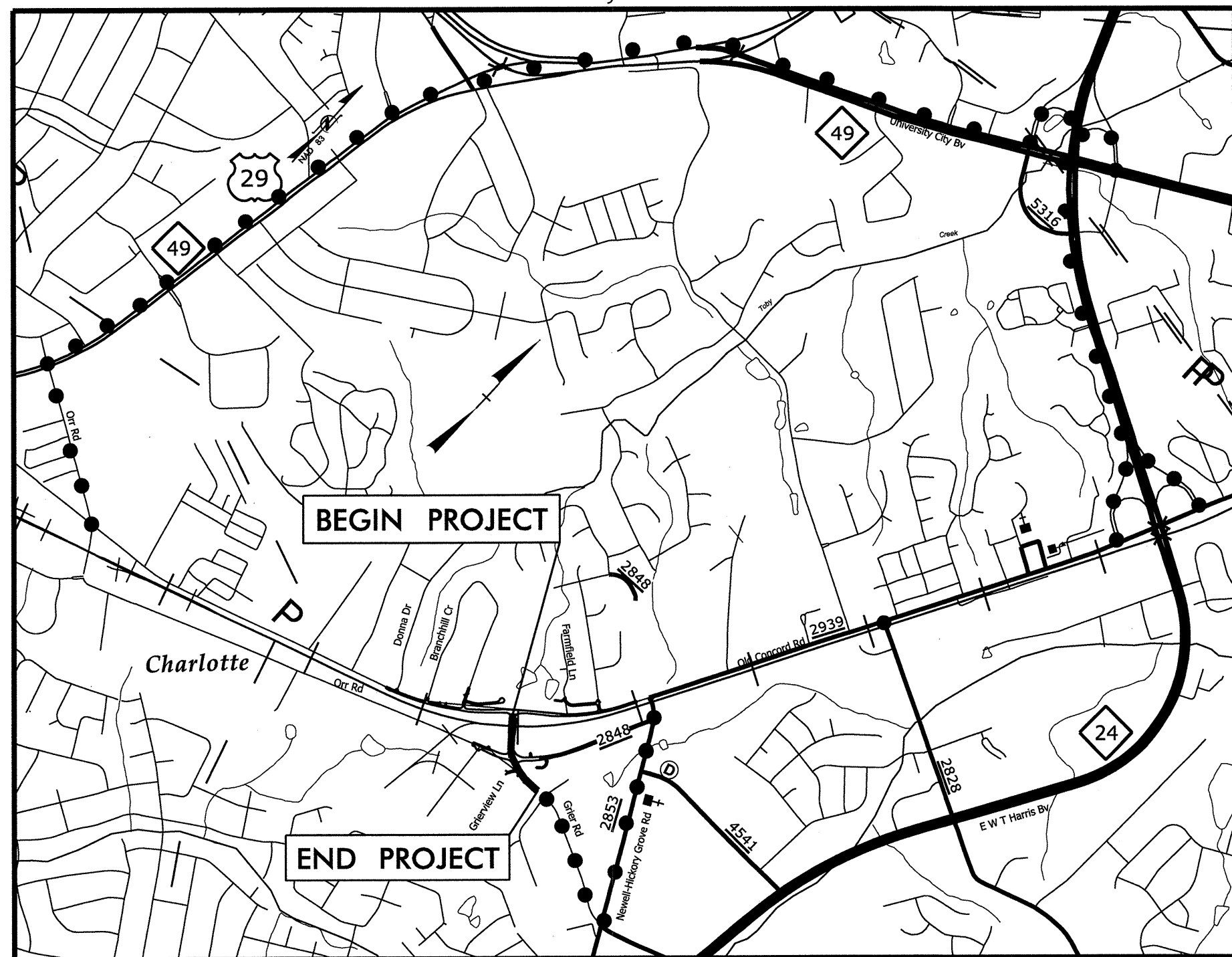


0102DEL_P10a6

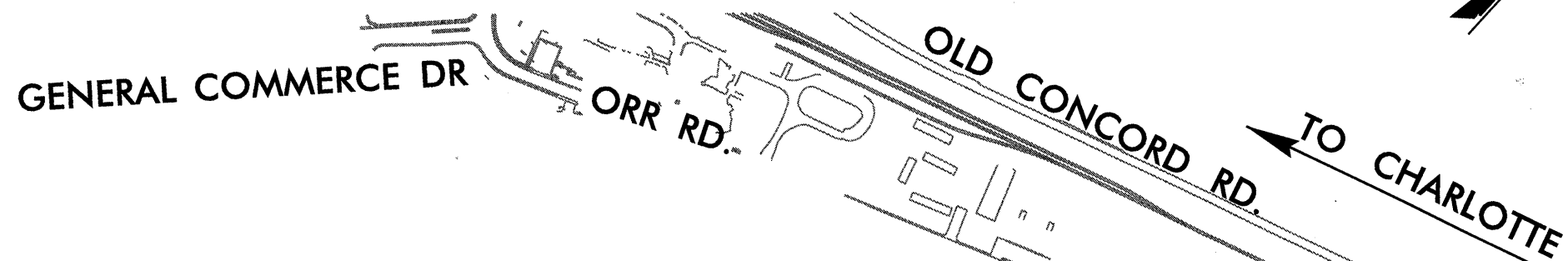
TIP PROJECT: P-5208H

CONTRACT: C203148

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



VICINITY MAP



STATE OF NORTH CAROLINA
NCDOT RAIL DIVISION

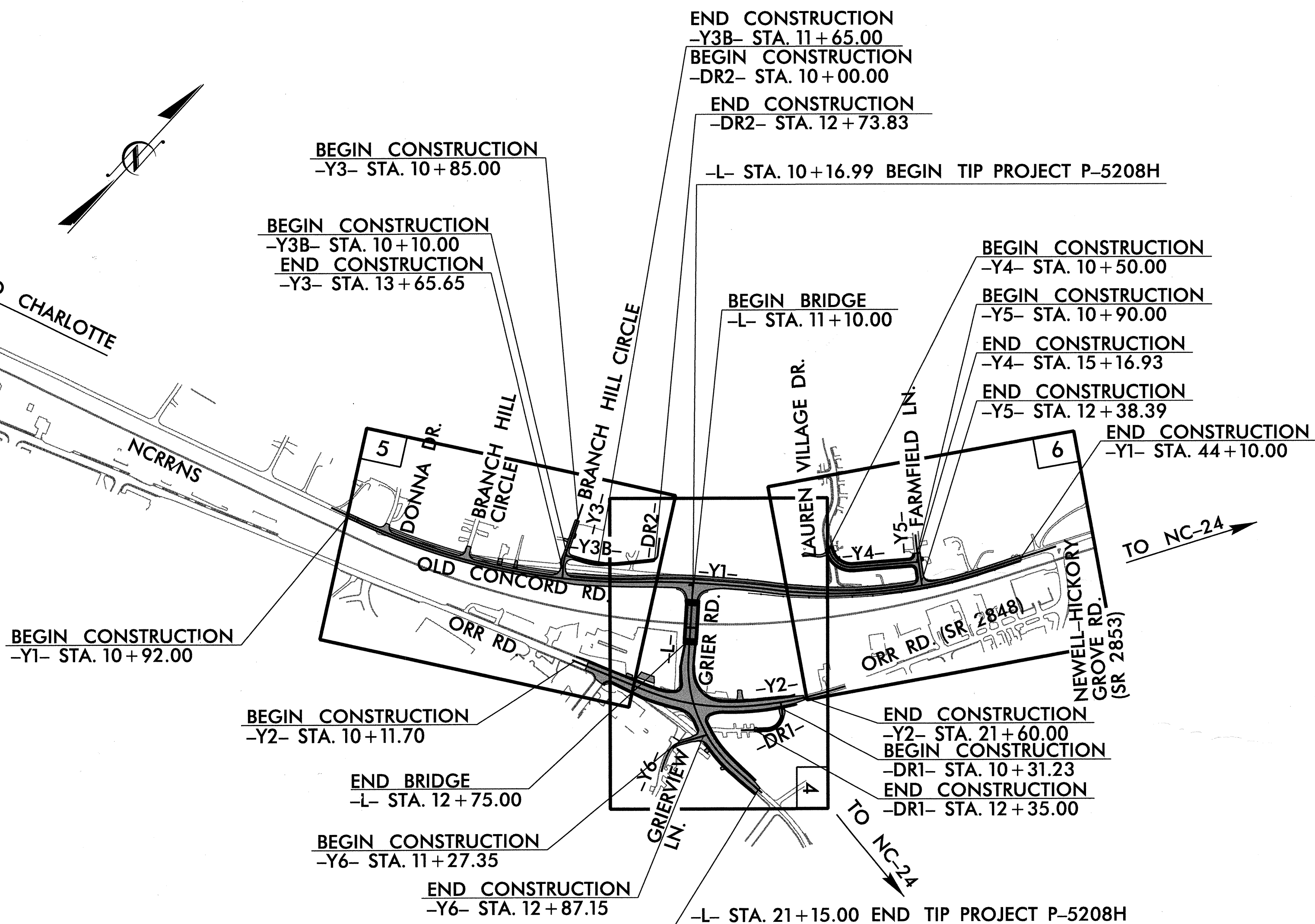


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	P-5208H	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50000.1.STR13T1B		PE, UTIL PE	
50000.1.STR14T3		PE, UTIL PE	
43219.2.STR09P5208		RW	
50000.3.STR08T4F	FRA-FR-HSR-0006-10-01-00	CONST	

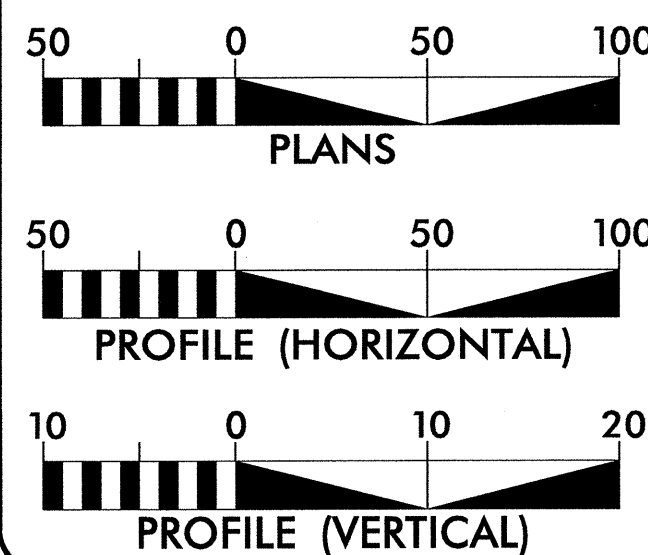
MECKLENBURG COUNTY

LOCATION: CHARLOTTE - GRIER RD. GRADE SEPARATION FROM
OLD CONCORD ROAD TO SOUTH OF ORR ROAD

TYPE OF WORK: GRADING, DRAINAGE, STRUCTURE, WALLS,
PAVING, AND TRACKBED



GRAPHIC SCALES



DESIGN DATA

ADT 2013 = 12,500
ADT 2035 = 26,900
DHV = 10 %
D = 70 %
T = 15 % *
V = 40 MPH
* TTST = 2% DUAL 13%
FUNC CLASS =
URBAN LOCAL
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT P-5208H..... 0.177 mi
LENGTH STRUCTURE TIP PROJECT P-5208H..... 0.031 mi
TOTAL LENGTH TIP PROJECT P-5208H..... 0.208 mi

Prepared in the Office of:
RK&K
RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEMOUNT DRIVE, SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
(919)878-9560 • NC LICENSE NO. F-0112

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JUNE 29, 2012

LETTING DATE:
MAY 21, 2013

J. T. Peacock, Jr., P.E.
PROJECT ENGINEER

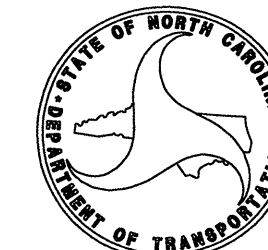
Brandon J. McInnis, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS
ENGINEER

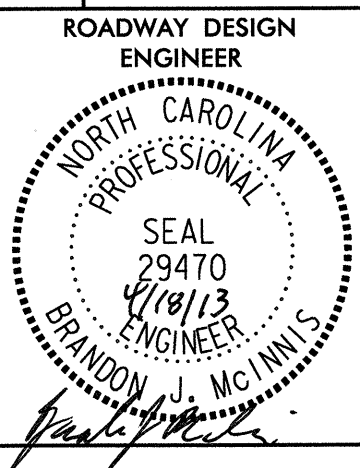
SEAL 27434
ENGINEER
MATTHEW L. COOK
P.E.
SIGNATURE: [Signature]

ROADWAY
DESIGN
ENGINEER

SEAL 29470
ENGINEER
BRANDON J. MCINNIS
P.E.
SIGNATURE: [Signature]



NC DEPARTMENT OF
TRANSPORTATION
RAIL DIVISION
PLANNING AND DEVELOPMENT



EFF. 01-17-2012
REV. 10-30-2012

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:

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C THRU 1-D	SURVEY CONTROL SHEETS
1-E	CENTERLINE COORDINATE LIST
2 THRU 2-D	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-E	DITCH DETAILS
2-F	SHEAR POINT DIAGRAM FOR -YI- AND RAIL CONSTRUCTION
2-G	TEMPORARY CONTAINMENT OF PETROLEUM CONTAMINATED SOIL
2-H	CURB RAMPS - MEDIAN OR TURN LANE ISLANDS
2-I	CURB RAMPS - PARALLEL RAMPS
2-J	REINFORCED CONCRETE ENDWALL FOR 54" & 15" DIAMETER PIPE
2-K	SIDEWALK TRANSITION DETAIL AT BACK OF CURB
3	SUMMARY OF QUANTITIES
3-A	PARCEL INDEX
3-B THRU 3-E	DRAINAGE SUMMARY SHEET
3-F	EARTHWORK SUMMARY SHEET
3-G	GUARDRAIL SUMMARY, BREAKING EXISTING ASPHALT SUMMARY, AND PAVEMENT REMOVAL SUMMARY
3-H	BRIDGE WAITING PERIOD AND SETTLEMENT GAUGES SUMMARY
4 THRU 6	PLAN SHEETS
7 THRU 10	PROFILE SHEETS
TMP-1 THRU TMP-18	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-13	PAVEMENT MARKING PLANS
EC-1 THRU EC-26	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-7	SIGNING PLANS
UC-1 THRU UC-10	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-5	UTILITIES BY OTHER PLANS
RR-1 THRU RR-10	RAILROAD PLAN/PROFILE SHEETS (SHEET RR-3 OMITTED)
RR-11 THRU RR-17	RAILROAD PROFILE SHEETS
X-1 THRU X-79	CROSS SECTIONS
S-1 THRU S-36	STRUCTURE PLANS
W-1 THRU W-5	RETAINING WALLS

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superlevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
422.10	Reinforced Bridge Approach Fills
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	
610.01	Guide for Paving Shoulders Under Bridges - Method I
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
815.02	Subsurface Drain
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.11	Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.21	Reinforced Concrete Endwall - for Single 54" Pipe 90 Skew
838.45	Notes for Reinforced Concrete Endwall - Std. Dwg 838.21 thru 838.40
838.51	Reinforced Brick Endwall - for Single 54" Pipe 90 Skew
838.75	Notes for Reinforced Brick Endwall - Std. Dwg 838.51 thru 838.70
838.80	Precast Endwalls - 12" thru 72" Pipe 90 Skew
840.01	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
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.45	Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
848.05	Curb Ramp - Proposed Curb & Gutter
852.01	Concrete Islands
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
866.01	Chain Link Fence - 4', 5' and 6' High Fence
866.02	Woven Wire Fence - with Wood Post
866.03	Woven Wire Fence - with Steel Post
866.05	Glare Screen - Chain Link Fabric/Guardrail Mounted
875.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

GENERAL NOTES: 2012 SPECIFICATIONS EFFECTIVE: 01-17-2012
REVISED: 07-30-2012

GRADE LINE:
GRADING AND SURFACING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED 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 III.

SUPERELEVATION:
ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 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. 848.02 USING 3' RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

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

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

END BENTS:
THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE
AT&T (Legacy), Level 3, Time Warner Cable (TWC), Piedmont Natural Gas (PNG),
Water-Charlotte-Mecklenburg Utilities (CMU), Sewer-Charlotte-Mecklenburg Utilities (CMU)

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.
UTILITIES BY OTHERS PLANS INCLUDED IN THE PROJECT.

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 CURB RAMPS ACCORDANCE WITH STD 848.05 and/or 848.06.

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8/17/13

04/18/13 14:38:40
P:\Roadway\Proj\p5208h_rdy_psh01a.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

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

0102DEL_10a6 04/16/11

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-WLB-
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
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	□ ↑
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	----- FLOW
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ NS 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	○ RW
Proposed Right of Way Line with Iron Pin and Cap Marker	○ RW
Proposed Right of Way Line with Concrete or Granite Marker	○ RW
Existing Control of Access	○ CA
Proposed Control of Access	○ CA
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	⊗

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	○ S
Storm Sewer	----- S

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	○ P
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	○ T
Telephone Booth	□ T
Telephone Pedestal	□ T
Telephone Cell Tower	⌵
U/G Telephone Cable Hand Hole	○ T
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	○ W
Water Meter	○
Water Valve	⊗
Water Hydrant	○ W
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
TV Tower	⊗
U/G TV Cable Hand Hole	○ TV
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	○ SS
Sanitary Sewer Cleanout	○ SS
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	□ TS
Utility Unknown U/G Line	----- ?UTL
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	□ UST
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⌵
U/G Test Hole (S.U.E.*)	○
Abandoned According to Utility Records	⊗
End of Information	⊗

AATUR
E.O.I.

SURVEY CONTROL SHEET

-Final-

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "P3414-15" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 572927.0137(ft) EASTING: 1490817.4654(ft) ELEVATION: 700.64(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998439800 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "P3414-15" TO -L- STATION 10+00.49 IS S 36°13'28.1" W 19488.936' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

BM110	ELEVATION + 776.25	BM112	ELEVATION + 770.54
N 557185	E 1479279	N 554327	E 1471529
Y1 STATION 27+77.2 RIGHT		MIG STATION 10874.44	
RR-SPIKE SET IN POWER POLE 12' SOUTH OF EOP OF OLD CONCORD RD. POLE IS ACROSS RD FROM BRANCH HILL FARMS 7217 OLD CONCORD RD		S 73°10'16.8" W DIST 1698.31	
		*S REBAR SET IN TOP OF BANK 85' NORTH OF TRACKS. POINT IS 200' WEST OF STEIN FABRIC CO. 300' EAST OF STORAGE BUILDING	
BM111	ELEVATION + 768.10	BM113	ELEVATION + 804.33
N 555581	E 1476544	N 556424	E 1480324
MIG STATION 10839.79 253 LEFT		L STATION 21+37	
RR-SPIKE SET BETWEEN EOP & C&G SOUTHSIDE OF ORR RD. DIRECTLY UNDER A HIGH TENSION POWERLINE		S 20°50'9.70" E DIST 274.14	
		CHEISED SQUARE ON TOP BACK OF CURB	

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	12+94.78	-105.00	557041.6031	1479566.7277
L	12+98.54	70.00	556929.0008	1479432.7133
L	13+67.38	70.00	556875.3588	1479475.8530
L	14+50.00	70.00	556807.8746	1479537.5786
L	14+60.00	-85.00	556913.5603	1479651.3846
L	17+60.00	-55.00	556756.3330	1479867.0895
L	17+86.32	55.00	556643.3171	1479863.2078
L	19+59.24	55.00	556621.6824	1480048.9470
L	19+59.24	-55.00	556731.6664	1480047.0709
L	20+90.00	-55.00	556733.8967	1480177.8166
L	20+95.00	-30.47	556709.4555	1480183.2342
L	21+15.00	55.00	556624.3390	1480204.6890
L	21+15.00	29.54	556649.7917	1480204.2549

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	13+11.37	-55.00	556448.3654	1478039.5992
Y1	14+00.00	-70.00	556492.6049	1478115.7500
Y1	16+25.00	-65.00	556575.1466	1478319.6168
Y1	16+63.54	-81.16	556606.0884	1478346.4085
Y1	26+35.00	-97.00	557165.7720	1479105.4991
Y1	27+10.00	-160.00	557264.7778	1479122.3248
Y1	28+59.96	-160.00	557364.9339	1479244.4444
Y1	30+04.63	-160.00	557453.8511	1479358.5615
Y1	32+00.00	-200.00	557606.5886	1479500.0816

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y2	11+87.26	65.00	556537.5308	1479319.6555
Y2	12+20.00	50.00	556562.0213	1479345.2911
Y2	14+10.73	60.00	556619.8552	1479529.5397
Y2	14+60.00	-46.94	556737.6377	1479533.1558
Y2	17+55.00	-48.03	556888.0003	1479771.0420
Y2	17+70.00	40.00	556830.3519	1479839.2239
Y2	18+75.31	40.00	556905.1511	1479918.6464
Y2	21+60.00	40.00	557129.3410	1480103.5712
Y2	21+60.00	29.89	557135.1491	1480095.2953

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y3	12+25.00	-31.36	556936.9564	1478795.5607

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y3B	10+55.00	-20.00	556929.6089	1478795.8607

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y4	10+50.00	24.77	557747.9034	1479659.9769
Y4	10+53.97	35.68	557736.1398	1479657.4791
Y4	10+58.46	-25.00	557783.3635	1479695.8524
Y4	10+90.43	51.05	557700.1074	1479696.1159
Y4	12+12.69	-25.00	557796.1231	1479804.7583
Y4	14+65.00	-25.00	557980.1955	1479977.3209
Y4	15+01.08	-43.10	558018.8928	1479988.7926

PERMANENT EASEMENT MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	18+65.00	-55.00	556736.4415	1479961.0173
L	18+65.00	-70.00	556751.3190	1479962.9308
L	18+90.00	-70.00	556748.8992	1479985.1055
L	18+90.00	-55.00	556733.9592	1479983.7654

PERMANENT EASEMENT MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	11+40.00	-31.40	556373.8625	1477885.8445
Y1	11+40.00	-40.00	556382.0994	1477883.3566
Y1	12+50.27	-45.00	556419.4252	1477986.0037

PERMANENT EASEMENT MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y2	10+15.00	-29.78	556567.6946	1479125.3675
Y2	10+15.00	-45.00	556581.9955	1479120.1637
Y2	12+60.00	-45.00	556665.7725	1479350.3949
Y2	14+70.23	-65.00	556758.1033	1479534.4445
Y2	17+64.83	55.00	556815.4340	1479844.8400
Y2	18+00.00	55.00	556898.2152	1479932.7894
Y2	20+10.00	65.00	556991.6349	1480029.6987
Y2	20+10.00	40.00	557007.6234	1480010.4798
Y2	20+10.00	75.00	556985.2395	1480037.3863
Y2	20+30.00	65.00	557007.6282	1480042.8566
Y2	20+30.00	75.00	557001.3172	1480050.6136
Y2	20+80.00	90.00	557032.9905	1480094.7960
Y2	21+15.00	-30.03	557133.6561	1480200.3800
Y2	21+35.00	-60.00	557167.0889	1480007.6921
Y2	21+60.00	-45.00	557178.1692	1480033.9953
Y2	21+60.00	-30.11	557169.6173	1480046.1815

PERMANENT EASEMENT MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y3	12+30.00	28.57	556908.5275	1478714.5697
Y3	12+93.61	45.00	556838.8826	1478730.5204

PERMANENT EASEMENT MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
DR2	10+70.00	-10.00	557017.8194	1478946.6150
DR2	12+60.00	-10.00	557157.6393	1479074.1276

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
DR2	10+05.00	-15.00	556980.4089	1478895.0804
DR2	10+05.00	-0.65	556968.9652	1478903.7310
DR2	11+05.00	8.62	557029.8248	1478984.3458

BL POINT DESC. NORTH EAST ELEVATION MIG STATION OFFSET

P341419	P3414-19	564767.3493	1484098.3476	746.59	10717-13.55	49.32 RT
BL90	BL-90	564198.5802	1483766.2571	741.15	10723-75.15	62.40 RT
BL91	BL-91	563445.5634	1483372.1772	748.22	10732-24.31	26.95 RT
BL92	BL-92	562620.0636	1482894.8638	753.85	10741-77.87	27.32 RT
BL93	BL-93	561795.8522	1482419.4826	756.94	10751-29.35	26.66 RT
BL94	BL-94	560920.1481	1481915.4659	759.54	10761-39.74	25.03 RT
BL95	BL-95	560098.3441	1481438.8177	766.49	10770-89.77	26.67 RT
BL96	BL-96	559309.7252	1481042.7146	773.31	10779-70.77	24.83 LT
BL97	BL-97	557685.4301	1480064.9284	783.82	10798-63.10	37.60 LT
BL98	BL-98	557032.8087	1479445.3543	788.25	10807-55.47	49.39 LT
BL99	BL-99	556545.0187	1478706.5784	785.81	10816-32.96	41.52 LT
BL100	BL-100	556319.0049	1478016.8249	777.22	10823-55.18	23.72 RT
BL101	BL-101	556018.9122	1477029.2367	770.42	10833-88.10	25.85 RT
BL102	BL-102	555719.7865	1476042.9376	764.94	10844-18.76	25.29 RT
BL103	BL-103	555472.3296	1475402.9360	762.10	10851-03.01	26.14 LT
BL104	BL-104	555314.4321	1474690.0481	762.20	10858-31.07	29.27 RT
P341423	P3414-23	555114.4441	1474002.6373	764.75	10865-46.86	38.06 RT
BL105	BL-105	554820.7271	1473262.7232	767.44	10873-40.19	29.28 LT
BL106	BL-106	554627.5193	1472388.2306	768.59	OUTSIDE PROJECT LIMITS	
BL107	BL-107	554283.8404	1471731.9959	759.22	OUTSIDE PROJECT LIMITS	
BL108	BL-108	553839.6463	1470869.6242	758.23	OUTSIDE PROJECT LIMITS	
BL109	BL-109	553076.4911	1470089.7245	761.21	OUTSIDE PROJECT LIMITS	
BL110	BL-110	552594.0702	1469525.6179	769.64	OUTSIDE PROJECT LIMITS	
P341425	P3414-25	552140.0827	1468608.2140	793.74	OUTSIDE PROJECT LIMITS	

BYS3-1 POINT DESC. NORTH EAST ELEVATION Y1 STATION OFFSET

E97	BL-97	557685.4301	1480064.9284	783.82	36+87.79	113.32 RT
BL126	BY-126	557729.8564	1479873.3360	775.53	35+87.58	55.20 LT
BL127	BY-127	557540.7255	1479676.9626	760.05	33+09.20	42.08 LT
BL128	BY-128	556996.0513	1479037.7898	786.07	24+70.61	18.16 LT
BL129	BY-129	556875.7968	1478794.7907	782.59	22+01.77	78.03 LT

