

U-5025, 37162

CONTRACT NO.: C201995

See Sheet 1-A For Index of Sheets

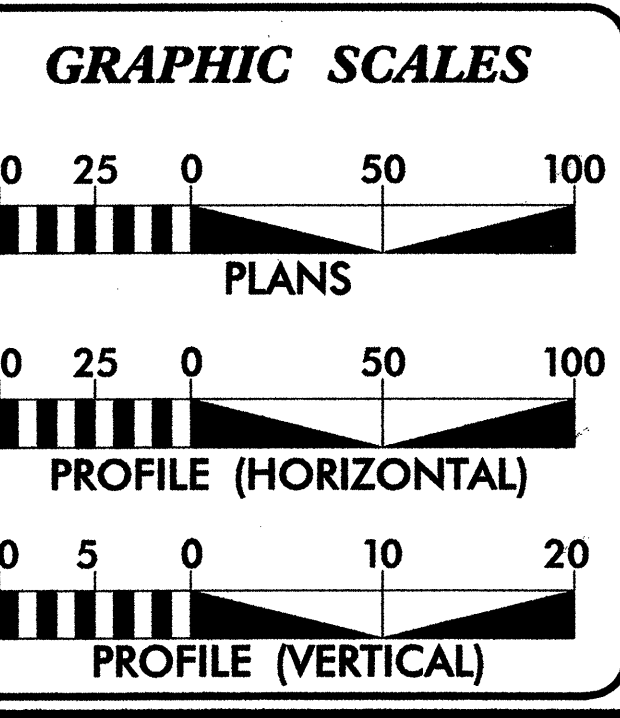
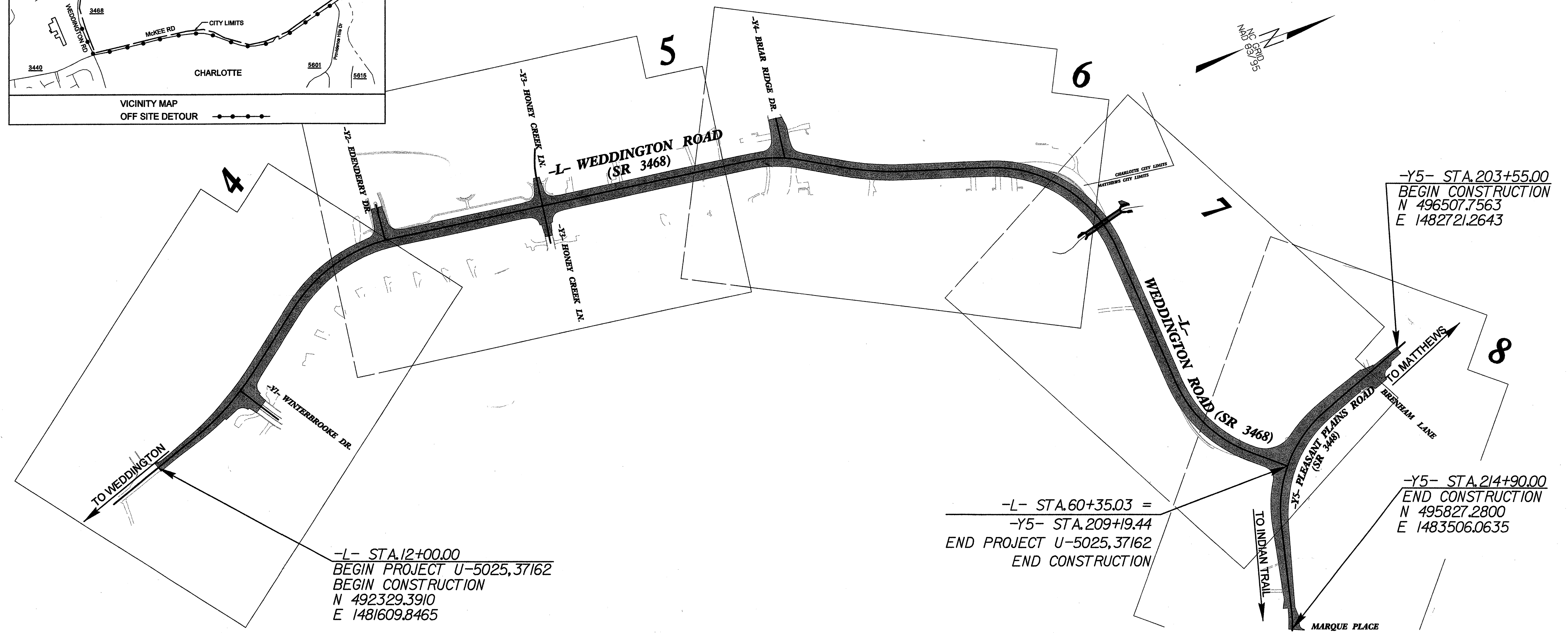
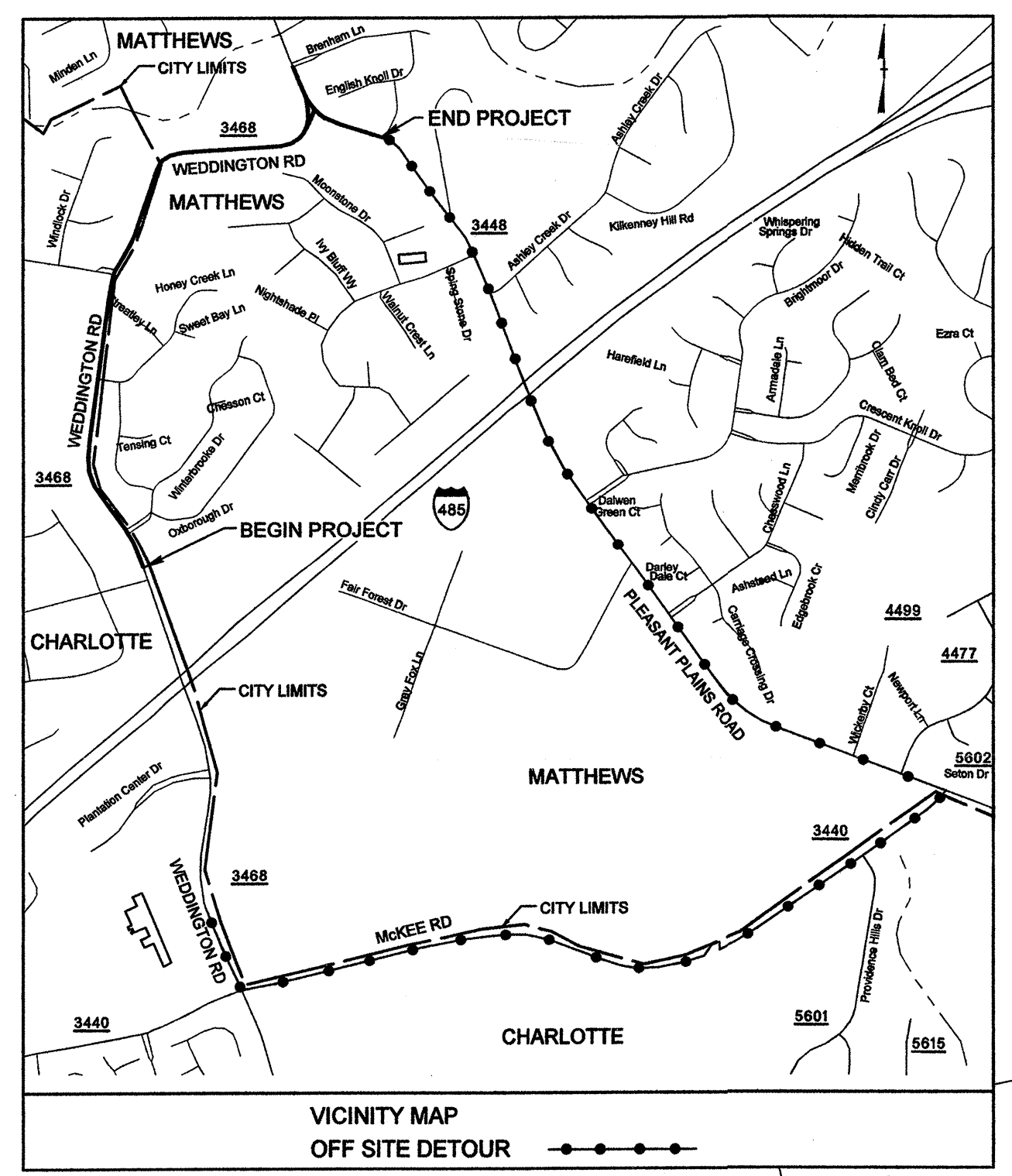
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**MECKLENBURG COUNTY**

**LOCATION: WEDDINGTON ROAD (SR 3468) FROM SOUTH OF I-485  
TO THE INTERSECTION OF PLEASANT PLAINS RD. (SR 3448)**

**TYPE OF WORK: GRADING, PAVING, CURB & GUTTER, DRAINAGE AND CULVERT**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5025, 37162	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	



**DESIGN DATA**

V = 40 MPH

\*\* DESIGN EXCEPTION REQUIRED FOR SE ON TWO HORIZONTAL CURVES.

**PROJECT LENGTH**

LENGTH ROADWAY PROJECT U-5025, 37162 -L- = 0.916 MI  
TOTAL LENGTH PROJECT U-5025, 37162 = 0.916 MI

**MULKEY**  
ENGINEERS & CONSULTANTS  
7912 E. INDEPENDENCE BOULEVARD  
SUITE 100  
CHARLOTTE, NC 28227  
(704) 537-7300  
(704) 537-2811 (FAX)  
WWW.MULKEYING.COM

2006 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
08-25-06

**LETTING DATE:**  
03-18-08

**SCOTT S. CHINERY, PE**  
PROJECT ENGINEER

**KIMBERLY BOIK, EI**  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

**ROADWAY DESIGN ENGINEER**

SIGNATURE: [Signature] 1/8/08 P.E.

SIGNATURE: [Signature] 1/8/08 P.E.

**DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA**

STATE DESIGN ENGINEER

**DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION**


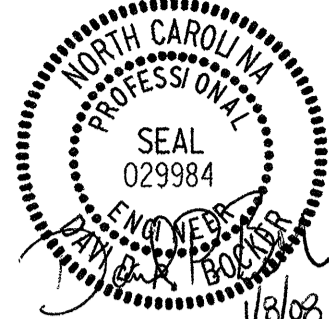
APPROVED DIVISION ADMINISTRATOR

DATE

1/7/2008  
\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$DGN\$\$\$\$\$  
\$\$\$\$\$USERNAME\$\$\$\$\$

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**INDEX OF SHEETS**

PROJECT REFERENCE NO. U-5025, 37162	SHEET NO. 1-A
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 

PROJECT NUMBER: U-5025, 37162  
MECKLENBURG COUNTY

INDEX OF SHEETS

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1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2 THRU 2-B	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2-C THRU 2-D	DETAILS
3	SUMMARY OF QUANTITIES
3-A THRU 3-D	LIST OF PIPES, ENDWALLS, ETC.
3-E	GUARDRAIL SUMMARY, SUMMARY OF EARTHWORK PAVEMENT REMOVAL SUMMARY
3-F	RIGHT OF WAY AREA DATA SHEET
3-G	PARCEL INDEX SHEET
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PM-1 THRU PM-6	PAVEMENT MARKING AND SIGNING PLANS
EC-1 THRU EC-9	EROSION CONTROL PLANS
UC-0 THRU UC-10	UTILITY CONSTRUCTION PLANS
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X-1A	CROSS-SECTION SUMMARY SHEET
C-1 THRU C-3	CULVERT PLANS

PROJECT NOTES:

TREE PROTECTION:

IN ADDITION TO WHAT IS SHOWN ON PLANS, CONTRACTOR IS TO COORDINATE WITH PROJECT ENGINEER TO DETERMINE WHICH TREES BETWEEN THE RIGHT-OF-WAY LINE AND EASEMENT LINE NEED TO BE PROTECTED.

PRECAST CONCRETE BOX CULVERT:

SEE CULVERT PLANS C-1 THRU C-3 AND PROJECT SPECIAL PROVISIONS FOR INFORMATION REGARDING THE CULVERT CONSTRUCTION.

GENERAL NOTES:

2006 SPECIFICATIONS  
EFFECTIVE: 07-18-06  
REVISED: 07-18-06

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. SEE PROJECT NOTES FOR INFORMATION REGARDING TREE PROTECTION.

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:  
UC: WATER - CHARLOTTE MECKLENBURG UTILITIES;  
SEWER - CHARLOTTE MECKLENBURG UTILITIES  
UO: POWER - DUKE ENERGY;  
TELEPHONE - WINDSTREAM;  
GAS - PIEDMONT NATURAL GAS;  
CATV - 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 OTHERS.

WHEELCHAIR RAMPS:

WHEELCHAIR RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. THE CONSTRUCTION OF ALL WHEELCHAIR RAMPS SHALL BE IN ACCORDANCE WITH STD. 848.05.

2006 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 July 18, 2006 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 II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation - Method 'A'
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
838.01	Concrete Endwall for Single and Double Pipe Culverts
838.11	Brick Endwall for Single and Double Pipe Culverts
838.80	Precast Concrete Endwall for Single Pipe Culverts
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
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.03	Driveway Turnout - Drop Curb Type
848.05	Wheelchair Ramp - Curb Cut
850.10	Guide for Berm Drainage Outlet - 15" and 18" Pipe
852.01	Concrete Islands
862.01	Guardrail Placement
862.02	Guardrail Installation
876.01	Rip Rap in Channels
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

\*S.U.E = SUBSURFACE UTILITY ENGINEER

# CONVENTIONAL SYMBOLS

## ROADS & RELATED ITEMS

Edge of Pavement	-----
Curb	-----
Prop. Slope Stakes Cut	---C---
Prop. Slope Stakes Fill	---F---
Prop. Woven Wire Fence	○ ○
Prop. Chain Link Fence	□ □
Prop. Barbed Wire Fence	◇ ◇
Prop. Wheelchair Ramp	WCR
Curb Cut for Future Wheelchair Ramp	CCFR
Exist. Guardrail	-----
Prop. Guardrail	-----
Equality Symbol	⊕
Pavement Removal	XXXXXX

## RIGHT OF WAY

Baseline Control Point	◆
Existing Right of Way Marker	△
Exist. Right of Way Line w/Marker	-----△-----
Prop. Right of Way Line with Proposed	-----▲-----
RW Marker (Iron Pin & Cap)	▲
Prop. Right of Way Line with Proposed	-----▲-----
(Concrete or Granite) RW Marker	▲
Exist. Control of Access Line	○ C A
Prop. Control of Access Line	○ C A
Exist. Easement Line	-----E-----
Prop. Temp. Construction Easement Line	-----E-----
Prop. Temp. Drainage Easement Line	-----TDE-----
Prop. Perm. Drainage Easement Line	-----PDE-----
Prop. Temp. Utility Easement Line	-----TUE-----
Prop. Perm. Utility Easement Line	-----PUE-----

## HYDROLOGY

Stream or Body of Water	-----
River Basin Buffer	-----BZ-----
Flow Arrow	→
Disappearing Stream	-----
Spring	○
Swamp Marsh	-----
Shoreline	-----
Falls, Rapids	-----
Prop Lateral, Tail, Head Ditches	-----

## STRUCTURES

MAJOR	
Bridge, Tunnel, or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW

MINOR	
Head & End Wall	CONC HW
Pipe Culvert	=====
Footbridge	-----
Drainage Boxes	CB
Paved Ditch Gutter	-----

## UTILITIES

Exist. Pole	●
Exist. Power Pole	○
Prop. Power Pole	○
Exist. Telephone Pole	●
Prop. Telephone Pole	○
Exist. Joint Use Pole	●
Prop. Joint Use Pole	○
Telephone Pedestal	⊕
U/G Telephone Cable Hand Hold	⊕
Cable TV Pedestal	⊕
U/G TV Cable Hand Hold	⊕
U/G Power Cable Hand Hold	⊕
Hydrant	⊕
Satellite Dish	⊕
Exist. Water Valve	⊕
Sewer Clean Out	⊕
Power Manhole	⊕
Telephone Booth	⊕
Cellular Telephone Tower	⊕
Water Manhole	⊕
Light Pole	⊕
H-Frame Pole	⊕
Power Line Tower	⊕
Pole with Base	⊕
Gas Valve	⊕
Gas Meter	⊕
Telephone Manhole	⊕
Power Transformer	⊕
Sanitary Sewer Manhole	⊕
Storm Sewer Manhole	⊕
Tank; Water, Gas, Oil	⊕
Water Tank With Legs	⊕
Traffic Signal Junction Box	⊕
Fiber Optic Splice Box	⊕
Television or Radio Tower	⊕
Utility Power Line Connects to Traffic Signal Lines Cut Into the Pavement	-----TS-----

Recorded Water Line	-----W-----
Designated Water Line (S.U.E.*)	-----W-----
Sanitary Sewer	-----SS-----
Recorded Sanitary Sewer Force Main	-----FSS-----
Designated Sanitary Sewer Force Main(S.U.E.*)	-----FSS-----
Recorded Gas Line	-----G-----
Designated Gas Line (S.U.E.*)	-----G-----
Storm Sewer	-----S-----
Recorded Power Line	-----P-----
Designated Power Line (S.U.E.*)	-----P-----
Recorded Telephone Cable	-----T-----
Designated Telephone Cable (S.U.E.*)	-----T-----
Recorded U/G Telephone Conduit	-----TC-----
Designated U/G Telephone Conduit (S.U.E.*)	-----TC-----
Unknown Utility (S.U.E.*)	-----?UTL-----
Recorded Television Cable	-----TV-----
Designated Television Cable (S.U.E.*)	-----TV-----
Recorded Fiber Optics Cable	-----FO-----
Designated Fiber Optics Cable (S.U.E.*)	-----FO-----
Exist. Water Meter	○
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to U/G Record	ATTUR
End of Information	E.O.I.

## BOUNDARIES & PROPERTIES

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Property Line Symbol	⊕
Exist. Iron Pin	⊕
Property Corner	⊕
Property Monument	⊕
Property Number	123
Parcel Number	6
Fence Line	-----X-----
Existing Wetland Boundaries	-----WW & ISBW-----
High Quality Wetland Boundary	-----WLB-----
Medium Quality Wetland Boundaries	-----MQ WLB-----
Low Quality Wetland Boundaries	-----LQ WLB-----
Proposed Wetland Boundaries	-----WLB-----
Existing Endangered Animal Boundaries	-----EAB-----
Existing Endangered Plant Boundaries	-----EPB-----

## BUILDINGS & OTHER CULTURE

Buildings	⊕
Foundations	⊕
Area Outline	⊕
Gate	⊕
Gas Pump Vent or UG Tank Cap	○
Church	⊕
School	⊕
Park	⊕
Cemetery	⊕
Dam	⊕
Sign	⊕
Well	⊕
Small Mine	⊕
Swimming Pool	⊕

## TOPOGRAPHY

Loose Surface	-----
Hard Surface	-----
Change in Road Surface	-----
Curb	-----
Right of Way Symbol	R/W
Guard Post	○ GP
Paved Walk	-----
Bridge	-----
Box Culvert or Tunnel	-----
Ferry	-----
Culvert	-----
Footbridge	-----
Trail, Footpath	-----
Light House	⊕

