -Y18- ALIGNMENT.

U-2509AD

RDY 16

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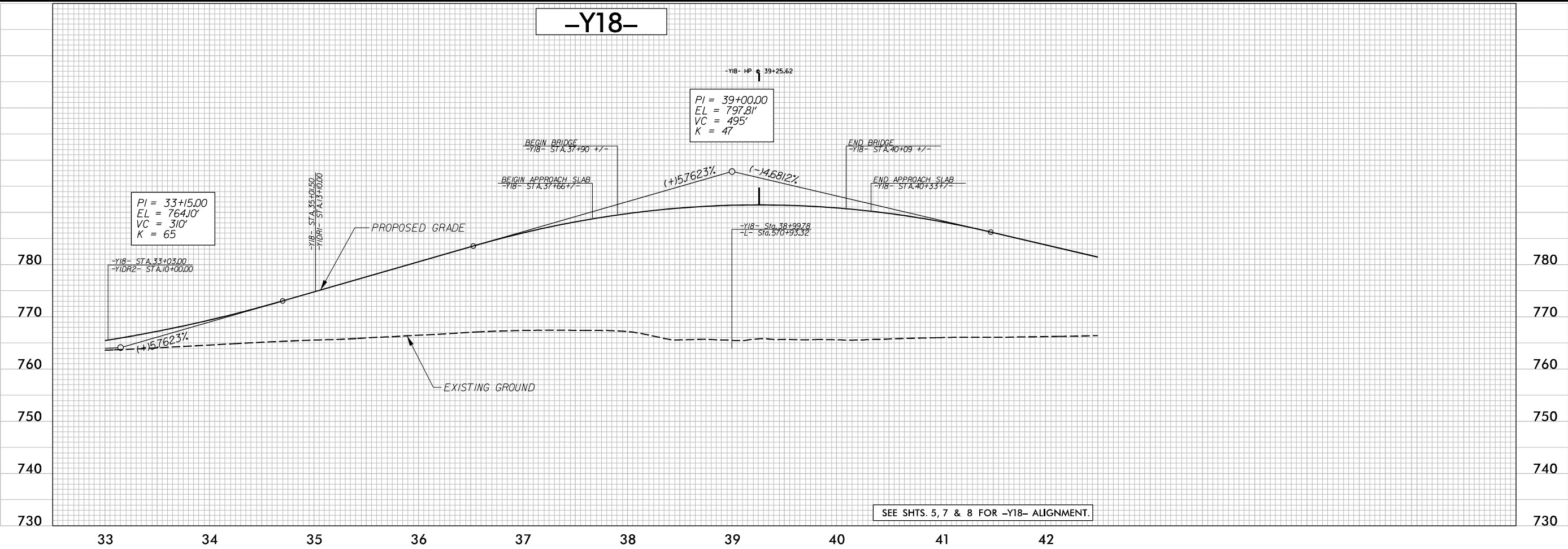
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# -Y18-