BYS3-2 POINT DESC. NORTH EAST ELEVATION Y4 STATION OFFSET

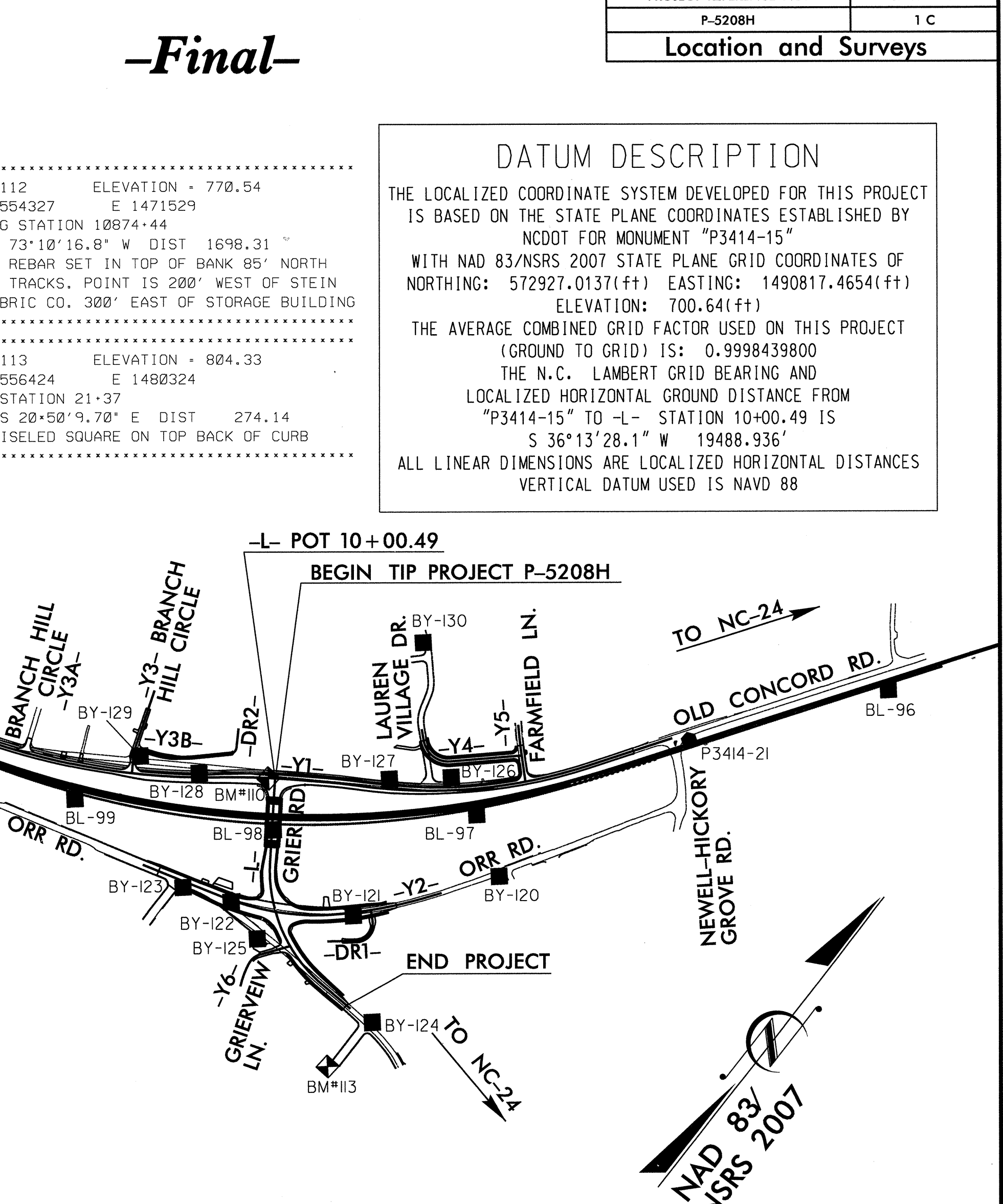
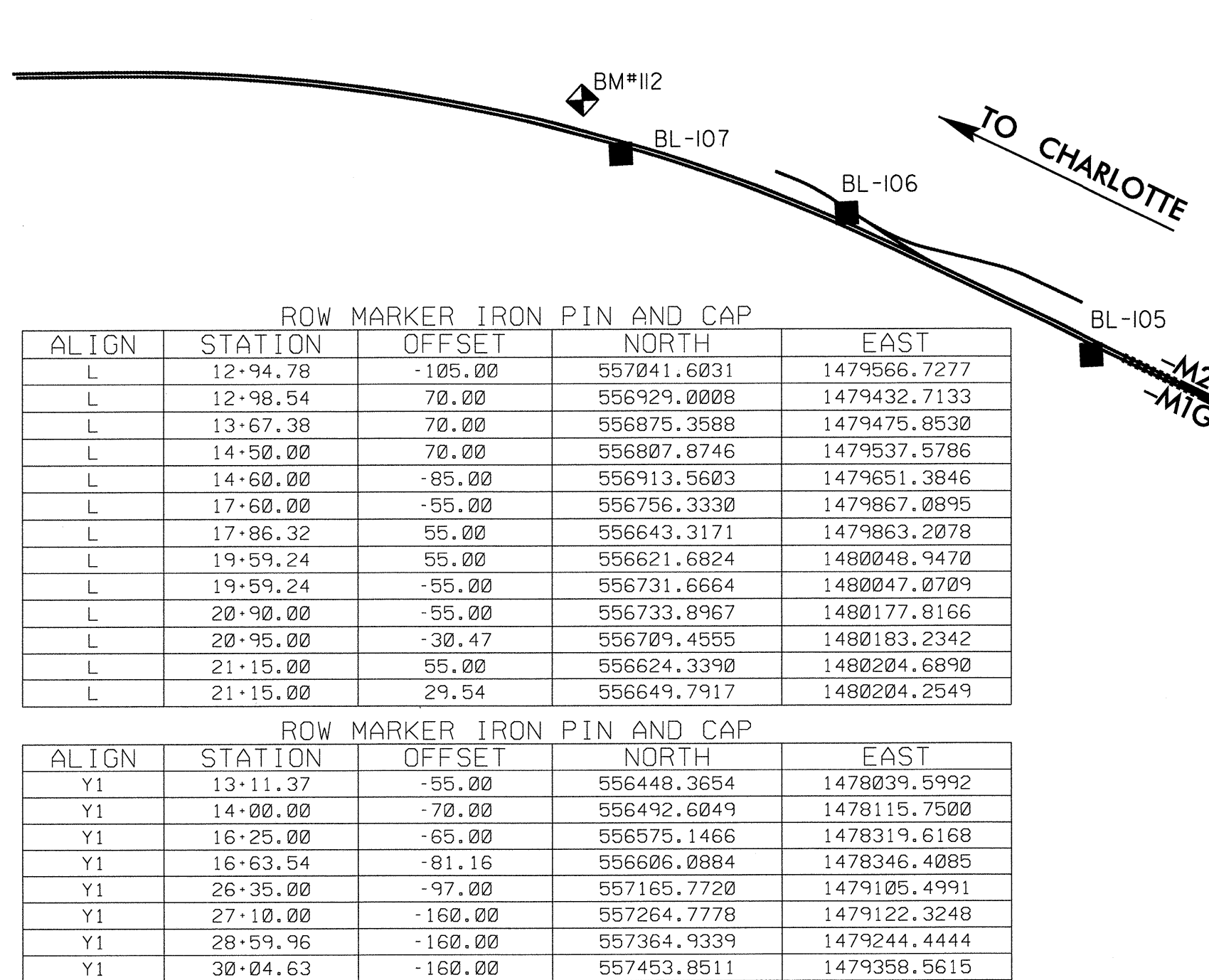
E126	BY-126	557729.8564	1479873.3360	775.53	12+11.81	70.36 RT
BL130	BY-130	558084.9560	1479383.7016	742.98	OUTSIDE PROJECT LIMITS	

BYS3-4 POINT DESC. NORTH EAST ELEVATION Y2 STATION OFFSET

EE97	BL-97	557685.4301	1480064.9284	783.82	OUTSIDE PROJECT LIMITS	
BL120	BY-120	557553.4894	1480319.0898	789.85	OUTSIDE PROJECT LIMITS	
BL121	BY-121	556992.7141	1479958.8560	794.36	19+65.77	10.39 RT
BL122	BY-122	556673.1069	1479520.8921	800.99	14+22.43	7.41 RT
BL123	BY-123	556578.6938	1479320.2977	797.50	12+01.94	26.54 RT

BYS3-5 POINT DESC. NORTH EAST ELEVATION L STATION OFFSET

BL124	BY-124	556700.7825	1480337.3918	800.01	OUTSIDE PROJECT LIMITS	
BL125	BY-125	556632.6338	1479714.0219	808.82	16+65.06	115.39 RT
E122	BY-122	556673.1069	1479520.8921	800.99	15+13.68	182.66 RT



NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT: [HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/](https://connect.ncdot.gov/resources/location/) THE FILES TO BE FOUND ARE AS FOLLOWS:
P5208H_LS_CONTROL.TXT
P5208H_LS_LOCAL.TXT
- SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM, UTILIZING THE NCGS RTN SYSTEM (VRS).
MONUMENTS USED OR SET FOR PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT:
● INDICATES GEODETIC CONTROL MONUMENTS FOR HORIZONTAL CONTROL
■ INDICATES BASELINE MONUMENTS FOR HORIZONTAL PROJECT CONTROL
✳ INDICATES BENCHMARKS FOR VERTICAL CONTROL
⊙ INDICATES NGS GEODETIC MONUMENTS USED FOR HORIZONTAL CONTROL
⊕ INDICATES USGS BENCHMARKS

NOTE: DRAWING NOT TO SCALE

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4/25/13

4/17/2013
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SURVEY CONTROL SHEET

Design Alignments

-Final-

M1G

TYPE	STATION	NORTH	EAST
POT	10512+34.70	573354.3592	1499865.8361
POT	10514+34.70	573333.8091	1499666.8947
TS	10523+99.22	573234.7043	1498707.4782
SC	10527+71.22	573200.5559	1498337.0670
CS	10534+28.17	573192.9112	1497680.5294
SC	10534+90.17	573196.1257	1497618.6131
CS	10543+91.63	573308.4389	1496724.8640
ST	10547+32.63	573379.6491	1496391.3925
TS	10554+11.58	573527.1372	1495728.6654
SC	10559+07.58	573624.3643	1495242.3829
CS	10571+44.40	573614.7038	1494010.9611
ST	10576+40.40	573509.8588	1493526.2639
TS	10609+00.17	572751.8932	1490355.8369
SC	10613+03.17	572653.2998	1489965.1093
CS	10620+84.83	572389.2160	1489230.1280
ST	10624+87.83	572216.5854	1488866.0025
TS	10633+52.59	571836.3887	1488089.3031
SC	10638+48.59	571608.7732	1487648.7182
CS	10662+78.54	569832.4842	1486050.8189
ST	10667+74.54	569370.3549	1485870.9293
TS	10708+65.47	565526.8519	1484469.7915
SC	10712+37.47	565178.7907	1484338.5512
CS	10718+47.67	564626.1172	1484080.5765
ST	10722+19.67	564301.9922	1483989.0564
TS	10790+39.51	558396.7248	1480486.6005
SC	10794+42.51	558050.9961	1480279.6006
CS	10822+75.36	556322.5403	1478099.8337
ST	10826+78.36	556199.7854	1477716.0258
POT	10831+03.16	556076.7191	1477309.4499
POT	10831+94.16	556050.3556	1477222.3524
POT	10841+47.88	555774.0550	1476309.5347
POT	10842+38.88	555747.6915	1476222.4373
POT	10860+30.64	555228.6025	1474507.5161
POT	10865+86.37	555066.5184	1473975.9469
POT	10872+44.31	554876.4554	1473346.0563
POT	10874+44.31	554818.6803	1473154.5829

M2G

TYPE	STATION	NORTH	EAST
POT	10512+34.71	573368.9716	1499864.3181
POT	10514+34.71	573348.4215	1499665.3767
TS	10523+95.01	573249.7508	1498710.1632
SC	10527+67.01	573215.6024	1498339.7519
CS	10533+81.53	573206.1395	1497725.5925
SC	10534+43.53	573208.8879	1497663.6537
CS	10543+94.76	573323.8405	1496720.2163
ST	10547+35.76	573395.0506	1496386.7448
TS	10554+10.19	573541.5593	1495728.4192
SC	10559+06.19	573638.7864	1495242.1367
CS	10571+43.01	573629.1259	1494010.7149
ST	10576+39.01	573524.2809	1493526.0177
TS	10609+12.22	572763.1908	1490342.5217
SC	10613+15.22	572664.5212	1489951.8142
CS	10620+78.66	572406.5911	1489233.9593
ST	10624+81.66	572234.0320	1488869.8008
TS	10633+64.19	571846.0242	1488077.1441
SC	10638+60.19	571618.4086	1487636.5593
CS	10662+90.13	569842.1197	1486038.6600
ST	10667+86.13	569379.9903	1485858.7703
TS	10708+82.40	565531.4724	1484455.8044
SC	10712+54.40	565183.4112	1484324.5641
CS	10718+64.61	564630.7377	1484066.5894
ST	10722+36.61	564306.6127	1483884.0693
TS	10790+48.37	558408.3417	1480476.6552
SC	10794+51.37	558062.6131	1480269.6553
CS	10822+84.22	556334.1572	1478089.8884
ST	10826+87.22	556211.4024	1477706.0805
POT	10835+32.72	555966.4538	1476896.8408
POT	10836+23.72	555940.0903	1476809.7434
POT	10837+23.72	555911.1195	1476714.0319
POT	10838+14.72	555884.7560	1476626.9344
POT	10860+33.35	555241.9980	1474503.4465
POT	10865+89.07	555079.9168	1473971.8867
POT	10870+39.48	554949.8047	1473540.6804
POT	10872+47.00	554889.2798	1473342.1837
POT	10874+47.00	554830.9480	1473150.8792

L

TYPE	STATION	NORTH	EAST
POT	10+00.49	557205.1356	1479300.4698
PC	13+67.38	556919.2275	1479530.4015
PT	19+59.24	556676.6744	1480048.0089
POT	21+37.34	556679.7121	1480226.0898

Y1

TYPE	STATION	NORTH	EAST
POT	10+00.00	556303.3284	1477760.9020
PC	11+70.20	556352.5413	1477923.8369
PT	25+67.96	557048.3363	1479121.5429
PC	25+67.96	557048.3363	1479121.5429
PT	28+59.96	557238.7231	1479342.7848
PC	30+04.63	557327.6403	1479456.9019
PT	31+82.07	557432.5021	1479600.0182
PC	31+82.07	557432.5021	1479600.0182
PT	42+10.25	558182.3562	1480290.9379
POT	45+89.94	558511.6769	1480479.9321

Y2

TYPE	STATION	NORTH	EAST
POT	10+00.00	556534.5789	1479121.4555
PC	13+75.57	556663.0046	1479474.3877
PCC	18+75.31	556932.9246	1479889.8605
PT	22+96.02	557266.4598	1480144.7603
POT	23+66.99	557327.4164	1480181.1011

Y3

TYPE	STATION	NORTH	EAST
POT	10+00.00	557130.9074	1478649.2757
PC	12+55.86	556896.1724	1478751.0666
PT	13+19.04	556841.9770	1478783.2253
POT	13+76.66	556796.5266	1478818.6391

Y3A

TYPE	STATION	NORTH	EAST
POT	10+00.00	556715.1046	1478331.6812
POT	11+85.34	556547.1961	1478410.1422

Y3B

TYPE	STATION	NORTH	EAST
POT	10+00.00	556887.8509	1478754.8574
PC	10+88.02	556925.7994	1478834.2774
PT	11+65.00	556965.4461	1478900.1235

Y4

TYPE	STATION	NORTH	EAST
POT	10+00.00	557798.1570	1479635.7292
PC	10+50.00	557767.4483	1479675.1877
PT	12+12.69	557779.0249	1479822.9970
POT	15+28.96	558009.7586	1480039.3034

Y5

TYPE	STATION	NORTH	EAST
PC	10+00.00	558098.2679	1479938.2902
PT	11+26.14	558014.9592	1480032.9810
POT	12+49.39	557936.6638	1480128.1662

Y6

TYPE	STATION	NORTH	EAST
PC	10+00.00	556428.7266	1479799.4425
PCC	11+10.56	556531.1871	1479758.9702
PT	11+69.84	556588.1347	1479768.5347
POT	13+09.37	556706.2332	1479842.8355

Y7

TYPE	STATION	NORTH	EAST
POT	10+00.00	554565.6402	1473888.0686
PC	10+25.00	554583.2076	1473905.8558
PT	12+63.30	554710.1177	1474105.4237
POT	15+36.21	554804.6332	1474361.4435

DR2

TYPE	STATION	NORTH	EAST
PC	10+00.00	556965.4461	1478900.1235
PT	11+10.52	557039.7363	1478981.7025
PC	12+60.90	557151.6264	1479082.1682
PT	13+01.80	557189.3838	1479084.0576
POT	13+85.00	557256.5329	1479034.9279

Y8

TYPE	STATION	NORTH	EAST
POT	10+00.00	554715.1746	1474119.1217
PC	10+76.83	554787.2526	1474092.5125
PT	11+12.87	554819.7495	1474077.0435
PC	12+74.84	554959.1357	1473994.5537
PT	16+85.80	555303.9963	1473771.2325
POT	17+11.81	555325.2403	1473756.2274

Y9

TYPE	STATION	NORTH	EAST
POT	10+00.00	558474.8689	1480547.5913
PC	10+43.32	558448.8612	1480582.2308
PCC	11+31.43	558390.7585	1480648.3564
PT	11+95.82	558334.5942	1480677.9941
POT	12+30.27	558300.8118	1480684.7758

SR1

TYPE	STATION	NORTH	EAST
POT	10+00.00	556614.5295	1478378.6784
PC	12+02.03	556701.6908	1478560.9360
PT	12+76.80	556743.4819	1478622.5998
PC	15+86.26	556953.3261	1478850.0498
PT	18+35.74	557127.3811	1479028.7338
PC	20+53.75	557283.6796	1479180.7177
PT	25+64.35	557600.3264	1479579.4932
POT	29+25.17	557786.7086	1479888.4544

SR2

TYPE	STATION	NORTH	EAST
POT	0+00.00	556834.6514	1478789.2562
EOB	1+39.75	556922.6366	1478897.8286
EOA	11+39.75	556922.6366	1478897.8286
PT	12+10.48	556968.7620	1478951.4367
PC	13+13.65	557038.3282	1479027.6272
PT	13+81.46	557085.4397	1479076.3842
PC	14+67.42	557146.8967	1479136.4929
PT	14+99.03	557170.1773	1479157.8657
PC	15+67.40	557221.9788	1479202.4889
PT	15+90.15	557237.3814	1479219.1558
PC	16+24.98	557257.9695	1479247.2585
PT	16+57.62	557286.6346	1479259.1951
EOB	16+64.02	557292.9658	1479258.2423
EOA	0+00.00	557292.9658	1479258.2423

SR3

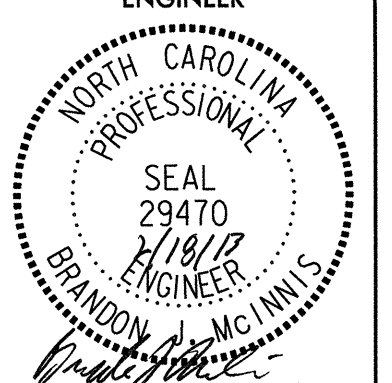

TYPE	STATION	NORTH	EAST
PC	10+00.00	557746.6008	1479720.1614
PRC	11+13.86	557656.0427	1479656.4025
PT	18+35.01	557195.8790	1479104.4062
POT	19+00.00	557147.5194	1479060.9843

DR1

TYPE	STATION	NORTH	EAST
POT	10+00.00	557060.6628	1480002.1257
PC	10+46.06	557031.8994	1480038.0950
PT	11+74.30	556918.8163	1480042.7703
POT	13+00.51	556832.1260	1479951.0435

DATUM DESCRIPTION

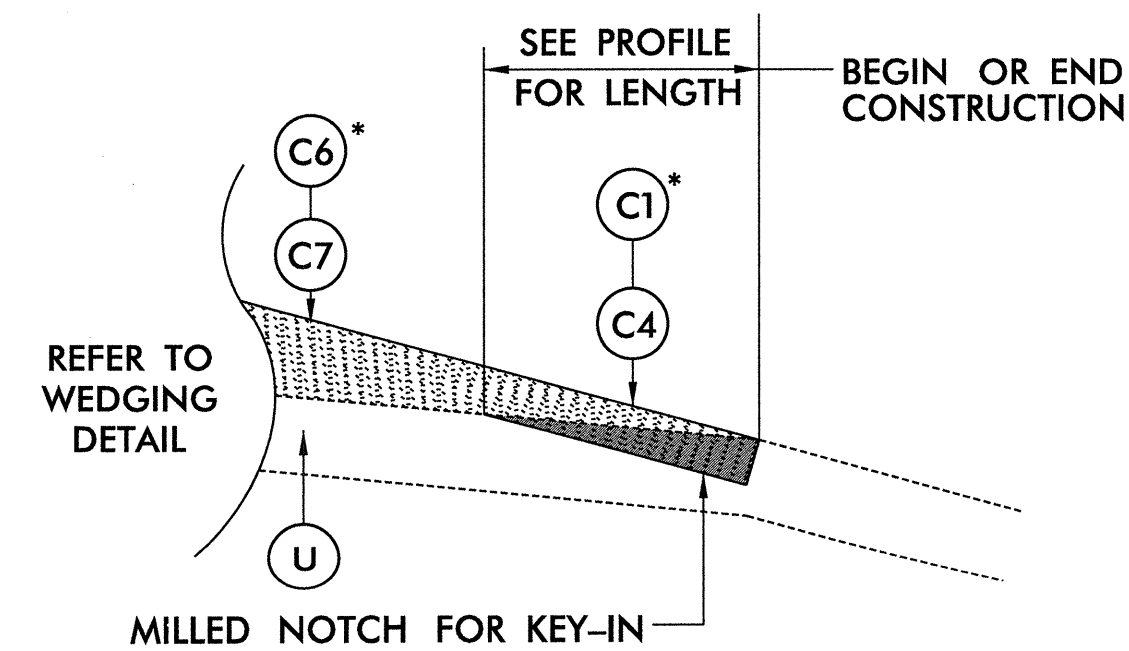
THE LOCALIZED COORDINATE SYSTEM DEVELOPED

PROJECT REFERENCE NO. P-5208H	SHEET NO. 2
ROADWAY DESIGN ENGINEER BRANDON J. MCINNIS	PAVEMENT DESIGN ENGINEER Vladimir M. Kozlov
	

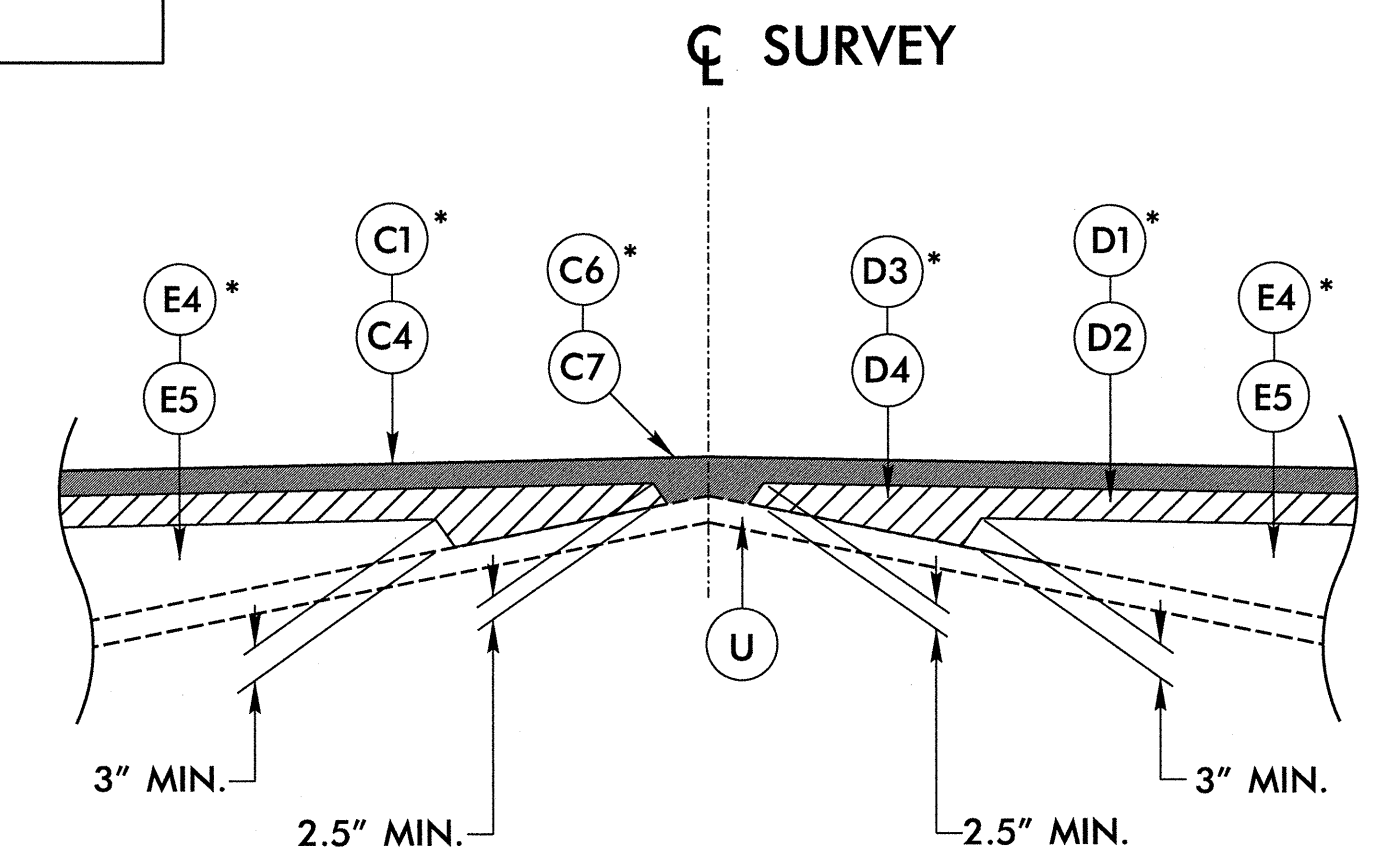
PAVEMENT SCHEDULE
FINAL PAVEMENT DESIGN

A1	6" CONCRETE DRIVEWAY	E4	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 TO EXCEED 5.5" IN DEPTH.
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	E5	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 TO EXCEED 5.5" IN DEPTH.
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.	J	6" AGGREGATE BASE COURSE
C3	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.	P	PRIME COAT AT THE RATE OF 0.35 GAL. PER SQ. YD.
C4	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R1	2'-6" CONCRETE CURB AND GUTTER.
C5	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.	R2	9"x12" CURB
C6	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.	S	4" CONCRETE SIDEWALK.
C7	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.	T	EARTH MATERIAL.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.
D2	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	W	WEDGING
D3	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 TO EXCEED 4" IN DEPTH.		
D4	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 TO EXCEED 4" IN DEPTH.		
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AVERAGE RATE OF 456 LBS. PER SQ. YD.		
E2	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AVERAGE RATE OF 627 LBS. PER SQ. YD.		
E3	PROP. APPROX. 7" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AVERAGE RATE OF 399 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.		

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF CONCRETE ISLANDS, TURN LANES, AND TAPERS.



DETAIL SHOWING GRADE TIE-INS
USE WITH -L-, -Y1-, -Y2-*, -Y3-* AND -Y5-*



DETAIL SHOWING METHOD OF WEDGING
USE WITH -L-, -Y1-, AND -Y2-*

PLANS PREPARED BY :

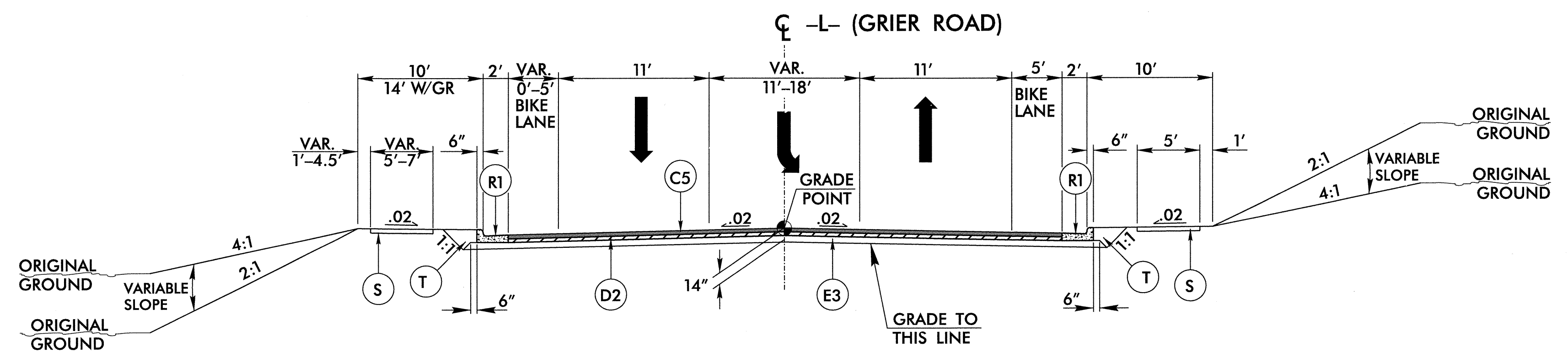


RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

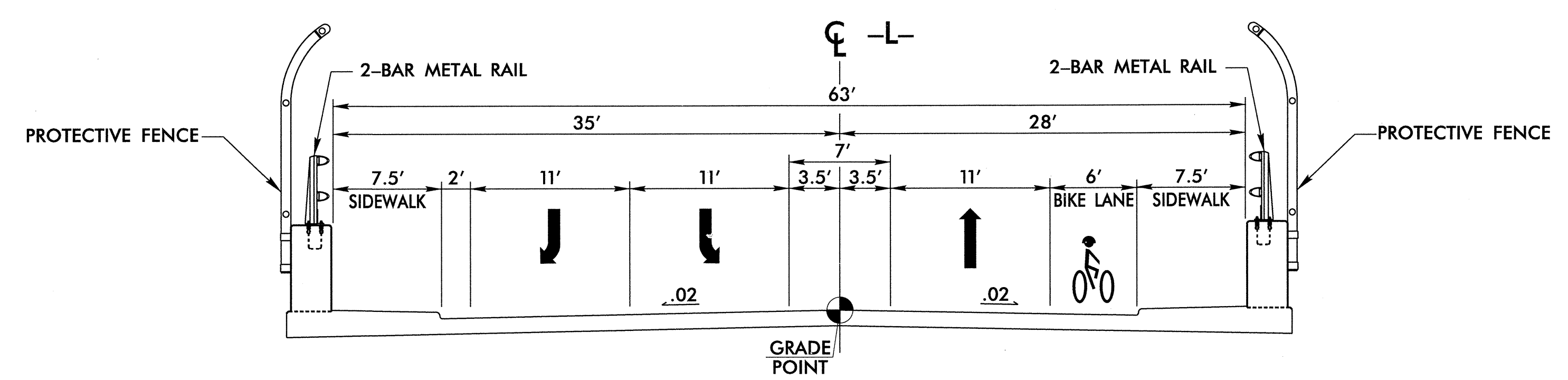
0102DEL_P10a6

PAVEMENT SCHEDULE	
A1	6" CONC. DR.
C1	1.5" S9.5B
C2	2.0" S9.5B
C3	3.0" S9.5B
C4	1.5" S9.5C
C5	3.0" S9.5C
C6	VAR. S9.5B
C7	VAR. S9.5C
D1	4.0" I19.0B
D2	4.0" I19.0C
D3	VAR. I19.0B
D4	VAR. I19.0C
E1	4.0" B25.0B
E2	5.5" B25.0B
E3	7.0" B25.0C
E4	VAR. B25.0B
E5	VAR. B25.0C
J	6" ABC
P	PRIME COAT
R1	2'-6" CONC. C&G
R2	9"x12" CURB
S	CONC. SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

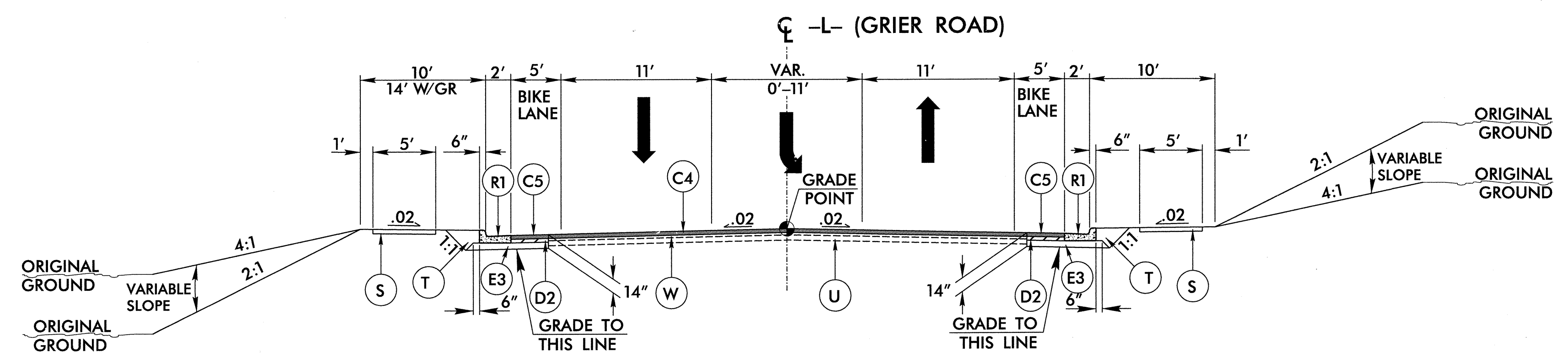
NOTE:
SEE PLANS FOR LOCATION OF CONCRETE ISLANDS, TURN LANES, AND TAPERS.