## VEGETATION

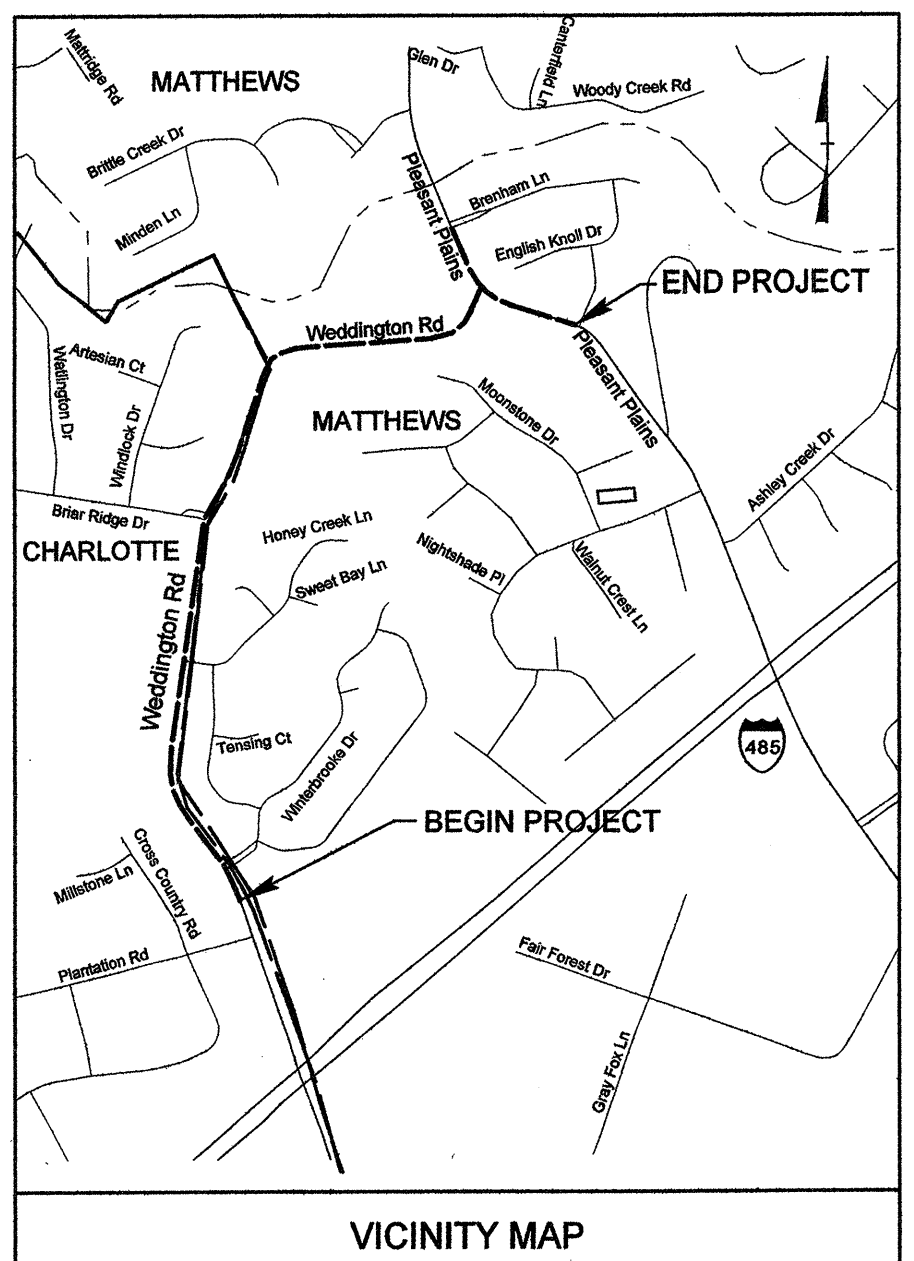
Single Tree	⊕
Single Shrub	⊕
Hedge	-----
Woods Line	-----
Orchard	⊕
Vineyard	VINEYARD

## RAILROADS

Standard Gauge	-----
RR Signal Milepost	⊕
Switch	⊕

# SURVEY CONTROL SHEET U-5025, 37162

**CONTRACT NO.: C201995**  
**U-5025, 37162**

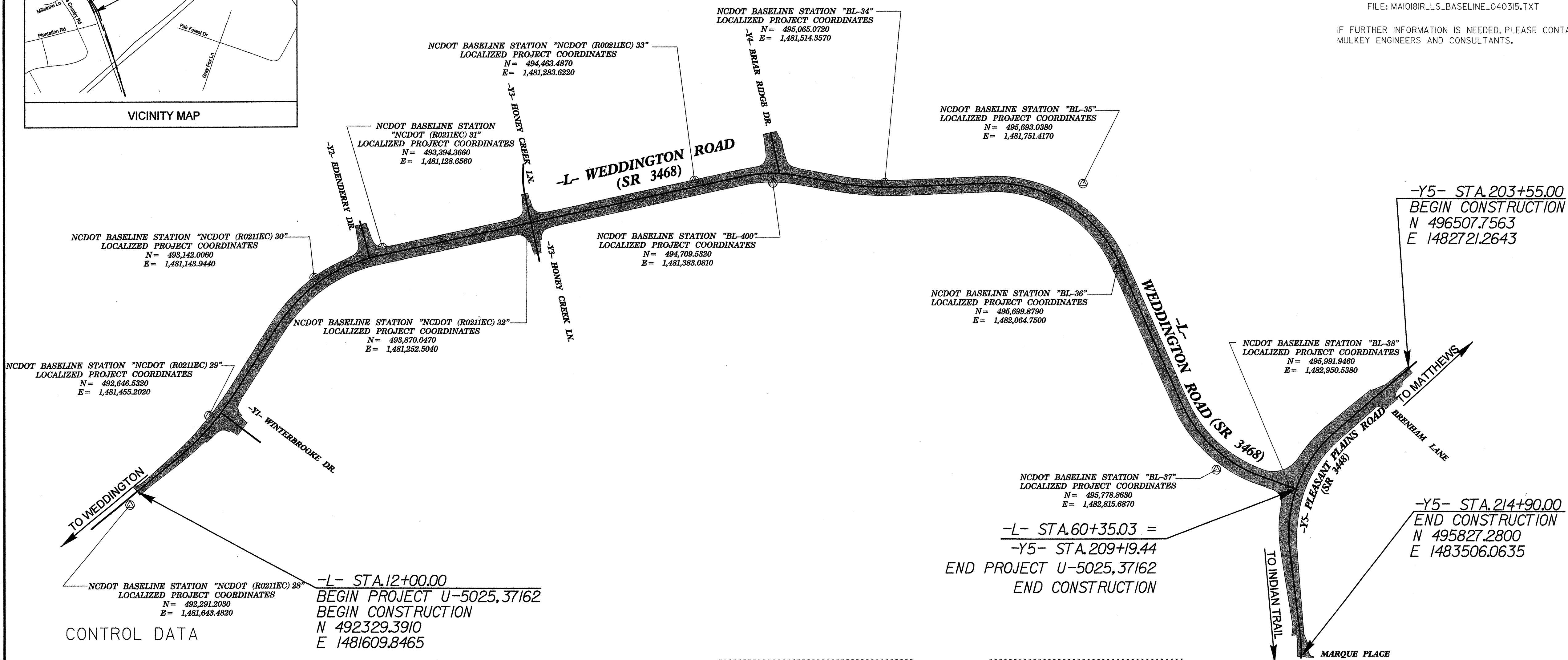


### NOTES

1. THE CONTROL DATA FOR THIS PROJECT CAN BE OBTAINED ELECTRONICALLY FROM MULKEY ENGINEERS AND CONSULTANTS

FILE: MAIOIBR\_LLS\_BASELINE\_040315.TXT

IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT MULKEY ENGINEERS AND CONSULTANTS.



### CONTROL DATA

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
122	BL-122	491617.3840	1481874.0490	745.48	OUTSIDE PROJECT LIMITS	
128	NCDOT(R0211EC) 28	492291.2030	1481643.4820	736.69		11.52.98 19.46 RT
129	NCDOT(R0211EC) 29	492646.5320	1481455.2020	728.70		15.56.35 25.86 LT
130	NCDOT(R0211EC) 30	493142.0060	1481143.9440	718.68		21.39.50 21.83 LT
131	NCDOT(R0211EC) 31	493394.3660	1481128.6560	716.62		23.84.89 23.95 LT
132	NCDOT(R0211EC) 32	493870.0470	1481252.5040	709.65		28.73.28 31.60 RT
133	NCDOT(R0211EC) 33	494463.4870	1481283.6220	690.24		34.65.18 21.28 LT
480	BL-400	494709.5320	1481383.0810	681.70		37.30.53 31.81 RT
34	BL-34	495065.0720	1481514.3570	660.09		41.12.54 15.63 LT
35	BL-35	495693.0380	1481751.4170	638.62		47.51.48 87.00 LT
36	BL-36	495699.8790	1482064.7500	637.06		50.31.86 15.75 RT
37	BL-37	495778.8630	1482815.6870	649.49		57.71.48 51.38 RT
38	BL-38	495911.9460	1482950.5380	647.85		60.08.62 4.03 LT

PROJECT CONTROL ESTABLISHED USING CONVENTIONAL SURVEYING METHODS BASED OFF OF EXISTING NCDOT BASELINE CONTROL FOR TIP-R-0211EC.

NOTE: DRAWING NOT TO SCALE

BM 1	ELEVATION = 736.42	BM 6	ELEVATION = 677.21
N 492315	E 1481637	N 494795	E 1481361
L STATION 12+10 74 LEFT		L STATION 37+99 24 LEFT	
BM 2	ELEVATION = 732.00	BM 7	ELEVATION = 649.96
N 492865	E 1481407	N 495408	E 1481678
L STATION 15+99 58 LEFT		L STATION 44+92 31 RIGHT	
BM 3	ELEVATION = 721.30	BM 8	ELEVATION = 635.04
N 493126	E 1481124	N 495749	E 1481805
L STATION 21+30 45 LEFT		L STATION 48-14 105 LEFT	
BM 4	ELEVATION = 711.19	BM 9	ELEVATION = 643.94
N 493860	E 1481170	N 495673	E 1482331
L STATION 28-51 49 LEFT		L STATION 52-96 59 RIGHT	
BM 10	ELEVATION = 647.48	BM 5	ELEVATION = 702.24
N 495918	E 1482948	N 494305	E 1481309
L STATION 59-51 42 RIGHT		L STATION 33-12 26 RIGHT	

**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "R0211EC-1"

WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 491174.1161(11) EASTING: 1481540.9411(11)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999876700

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "R0211EC-1" TO L STATION 12+00.00 IS

N 03° 24' 48" E 1,157.33(11)

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES

VERTICAL DATUM USED IS MVD 88

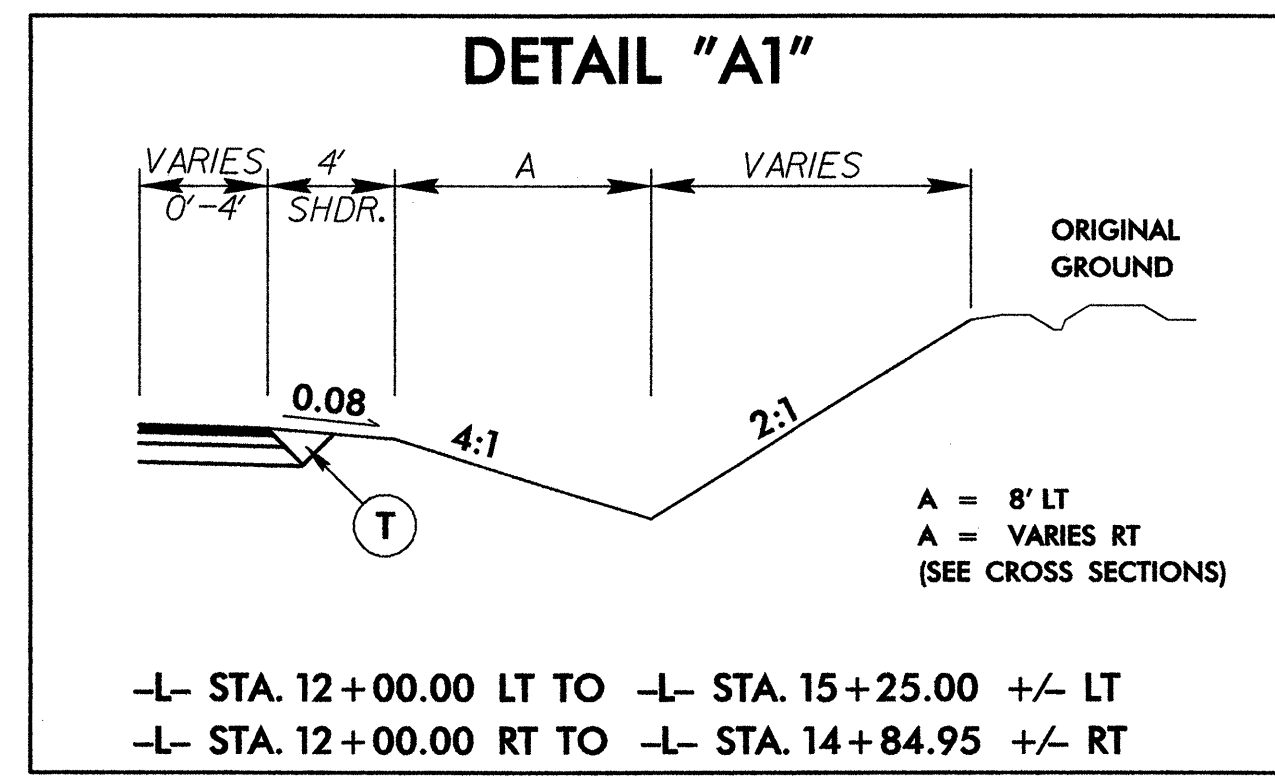
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6/2/09

1/7/2008

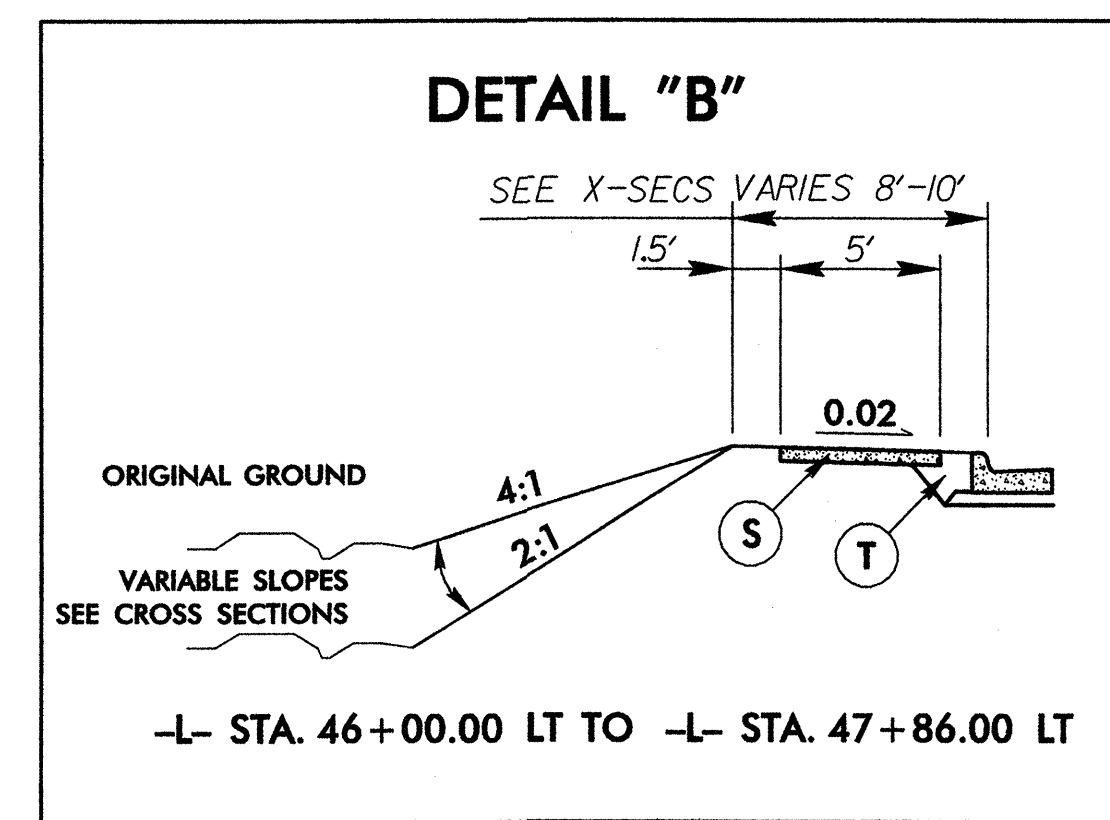
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 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 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 6" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
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" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	1'-6" CONCRETE CURB AND GUTTER.
R3	MONOLITHIC CONCRETE ISLAND (KEYED IN).
S	4" CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	WEDGING.

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



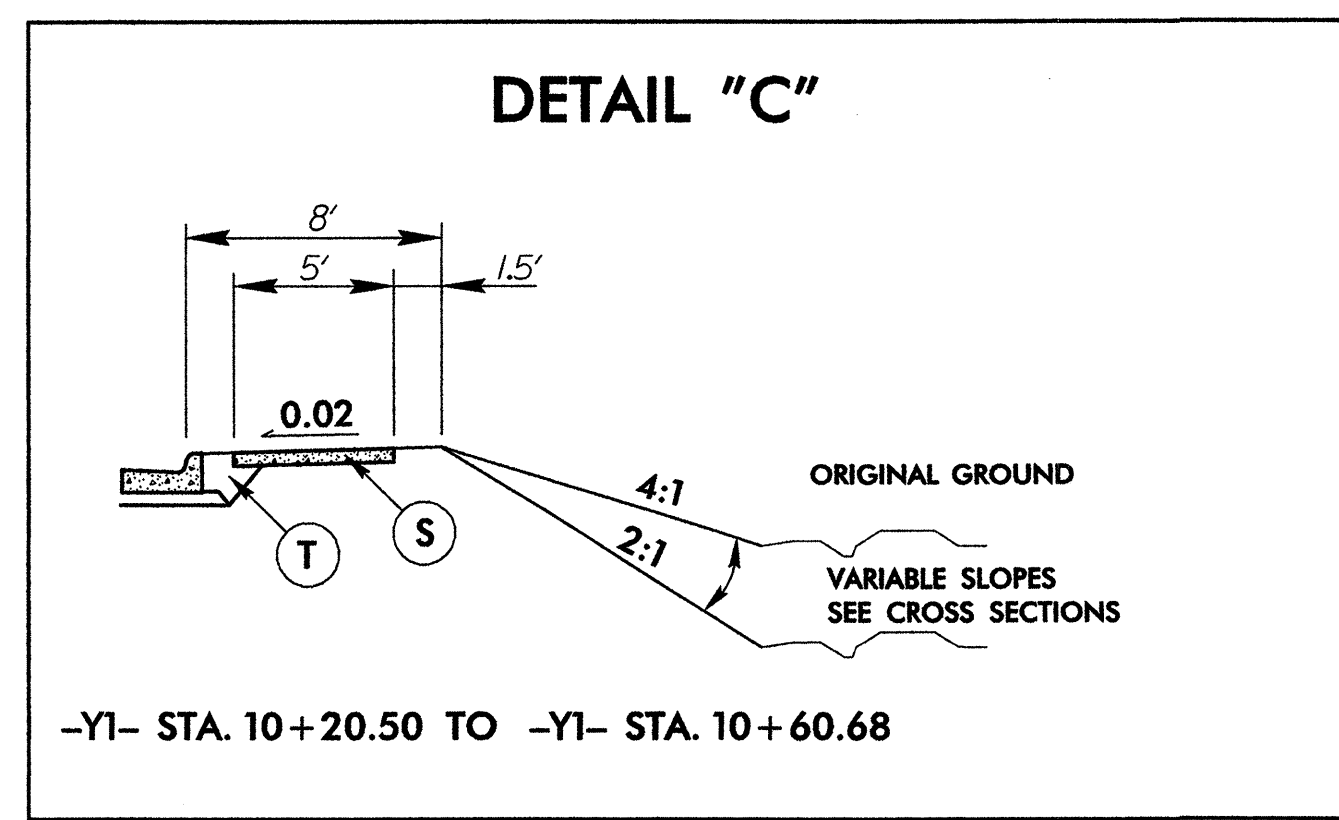
DETAIL "A1"

-L- STA. 12+00.00 LT TO -L- STA. 15+25.00 +/- LT  
-L- STA. 12+00.00 RT TO -L- STA. 14+84.95 +/- RT



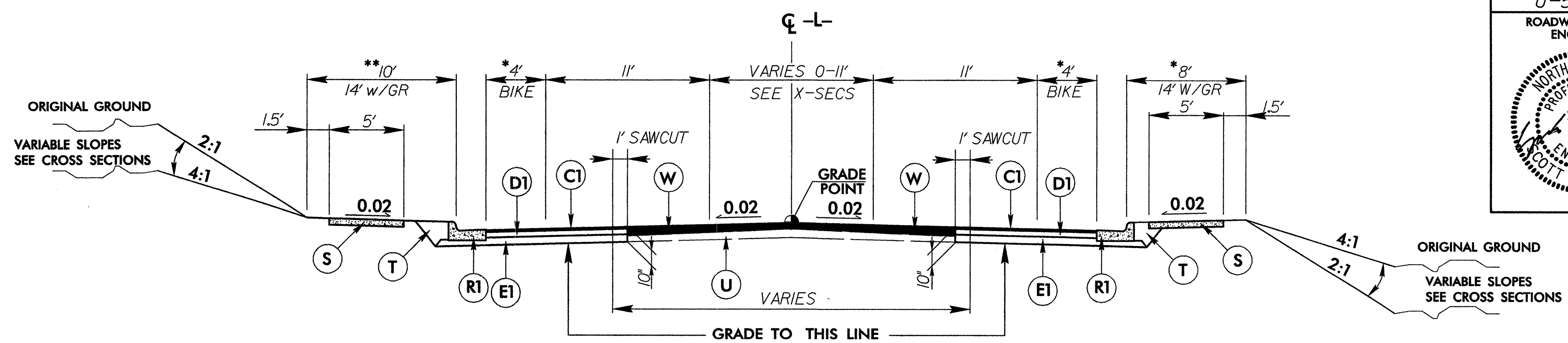
DETAIL "B"

-L- STA. 46+00.00 LT TO -L- STA. 47+86.00 LT



DETAIL "C"

