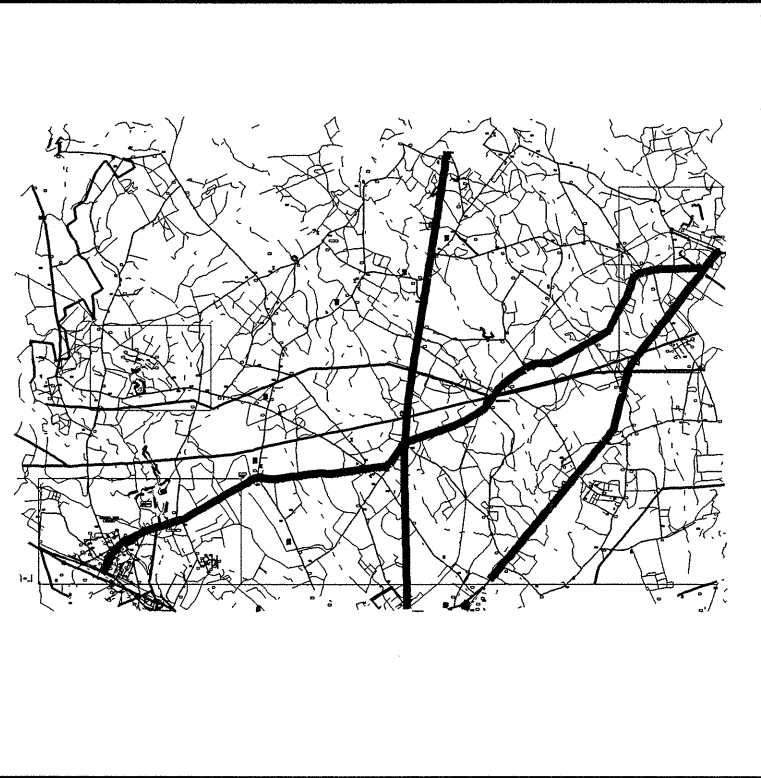


PROJECT: 37626 & 39211 (PART I & II)

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



PROJECT LOCATION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

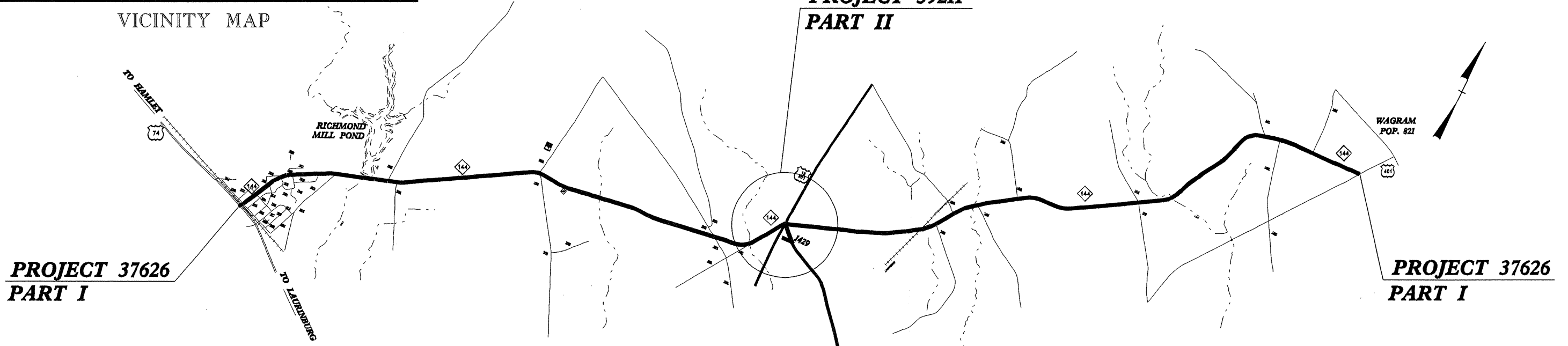
SCOTLAND COUNTY

LOCATION: NC 144 FROM US 74 TO US 401 AND INTERSECTION OF NC 144 AT US 15-501 & SR 1429

TYPE OF WORK: WIDENING, MILLING, REALIGNMENT, RESURFACING, CONCRETE WORK, PAVEMENT MARKINGS & MARKERS, AND EROSION CONTROL

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	37626, 39211	1	37
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
37626, PART I		CONSTRUCTION	
39211, PART II		CONSTRUCTION	

VICINITY MAP

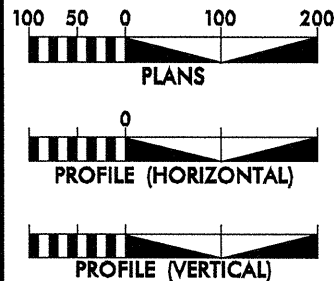


PROJECT 37626 PART I

PROJECT 39211 PART II

PROJECT 37626 PART I

GRAPHIC SCALES



RIGHT OF WAY DATE: _____

LETTING DATE: JUNE 20, 2006

DESIGN DATA

ADT 2004 = 13,000
ADT 2024 = _____
DHV = %
D = %
T = 5 %
V = MPH

2002 STANDARDS SPECIFICATION

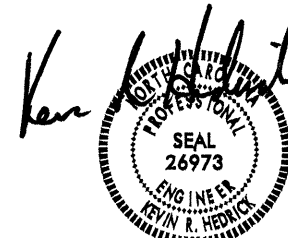
Prepared In the Office of:

**DIVISION OF HIGHWAYS
DIVISION 8 DESIGN & CONSTRUCT UNIT
ABERDEEN NC
DIVISION 8 DISTRICT OFFICE
ROCKINGHAM NC**

PROJECT LENGTH

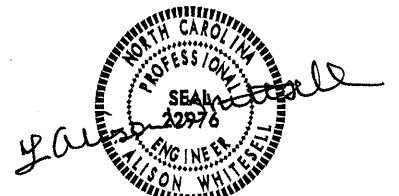
ROADWAY: 11.92 MILES
STRUCTURE: _____ MILES
TOTAL: 11.92 MILES

DISTRICT ENGINEER



5-3-06

DIVISION PROJECT MANAGER



5/3/06

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL SYMBOLS

*S.U.E = SUBSURFACE UTILITY ENGINEER

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	-----
Exist. Cable Guiderail	-----
Prop. Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	▨

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 R/W Marker (Iron Pin & Cap)	-----▲-----
Prop. Right of Way Line with Proposed (Concrete or Granite) R/W Marker	-----⊙-----
Exist. Control of Access Line	-----⊙-----
Prop. Control of Access Line	-----⊙-----
Exist. Easement Line	-----E-----
Prop. Temp. Construction Easement Line	-----E-----
Prop. Temp. Drainage Easement Line	-----TDE-----
Prop. Perm. Drainage Easement Line	-----PDE-----

HYDROLOGY

Stream or Body of Water	-----
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	□
Cable TV Pedestal	□
Hydrant	◆
Satellite Dish	∠
Exist. Water Valve	⊗
Sewer Clean Out	⊕
Power Manhole	⊙
Telephone Booth	⊞
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	-----
Designated Water Line (S.U.E.*)	-----
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.*)	-----PUTL-----
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	⊞
Parcel Number	⊞
Fence Line	-----WW & ISBW-----
Existing Wetland Boundaries	-----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 U/G 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	-----

RAILROADS

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

\$DATE\$ \$TIME\$ \$FILE\$
 \$DATE\$ \$TIME\$ \$FILE\$

PROJECT NO.	SHEET NO.
PART I, 37626 AND PART II, 39211	1-B

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH MI	WIDTH FT	INCIDENTAL GRADING FOR GUARDRAIL SY	GRADING (LUMP SUM) EA	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES TON	15" SIDE DRAIN PIPE LF	15" RC PIPE CULVERTS, CLASS III LF	18" RC PIPE CULVERT, CLASS III LF	PIPE REMOVAL LF	AGGREGATE BASE COURSE TONS	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	0" TO 3" MILLING SY	INCIDENTAL MILLING SY
PART I, 37626	Scotland	1	NC 144	FROM PVMT. JOINT NORTH OF RR AT US 74 TO SR 1314	1	0.18	42												233
PART I, 37626	Scotland	2	NC 144	FROM SR 1314 TO US 15-501	2	5.50	24	611.2								200	11.00	1,067	133
PART I, 37626	Scotland	3	NC 144	FROM US 15-501 TO US 401	3	6.24	26	1,722.4		7	60			60		300	12.48	2,750	578
TOTAL FOR PROJ NO. 37626						11.92		2,333.6		7	60			60		500	23.48	3,817	944
PART II, 39211	Scotland	1	US 501	AT NC 144 & SR 1429	1,3,4	0.25	27		0.25	1		8				20			150
PART II, 39211	Scotland	2	SR 1429	FROM 0.17 MI. EAST OF US 501 TO US 501	2	0.17	20		0.75	9		60	84		823				50
TOTAL FOR PROJ NO. 39211						0.42			1.00	10		68	84		823	20			200
GRAND TOTAL						12.34		2,333.6	1.00	17	60	68	84	60	823	520	23.48	3,817	1,144

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	BASE COURSE, TYPE B25.0B TONS	INTERMEDIATE COURSE, TYPE I19.0B TONS	SURFACE COURSE, TYPE S9.5B TONS	PG 64-22 PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	RIGHT OF WAY MARKER EA	PIPE COLLAR CY	MASONRY DRAINAGE STRUCTURE EA	2'-6" CURB & GUTTER LF	RETROFIT EXISTING WHEELCHAIR RAMP EA	WHEELCHAIR RAMP EA	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED) SY	CONVERT DI TO JB EA
PART I, 37626	Scotland	1	NC 144	FROM PVMT. JOINT NORTH OF RR AT US 74 TO SR 1314	1			485	29	10				80	5	1		1
PART I, 37626	Scotland	2	NC 144	FROM SR 1314 TO US 15-501	2			14,900	894	25								
PART I, 37626	Scotland	3	NC 144	FROM US 15-501 TO US 401	3	7,580		17,041	1,348	25								
TOTAL FOR PROJ NO. 37626						7,580		32,426	2,271	60				80	5	1		1
PART II, 39211	Scotland	1	US 501	AT NC 144 & SR 1429	1,3,4	102	76	467	36		8	1	1				194	
PART II, 39211	Scotland	2	SR 1429	FROM 0.17 MI. EAST OF US 501 TO US 501	2		399	196	31		11							
TOTAL FOR PROJ NO. 39211						102	475	663	67		19	1	1				194	
GRAND TOTAL						7,682	475	33,089	2,338	60	19	1	1	80	5	1	194	1

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	ADJUSTMENT OF MANHOLES EA	ADJUSTMENT OF METER OR VALVE BOX EA	STEEL BEAM GUARDRAIL LF	ADDITIONAL GUARDRAIL POSTS EA	GUARDRAIL ANCHOR UNITS, TYPE III MOD. EA	GUARDRAIL ANCHOR UNIT, TYPE 350 EA	GUARDRAIL ANCHOR UNIT, TYPE III EA	TEMPORARY SILT FENCE LF	EROSION CONTROL STONE, CLASS B TON	SEDIMENT CONTROL STONE TON	SILT EXCAVATION CY	MATTING (EROSION CONTROL) SY	SEED & MULCHING AC
PART I, 37626	Scotland	1	NC 144	FROM PVMT. JOINT NORTH OF RR AT US 74 TO SR 1314	1	2	2											
PART I, 37626	Scotland	2	NC 144	FROM SR 1314 TO US 15-501	2			75	5		8	4	400					10.66
PART I, 37626	Scotland	3	NC 144	FROM US 15-501 TO US 401	3			400	5	2	20	4	600	200	120			12.10
TOTAL FOR PROJ NO. 37626						2	2	475	10	2	28	8	1,000	200	120			22.76
PART II, 39211	Scotland	1	US 501	AT NC 144 & SR 1429	1,3,4		1						70	15	2	2	360	0.60
PART II, 39211	Scotland	2	SR 1429	FROM 0.17 MI. EAST OF US 501 TO US 501	2								90	38	13	28	1,640	1.80
TOTAL FOR PROJ NO. 39211							1						160	53	15	30	2,000	2.40
GRAND TOTAL						2	3	475	10	2	28	8	1,160	253	135	30	2,000	25.16

PROJECT NO.	SHEET NO.
PART I, 37626 AND PART II, 39211	1-C

THERMOPLASTIC AND PAINT QUANTITIES

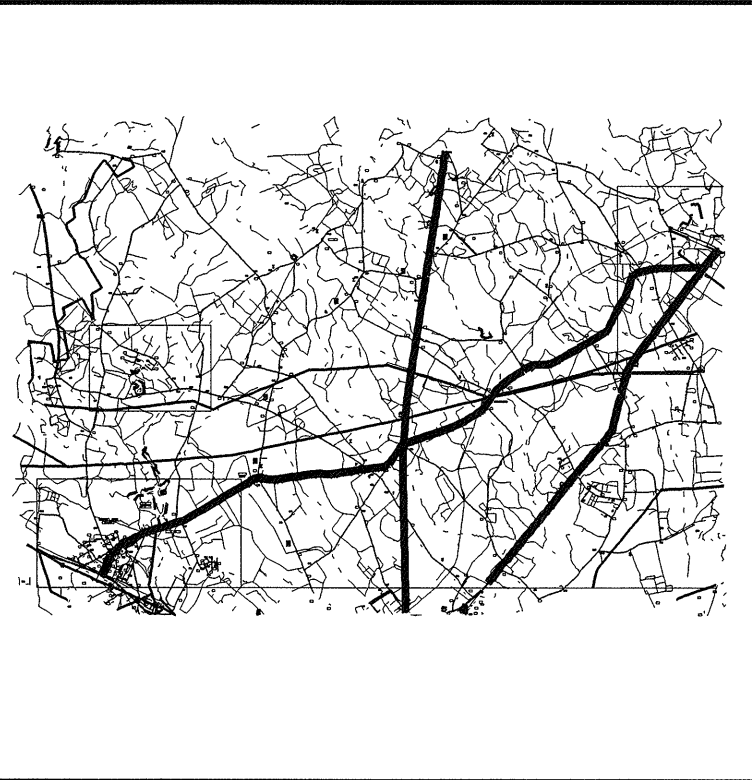
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4" X 90 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	4" X 120 M WHITE THERMO LF	8" X 90 M YELLOW THERMO LF	8" X 90 M WHITE THERMO LF	16" X 120 M WHITE THERMO LF	24" X 120 M WHITE THERMO LF	THERMO RXR 120 M EA	THERMO MSG SCHOOL 120 M EA	THERMO LT ARROW 90 M EA	THERMO RT ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA
PART I, 37626	Scotland	1	NC 144	FROM PVMT. JOINT NORTH OF RR AT US 74 TO SR 1314		3,485				50	25	2				
PART I, 37626	Scotland	2	NC 144	FROM SR 1314 TO US 15-501	59,180	66,080	450	1,000			100		12	12	7	1
PART I, 37626	Scotland	3	NC 144	FROM US 15-501 TO US 401	67,142	41,184				100	150	4	12			
TOTAL FOR PROJ NO. 37626					126,322	110,749	450	1,000		150	275	6	24	12	7	1
						111,199		1,000				30		20		
PART II, 39211	Scotland	1	US 501	AT NC 144 & SR 1429	1,500	1,800	65		340						1	
PART II, 39211	Scotland	2	SR 1429	FROM 0.17 MI. EAST OF US 501 TO US 501												
TOTAL FOR PROJ NO. 39211					1,500	1,800	65		340						1	
						1,865		340							1	
GRAND TOTAL					127,822	112,549	515	1,000	340	150	275	6	24	12	8	1
						113,064		1,340				30		21		

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4" YELLOW PAINT LF	4" WHITE PAINT LF	16" WHITE PAINT LF	24" WHITE PAINT LF	PAINT MSG RXR EA	PAINT MSG SCHOOL EA	PAINT LT ARROW EA	PAINT RT ARROW EA	YELLOW & YELLOW MARKERS EA	CYAN & RED MARKERS EA
PART I, 37626	Scotland	1	NC 144	FROM PVMT. JOINT NORTH OF RR AT US 74 TO SR 1314	3,485		50	25	2				15	
PART I, 37626	Scotland	2	NC 144	FROM SR 1314 TO US 15-501	66,080	450		100		12	12	7	340	23
PART I, 37626	Scotland	3	NC 144	FROM US 15-501 TO US 401	41,184		100	150	4	12				
TOTAL FOR PROJ NO. 37626					110,749	450	150	275	6	24	12	7	355	23
						111,199			30		19			
PART II, 39211	Scotland	1	US 501	AT NC 144 & SR 1429									14	3
PART II, 39211	Scotland	2	SR 1429	FROM 0.17 MI. EAST OF US 501 TO US 501	3,650	3,800								
TOTAL FOR PROJ NO. 39211					3,650	3,800							14	3
						7,450								
GRAND TOTAL					114,399	4,250	150	275	6	24	12	7	369	26
						118,649			30		19			

MA08049R

PROJECT: PART I, 37626

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



PROJECT LOCATION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SCOTLAND COUNTY

