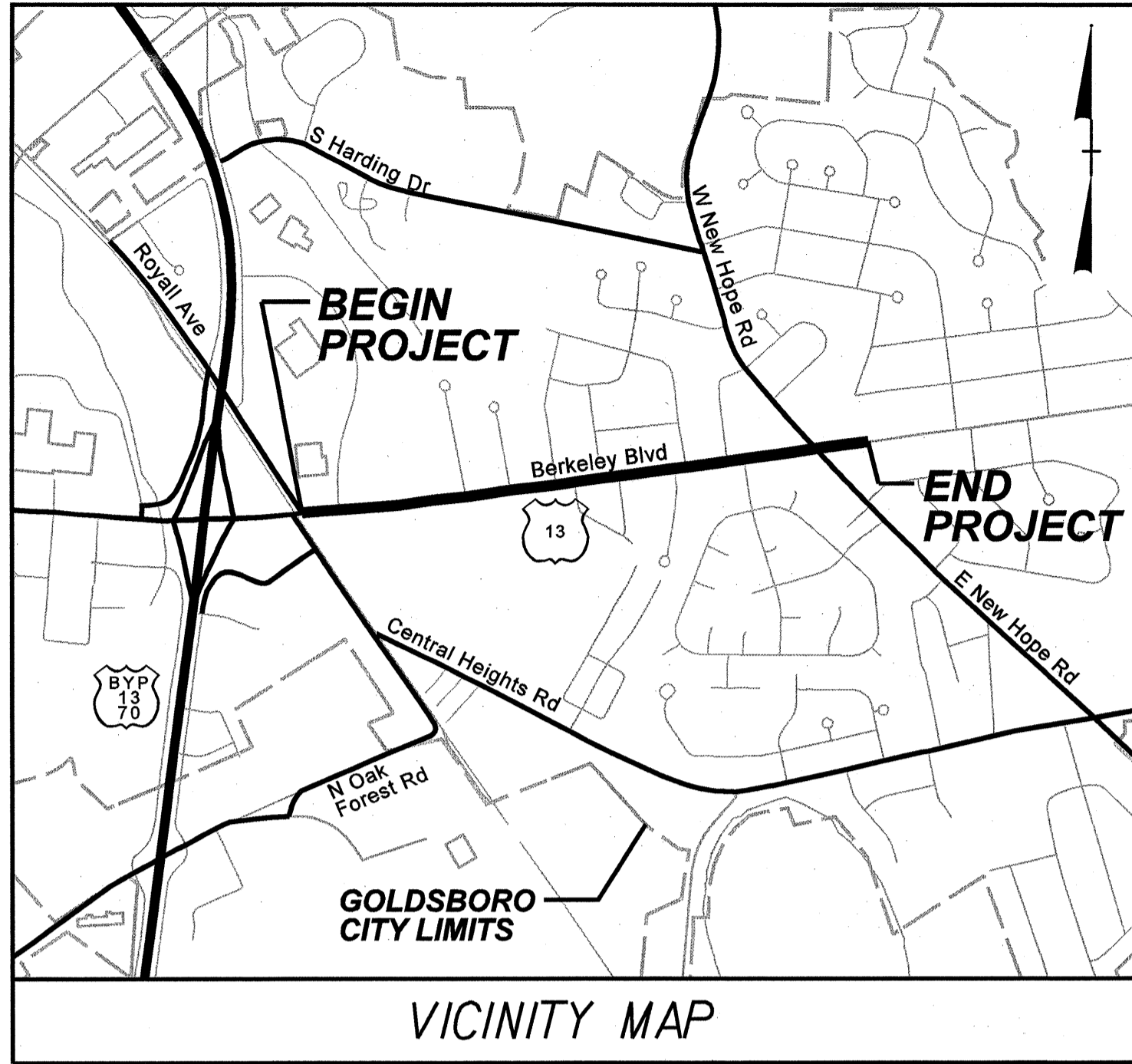


**TIP PROJECT: U-3609A**

**CONTRACT: C202603**

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



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

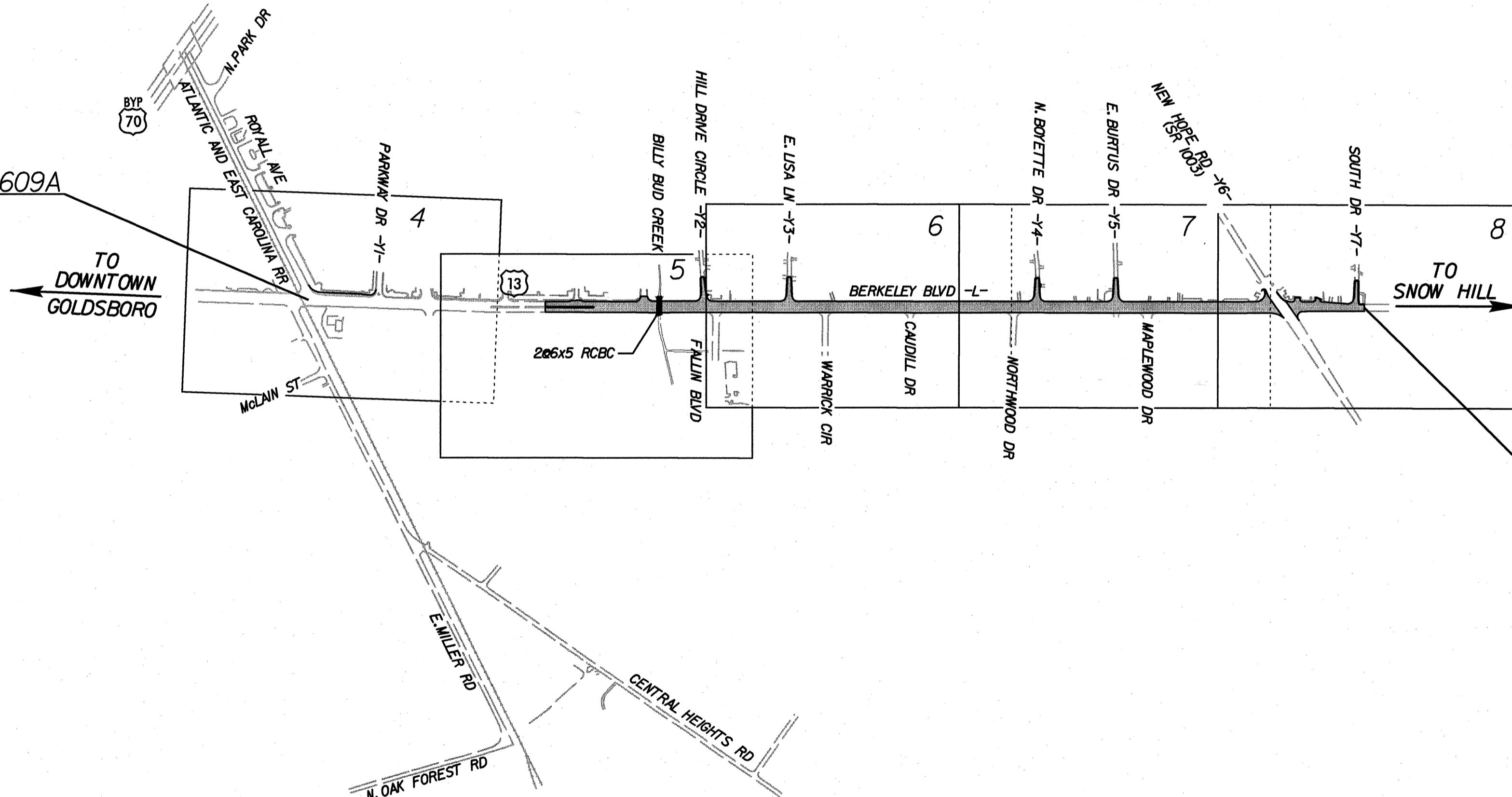
**WAYNE COUNTY**

**LOCATION: US 13 (BERKELEY BOULEVARD) FROM ROYALL AVENUE TO SOUTH DRIVE**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS, AND CULVERT**

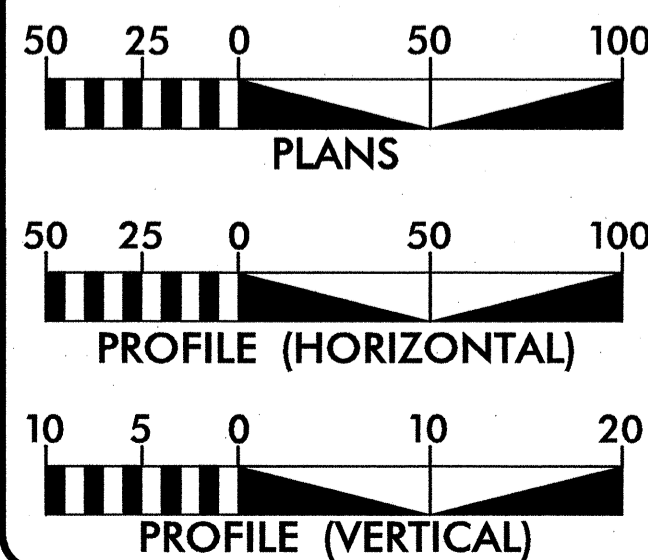
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3609A	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
39026.1.1	STP-0013(33)	P.E.	
39026.2.1	STP-0013(33)	R /W	
39026.3.1.FR1	STP-0013(33)	CONST.	

BEGIN TIP PROJECT U-3609A  
-L- STA 14+67.00



END TIP PROJECT U-3609A  
-L- STA 71+75.00

**GRAPHIC SCALES**



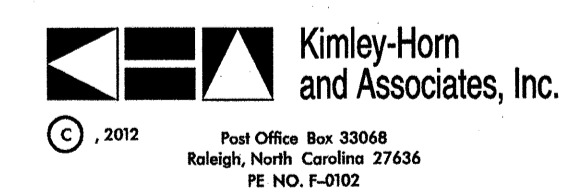
**DESIGN DATA**

**BERKELEY BLVD (US 13)**  
ADT 2008 = 15,500 VPD  
ADT 2035 = 29,100 VPD  
DESIGN SPEED = 50 mph  
FUNCTIONAL CLASSIFICATION:  
URBAN ARTERIAL

**PROJECT LENGTH**

TOTAL LENGTH TIP PROJECT U-3609A = 1.081 MILES

PLANS PREPARED FOR  
THE NCDOT BY:



2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
MAY 13, 2011

LETTING DATE:  
MAY 20, 2014

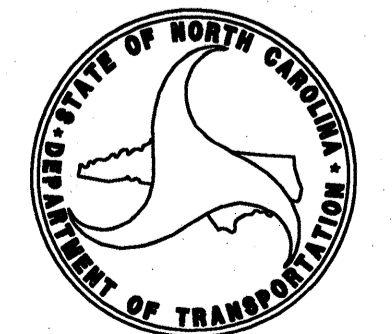
**CHUCK NUCKOLS, P.E.**  
PROJECT ENGINEER

**J. JASON PACE, P.E.**  
PROJECT DESIGN ENGINEER

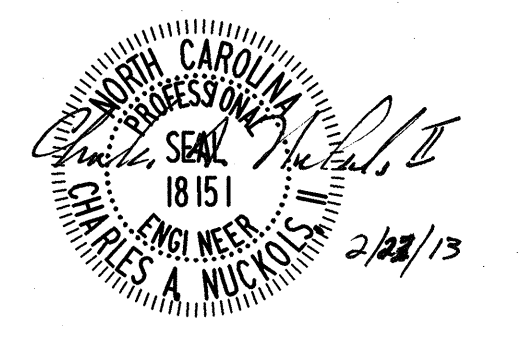
**HYDRAULICS ENGINEER**

Professional Engineer Seal for J. Jason Pace, P.E., No. 18151, State of North Carolina, expires 4/7/14. Signature of J. Jason Pace is present.

**DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA**





PROJECT REFERENCE NO.	SHEET NO.
U-3609A	1-A
ROADWAY DESIGN ENGINEER	
	

39026.3.1 (U-3609A)  
WAYNE COUNTY

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, LIST OF ROADWAY STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
2 THRU 2-B	TYPICAL SECTIONS, PAVEMENT SCHEDULE, AND MISCELLANEOUS DETAILS
2-C	MANHOLE AND VALVE BOX ADJUSTMENTS DETAIL
3-A THRU 3-B	SUMMARY OF DRAINAGE QUANTITIES
3-C	SUMMARY OF PAVEMENT REMOVAL AND SUMMARY OF EARTHWORK
3-D	PARCEL INDEX SHEET
4 THRU 8	PLAN SHEETS
9	PROFILE SHEETS
TCP-1 THRU TCP-11	TRAFFIC CONTROL PLANS
PM-1 THRU PM-4	PAVEMENT MARKING AND SIGNING PLANS
EC-1 THRU EC-10	EROSION CONTROL PLANS
SIG-1 THRU SIG-17	SIGNAL PLANS
UC-1 THRU UC-6	UTILITY CONSTRUCTION PLANS
X-1A	CROSS SECTION SUMMARY SHEET
X-1 THRU X-24	CROSS SECTIONS
C-1 THRU C-5	CULVERT PLANS

**GENERAL NOTES:**

2012 SPECIFICATIONS  
EFFECTIVE: 01-17-12  
REVISED: 11/01/11

**GRADING AND SURFACING OR RESURFACING AND WIDENING:**

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

**CLEARING:**

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

**SUPERELEVATION:**

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

**SHOULDER CONSTRUCTION:**

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

**SIDE ROADS:**

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

**DRIVEWAYS:**

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

**STREET TURNOUT:**

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

**TEMPORARY SHORING:**

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING".