TYPICAL SECTION NO. 1



TYPICAL SECTION NO. 2



TYPICAL SECTION NO. 3

PROJECT REFERENCE NO. P-5208H	SHEET NO. 2A
ROADWAY DESIGN ENGINEER BRANDON J. MCINNIS	PAVEMENT DESIGN ENGINEER ALEXANDER S. MICHEL

USE TYPICAL SECTION NO. 1
-L- STA. 10+16.99 TO 11+10.00 (BEGIN BRIDGE)
-L- STA. 12+75.00 (END BRIDGE) TO 17+59.19

USE TYPICAL SECTION NO. 2
-L- STA. 11+10.00 TO STA. 12+75.00

USE TYPICAL SECTION NO. 3
-L- STA. 17+59.19 TO 21+15.00

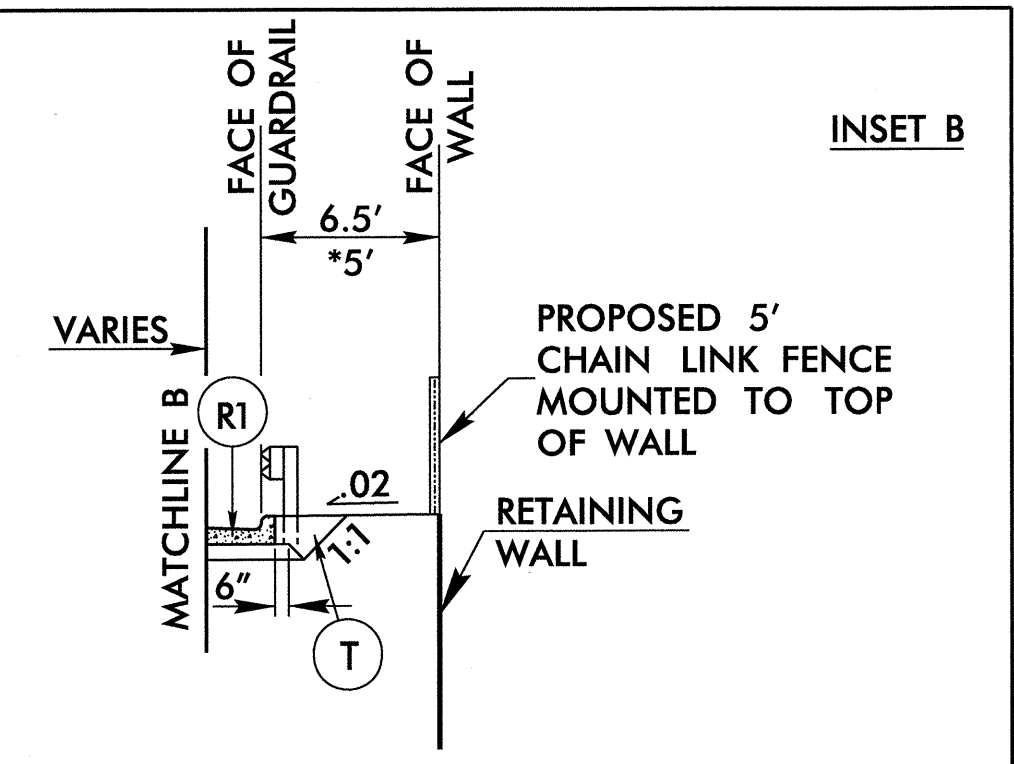
PLANS PREPARED BY :

RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

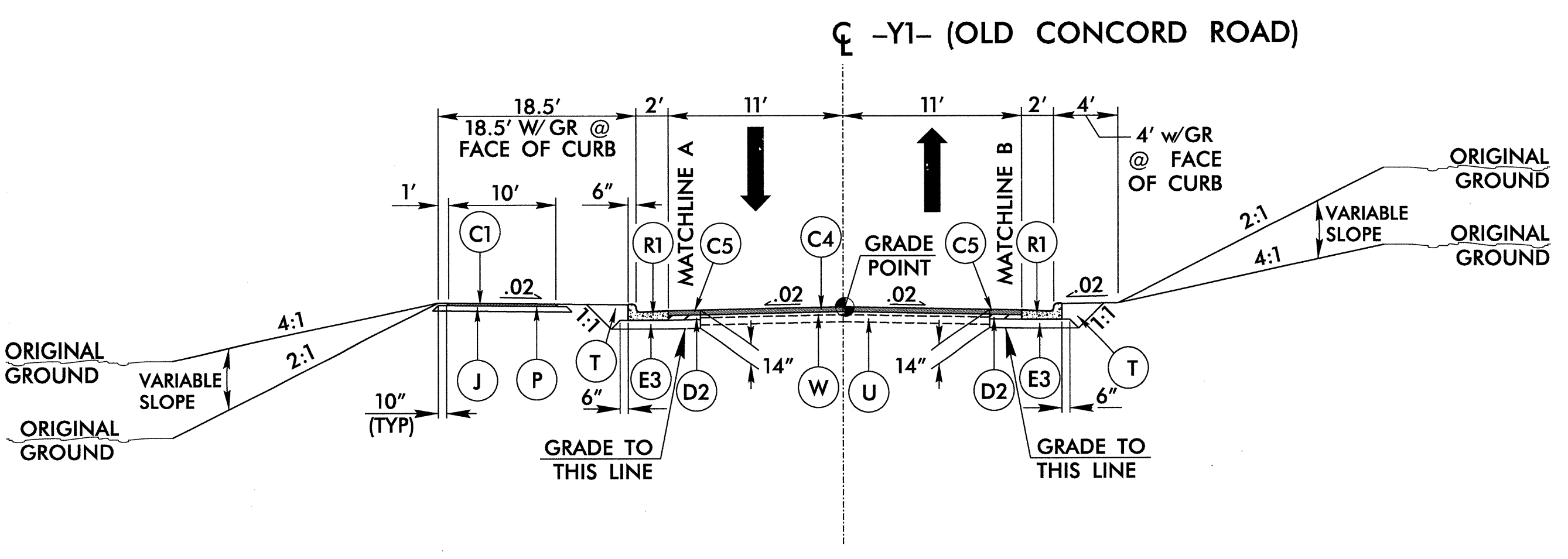
8/2/2013
 P:\Roadway\Projects\5208H_RdJ_tj.p.dgn
 Plot

0102DEL_P10a6

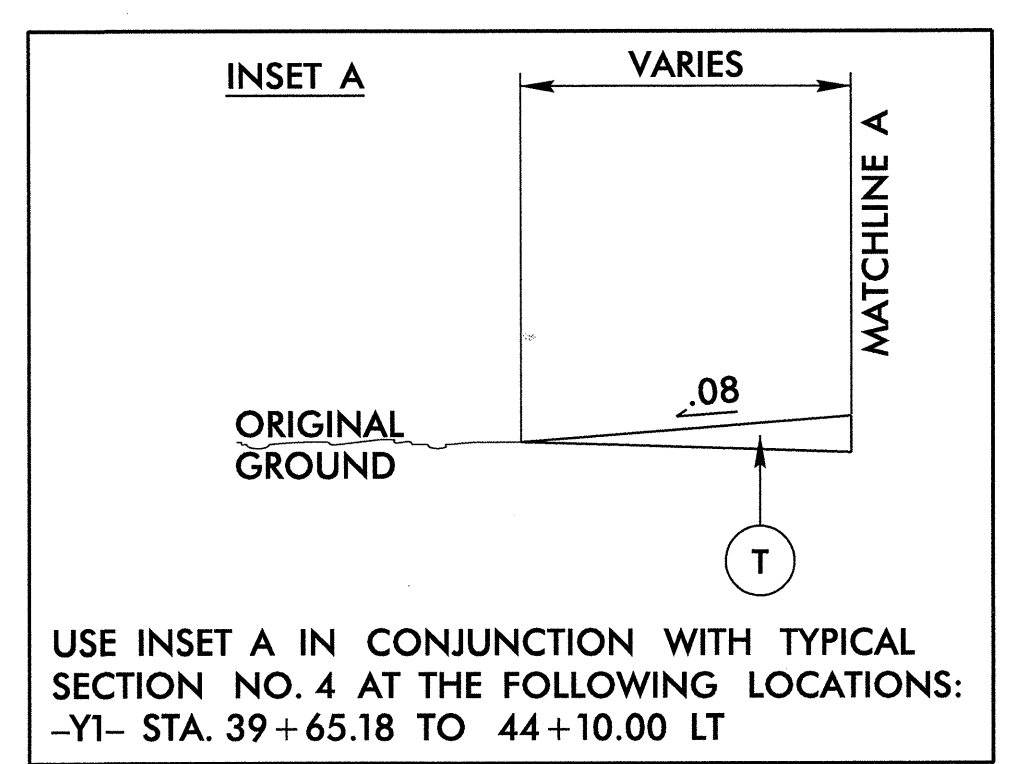
PROJECT REFERENCE NO. P-5208H	SHEET NO. 2B
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER



INSET B
 USE INSET B IN CONJUNCTION WITH TYPICAL SECTION NO. 485 AT THE FOLLOWING LOCATIONS:
 -Y1- STA. 30+75.00 TO 37+00.00 RT
 *Y1- STA. 37+00.00 TO 44+05.00 RT
 (USE 8' GUARDRAIL POSTS FROM 37+00 TO 44+30)



TYPICAL SECTION NO. 4

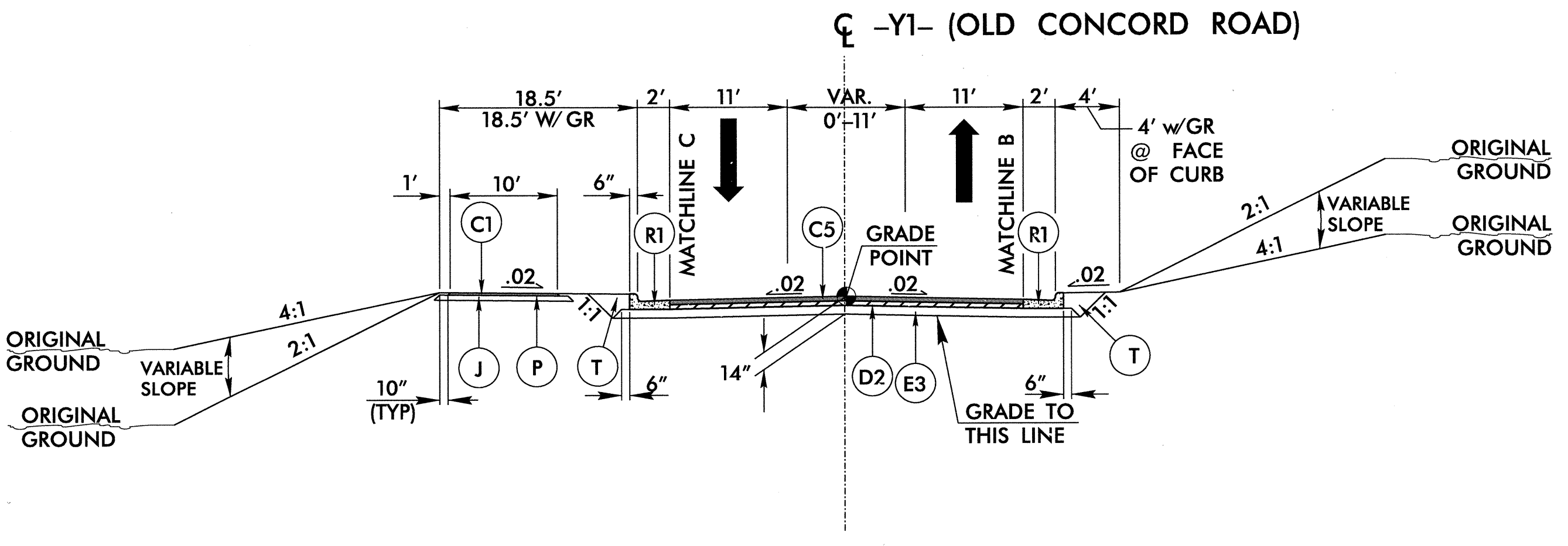


USE INSET A IN CONJUNCTION WITH TYPICAL SECTION NO. 4 AT THE FOLLOWING LOCATIONS:
 -Y1- STA. 39+65.18 TO 44+10.00 LT

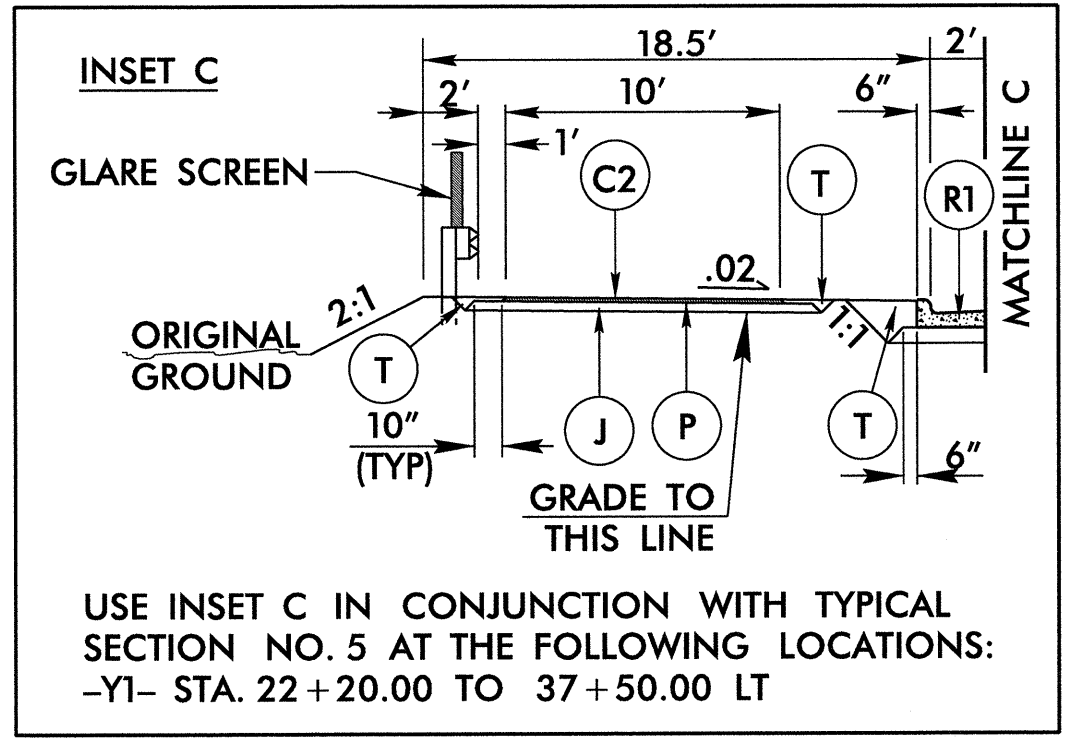
USE TYPICAL SECTION NO. 4
 -Y1- STA. 11+40.00 TO 17+34.07
 -Y1- STA. 39+50.00 TO 44+10.00

NOTE: FROM -Y1- STA. 10+92.00 TO 11+40.00 OVERLAY EXISTING PAVEMENT WITH 1 1/2" S9.5C.

PAVEMENT SCHEDULE	
A1	6" CONC. DR.
C1	1.5" S9.5B
C2	2.0" S9.5B
C3	3.0" S9.5B
C4	1.5" S9.5C
C5	3.0" S9.5C
C6	VAR. S9.5B
C7	VAR. S9.5C
D1	4.0" I19.0B
D2	4.0" I19.0C
D3	VAR. I19.0B
D4	VAR. I19.0C
E1	4.0" B25.0B
E2	5.5" B25.0B
E3	7.0" B25.0C
E4	VAR. B25.0B
E5	VAR. B25.0C
J	6" ABC
P	PRIME COAT
R1	2'-6" CONC. C&G
R2	9"x12" CURB
S	CONC. SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

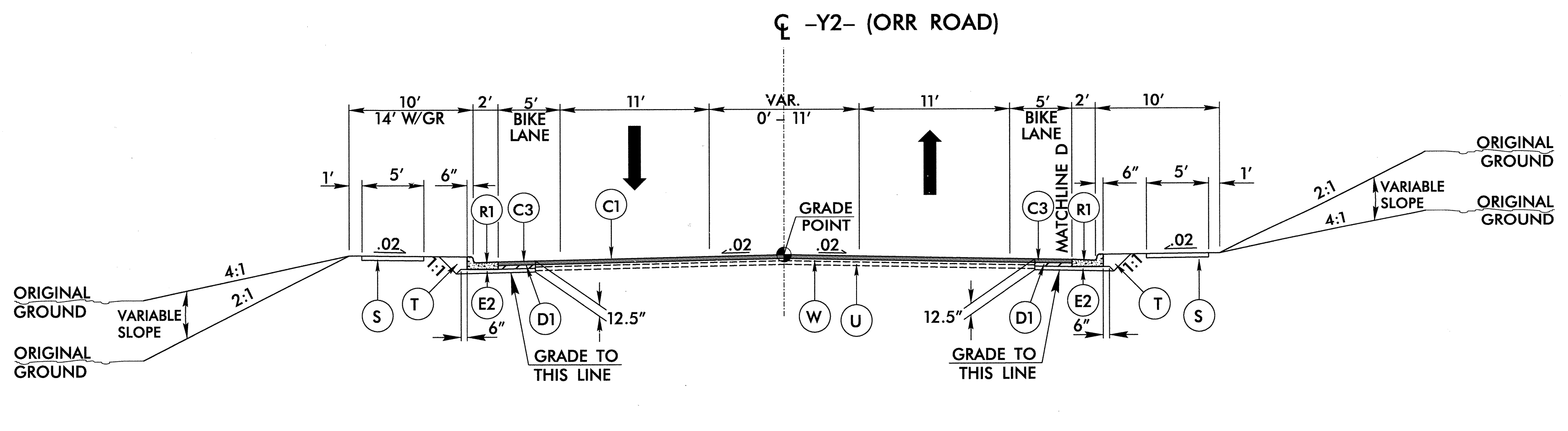


TYPICAL SECTION NO. 5

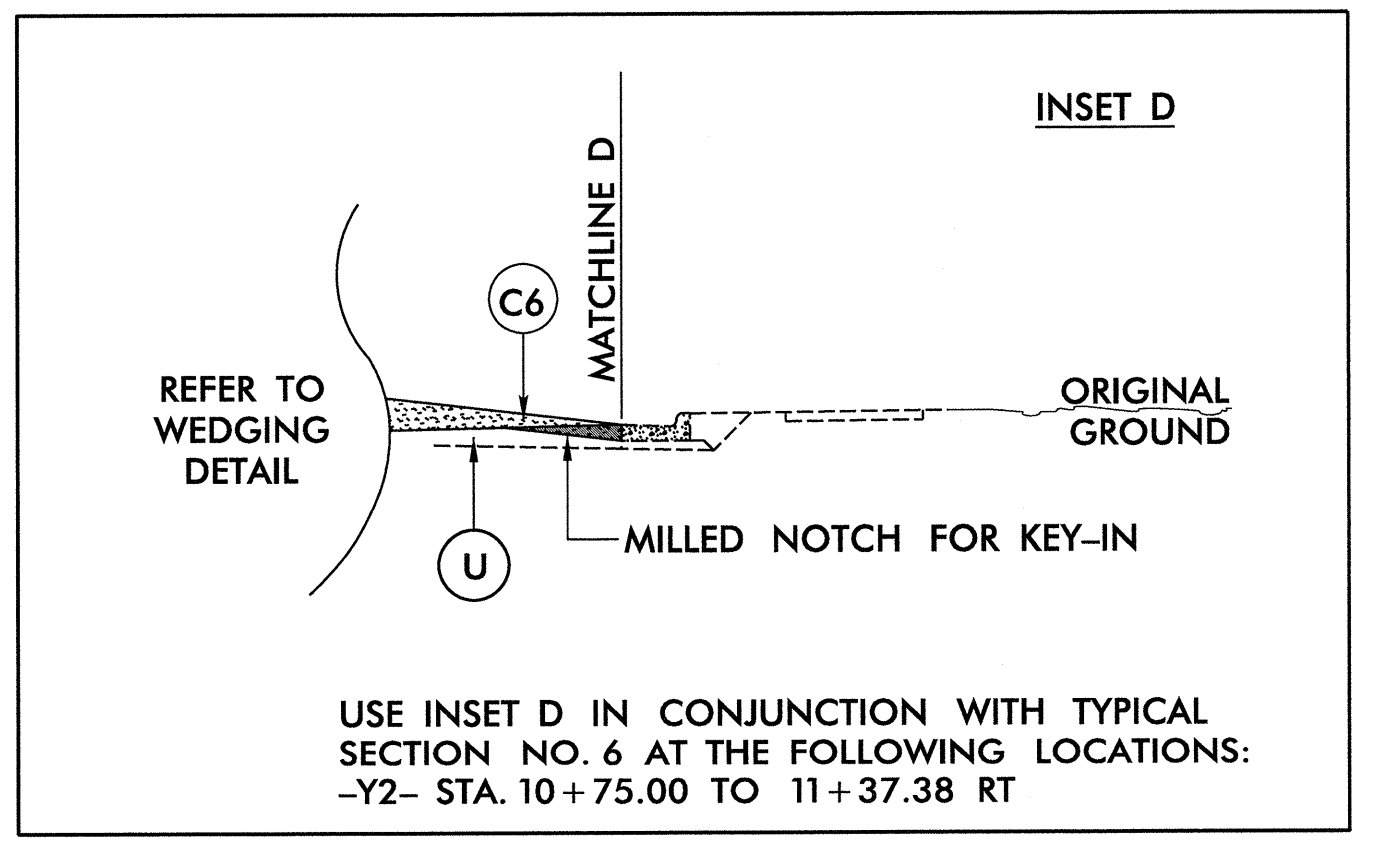


USE INSET C IN CONJUNCTION WITH TYPICAL SECTION NO. 5 AT THE FOLLOWING LOCATIONS:
 -Y1- STA. 22+20.00 TO 37+50.00 LT

USE TYPICAL SECTION NO. 5
 -Y1- STA. 17+34.07 TO 39+50.00



TYPICAL SECTION NO. 6



USE INSET D IN CONJUNCTION WITH TYPICAL SECTION NO. 6 AT THE FOLLOWING LOCATIONS:
 -Y2- STA. 10+75.00 TO 11+37.38 RT

USE TYPICAL SECTION NO. 6
 -Y2- STA. 10+75.00 TO 14+00.00
 -Y2- STA. 18+50.00 TO 21+60.00

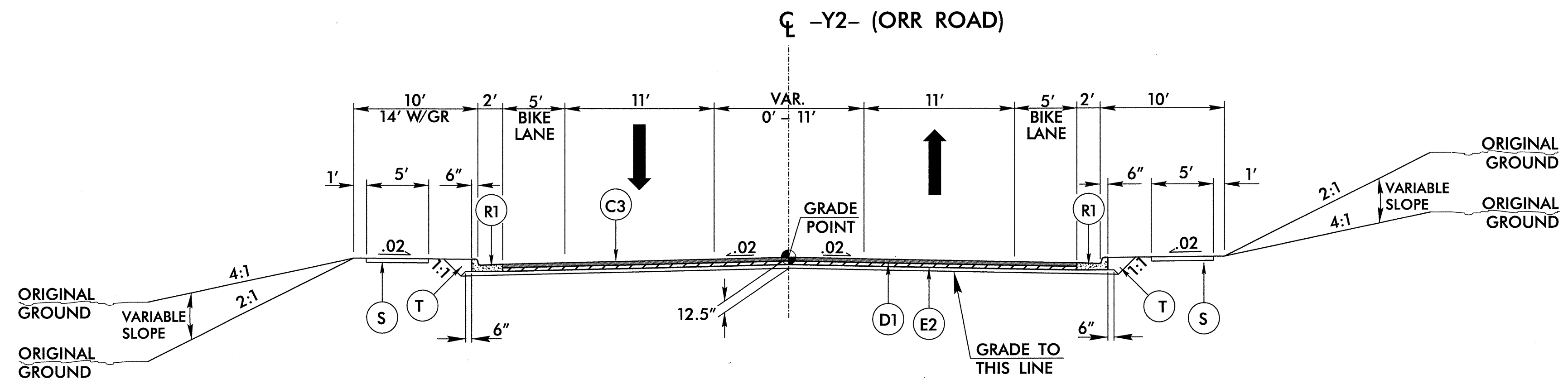
NOTE:
 SEE PLANS FOR LOCATION OF CONCRETE ISLANDS, TURN LANES, AND TAPERS.