-Y1- STA. 10+20.50 TO -Y1- STA. 10+60.68

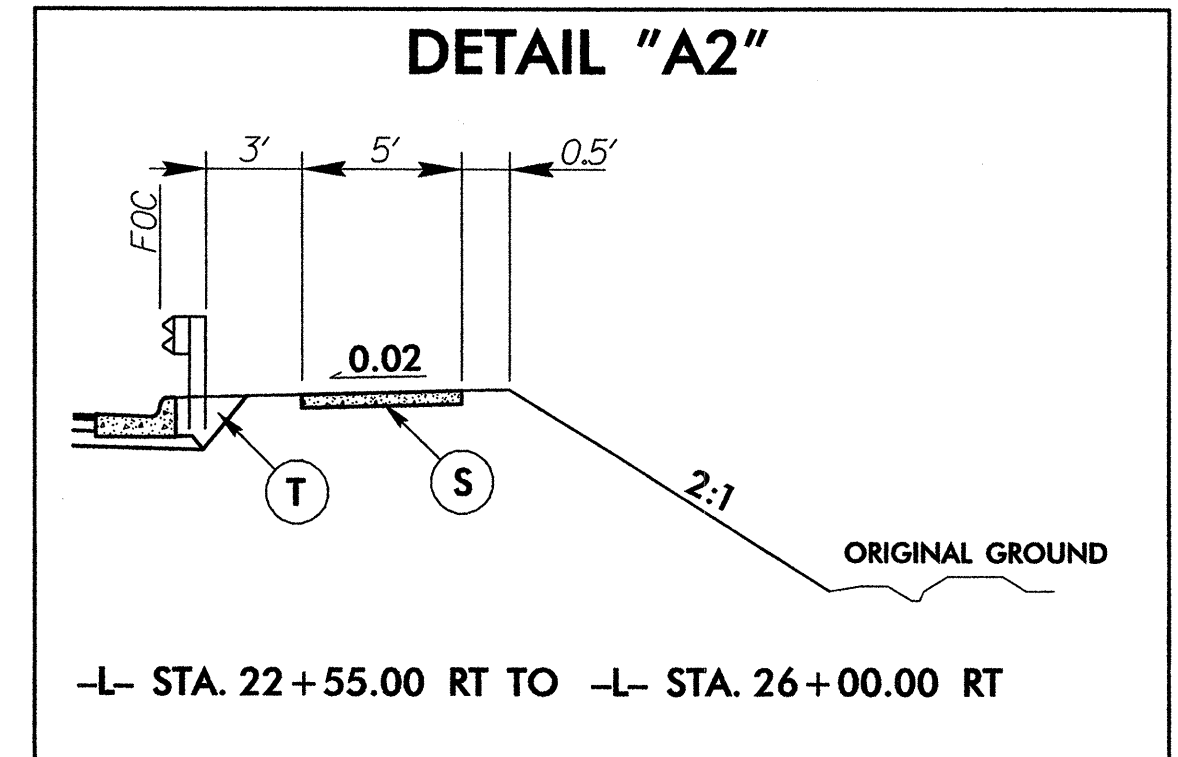


-L- TYPICAL SECTION NO. 1

\* SEE DETAILS "A1" AND "A2" (THIS SHEET)  
\*\* MATCH AND UTILIZE EXISTING SIDEWALK BETWEEN -L- STA. 24+84.85 LT AND -L- STA. 28+49.67 LT

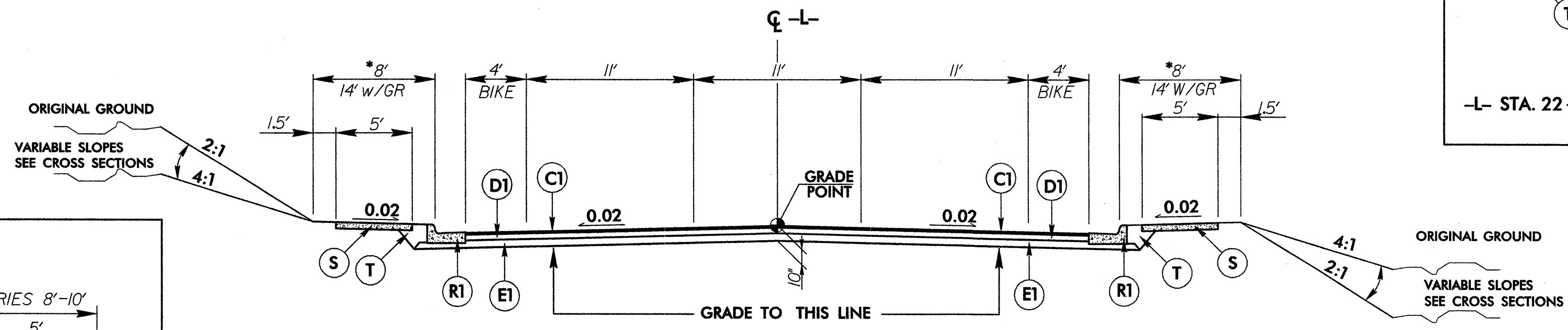
USE TYPICAL SECTION NO. 1

-L- STA. 12+00.00 TO -L- STA. 46+00.00  
-L- STA. 51+00.00 TO -L- STA. 56+00.00



DETAIL "A2"

-L- STA. 22+55.00 RT TO -L- STA. 26+00.00 RT

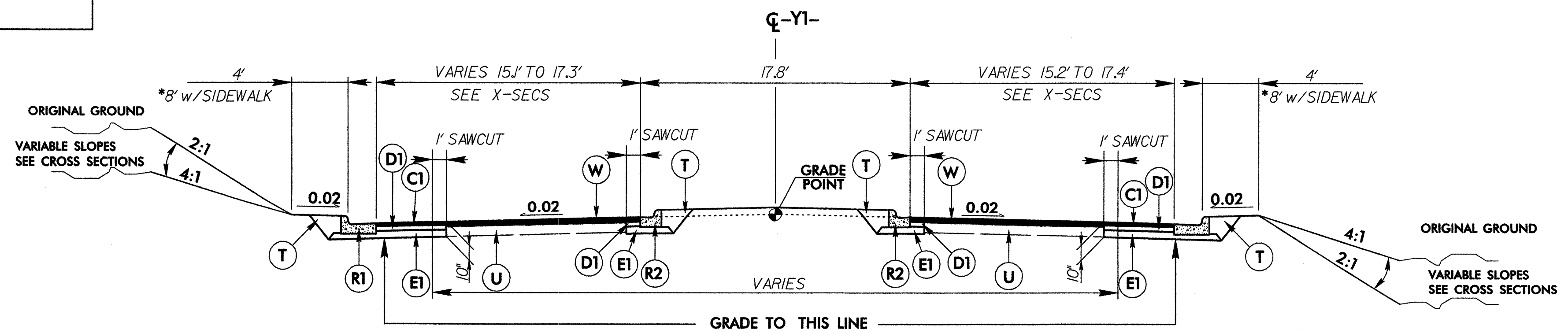


-L- TYPICAL SECTION NO. 2

\* SEE DETAIL "B" (THIS SHEET)

USE TYPICAL SECTION NO. 2

-L- STA. 46+00.00 TO -L- STA. 51+00.00  
-L- STA. 56+00.00 TO -L- STA. 59+96.88



-Y1- TYPICAL SECTION NO. 3

\* SEE DETAIL "C" (THIS SHEET)

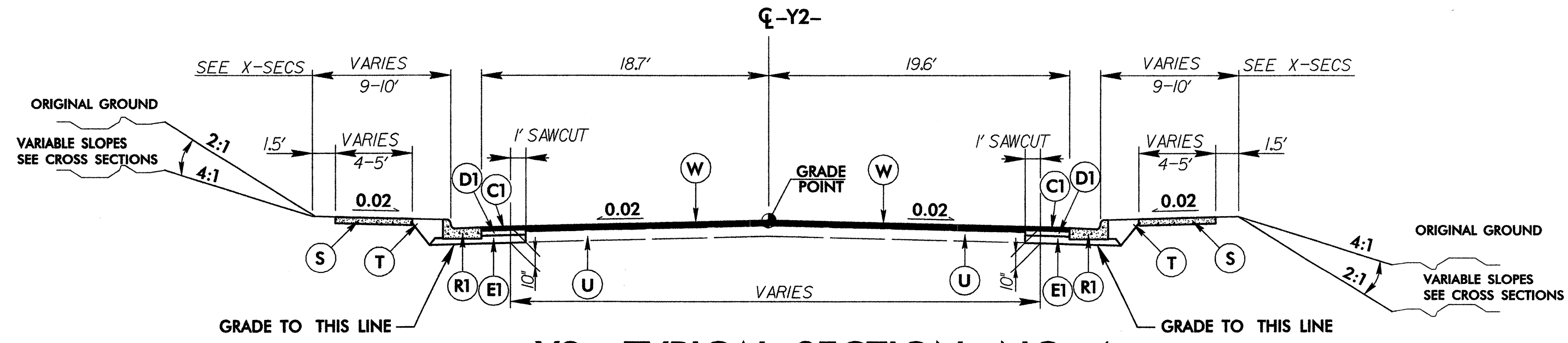
USE TYPICAL SECTION NO. 3

-Y1- STA. 10+20.50 TO -Y1- STA. 10+90.00

PROJECT REFERENCE NO. U-5025, 37162	SHEET NO. 2
ROADWAY DESIGN ENGINEER COTT S. CHINERY	PAVEMENT DESIGN ENGINEER C. MARK S. MORRISON

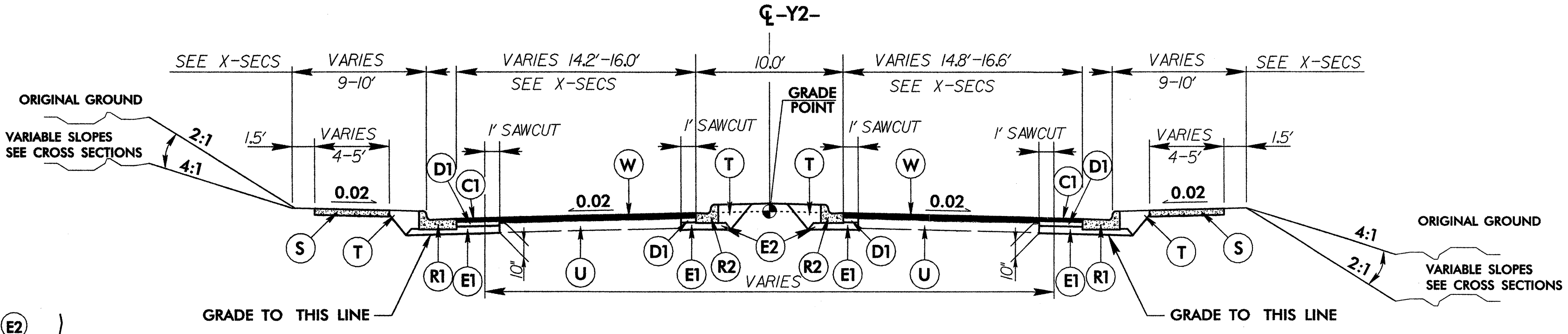
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B.
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B.
E1	PROP. APPROX. 6" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B.
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	1'-6" CONCRETE CURB AND GUTTER.
R3	MONOLTHIC CONCRETE ISLAND (KEYED IN).
S	4" CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	WEDGING.

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



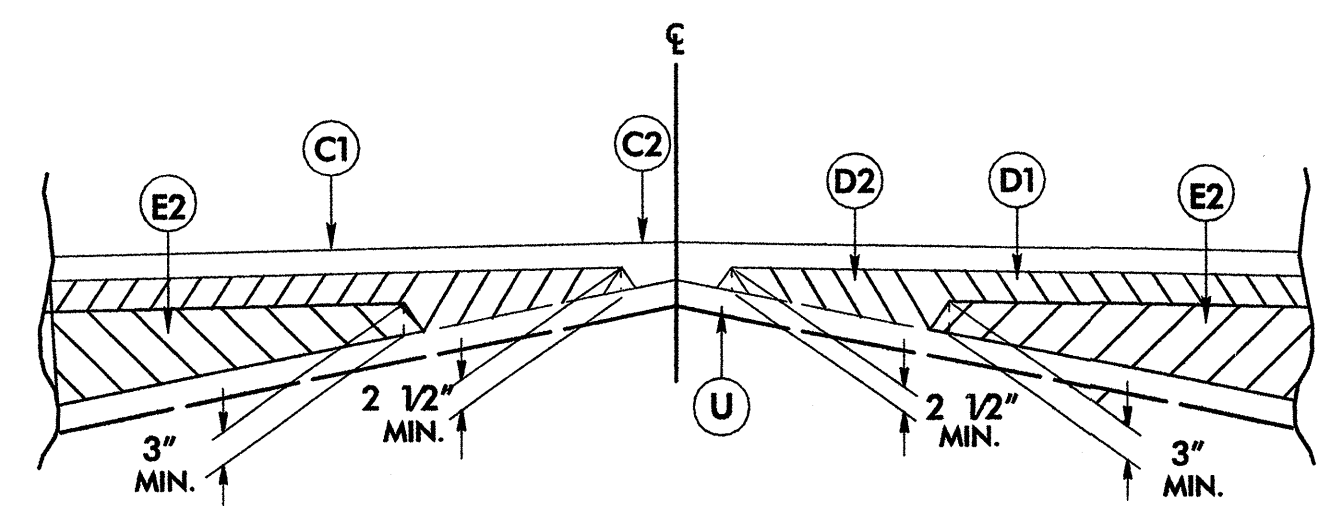
**-Y2- TYPICAL SECTION NO. 4**

**USE TYPICAL SECTION NO. 4**  
 -Y2- STA. 10+31.93 TO -Y2- STA. 10+47.11  
 -Y2- STA. 10+81.96 TO -Y2- STA. 11+07.82

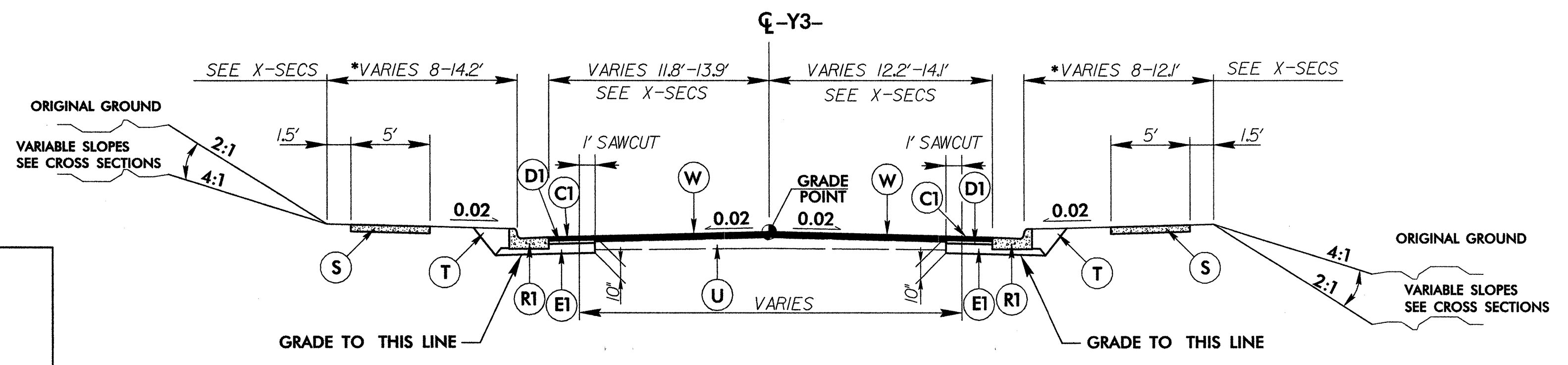


**-Y2- TYPICAL SECTION NO. 5**

**USE TYPICAL SECTION NO. 5**  
 -Y2- STA. 10+47.11 TO -Y2- STA. 10+81.96

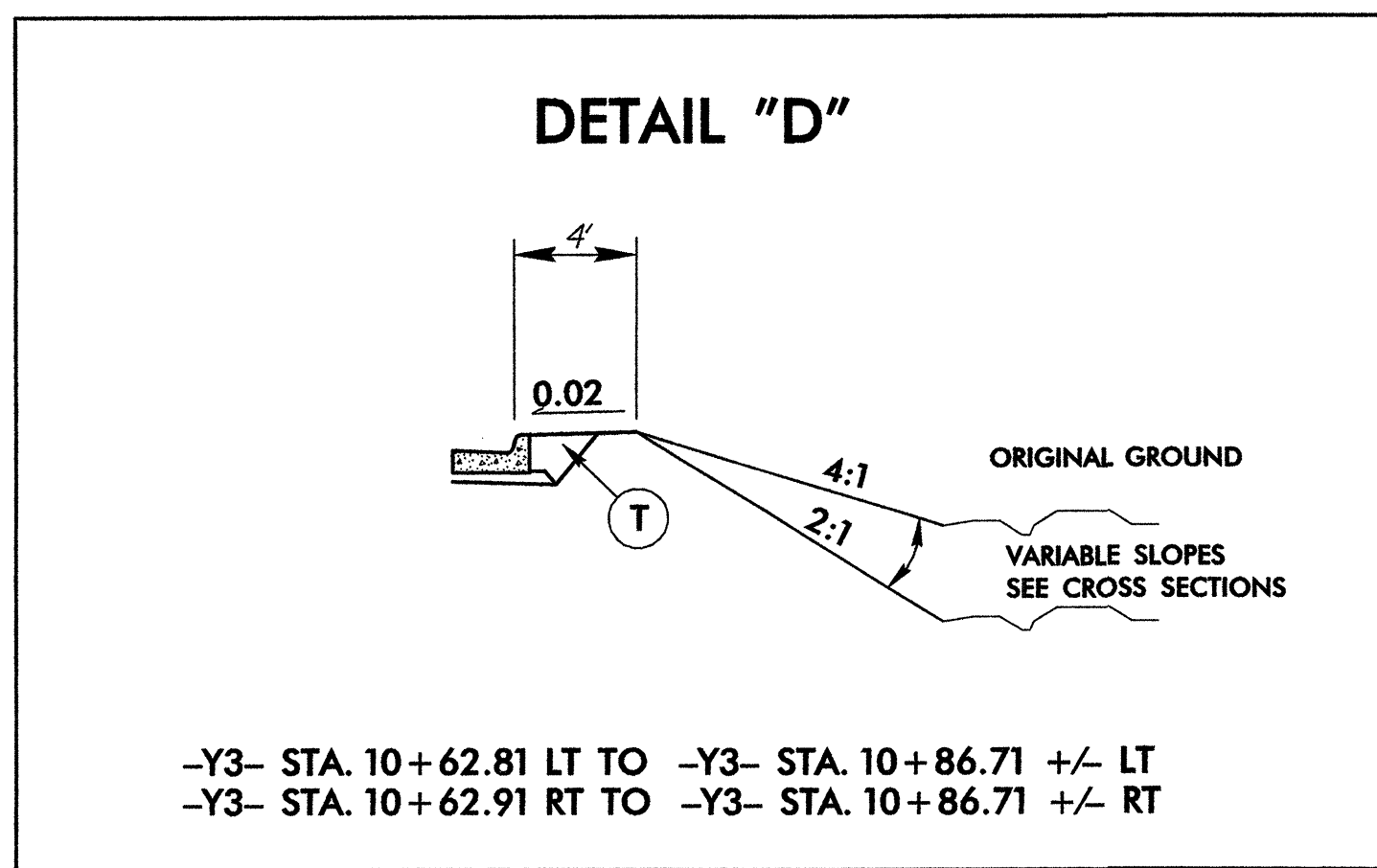


Detail Showing Method of Wedging



**-Y3- TYPICAL SECTION NO. 6**

**USE TYPICAL SECTION NO. 6**  
 -Y3- STA. 9+20.29 TO -Y3- STA. 10+86.71

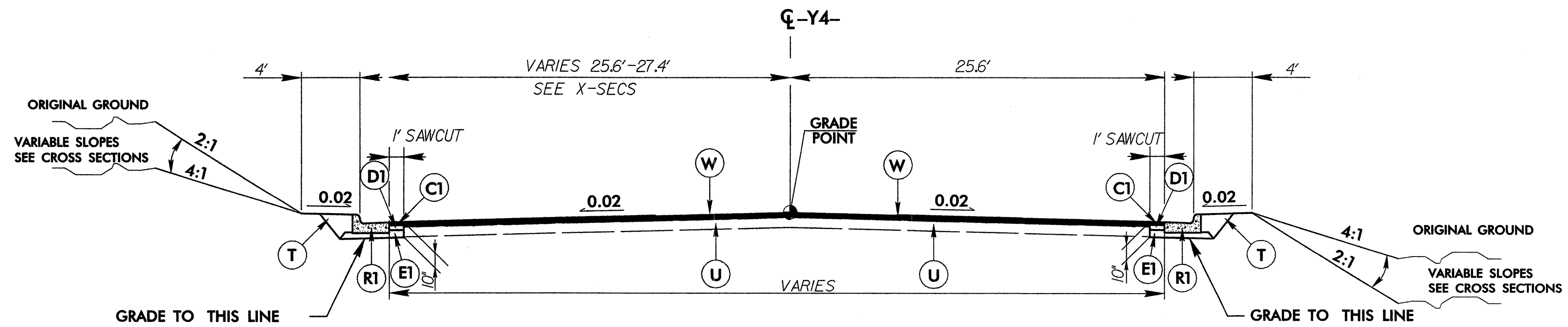


-Y3- STA. 10+62.81 LT TO -Y3- STA. 10+86.71 +/- LT  
 -Y3- STA. 10+62.91 RT TO -Y3- STA. 10+86.71 +/- RT

\* SEE DETAIL "D" (THIS SHEET)

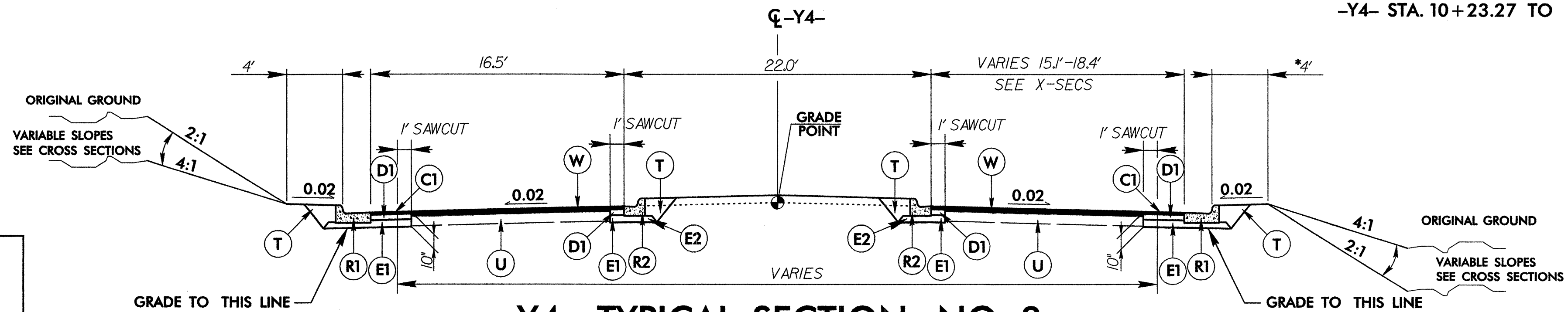
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B.
D1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B.
E1	PROP. APPROX. 6" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B.
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	1'-6" CONCRETE CURB AND GUTTER.
R3	MONOLTHIC CONCRETE ISLAND (KEYED IN).
S	4" CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	WEDGING.