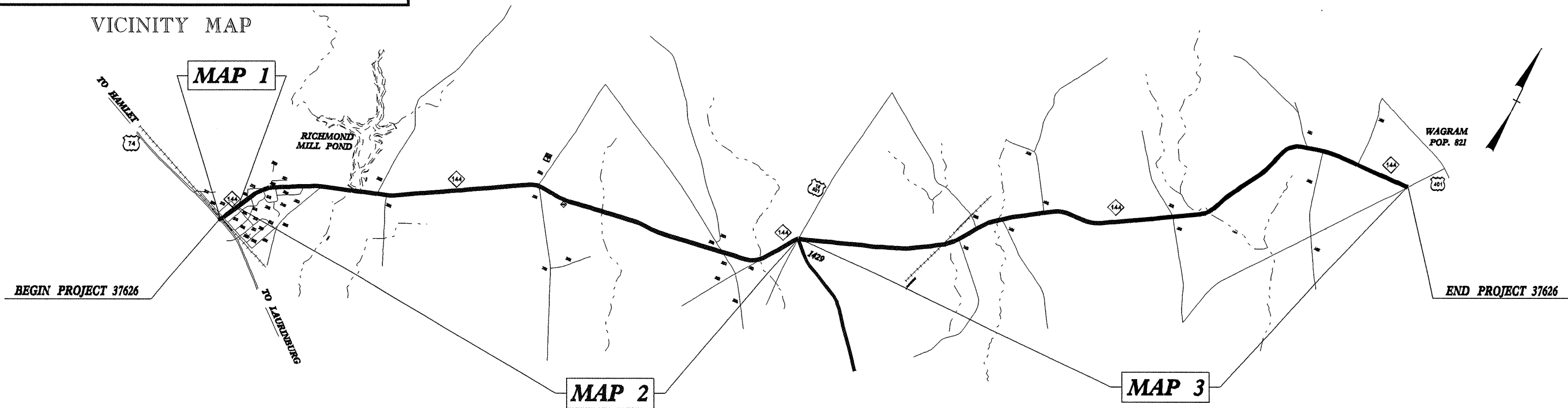
N.C. MOVING AHEAD

LOCATION: NC 144 FROM US 74 TO US 401

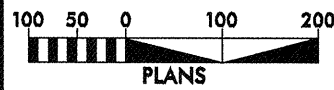
TYPE OF WORK: **WIDENING, MILLING, RESURFACING, PAVEMENT MARKINGS & MARKERS, AND EROSION CONTROL**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	PART I, 37626	1	6
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
37626		CONSTRUCTION	

VICINITY MAP



GRAPHIC SCALES



RIGHT OF WAY DATE: _____

LETTING DATE: JUNE 20, 2006

DESIGN DATA

ADT 2004 = 13,000
ADT 2024 = _____
DHV = _____ %
D = _____ %
T = 5 %
V = _____ MPH

2002 STANDARDS SPECIFICATION

Prepared in the Office of:

**DIVISION OF HIGHWAYS
DIVISION 8 DESIGN & CONSTRUCT UNIT
902 N. SANDHILLS BLVD.
ABERDEEN NC 28315**

PROJECT LENGTH

ROADWAY: 11.92 MILES
STRUCTURE: _____ MILES
TOTAL: 11.92 MILES

DIVISION PROJECT MANAGER



5/3/06

DATE PLOTTED: 05/23/06 10:58 AM USERNAME: jls

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL SYMBOLS

*S.U.E = SUBSURFACE UTILITY ENGINEER

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	-----
Exist. Cable Guiderail	-----
Prop. Cable Guiderail	-----
Equality Symbol	----- ⊕
Pavement Removal	----- XXXX

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	----- ○
Prop. Control of Access Line	----- ○
Exist. Easement Line	----- -E-
Prop. Temp. Construction Easement Line	----- -E-
Prop. Temp. Drainage Easement Line	----- -TDE-
Prop. Perm. Drainage Easement Line	----- -PDE-

HYDROLOGY

Stream or Body of Water	-----
Flow Arrow	----- →
Disappearing Stream	----- ↘
Spring	----- ○
Swamp Marsh	----- ⌵
Shoreline	-----
Falls, Rapids	----- +
Prop Lateral, Tail, Head Ditches	----- ← FLOW →

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	----- X
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	----- □
Cable TV Pedestal	----- □
Hydrant	----- ◇
Satellite Dish	----- ∩
Exist. Water Valve	----- ⊗
Sewer Clean Out	----- ⊕
Power Manhole	----- ⊕
Telephone Booth	----- ⊕
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 TS
Recorded Water Line	----- —W—W—
Designated Water Line (S.U.E.*)	----- —W—W—
Sanitary Sewer	----- —SS—SS—
Recorded Sanitary Sewer Force Main	----- —FSS—FSS—
Designated Sanitary Sewer Force Main(S.U.E.*)	----- —FSS—FSS—
Recorded Gas Line	----- —G—G—
Designated Gas Line (S.U.E.*)	----- —G—G—
Storm Sewer	----- —S—S—
Recorded Power Line	----- —P—P—
Designated Power Line (S.U.E.*)	----- —P—P—
Recorded Telephone Cable	----- —T—T—
Designated Telephone Cable (S.U.E.*)	----- —T—T—
Recorded U/G Telephone Conduit	----- —TC—TC—
Designated U/G Telephone Conduit (S.U.E.*)	----- —TC—TC—
Unknown Utility (S.U.E.*)	----- —UTL—UTL—
Recorded Television Cable	----- —TV—TV—
Designated Television Cable (S.U.E.*)	----- —TV—TV—
Recorded Fiber Optics Cable	----- —FO—FO—
Designated Fiber Optics Cable (S.U.E.*)	----- —FO—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	----- PL
Exist. Iron Pin	----- ⊕
Property Corner	----- +
Property Monument	----- ⊕
Property Number	----- 123
Parcel Number	----- 6
Fence Line	----- —X—X— WW & ISBW
Existing Wetland Boundaries	----- —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 U/G 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	----- CSX TRANSPORTATION
RR Signal Milepost	----- MILEPOST 35
Switch	----- SWITCH

\$DATE\$ \$TIME\$ \$FILES\$

PROJECT NO.	SHEET NO.
37626	1-B

PART I

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH MI	WIDTH FT	INCIDENTAL GRADING FOR GUARDRAIL SY	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES TON	15" SIDE DRAIN PIPE LF	PIPE REMOVAL LF	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	0" TO 3" MILLING SY	INCIDENTAL MILLING SY
37626	Scotland	1	NC 144	FROM PVMT. JOINT NORTH OF RR AT US 74 TO SR 1314	1	0.18	42								233
37626	Scotland	2	NC 144	FROM SR 1314 TO US 15-501	2	5.50	24	611				200	11.00	1,067	133
37626	Scotland	3	NC 144	FROM US 15-501 TO US 401	3	6.24	26	1,722	7	60	60	300	12.48	2,750	578
TOTAL FOR PROJ NO. 37626						11.92		2,333	7	60	60	500	23.48	3,817	944
GRAND TOTAL						11.92		2,333	7	60	60	500	23.48	3,817	944

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	BASE COURSE, B25.0B TONS	SURFACE COURSE, S9.5B TONS	PG 64-22 PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	2' - 6" CURB & GUTTER LF	CONCRETE WHEELCHAIR RAMPS EA	RETROFIT EXISTING WHEELCHAIR RAMP EA	CONVERT DI TO JB EA	ADJUSTMENT OF MANHOLES EA	ADJUSTMENT OF METER OR VALVE BOX EA
37626	Scotland	1	NC 144	FROM PVMT. JOINT NORTH OF RR AT US 74 TO SR 1314	1		485	29	10	80	1	5	1	2	2
37626	Scotland	2	NC 144	FROM SR 1314 TO US 15-501	2		14,900	894	25						
37626	Scotland	3	NC 144	FROM US 15-501 TO US 401	3	7,580	17,041	1,348	25						
TOTAL FOR PROJ NO. 37626						7,580	32,426	2,271	60	80	1	5	1	2	2
GRAND TOTAL						7,580	32,426	2,271	60	80	1	5	1	2	2

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	STEEL BEAM GUARDRAIL LF	ADDITIONAL GUARDRAIL POSTS EA	GUARDRAIL ANCHOR UNITS, TYPE III MOD EA	GUARDRAIL ANCHOR UNIT, TYPE 350 EA	GUARDRAIL ANCHOR UNIT, TYPE III EA	TEMPORARY SILT FENCE LF	EROSION CONTROL STONE, CLASS B TON	SEDIMENT CONTROL STONE TON	SEED & MULCHING AC
37626	Scotland	1	NC 144	FROM PVMT. JOINT NORTH OF RR AT US 74 TO SR 1314	1									
37626	Scotland	2	NC 144	FROM SR 1314 TO US 15-501	2	75	5		8	4	400			10.66
37626	Scotland	3	NC 144	FROM US 15-501 TO US 401	3	400	5	2	20	4	600	200	120	12.10
TOTAL FOR PROJ NO. 37626						475	10	2	28	8	1,000	200	120	22.76
GRAND TOTAL						475	10	2	28	8	1,000	200	120	22.76

PROJECT NO.	SHEET NO.
37626	1-C

PART I

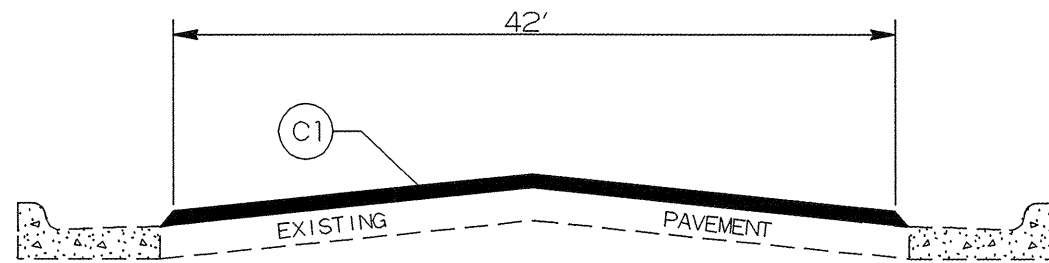
THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4" X 90 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	4" X 120 M WHITE THERMO LF	8" X 90 M YELLOW THERMO LF	16" X 120 M WHITE THERMO LF	24" X 120 M WHITE THERMO LF	THERMO RXR 120 M EA	THERMO MSG SCHOOL 120 M EA	THERMO LT ARROW 90 M EA	THERMO RT ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA
37626	Scotland	1	NC 144	FROM PVMT. JOINT NORTH OF RR AT US 74 TO SR 1314		3,485			50	25	2				
37626	Scotland	2	NC 144	FROM SR 1314 TO US 15-501	59,180	66,080	450	1,000		100		12	12	7	1
37626	Scotland	3	NC 144	FROM US 15-501 TO US 401	67,142	41,184			100	150	4	12			
TOTAL FOR PROJ NO. 37626					126,322	110,749	450	1,000	150	275	6	24	12	7	1
						111,199					30		20		
GRAND TOTAL					126,322	110,749	450	1,000	150	275	6	24	12	7	1
						111,199					30		20		

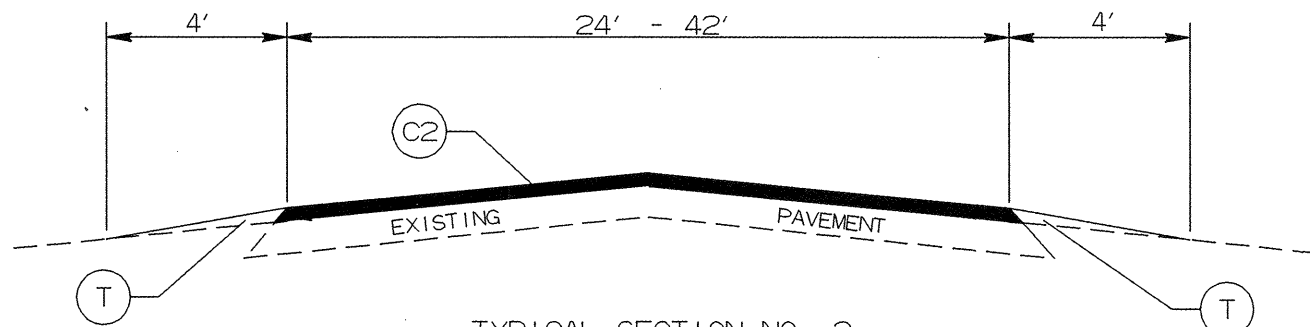
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4" YELLOW PAINT LF	4" WHITE PAINT LF	16" WHITE PAINT LF	24" WHITE PAINT LF	PAINT MSG RXR EA	PAINT MSG SCHOOL EA	PAINT LT ARROW EA	PAINT RT ARROW EA	YELLOW & YELLOW MARKERS EA	CYAN & RED MARKERS EA
37626	Scotland	1	NC 144	FROM PVMT. JOINT NORTH OF RR AT US 74 TO SR 1314	3,485		50	25	2				15	
37626	Scotland	2	NC 144	FROM SR 1314 TO US 15-501	66,080	450		100		12	12	7	340	23
37626	Scotland	3	NC 144	FROM US 15-501 TO US 401	41,184		100	150	4	12				
TOTAL FOR PROJ NO. 37626					110,749	450	150	275	6	24	12	7	355	23
						111,199			30		19		378	
GRAND TOTAL					110,749	450	150	275	6	24	12	7	355	23
						111,199			30		19		378	

10/26/98

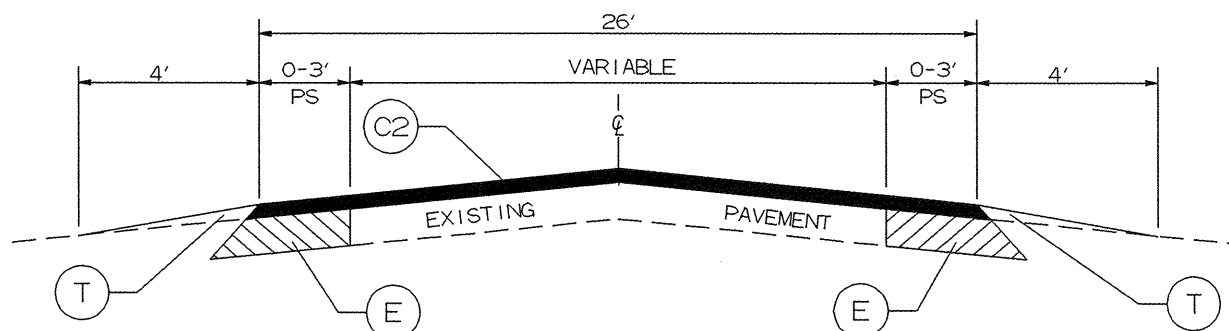
SCOTLAND COUNTY



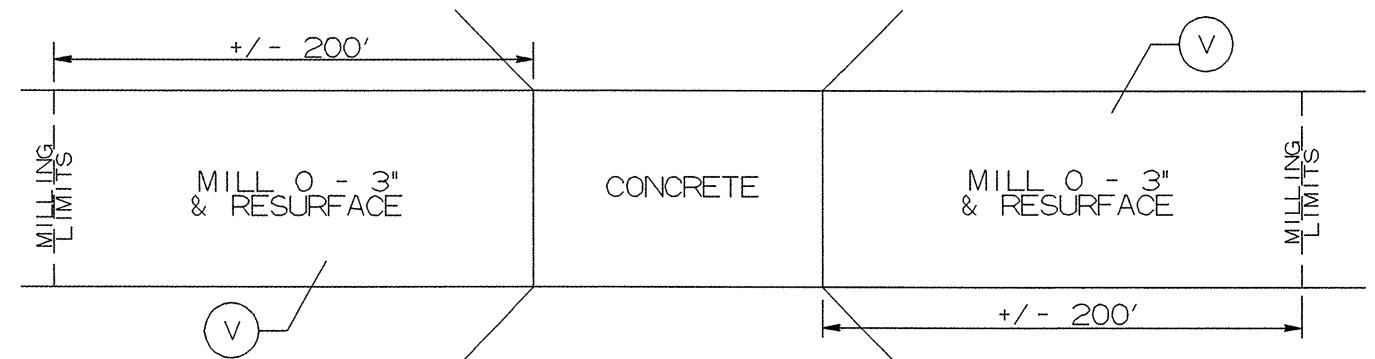
TYPICAL SECTION NO. 1
TO BE USED FROM PVMT. JOINT NORTH OF RR TRACKS
TO END OF CURB AND GUTTER



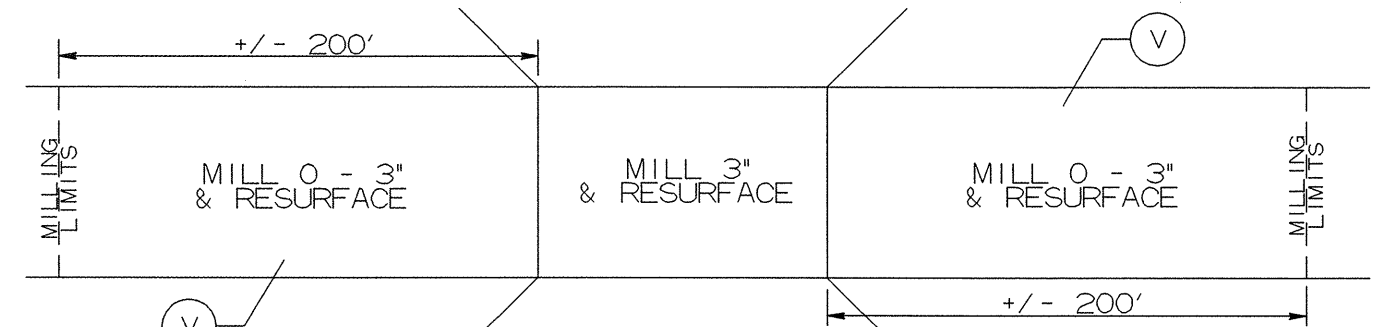
TYPICAL SECTION NO. 2
TO BE USED FROM END OF CURB
AND GUTTER TO US 15/501
NOTE: IN CURBED SECTION LOCATED AT RICHMOND MILLS, RESURFACE
THE TRAVEL LANES AND TAPER DOWN TO THE EXISTING EOP