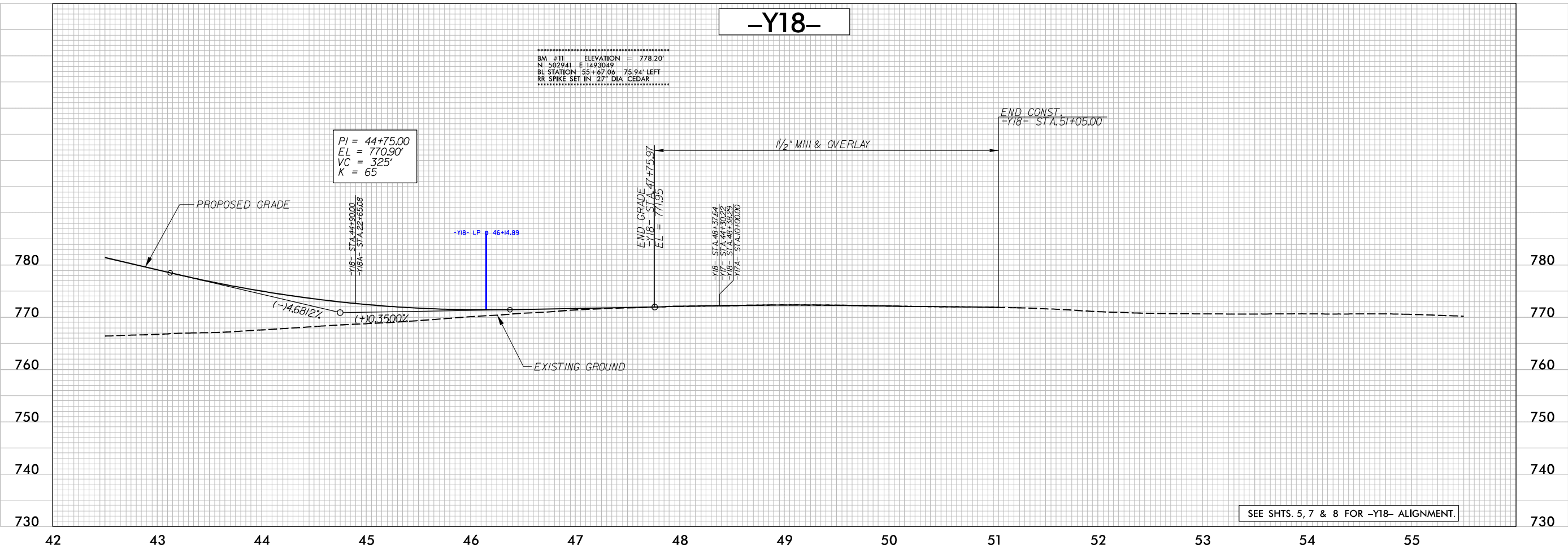


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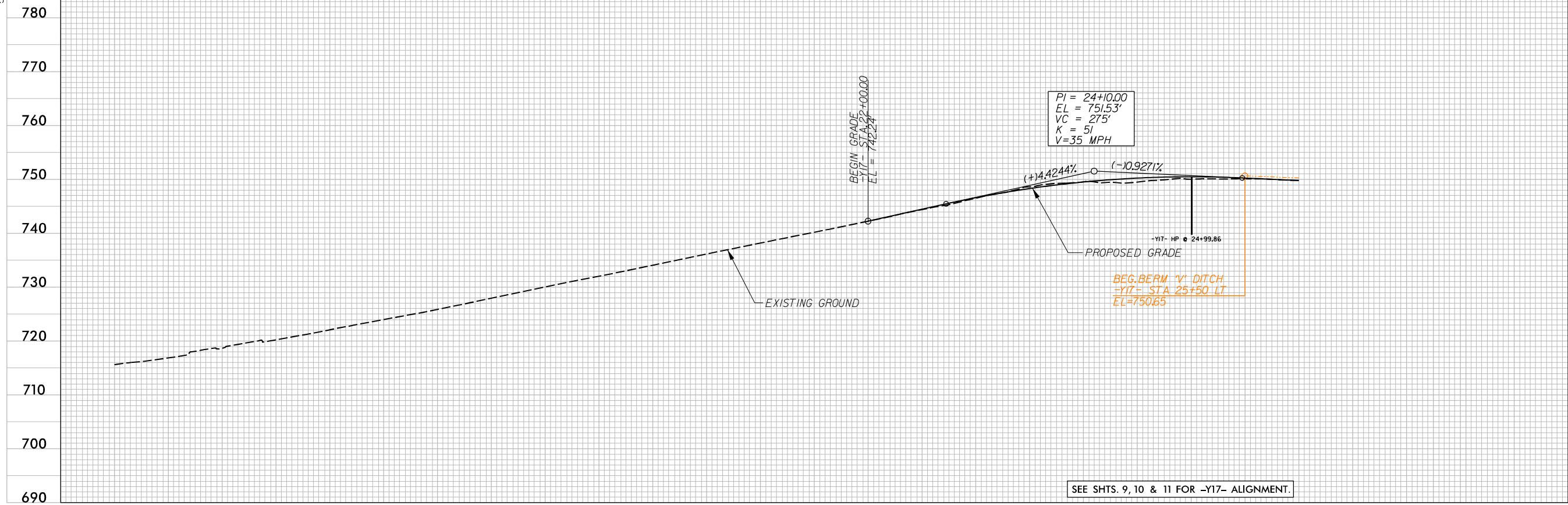
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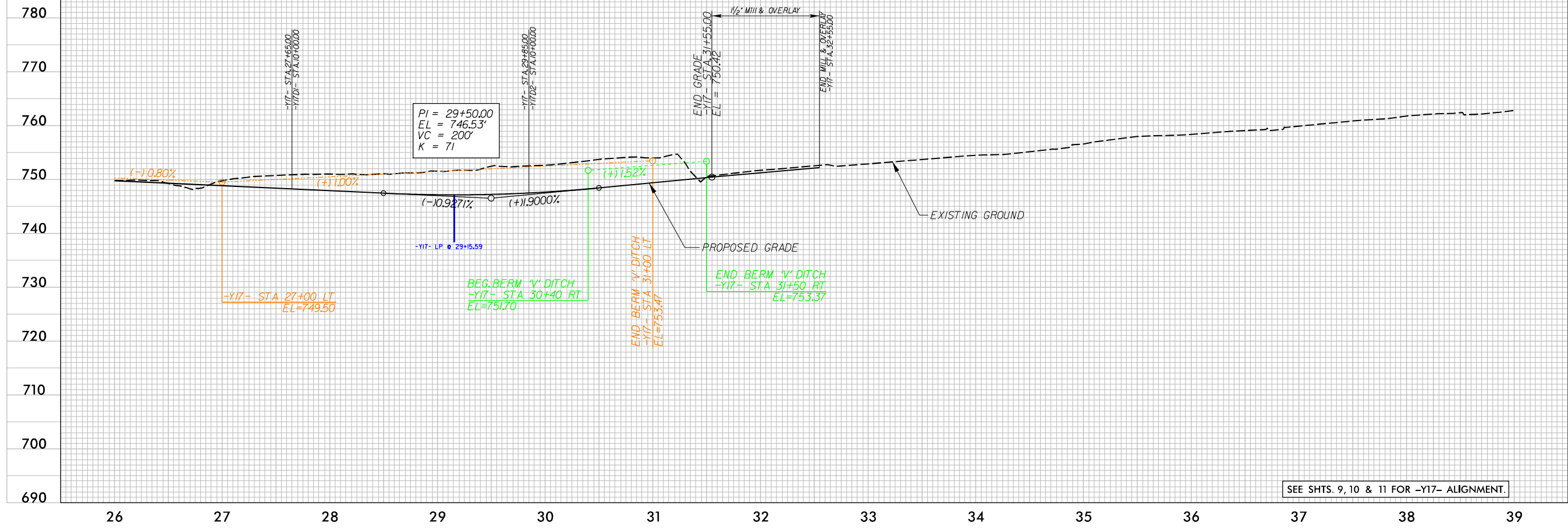
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# -Y17-