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



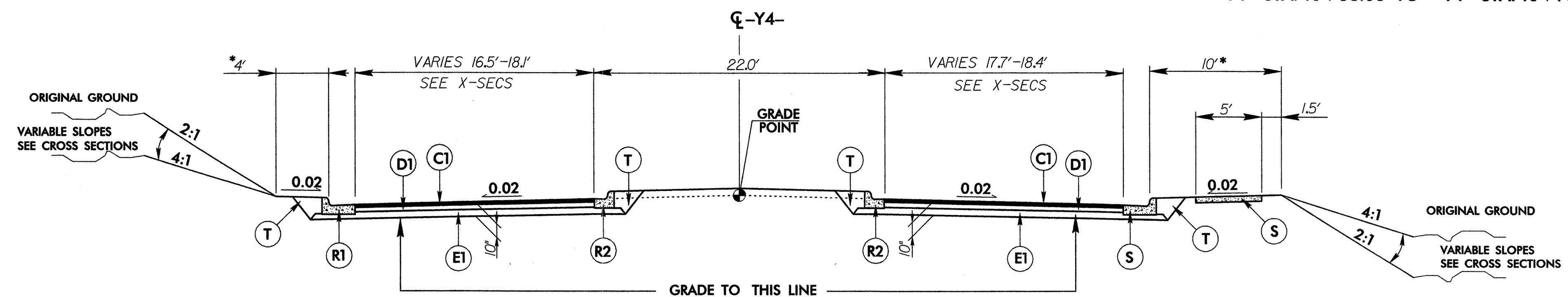
**-Y4- TYPICAL SECTION NO. 7**

**USE TYPICAL SECTION NO. 7**  
-Y4- STA. 10+23.27 TO -Y4- STA. 10+38.68



**-Y4- TYPICAL SECTION NO. 8**

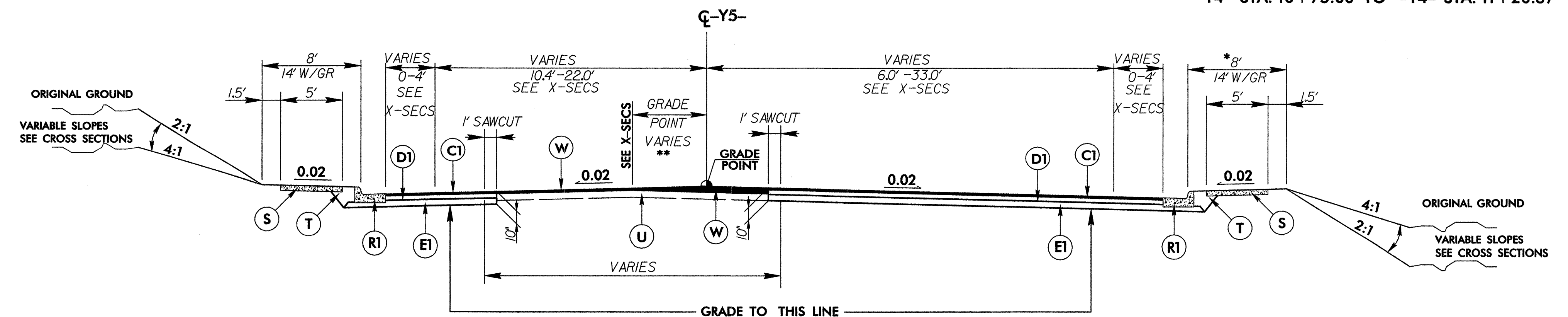
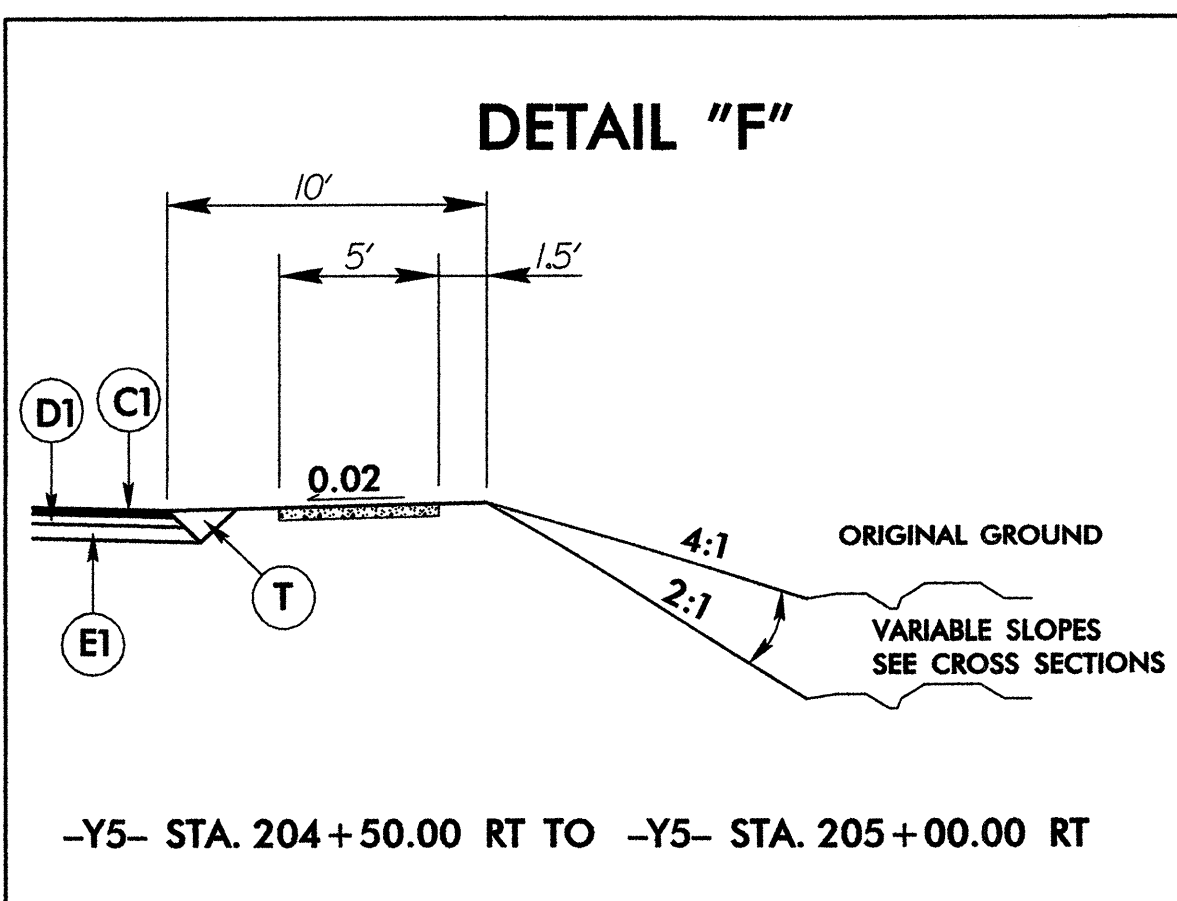
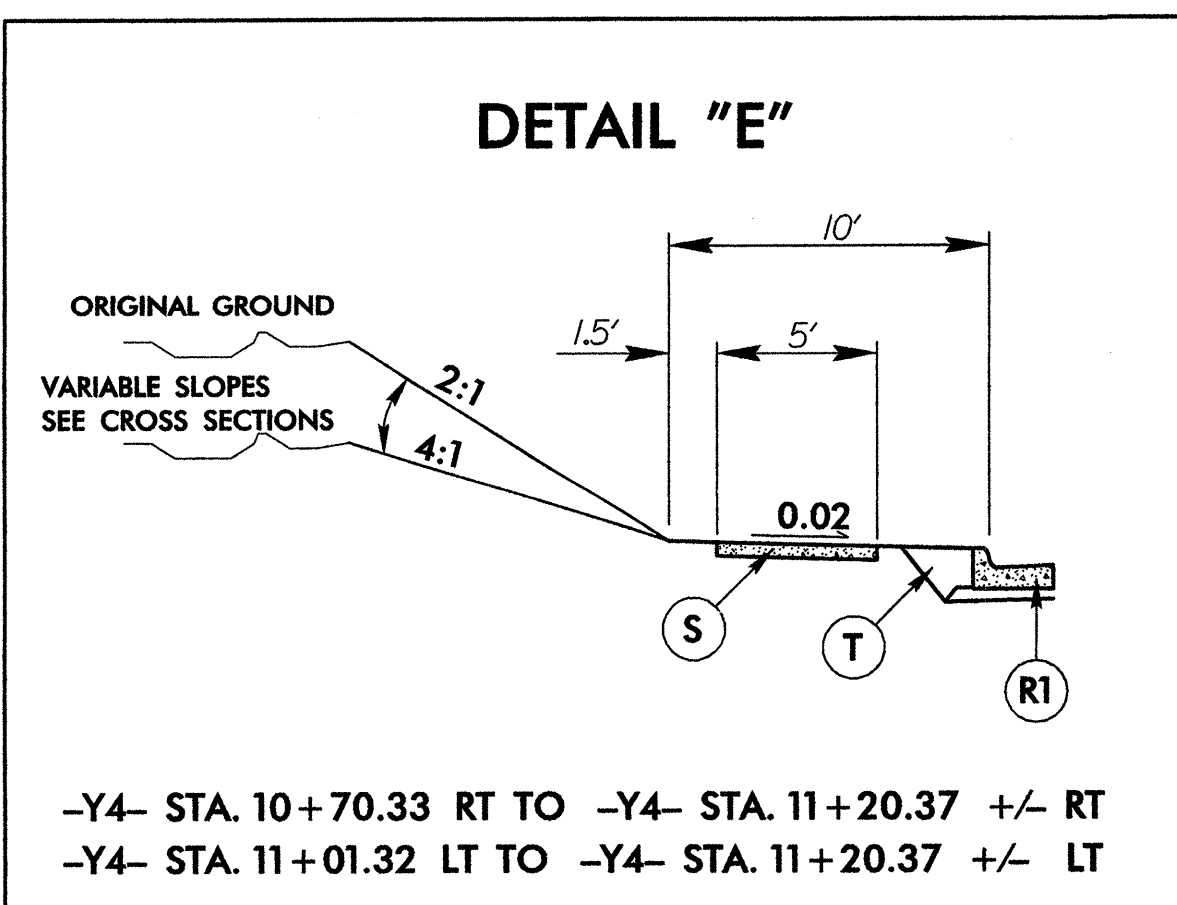
**USE TYPICAL SECTION NO. 8**  
-Y4- STA. 10+38.68 TO -Y4- STA. 10+75.00



**-Y4- TYPICAL SECTION NO. 9**

**USE TYPICAL SECTION NO. 9**  
-Y4- STA. 10+75.00 TO -Y4- STA. 11+20.37

\* SEE DETAIL "E" (THIS SHEET)



**-Y5- TYPICAL SECTION NO. 10**

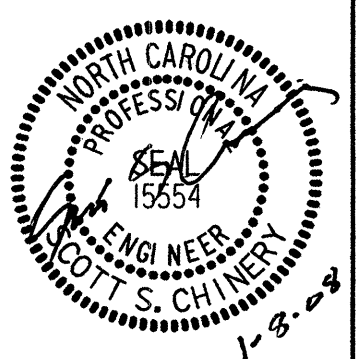
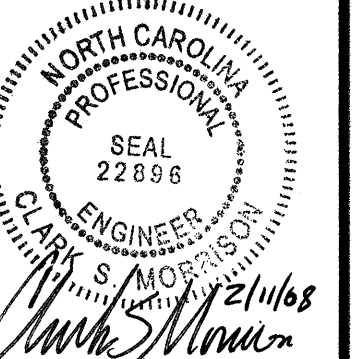
**USE TYPICAL SECTION NO. 10**  
-Y5- STA. 203+55.00 TO -Y5- STA. 204+87