TYPICAL SECTION NO. 3
TO BE USED FROM US 15/501 TO US 401
NOTE: EXISTING WIDENING TO BE REMOVED



TREATMENT FOR BRIDGE #3
Located 0.30 miles northeast of SR 1305



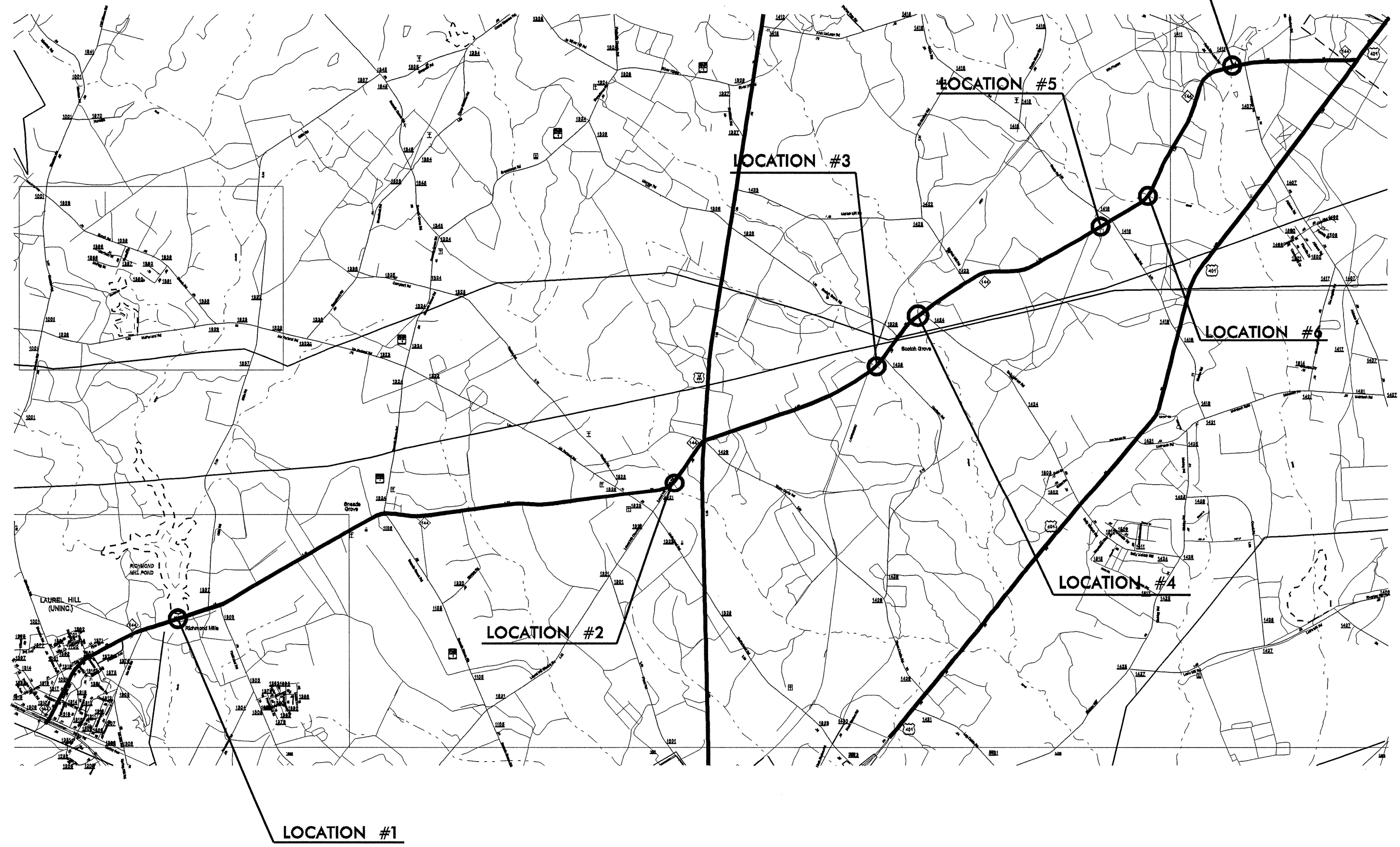
TREATMENT FOR BRIDGES #12 and #14
Located 150' west of SR 1424 and 200' east of SR 1411

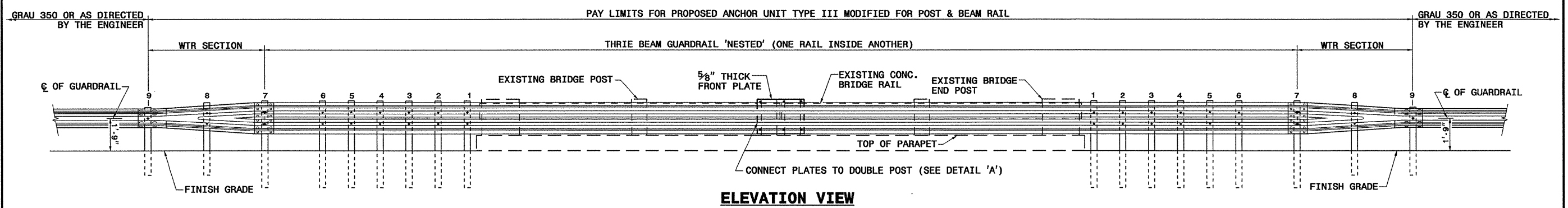
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
E	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
T	EARTH MATERIAL
V	MILLING, 0 - 3" IN DEPTH

NOTE: PAVEMENT SLOPES ARE 1:1 UNLESS OTHERWISE NOTED

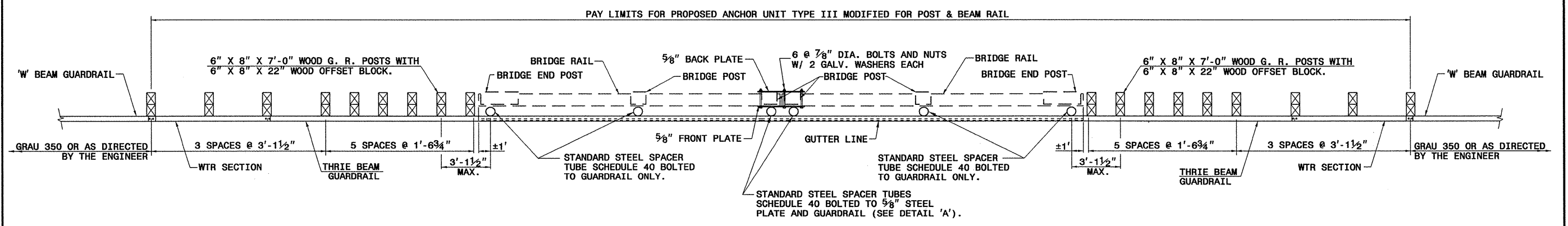
SYSTEMS DESIGN CONSULTANTS
 10/26/98

GUARDRAIL LOCATIONS

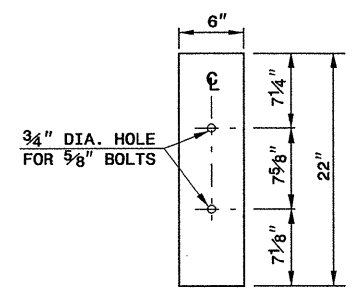




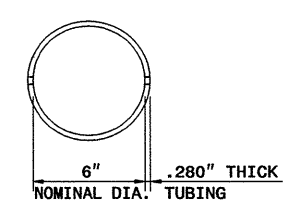
ELEVATION VIEW



PLAN VIEW

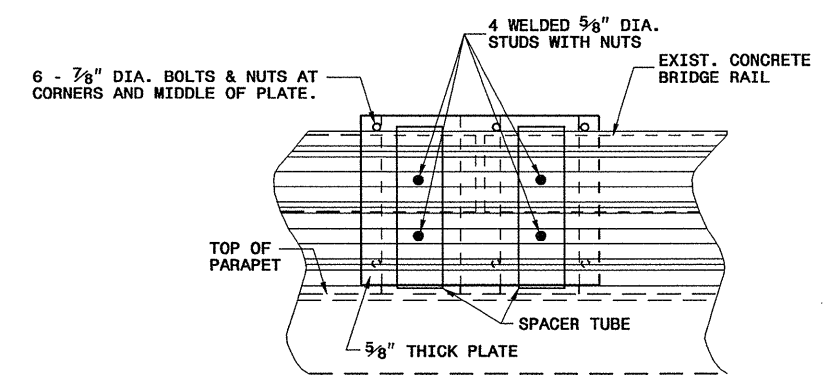


FRONT VIEW

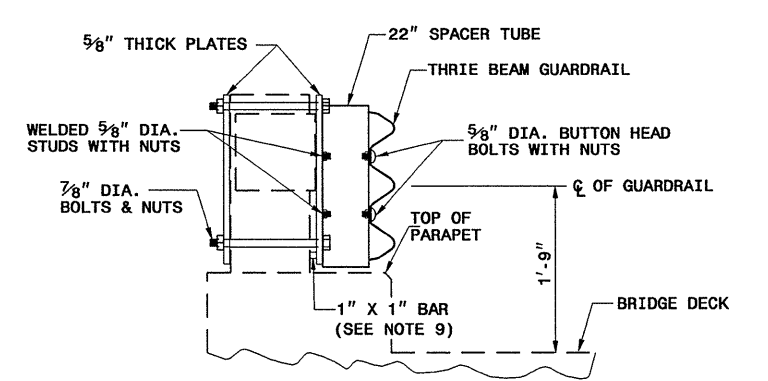


PLAN VIEW

STEEL SPACER TUBE



ELEVATION VIEW



SECTION VIEW

**DETAIL 'A'
GUARDRAIL ATTACHMENT
TO BRIDGE POST**

- GENERAL NOTES:**
1. USE NUTS, BOLTS, AND WASHERS CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-307 AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
 2. TAP NUTS FOR THE 1/8" DIA. STUDS AND BOLTS AFTER GALVANIZING SEE A.S.T.M. A-563.
 3. USE PLATES AND TUBES CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-36 AND GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
 4. ADDITIONAL FIELD HOLES MAY BE DRILLED IN STEEL RAIL AS DIRECTED BY THE ENGINEER.
 5. INSTALL FACE OF GUARDRAIL AS NEAR AS POSSIBLE TO PLUMB WITH THE PARAPET FACE WITH SPACER TUBE OR AS DIRECTED BY THE ENGINEER.
 6. DO NOT DRILL BRIDGE RAIL IN ORDER TO INSTALL GUARDRAIL ANCHOR UNIT.
 7. USE THIS DETAIL ONLY FOR BRIGES WITH POST AND BEAM TYPE RAIL.
 8. ATTACH 1" X 1" BAR AND THREADED STUDS TO PLATE WITH 1/4" WELDS ALL AROUND.
 9. 1" X 1" BAR MAY NOT BE NEEDED ON BRIDGE RAILS WHERE FACE OF RAIL DOES NOT PROJECT BEYOND FACE OF POST.
 10. PROVIDE SHOP DRAWINGS OF THE PLATES TO THE ENGINEER FOR APPROVAL BEFORE FABRICATING THE PLATES.
 11. LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
 12. SEE ROADWAY STANDARD DRAWING 862.03 SHEET 5 FOR ADDITIONAL INFORMATION ON THE TYPE III ANCHOR UNIT

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**GUARDRAIL ANCHOR UNIT
TYPE III MODIFIED
FOR POST & BEAM RAIL**

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 MODIFIED BY: DATE:
 CHECKED BY: DATE:
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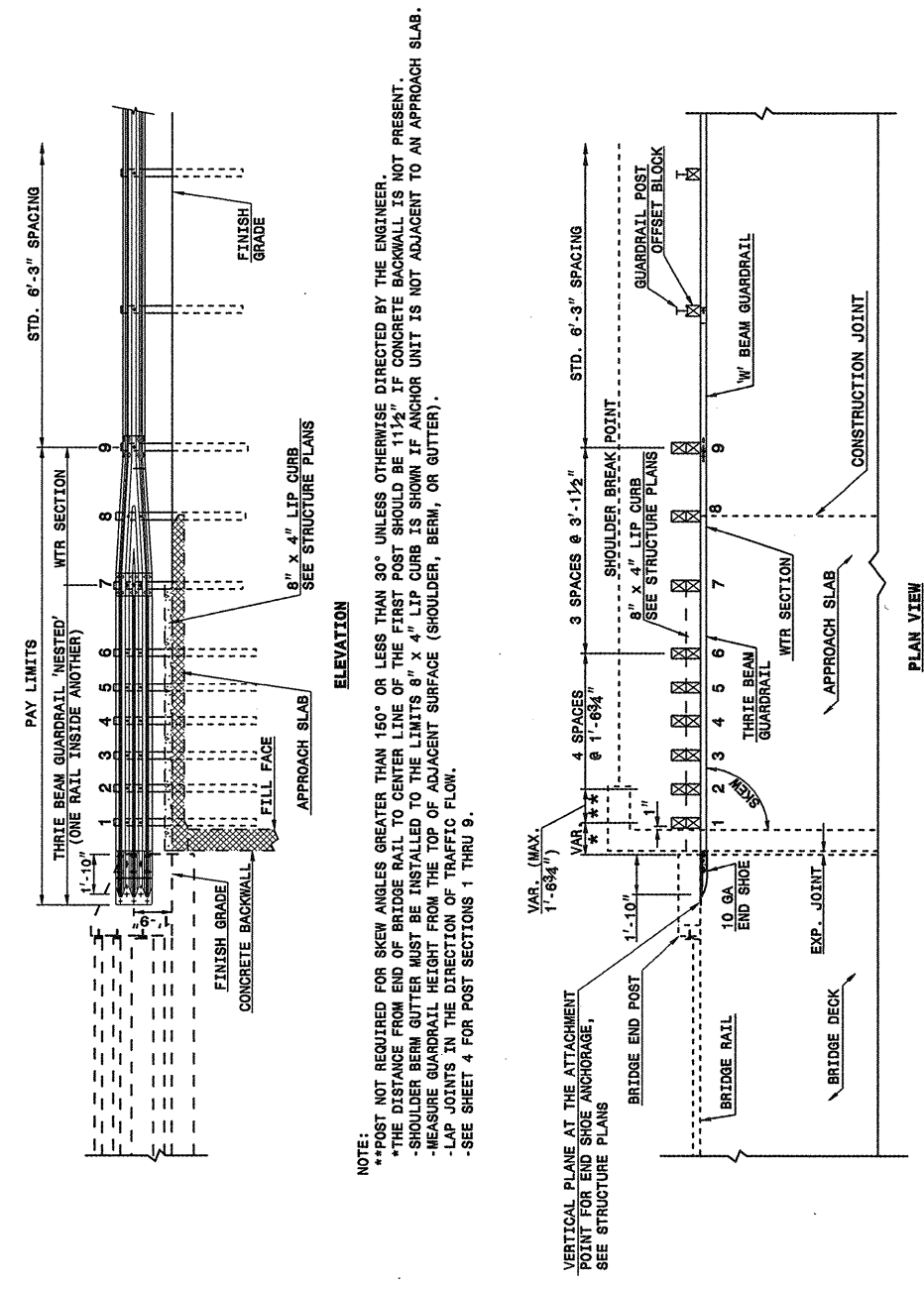
ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
 GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
 RAIL ON BRIDGE (15' MINIMUM LENGTH APPROACH SLAB)

SHEET 1 OF 6
862D03

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ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
 GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
 RAIL ON BRIDGE (15' MINIMUM LENGTH APPROACH SLAB)

SHEET 1 OF 6
862D03



GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE (15' MINIMUM LENGTH APPROACH SLAB)

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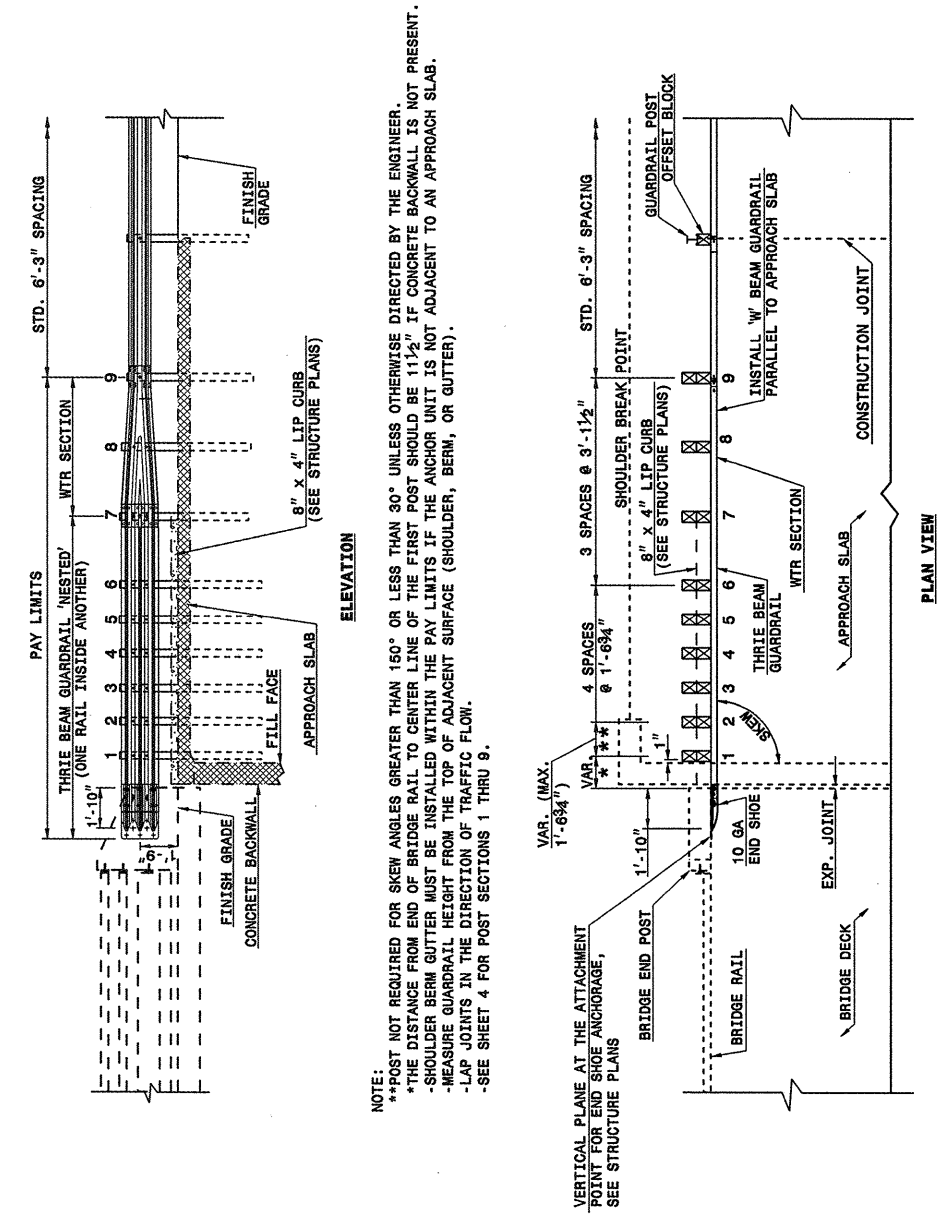
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STRUCTURE ANCHOR UNITS
 GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
 RAIL ON BRIDGE (25' MINIMUM LENGTH APPROACH SLAB)