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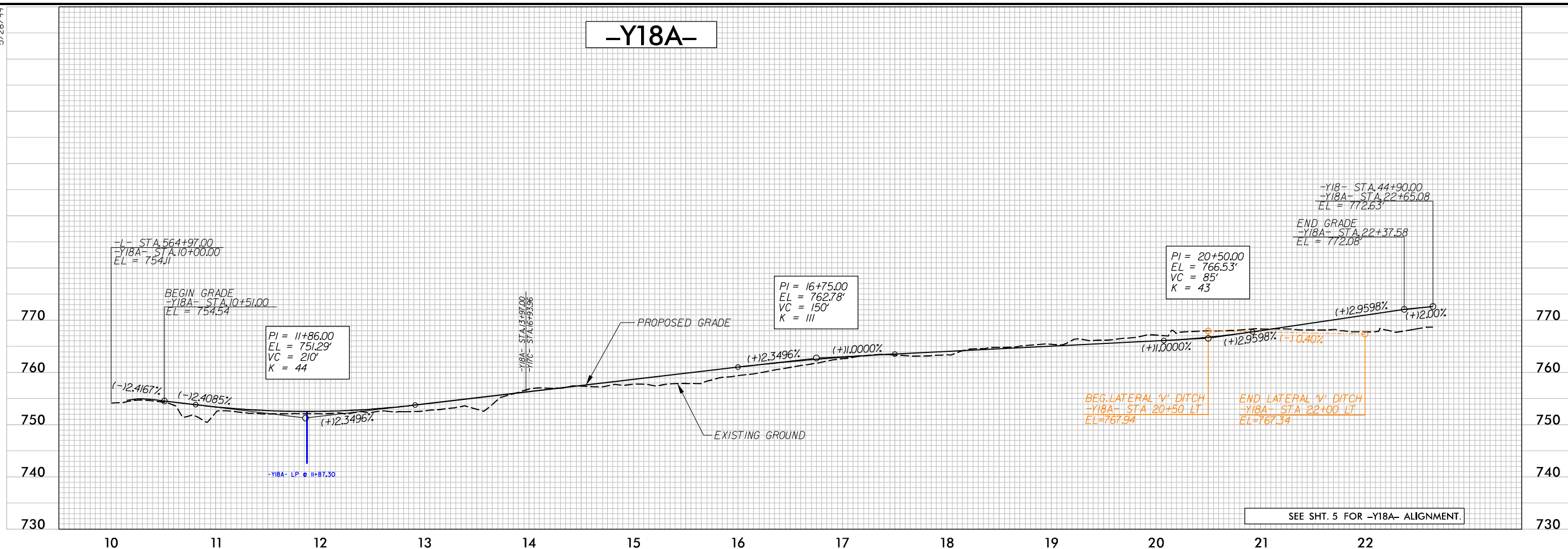
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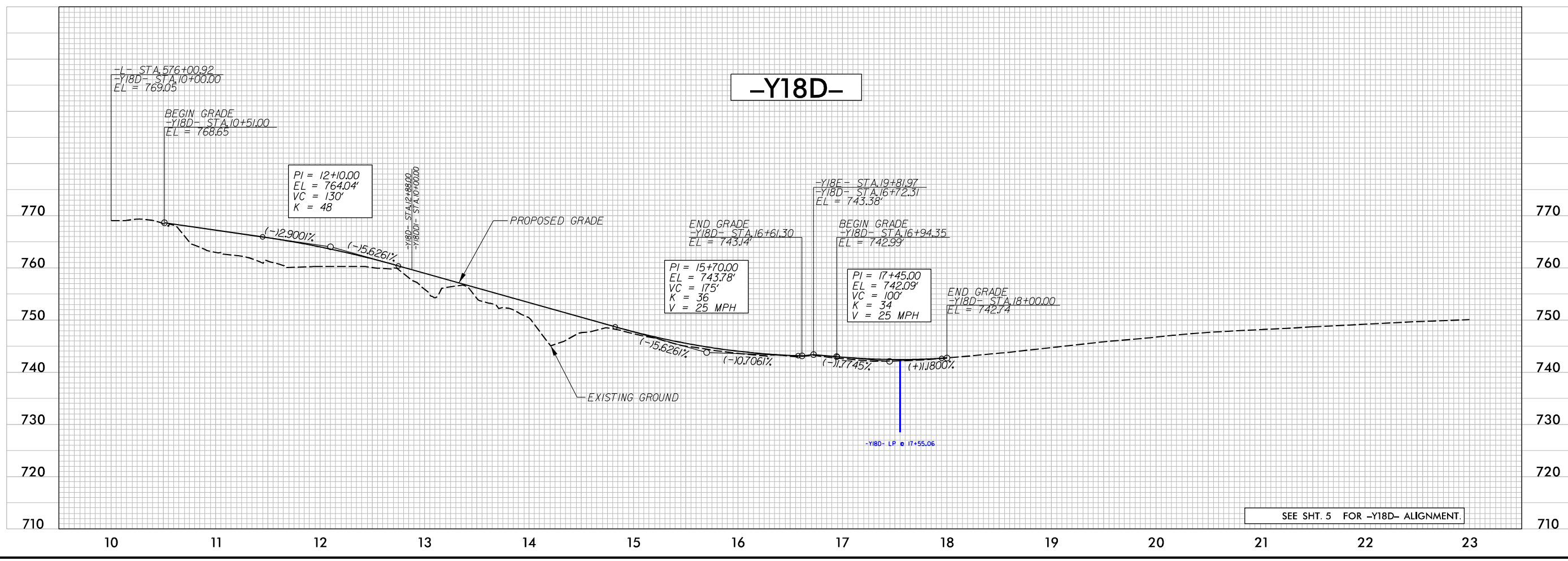
SEE SHTS. 9, 10 & 11 FOR -Y17- ALIGNMENT.