**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 PROGRESS ENERGY, CENTURY LINK, TELICS/AT&T, PIEDMONT NATURAL GAS, AND TIME WARNER CABLE  
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 CONTRACT.

**CURB RAMPS**

CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL RAMPS IN ACCORDANCE WITH STD. 848.05 AND/OR 848.06.

**2012 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, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
<b>DIVISION 2 - EARTHWORK</b>	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
<b>DIVISION 3 - PIPE CULVERTS</b>	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
<b>DIVISION 5 - SUBGRADE, BASES AND SHOULDERS</b>	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
<b>DIVISION 6 - ASPHALT BASES AND PAVEMENTS</b>	
654.01	Pavement Repairs
<b>DIVISION 8 - INCIDENTALS</b>	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.03	Driveway Turnout - Drop Curb Type
848.04	Street Turnout
848.05	Curb Ramp - Proposed Curb & Gutter
848.06	Curb Ramp - Existing Curb & Gutter
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class "B" Rip Rap

K:\RAL\_Roadway\0117-46003 (Berkeley Blvd)\Plan\0117-46003\_1.tsh.dgn

2/26/2013



Note: Not to Scale

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

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	○ IP
Property Corner	-----x
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
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ☠

### BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□ †
Building	□
School	□ S
Church	□ C
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:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	○
Proposed Right of Way Line with Concrete or Granite RW Marker	○
Proposed Control of Access Line with Concrete CA Marker	○
Existing Control of Access	○
Proposed Control of Access	○
Existing Easement Line	-----E
Proposed Temporary Construction Easement	-----E
Proposed Temporary Drainage Easement	-----TDE
Proposed Permanent Drainage Easement	-----PDE
Proposed Permanent Drainage / Utility Easement	-----DUE
Proposed Permanent Utility Easement	-----PUE
Proposed Temporary Utility Easement	-----TUE
Proposed Aerial Utility Easement	-----AUE
Proposed Permanent Easement with Iron Pin and Cap Marker	◆

### 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	XXXX
VEGETATION:	
Single Tree	☼
Single Shrub	☼
Hedge	-----

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	-----

### 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	●
Recorded U/G Power Line	-----P
Designated U/G Power Line (S.U.E.*)	-----P

### TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	□
Telephone Pedestal	□
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	□
Recorded U/G Telephone Cable	-----T
Designated U/G Telephone Cable (S.U.E.*)	-----T
Recorded U/G Telephone Conduit	-----TC
Designated U/G Telephone Conduit (S.U.E.*)	-----TC
Recorded U/G Fiber Optics Cable	-----T FO
Designated U/G Fiber Optics Cable (S.U.E.*)	-----T FO

### WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded U/G Water Line	-----W
Designated U/G Water Line (S.U.E.*)	-----W
Above Ground Water Line	-----A/G Water

### TV:

TV Satellite Dish	☼
TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	□
Recorded U/G TV Cable	-----TV
Designated U/G TV Cable (S.U.E.*)	-----TV
Recorded U/G Fiber Optic Cable	-----TV FO
Designated U/G Fiber Optic Cable (S.U.E.*)	-----TV FO

### GAS:

Gas Valve	◇
Gas Meter	⊕
Recorded U/G Gas Line	-----G
Designated U/G Gas Line (S.U.E.*)	-----G
Above Ground Gas Line	-----A/G Gas

### SANITARY SEWER:

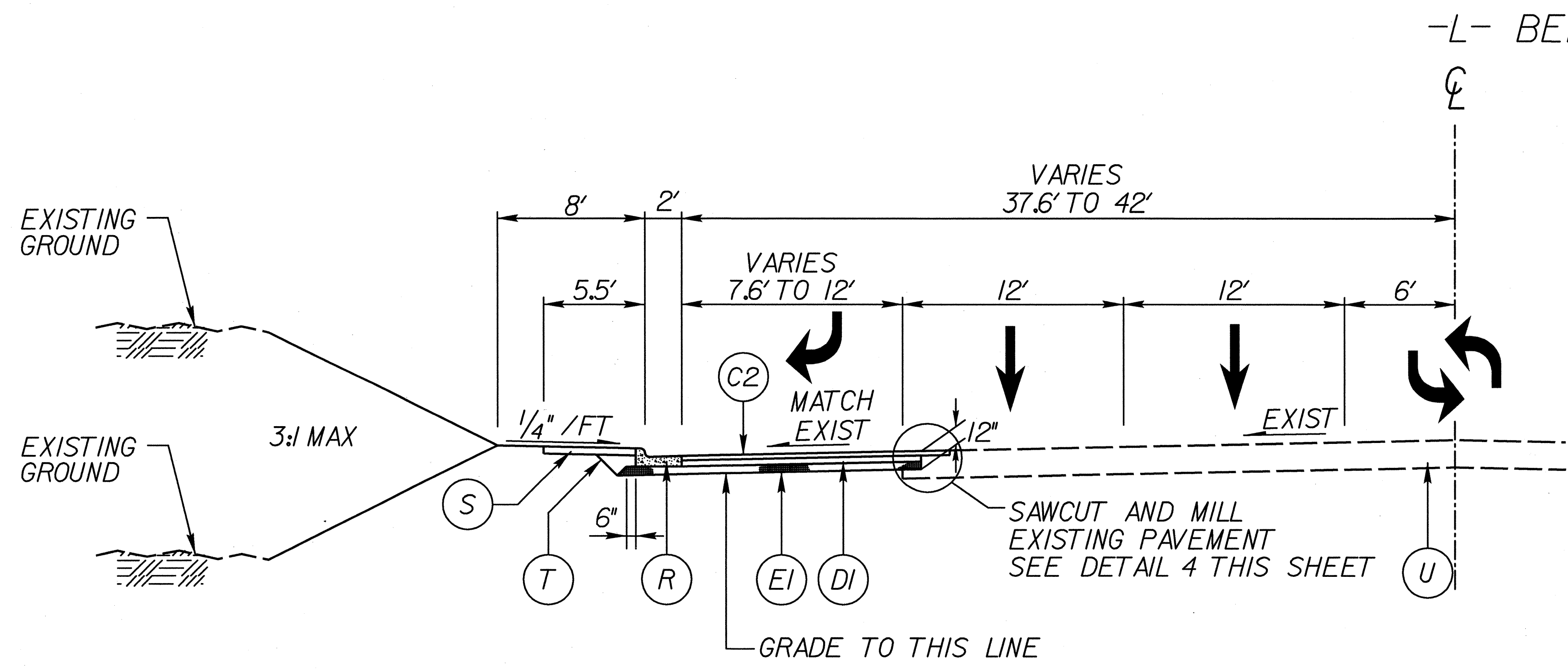
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	-----SS
Above Ground Sanitary Sewer	-----A/G Sanitary Sewer
Recorded SS Forced Main Line	-----FSS
Designated SS Forced Main Line (S.U.E.*)	-----FSS

### MISCELLANEOUS:

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

Kimley-Horn  
and Associates, Inc.  
P.O. BOX 33068  
RALEIGH, N.C. 27636-3068

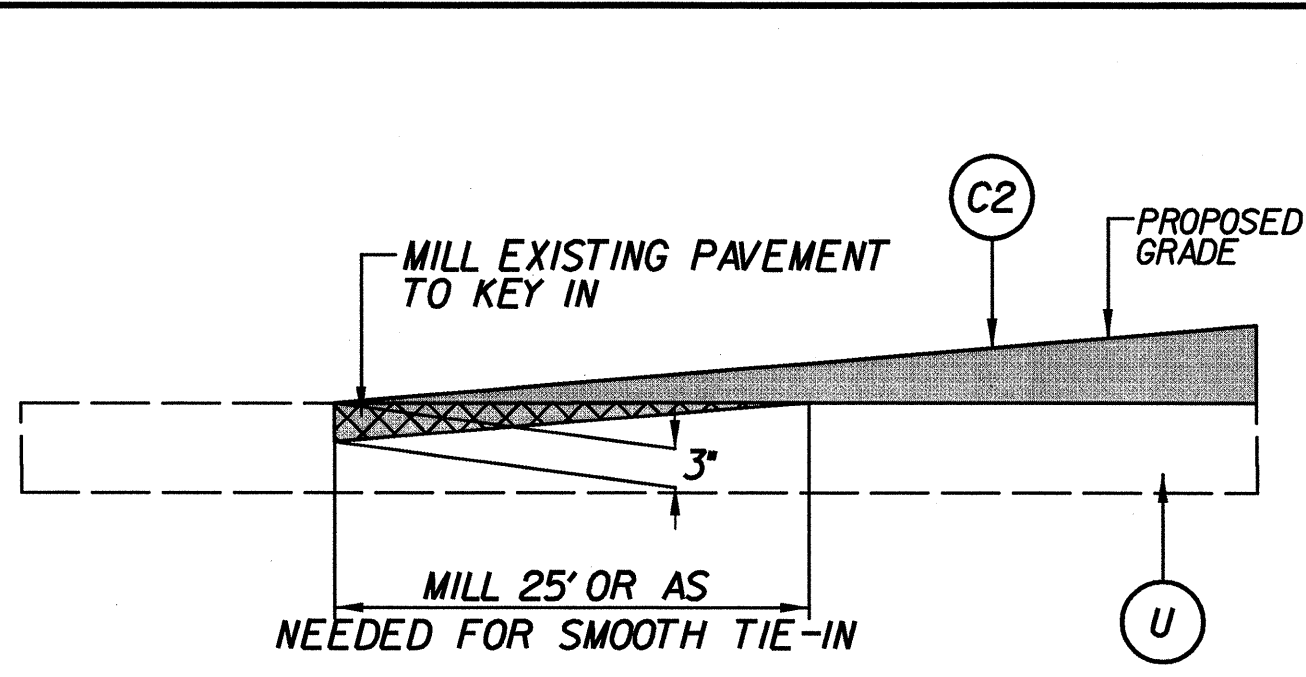
PROJECT REFERENCE NO. U-3609A	SHEET NO. 2
ROADWAY DESIGN ENGINEER SEAL 18537 CHARLES A. NUCKOL 1/21/13	PAVEMENT DESIGN ENGINEER SEAL 18537 JERRY P. PAGE 3/1/13



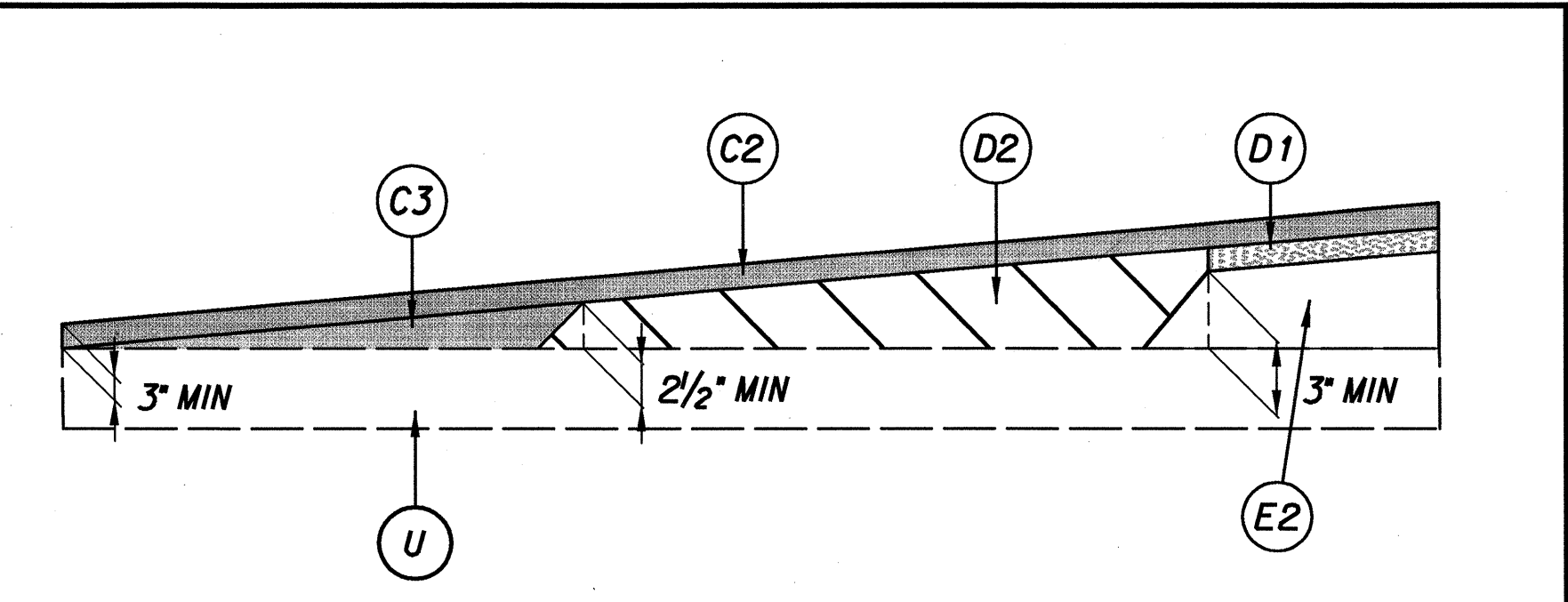
**TYPICAL SECTION NO. 1**  
-L- STA 14+67.00 TO STA 18+33.00 (LT)