PLANS PREPARED BY :

RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 • (919) 878-9560

4/17/2013 R:\Roadway\Proj\VP5208H_Rdy_ttp.dgn

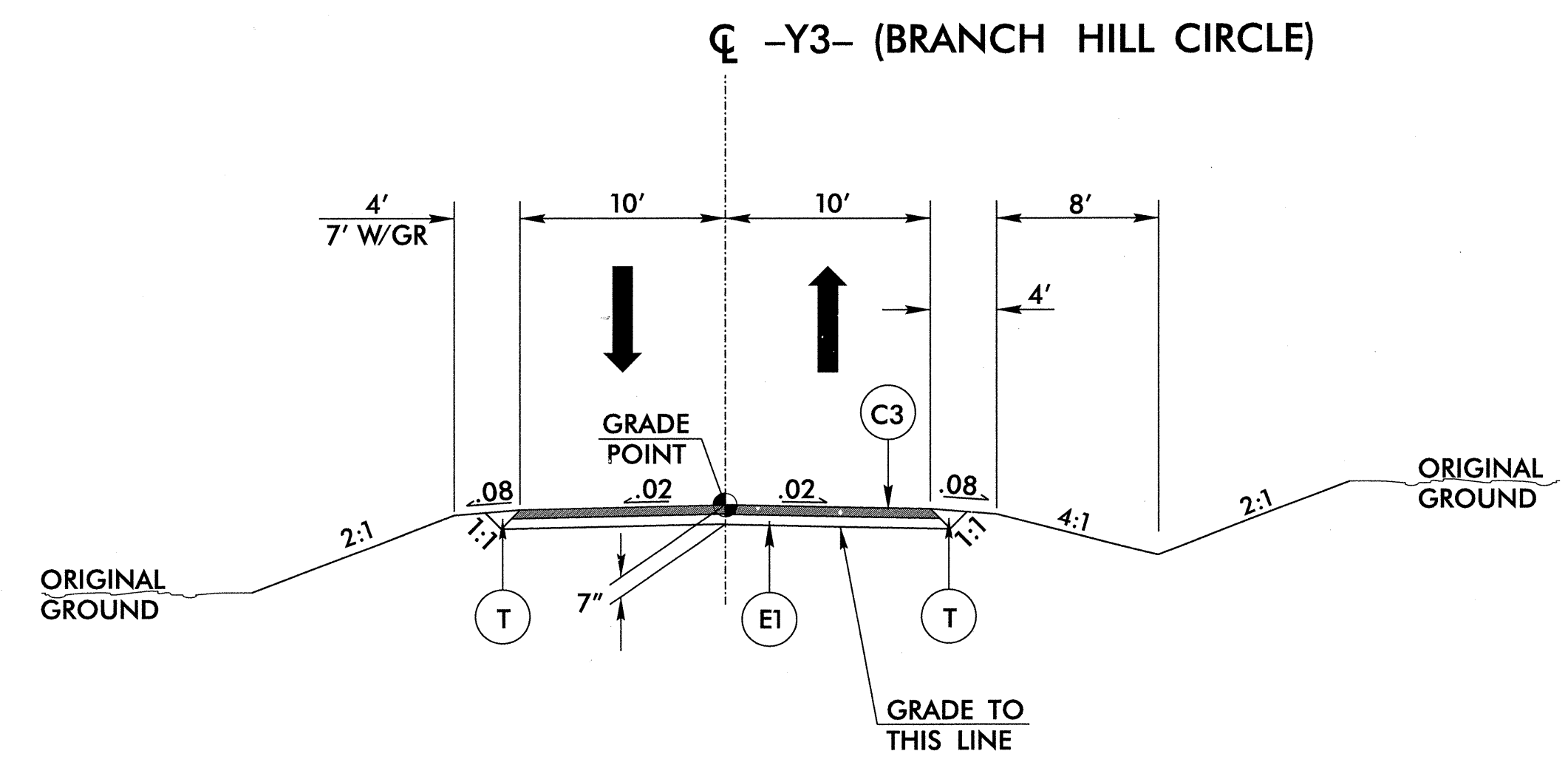
PROJECT REFERENCE NO. P-5208H	SHEET NO. 2C
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 29470 BRANDON J. MCINNIS	PAVEMENT DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 031484 WILHELM G. WILHELM



USE TYPICAL SECTION NO. 7
 -Y2- STA. 14+00.00 TO 15+99.67
 -Y2- STA. 16+47.29 TO 18+50.00

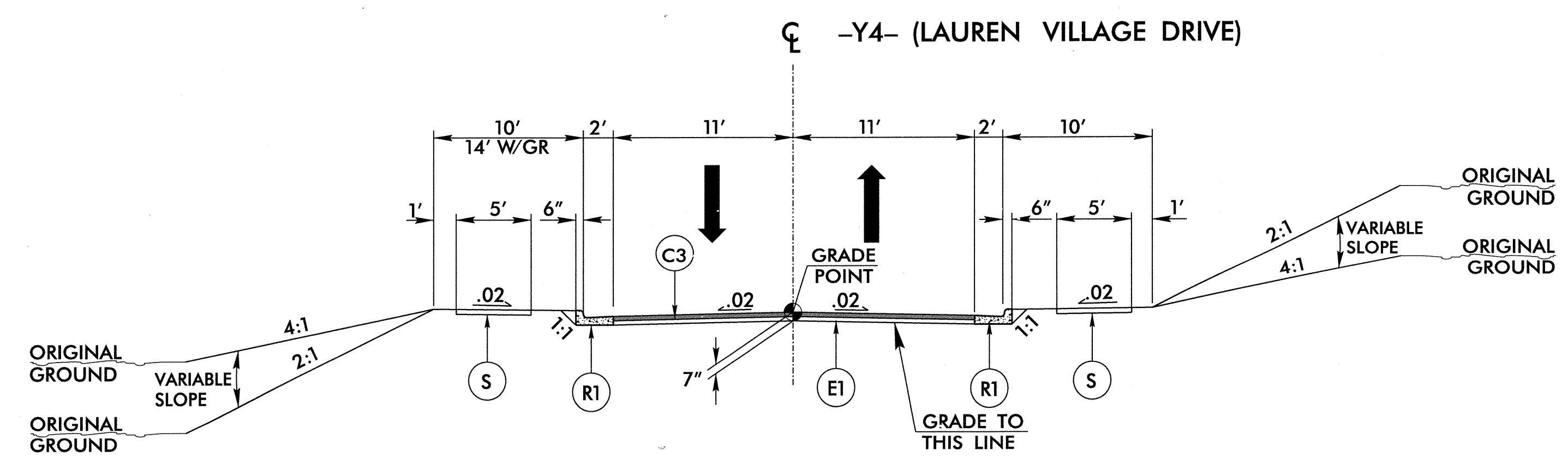
TYPICAL SECTION NO. 7

PAVEMENT SCHEDULE	
A1	6" CONC. DR.
C1	1.5" S9.5B
C2	2.0" S9.5B
C3	3.0" S9.5B
C4	1.5" S9.5C
C5	3.0" S9.5C
C6	VAR. S9.5B
C7	VAR. S9.5C
D1	4.0" I19.0B
D2	4.0" I19.0C
D3	VAR. I19.0B
D4	VAR. I19.0C
E1	4.0" B25.0B
E2	5.5" B25.0B
E3	7.0" B25.0C
E4	VAR. B25.0B
E5	VAR. B25.0C
J	6" ABC
P	PRIME COAT
R1	2'-6" CONC. C&G
R2	9"x12" CURB
S	CONC. SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING



USE TYPICAL SECTION NO. 8
 -Y3- STA. 10+85.00 TO 13+65.65

TYPICAL SECTION NO. 8



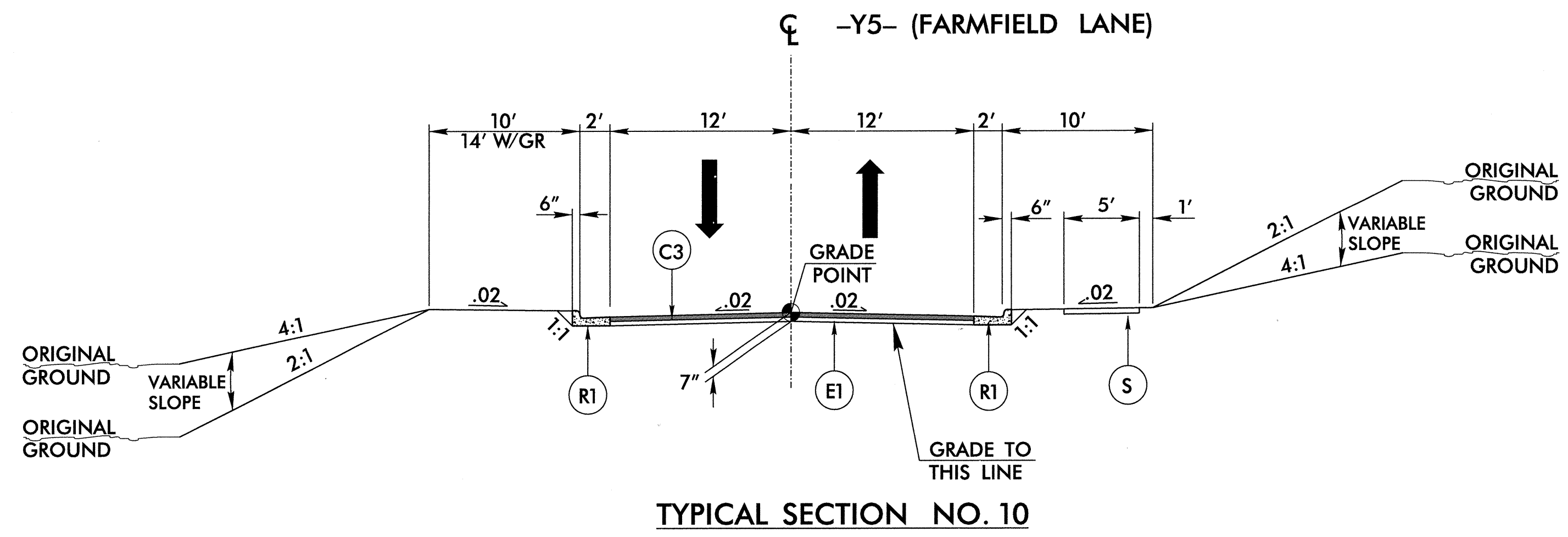
USE TYPICAL SECTION NO. 9
 -Y4- STA. 10+50.00 TO 15+16.93

TYPICAL SECTION NO. 9

NOTE:
 SEE PLANS FOR LOCATION OF CONCRETE ISLANDS, TURN LANES, AND TAPERS.

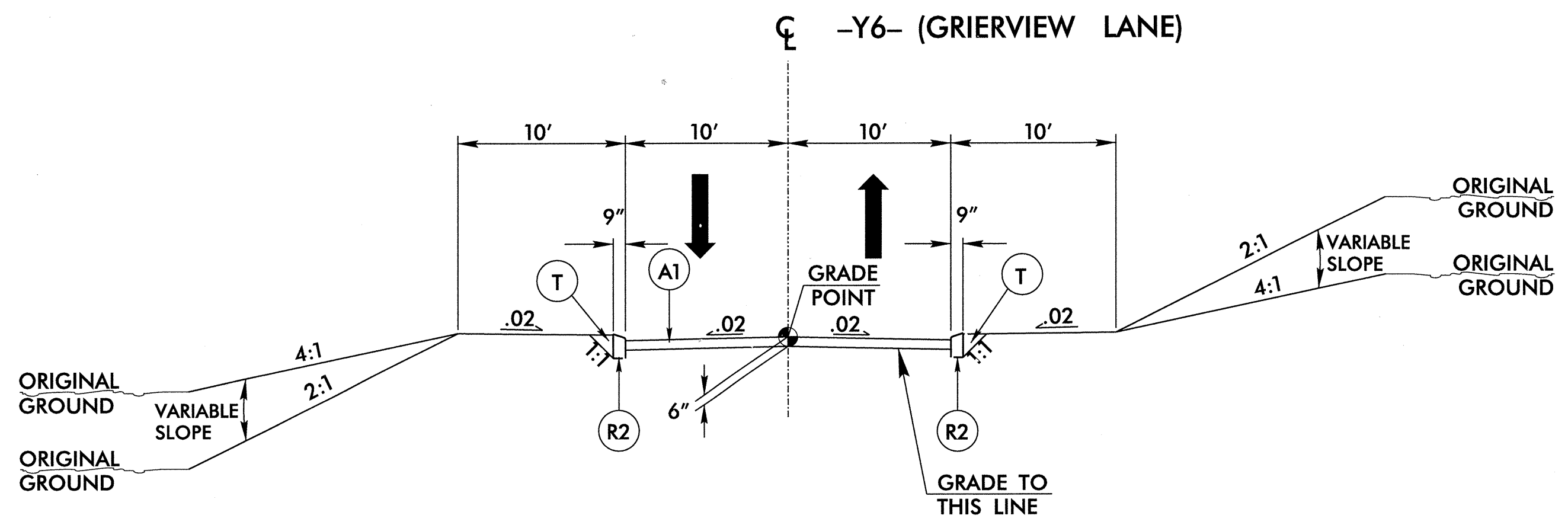
PLANS PREPARED BY :

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 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 • (919) 878-9560



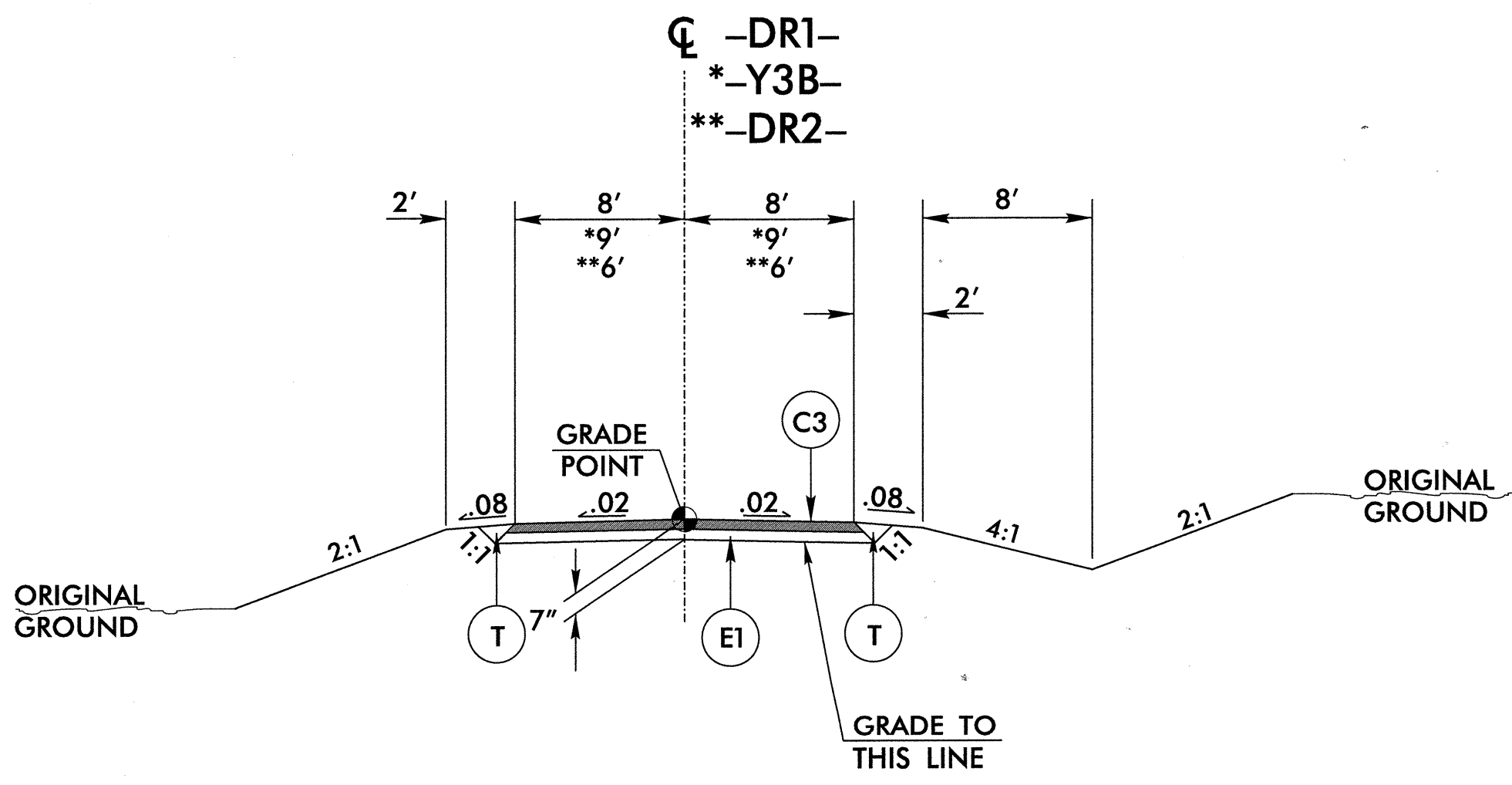
USE TYPICAL SECTION NO. 10
-Y5- STA. 10+90.00 TO 12+38.39

TYPICAL SECTION NO. 10



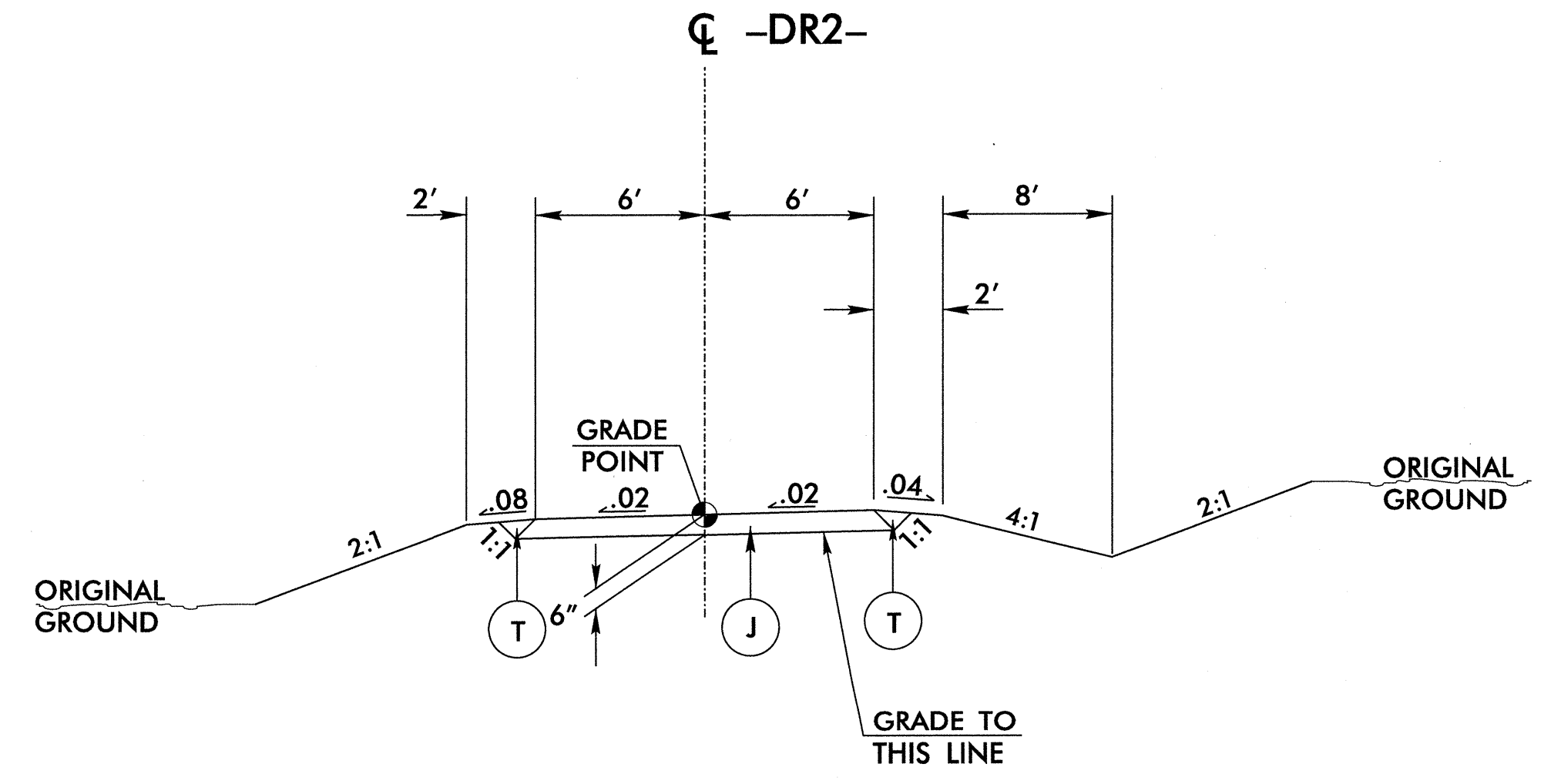
USE TYPICAL SECTION NO. 11
-Y6- STA. 11+27.35 TO 12+87.15

TYPICAL SECTION NO. 11



TYPICAL SECTION NO. 12

USE TYPICAL SECTION NO. 12
-DR1- STA. 10+31.23 TO 12+35.00
*-Y3B- STA. 10+10.00 TO 11+65.00
**-DR2- STA. 10+00.00 TO 11+85.00



TYPICAL SECTION NO. 13

USE TYPICAL SECTION NO. 13
-DR2- STA. 11+85.00 TO 12+73.83

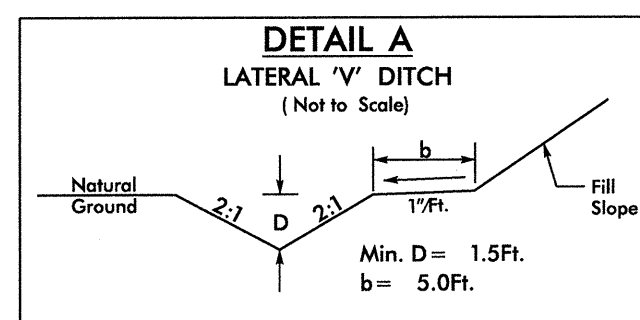
PAVEMENT SCHEDULE	
A1	6" CONC. DR.
C1	1.5" S9.5B
C2	2.0" S9.5B
C3	3.0" S9.5B
C4	1.5" S9.5C
C5	3.0" S9.5C
C6	VAR. S9.5B
C7	VAR. S9.5C
D1	4.0" I19.0B
D2	4.0" I19.0C
D3	VAR. I19.0B
D4	VAR. I19.0C
E1	4.0" B25.0B
E2	5.5" B25.0B
E3	7.0" B25.0C
E4	VAR. B25.0B
E5	VAR. B25.0C
J	6" ABC
P	PRIME COAT
R1	2'-6" CONC. C&G
R2	9"x12" CURB
S	CONC. SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

NOTE:
SEE PLANS FOR LOCATION OF CONCRETE ISLANDS, TURN LANES, AND TAPERS.

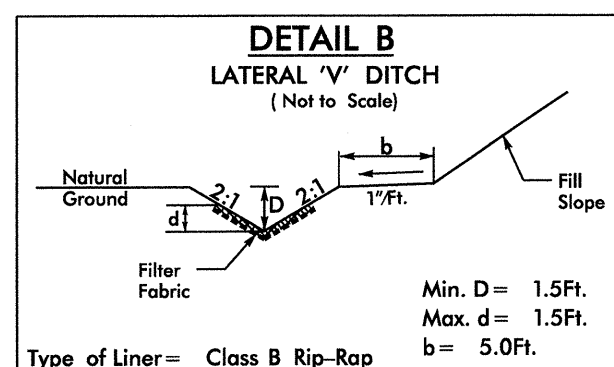
PLANS PREPARED BY :

RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

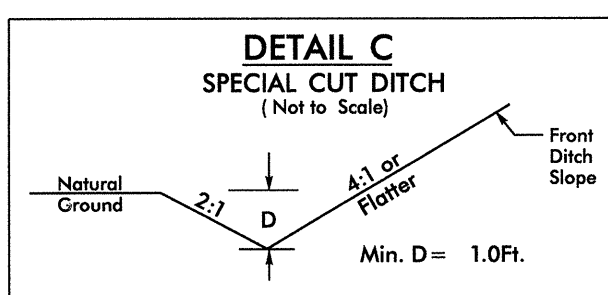
0102DEL_P10a6



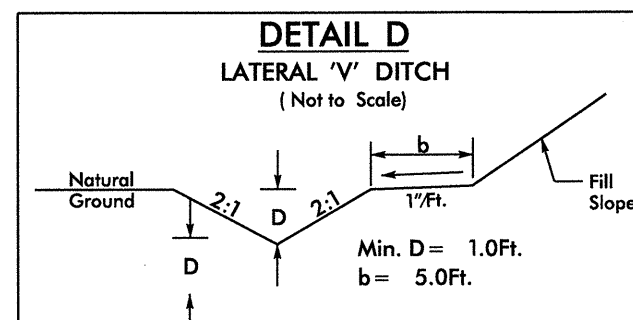
-Y1- STA. 13+00 TO STA. 16+67 RT
DDE=545CY



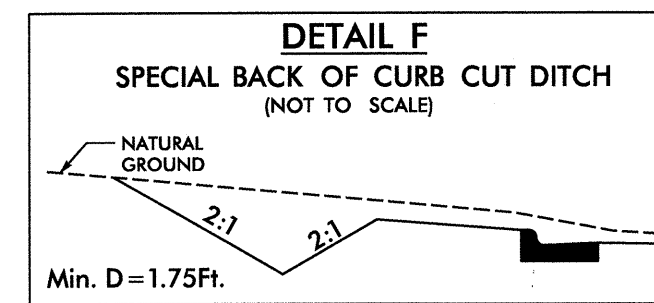
-L- STA. 12+00 TO STA. 14+95 LT
DDE=142CY, CLASS B RIP-RAP=136TON,
FILTER FABRIC=382SY



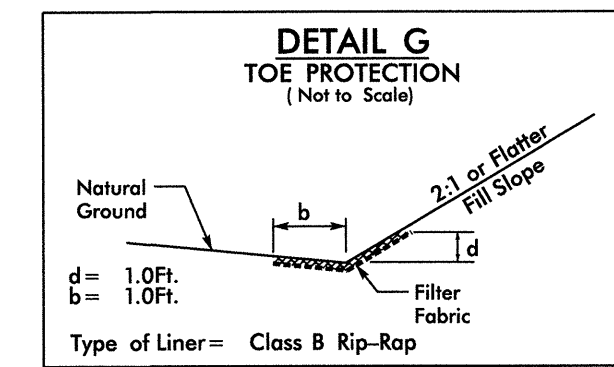
-Y1- STA. 11+40 TO STA. 12+50 LT
-Y1- STA. 22+00 TO STA. 25+00 LT



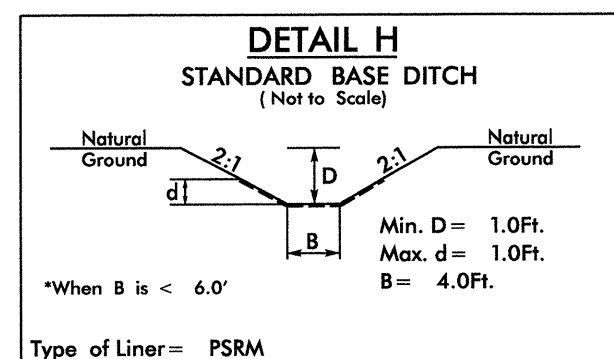
-Y1- STA. 11+00 TO STA. 13+00 RT
DDE=107CY



-L- STA. 17+75 TO STA. 21+15 RT



-DR1- STA. 10+40 TO STA. 11+10 LT
CLASS B RIP-RAP=25TON, FILTER FABRIC=74SY
-Y2- STA. 20+65 TO STA. 21+20 RT
CLASS RIP-RAP=20TON, FILTER FABRIC=58SY



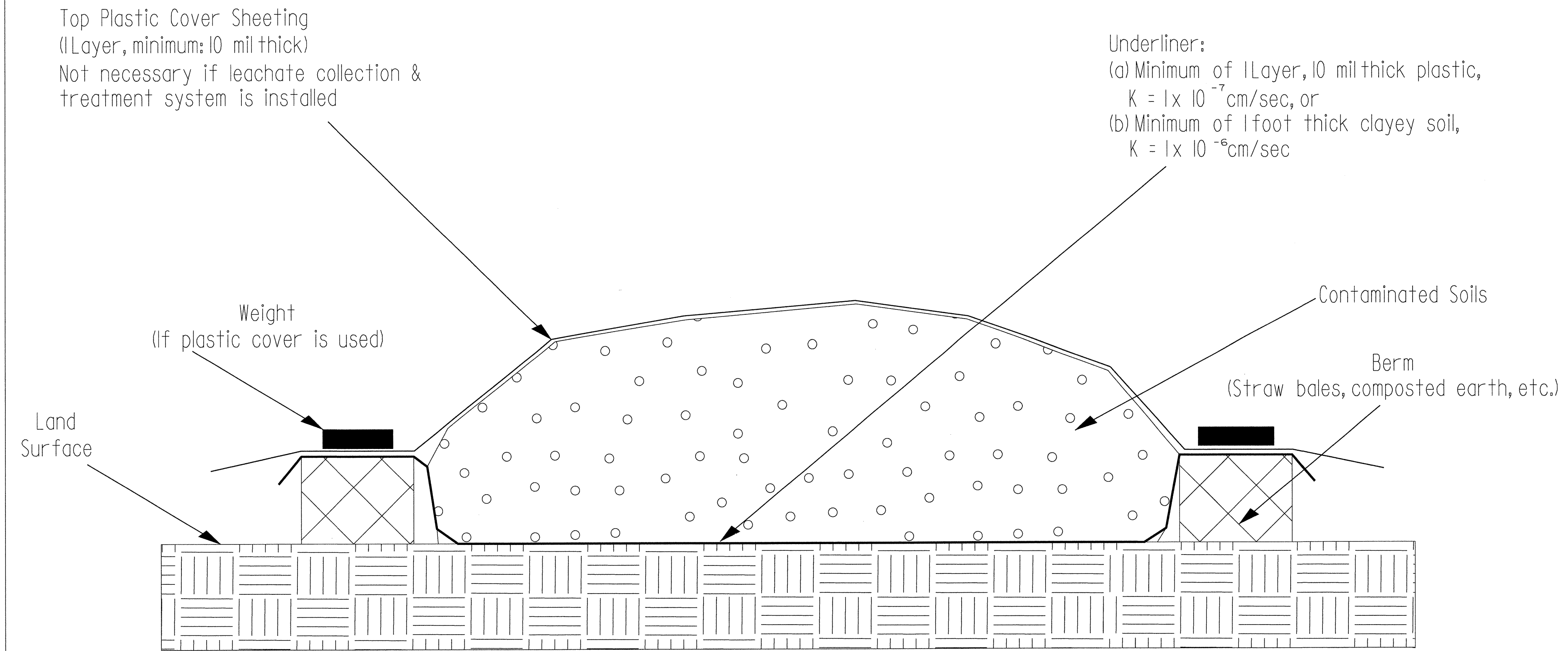
*When B is < 6.0'
Type of Liner = PSRM
-Y1- STA. 14+65 LT
L=225', S=MATCH EXIST GRADE
DDE=61CY, PSRM=210SY