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# -Y18A-



# -Y18D-



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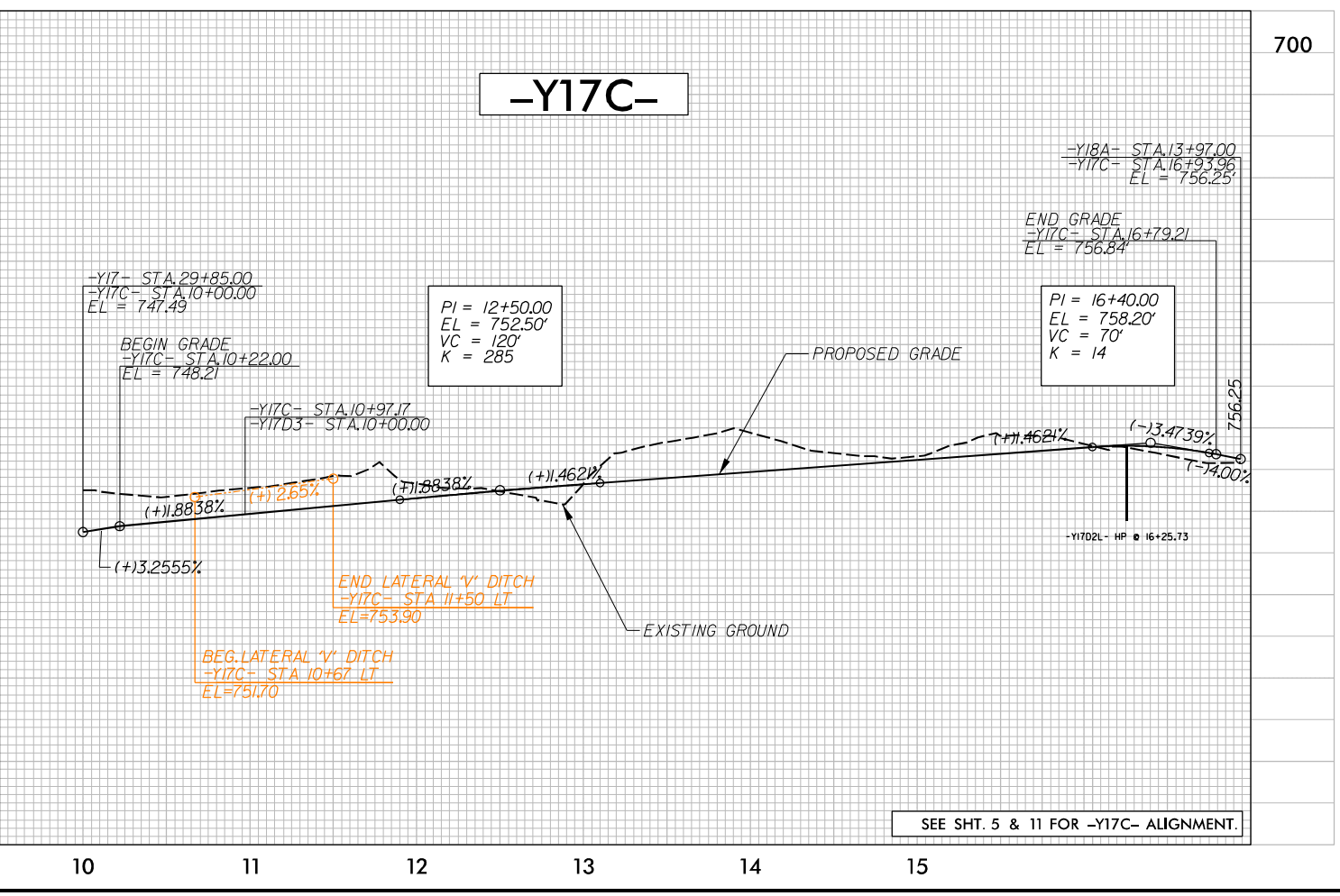