SHEET 2 OF 6
862D03

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ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
 GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
 RAIL ON BRIDGE (25' MINIMUM LENGTH APPROACH SLAB)

SHEET 2 OF 6
862D03



GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE (25' MINIMUM LENGTH APPROACH SLAB)

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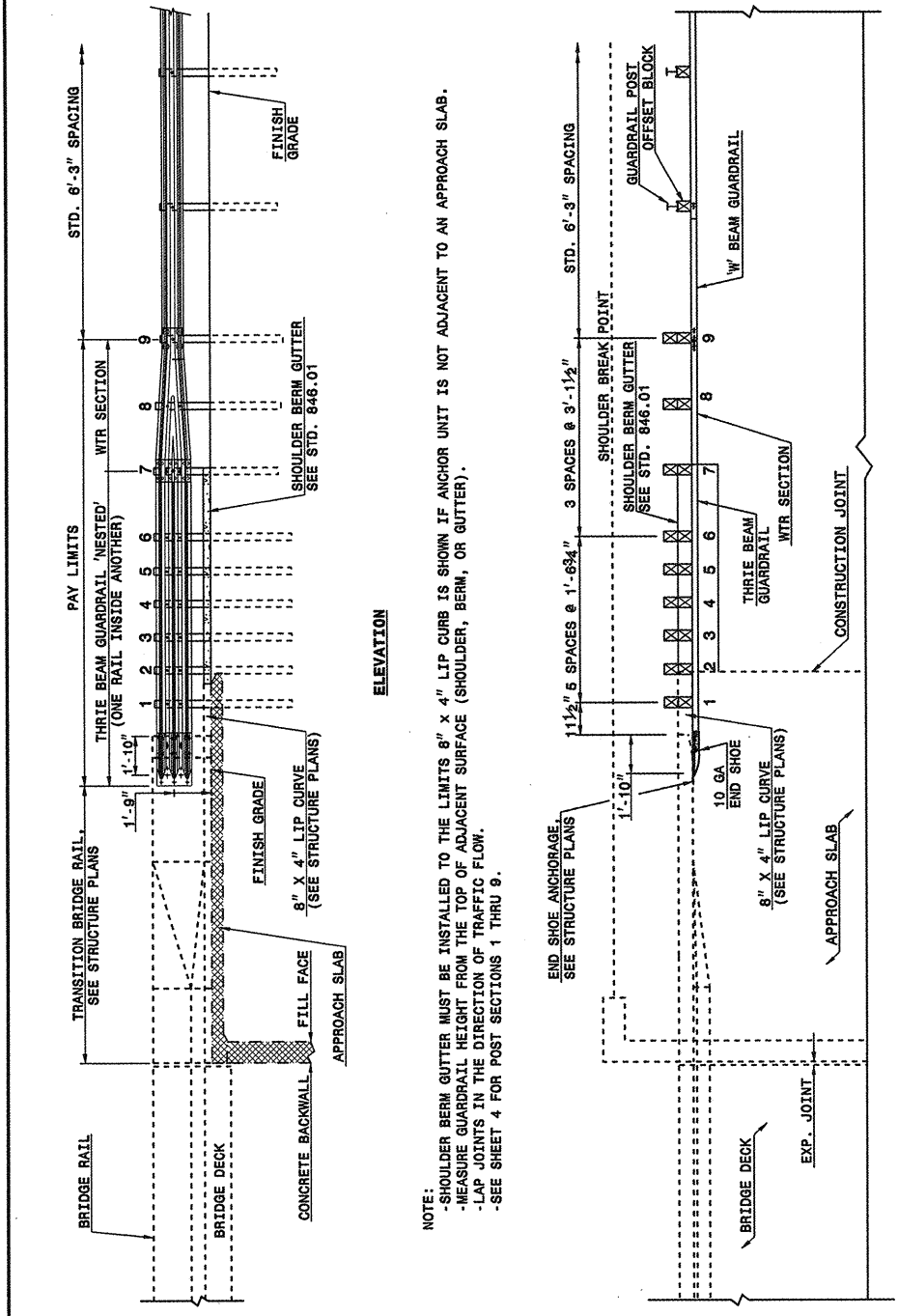
SEE PLATE FOR TITLE

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ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON APPROACH SLAB (15' MINIMUM LENGTH APPROACH SLAB)

SHEET 3 OF 6
862D03



ELEVATION

PLAN VIEW

NOTE:
-SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" X 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
-MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
-LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
-SEE SHEET 4 FOR POST SECTIONS 1 THRU 9.

**GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON APPROACH SLAB (15' MINIMUM LENGTH APPROACH SLAB)**

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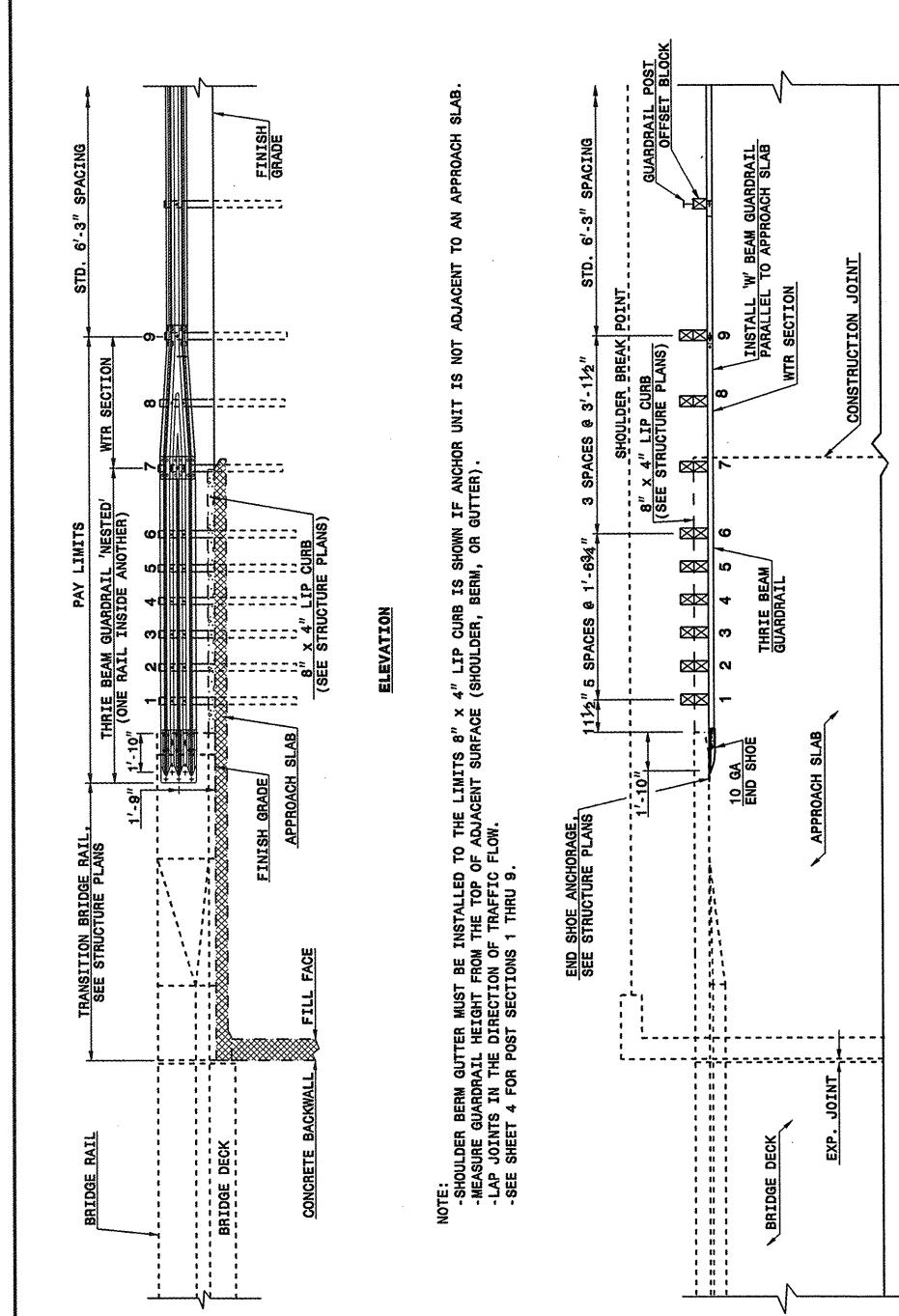
ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON APPROACH SLAB (15' MINIMUM LENGTH APPROACH SLAB)

SHEET 3 OF 6
862D03

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ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON APPROACH SLAB (25' MINIMUM LENGTH APPROACH SLAB)

SHEET 4 OF 6
862D03



ELEVATION

PLAN VIEW

NOTE:
-SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" X 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
-MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
-LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
-SEE SHEET 4 FOR POST SECTIONS 1 THRU 9.

**GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON APPROACH SLAB (25' MINIMUM LENGTH APPROACH SLAB)**

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ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON APPROACH SLAB (25' MINIMUM LENGTH APPROACH SLAB)

SHEET 4 OF 6
862D03

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SEE PLATE FOR TITLE

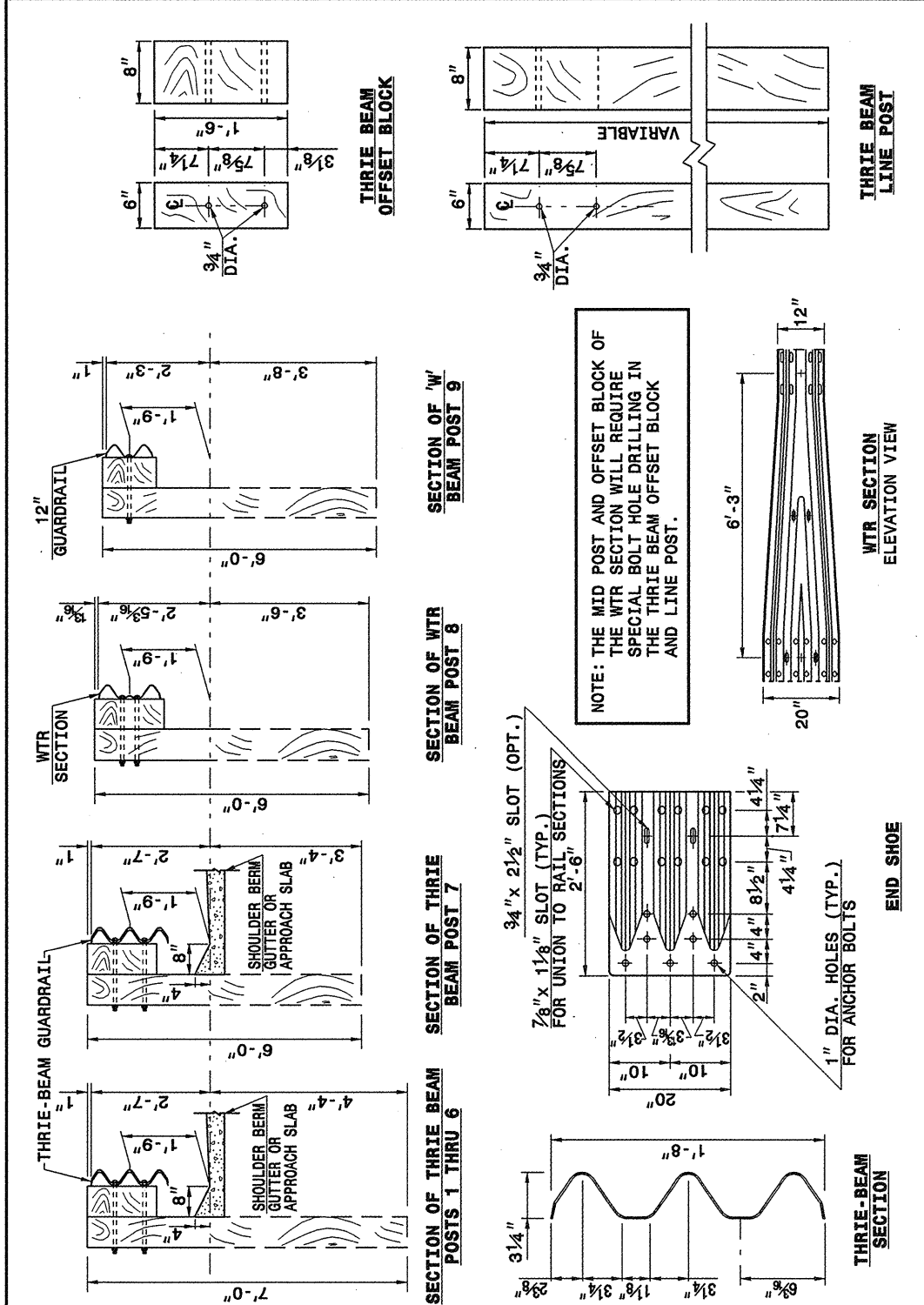
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ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
 GUARDRAIL ANCHOR UNIT, TYPE III

SHEET 5 OF 6
862D03



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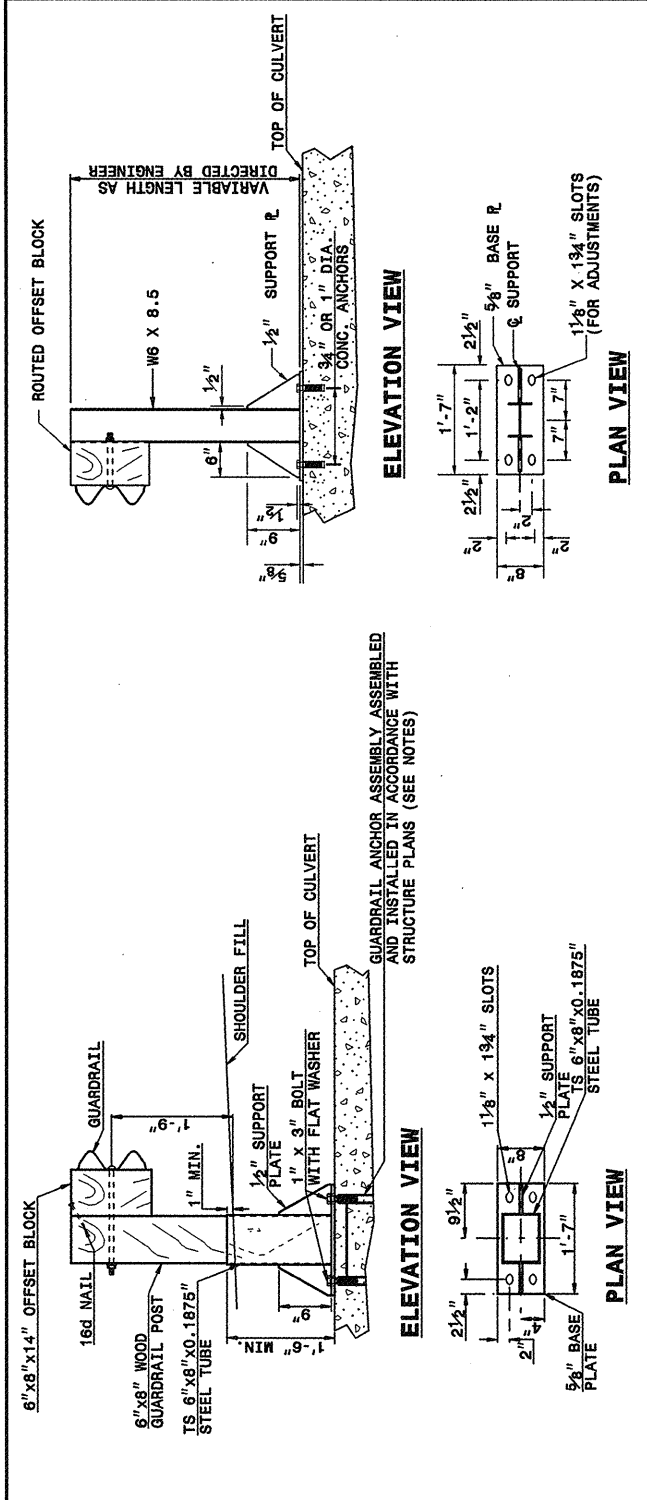
ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
 GUARDRAIL ANCHOR UNIT, TYPE III

SHEET 5 OF 6
862D03

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ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
 ANCHORAGE FOR GUARDRAIL POST ON BOX CULVERT

SHEET 6 OF 6
862D03



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ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
 ANCHORAGE FOR GUARDRAIL POST ON BOX CULVERT

SHEET 6 OF 6
862D03

NOTES FOR:
 GUARDRAIL POST ANCHORED TO STRUCTURE:
 -USE FULL LENGTH 3/4" BUT WELDS AT ALL LOCATIONS OF CONTACT BETWEEN THE BASE PLATE, SUPPORT PLATES AND STEEL POST OR STEEL TUBE.
 -USE POST AND POST BASE PLATES CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-153 AND GALVANIZED STEEL FABRICATION TO CONFORM TO A.S.T.M. A-123.
 -USE WOOD POSTS WHICH FIT SNUGLY IN THE STEEL TUBE WITH A MAXIMUM OF 1/8" CLEARANCE BETWEEN TUBE WALL AND POST.