PROJECT REFERENCE NO. P-5208H	SHEET NO. 2E
RW SHEET NO.	
ROADWAY ENGINEER 	HYDRAULICS ENGINEER

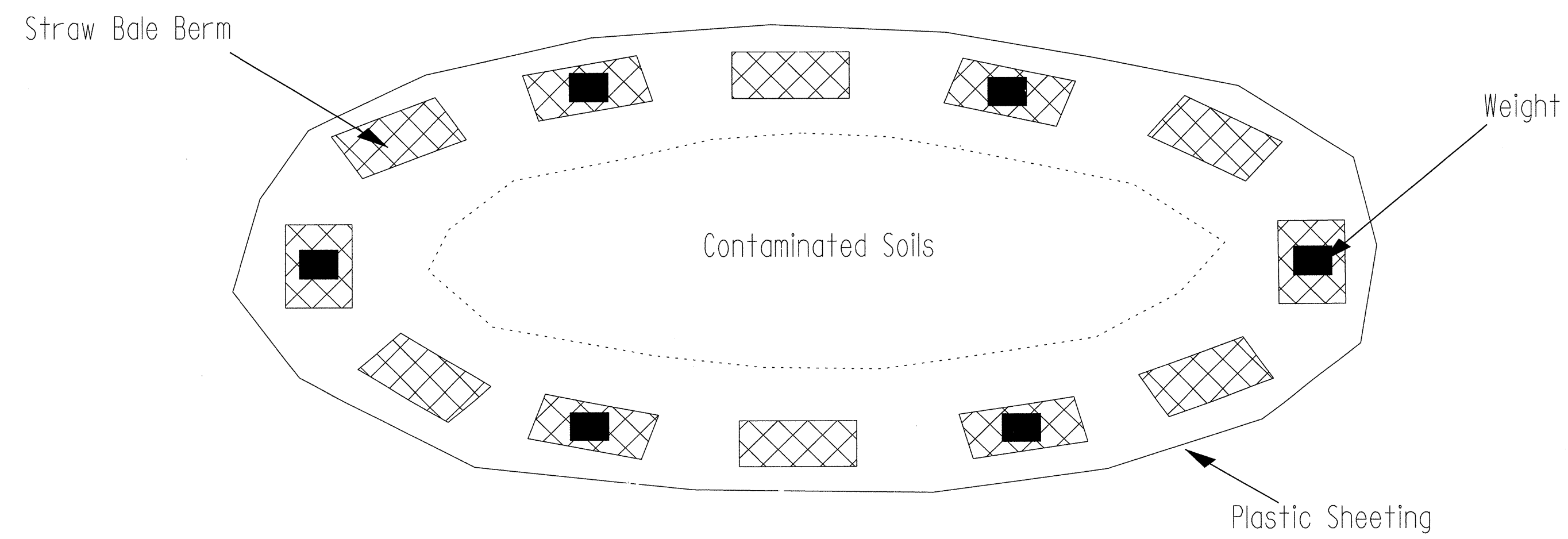
0102DEL_10a6

Detail for Temporary Containment of Petroleum Contaminated Soil

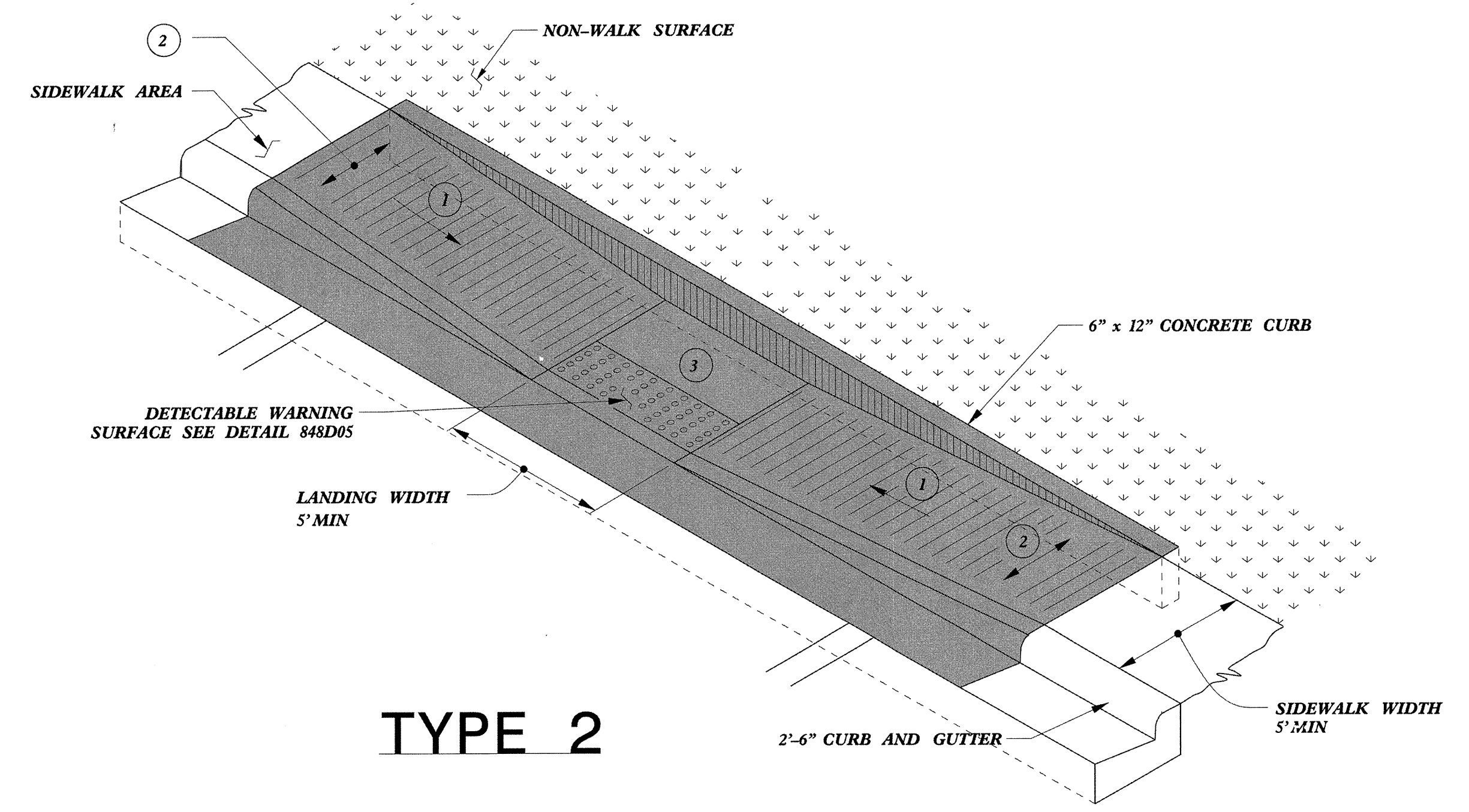
Cross-Section View



Map View



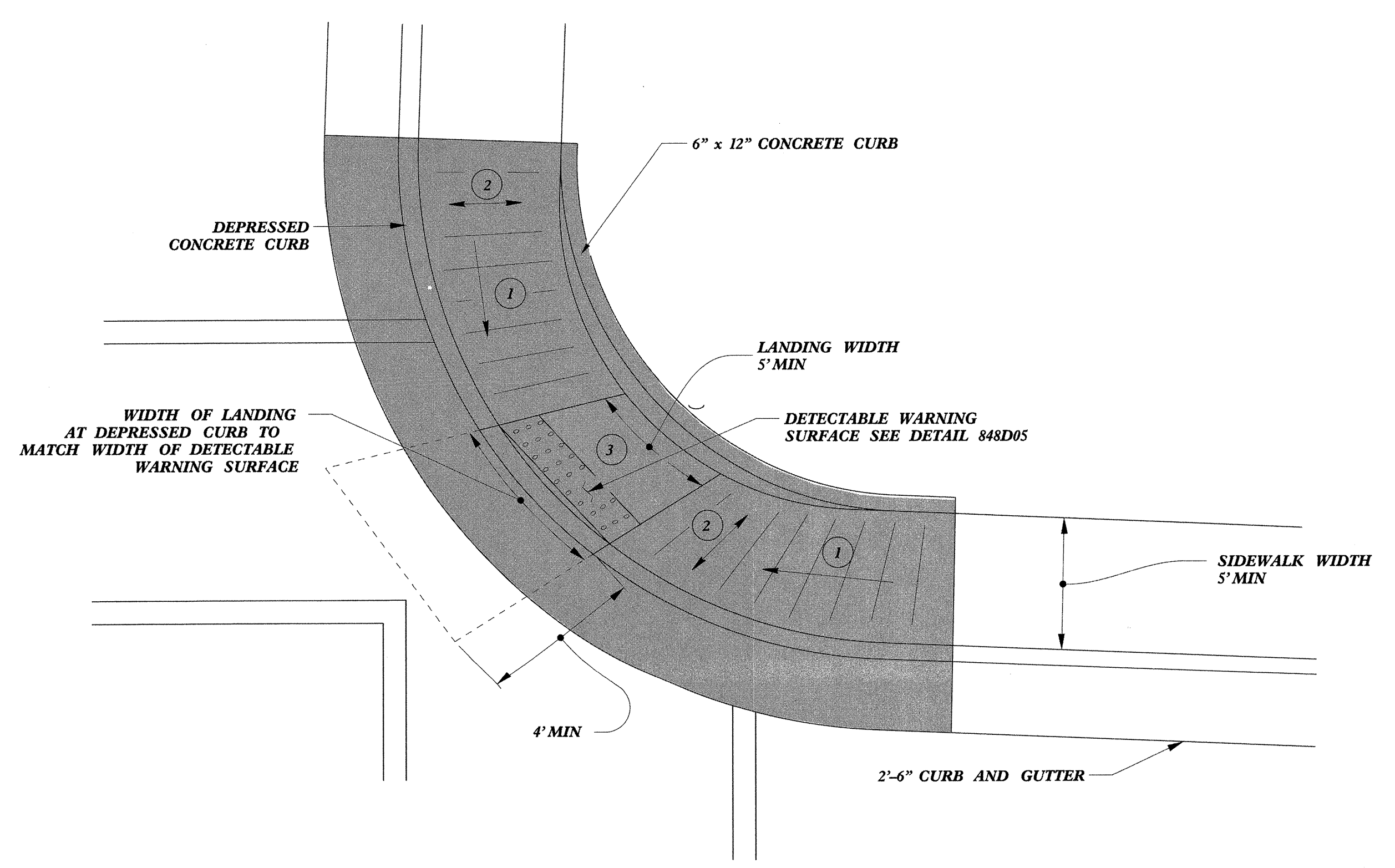
0102DEL_10a6
 5/14/99
 DCN



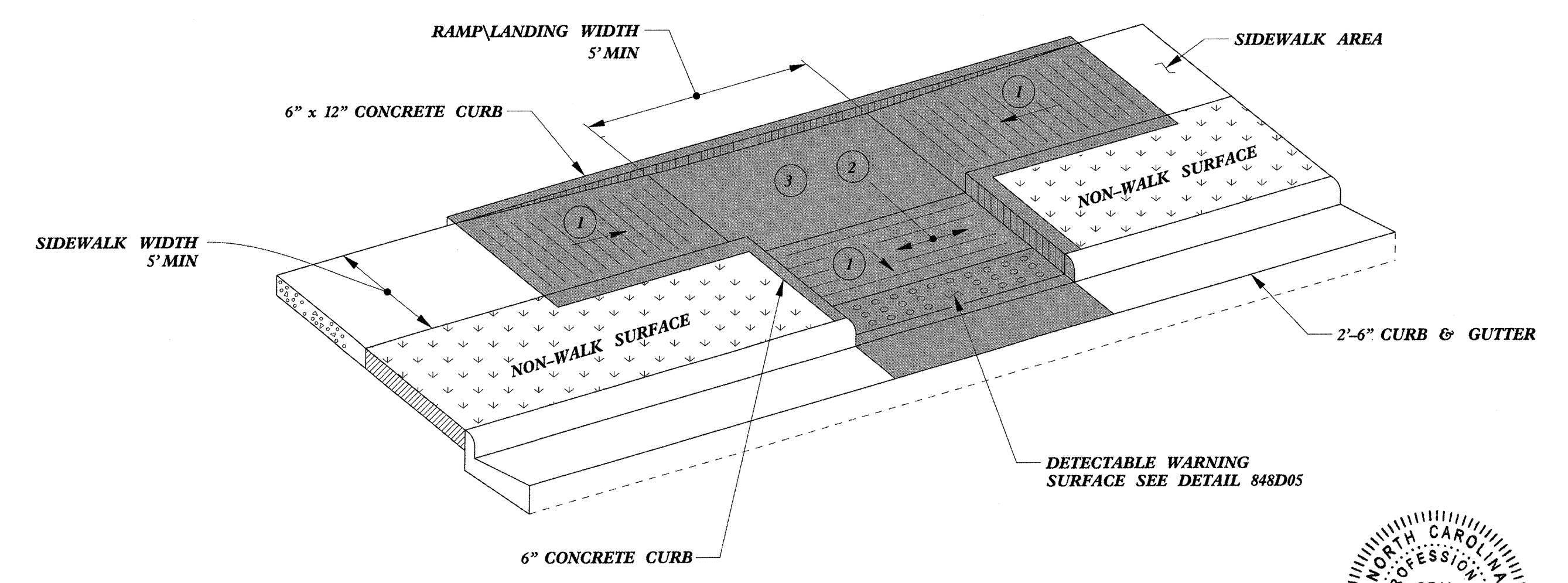
TYPE 2

PAY LIMITS FOR 1 CURB RAMP

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



TYPE 2A



TYPE 3



CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950 FAX 919-250-4119	
CURB RAMPS	
Parallel Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC. :stds/2012CurbRamp/CurbRampDetails.dgn	

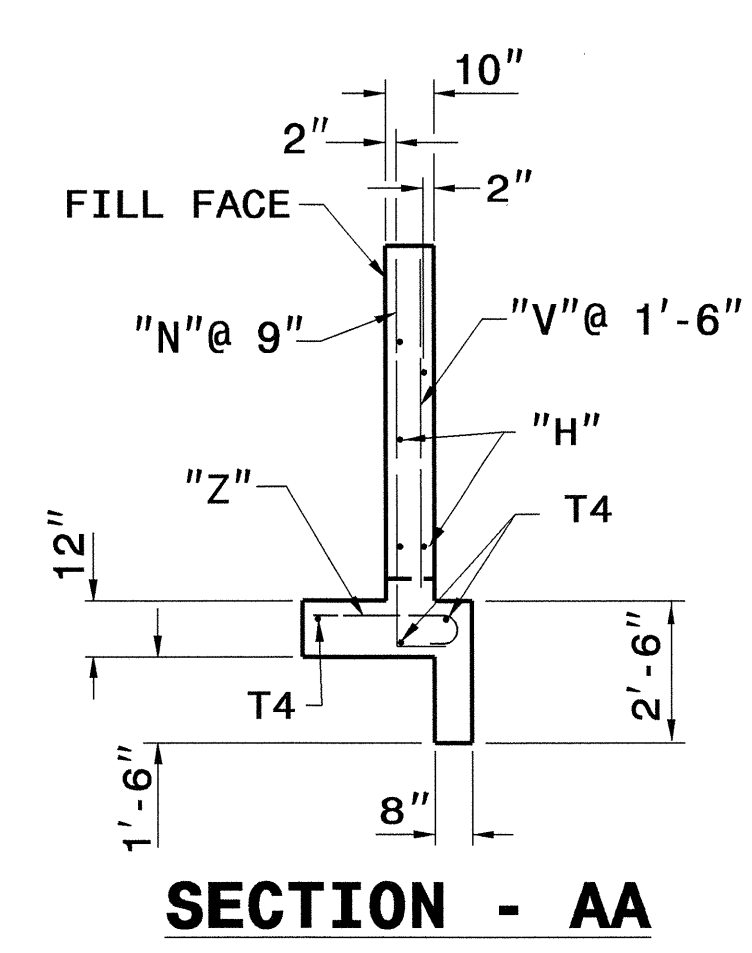
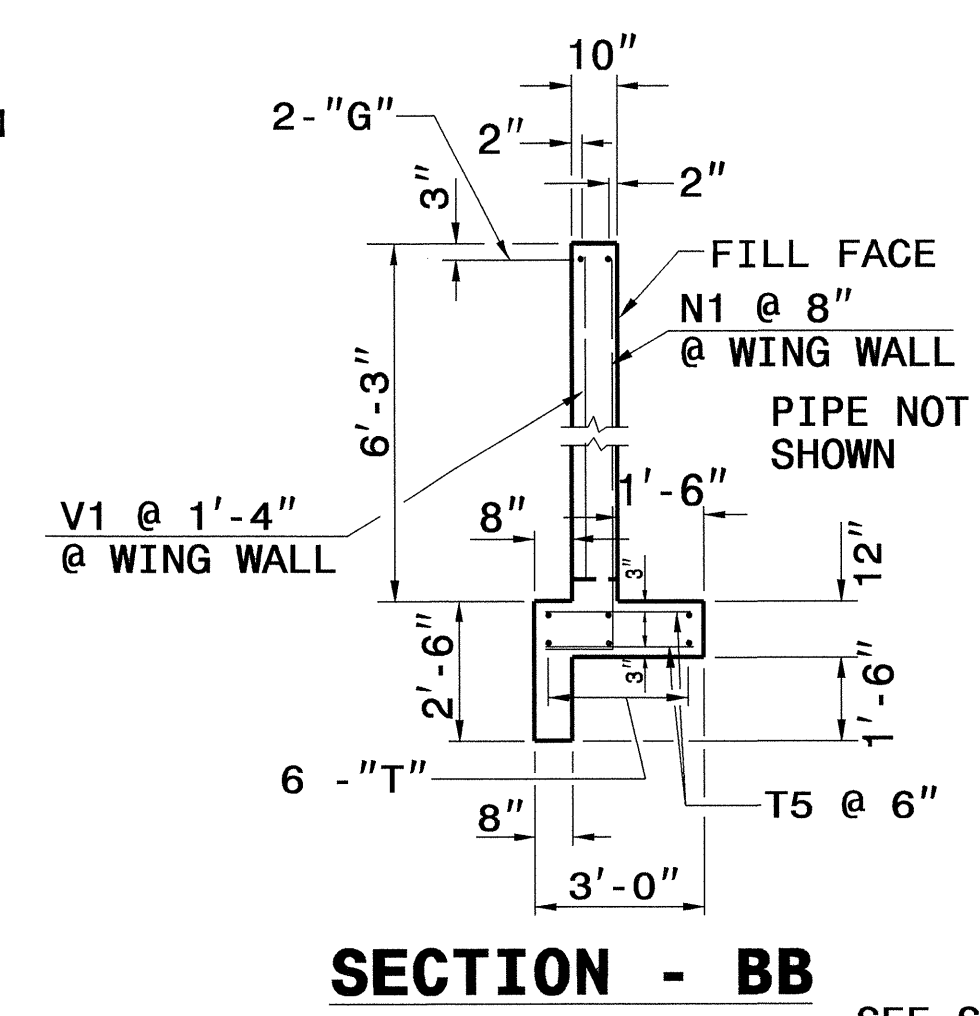
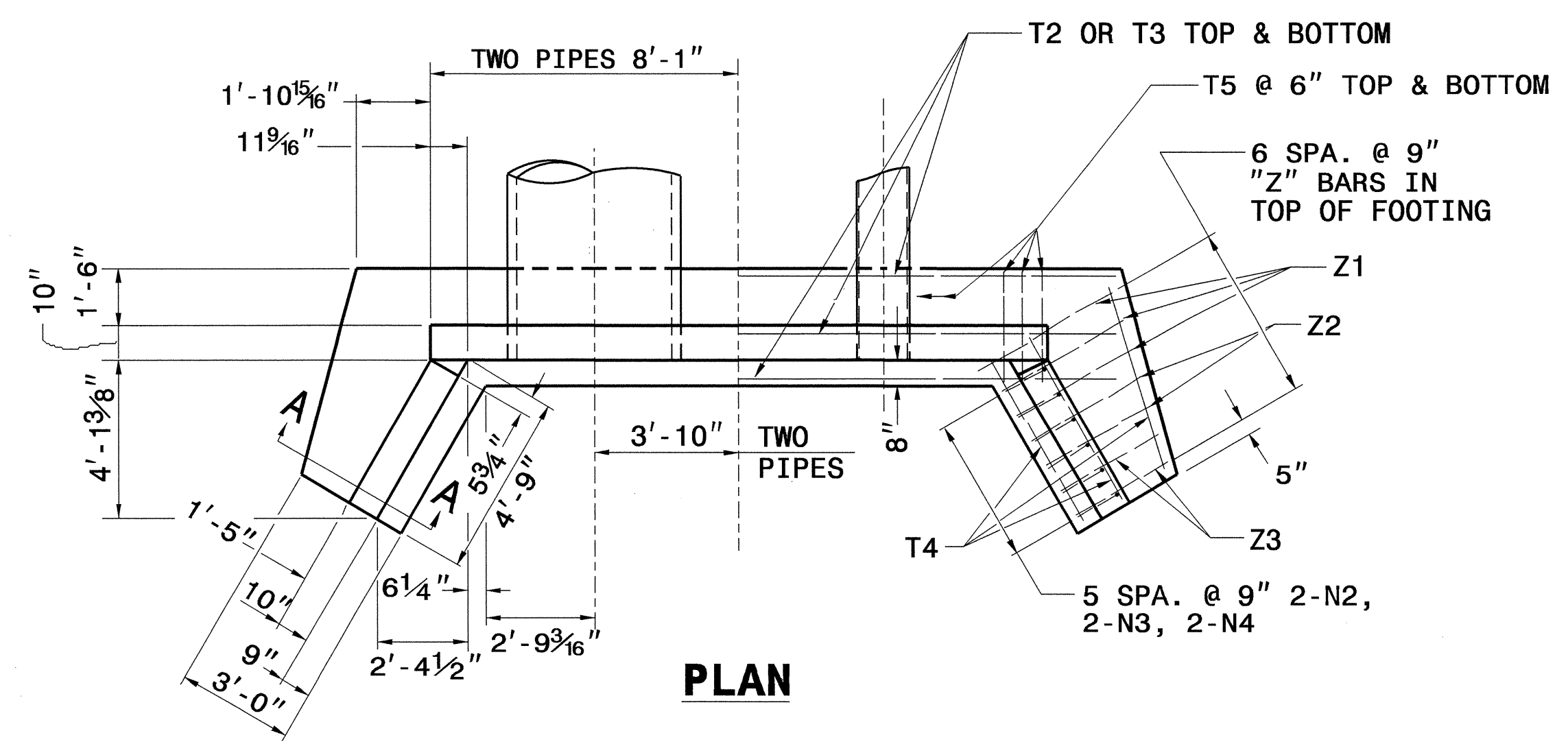
REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

 SYSTEMS

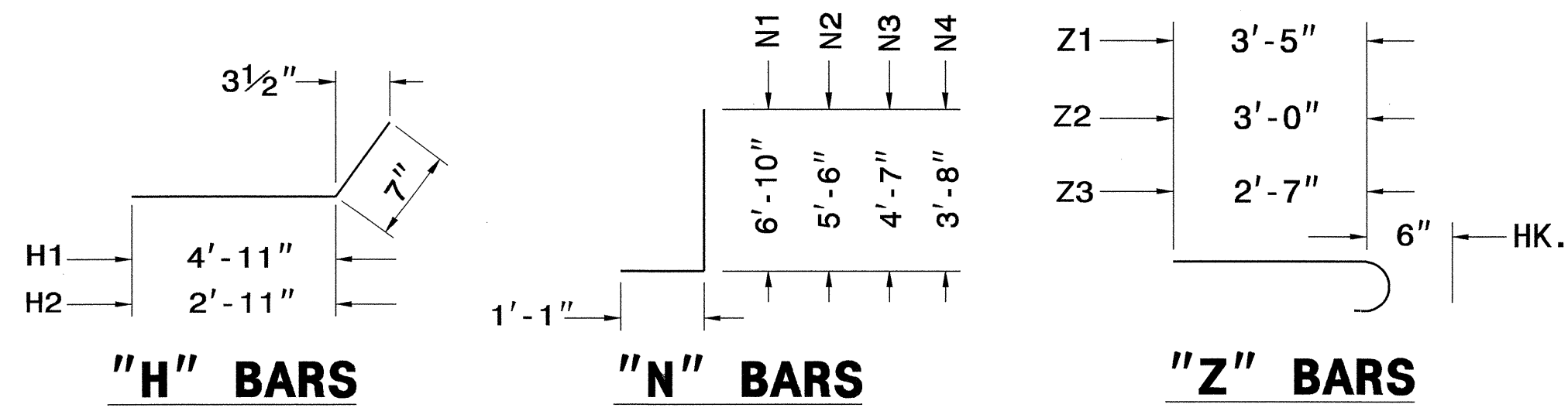
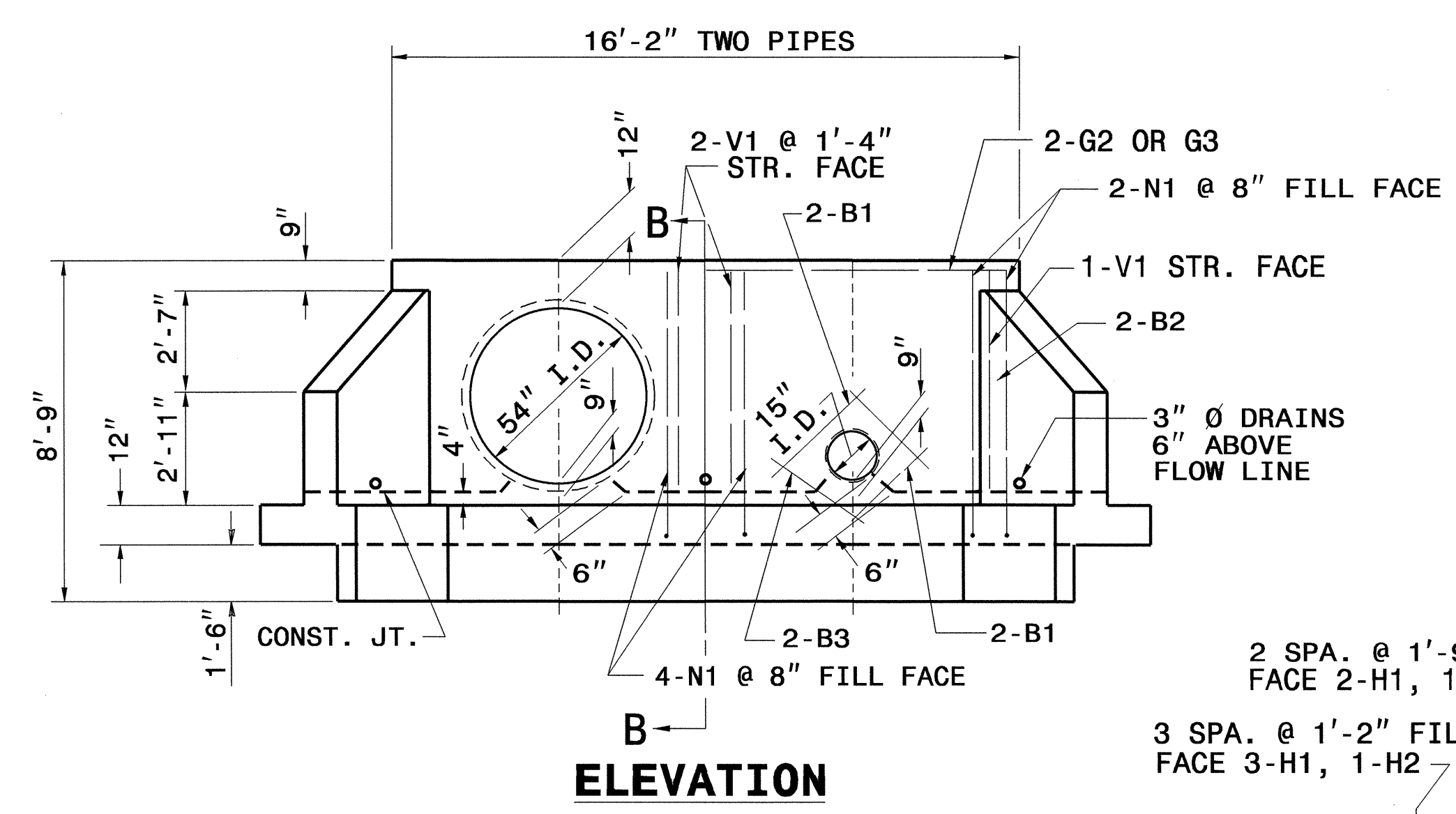
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
REINFORCED CONCRETE ENDWALL

SHEET OF
838D22



SEE STD. # 838.45 FOR GENERAL NOTES.