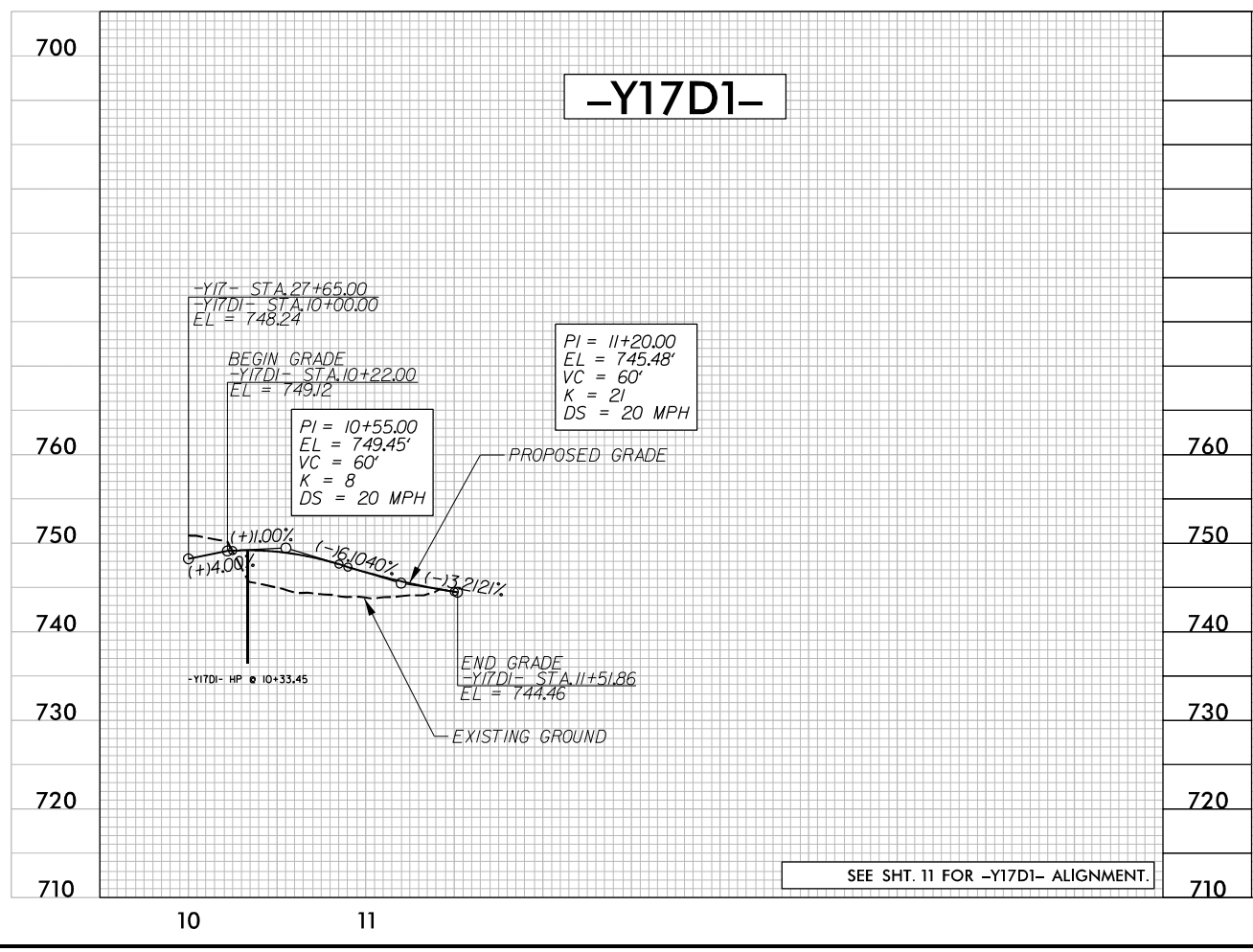
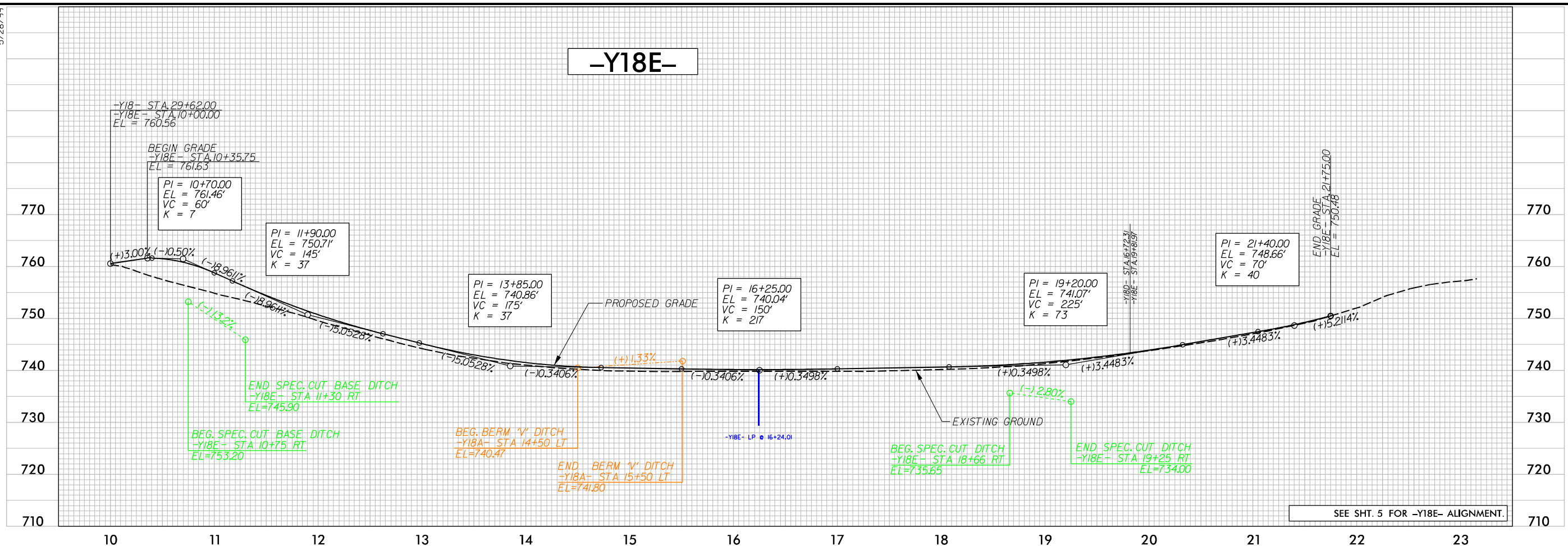
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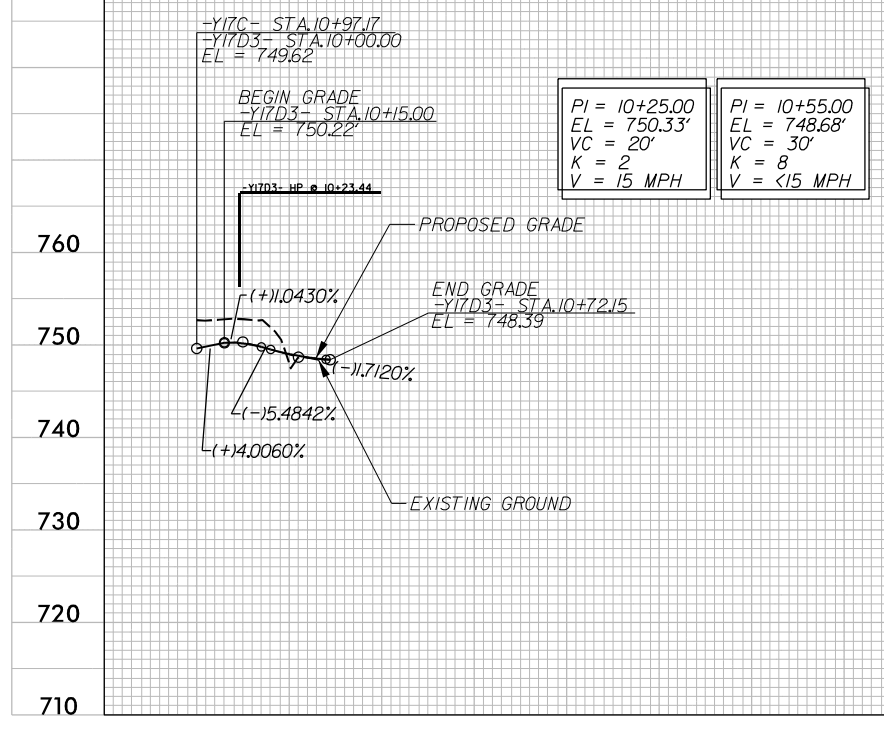