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 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 112 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 1.5" OR GREATER THAN 2.0" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" OR GREATER THAN 5.5" IN DEPTH.
J	PROPOSED 6" AGGREGATE BASE COURSE
P	PRIME COAT AT THE RATE OF 0.35 GAL PER SQ. YD.
R	PROPOSED 2'-6" CONCRETE CURB AND GUTTER
S	PROPOSED 4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
V2	MILLING ASPHALT PAVEMENT, 3" DEPTH
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

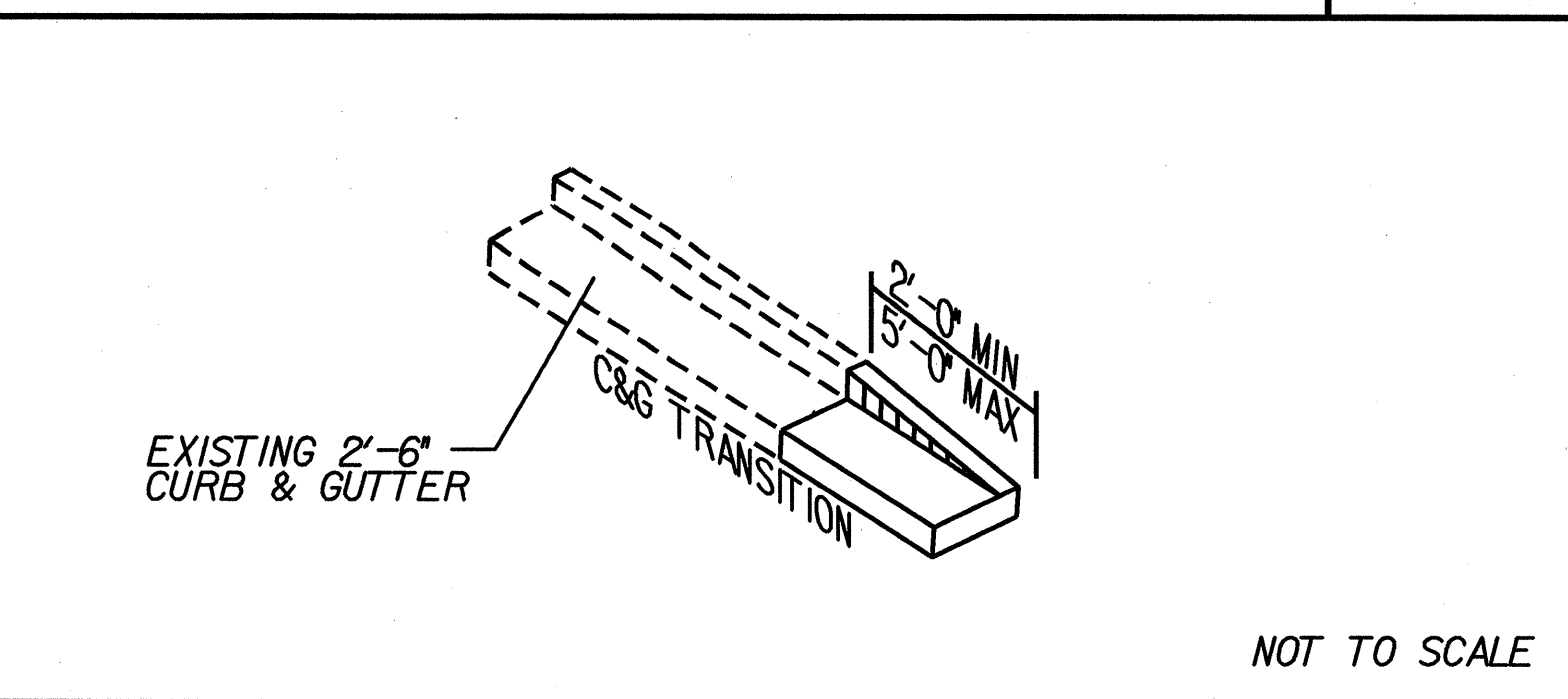
PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED



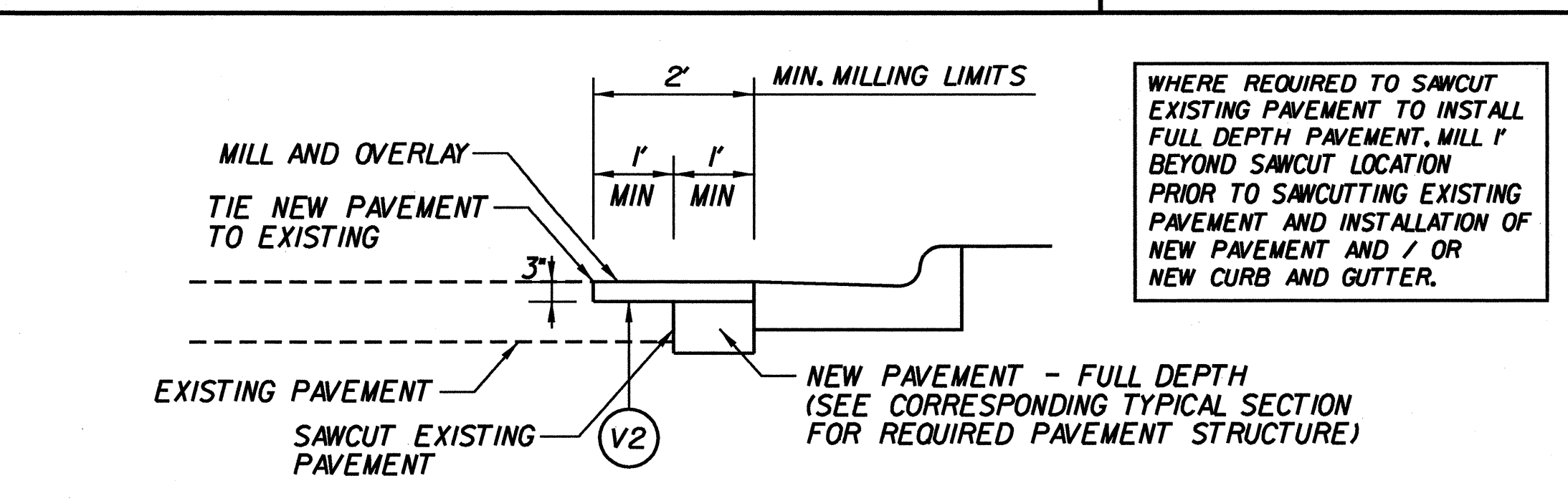
**DETAIL 1 - INCIDENTAL MILLING DETAIL**



**DETAIL 2 - METHOD OF WEDGING**



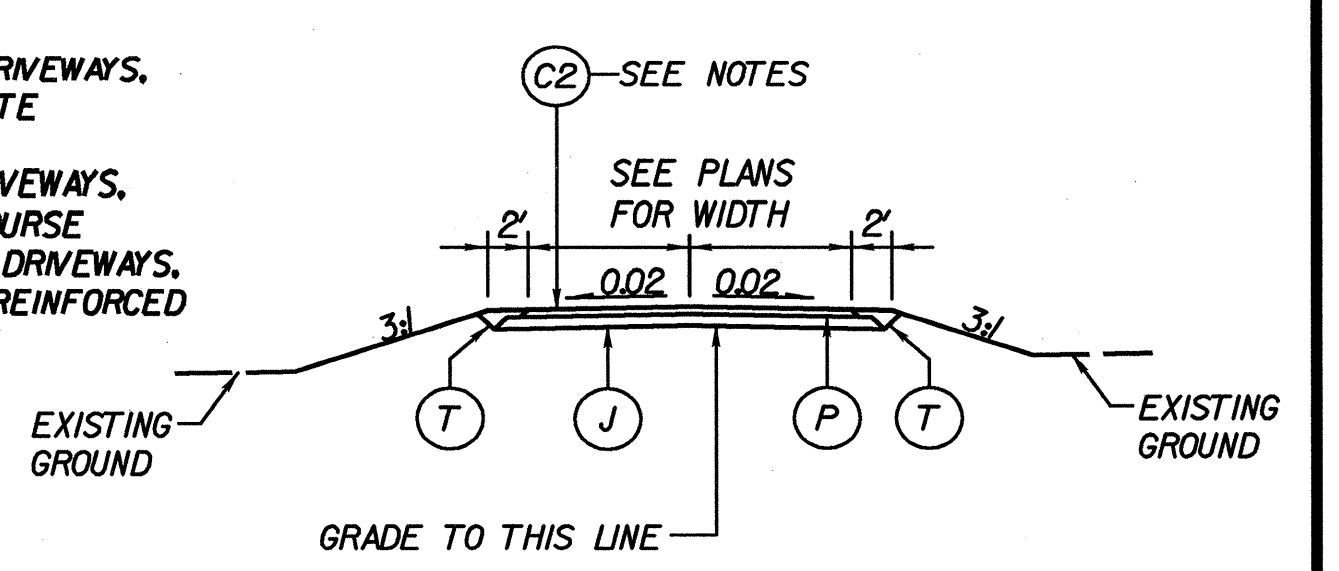
**DETAIL 3 - CURB AND GUTTER END TREATMENT**



**DETAIL 4 - MILLING AND SAWCUT DIMENSIONS**

WHERE REQUIRED TO SAWCUT EXISTING PAVEMENT TO INSTALL FULL DEPTH PAVEMENT, MILL 1' BEYOND SAWCUT LOCATION PRIOR TO SAWCUTTING EXISTING PAVEMENT AND INSTALLATION OF NEW PAVEMENT AND / OR NEW CURB AND GUTTER.

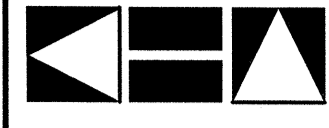
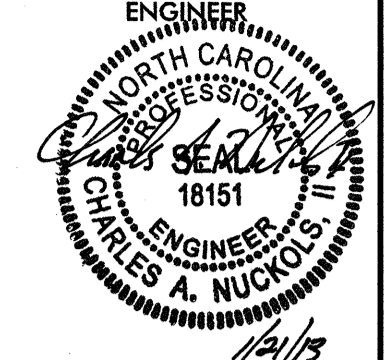
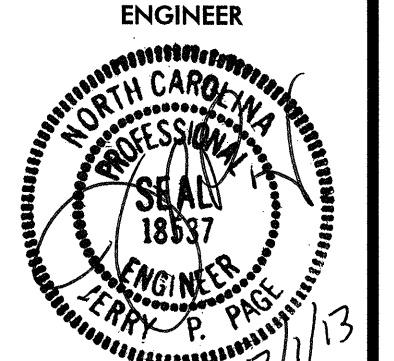
NOTES:  
1. FOR EXISTING ASPHALT DRIVEWAYS, USE 3" S9.5B ON 6" AGGREGATE BASE COURSE  
2. FOR EXISTING GRAVEL DRIVEWAYS, USE 6" AGGREGATE BASE COURSE  
3. FOR EXISTING CONCRETE DRIVEWAYS, USE 6" JOINTED CONCRETE REINFORCED WITH WOVEN WIRE MESH ON 6" AGGREGATE BASE COURSE