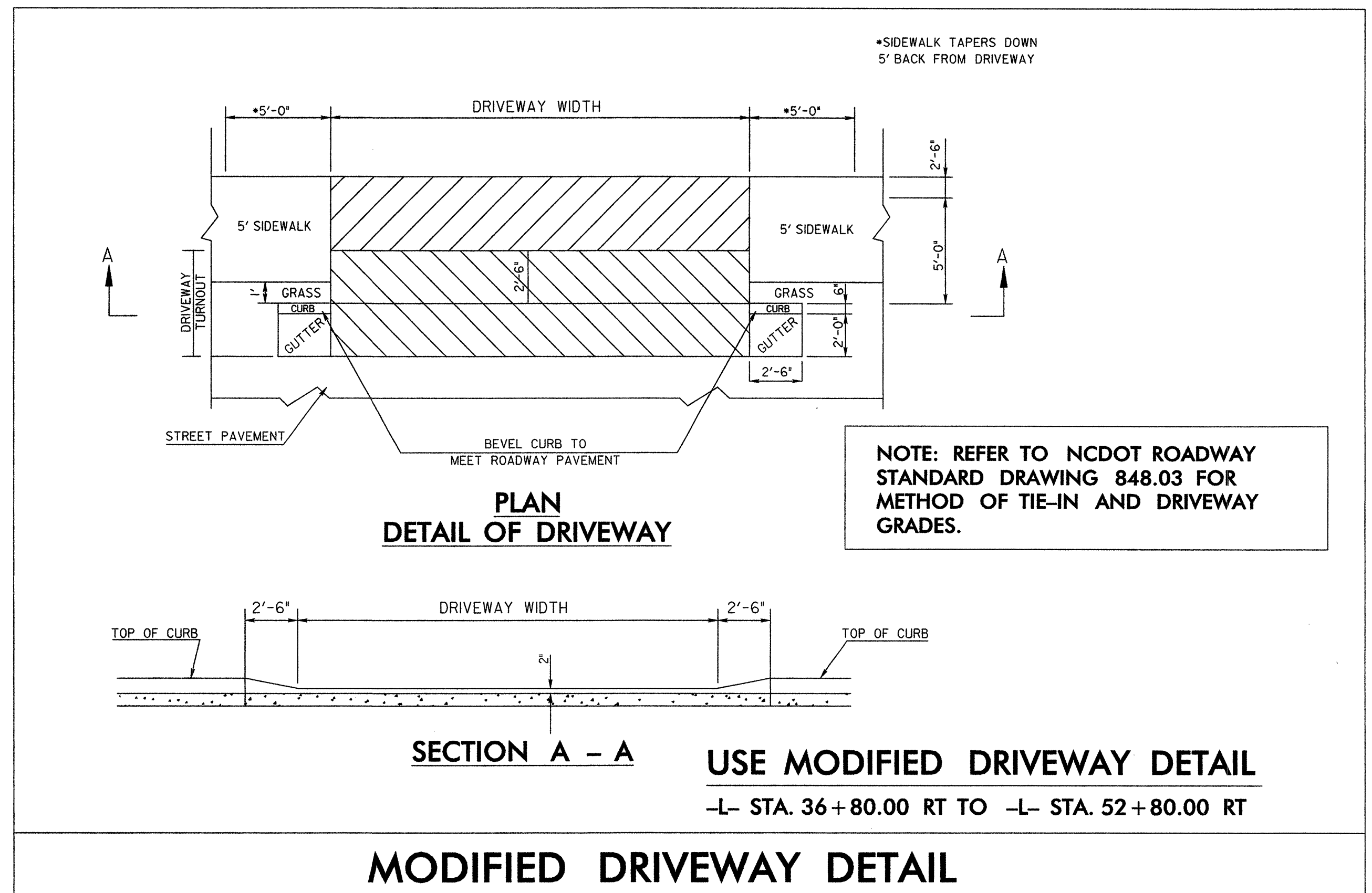
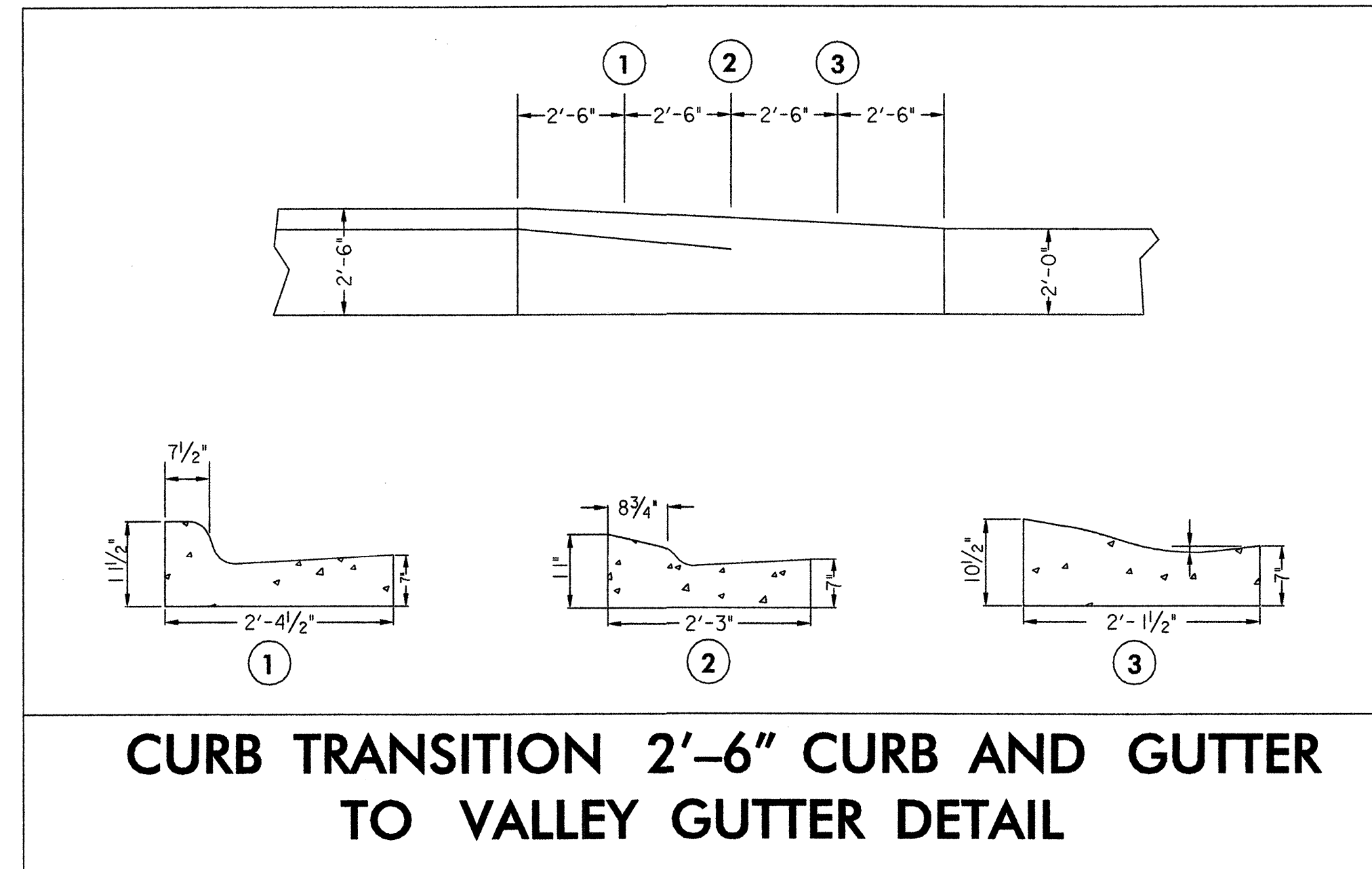
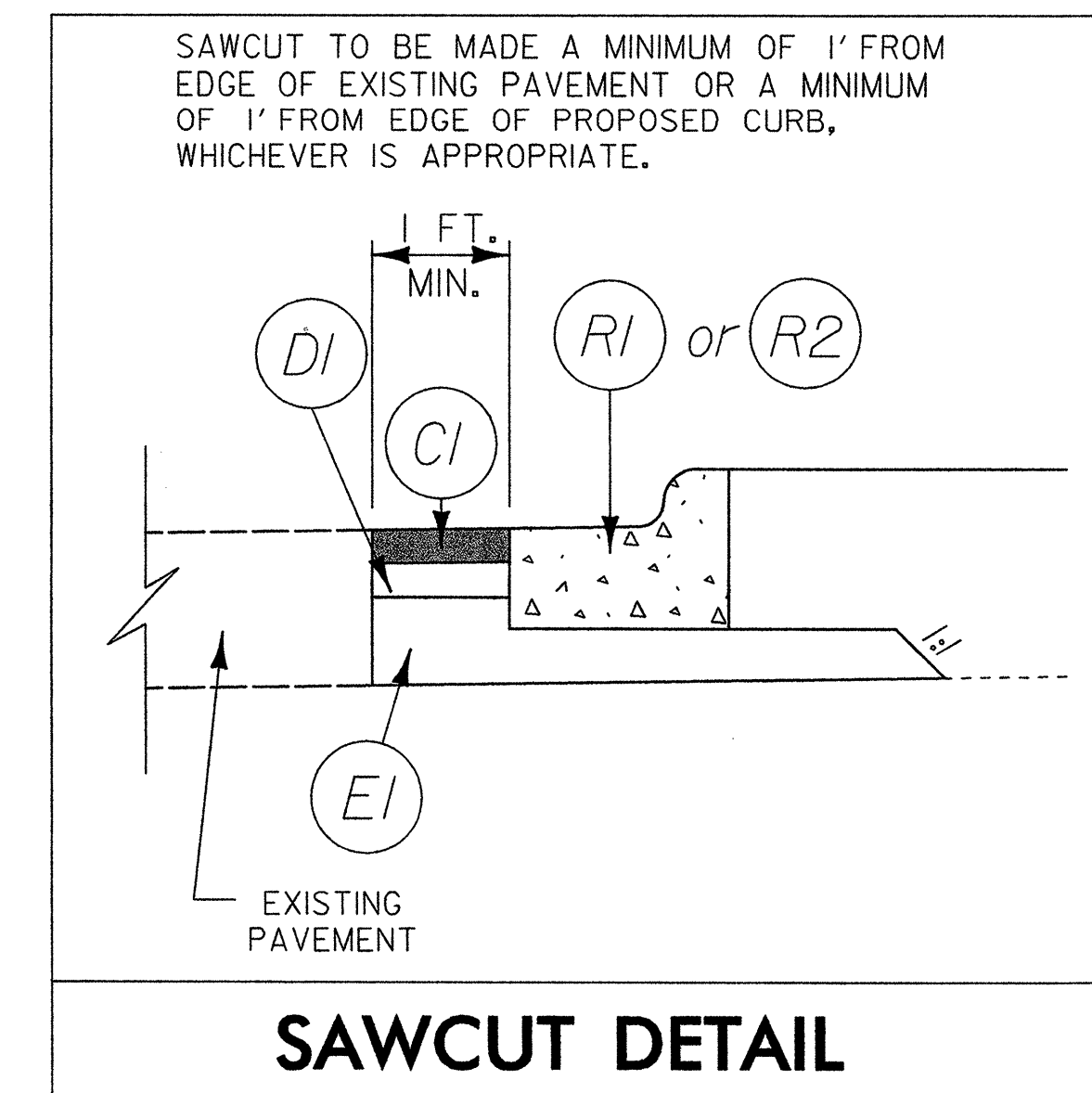
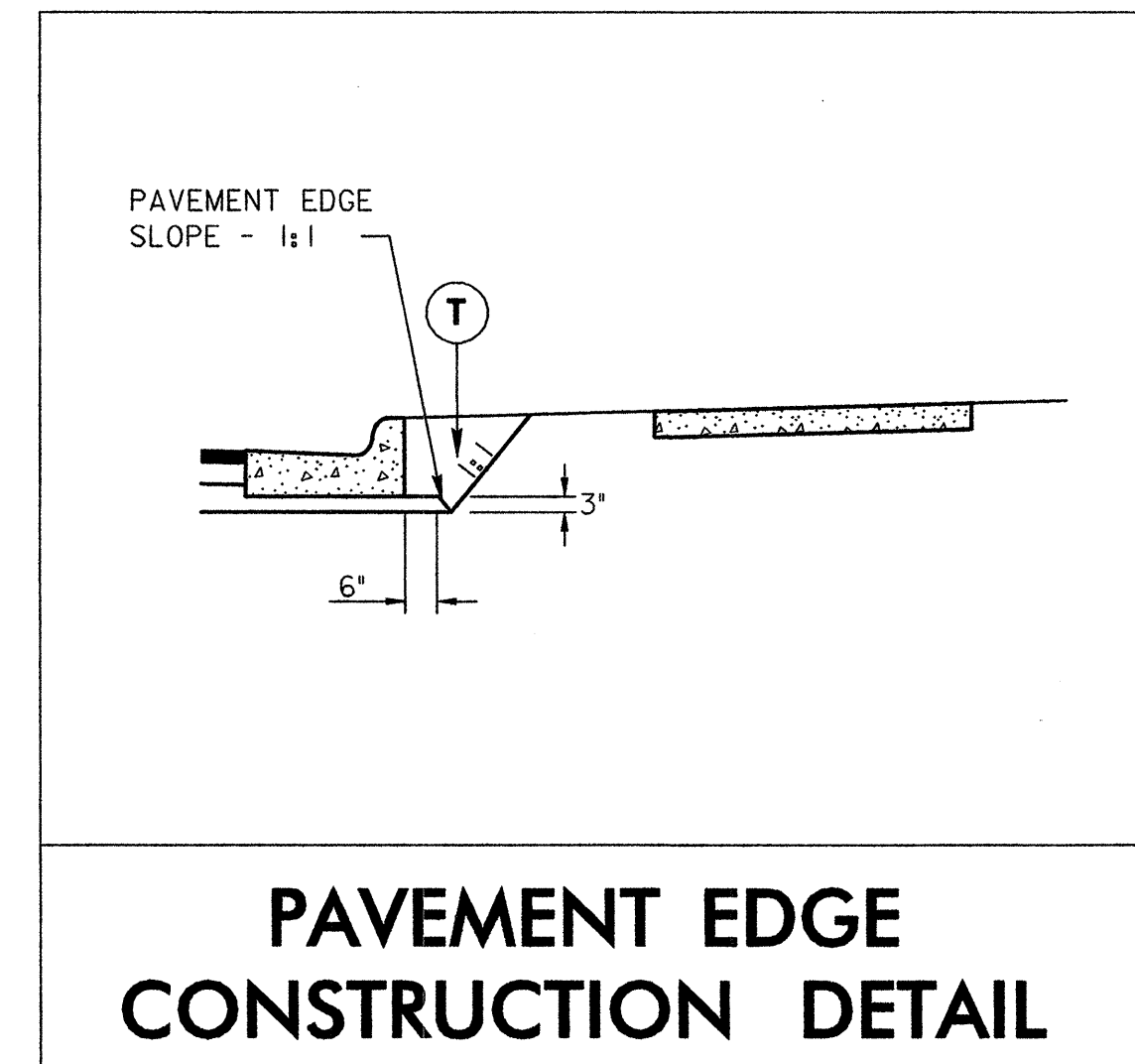
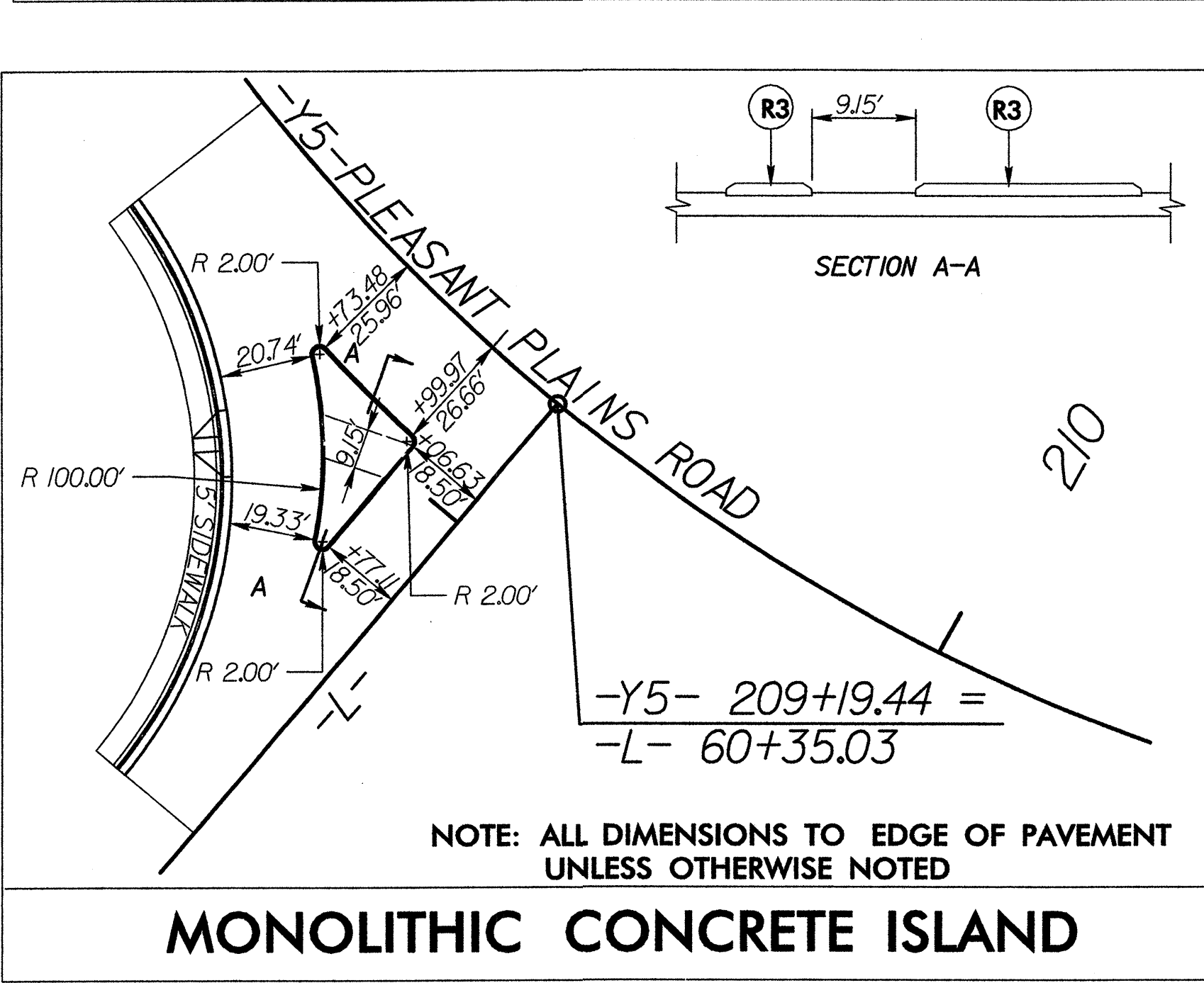
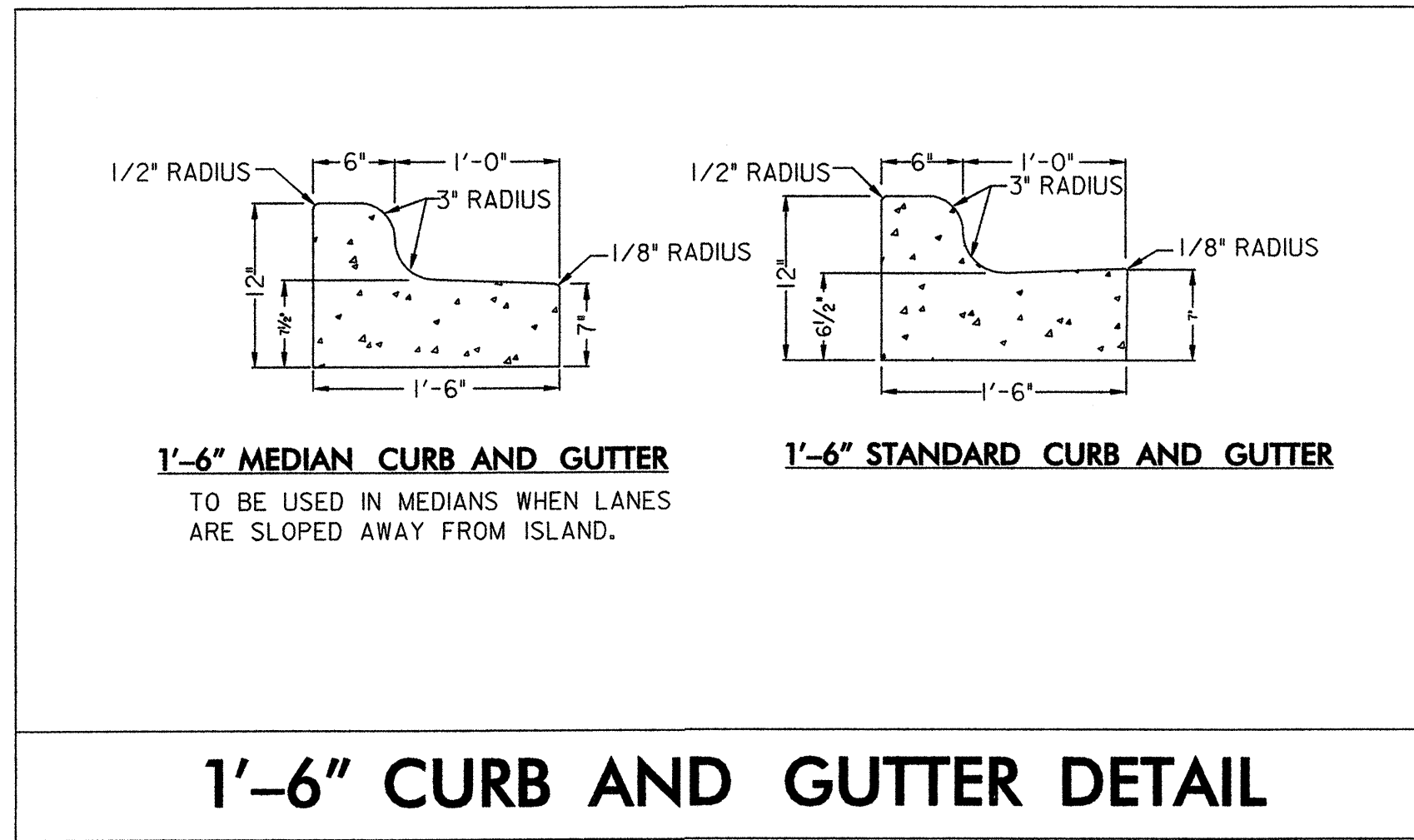
\* SEE DETAIL "F" (THIS SHEET)

\*\* GRADE POINT VARIES BETWEEN -Y5- STA. 203+55.00 TO -Y5- STA. 204+86.92

6/27/95

6/2/99

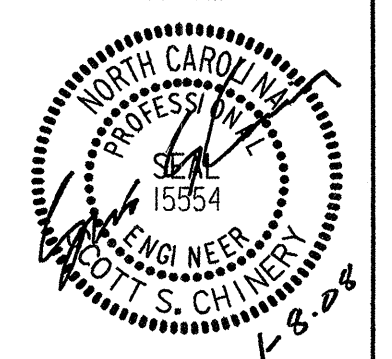
PROJECT REFERENCE NO. U-5025, 37162	SHEET NO. 2-C
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 

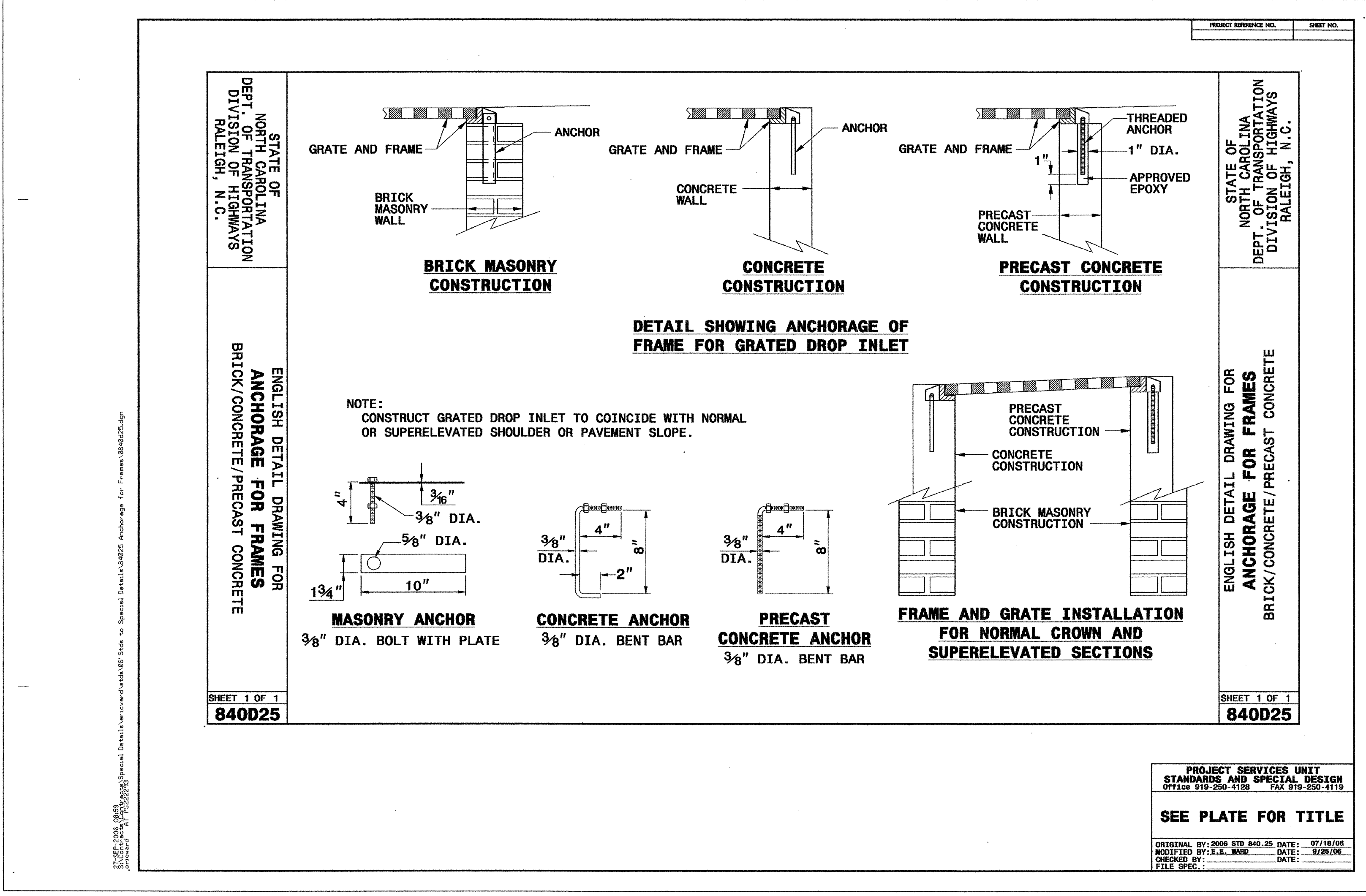
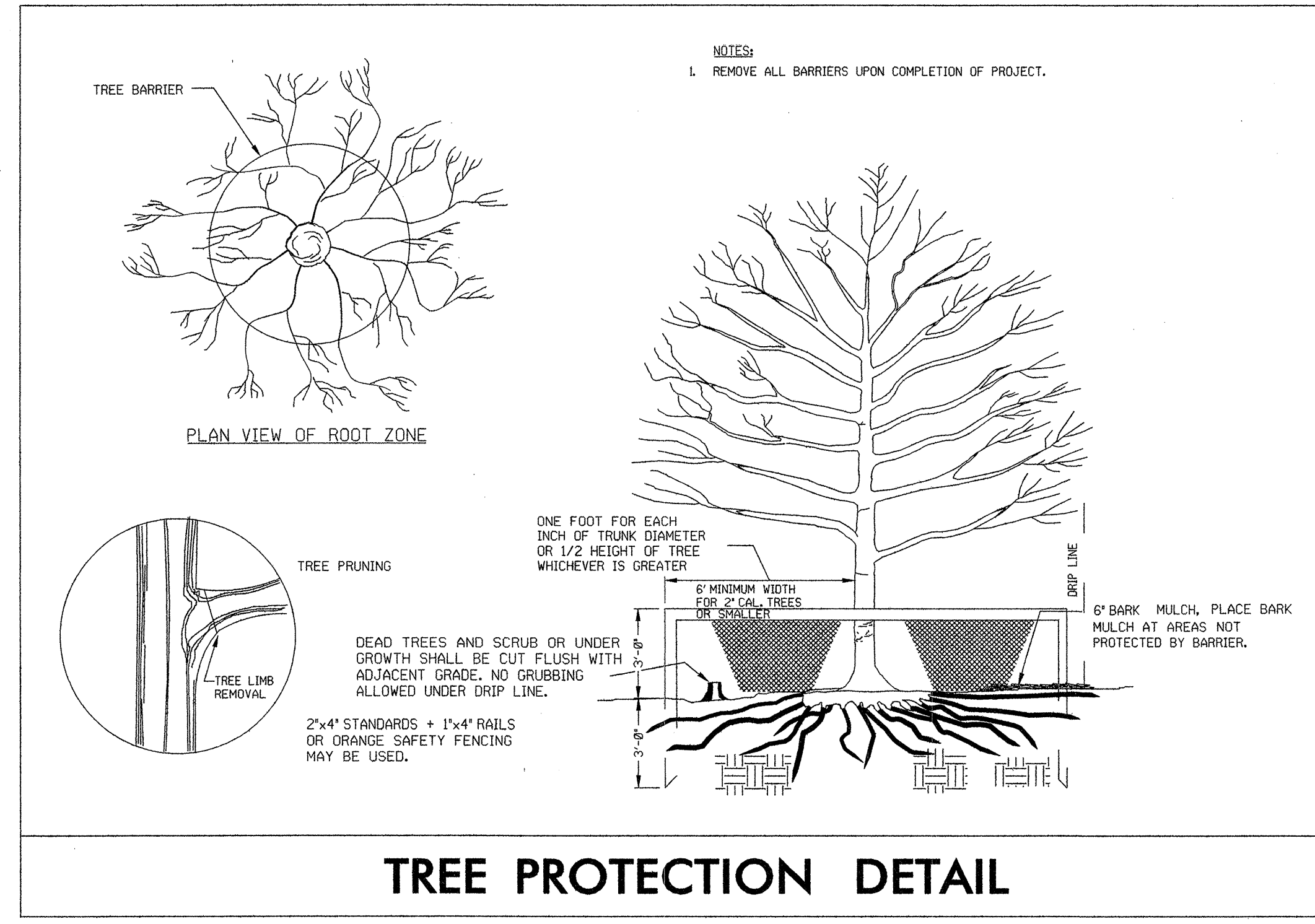