"H", "N", & "Z" BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL FOR ENDWALL					
REINF. STEEL		2 PIPES			
BAR SIZE	LENGTH	NO.	WEIGHT		
B1	#4 5'-6"	8	29		
B2	#4 4'-6"	4	12		
B3	#4 6'-0"	4	16		
G2	#7 15'-10"	2	65		
H1	#4 5'-6"	10	37		
H2	#4 3'-6"	4	9		
N1	#4 7'-11"	8	42		
N2	#4 6'-7"	4	18		
N3	#4 5'-8"	4	15		
N4	#4 4'-9"	4	13		
T2	#4 19'-6"	6	78		
T4	#4 5'-3"	6	21		
T5	#4 2'-6"	64	107		
V1	#4 5'-9"	12	46		
V2	#4 4'-10"	6	19		
V3	#4 3'-11"	6	16		
V4	#4 3'-1"	6	12		
Z1	#4 3'-11"	6	16		
Z2	#4 3'-6"	4	9		
Z3	#4 3'-1"	4	8		
REINF. STEEL LBS.		588			
CON./R.C. CU. YDS		6.9			

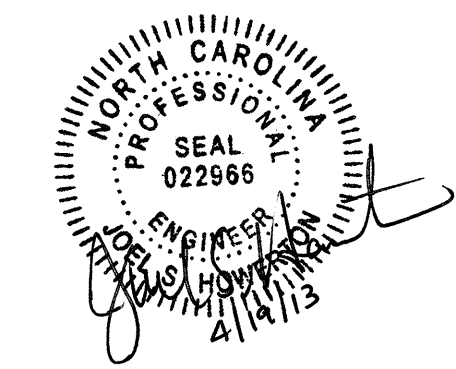
ENGLISH STANDARD DRAWING FOR

SHEET OF
838D22

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

REINFORCED CONCRETE ENDWALL

CONTRACT STANDARDS & DEVELOPMENT UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

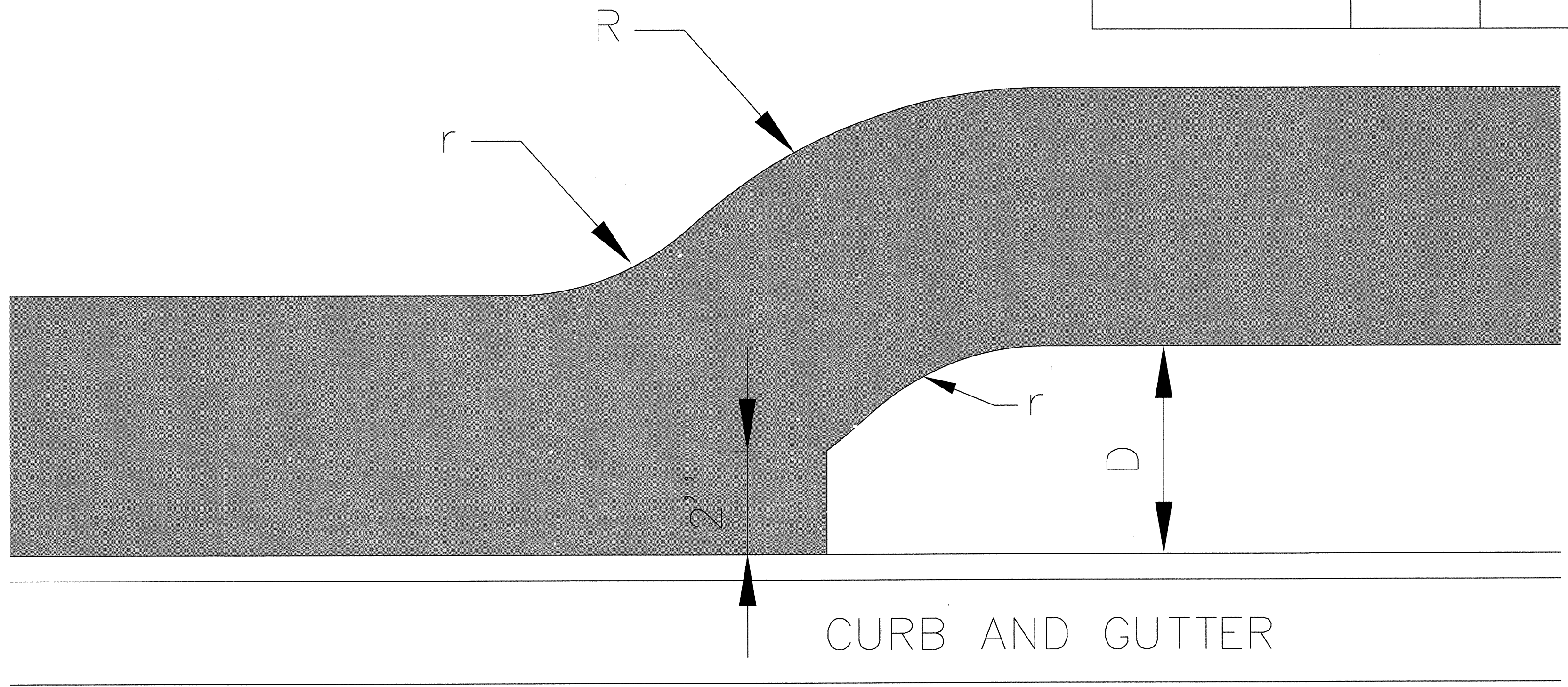


DETAIL OF REINFORCED CONCRETE ENDWALL FOR 54" & 15" DIAMETER PIPE - 90° SKEW

ORIGINAL BY: DATE:
MODIFIED BY: rnbritt DATE: 04-18-13
CHECKED BY: DATE: 4/14/13
FILE SPEC: details/rnbritt/english/hydro/p5208h 54-15endwall sk90.dgn

0102DEL_P10a6
8/17/99

D	R	r
0' - 2.9'	10'	4'
3' - 7.9'	25'	19'
8' +	50'	44'



NOT TO SCALE



CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

SIDEWALK TRANSITION DETAIL
AT BACK OF CURB

STD. NO.	REV.

**STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203148**

ItemNumber	Sec #	Quantity	Unit	Description
000010000-N	800	Lump Sum		MOBILIZATION
000040000-N	801	Lump Sum		CONSTRUCTION SURVEYING
003600000-E	225	10,800	CY	UNDERCUT EXCAVATION
005000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
006300000-N	SP	Lump Sum		GRADING
010600000-E	230	294,200	CY	BORROW EXCAVATION
012700000-N	SP	2	EA	EMBANKMENT SETTLEMENT GAUGES
013400000-E	240	1,080	CY	DRAINAGE DITCH EXCAVATION
019500000-E	265	12,300	CY	SELECT GRANULAR MATERIAL
019600000-E	270	8,000	SY	GEOTEXTILE FOR SOIL STABILIZATION
022300000-E	275	1,320	SY	ROCK PLATING
025500000-E	SP	180	TON	GENERIC GRADING ITEM HAULING AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL
031800000-E	300	1,526	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES
032000000-E	300	1,440	SY	FOUNDATION CONDITIONING GEOTEXTILE
033520000-E	305	3,098	LF	15" DRAINAGE PIPE
033530000-E	305	116	LF	18" DRAINAGE PIPE
033540000-E	305	68	LF	24" DRAINAGE PIPE
033550000-E	305	32	LF	30" DRAINAGE PIPE
033560000-E	305	220	LF	36" DRAINAGE PIPE
039000000-E	310	24	LF	36" RC PIPE CULVERTS, CLASS III
044820000-E	310	84	LF	15" RC PIPE CULVERTS, CLASS IV
044830000-E	310	172	LF	18" RC PIPE CULVERTS, CLASS IV
044860000-E	310	52	LF	36" RC PIPE CULVERTS, CLASS IV
098600000-E	SP	34	LF	GENERIC PIPE ITEM 18" WELDED STEEL PIPE, 0.5" THICK, GRADE B (OPEN CUT)

SUMMARY OF QUANTITIES - P-5208H

ItemNumber	Sec #	Quantity	Unit	Description
098600000-E	SP	42	LF	GENERIC PIPE ITEM 36" WELDED STEEL PIPE, 0.5" THICK, GRADE B IN SOIL
098600000-E	SP	41	LF	GENERIC PIPE ITEM 36" WELDED STEEL PIPE, 0.5" THICK, GRADE B NOT IN SOIL
098600000-E	SP	83	LF	GENERIC PIPE ITEM 42" WELDED STEEL PIPE, 0.625" THICK, GRADE B (OPEN CUT)
098600000-E	SP	50	LF	GENERIC PIPE ITEM 42" WELDED STEEL PIPE, 0.625" THICK, GRADE B IN SOIL
098600000-E	SP	50	LF	GENERIC PIPE ITEM 42" WELDED STEEL PIPE, 0.625" THICK, GRADE B NOT IN SOIL
098600000-E	SP	286	LF	GENERIC PIPE ITEM 54" WELDED STEEL PIPE 0.75" THICK, GRADE B (OPEN CUT)
098600000-E	SP	42	LF	GENERIC PIPE ITEM 54" WELDED STEEL PIPE, 0.75" THICK, GRADE B IN SOIL
098600000-E	SP	42	LF	GENERIC PIPE ITEM 54" WELDED STEEL PIPE, 0.75" THICK, GRADE B NOT IN SOIL
099500000-E	340	285	LF	PIPE REMOVAL
104400000-E	501	1,000	SY	LIME TREATED SOIL (SLURRY METHOD)
106600000-E	501	100	TON	LIME FOR LIME TREATED SOIL
109950000-E	505	1,500	CY	SHALLOW UNDERCUT
109970000-E	505	3,000	TON	CLASS IV SUBGRADE STABILIZATION
111000000-E	510	100	TON	STABILIZER AGGREGATE
112100000-E	520	1,282	TON	AGGREGATE BASE COURSE
117600000-E	542	1,000	SY	SOIL CEMENT BASE
118700000-E	542	100	TON	PORTLAND CEMENT FOR SOIL CEMENT BASE
119800000-E	542	100	TON	AGGREGATE FOR SOIL CEMENT BASE
120900000-E	543	500	GAL	ASPHALT CURING SEAL
122000000-E	545	100	TON	INCIDENTAL STONE BASE
127500000-E	600	1,215	GAL	PRIME COAT

ItemNumber	Sec #	Quantity	Unit	Description
133000000-E	607	1,230	SY	INCIDENTAL MILLING
148900000-E	610	4,000	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
149100000-E	610	5,930	TON	ASPHALT CONC BASE COURSE, TYPE B25.0C
149800000-E	610	1,220	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE 119.0B
150300000-E	610	3,190	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE 119.0C
151900000-E	610	1,830	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
152300000-E	610	2,340	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5C
157500000-E	620	925	TON	ASPHALT BINDER FOR PLANT MIX
169300000-E	654	85	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
200000000-N	806	45	EA	RIGHT OF WAY MARKERS
207000000-N	815	5	EA	SUBDRAIN PIPE OUTLET
207700000-E	815	190	LF	6" OUTLET PIPE
214300000-E	818	100	TON	BLOTTING SAND
220900000-E	838	24.2	CY	ENDWALLS
222000000-E	838	12.1	CY	REINFORCED ENDWALLS
227500000-E	SP	145	CY	FLOWABLE FILL
228600000-N	840	39	EA	MASONRY DRAINAGE STRUCTURES
229700000-E	840	4	CY	MASONRY DRAINAGE STRUCTURES
230800000-E	840	29.2	LF	MASONRY DRAINAGE STRUCTURES
236400000-N	840	5	EA	FRAME WITH TWO GRATES, STD 840.16
236600000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.24
237400000-N	840	3	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)
237400000-N	840	15	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)

ItemNumber	Sec #	Quantity	Unit	Description
237400000-N	840	13	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)
239600000-N	840	2	EA	FRAME WITH COVER, STD 840.54
240700000-N	840	1	EA	STEEL FRAME WITH TWO GRATES, STD 840.37
248400000-E	SP	2,330	LF	GENERIC DRAINAGE ITEM SUBSURFACE DRAIN
253500000-E	846	240	LF	***X*** CONCRETE CURB (9" X 12")
254900000-E	846	10,340	LF	2'-6" CONCRETE CURB & GUTTER
259100000-E	848	2,490	SY	4" CONCRETE SIDEWALK
260500000-N	848	25	EA	CONCRETE CURB RAMP
261200000-E	848	970	SY	6" CONCRETE DRIVEWAY
265500000-E	852	60	SY	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)
283000000-N	858	1	EA	ADJUSTMENT OF MANHOLES
284500000-N	858	1	EA	ADJUSTMENT OF METER BOXES OR VALVE BOXES
303000000-E	862	5,162.5	LF	STEEL BM GUARDRAIL
304500000-E	862	250	LF	STEEL BM GUARDRAIL, SHOP CURVED
310500000-N	862	2	EA	STEEL BM GUARDRAIL TERMINAL SECTIONS
315000000-N	862	10	EA	ADDITIONAL GUARDRAIL POSTS
321000000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE CAT-1
321500000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III
327000000-N	SP	9	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
338000000-E	862	1,087.5	LF	TEMPORARY STEEL BM GUARDRAIL
338200000-E	862	62.5	LF	TEMPORARY STEEL BM GUARDRAIL (SHOP CURVED)
338700000-N	862	1	EA	TEMPORARY GUARDRAIL ANCHOR UNITS, TYPE ***** (AT-1)

ItemNumber	Sec #	Quantity	Unit	Description
338910000-N	SP	5	EA	TEMPORARY GUARDRAIL ANCHOR UNITS, TYPE 350
342000000-E	SP	1,560	LF	GENERIC GUARDRAIL ITEM BLACK VINYL COATED GLARE SCREEN (GUARDRAIL MOUNTED)
343500000-N	SP	160	EA	GENERIC GUARDRAIL ITEM EXTRA LENGTH GUARDRAIL POSTS, 8'
350300000-E	866	530	LF	WOVEN WIRE FENCE, 47" FABRIC
350900000-E	866	40	EA	4" TIMBER FENCE POSTS, 7'-6" LONG
351500000-E	866	20	EA	5" TIMBER FENCE POSTS, 8'-0" LONG
353300000-E	866	1,350	LF	CHAIN LINK FENCE, *** FABRIC (60")
353900000-E	866	115	EA	METAL LINE POSTS FOR *** CHAIN LINK FENCE (60")
354500000-E	866	5	EA	METAL TERMINAL POSTS FOR *** CHAIN LINK FENCE (60")
357800000-N	SP	1	EA	GENERIC FENCING ITEM RIGHT OF WAY GATE
362800000-E	876	30	TON	RIP RAP, CLASS I
364900000-E	876	1,410	TON	RIP RAP, CLASS B
365600000-E	876	4,985	SY	GEOTEXTILE FOR DRAINAGE
388500000-E	SP	21,500	TON	GENERIC TRACKWORK ITEM SUB-BALLAST
402500000-E	901	252	SF	CONTRACTOR FURNISHED, TYPE *** SIGN (E)
407200000-E	903	577	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
410200000-N	904	45	EA	SIGN ERECTION, TYPE E
411610000-N	904	2	EA	SIGN ERECTION, RELOCATE, TYPE **** (GROUND MOUNTED) (E)
415500000-N	907	26	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
419200000-N	907	2	EA	DISPOSAL OF SUPPORT, U-CHANNEL
423800000-N	907	3	EA	DISPOSAL OF SIGN, D, E OR F

ItemNumber	Sec #	Quantity	Unit	Description
440000000-E	1110	958	SF	WORK ZONE SIGNS (STATIONARY)
440500000-E	1110	96	SF	WORK ZONE SIGNS (PORTABLE)
441000000-E	1110	155	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
442000000-N	1120	1	EA	PORTABLE CHANGEABLE MESSAGE SIGN
443000000-N	1130	54	EA	DRUMS
443500000-N	1135	83	EA	CONES
444500000-E	1145	164	LF	BARRICADES (TYPE III)
445500000-N	1150	600	DAY	FLAGGER
446500000-N	1160	2	EA	TEMPORARY CRASH CUSHIONS
448500000-E	1170	770	LF	PORTABLE CONCRETE BARRIER
451600000-N	1180	83	EA	SKINNY DRUM
465000000-N	1251	240	EA	TEMPORARY RAISED PAVEMENT MARKERS
468500000-E	1205	825	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
468600000-E	1205	12,589	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
468800000-E	1205	2,582	LF	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS)
469000000-E	1205	706	LF	THERMOPLASTIC PAVEMENT MARKING LINES (6", 120 MILS)
469500000-E	1205	81	LF	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)
469700000-E	1205	784	LF	THERMOPLASTIC PAVEMENT MARKING LINES (8", 120 MILS)
470200000-E	1205	277	LF	THERMOPLASTIC PAVEMENT MARKING LINES (12", 120 MILS)
471000000-E	1205	264	LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)
472500000-E	1205	65	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)
477000000-E	1205	825	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (III)

SUMMARY OF QUANTITIES - P-5208H

ItemNumber	Sec #	Quantity	Unit	Description
477000000-E	1205	660	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (IV)
477500000-E	1205	155	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (6") (III)
478000000-E	1205	94	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (8") (III)
478000000-E	1205	94	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (8") (IV)
480000000-N	1205	8	EA	COLD APPLIED PLASTIC PAVEMENT MARKING CHARACTER, TYPE ** (III)
480000000-N	1205	8	EA	COLD APPLIED PLASTIC PAVEMENT MARKING CHARACTER, TYPE ** (IV)
480500000-N	1205	3	EA	COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOL, TYPE ** (III)
480500000-N	1205	2	EA	COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOL, TYPE ** (IV)
481000000-E	1205	68,481	LF	PAINT PAVEMENT MARKING LINES (4")
482000000-E	1205	1,816	LF	PAINT PAVEMENT MARKING LINES (8")
483500000-E	1205	1,136	LF	PAINT PAVEMENT MARKING LINES (24")
484500000-N	1205	128	EA	PAINT PAVEMENT MARKING SYMBOL
490000000-N	1251	227	EA	PERMANENT RAISED PAVEMENT MARKERS
532560000-E	1510	47	LF	6" WATER LINE
532580000-E	1510	1,134	LF	8" WATER LINE
532620000-E	1510	2,650	LF	12" WATER LINE
532660000-E	1510	312	LF	16" WATER LINE
554000000-E	1515	1	EA	6" VALVE
554600000-E	1515	6	EA	8" VALVE
555800000-E	1515	5	EA	12" VALVE
555860000-E	1515	3	EA	16" VALVE

ItemNumber	Sec #	Quantity	Unit	Description
558910000-E	1515	2	EA	1" AIR RELEASE VALVE
560600000-E	1515	1	EA	2" BLOW OFF
564800000-N	1515	8	EA	RELOCATE WATER METER
564900000-N	1515	1	EA	RECONNECT WATER METER
566600000-E	1515	3	EA	FIRE HYDRANT
567200000-N	1515	2	EA	RELOCATE FIRE HYDRANT
567840000-E	1515	2	EA	6" LINE STOP
567860000-E	1515	8	EA	8" LINE STOP
567900000-E	1515	3	EA	12" LINE STOP
567920000-E	1515	3	EA	16" LINE STOP
569130000-E	1520	884	LF	8" SANITARY GRAVITY SEWER
577500000-E	1525	3	EA	4" DIA UTILITY MANHOLE
577600000-E	1525	2	EA	5" DIA UTILITY MANHOLE
578100000-E	1525	7	LF	UTILITY MANHOLE WALL, 4" DIA
578200000-E	1525	29	LF	UTILITY MANHOLE WALL, 5" DIA
580000000-E	1530	54	LF	ABANDON 6" UTILITY PIPE
580100000-E	1530	2,995	LF	ABANDON 8" UTILITY PIPE
580400000-E	1530	2,784	LF	ABANDON 12" UTILITY PIPE
581000000-E	1530	110	LF	ABANDON 16" UTILITY PIPE
581550000-N	1530	3	EA	REMOVE FIRE HYDRANT
581600000-N	1530	1	EA	ABANDON UTILITY MANHOLE
582800000-N	1530	5	EA	REMOVE UTILITY MANHOLE
583580000-E	1540	12	LF	18" ENCASMENT PIPE
583600000-E	1540	188	LF	24" ENCASMENT PIPE
587220000-E	1550	94	LF	TRENCHLESS INSTALLATION OF 24" IN SOIL
587221000-E	1550	94	LF	TRENCHLESS INSTALLATION OF 24" NOT IN SOIL
600000000-E	1605	26,735	LF	TEMPORARY SILT FENCE
600600000-E	1610	900	TON	STONE FOR EROSION CONTROL, CLASS A

ItemNumber	Sec #	Quantity	Unit	Description
600900000-E	1610	5,035	TON	STONE FOR EROSION CONTROL, CLASS B
601200000-E	1610	2,800	TON	SEDIMENT CONTROL STONE
601500000-E	1615	40.5	ACR	TEMPORARY MULCHING
601800000-E	1620	1,200	LB	SEED FOR TEMPORARY SEEDING
602100000-E	1620	6	TON	FERTILIZER FOR TEMPORARY SEEDING
602400000-E	1622	4,155	LF	TEMPORARY SLOPE DRAINS
602900000-E	SP	200	LF	SAFETY FENCE
603000000-E	1630	7,000	CY	SILT EXCAVATION
603600000-E	1631	60,430	SY	MATting FOR EROSION CONTROL
603700000-E	SP	425	SY	COIR FIBER MAT
603800000-E	SP	315	SY	PERMANENT SOIL REINFORCEMENT MAT
604200000-E	1632	1,500	LF	1/4" HARDWARE CLOTH
604500000-E	SP	35	LF	*** TEMPORARY PIPE (15")
6071012000-E	SP	9,405	LF	COIR FIBER WATTLE
6071020000-E	SP	970	LB	POLYACRYLAMIDE (PAM)
6071030000-E	1640	2,930	LF	COIR FIBER BAFFLE
6071050000-E	SP	4	EA	*** SKIMMER (1-1/2")
608400000-E	1660	57	ACR	SEEDING & MULCHING
608700000-E	1660	45	ACR	MOWING
609000000-E	1661	450	LB	SEED FOR REPAIR SEEDING
609300000-E	1661	3	TON	FERTILIZER FOR REPAIR SEEDING
609600000-E	1662	1,400	LB	SEED FOR SUPPLEMENTAL SEEDING
610800000-E	1665	41.5	TON	FERTILIZER TOPDRESSING
611100000-E	SP	30	LF	IMPERVIOUS DIKE
611450000-N	1667	20	MHR	SPECIALIZED HAND MOWING
611700000-N	SP	100	EA	RESPONSE FOR EROSION CONTROL

ItemNumber	Sec #	Quantity	Unit	Description
613200000-N	SP	10	EA	GENERIC EROSION CONTROL ITEM SUPPLEMENTAL RESPONSE FOR EROSION CONTROL

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DRAINAGE SUMMARY

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

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COMPUTED BY: RBH DATE: 11/16/12
CHECKED BY: MLC DATE: 11/16/12

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

STATION	STRUCTURE NO.		TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC)								C.S. PIPE								R.C. PIPE CLASS III								R.C. PIPE CLASS IV								ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE)	QUANTITIES FOR DRAINAGE STRUCTURES *TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' x (1.3 X COL. 'B')		FRAME, GRATES, AND HOOD STANDARD 840.03	CONCRETE TRANSITIONAL SECTION			PIPE REMOVAL LIN. FT.	REMARKS									
							THICKNESS OR GAUGE		DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	.064	.064	.064	.064	.079	.109	.109	.120	.150	.180	.240	.300	.360	.420	.480	.120	.150	.180	.240	.300	.360	.420	.480	PER EACH (0' THRU 5.0')	5.0' THRU 10.0'	10.0' AND ABOVE		TYPE OF GRATE			DRAINAGE PIPE ELBOWS NO. & SIZE	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72											
	FROM	TO	E	F	G																																																			
SHEET 6 (Cont.)																																																								
-Y4-11+75.00	RT	611	763.8																													1		1																						
		611 612		759.5	759.4																																																			
-Y4-11+75.00	LT	612	763.8																															1		1																				
		612 613		759.4	754.2																																																			
-Y4-10+87.00	LT	613	757.2																																	1		1																		
		613 OUT		754.2	748.6																																																			
SHEET TOTALS							196																																																	
SHEET 3B TOTALS							1,710	116	28																																															
SHEET 3C TOTALS							1,192		40	32	220																																													
ROADWAY TOTALS							3,098	116	68	32	220																																													
SHEET RR4																																																								
-M1-10789+40	RT																																																							
-M1-10789+40	LT																																																							
SHEET RR5																																																								
-M1-10809+92	RT	504		777.4	775.6																																																			
SHEET RR6																																																								
-M1-10819+14	CL	601		769.0	767.0																																																			
-M1-10819+01	LT																																																							
SHEET RR7																																																								
-M1-10825+47	LT	701																																																						
-M1-10833+69	RT	702		760.5	757.7																																																			
SHEET RR8																																																								
-M1-10839+53	CL	801		755.8	754.0																																																			
SHEET RR10																																																								
-M1-10871+14	CL	1001		756.0	753.5																																																			
TRACK TOTALS																																																								
ROADWAY TOTALS							3,098	116	68	32	220																																													
TRACK TOTALS																																																								
PROJECT TOTALS							3,098	116	68	32	220																																													

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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

DRAINAGE SUMMARY

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 54 INCHES & OVER)

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

Table with columns for STATION, LOCATION (LT, RT, OR CLY), STRUCTURE NO., TOP ELEVATION, INVERT ELEVATION, SLOPE CRITICAL, CLASS III R.C. PIPE, BITUMINOUS COATED C.S. PIPE TYPE B, STRUCTURAL PLATE PIPE, REINFORCED ENDWALLS, FRAMES, GRATES & HOOD STANDARD 840.03, CONCRETE TRANSITIONAL SECTION, TYPE OF GRATE (E, F, G), DROP INLET, CATCH BASIN, 54" WELDED STEEL PIPE, 54" WELDED STEEL PIPE, 54" WELDED STEEL PIPE, TRAFFIC BEARING DROP INLET, STEEL GRATE AND FRAME STD. 840.37, REINF. CONC. FLARED END SECTIONS, CORR. STEEL FLARED END SECTIONS, CORR. STEEL ELBOWS NO. & SIZE, CONC. COLLARS CL. "B" C.Y. STD. 840.72, PIPE REMOVAL LIN. FT., ABBREVIATIONS (C.B., N.D.I., D.I., G.D.I., J.B., M.H., T.B.D.I., T.B.J.B.), and REMARKS.

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PROJECT TOTALS

12.1 4.0 286 42 42 1 1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF EARTHWORK
IN CUBIC YARDS

STATION	STATION	EXCAVATION		EMBANK. (+) %	BORROW	WASTE TOTAL
		TOTAL UNCLASS.	UNDERCUT			
-L- 10+16.99	-L- 11+15.25 (Face of Wall)			20,519	20,519	
-Y1- 10+92.00 (Incl. -Y3B-)	-Y1- 44+10.00 (Incl. -Y4-)	3,069	2,912	256,555	253,486	2,912
-Y3- 10+85.00	-Y3- 13+65.65	1		1,206	1,205	
-Y4- 10+50.00	-Y4- 11+78.11	161		25		136
-Y5- 10+90.00	-Y5- 12+38.39	9		117	108	
	SUBTOTAL	3,240	2,912	278,423	275,319	3,048
-L- 12+75.00 (End Bridge)	-L- 21+15.00	563	1,503	17,180	16,617	1,503
-Y2- 10+75.00	-Y2- 15+99.67	152		2,922	2,770	
-Y2- 16+47.29	-Y2- 21+60.00	70	524	2,977	2,907	524
-Y6- 11+27.35	-Y6- 12+87.15	92		22		70
-DR1- 10+31.23	-DR1- 12+35.00	28		420	392	
	SUBTOTAL	905	2,027	23,521	22,686	2,097
-M1- 10786+00.00	-M1- 10816+00.00	29,959	1,495	30,137	178	1,495
-M1- 10816+00.00	-M1- 10846+00.00	6,417		4,955		1,462
-M1- 10846+00.00	-M1- 10849+00.00	419		58		362
	SUBTOTAL	36,795	1,495	35,150	178	3,318
-M1- 10786+00.00	-M1- 10816+00.00	22,462	978	14		23,426
-M1- 10816+00.00	-M1- 10846+00.00	14,365		1,404		12,961
	SUBTOTAL	36,827	978	1,418		36,387
-M1- 10849+00.00	-M1- 10872+00.00	6,764		515		6,249
	SUBTOTAL	6,764		515		6,249
TOTAL		84,531	7,412	339,027	298,183	51,099
LOSS DUE TO CLEARING & GRUBBING		-75			75	
ADDITIONAL UNDERCUT			3,300			3,300
WASTE IN LIEU OF BORROW					-18,144	-18,144
UNSUITABLE EXCAVATION		25		29	29	25
PROJECT TOTAL		84,481	10,712	339,056	280,143	36,280
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT					14,007	
GRAND TOTAL		84,481	10,712	339,056	294,150	36,280
SAY		84,500	10,800		294,200	

Approximate quantities only. Unclassified excavation, fine grading, clearing and grubbing, breaking of existing pavement and removal of existing pavement will be paid for at the lump sum price for "Grading".