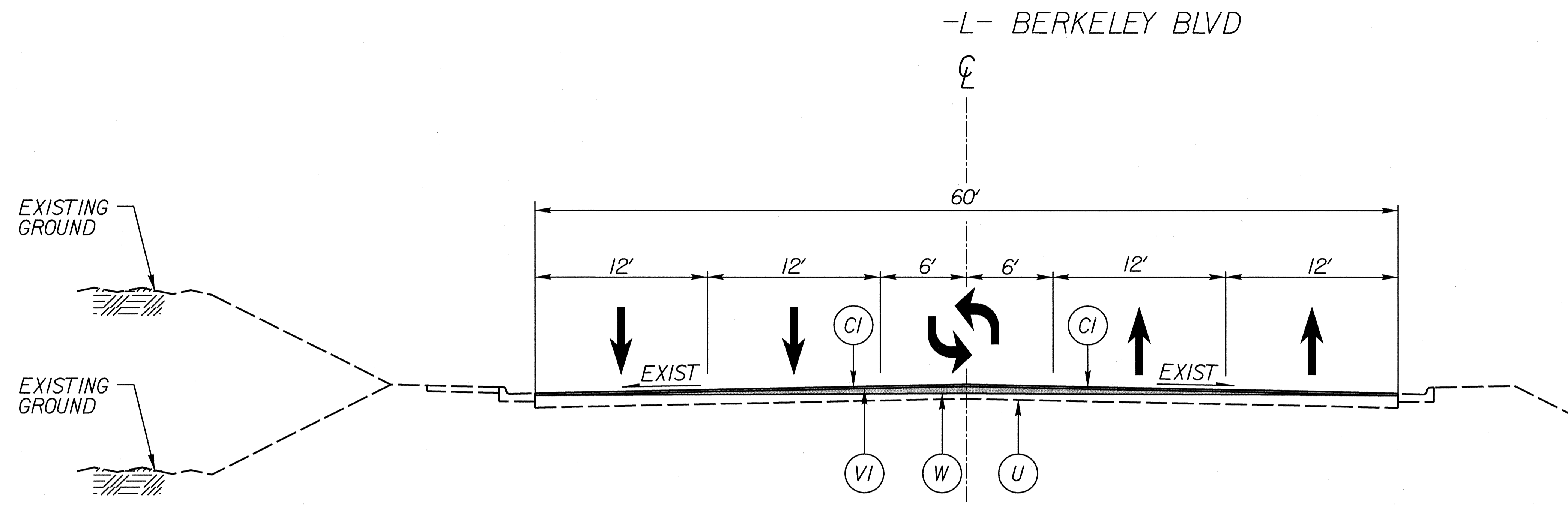


**DETAIL 5 - DRIVEWAY DETAIL**

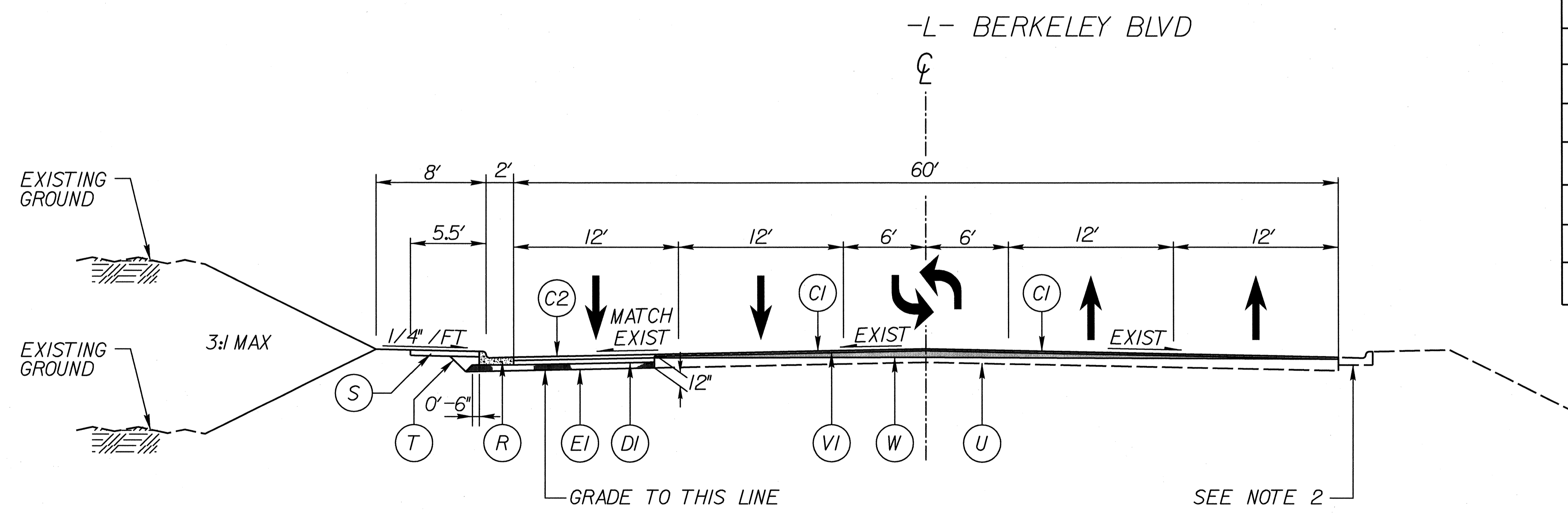
K:\RAL\_Roadway\011746003 (Berkeley Blvd)\Plan\01746003\_1.dwg 1/17/2013



 Kimley-Horn and Associates, Inc. P.O. BOX 33068 RALEIGH, N.C. 27636-3068	PROJECT REFERENCE NO.	SHEET NO.
	U-3609A	2-A
	ROADWAY DESIGN ENGINEER  CHARLES A. NUCKOLS 18151 1/2/13	PAVEMENT DESIGN ENGINEER  JERRY P. PRICE 18537 3/1/13



**TYPICAL SECTION NO.2**  
 -L- STA 27+50.00 TO STA 32+35.00

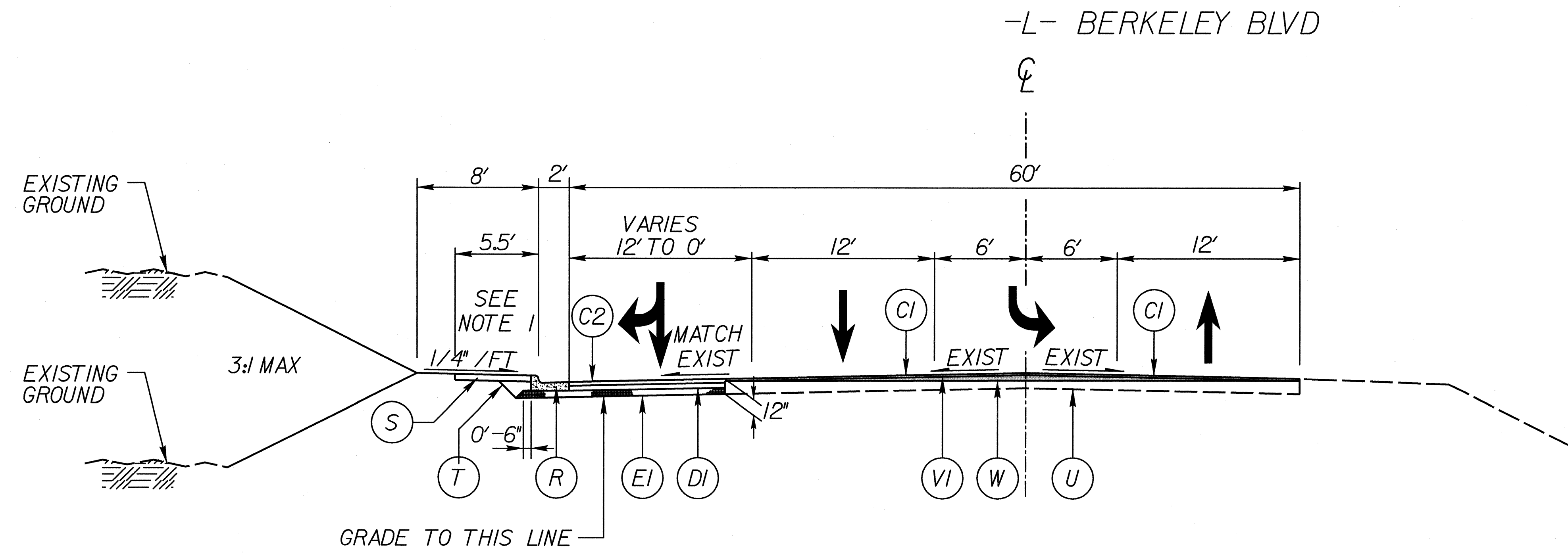


**TYPICAL SECTION NO.3**  
 -L- STA 32+35.00 TO STA 67+33.97 (NEW HOPE RD)

PAVEMENT SCHEDULE	
C1	1.5" TYPE S9.5B
C2	3" TYPE S9.5B
C3	PROP. VAR. DEPTH TYPE S9.5B,
D1	4" TYPE I19.0B
D2	PROP. VAR. DEPTH TYPE I19.0B
E1	5" TYPE B25.0B
E2	PROP. VAR. DEPTH TYPE B25.0B
J	6" AGGREGATE BASE COURSE
P	PRIME COAT
R	2'-6" CONCRETE CURB AND GUTTER
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
V2	MILLING ASPHALT PAVEMENT, 3" DEPTH
W	VARIABLE DEPTH ASPHALT PAVEMENT

- NOTES:**
- FULL DEPTH PAVEMENT REPAIR WILL BE NEEDED DUE TO CULVERT CONSTRUCTION FROM -L- STA 33+45 +/- TO STA 33+85 +/- (SEE TRAFFIC CONTROL PLANS)
  - REPLACE 2'-6" C&G FROM -L- STA 33+08.00 TO STA 34+22.00 (RT) DUE TO DRAINAGE SYSTEM AND BOX CULVERT INSTALLATION.

K:\RAL\_Roadway\0117-46003 (Berkeley Blvd)\Plan\0117-46003\_Typ.dgn  
1/17/2013

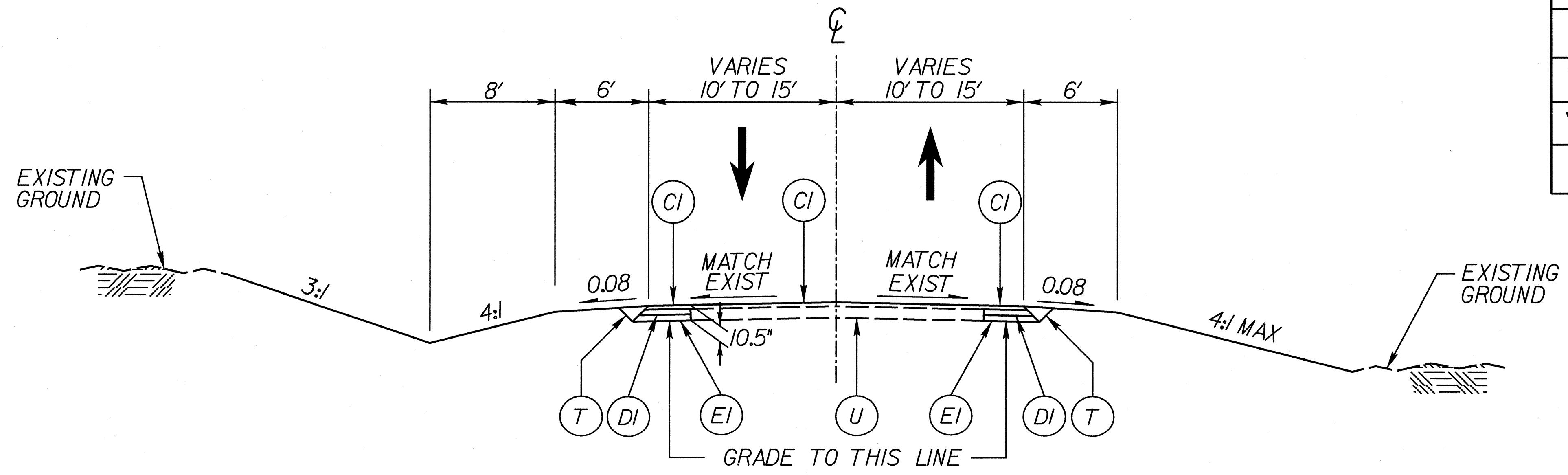


NOTE:  
 1. NO SIDEWALK FROM -L- 69+10.00 TO STA 71+50.00 (LT)

TYPICAL SECTION NO. 4

-L- STA 67+75.23 (NEW HOPE RD) TO STA 71+75.00

- Y2- HILL DRIVE CIRCLE
- Y3- E. LISA LANE
- Y4- N. BOYETTE DRIVE
- Y5- E. BURTUS DRIVE
- Y7- SOUTH DRIVE



NOTE: NO GRADE POINT ON OVERLAY SECTIONS

TYPICAL SECTION NO. 5

-Y2- STA 11+36.98 TO STA 12+69.94  
 -Y3- STA 11+35.39 TO STA 12+70.00  
 -Y4- STA 11+40.00 TO STA 12+70.00  
 -Y5- STA 11+39.85 TO STA 12+70.00  
 -Y7- STA 11+51.35 TO STA 12+82.00

PAVEMENT SCHEDULE	
C1	1.5" TYPE S9.5B
C2	3" TYPE S9.5B
C3	PROP. VAR. DEPTH TYPE S9.5B,
D1	4" TYPE I19.0B
D2	PROP. VAR. DEPTH TYPE I19.0B
E1	5" TYPE B25.0B
E2	PROP. VAR. DEPTH TYPE B25.0B
J	6" AGGREGATE BASE COURSE
P	PRIME COAT
R	2'-6" CONCRETE CURB AND GUTTER
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
V2	MILLING ASPHALT PAVEMENT, 3" DEPTH
W	VARIABLE DEPTH ASPHALT PAVEMENT