NEW STRUCTURES:
 -ATTACH POST TO INSERT ASSEMBLY UNITS (USING ANCHOR BOLTS SUPPLIED WITH INSERTS) WHICH HAVE BEEN CAST INTO THE STRUCTURE DURING CONSTRUCTION.
EXISTING STRUCTURES:
 -USE CONCRETE ANCHORS CONSISTING OF A STUD BOLT WITH NUT AND WASHER. USE STUDS THREADED ON ONE END AND HAVING AN EXPANDED WEDGE ASSEMBLY POSITIONED AROUND A TAPERED AREA AT THE OTHER END. USE ANCHORS WHICH PROVIDE A MINIMUM SAFE HOLDING POWER OF 2875 LBS. FOR A 3/4" OR 1" DIAMETER BOLT. CALCULATE HOLDING POWER BASED ON 1/4 THE ACTUAL HOLDING POWER OF THE ANCHOR IN 3500 PSI CONCRETE AS DETERMINED BY AN APPROVED COMMERCIAL TESTING LABORATORY.
 -USE ANCHORS GALVANIZED IN ACCORDANCE WITH A.S.T.M. A-153. SIZE HOLES FOR THE CONCRETE ANCHORS IN ACCORDANCE WITH THE ANCHOR MANUFACTURER'S RECOMMENDATIONS. DRILL HOLES WITH A CARBIDE OR DIAMOND TIPPED MASONRY BIT POWERED BY A ROTARY OR ROTARY IMPACT DRILL. NO OTHER IMPACT TOOLS WILL BE PERMITTED. DRILL HOLES VERTICALLY. FURNISH DOCUMENTATION OF HOLE SIZE RECOMMENDED FOR THE SPECIFIED ANCHOR TO THE ENGINEER BEFORE DRILLING HOLES. THOROUGHLY CLEAN HOLES FOR ANCHORS OF ALL CONCRETE CHIPS, DUST, GREASE, OIL, ETC. BEFORE ANCHORS ARE INSTALLED. REPAIR ALL DAMAGE CAUSED BY THIS WORK TO THE SATISFACTION OF THE ENGINEER.

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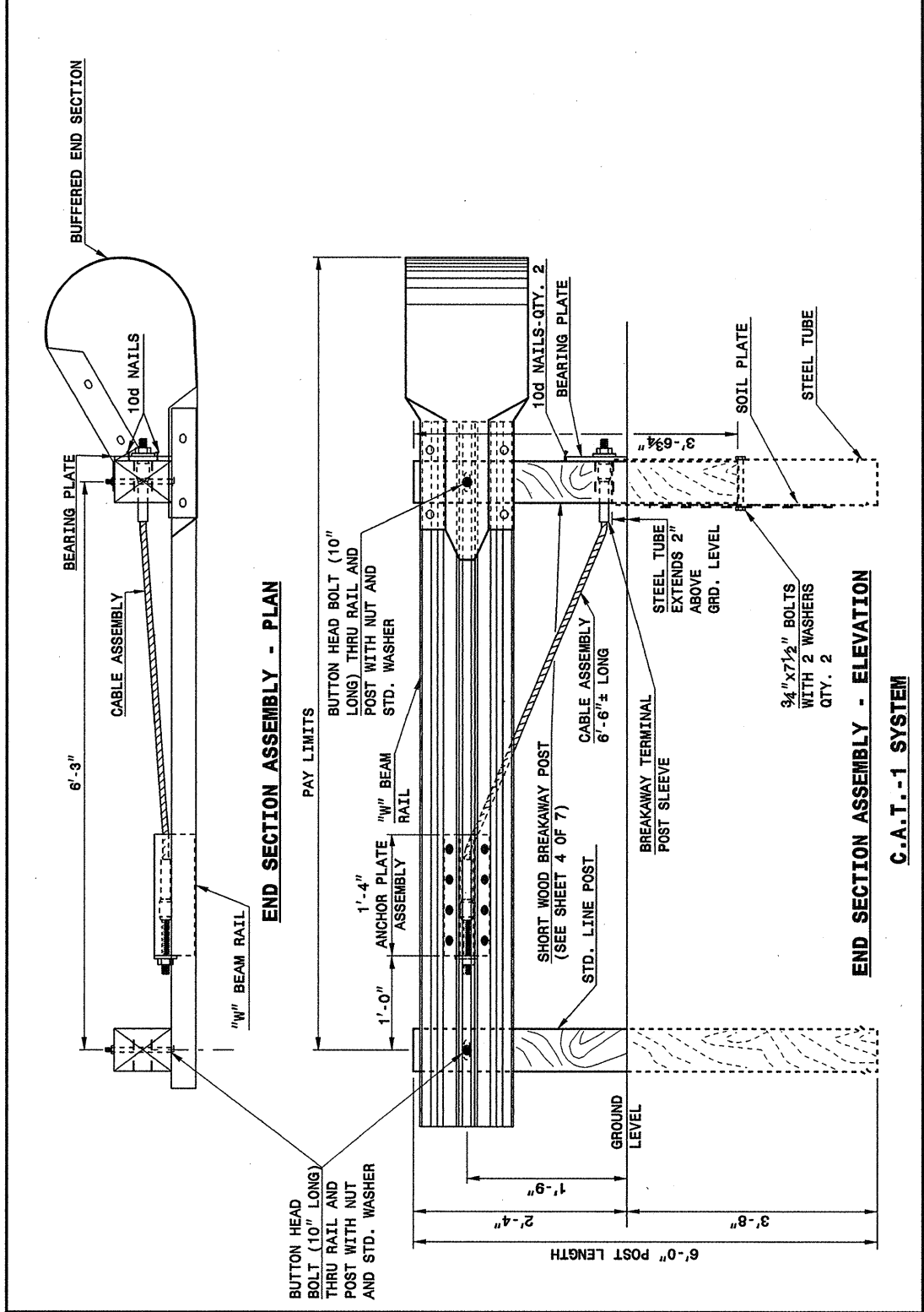
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ENGLISH DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 1 OF 7
862D02



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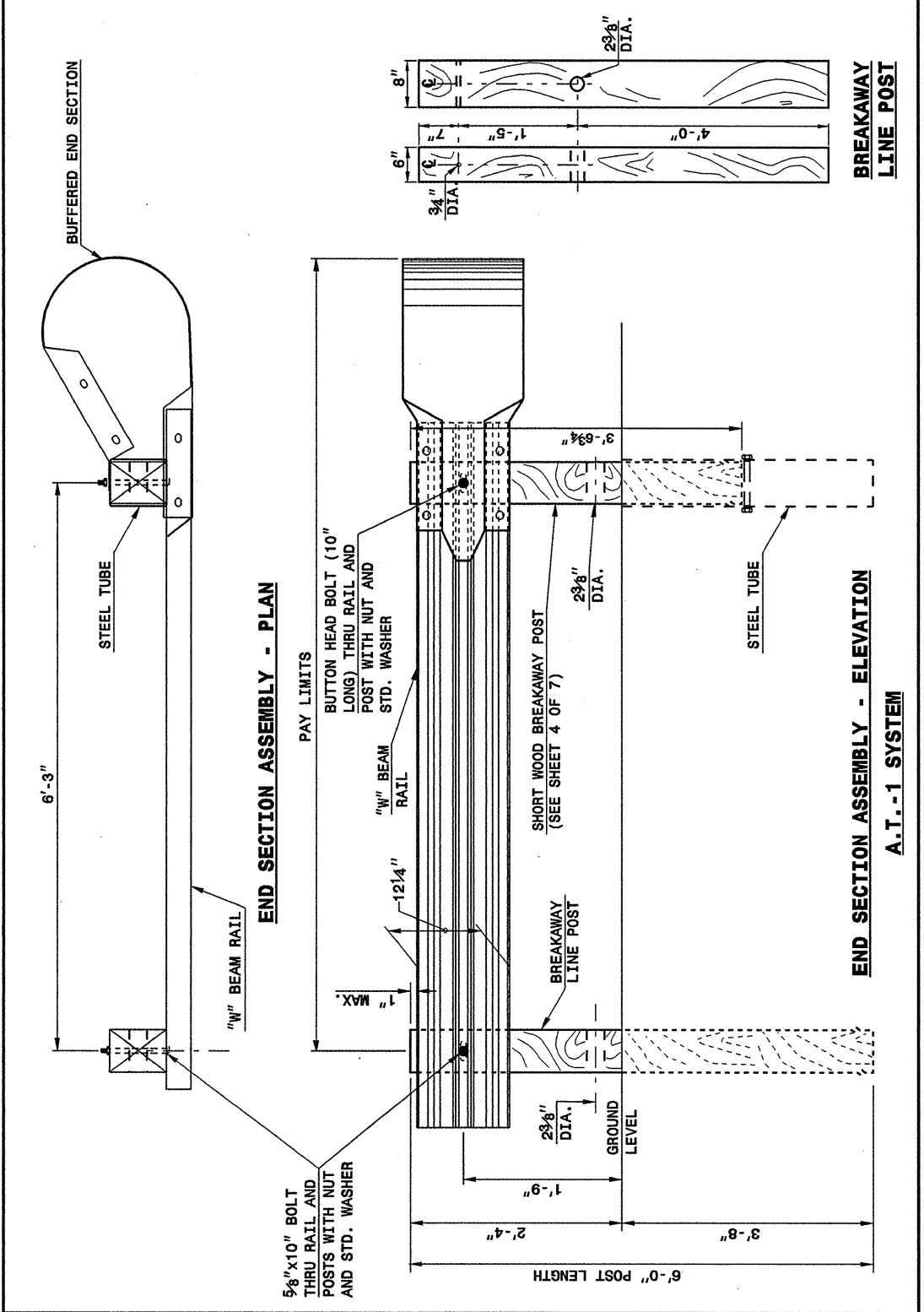
ENGLISH DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 1 OF 7
862D02

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ENGLISH DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 2 OF 7
862D02



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ENGLISH DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 2 OF 7
862D02

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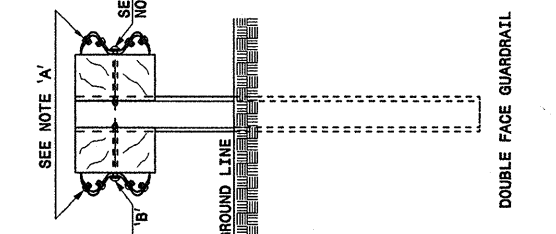
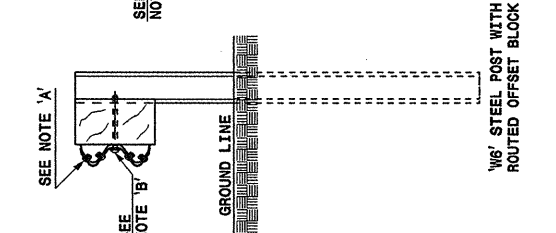
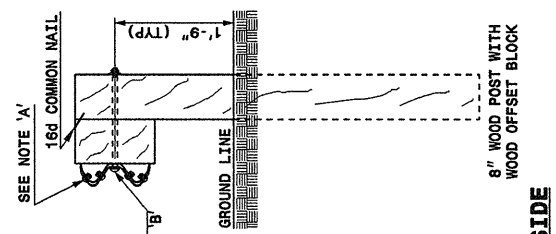
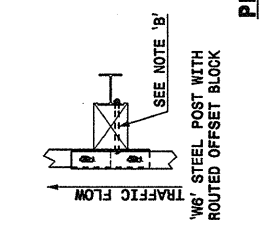
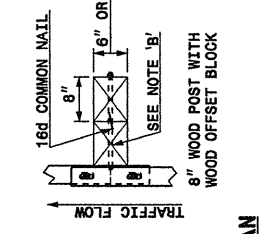
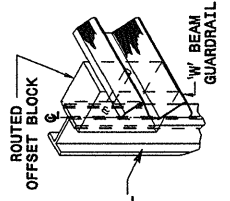
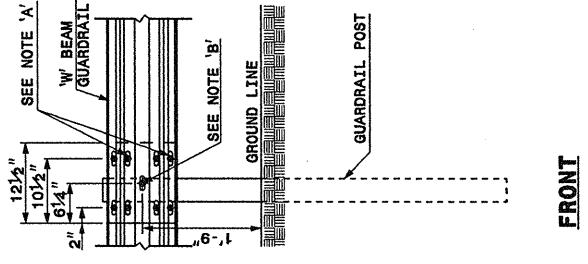
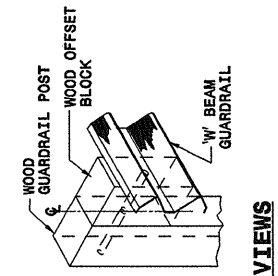
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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 3 OF 7
862D02



STATE OF NORTH CAROLINA
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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 3 OF 7
862D02

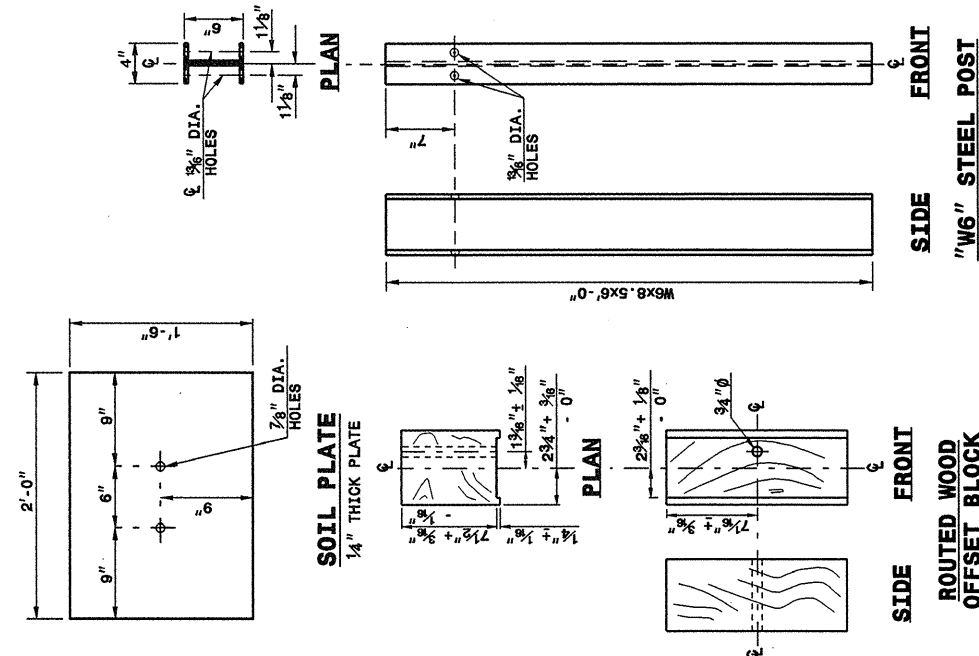
TYPICAL GUARDRAIL AND GUARDRAIL POST ALTERNATIVES

NOTES:
A - 7/8" DIA. BUTTON HEAD SPLICE BOLT 1 1/4" LONG (8 REQ. PER SPLICE JOINT).
B - 5/8" DIA. BUTTON HEAD BOLT 7 1/2"/9" LONG WITH NUT FOR BOLTING 6"/8" ROUTED OFFSET BLOCK TO STEEL POSTS OR 5/8" DIA. BUTTON HEAD BOLT 18" LONG WITH STD. WASHER UNDER NUT FOR BOLTING TO WOOD POSTS (1 REQ. PER LOCATION)
C - FIELD PUNCHING OF HOLES INTO GUARDRAIL SHALL BE AS DIRECTED BY THE ENGINEER.