TIME: 10:00 AM DATE: 6/2/99



6/2/05

PROJECT REFERENCE NO. U-5025, 37162	SHEET NO. 2-D
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
	



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STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# SUMMARY OF ROADWAY QUANTITIES

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201995

ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	4870000000-E	1205	60	LF	REMOVAL OF PAVEMENT MARKING LINES (24")
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING	4892000000-N	1205	11	EA	GENERIC PAVEMENT MARKING ITEM SKID RESISTANT THERMO BICYCLE SYMBOL WITH ARROW, 90 MILS
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING	4900000000-N	1251	172	EA	PERMANENT RAISED PAVEMENT MARKERS
0057000000-E	226	500	CY	UNDERCUT EXCAVATION	5325600000-E	1510	25.3	LF	6" WATER LINE
0063000000-N	SP	Lump Sum		GRADING	5325800000-E	1510	99.61	LF	8" WATER LINE
0106000000-E	230	27,000	CY	BORROW EXCAVATION	5326600000-E	1510	772.18	LF	16" WATER LINE
0134000000-E	240	250	CY	DRAINAGE DITCH EXCAVATION	5546000000-E	1515	1	EA	8" VALVE
0141000000-E	240	210	LF	BERM DITCH CONSTRUCTION	5558600000-E	1515	3	EA	16" VALVE
0318000000-E	300	1,213	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS	5648000000-N	1515	4	EA	RELOCATE WATER METER
0366000000-E	310	2,032	LF	15" RC PIPE CULVERTS, CLASS III	5672000000-N	1515	4	EA	RELOCATE FIRE HYDRANT
0372000000-E	310	2,680	LF	18" RC PIPE CULVERTS, CLASS III	5691300000-E	1520	1,572.11	LF	8" SANITARY GRAVITY SEWER
0378000000-E	310	3,812	LF	24" RC PIPE CULVERTS, CLASS III	5775000000-E	1525	9	EA	4' DIA UTILITY MANHOLE
0402000000-E	310	124	LF	48" RC PIPE CULVERTS, CLASS III	5776000000-E	1525	1	EA	5' DIA UTILITY MANHOLE
0708000000-E	310	56	LF	15" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK	5801000000-E	1530	1,749.25	LF	ABANDON 8" UTILITY PIPE
0806000000-E	310	1	EA	15" BIT COAT CS PIPE ELBOWS, TYPE B 0.064" THICK	5810000000-E	1530	687.62	LF	ABANDON 16" UTILITY PIPE
0995000000-E	340	1,055	LF	PIPE REMOVAL	5828000000-N	1530	7	EA	REMOVE UTILITY MANHOLE
1220000000-E	545	252	TON	INCIDENTAL STONE BASE	6000000000-E	1605	9,800	LF	TEMPORARY SILT FENCE
1489000000-E	610	7,152	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	6006000000-E	1610	78	TON	STONE FOR EROSION CONTROL, CLASS A
1498000000-E	610	3,959	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B	6009000000-E	1610	130	TON	STONE FOR EROSION CONTROL, CLASS B
1519000000-E	610	2,731	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	6012000000-E	1610	547	TON	SEDIMENT CONTROL STONE
1560000000-E	620	658	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	6015000000-E	1615	0.6	ACR	TEMPORARY MULCHING
1693000000-E	654	641	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR	6018000000-E	1620	52	LB	SEED FOR TEMPORARY SEEDING
2209000000-E	838	6	CY	ENDWALLS	6021000000-E	1620	0.3	TON	FERTILIZER FOR TEMPORARY SEEDING
2264000000-E	840	0.11	CY	PIPE PLUGS	6024000000-E	1622	93	LF	TEMPORARY SLOPE DRAINS
2275000000-E	SP	1.2	CY	FLOWABLE FILL	6027000000-N	1622	2	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
2286000000-N	840	62	EA	MASONRY DRAINAGE STRUCTURES	6030000000-E	1630	955	CY	SILT EXCAVATION
2308000000-E	840	51	LF	MASONRY DRAINAGE STRUCTURES	6042000000-E	1632	1,664	LF	1/4" HARDWARE CLOTH
2364000000-N	840	8	EA	FRAME WITH TWO GRATES, STD 840.16	6069000000-E	1638	101	CY	STILLING BASINS
2374000000-N	840	3	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	6070000000-N	SP	1	EA	SPECIAL STILLING BASINS
2374000000-N	840	37	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	6084000000-E	1660	0.5	ACR	SEEDING & MULCHING
2374000000-N	840	10	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	6087000000-E	1660	0.5	ACR	MOWING
2396000000-N	840	4	EA	FRAME WITH COVER, STD 840.54	6090000000-E	1661	52	LB	SEED FOR REPAIR SEEDING
2542000000-E	846	365	LF	1'-6" CONCRETE CURB & GUTTER	6093000000-E	1661	0.3	TON	FERTILIZER FOR REPAIR SEEDING
2549000000-E	846	11,838	LF	2'-6" CONCRETE CURB & GUTTER	6096000000-E	1662	52	LB	SEED FOR SUPPLEMENTAL SEEDING
2591000000-E	848	6,000	SY	4" CONCRETE SIDEWALK	6108000000-E	1665	0.3	TON	FERTILIZER TOPDRESSING
2605000000-N	848	12	EA	CONCRETE WHEELCHAIR RAMPS	6111000000-E	SP	52	LF	IMPERVIOUS DIKE
2612000000-E	848	872	SY	6" CONCRETE DRIVEWAY	6114000000-N	SP	2	HR	SPECIALIZED HAND MOWING
2619000000-E	850	14.5	SY	4" CONCRETE PAVED DITCH	6117000000-N	SP	8	EA	RESPONSE FOR EROSION CONTROL
2655000000-E	852	64	SY	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)	6120000000-E	SP	186	CY	CULVERT DIVERSION CHANNEL
2800000000-N	858	1	EA	ADJUSTMENT OF CATCH BASINS	6147000000-E	SP	1,650	LF	GENERIC EROSION CONTROL ITEM TREE PROTECTION FENCE
2830000000-N	858	7	EA	ADJUSTMENT OF MANHOLES	8126000000-N	414	Lump Sum		CULVERT EXCAVATION, STA ***** (49+24.00)
2845000000-N	858	24	EA	ADJUSTMENT OF METER BOXES OR VALVE BOXES	8133000000-E	414	140	TON	FOUNDATION CONDITIONING MATERIAL, BOX CULVERT
3030000000-E	862	900	LF	STEEL BM GUARDRAIL	8804000000-N	SP	Lump Sum		GENERIC CULVERT ITEM PRECAST BOX CULVERT AT STA 49+24
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS					
3210000000-N	862	3	EA	GUARDRAIL ANCHOR UNITS, TYPE CAT-1					
3270000000-N	SP	6	EA	GUARDRAIL ANCHOR UNITS, TYPE 350					
3628000000-E	876	599	TON	RIP RAP, CLASS I					
3642000000-E	876	52	TON	RIP RAP, CLASS A					



5/28/99

1/7/2008

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

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



Main data table with columns for Station, Location, Structure No., Top Invert, Invert, Slope, Pipe Size, Pipe Material, Endwalls, Quantities, Frame/Grates, and Remarks. Includes summary row at the bottom.

ABBREVIATIONS table listing terms like C.B., N.D.I., D.I., M.D.I., M.D.I. (N.S.), J.B., M.H., T.B.D.I., T.B.J.B. with their corresponding descriptions.

1/24/2008  
SYTIME  
CGN  
MIL  
SHEET TOTAL









STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS

**RIGHT OF WAY AREA DATA SHEET**

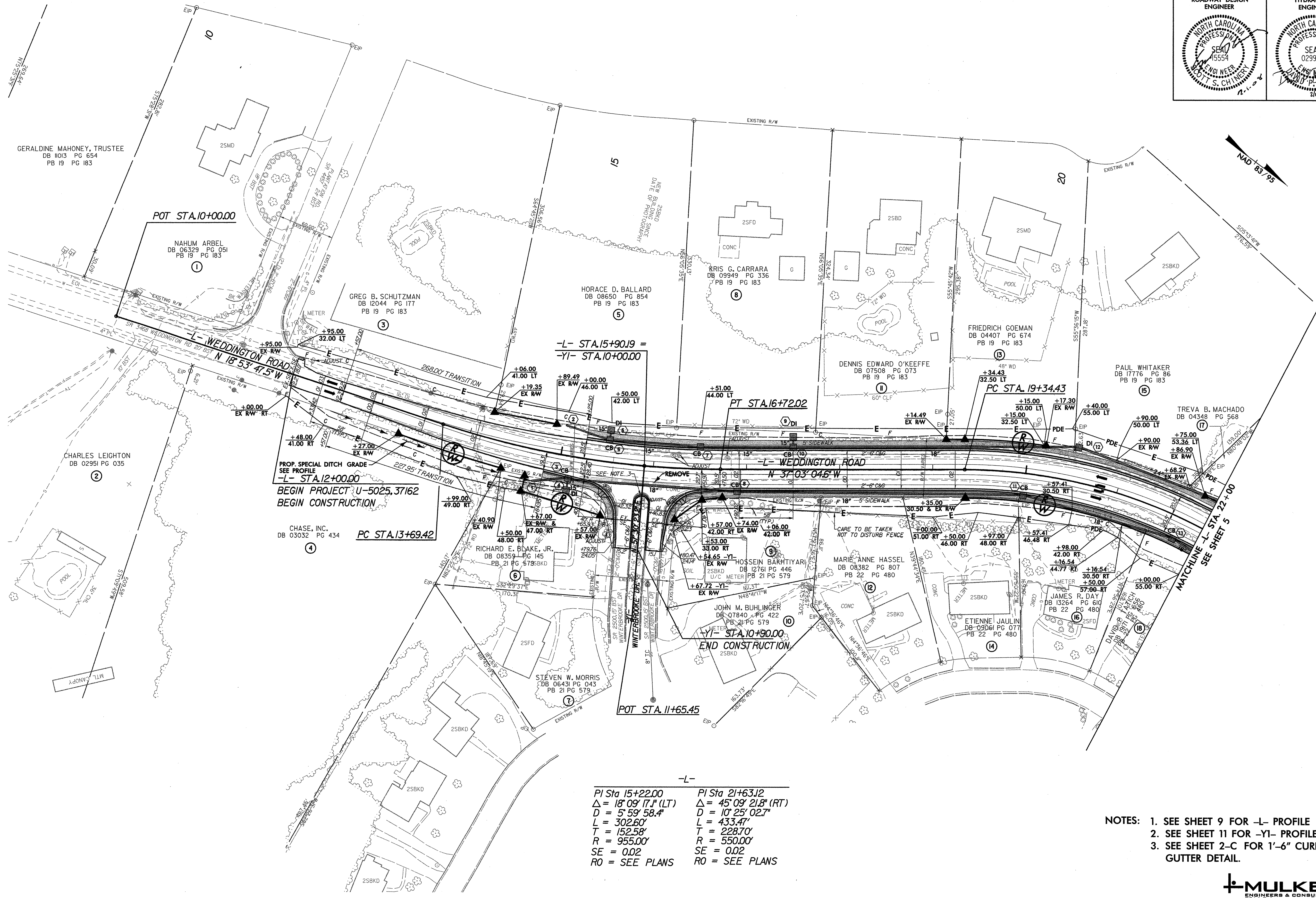
ALL UNITS ARE IN SQUARE FEET UNLESS OTHERWISE NOTED

PARCEL NO.	PROPERTY OWNERS NAME	TOTAL ACREAGE	AREA TAKEN	AREA REMAINING RIGHT	AREA REMAINING LEFT	CONSTR. EASEMENT	PERMANENT DRAINAGE EASEMENT	TEMPORARY DRAINAGE EASEMENT	PERMANENT UTILITY EASEMENT	PARCEL NO.	PROPERTY OWNERS NAME	TOTAL ACREAGE	AREA TAKEN	AREA REMAINING RIGHT	AREA REMAINING LEFT	CONSTR. EASEMENT	PERMANENT DRAINAGE EASEMENT	TEMPORARY DRAINAGE EASEMENT	PERMANENT UTILITY EASEMENT
3	Greg B.Schultzman	1.54 ac.				1893.02				36	Janet Sheridan	1.78 ac.	708.30		1.77 ac.	3865.31	797.49		
4	Chase Inc.	24.17 ac.	251.32	24.17 ac.		4268.33				37	Daniel J. Mille	20355.21	87.60	20267.61		967.62			
5	Horace D. Ballard	1.31 ac.	143.88		1.30 ac.	1685.56				38	Catherine B. Black	43506.67	1052.38	42454.29		5330.76			
6	Richard E. Blake, Jr.	17195.50	1909.23	15286.27		527.32				39	Mary C. Etter	15358.97	911.38		14447.59	4076.27			
8	Kris G. Carrara	1.12 ac.				344.00				41	Arnot H. Meyer	2.75 ac.	394.72	2.74 ac.		4744.19			
9	Hossin Bakhtiyari	15900.32	425.14	15475.18		1958.36				42	Victoria L. Sprouse	26331.50	1190.42		25141.08.	6833.54			
11	Dennis Edward O'Keeffe	1.04 ac.				1110.72				43	Larry Wright	15774.58							
12	Marie Anne Hassel	19915.54				1580.43				44	Bryant S. Waldkirch	24872.82	306.15		24566.67	1797.01			
13	Friedrich Goeman	1.01 ac.	116.98		1.01 ac.	1367.85	639.91			45	Vickie F. Fresh	2.21 ac.				0.18 ac.			
14	Etienne Jaulin	18110.63	76.28	18034.35		2234.20				46	Susan Macvicker	16351.30	430.23		15921.07	2726.22			
15	Paul Whitaker	1.48 ac.				1437.29	892.26			47	Jimmy O. Rudisill, Jr.	23329.88	187.42		23142.46	1714.99			
16	James R. Day	17876.25	541.70	17334.55		1491.96	752.33			48	Karen G. Grass	2.53 ac.	318.82		2.52 ac.	0.14 ac.			
17	Treva B. Machado	16860.11	153.28		16706.83		2147.08			49	Carlos Sinclair	41181.65				2369.16			
18	David P. Tatich	18379.15	382.92	17996.22		3534.23				50	Timothy White	31988.55				1412.96			
19	Stratland Development	5376.97				1297.22				51	Chris Audet	28570.41	775.95	27794.46		2092.99			
20	John Morton	17279.57				2602.91				52	John J. Lynch	36549.40	9249.41	27299.99		2426.57	5875.97		
21	Stratland Development	8466.14				794.46				53	Karen G. Grass	2.30 ac.				817.58			
22	Michael D. Wilson	17033.04	228.34	16804.70		2586.99				54	R.L. Williams	17.90 ac.	0.29 ac.	17.61 ac.		0.74 ac.	0.24 ac.		3161.38
23A	Canterbury Place Homeowners Association, Inc.	7453.72				3194.70				55	Mahlon H. Privette	1.63 ac.	2389.71	1.58 ac.		569.87	0.29 ac.		
23B	Canterbury Place Homeowners Association, Inc.	16516.72				3608.78				56	Mahlon H. Privette	3.26 ac.	2994.34	3.19 ac.		1911.67	0.22 ac.		
23C	Canterbury Place Homeowners Association, Inc.	12153.24				1967.22				57	Mark Dlugosz	1.02 ac.	2531.71	0.96 ac.		0.14 ac.	1276.49		
24	Ravjibhai N. Patel	16560.76	275.24	16285.52		1990.28				58	Dmitriy Kishlo	18463.36	1667.22	16796.14		6247.30			
25	Philip L. Stark	15988.38	86.74	15901.64		1338.97				59	James O. Bryant	17022.71				1634.89			
26	John Bower	24414.54	534.41	23880.13		2164.76				61	Chong U. Choi	1.85 ac.	0.27 ac.	1.58 ac.		0.32 ac.	558.73		
27	Donnie E. Doby, Jr.	20671.22	581.42	20089.80		2320.53				65	William K. Mayhew	12986.71				1859.95			
28	Hinshaw Properties	707.19	407.41		299.78	380.00				66	John K. Eaves VI	21778.11					400.17		
29	Dwight F. Hunter	17144.31				2053.06				67	Heathers Land Corporation	1479.61	1479.61	0.00					
30	Diane Wilkerson	33169.63	147.73	33021.90		1394.68				68	Sotirios Mantekas	15386.32							
31	Hinshaw Properties	853.56	375.32		478.24	478.25				69	John J. Sergi	14018.84							
32	Jennifer M. Schlenberger	22479.10				1635.68				70	Donald K. Glover	12719.93							
33	Hinshaw Properties	1135.94	380.98		754.96	754.95				71	Bijan Neshat	1.25 ac.	814.92	1.23 ac.		4150.27	1351.84		
34	Joseph Carey	28735.71				1457.84				72	Daniel Koroly	11307.84				828.19			
35	Brian J. Brown	24952.99	538.75	24414.24		5010.26				73	Jeremy L. Davis	21610.93	527.51		21083.62	721.36			