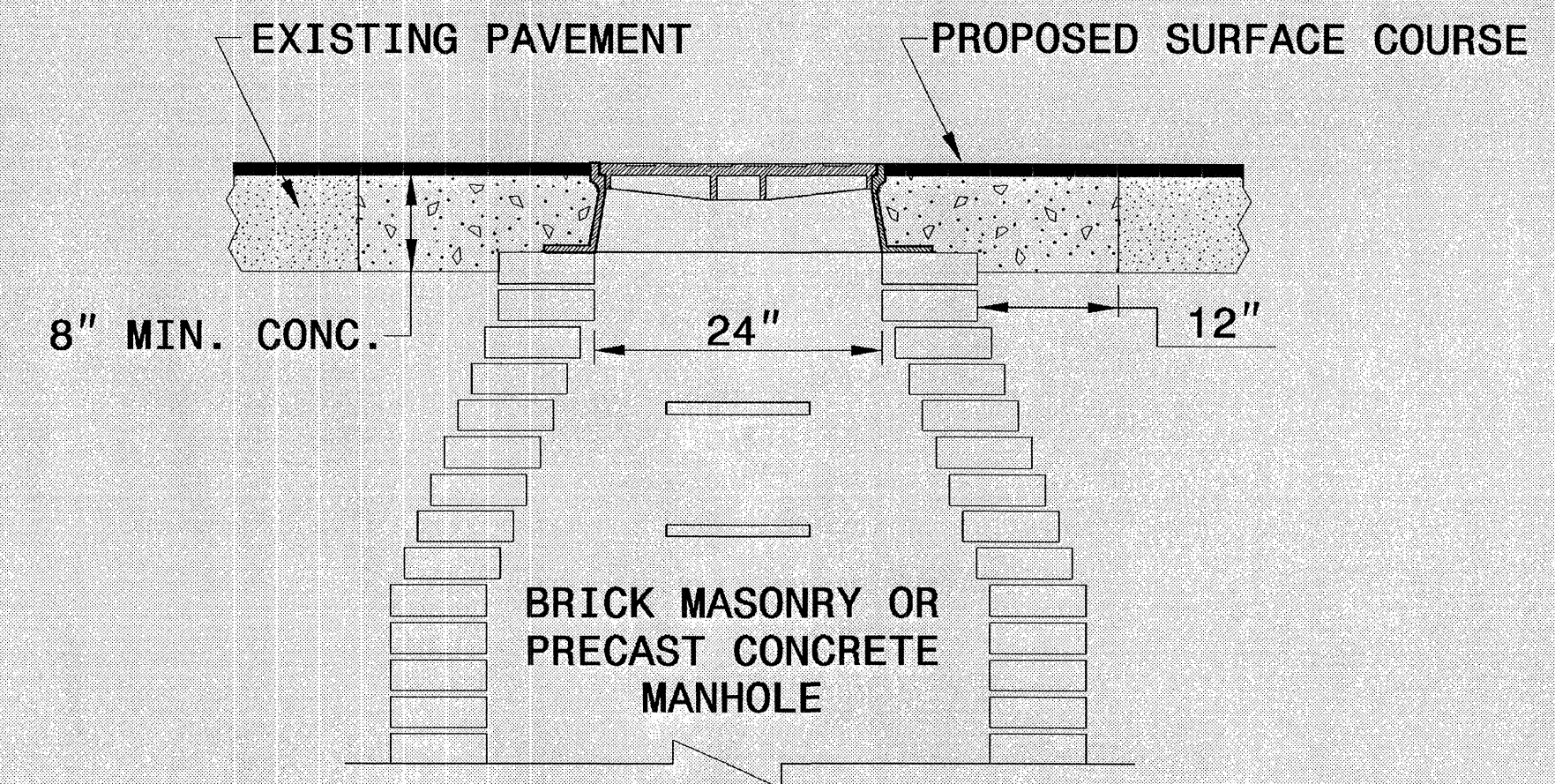
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**MANHOLE AND VALVE BOX ADJUSTMENTS**

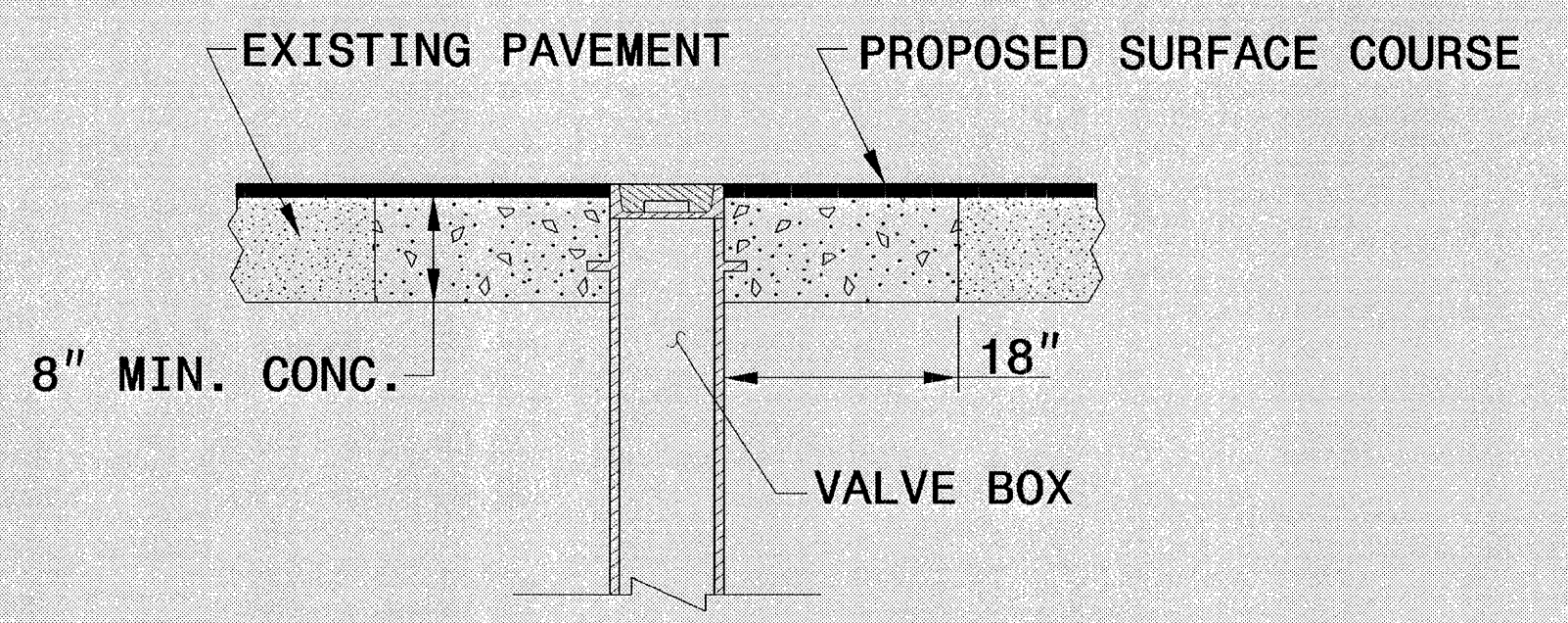
SHEET 1 OF 1  
**840D55**

**GENERAL NOTES:**

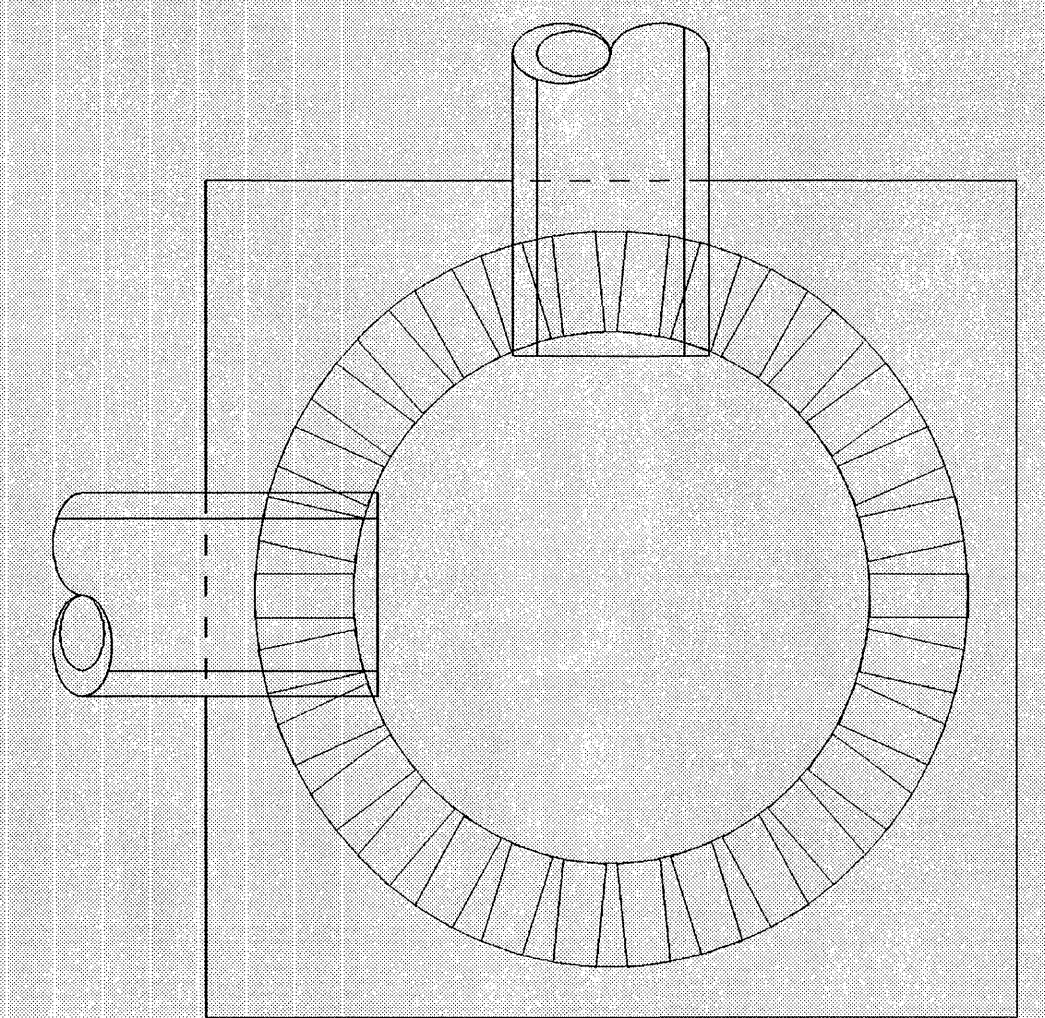
1. USE RAPID SET GROUT, MORTAR, OR CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
2. REMOVE ALL FAULTY EXISTING BRICKWORK AND REPLACE WITH NEW BRICK MASONRY.
3. SHEER CUT EXCAVATION FOR THE ADJUSTMENT ON ALL SIDES.
4. FILL AREA BELOW 8" DEPTH WITH 78M OR NO. 57 CLEAN STONE.
5. MIX MORTAR TO NCDOT SPECIFICATIONS.
6. MORTAR JOINTS 1/2" +/- 1/8"



**MANHOLE CONCRETE ENCASEMENT**



**VALVE BOX CONCRETE ENCASEMENT**



**ELEVATION VIEW**

PLACE BRICK ACCORDING TO ELEVATION VIEW

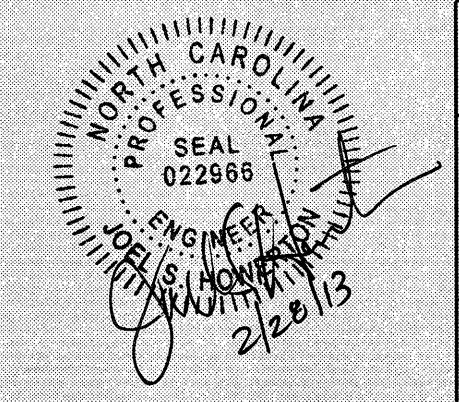
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**MANHOLE AND VALVE BOX ADJUSTMENTS**

SHEET 1 OF 1  
**840D55**

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07-DEC-2005 14:25  
S:\contracts\01746003\Special\_Details\eric\rd\usr\catalia\stand\840d55.dgn  
P:\stand\01746003



**PROJECT SERVICES UNIT  
STANDARDS AND SPECIAL DESIGN**  
Office 919-250-4128 FAX 919-250-4119

**SEE PLATE FOR TITLE**

ORIGINAL BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 MODIFIED BY: E.E. WARD DATE: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 FILE SPEC.: /usr/details/stand/840d55.dgn

2/26/2013

REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY

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PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050 PE NO. F-0102

**MANHOLE AND VALVE ADJUSTMENTS  
DETAIL**

PROJECT:  
**BERKELEY BOULEVARD WIDENING**

JOB NUMBER: 011746003 SHEET NUMBER: 2-C









## SUMMARY OF EARTHWORK IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
-L- STA 14+67 TO STA 18+33	243		13		230
-L- STA 33+00 TO STA 71+75	1,298		3,948	2,650	
-Y2- STA 11+36.98 TO STA 12+69.94	94		48		46
-Y3- STA 11+35.39 TO STA 12+70	34		24		10
-Y4- STA 11+40 TO STA 12+70	32		38	6	
-Y5- STA 11+39.85 TO STA 12+70	42		17		25
-Y7- STA 11+51.35 TO STA 12+82	35		16		19
SUB-TOTAL	1,778		4,104	2,656	330
USE WASTE TO REPLACE BORROW				-330	-330
TOTAL	1,778		4,104	2,326	0
SAY	2,000			2,700	
EST. DDE = 630 CY					
EST. CHANNEL EXCAVATION = 390 CY					
EST. CONTINGENCY UNDERCUT = 200 CY					
EST. CONTINGENCY SHALLOW UNDERCUT = 250 CY					
EST. CLASS IV SUBGRADE STABILIZATION = 450 TONS					
EST. SELECT MATERIAL CLASS VI (BACKFILL FOR RCBC AND SEWER INSTALLATION) = 550 CY					

REMOVAL OF EXISTING ASPHALT PAVEMENT			
LINE	STATION TO STATION	LOCATION	SQ. YDS.
-L-	33+45 TO 33+85	LT/RT	210
TOTAL			210


NOTE: APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING AND GRUBBING, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING."