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ENGLISH DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 4 OF 7
862D02



STATE OF NORTH CAROLINA
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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 4 OF 7
862D02

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

SEE PLATE FOR TITLE

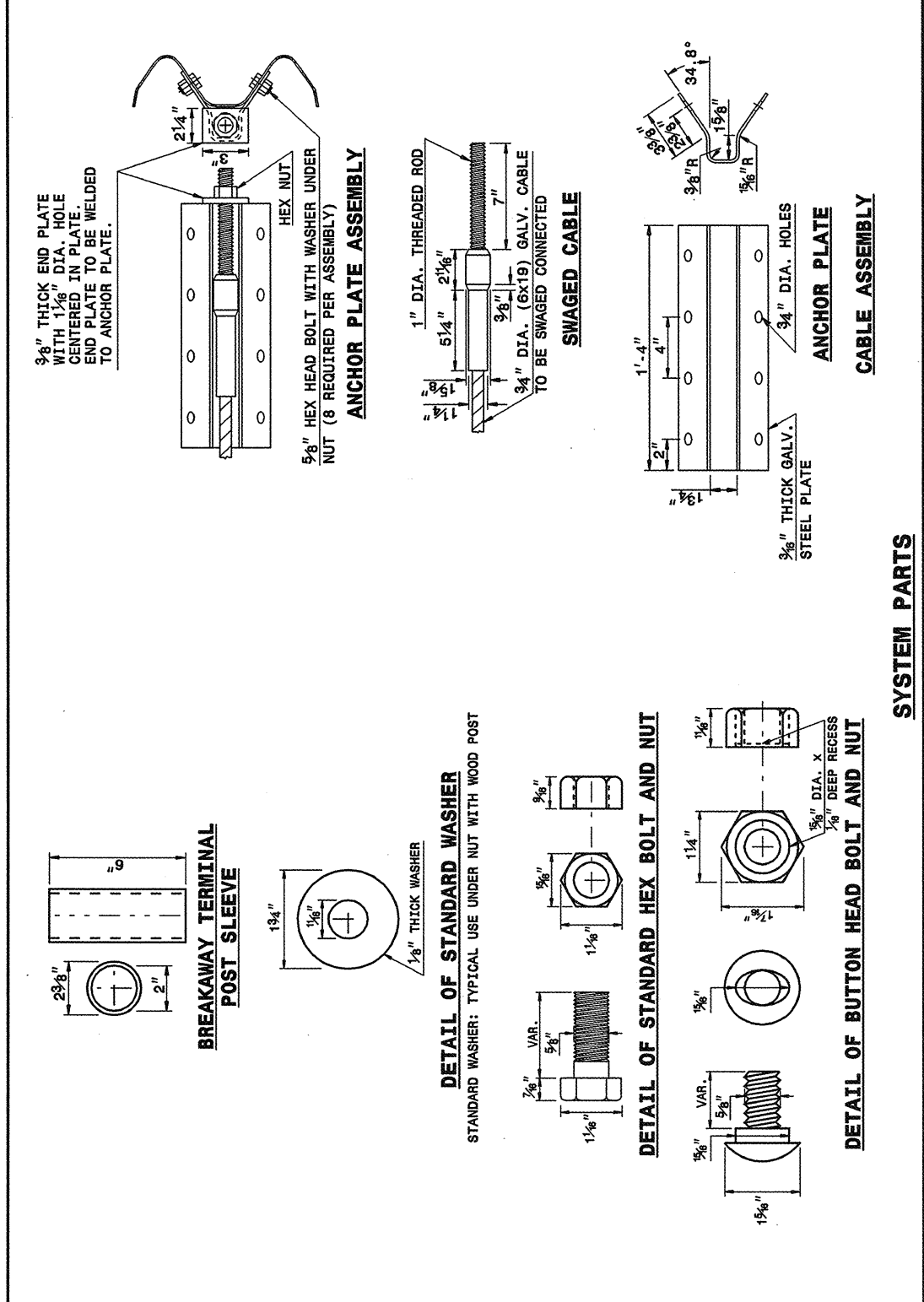
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STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR GUARDRAIL INSTALLATION

SHEET 5 OF 7 **862D02**



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

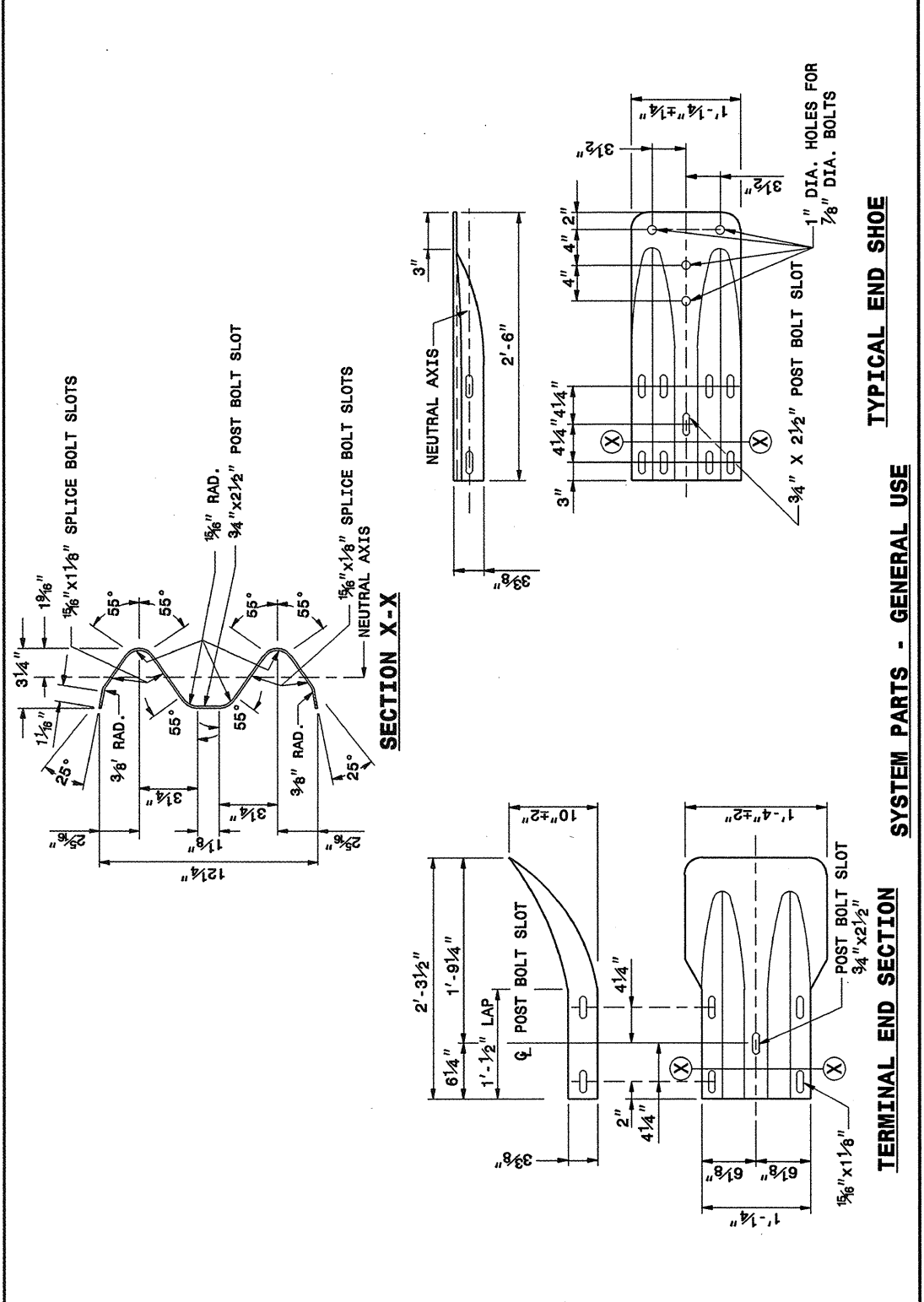
ENGLISH DETAIL DRAWING FOR GUARDRAIL INSTALLATION

SHEET 5 OF 7 **862D02**

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

ENGLISH DETAIL DRAWING FOR GUARDRAIL INSTALLATION

SHEET 6 OF 7 **862D02**



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

ENGLISH DETAIL DRAWING FOR GUARDRAIL INSTALLATION

SHEET 6 OF 7 **862D02**

PROJECT SERVICES UNIT
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SEE PLATE FOR TITLE

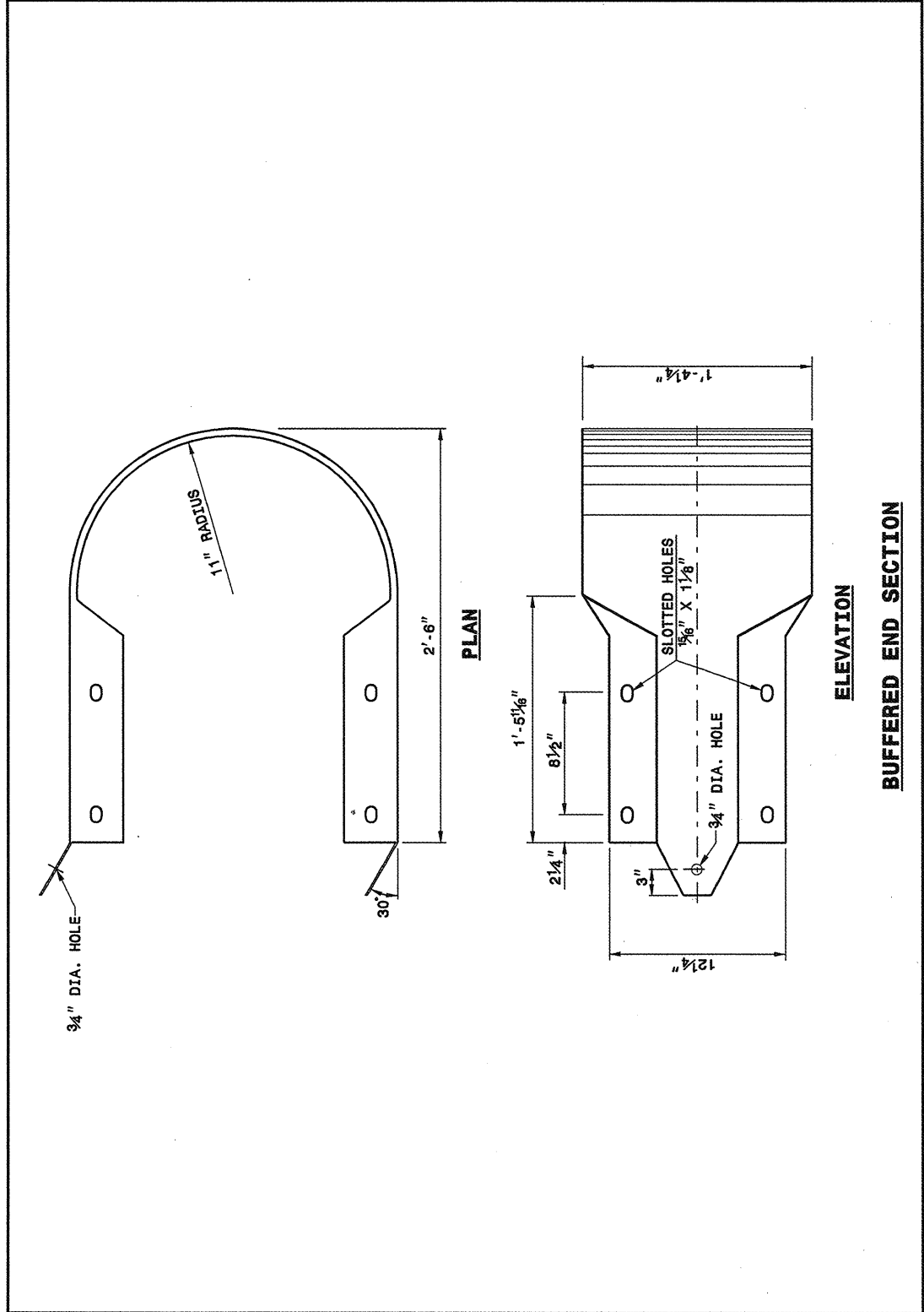
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STATE OF
NORTH CAROLINA
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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 7 OF 7
862D02



STATE OF
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ENGLISH DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 7 OF 7
862D02

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

SEE PLATE FOR TITLE

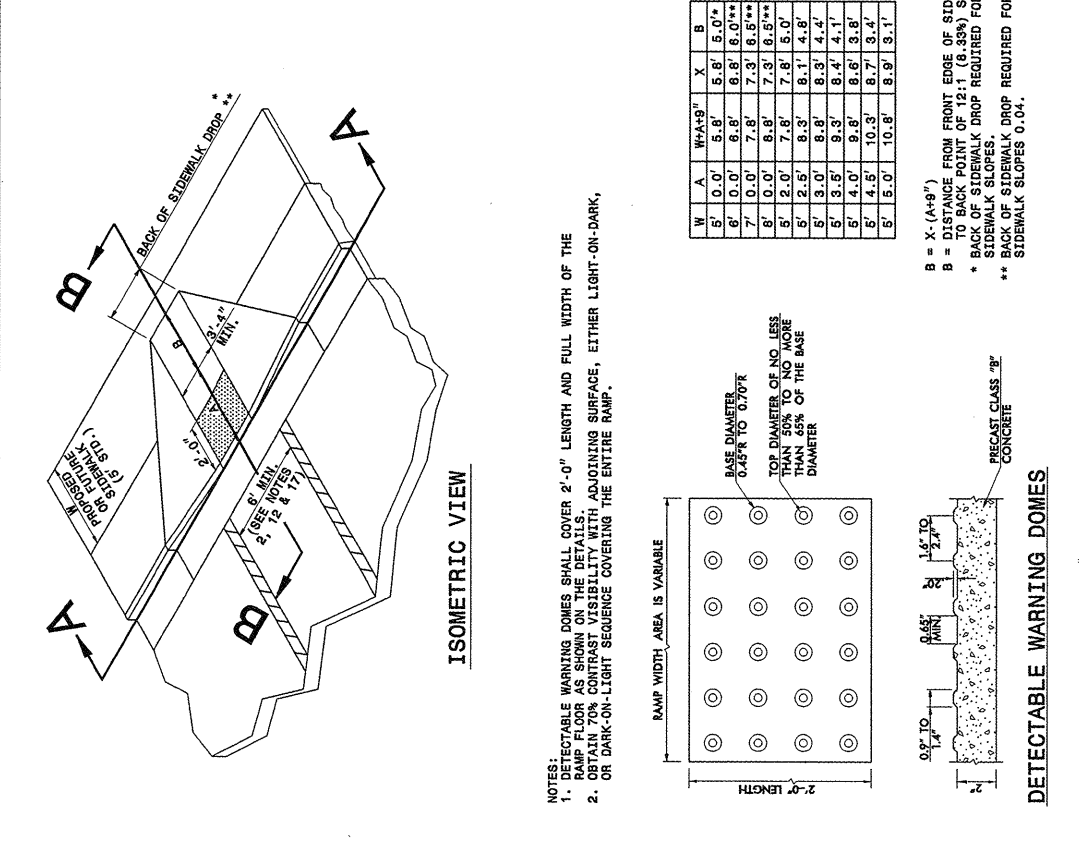
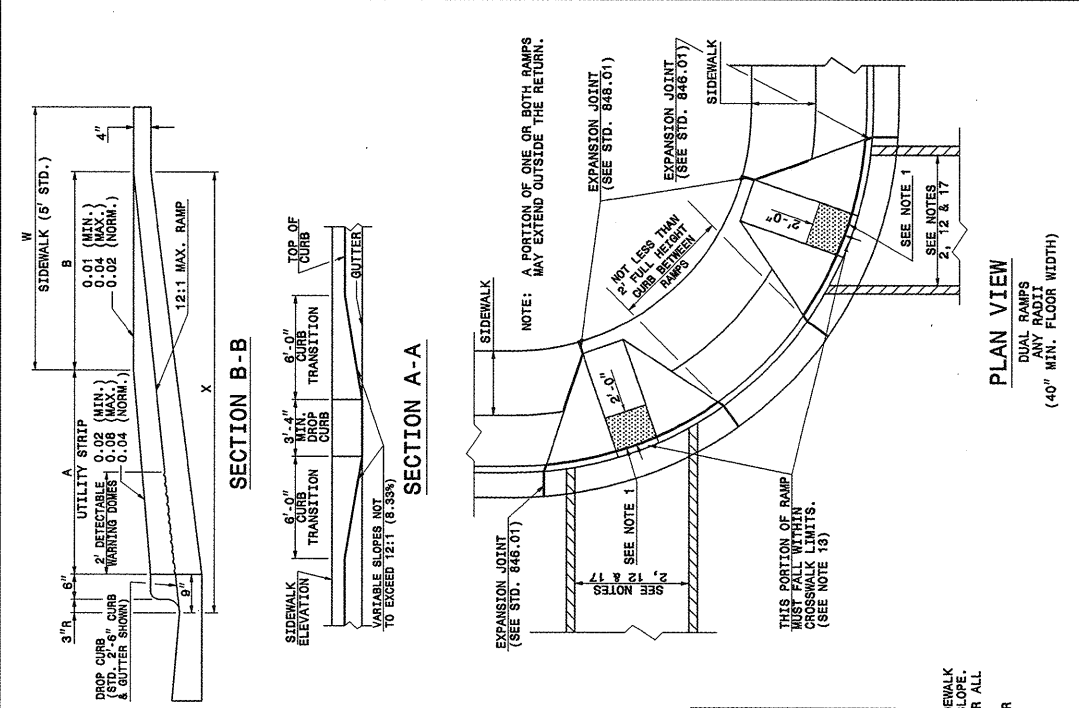
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STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR WHEELCHAIR RAMP CURB CUT