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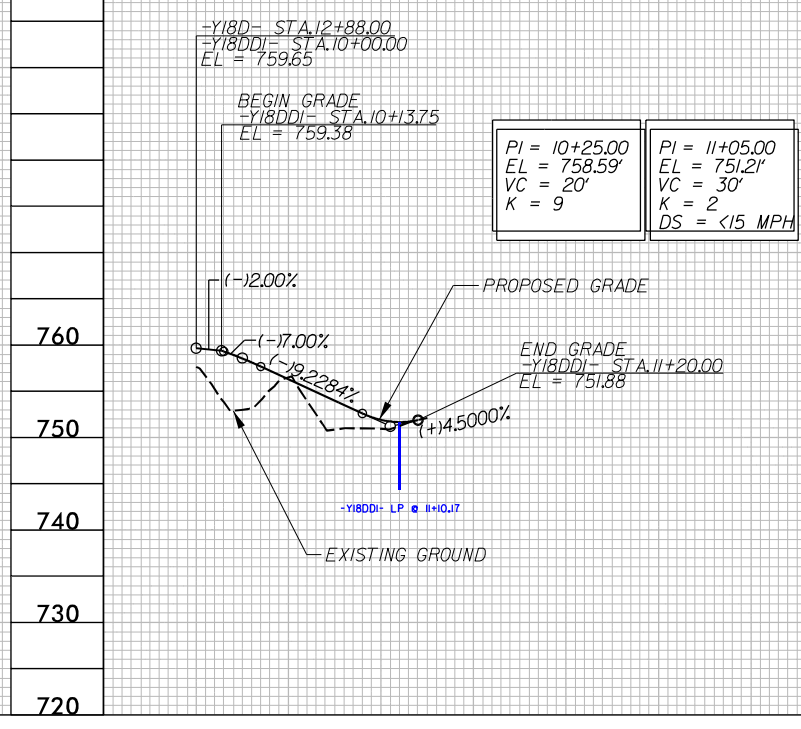
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### -Y17D3-