10/26/08  
 COUNTY OF CUMBERLAND







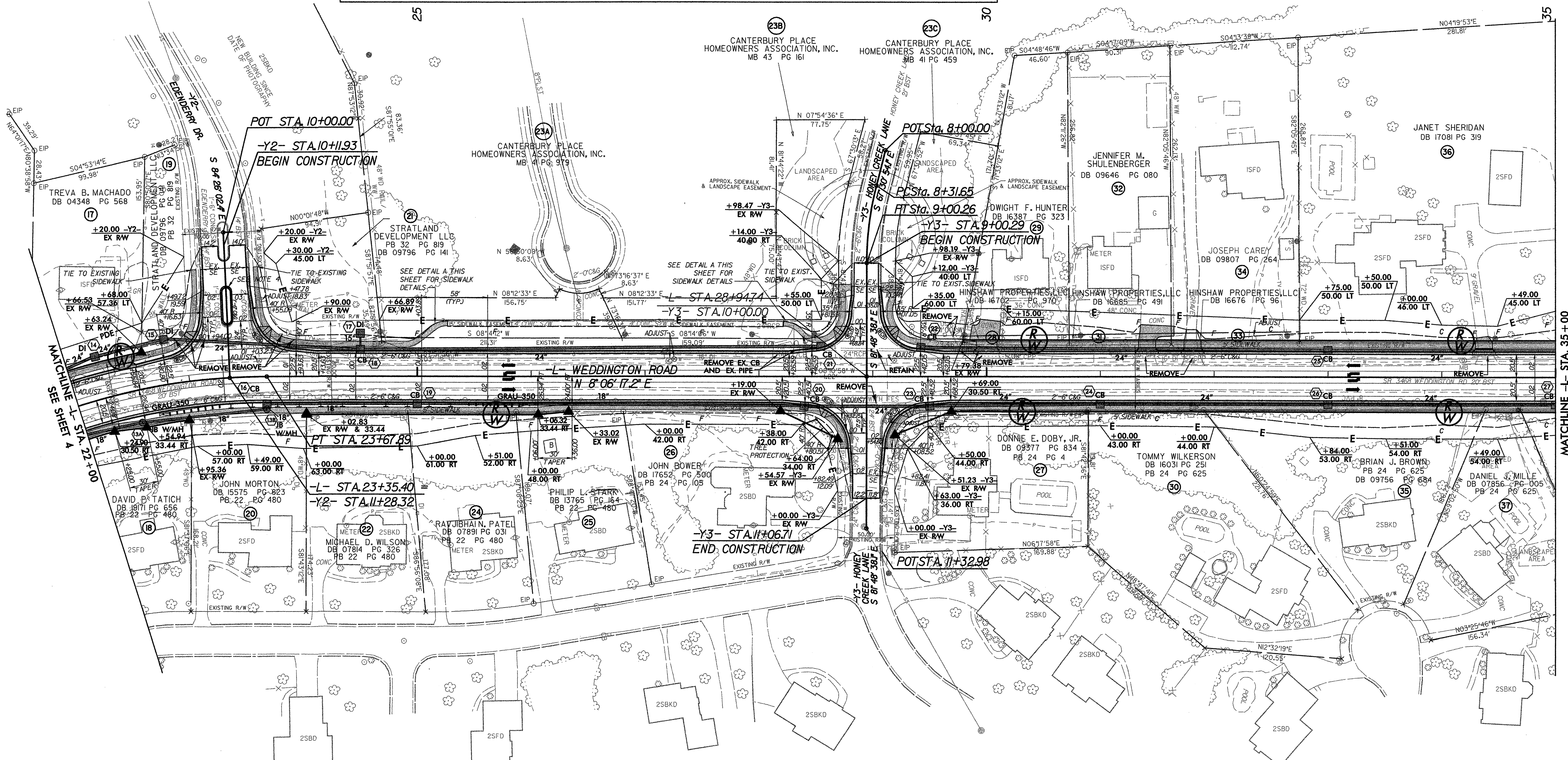
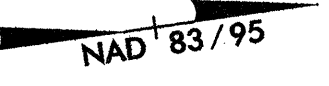
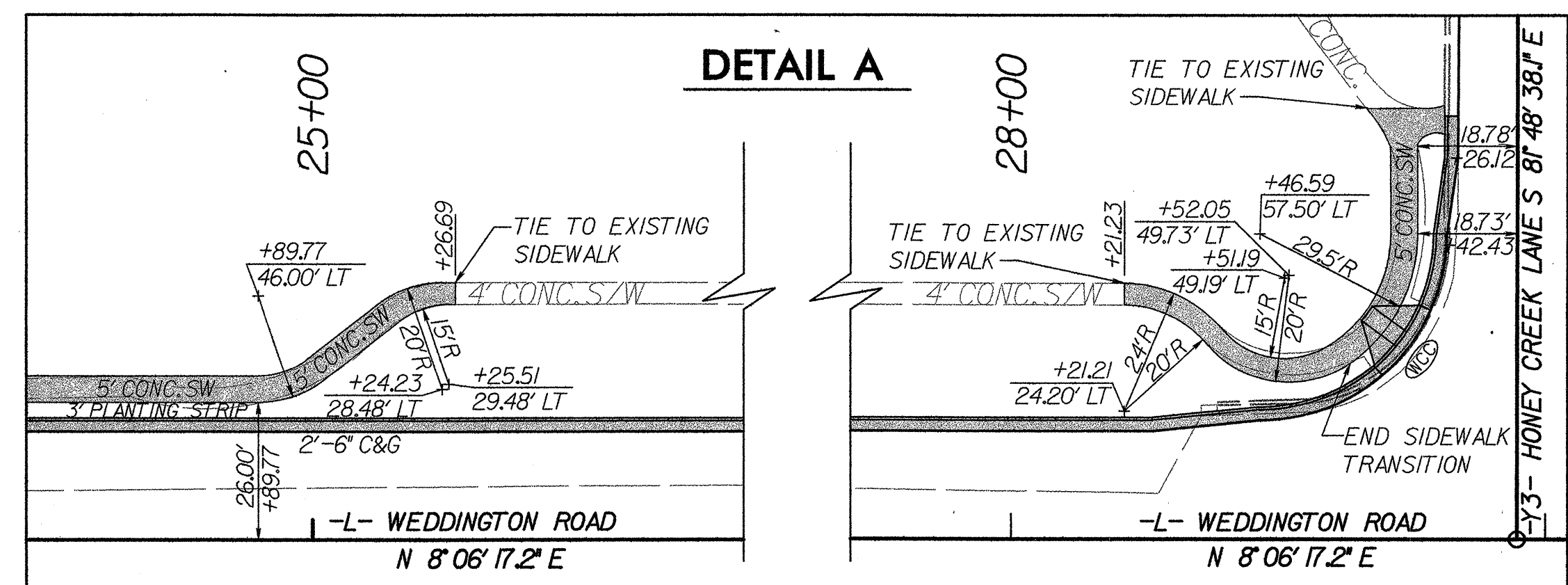
-L-	-YI-
PI Sta 15+22.00	PI Sta 21+63.12
$\Delta = 18^{\circ} 09' 17.1''$ (LT)	$\Delta = 45^{\circ} 09' 21.8''$ (RT)
D = 5' 59' 58.4"	D = 10' 25' 02.7"
L = 302.60'	L = 433.47'
T = 152.58'	T = 228.70'
R = 955.00'	R = 550.00'
SE = 0.02	SE = 0.02
RO = SEE PLANS	RO = SEE PLANS

- NOTES:
1. SEE SHEET 9 FOR -L- PROFILE
  2. SEE SHEET 11 FOR -YI- PROFILE
  3. SEE SHEET 2-C FOR 1'-6" CURB AND GUTTER DETAIL.

8/17/99  
 1/24/2008  
 SYSTEMS  
 DESIGN  
 CONSTRUCTION

8/17/99  
1/4/2008

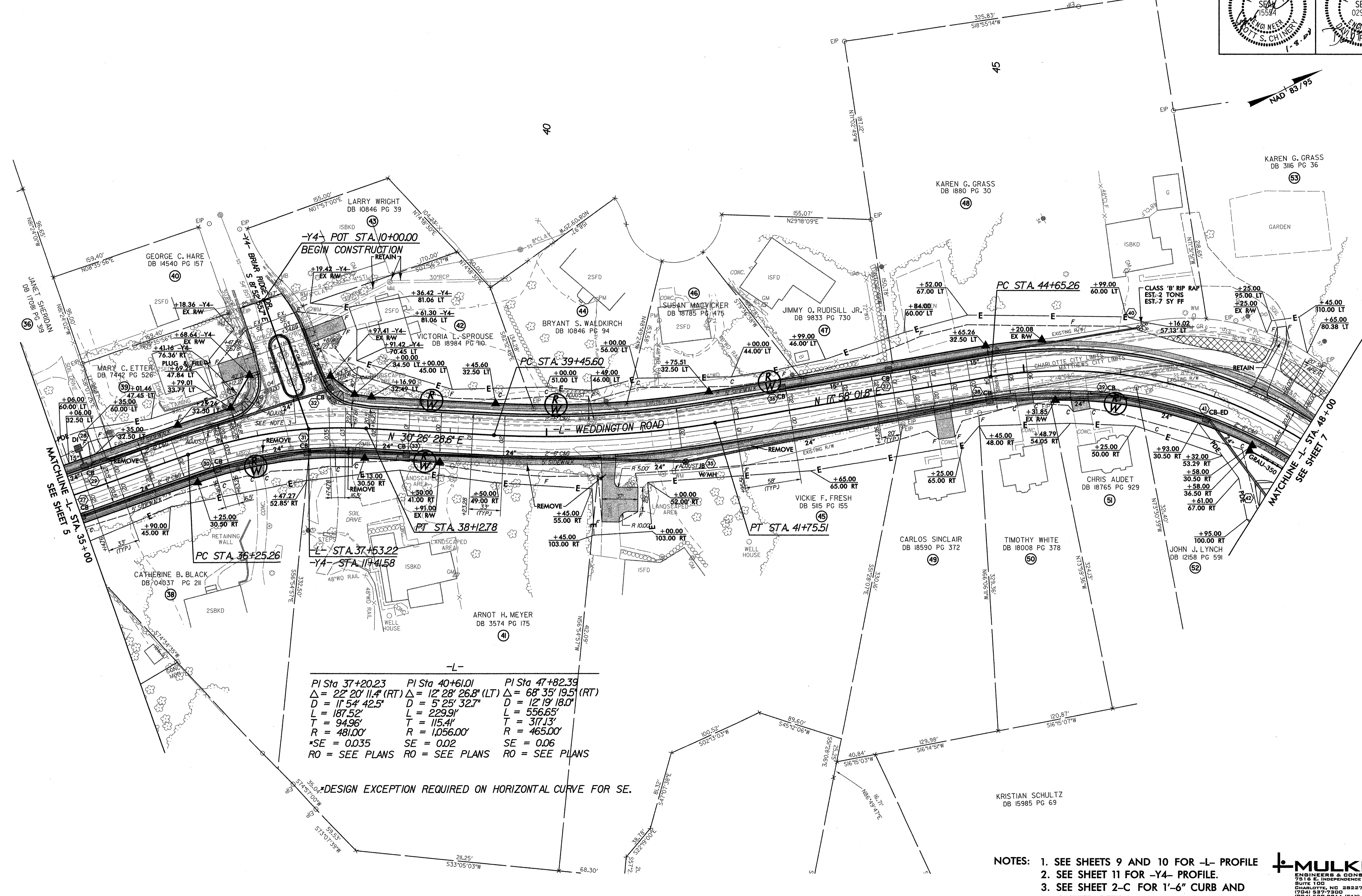
PROJECT REFERENCE NO. U-5025, 37162		SHEET NO. 5
RW SHEET NO.		
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 15654 BOB B. SHAW	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 029984 D. S. CHINEY	



$-L-$ PI Sta 21+63.12 $\Delta = 45^\circ 09' 21.8\"$ (RT) $D = 10^\circ 25' 02.7\"$ $L = 433.47'$ $T = 228.70'$ $R = 550.00'$ $SE = 0.02$ $RO = \text{SEE PLANS}$	$-Y3-$ PI Sta 8+66.13 $\Delta = 14^\circ 17' 44.0\"$ (LT) $D = 20^\circ 50' 05.4\"$ $L = 68.61'$ $T = 34.49'$ $R = 275.00'$
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- NOTES:
- 1. SEE SHEET 9 FOR -L- PROFILE
  - 2. SEE SHEET 11 FOR -Y2- PROFILE.
  - 3. SEE SHEET 11 FOR -Y3- PROFILE
  - 4. SEE SHEET 2-C FOR 1'-6\" CURB AND GUTTER DETAIL.



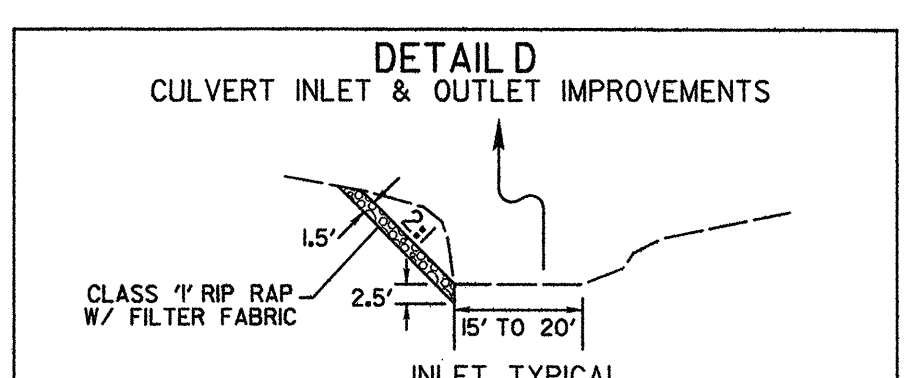
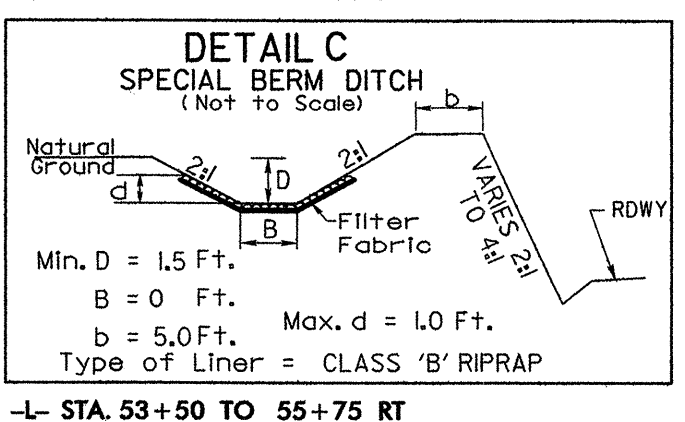
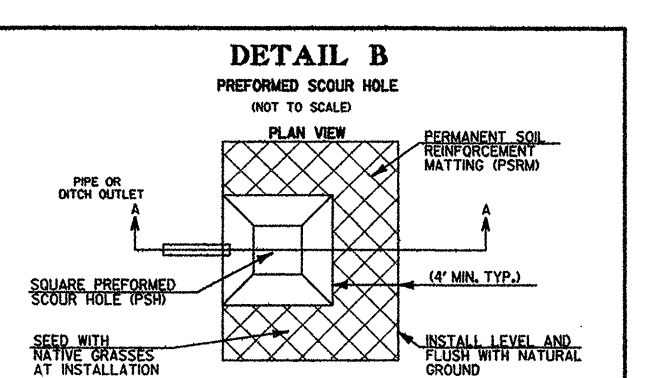
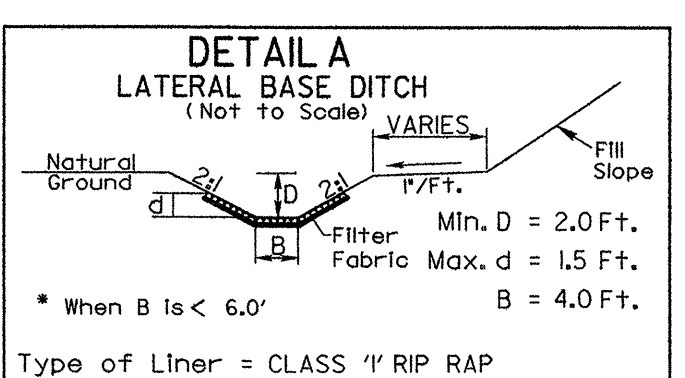


PI Sta	PI Sta	PI Sta
37+20.23	40+61.01	47+82.39
$\Delta = 22^{\circ} 20' 11.4" (RT)$	$\Delta = 12^{\circ} 28' 26.8" (LT)$	$\Delta = 68^{\circ} 35' 19.5" (RT)$
$D = 11' 54" 42.5"$	$D = 5' 25" 32.7"$	$D = 12' 19" 18.0"$
$L = 187.52'$	$L = 229.91'$	$L = 556.65'$
$T = 94.96'$	$T = 115.41'$	$T = 317.13'$
$R = 481.00'$	$R = 1,056.00'$	$R = 465.00'$
$*SE = 0.035$	$SE = 0.02$	$SE = 0.06$
$RO = \text{SEE PLANS}$	$RO = \text{SEE PLANS}$	$RO = \text{SEE PLANS}$

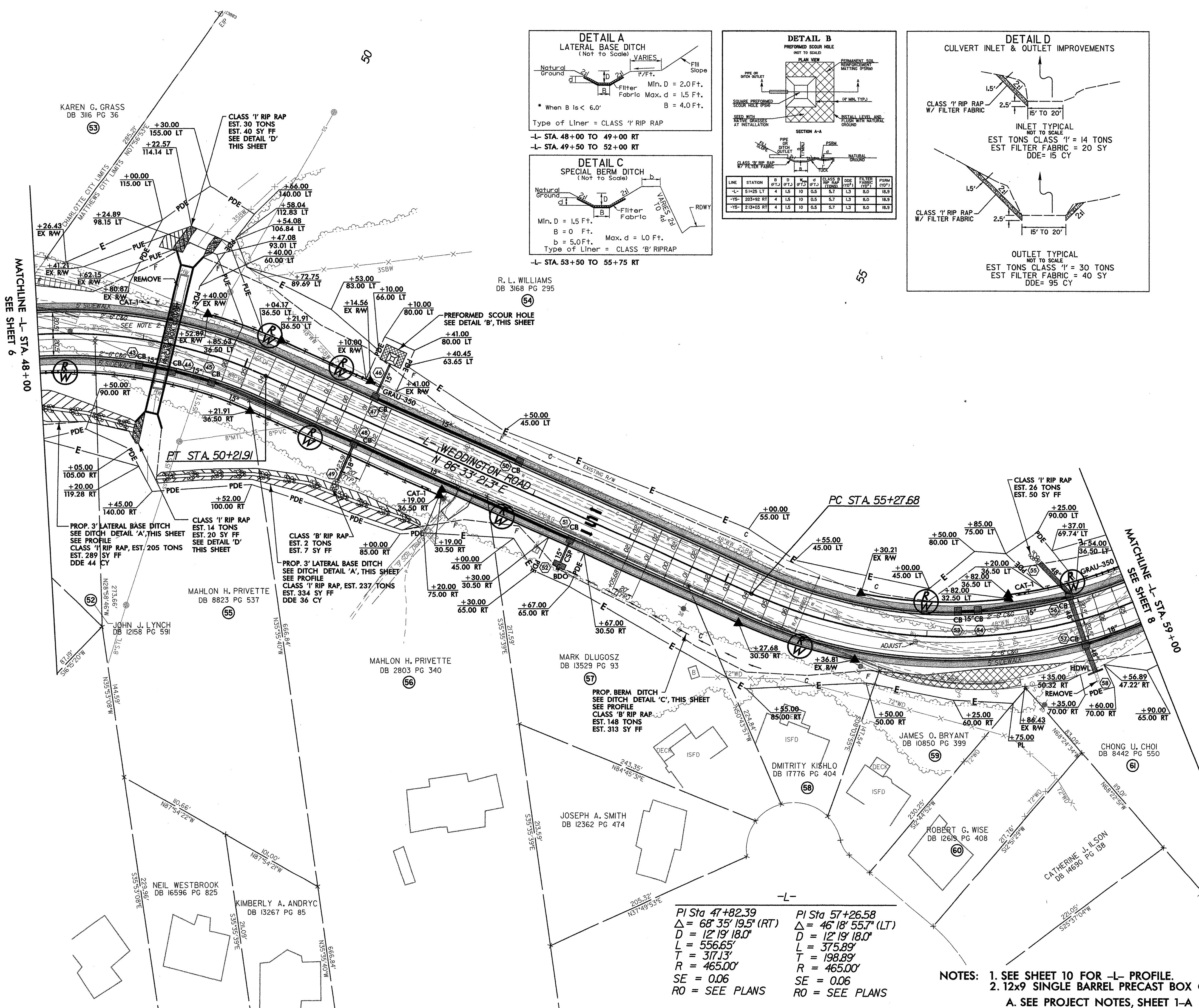
DESIGN EXCEPTION REQUIRED ON HORIZONTAL CURVE FOR SE.

NOTES: 1. SEE SHEETS 9 AND 10 FOR -L- PROFILE  
2. SEE SHEET 11 FOR -Y4- PROFILE.  
3. SEE SHEET 2-C FOR 1'-6" CURB AND GUTTER DETAIL.