SHEET 1 OF 4 848D05



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

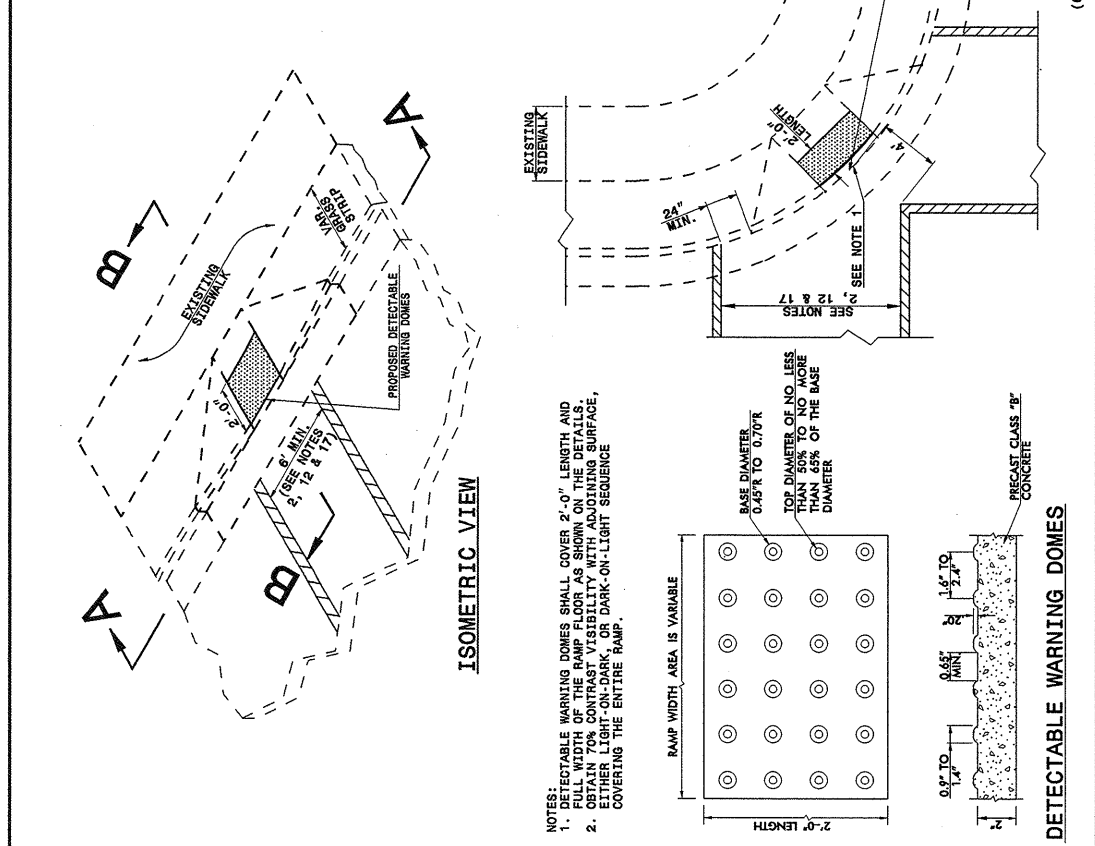
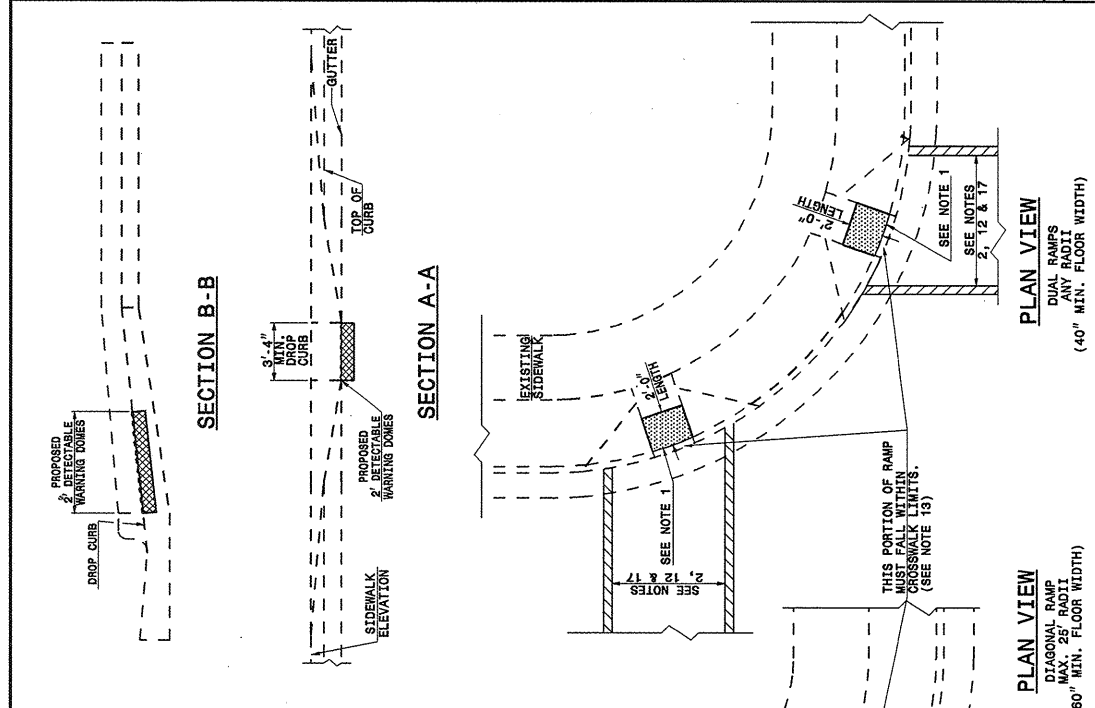
ENGLISH DETAIL DRAWING FOR WHEELCHAIR RAMP CURB CUT

SHEET 1 OF 4 848D05

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

ENGLISH DETAIL DRAWING FOR RETROFITTING DETECTABLE WARNING DOMES ONTO EXISTING WHEELCHAIR RAMP CURB CUT

SHEET 2 OF 4 848D05



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

ENGLISH DETAIL DRAWING FOR RETROFITTING DETECTABLE WARNING DOMES ONTO EXISTING WHEELCHAIR RAMP CURB CUT

SHEET 2 OF 4 848D05

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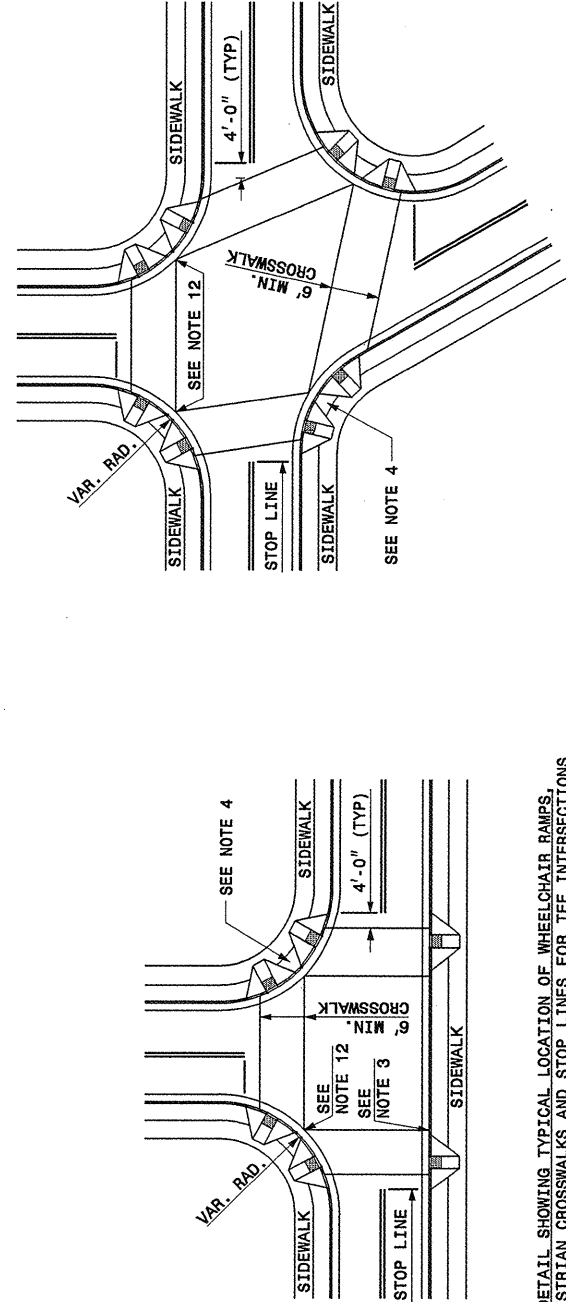
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STATE OF
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 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

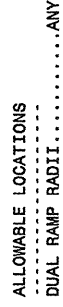
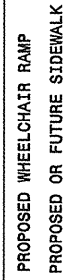
ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
 CURB CUT

SHEET 3 OF 4
848D05



DETAIL SHOWING TYPICAL LOCATION OF WHEELCHAIR RAMP,
 PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS

DETAIL SHOWING TYPICAL LOCATION OF WHEELCHAIR
 RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES



SHEET 3 OF 4
848D05

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ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
 CURB CUT

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ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
 CURB CUT

SHEET 4 OF 4
848D05

NOTES:

- CONSTRUCT THE WALKING SURFACE WITH SLIP RESISTANCE AND A 70% CONTRASTING COLOR TO THE SIDEWALK.
- CROSSWALK WIDTHS AND CONFIGURATION VARY BUT MUST CONFORM TO TRAFFIC DESIGN STANDARDS.
- NORTH CAROLINA GENERAL STATUTE 136-44.14 REQUIRES THAT ALL STREET CURBS BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1, 1973 SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY DISABLED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTER AND SIDEWALKS ARE PROVIDED AND AT OTHER POINTS OF PEDESTRIAN FLOW.
 IN ADDITION, SECTION 228 OF THE 1973 FEDERAL AID HIGHWAY SAFETY ACT REQUIRES PROVISION OF CURB RAMPS ON ANY CURB CONSTRUCTION AFTER JULY 1, 1976 WHETHER A SIDEWALK IS PROPOSED INITIALLY OR IS PLANNED FOR A FUTURE DATE.
 THE AMERICANS WITH DISABILITIES ACT (ADA) OF 1990 EXTENDS TO INDIVIDUALS WITH DISABILITIES. COMPREHENSIVE CIVIL RIGHTS PROTECTIONS SIMILAR TO THOSE PROVIDED TO PERSONS ON THE BASIS OF RACE, SEX, NATIONAL ORIGIN AND RELIGION UNDER THE CIVIL RIGHTS ACT OF 1964. THESE CURB RAMPS HAVE BEEN DESIGNED TO COMPLY WITH THE CURRENT ADA STANDARDS.
- PROVIDE WHEELCHAIR RAMPS AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. LOCATE WHEELCHAIR RAMPS AS DIRECTED BY THE ENGINEER WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT WHERE TWO RAMPS ARE INSTALLED PLACE NOT LESS THAN 2 FEET OF FULL HEIGHT CURB BETWEEN THE RAMPS. PLACE DUAL RAMPS AS NEAR PERPENDICULAR TO THE TRAVEL LANE BEING CROSSED AS POSSIBLE.
- PAY FOR ALL VARIABLE DEPTH CONCRETE USED FOR CONSTRUCTION OF WHEELCHAIR RAMPS AS CONCRETE WHEELCHAIR RAMPS. (SQ. YDS.)
- PAY FOR ALL DEPRESSED CURBS AT WHEELCHAIR RAMPS AS THE TYPE CURB AND GUTTER USED ADJACENT TO DEPRESSED CURB. (LN. FT.)
- SUCH PRICES AND PAYMENTS IS CONSIDERED FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO SATISFACTORILY COMPLETE THE WORK.
- DO NOT EXCEED 0.08 (12:1) SLOPE ON THE WHEELCHAIR RAMP IN RELATIONSHIP TO THE GRADE OF THE STREET.
- CONSTRUCT WHEELCHAIR RAMPS 40" (3'-4") OR GREATER FOR DUAL RAMPS.
- USE CLASS "B" CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NON-SKID TYPE SURFACE.
- PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE WHEELCHAIR RAMP JOINS THE CURB AND AS SHOWN ON STD. DWG. 848.01.
- PLACE THE INSIDE PEDESTRIAN CROSSWALK LINES NO CLOSER IN THE INTERSECTION BY BISECTING THE INTERSECTION RADIUS, WITH ALLOWANCE OF A 4' CLEAR ZONE IN THE VEHICULAR TRAVELWAY WHEN ONE RAMP IS INSTALLED. (SEE NOTE 17)
- COORDINATE THE CURB CUT AND THE PEDESTRIAN CROSSWALK LINES SO THE FLOOR OF THE WHEELCHAIR RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES. PLACE DIAGONAL RAMPS WITH FLARED SIDES SO 24" OF FULL HEIGHT CURB FALLS WITHIN THE CROSSWALK MARKINGS ON EACH SIDE OF THE FLARES.
- CONSTRUCT THE PEDESTRIAN CROSSWALK A MINIMUM OF 6 FEET. A CROSSWALK WIDTH OF 10 FEET OR GREATER IS DESIRABLE.
- USE STOP LINES, NORMALLY PERPENDICULAR TO THE LANE LINES, WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN OR OTHER LEGAL REQUIREMENT. AN UNUSUAL APPROACH SKEW MAY REQUIRE THE PLACEMENT OF THE STOP LINE TO BE PARALLEL TO THE INTERSECTING ROADWAY.
- TERMINATE PARKING A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK.
- PLACE ALL PAVEMENT MARKINGS IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION AND THE NORTH CAROLINA SUPPLEMENT TO THE MUTCD.

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

SEE PLATE FOR TITLE

ORIGINAL BY: 2002 STD.848.05 DATE:
 MODIFIED BY: E.E. WARD DATE: 09-06-05
 CHECKED BY: DATE:
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TWO LANE, TWO WAY WORK ZONE (L-LINES)

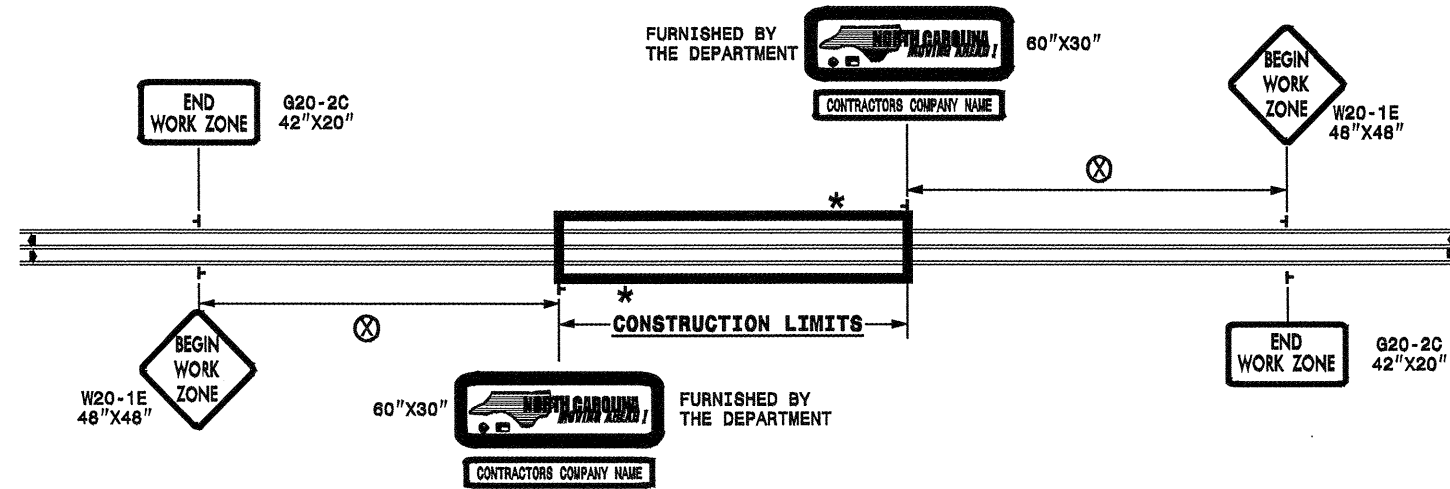
FURNISHED BY THE DEPARTMENT



60" X 30"

CONTRACTORS COMPANY NAME

60" Max. X 12"



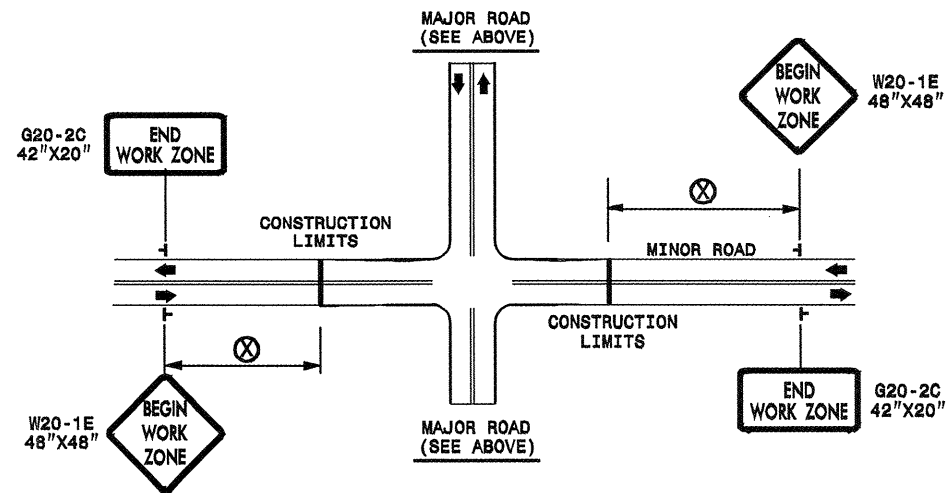
POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
P.S.L. ≤ 60	350'
P.S.L. ≥ 65	500'

* **WORK ZONE NEXT XX MILES** G20-1 42"x20"

* THIS SIGN TO BE USED ON PROJECTS LONGER THAN 2 MILES. THE NUMBER DISPLAYED ON THE SIGN IS TO BE A WHOLE NUMBER ROUNDED UP TO THE NEXT MILE. IT'S TO BE LOCATED 1,500 FEET INSIDE OF THE CONSTRUCTION LIMITS.

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INTERSECTIONS (-Y- LINES)

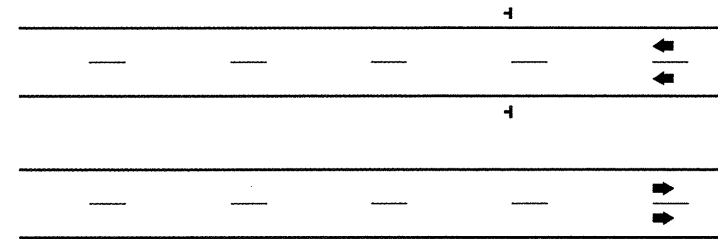


* ON INTERSECTION TYPE PROJECTS, SELECT THE MAJOR ROAD BASED ON THE HIGHER ADT.

FREEWAYS / INTERSTATES

DUAL MOUNT "BEGIN WORK ZONE" SIGNS 1,000' IN ADVANCE OF PROJECT LIMITS

DUAL MOUNT "MOVING AHEAD" SIGNS 500' IN ADVANCE OF PROJECT LIMITS



GENERAL NOTES

SEE SPECIAL PROVISIONS FOR "NORTH CAROLINA MOVING AHEAD" REQUIREMENTS.