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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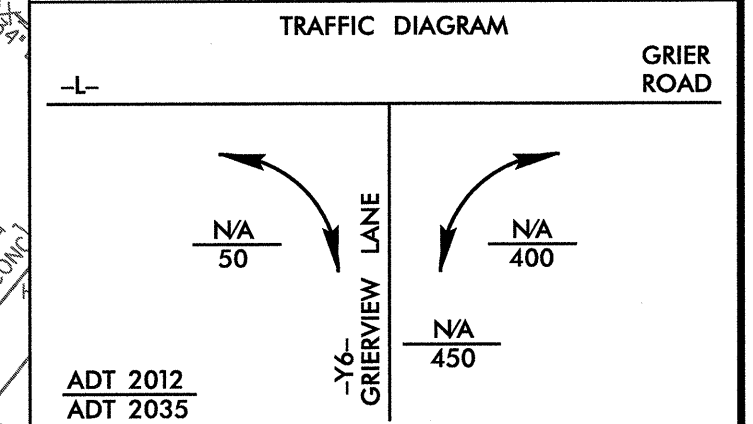
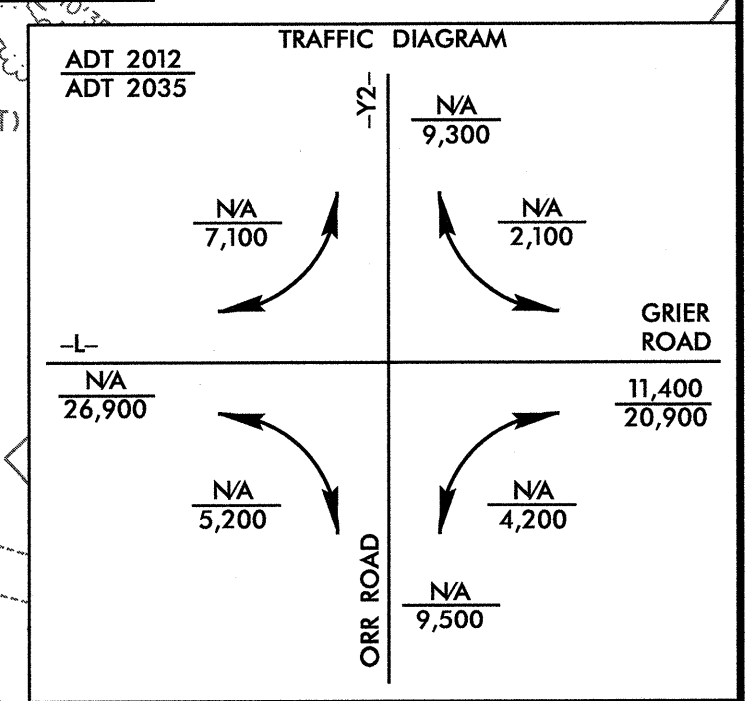
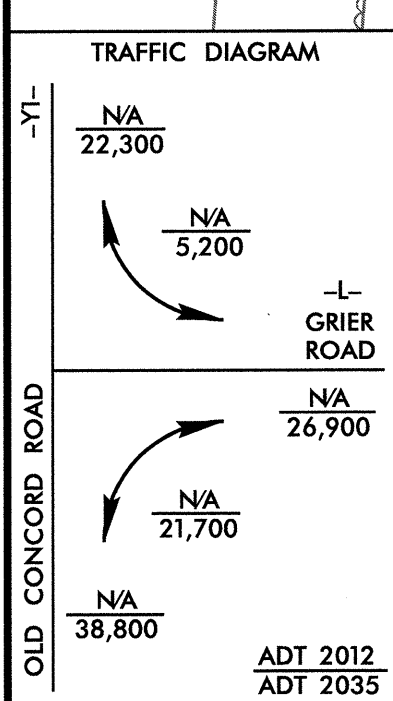
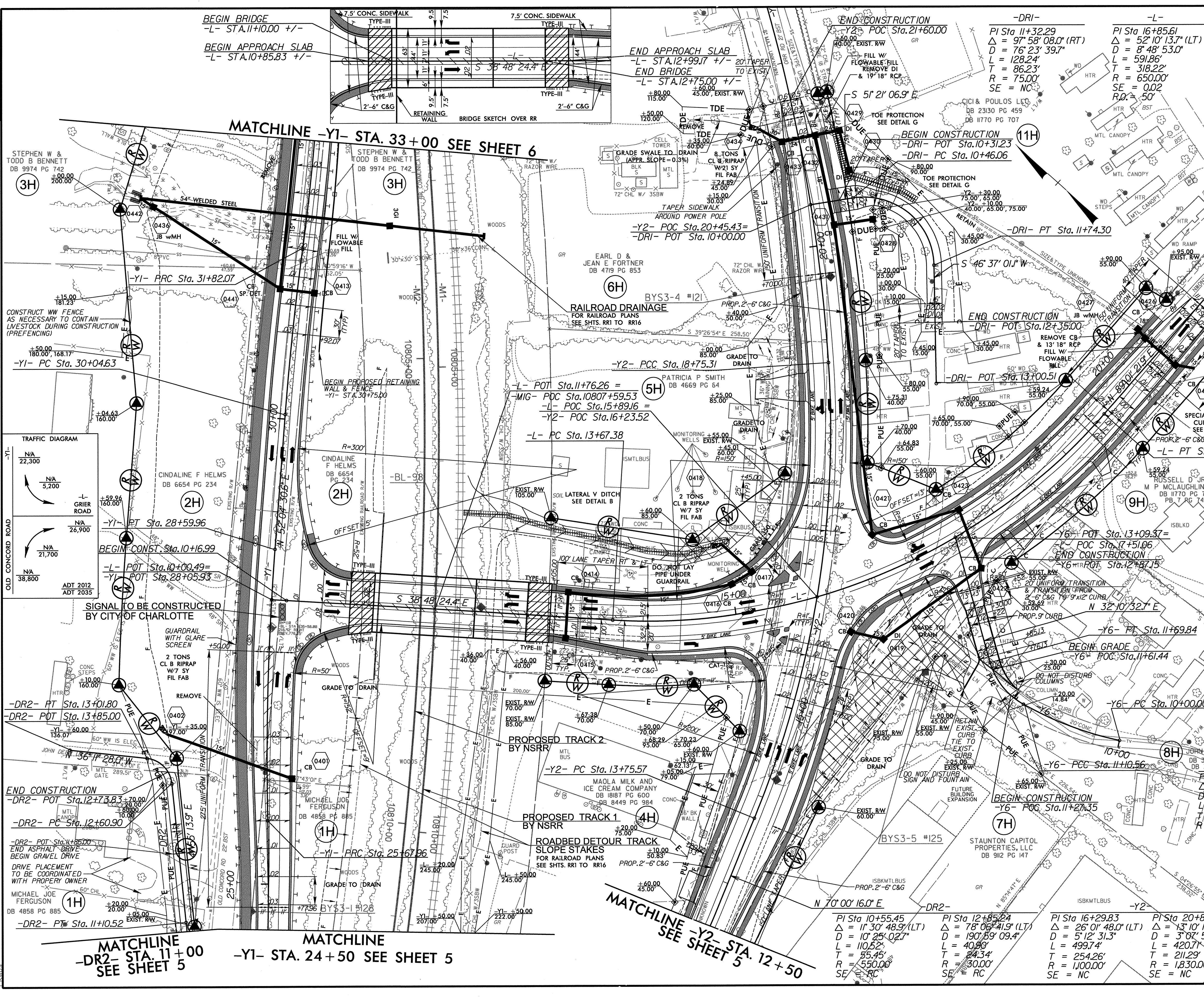
**SUMMARY OF
BRIDGE WAITING PERIODS**

Bridge Description	End Bent/ Bent No.	MONTHS
Bridge on Grier Rd. (-L-) over NCRR/NS RR (-M1G-, -M2G-)	1	1
Bridge on Grier Rd. (-L-) over NCRR/NS RR (-M1G-, -M2G-)	2	1

**SUMMARY OF
SETTLEMENT GAUGES**

Gauge No.	LINE	Approx. Station	Approx. Offset
1	-L-	10+85	0
2	-L-	13+00	0
TOTAL GAUGES (EACH):			2

PROJECT REFERENCE NO. P-5208H	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 29470 BRANDON J. MCINNIS	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 27434 MATTHEW J. COOK



FOR -L- PROFILE SEE SHT. 7
 FOR -Y1- PROFILE SEE SHT. 7 & 8
 FOR -Y2- PROFILE SEE SHT. 9
 FOR -Y6- PROFILE SEE SHT. 10
 FOR -DRI- PROFILE SEE SHT. 10
 FOR -DR2- PROFILE SEE SHT. 10
 FOR DITCH DETAILS SEE SHT. 2D
 FOR STRUCTURE PLANS SEE SHTS. S-1 THRU S-36
 FOR RETAINING WALL DETAILS SEE SHTS. W-1 & W-5

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MATCHLINE -DR2- STA. 11+00 SEE SHEET 5

MATCHLINE -Y1- STA. 24+50 SEE SHEET 5

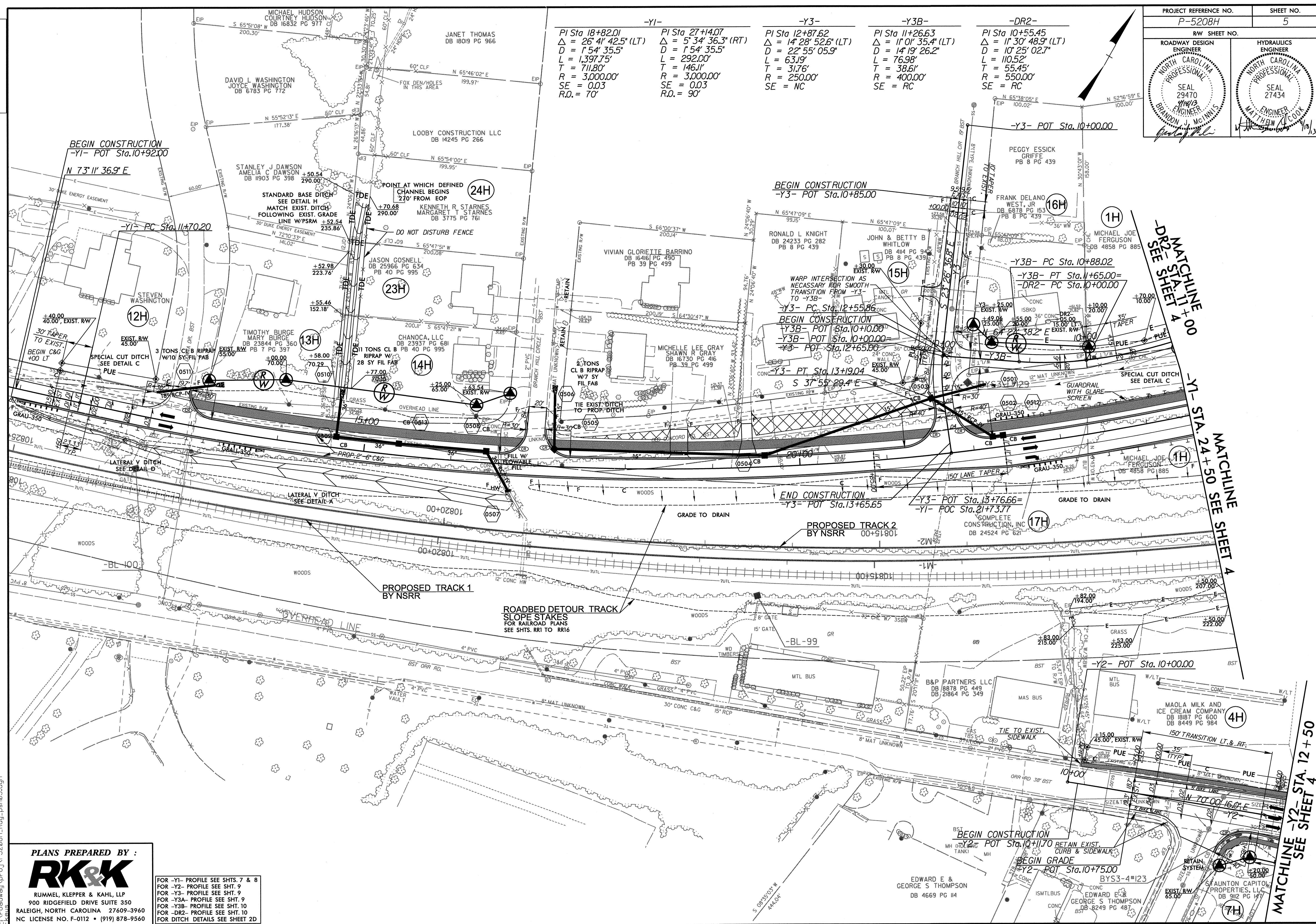
MATCHLINE -Y2- STA. 12+50 SEE SHEET 5

PI Sta 10+55.45 Δ = 11° 30' 48.9" (LT) D = 10' 25' 02.7" L = 110.52' T = 55.45' R = 550.00' SE = RC	PI Sta 12+85.24 Δ = 78° 06' 41.9" (LT) D = 190' 89' 09.4" L = 49.97' T = 24.34' R = 30.00' SE = RC	PI Sta 16+29.83 Δ = 26° 01' 48.0" (LT) D = 5' 12' 31.3" L = 42.07' T = 25.26' R = 1,100.00' SE = NC	PI Sta 20+86.60 Δ = 13° 10' 19.6" (LT) D = 3' 07' 51.3" L = 42.07' T = 21.29' R = 1,830.00' SE = NC
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PROJECT REFERENCE NO. P-5208H	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 29470 BRANDON J. MCINNIS	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 27434 WALTER W. COOK

-Y1- PI Sta 18+82.01 $\Delta = 26' 41" 42.5"$ (LT) $D = 1' 54' 35.5"$ $L = 1,397.75'$ $T = 711.80'$ $R = 3,000.00'$ $SE = 0.03$ $R.O. = 70'$	-Y1- PI Sta 27+14.07 $\Delta = 5' 34' 36.3"$ (RT) $D = 1' 54' 35.5"$ $L = 292.00'$ $T = 146.1'$ $R = 3,000.00'$ $SE = 0.03$ $R.O. = 90'$	-Y3- PI Sta 12+87.62 $\Delta = 14' 28' 52.6"$ (LT) $D = 22' 55' 05.9"$ $L = 63.19'$ $T = 31.76'$ $R = 250.00'$ $SE = NC$	-Y3B- PI Sta 11+26.63 $\Delta = 11' 01' 35.4"$ (LT) $D = 14' 19' 26.2"$ $L = 76.98'$ $T = 38.61'$ $R = 400.00'$ $SE = RC$	-DR2- PI Sta 10+55.45 $\Delta = 11' 30' 48.9"$ (LT) $D = 10' 25' 02.7"$ $L = 110.52'$ $T = 55.45'$ $R = 550.00'$ $SE = RC$
--	--	---	--	---



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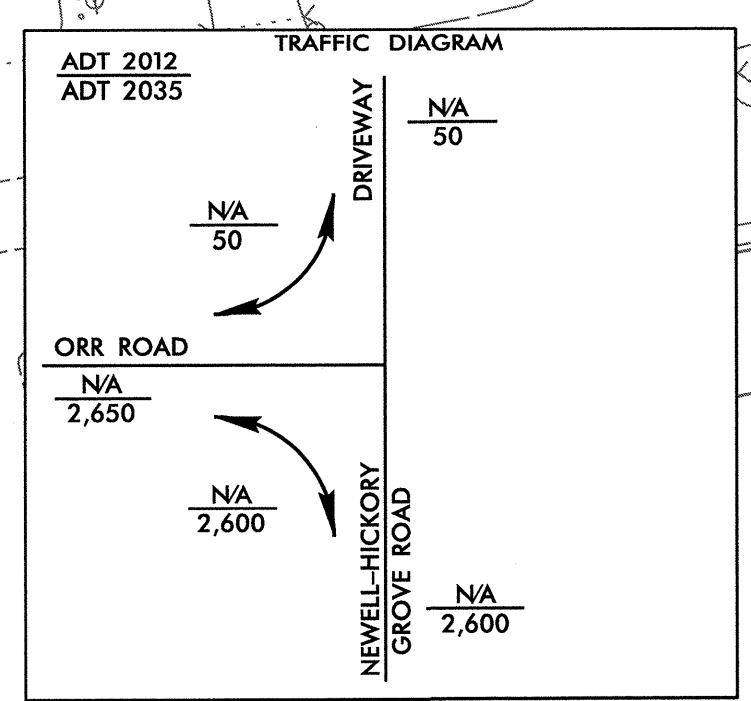
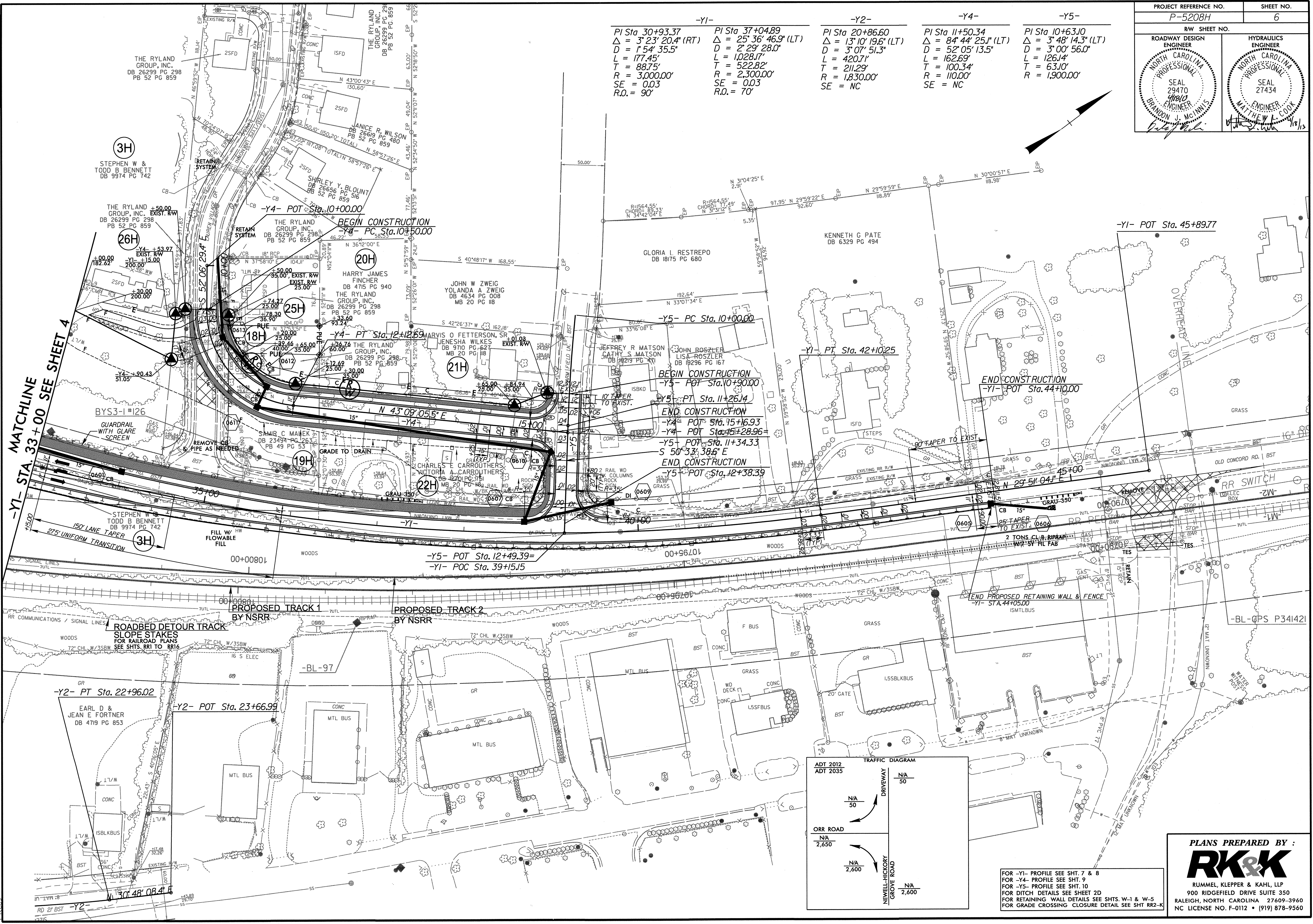
FOR -Y1- PROFILE SEE SHTS. 7 & 8
 FOR -Y2- PROFILE SEE SHT. 9
 FOR -Y3- PROFILE SEE SHT. 9
 FOR -Y3A- PROFILE SEE SHT. 9
 FOR -Y3B- PROFILE SEE SHT. 10
 FOR -DR2- PROFILE SEE SHT. 10
 FOR DITCH DETAILS SEE SHEET 2D

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PROJECT REFERENCE NO. P-5208H	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 29470 4/18/10 ENGINEER BRANDON J. MCINNIS	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 27434 ENGINEER MATTHEW L. COOK

-Y1-	-Y2-	-Y4-	-Y5-
PI Sta 30+93.37 Δ = 3° 23' 20.4" (RT) D = 1' 54' 35.5" L = 177.45' T = 88.75' R = 3,000.00' SE = 0.03 R.O. = 90'	PI Sta 37+04.89 Δ = 25° 36' 46.9" (LT) D = 2' 29' 28.0" L = 1,028.17' T = 522.82' R = 2,300.00' SE = 0.03 R.O. = 70'	PI Sta 20+86.60 Δ = 13° 10' 19.6" (LT) D = 3' 07' 51.3" L = 420.71' T = 211.29' R = 1,830.00' SE = NC	PI Sta 11+50.34 Δ = 84° 44' 25.1" (LT) D = 52' 05' 13.5" L = 162.69' T = 100.34' R = 110.00' SE = NC
PI Sta 10+63.10 Δ = 3° 48' 14.3" (LT) D = 3' 00' 56.0" L = 126.14' T = 63.10' R = 1,900.00'			



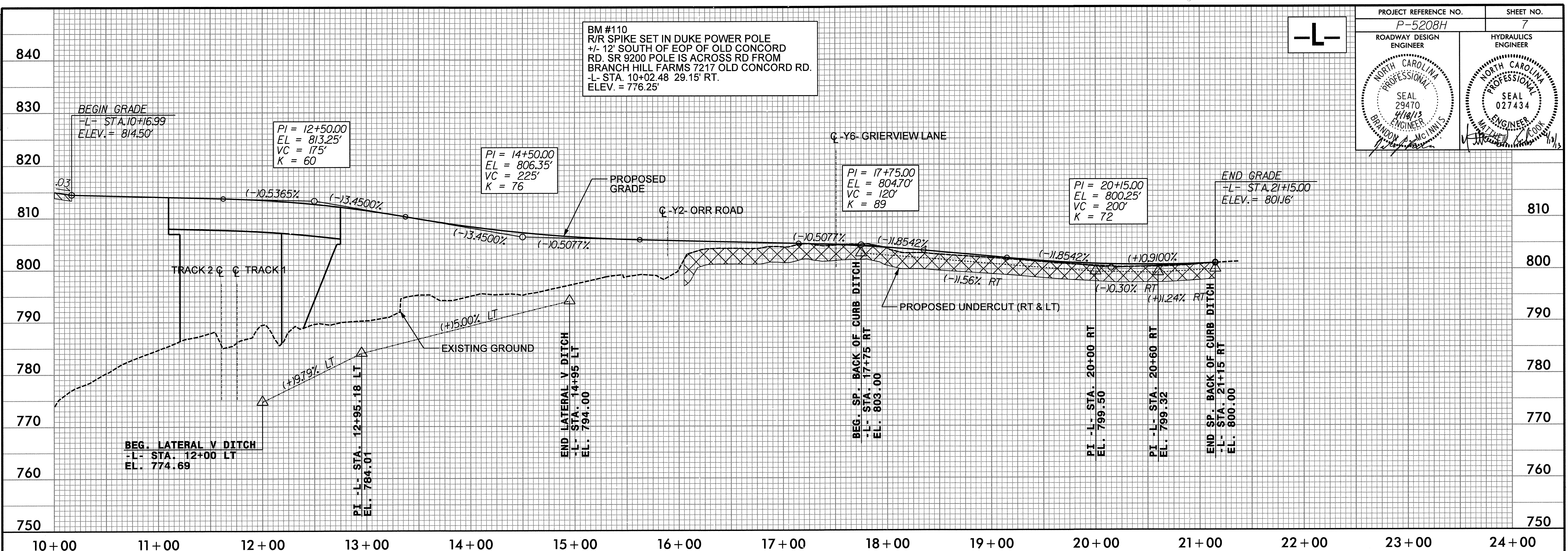
FOR -Y1- PROFILE SEE SHT. 7 & 8
 FOR -Y4- PROFILE SEE SHT. 9
 FOR -Y5- PROFILE SEE SHT. 10
 FOR DITCH DETAILS SEE SHEET 2D
 FOR RETAINING WALL DETAILS SEE SHTS. W-1 & W-5
 FOR GRADE CROSSING CLOSURE DETAIL SEE SHT RR2-K

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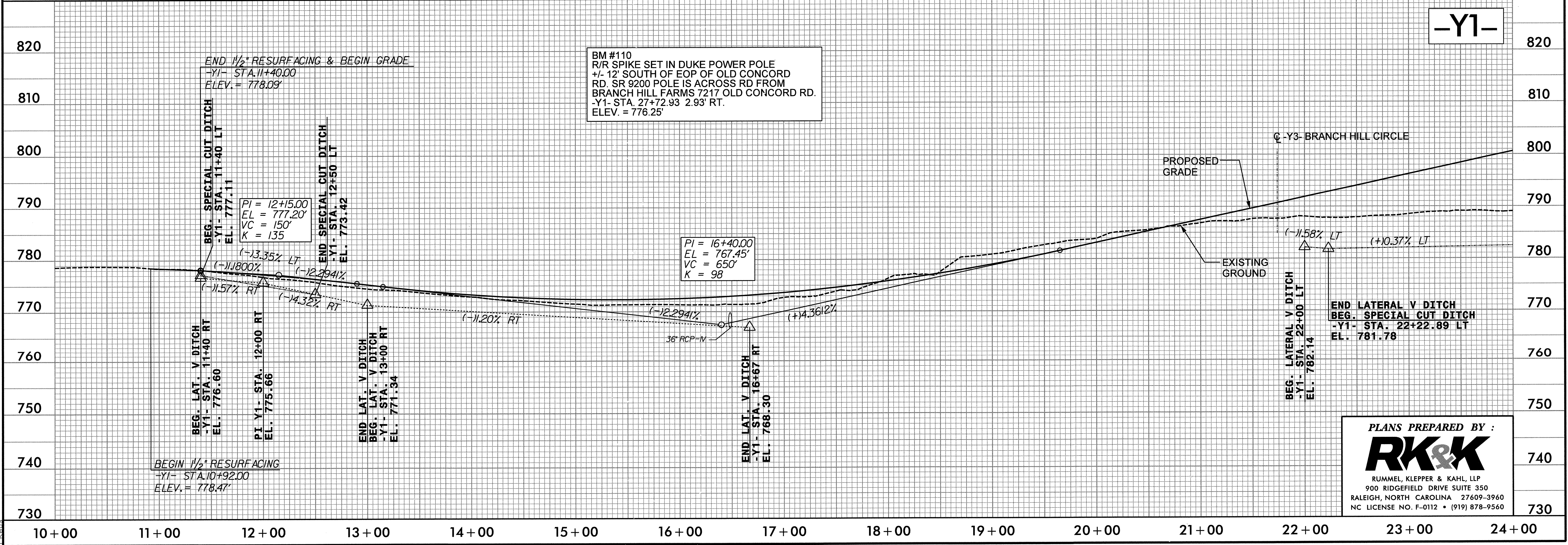
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PROJECT REFERENCE NO. P-5208H	SHEET NO. 7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



BM #110
R/R SPIKE SET IN DUKE POWER POLE
+/- 12' SOUTH OF EOP OF OLD CONCORD
RD. SR 9200 POLE IS ACROSS RD FROM
BRANCH HILL FARMS 7217 OLD CONCORD RD.
-L- STA. 10+02.48 29.15' RT.
ELEV. = 776.25'

-L-



BM #110
R/R SPIKE SET IN DUKE POWER POLE
+/- 12' SOUTH OF EOP OF OLD CONCORD
RD. SR 9200 POLE IS ACROSS RD FROM
BRANCH HILL FARMS 7217 OLD CONCORD RD.
-Y1- STA. 27+72.93 2.93' RT.
ELEV. = 776.25'