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1/17/2013

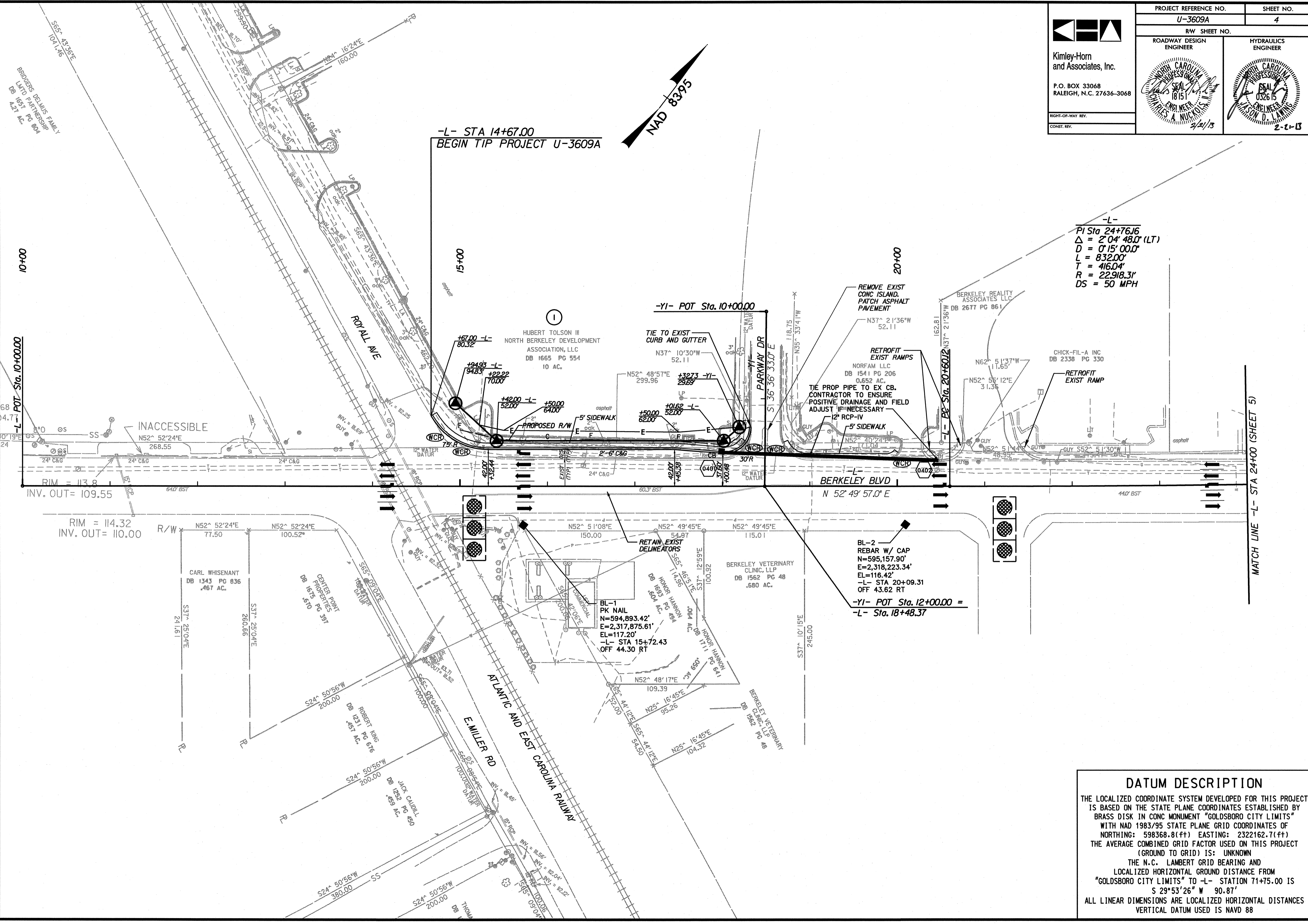




 Kimley-Horn and Associates, Inc.  P.O. BOX 33068 RALEIGH, N.C. 27636-3068  RIGHT-OF-WAY REV. CONST. REV.	PROJECT REFERENCE NO. U-3609A	SHEET NO. 4
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

  
 4/21/15

  
 2-2-15



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2/21/2013

**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY BRASS DISK IN CONC MONUMENT "GOLDSBORO CITY LIMITS" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 598368.8(ft) EASTING: 2322162.7(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: UNKNOWN

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GOLDSBORO CITY LIMITS" TO -L- STATION 71+75.00 IS S 29°53'26" W 90.87'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88







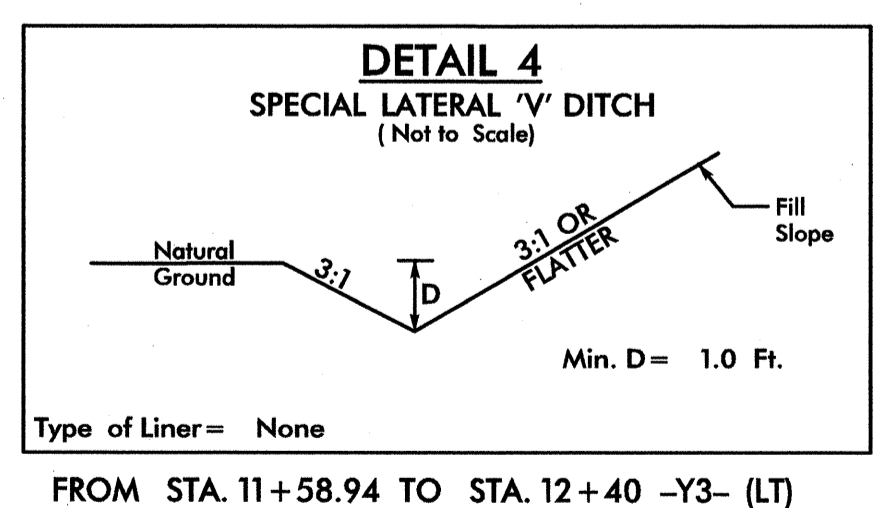
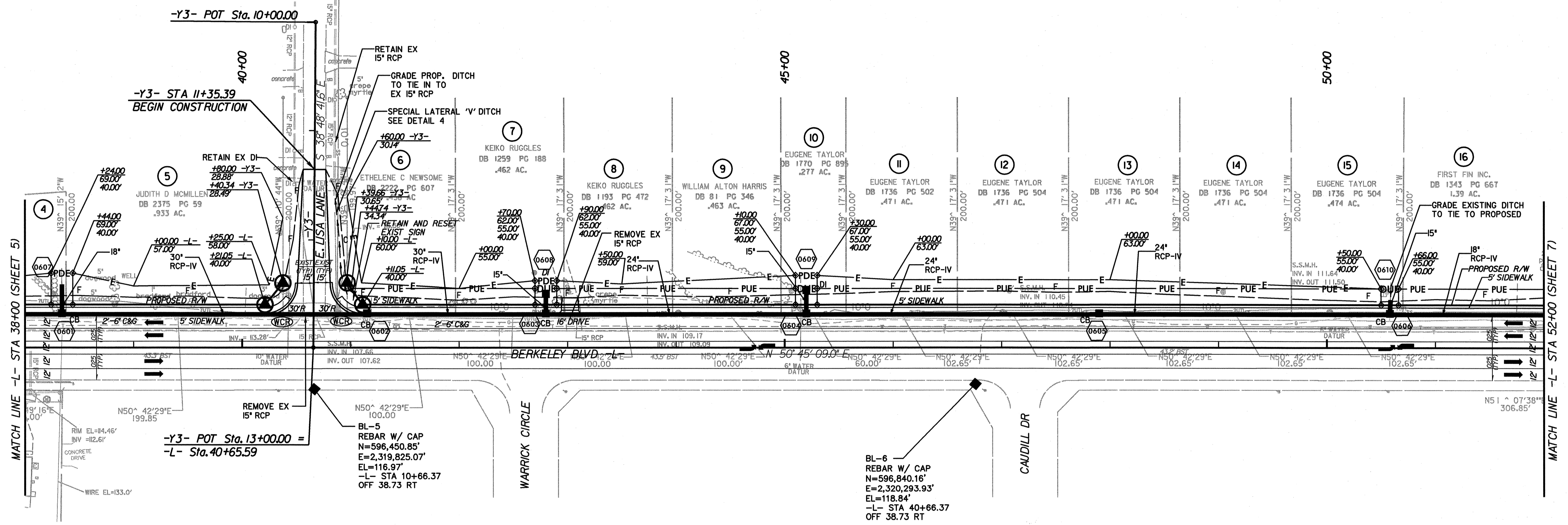


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and Associates, Inc.

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RIGHT-OF-WAY REV.  
CONST. REV.

PROJECT REFERENCE NO. U-3609A	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



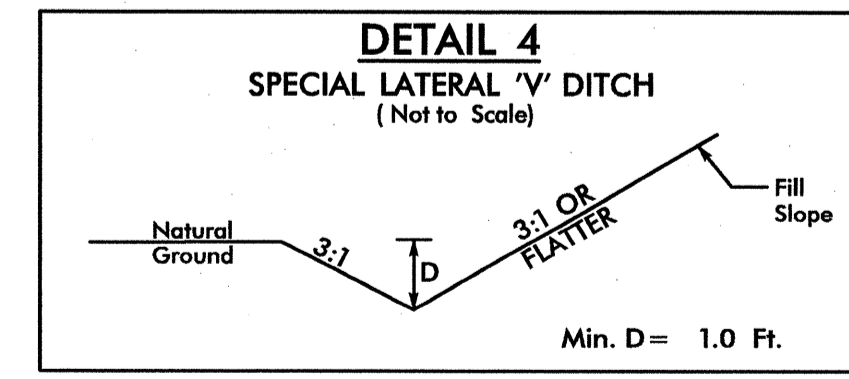
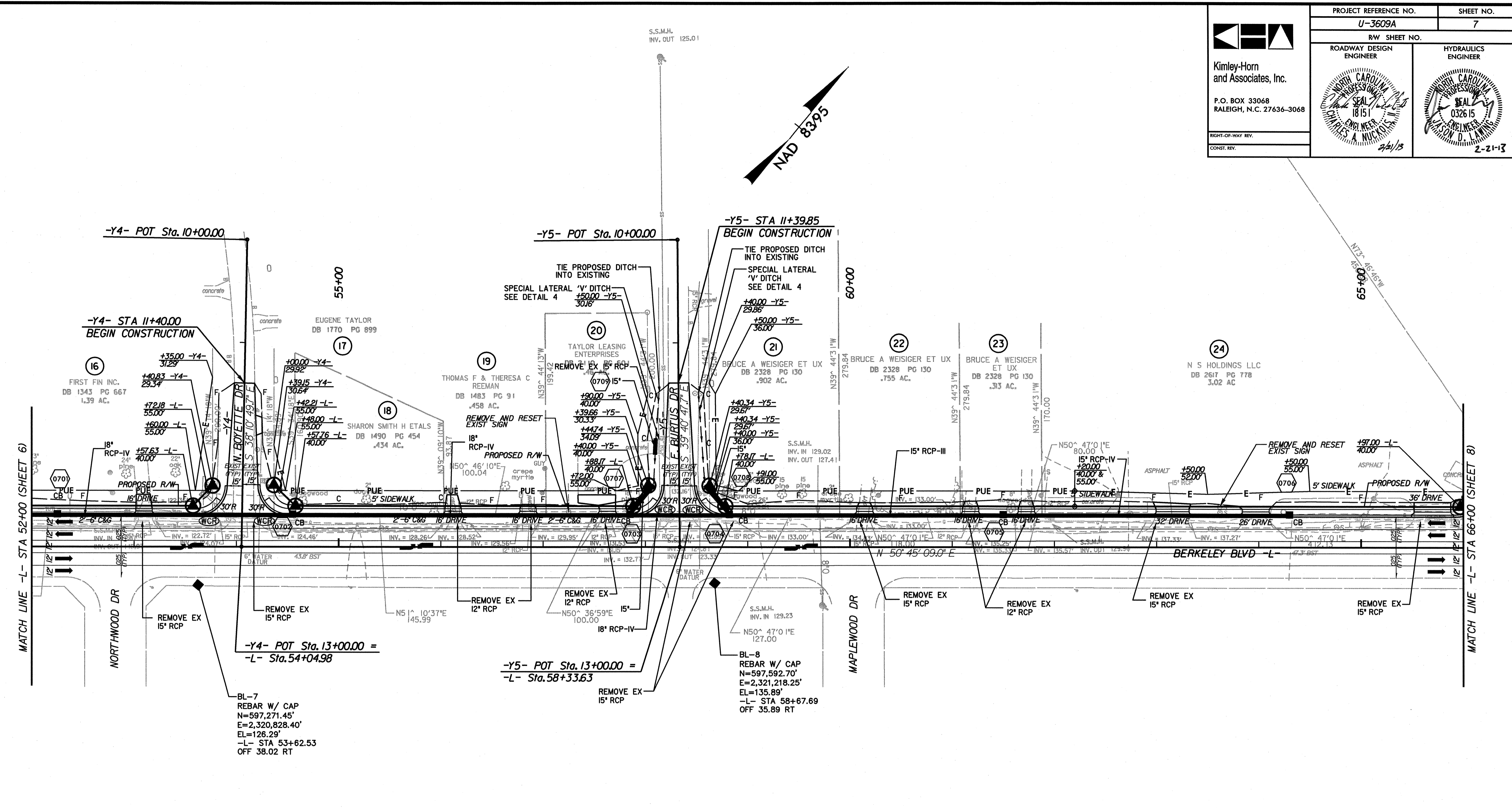
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2/21/2013

SEE SHEET NO.9 FOR -Y3- PROFILE



<p>Kimley-Horn and Associates, Inc. P.O. BOX 33068 RALEIGH, N.C. 27636-3068</p>	PROJECT REFERENCE NO. U-3609A	SHEET NO. 7
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
RIGHT-OF-WAY REV.		
CONST. REV.		