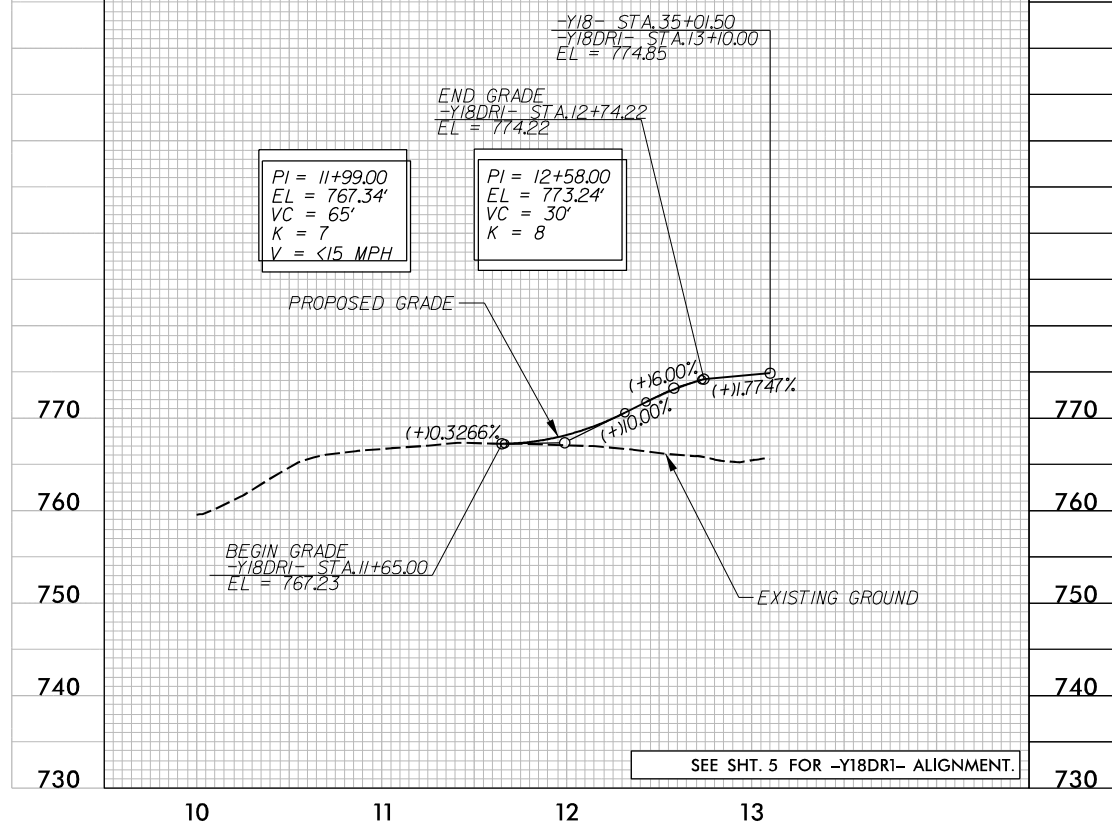
SEE SHT. 11 FOR -Y17D3- ALIGNMENT.