8/17/99 1/4, 2008



LINE	STATION	R	D	W	H	DOE	DOE	DOE	PSRW	PSRW
-L-	51+25 LT	4	1.5	10	0.5	5.7	1.3	8.0	18.3	
-L-	52+32 RT	4	1.5	10	0.5	5.7	1.3	8.0	18.3	
-L-	53+03 RT	4	1.5	10	0.5	5.7	1.3	8.0	18.3	



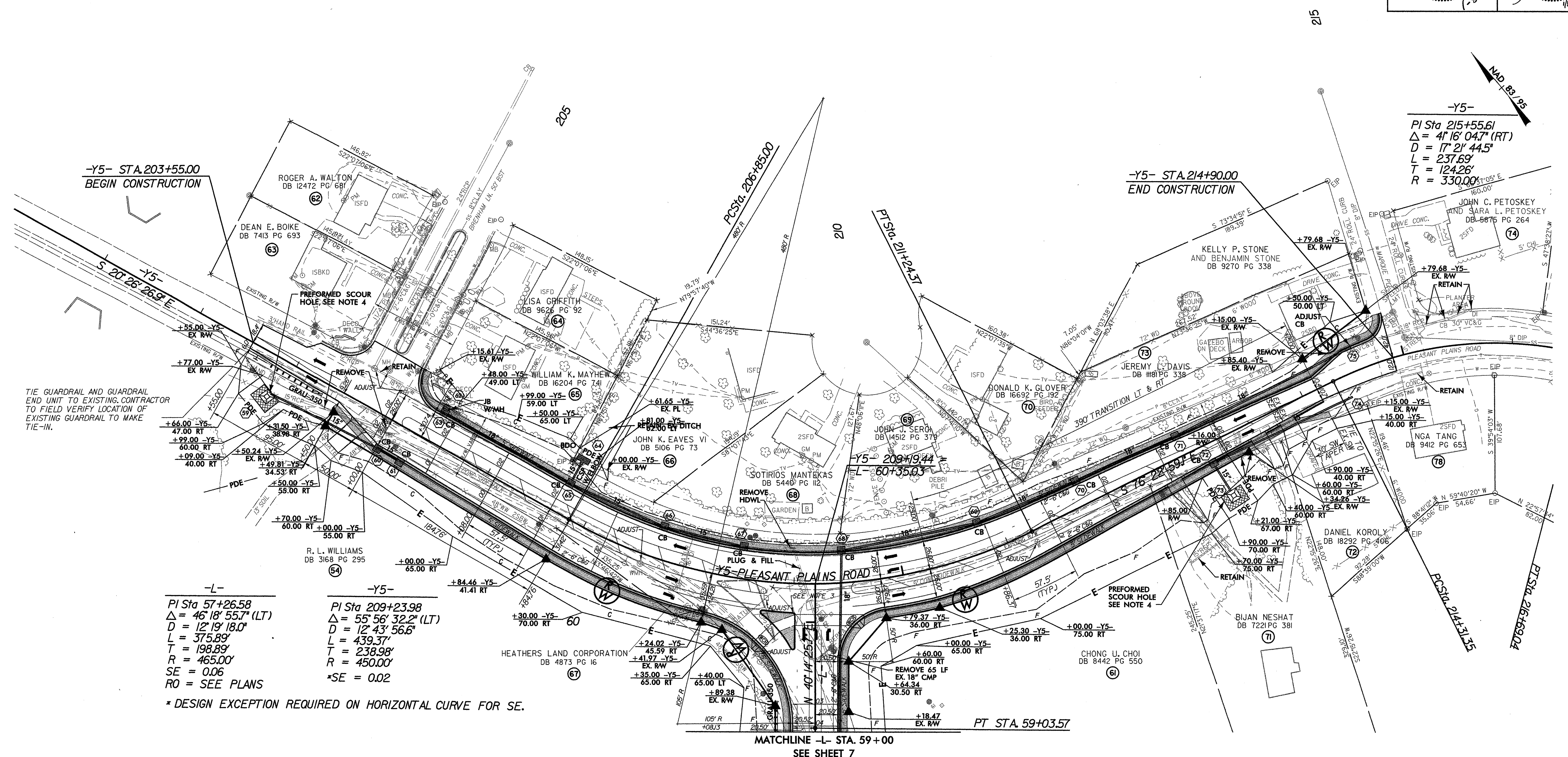
-L-

PI Sta 47+82.39	PI Sta 57+26.58
Δ = 68° 35' 19.5" (RT)	Δ = 46° 18' 55.7" (LT)
D = 12' 19" 18.0"	D = 12' 19" 18.0"
L = 556.65'	L = 375.89'
T = 317.13'	T = 198.89'
R = 465.00'	R = 465.00'
SE = 0.06	SE = 0.06
RO = SEE PLANS	RO = SEE PLANS

- NOTES:
- SEE SHEET 10 FOR -L- PROFILE.
  - 12x9 SINGLE BARREL PRECAST BOX CULVERT
- A. SEE PROJECT NOTES, SHEET 1-A  
 B. FOR CULVERT PHASING, SEE SHEET EC-9  
 C. SEE SHEET C-1 THRU C-3 FOR CULVERT DESIGN DETAILS



8/17/99 1/4/2008



-Y5- STA.203+55.00  
BEGIN CONSTRUCTION

-Y5- STA.214+90.00  
END CONSTRUCTION

-Y5-  
PI Sta 215+55.61  
Δ = 41' 16" 04.7" (RT)  
D = 17' 21" 44.5"  
L = 237.69'  
T = 124.26'  
R = 330.00'

TIE GUARDRAIL AND GUARDRAIL  
END UNIT TO EXISTING. CONTRACTOR  
TO FIELD VERIFY LOCATION OF  
EXISTING GUARDRAIL TO MAKE  
TIE-IN.

-L-  
PI Sta 57+26.58  
Δ = 46' 18" 55.7" (LT)  
D = 12' 19" 18.0"  
L = 375.89'  
T = 198.89'  
R = 465.00'  
SE = 0.06  
RO = SEE PLANS

-Y5-  
PI Sta 209+23.98  
Δ = 55' 56" 32.2" (LT)  
D = 12' 43" 56.6"  
L = 439.37'  
T = 238.98'  
R = 450.00'  
\*SE = 0.02

\* DESIGN EXCEPTION REQUIRED ON HORIZONTAL CURVE FOR SE.

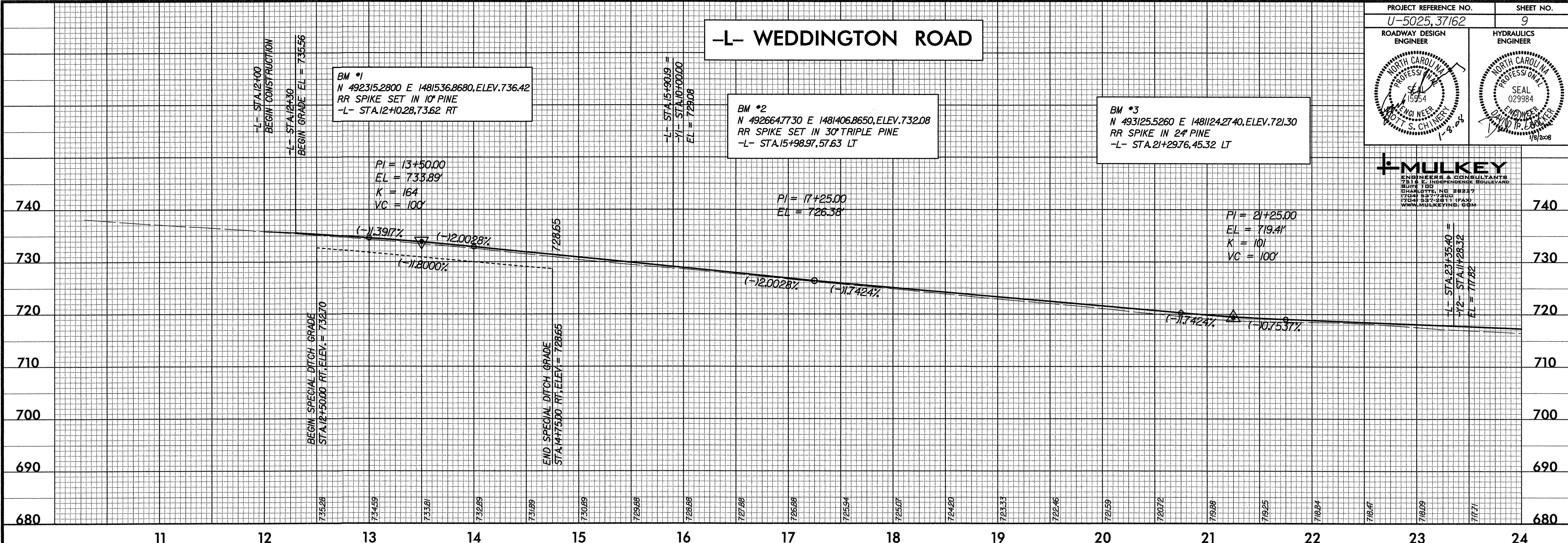
MATCHLINE -L- STA. 59+00  
SEE SHEET 7

- NOTES:
1. SEE SHEET 10 FOR -L- PROFILE
  2. SEE SHEET 12 FOR -Y5- PROFILE.
  3. SEE SHEET 2-C FOR MONOLITHIC CONCRETE ISLAND DETAIL.
  4. SEE SHEET 7, DETAIL B.

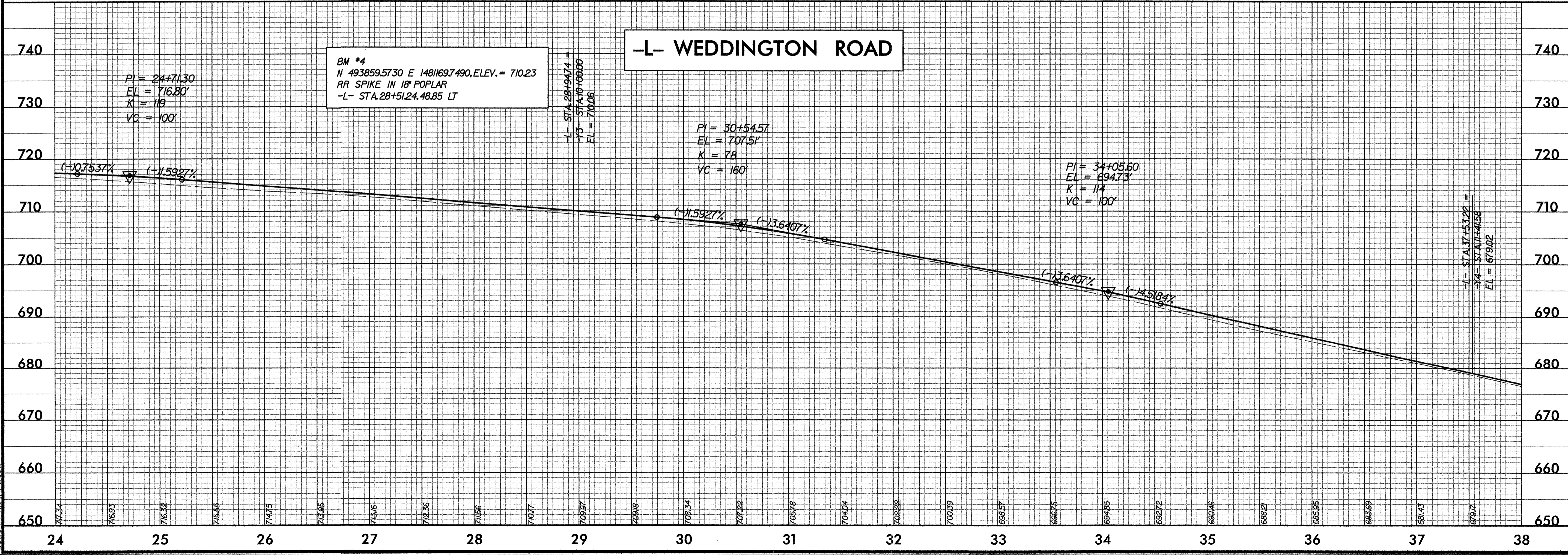
8/17/99  
1/4/2008



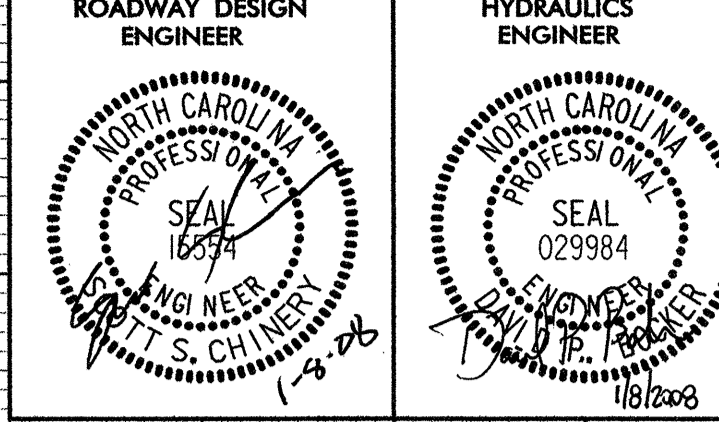
**-L- WEDDINGTON ROAD**



**-L- WEDDINGTON ROAD**



5/28/99  
1/4/2008  
SYSTEMS TIME RECORDS  
SUSTAINABLE



MULKEY ENGINEERS & CONSULTANTS  
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### -L- WEDDINGTON ROAD

PI = 39+62.08  
EL = 669.59'  
K = 203  
VC = 100'

PI = 42+36.10  
EL = 655.85'  
K = 98  
VC = 200'

BM \*8  
N 495748.7180 E 1481805.2670, ELEV. 635.04  
RR SPIKE IN 12" OAK  
-L- STA. 48+14.10, 104.53 LT

CULVERT HYDRAULIC DATA	
DRAINAGE AREA	= 0.85 SQ. MI.
DESIGN DISCHARGE	= 1032 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 622.73 FT
BASE DISCHARGE	= 1147 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 623.42 FT
OVERTOPPING DISCHARGE	= 2325 CFS
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING ELEVATION	= 637.40 FT

PI = 48+84.00  
EL = 636.55'  
K = 67  
VC = 300'

STA 49+24.11 PROP. 12'X9'  
PRECAST CONCRETE BOX CULVERT

690  
680  
670  
660  
650  
640  
630  
620

660  
650  
640  
630  
620

38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

### -L- WEDDINGTON ROAD

BM \*9  
N 495672.7780 E 1482331.4820, ELEV = 643.94  
RR SPIKE IN 36" OAK  
-L- STA. 52+96.48, 58.82 RT

BM \*10  
N 495918.4500 E 1482948.2370, ELEV = 647.48  
RR SPIKE IN 12" BIRCH  
-L- STA. 59+51.03, 41.69 RT

PI = 56+03.21  
EL = 647.29'  
K = 50  
VC = 100'

PI = 58+11.49  
EL = 646.25'  
K = 72  
VC = 200'

I- STA. 60+35.03 =  
-Y5- STA. 209+19.44  
EL = 649.72

CULVERT HYDRAULIC DATA	
DRAINAGE AREA	= 20.07 AC.
DESIGN DISCHARGE	= 75.58 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 644.30 FT
BASE DISCHARGE	= 85.05 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 644.66 FT
OVERTOPPING DISCHARGE	= 175 CFS
OVERTOPPING FREQUENCY	= 100+ YRS
OVERTOPPING ELEVATION	= 649.08 FT

680  
670  
660  
650  
640  
630  
620

680  
670  
660  
650  
640  
630  
620

52 53 54 55 56 57 58 59 60



5/28/99

1/4/2008

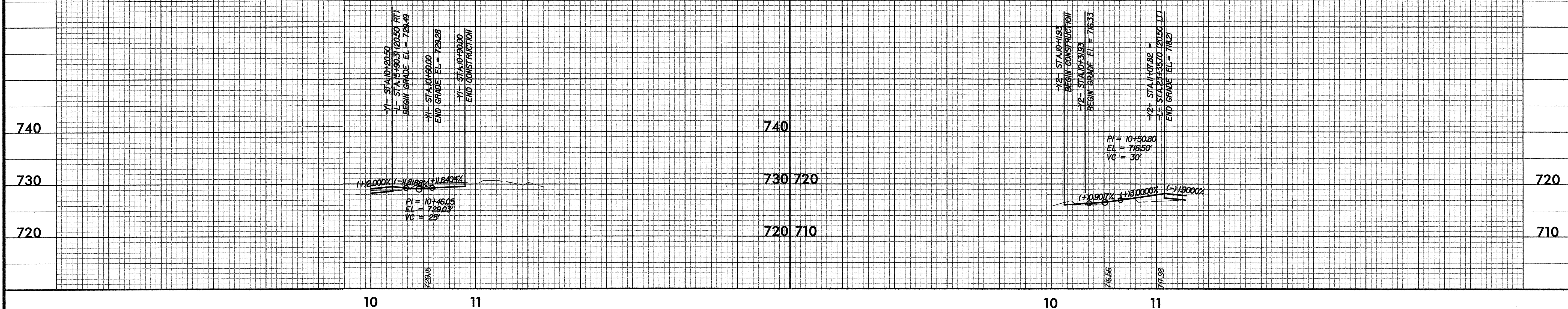
SYSTEMS DIVISION  
UTILITY ENGINEERING

PROJECT REFERENCE NO. U-5025,37162	SHEET NO. 11
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**MULKEY**  
ENGINEERS & CONSULTANTS  
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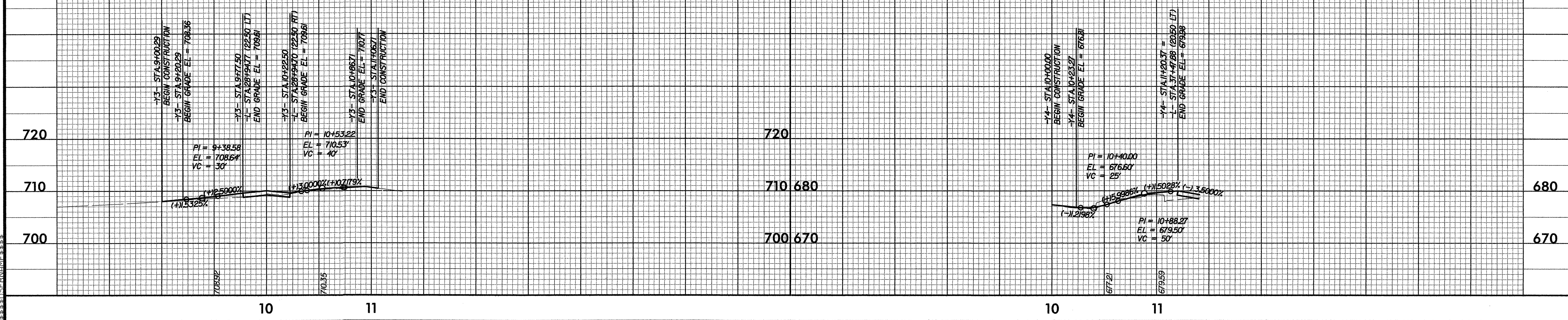
**-Y1- WINTERBROOKE DR.**

**-Y2- EDENDERRY DRIVE**



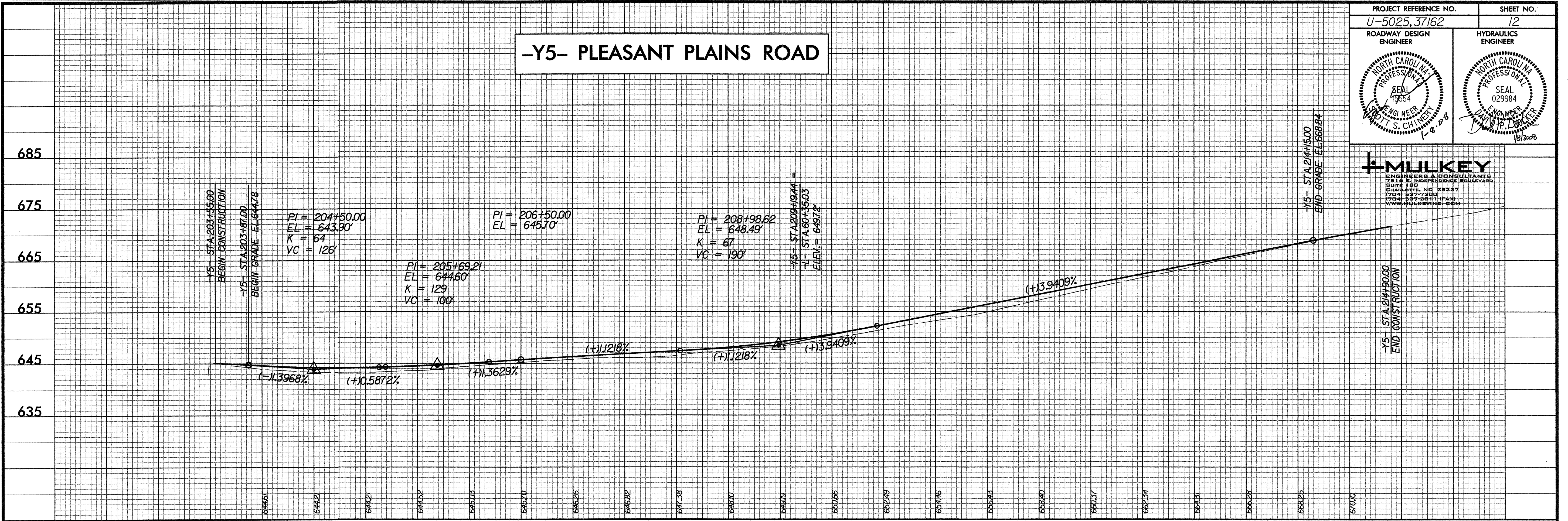
**-Y3- HONEY CREEK LANE**

**-Y4- BRIAR RIDGE DRIVE**



# -Y5- PLEASANT PLAINS ROAD

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D.C.N.  
USFNAME