FROM STA. 11+39.66 TO STA. 12+39.14 -Y5- (RT)  
FROM STA. 11+36.66 TO STA. 12+39.85 -Y5- (LT)

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2/21/2013

SEE SHEET NO.9 FOR -Y4- AND -Y5- PROFILES





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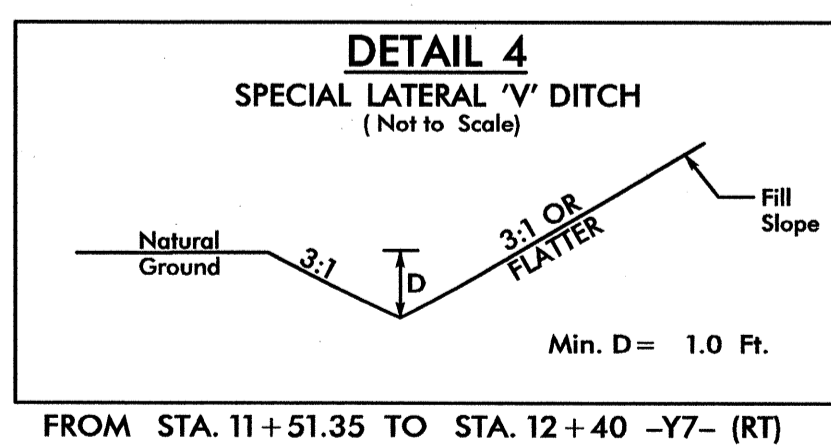
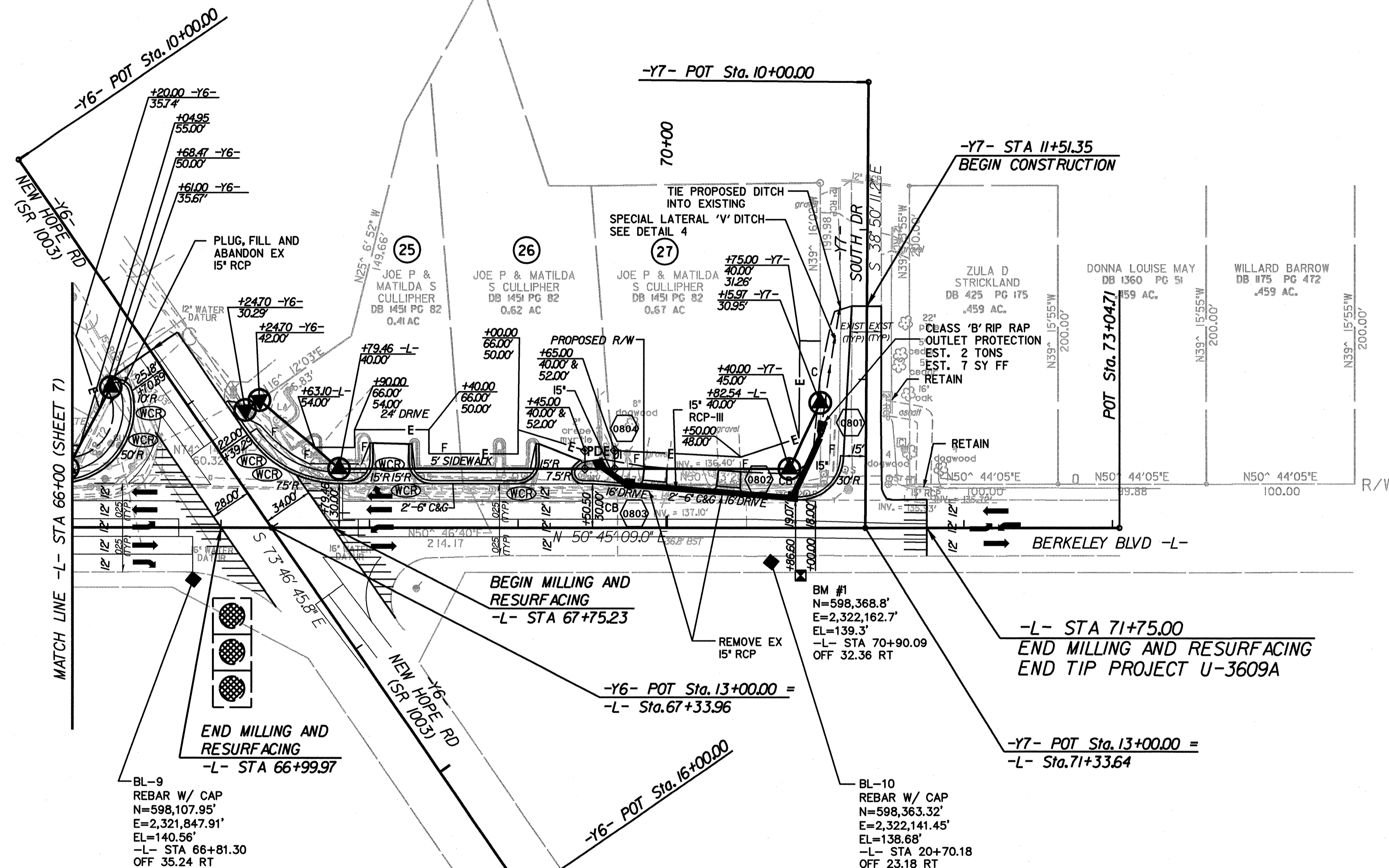
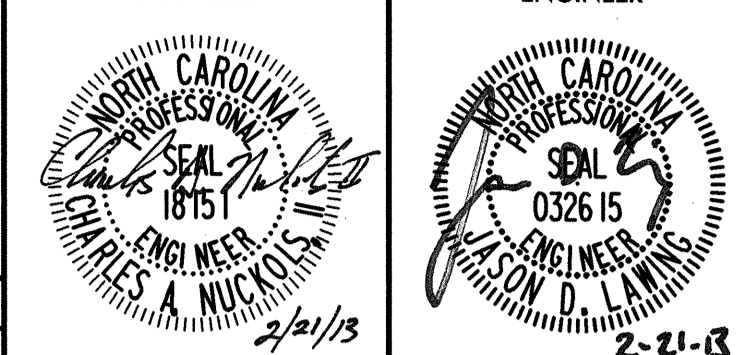
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RALEIGH, N.C. 27636-3068

RIGHT-OF-WAY REV.  
CONST. REV.

PROJECT REFERENCE NO. SHEET NO.

U-3609A 8

ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER



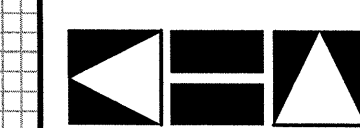
FROM STA. 11+51.35 TO STA. 12+40 -Y7- (RT)