### -Y18DD1-



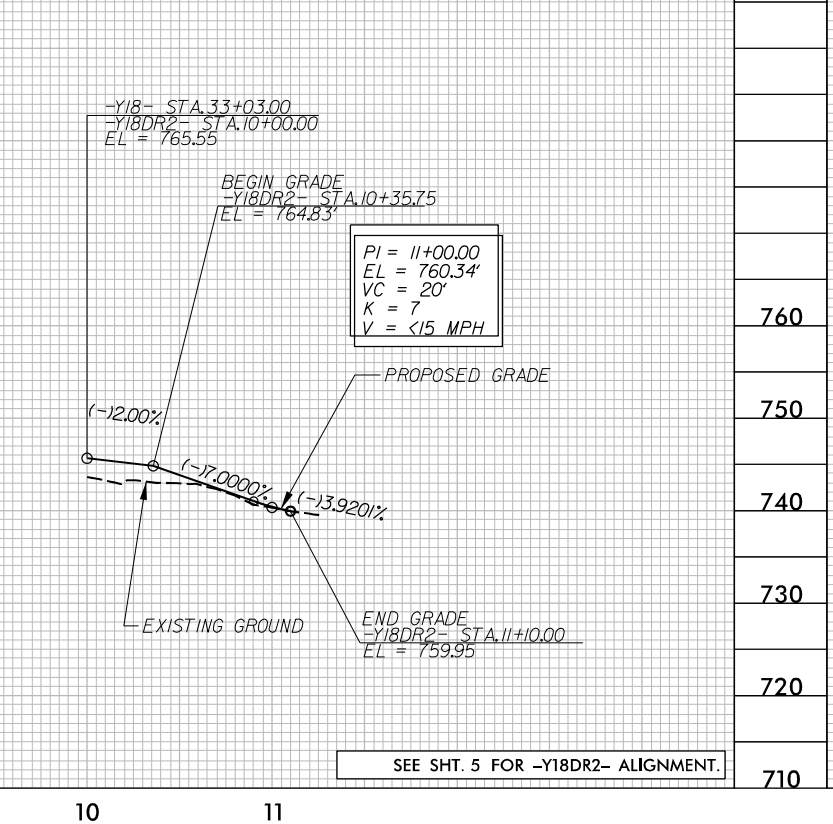
SEE SHT. 5 FOR -Y18DD1- ALIGNMENT.

### -Y18DR1-



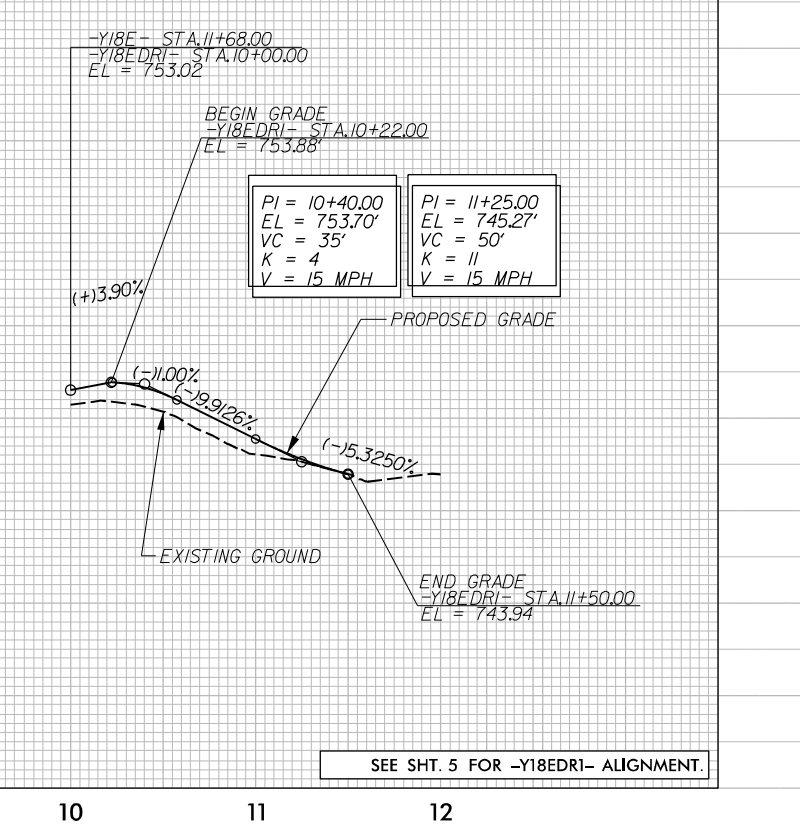
SEE SHT. 5 FOR -Y18DR1- ALIGNMENT.

### -Y18DR2-



SEE SHT. 5 FOR -Y18DR2- ALIGNMENT.

### -Y18EDR1-



SEE SHT. 5 FOR -Y18EDR1- ALIGNMENT.

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