-Y1-

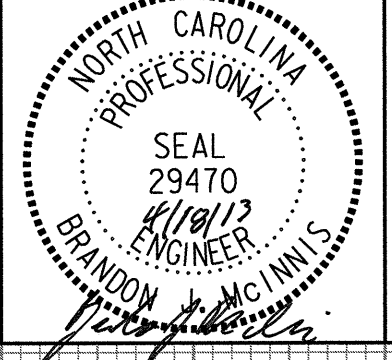
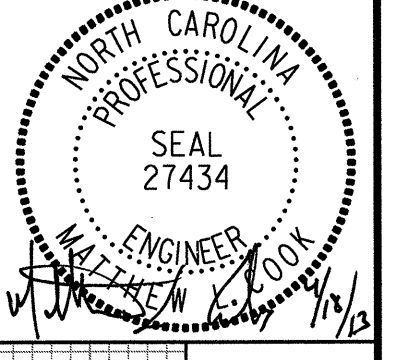
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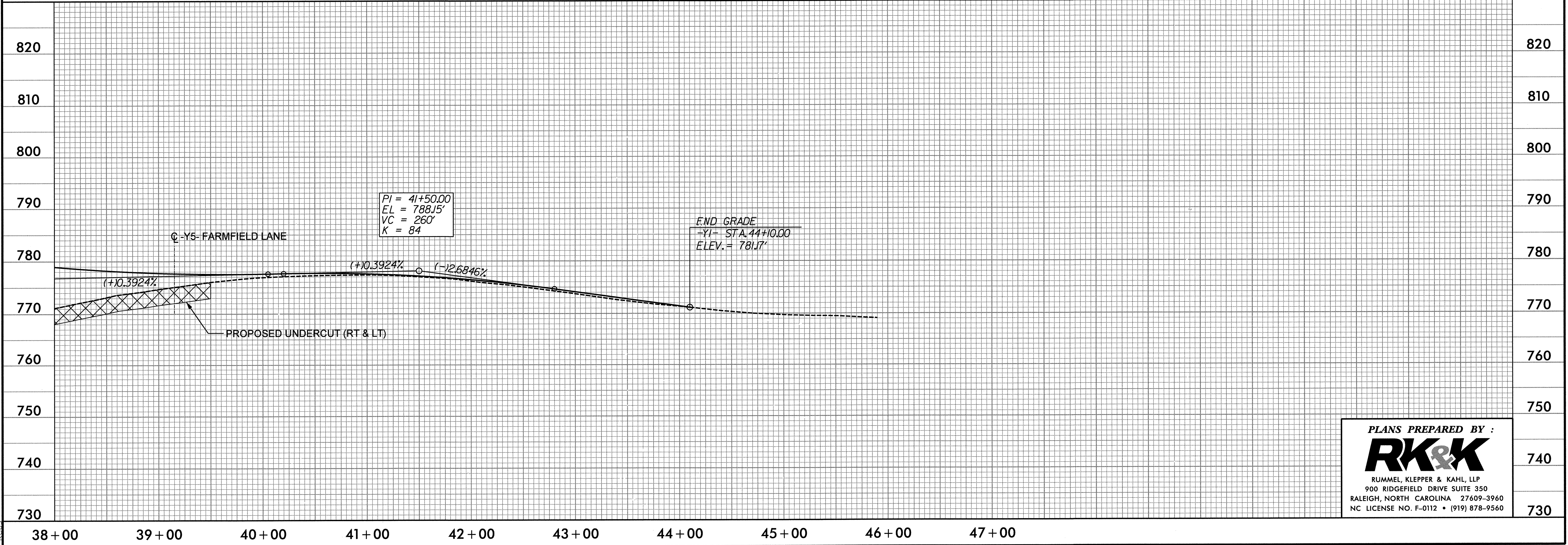
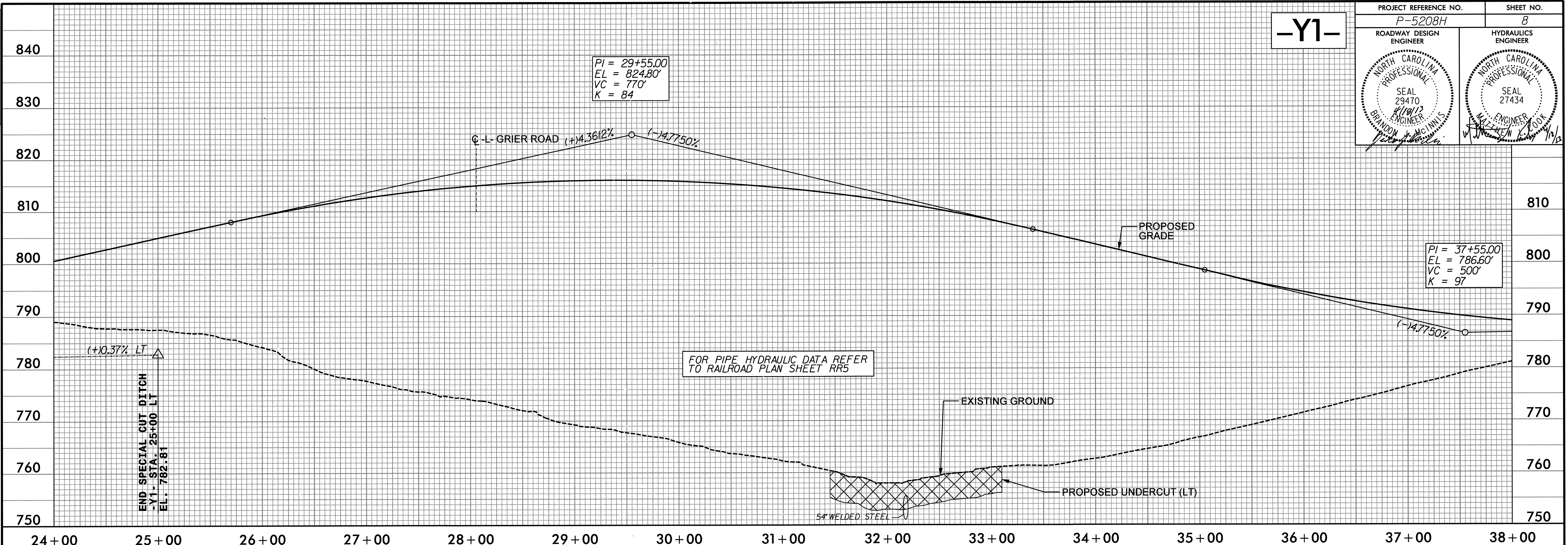
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-Y1-

PROJECT REFERENCE NO. P-5208H	SHEET NO. 8
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	



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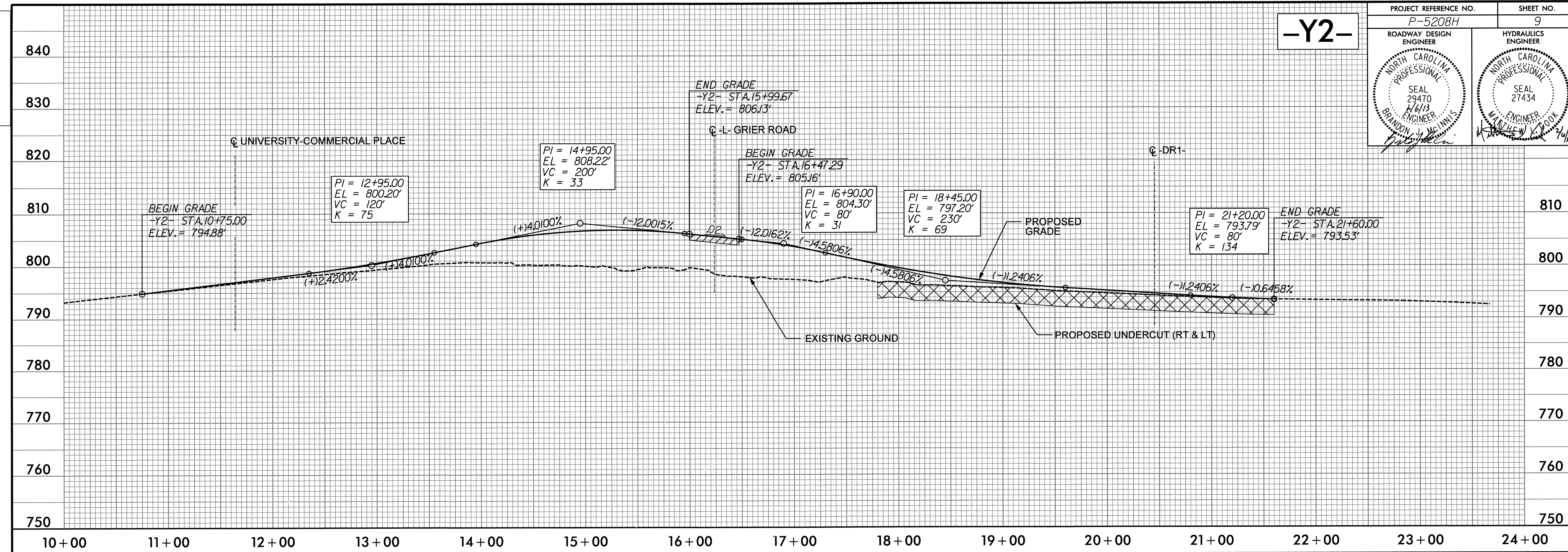
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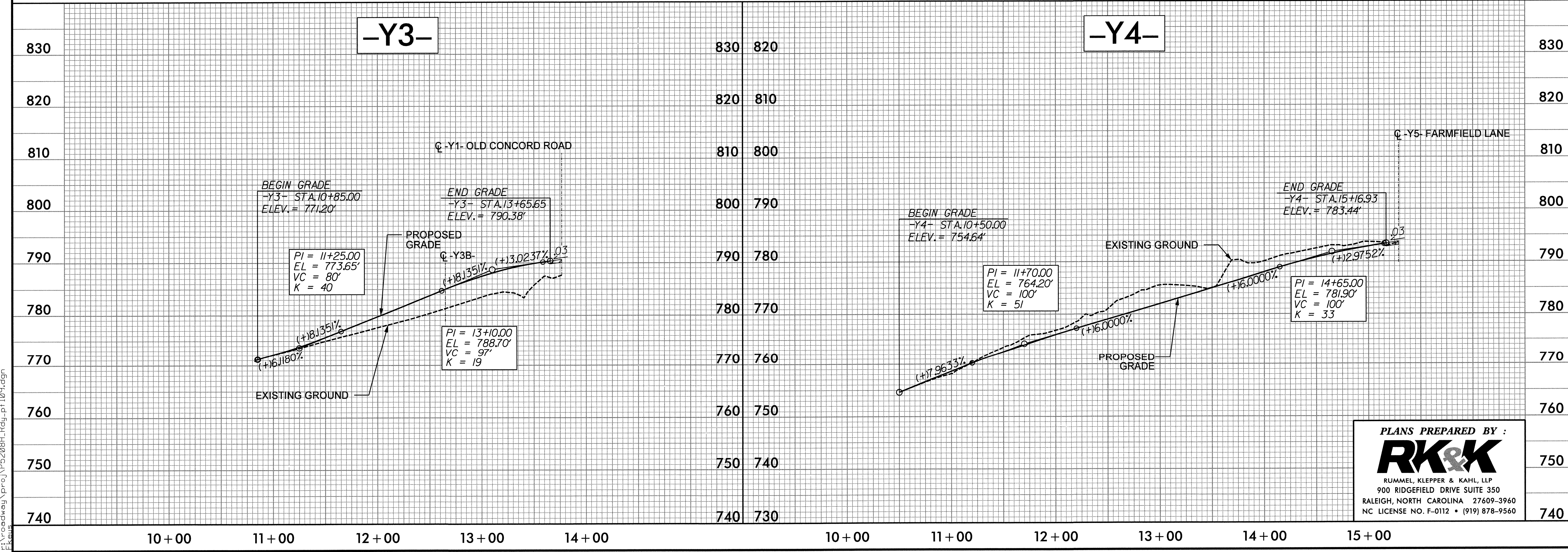
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PROJECT REFERENCE NO. P-5208H	SHEET NO. 9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-Y3-

-Y4-



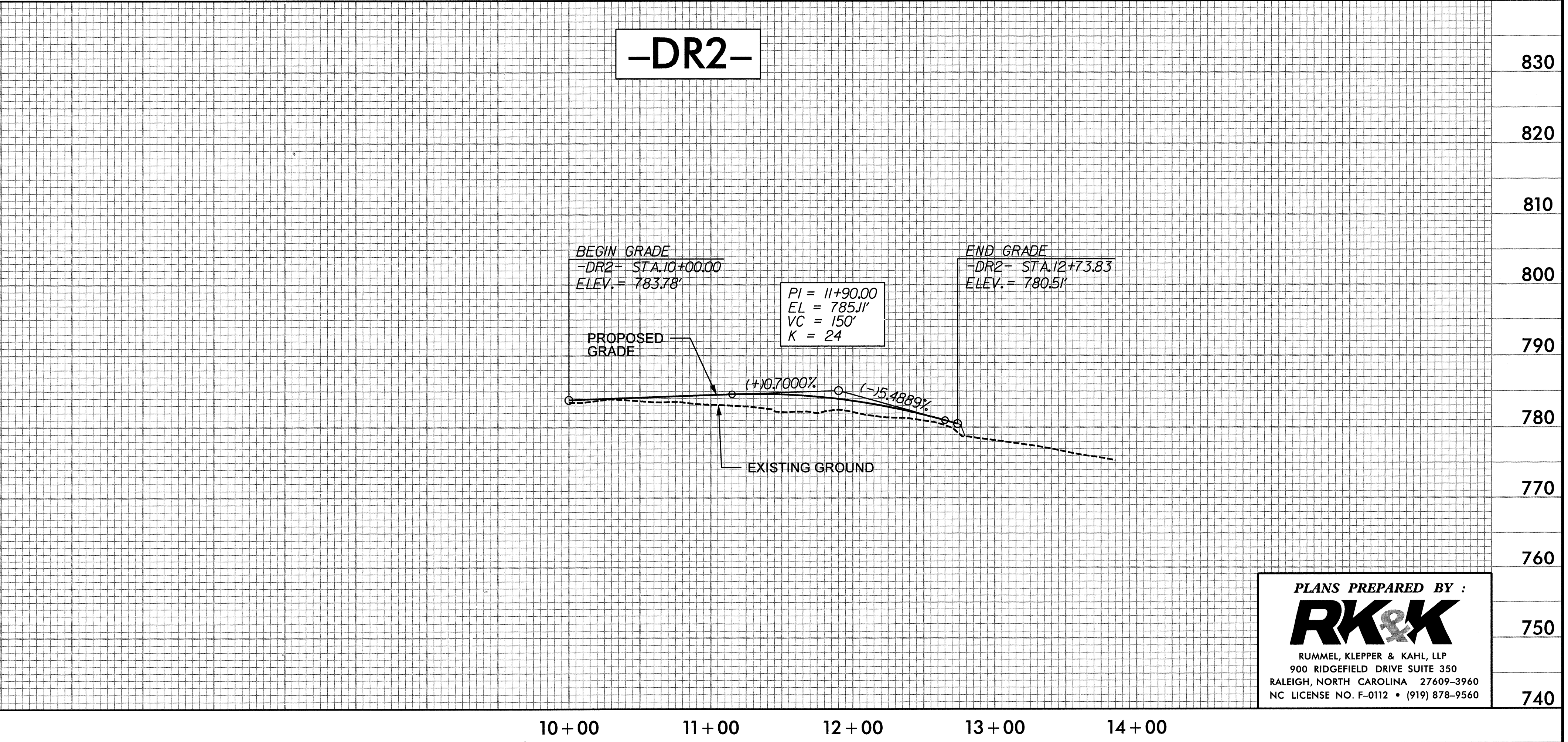
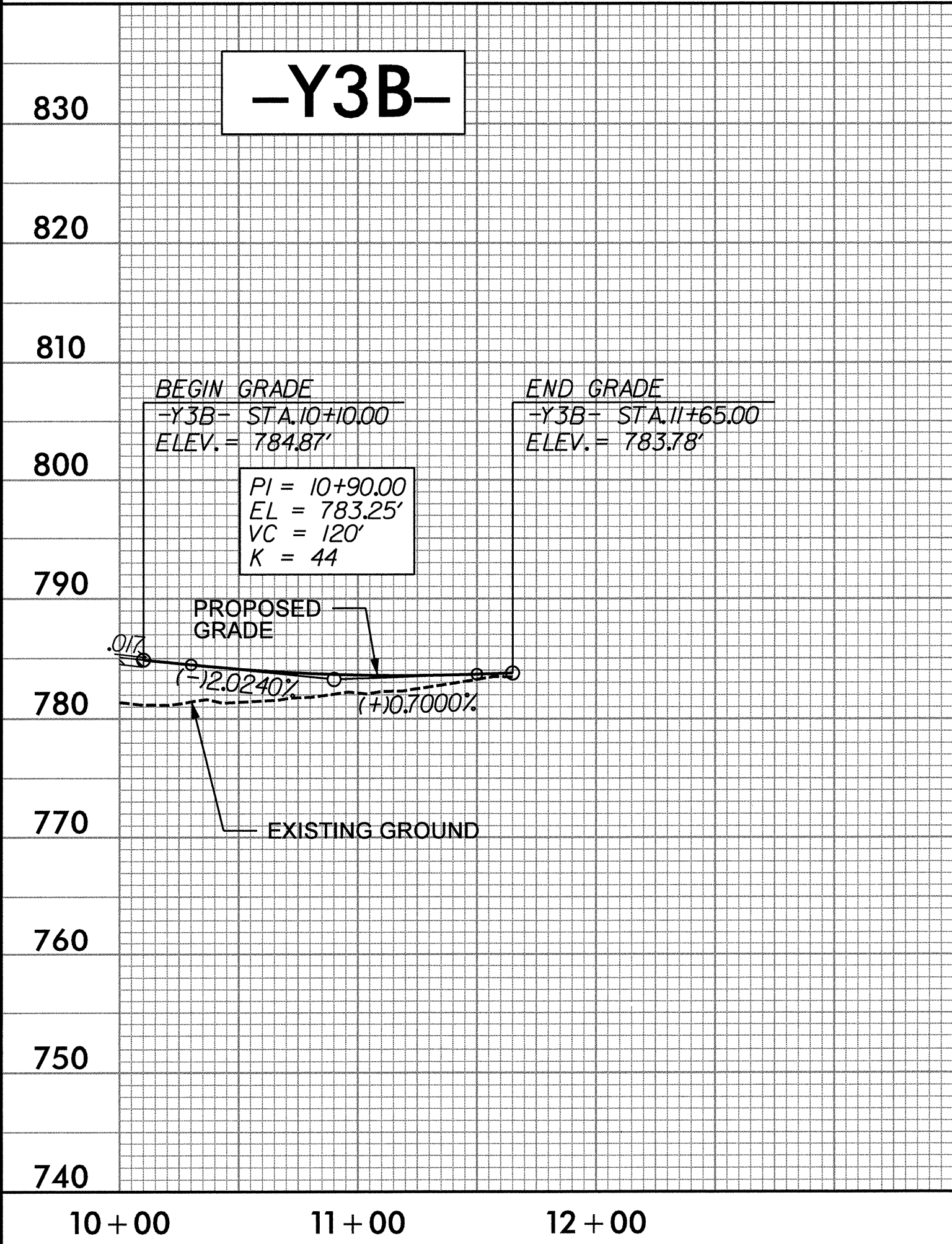
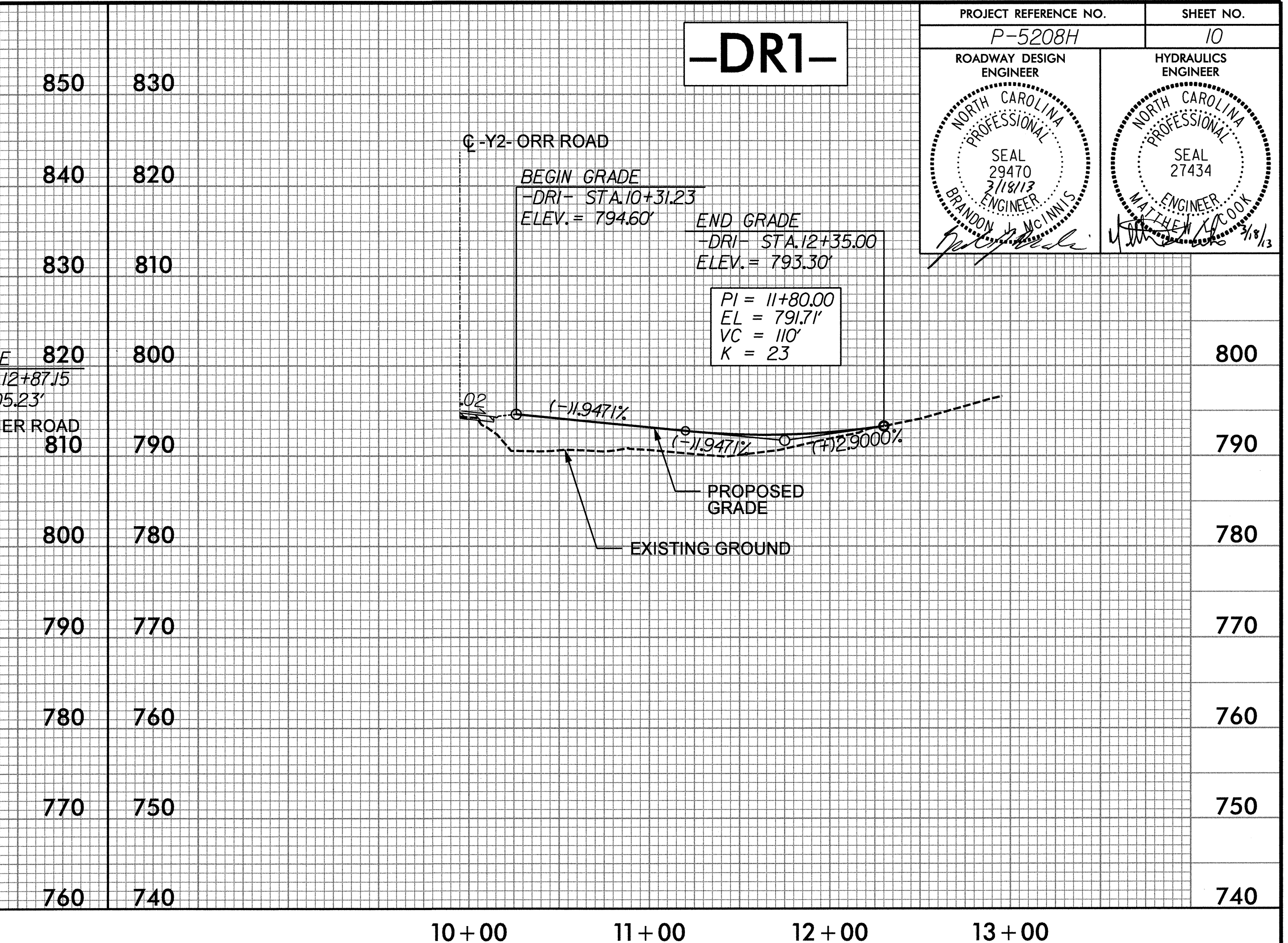
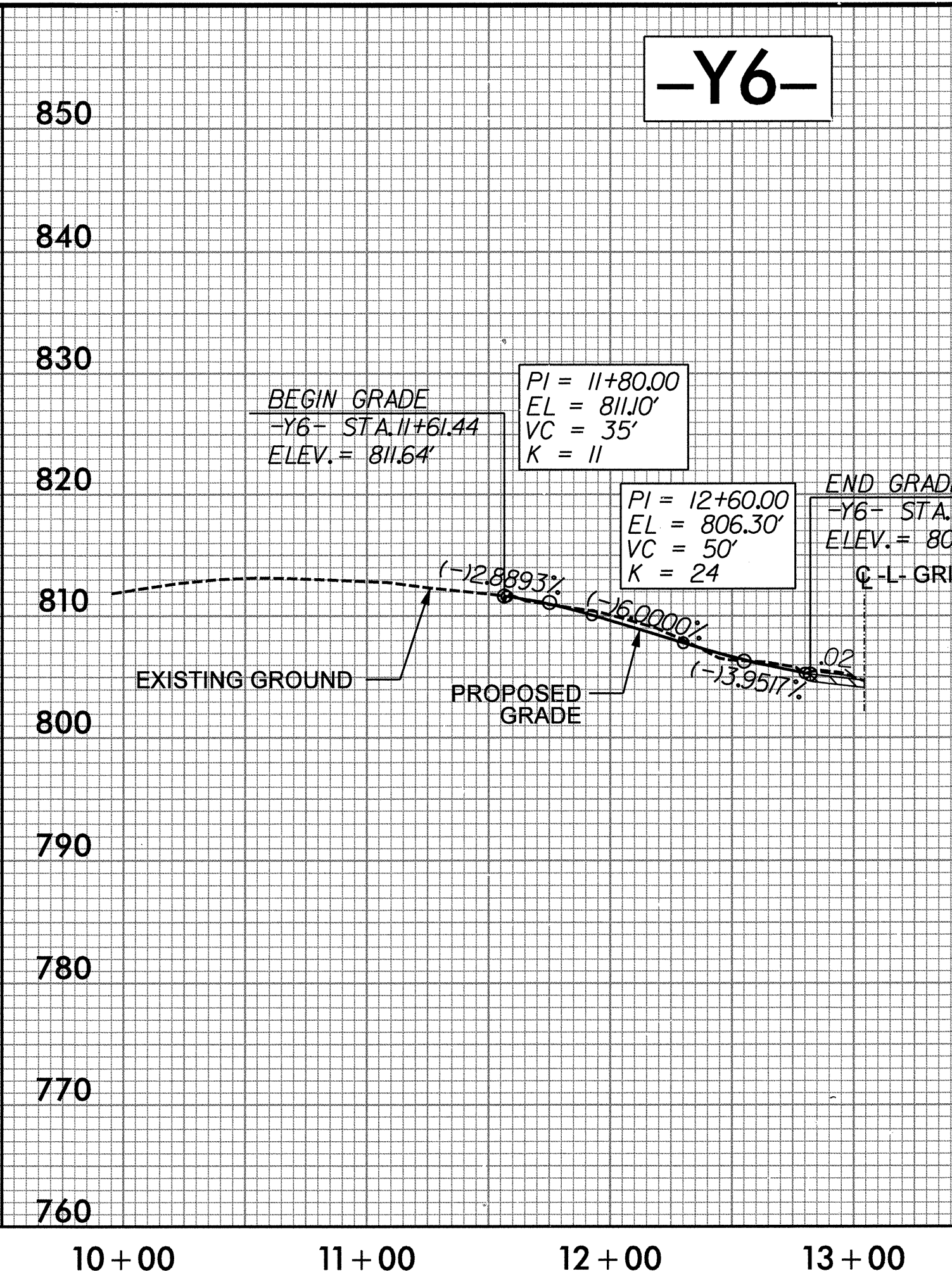
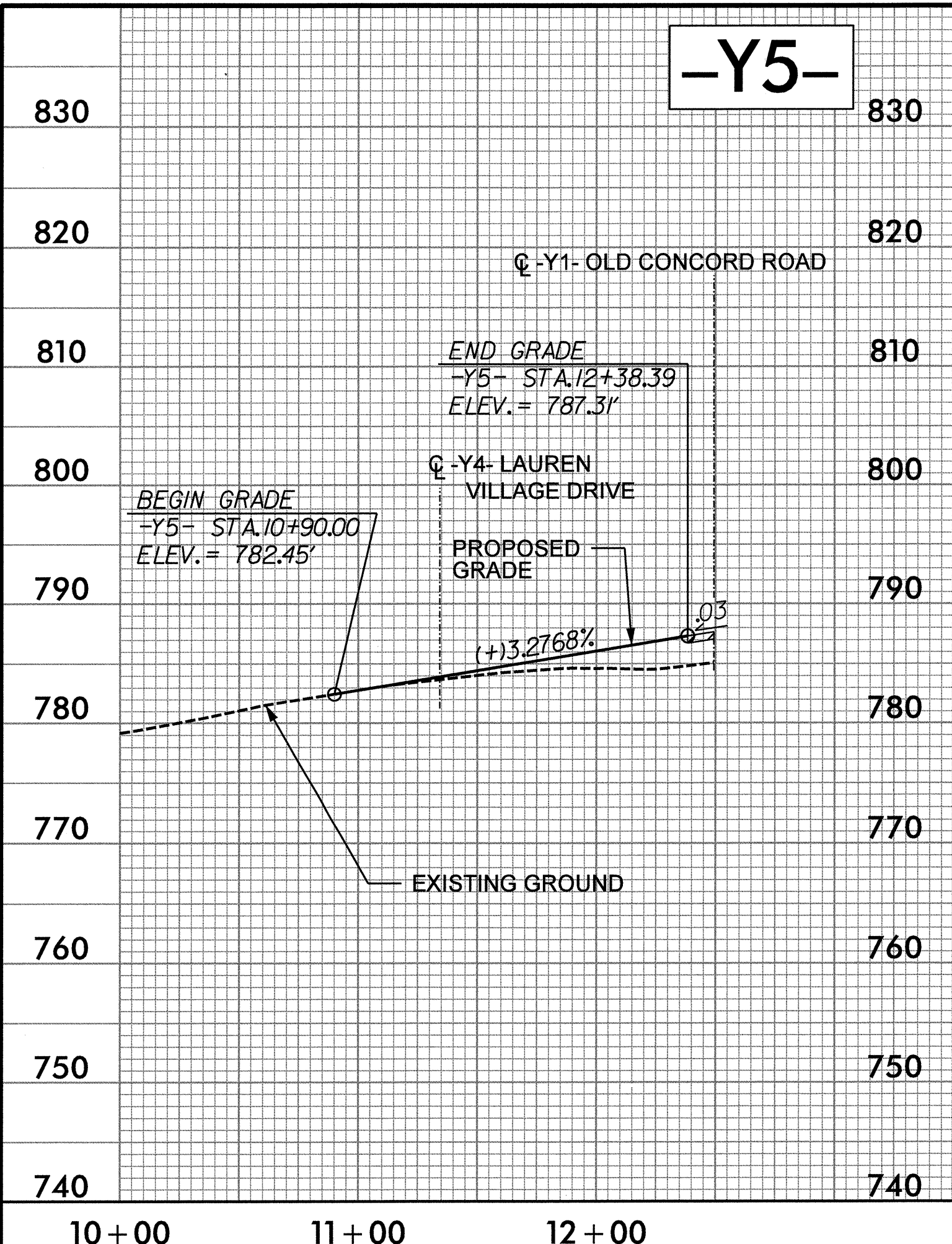
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PROJECT REFERENCE NO. P-5208H	SHEET NO. 10
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 29470 3/18/13 ENGINEER BRANDON J. MCINNIS	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 27434 ENGINEER WALTER K. COOK



3/1/2013
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