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2/21/2013

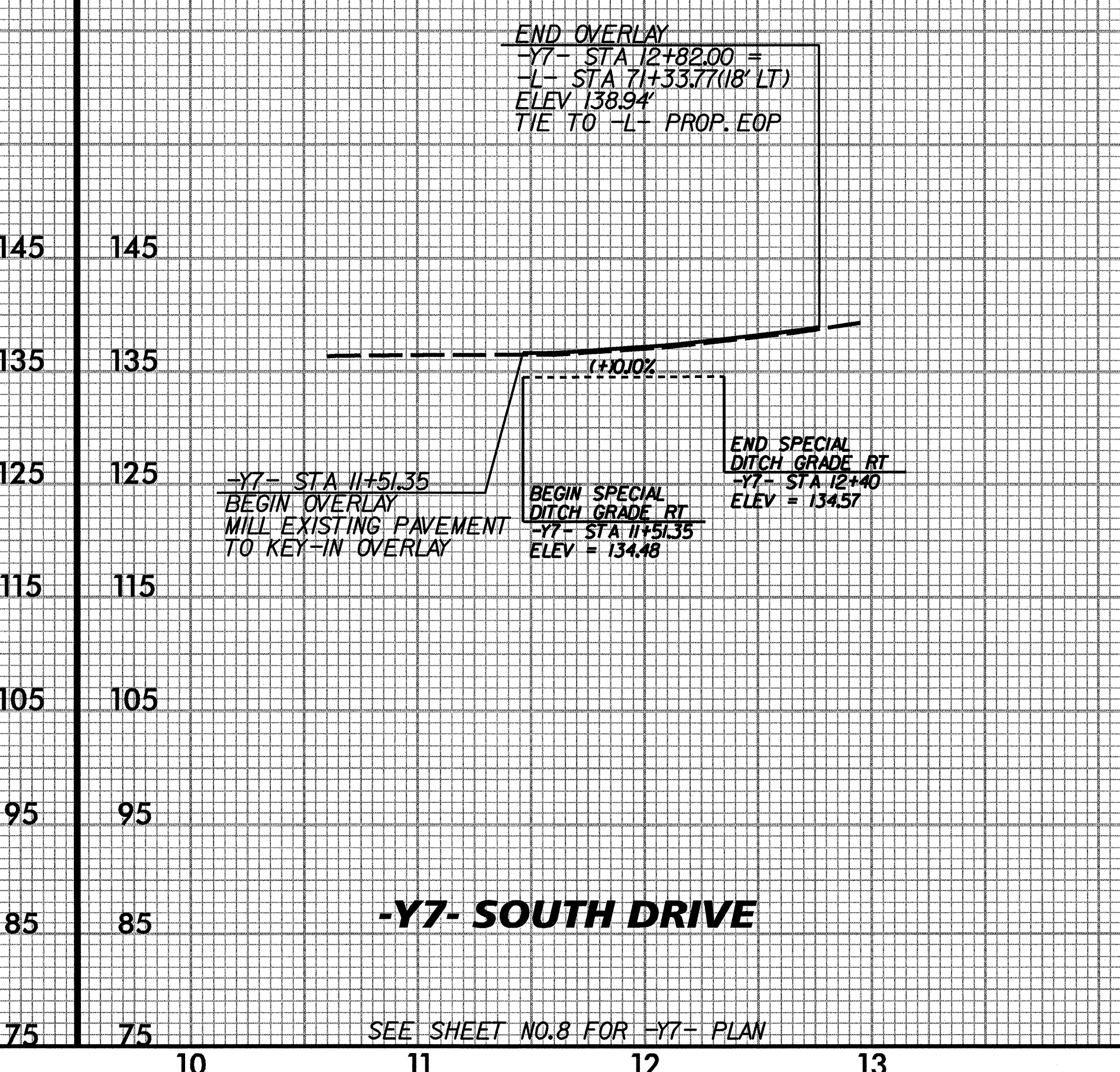
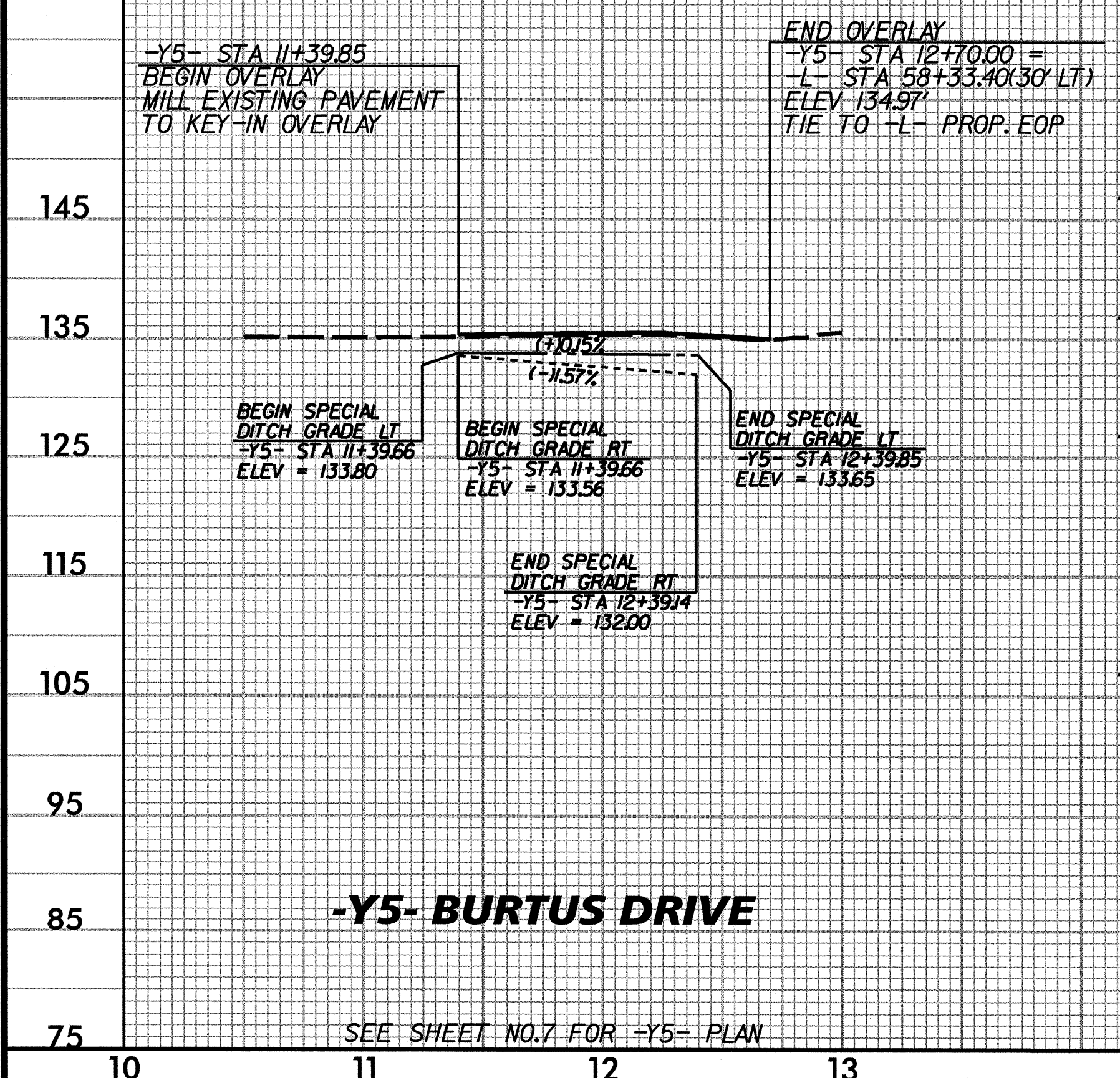
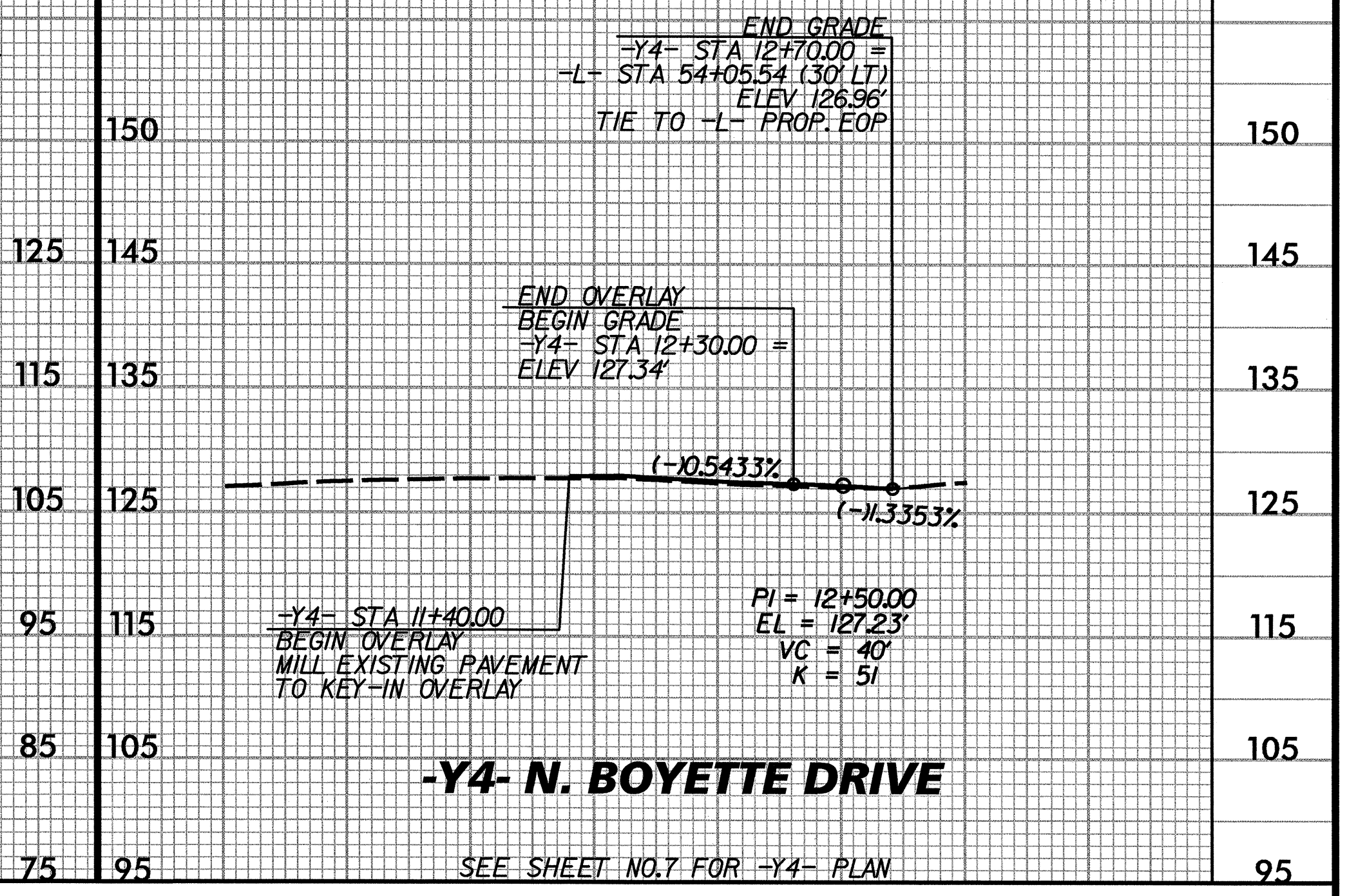
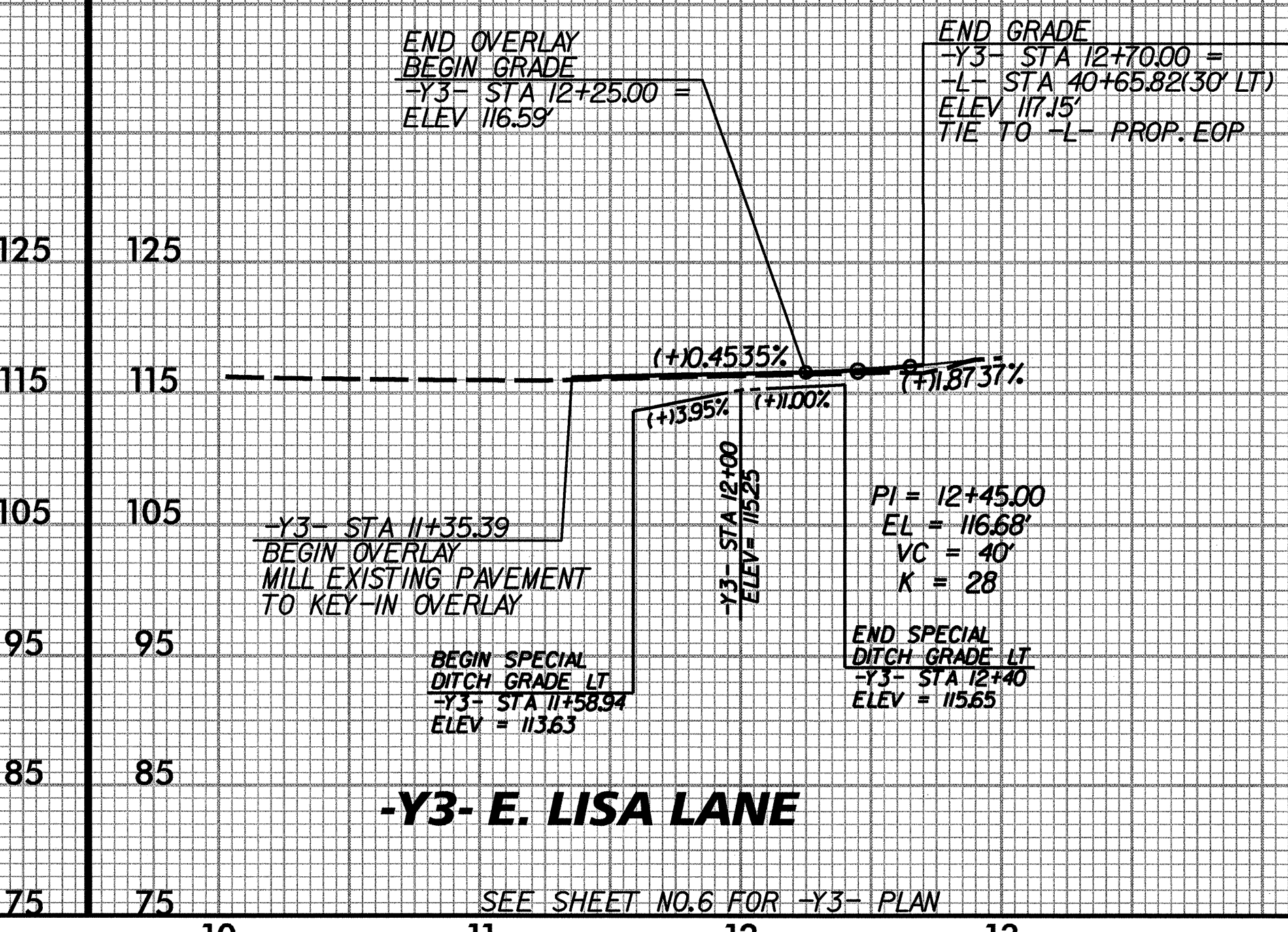
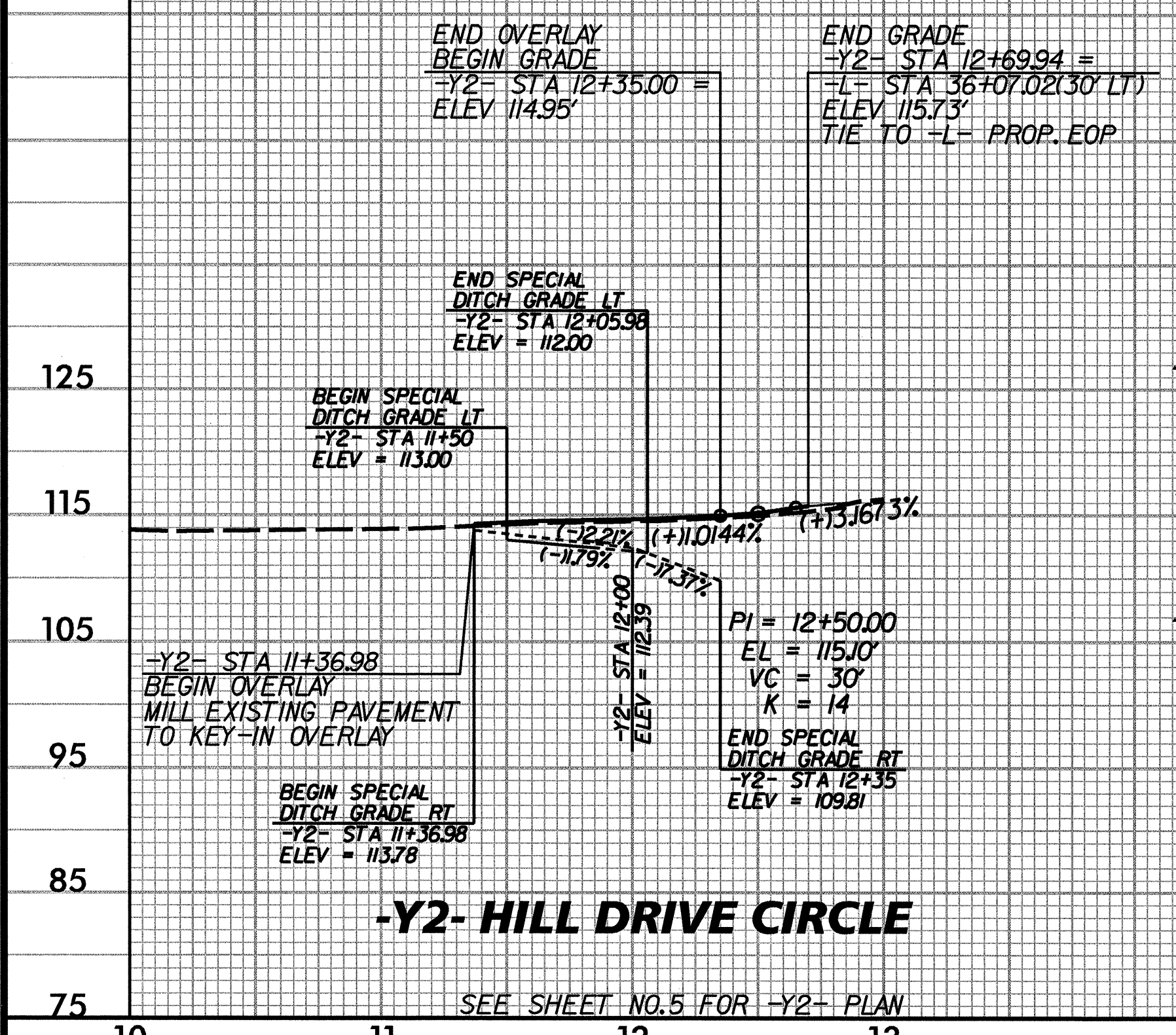
SEE SHEET NO.9 FOR -Y7- PROFILE





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PROJECT REFERENCE NO. U-3609A	SHEET NO. 9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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