LEGEND

- └ STATIONARY SIGN
- ◀ DIRECTION OF TRAFFIC FLOW

DETAIL DRAWING FOR ADVANCE
WARNING WORK ZONE SIGNS

SHEET 1 OF 1

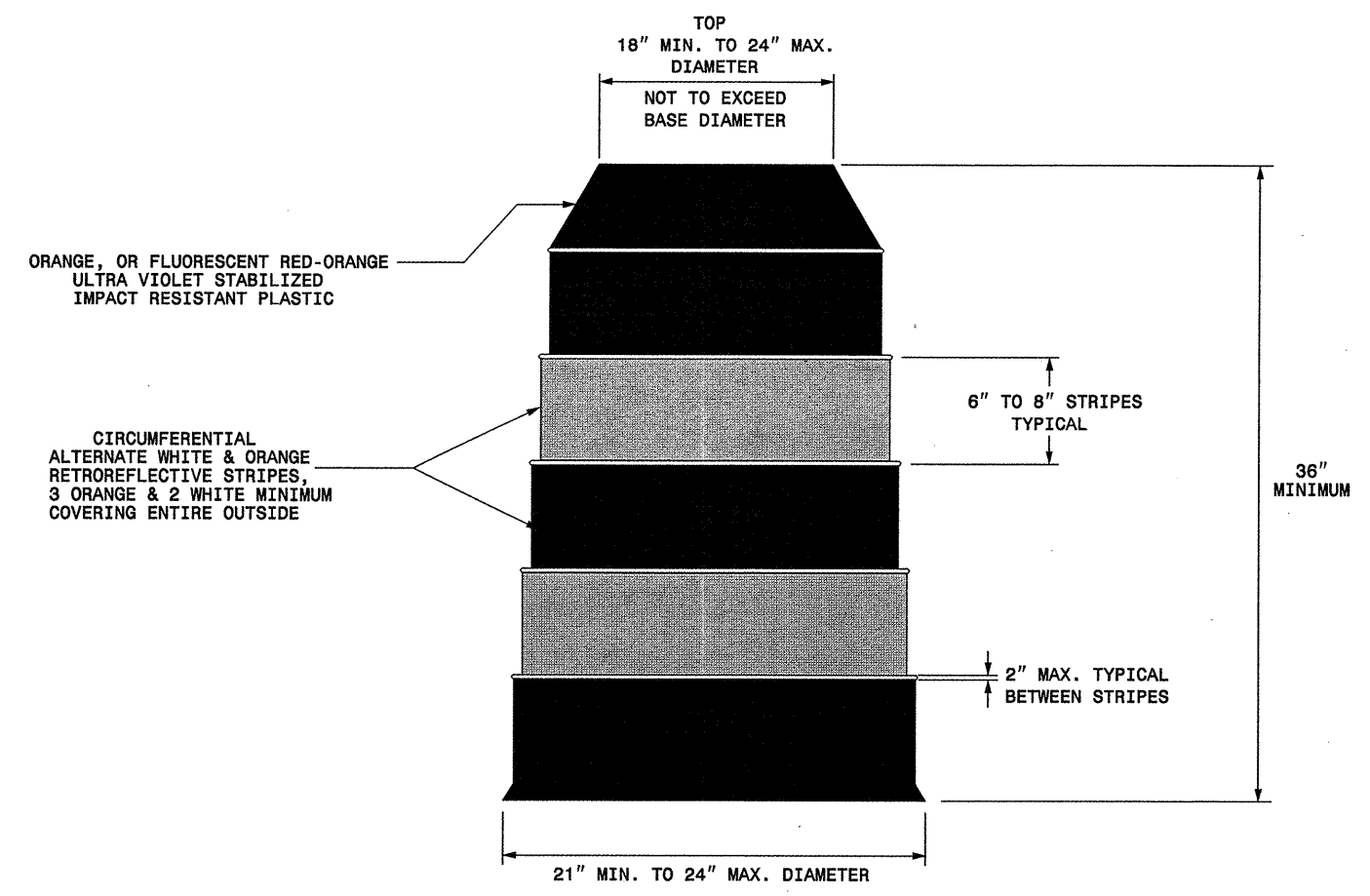
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	DESIGN BY: JSK		
	REVIEWED BY: SK		

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RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
DRUMS

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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
DRUMS



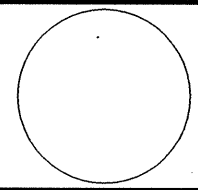

GENERAL NOTES

- BALLASTING SHALL BE ACHIEVED BY THE SAND BAG, TIRE-SIDEWALL BALLAST, OR PREFORMED WEIGHTED BASE BALLASTING METHODS. DO NOT PLACE BALLAST ON TOP OF THE DRUM.
- IF NECESSARY PLACE THE NAME OF THE AGENCY, CONTRACTOR, OR SUPPLIER ON NON-RETROREFLECTIVE DRUM SURFACES. SHOW THE LETTERS AND NUMBERS USING A NON-RETROREFLECTIVE COLOR AND NOT OVER 2" IN HEIGHT.

SHEET 1 OF 1
1130D01

SHEET 1 OF 1
1130D01

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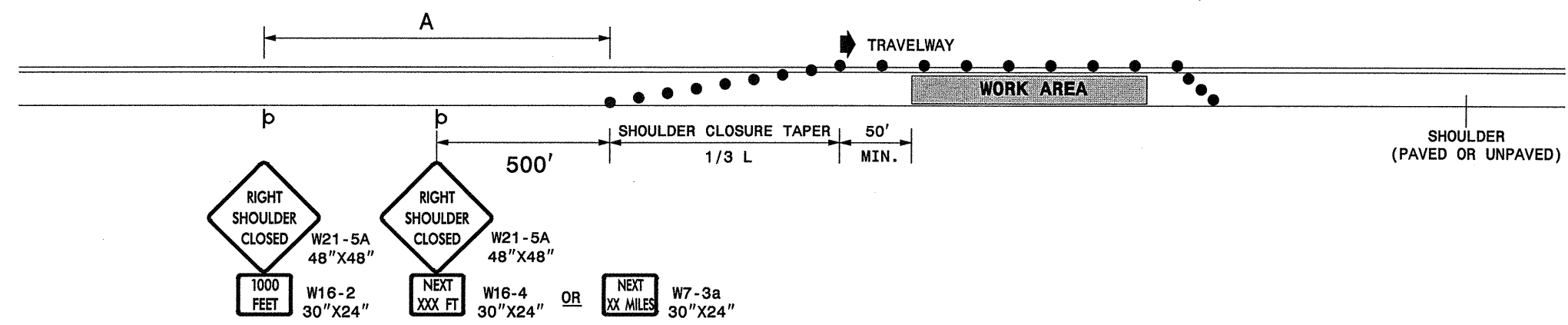
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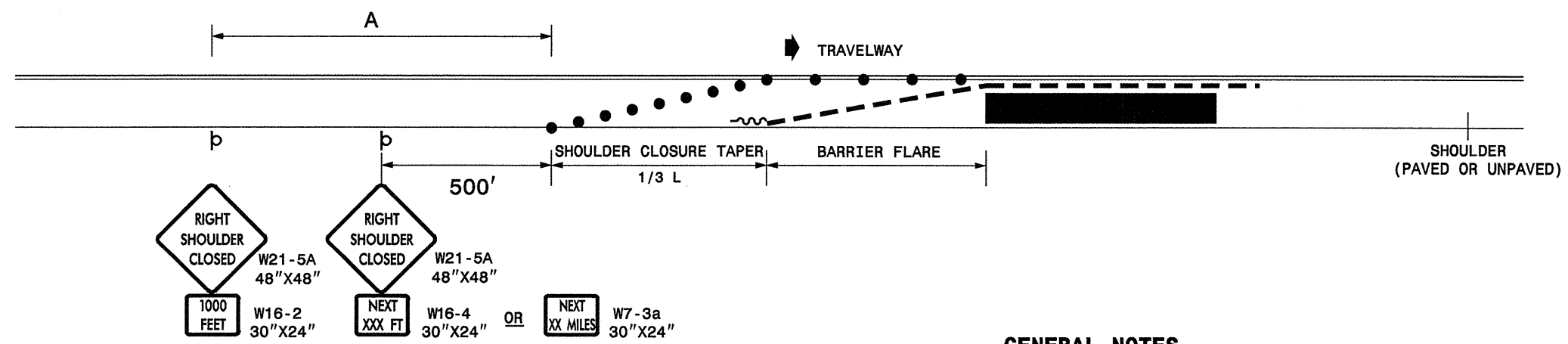
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ENGLISH STANDARD DRAWING FOR
TEMPORARY SHOULDER CLOSURES

SHOULDER CLOSURES UTILIZING DRUMS



SHOULDER CLOSURES UTILIZING TEMPORARY BARRIER



GENERAL NOTES

- PLACE SHOULDER CLOSURE SIGNS ON THE SAME SIDE AS THE SHOULDER THAT IS CLOSED.
- PLACE DRUMS IN THE SHOULDER TAPER AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MAXIMUM SPACING OF DRUMS ALONG THE WORK AREA AND BARRIER FLARE IS EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
- FLARE THE APPROACH END OF PORTABLE CONCRETE BARRIER BEYOND THE SHOULDER AND USE A CRASH CUSHION FOR PROTECTION IF THE EXPOSED END OF THE BARRIER IS WITHIN THE "CLEAR ZONE".
- USE STATIONARY SIGNS FOR LONG TERM OPERATIONS (LONGER THAN 3 DAYS).
- REFER TO STD. 1101.11 SHEETS 1, 3, & 4, FOR "L" DISTANCE, BARRIER FLARE RATES, AND SIGN SPACING.

LEGEND

- ~ TEMPORARY CRASH CUSHION
- - - PORTABLE CONCRETE BARRIER
- DRUM
- ⊔ STATIONARY OR PORTABLE SIGN
- ➔ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1
1101D04

SHEET 1 OF 1
1101D04

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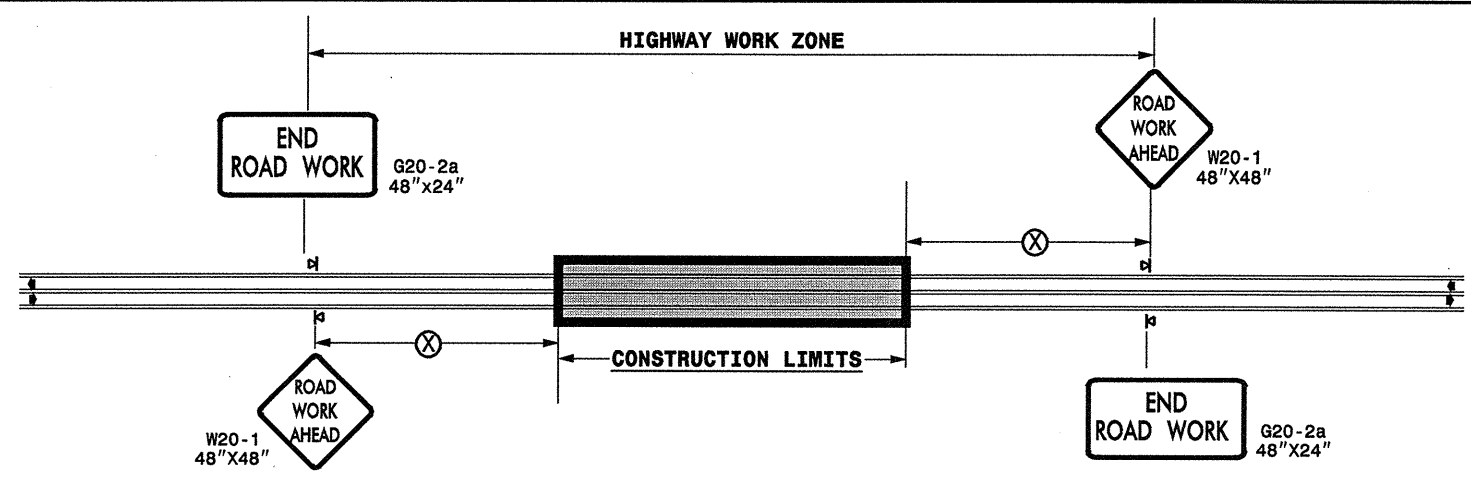
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ENGLISH STANDARD DRAWING FOR
TEMPORARY SHOULDER CLOSURES

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REVIEWED BY: MMM		

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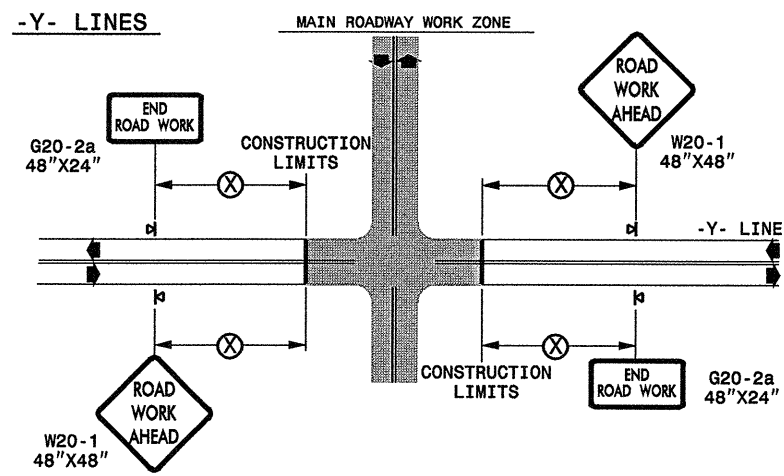
TWO-WAY UNDIVIDED ** (L-LINES)



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
≤ 50	500'
≥ 55	1000'

STATE OF NORTH CAROLINA
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ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



DETAIL DRAWING
FOR TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- PROVIDE PORTABLE WORK ZONE SIGN STANDS, PORTABLE SIGNS AND SIGN SHEETING WHICH ARE LISTED ON THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCT LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE TRAFFIC CONTROL UNIT.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

◀ PORTABLE SIGN

➡ DIRECTION OF TRAFFIC FLOW


SHEET 1 OF 1

APPROVED: _____ DATE: _____	<p>DETAIL DRAWING FOR TWO-WAY UNDIVIDED ADVANCED WORK ZONE WARNING SIGNS</p>								
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SCALE: NONE									
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REVIEWED BY: _____									
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REVISIONS									
7-98	10/01								
10-98	03/04								
01/01	11/04								

27 APR 2006 10:03 C:\GROUPS-WZ\TCCC\design\group\p\sq\od4\resur\fac\div08\37626et2wayundivurbfr-wysrev05.dgn
 Desy Moore AT WZTC06421

TWO LANE, TWO WAY WORK ZONE (L-LINES)

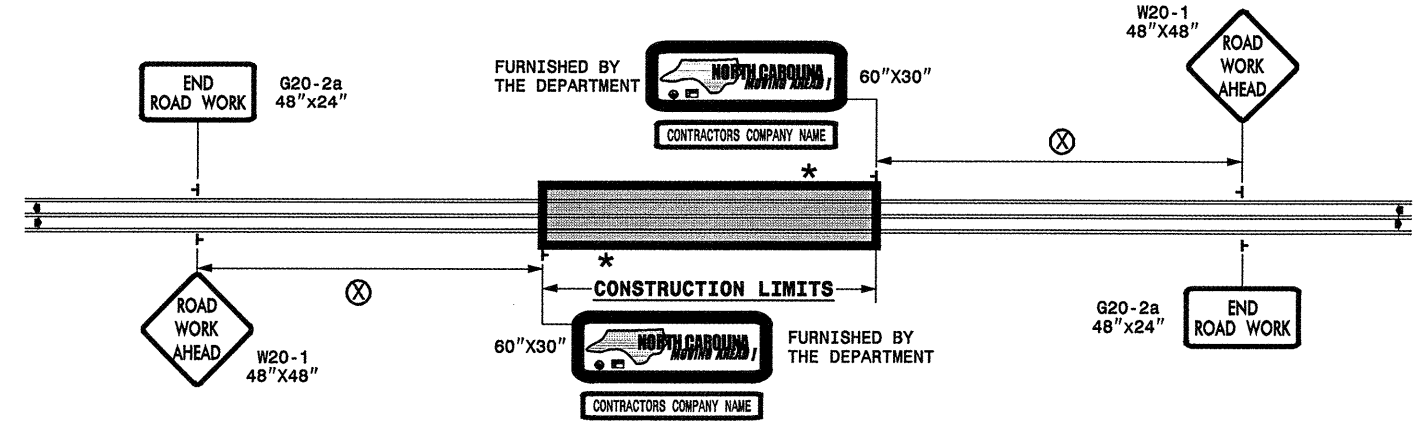
FURNISHED BY THE DEPARTMENT



60" X 30"

CONTRACTORS COMPANY NAME

60" Max. X 12"



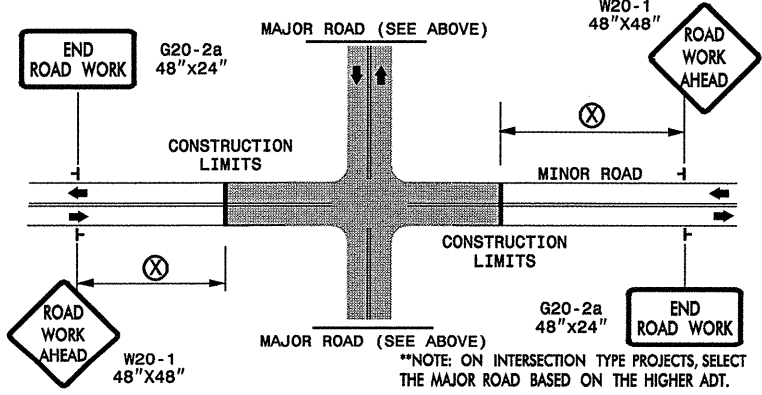
POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
P.S.L. ≤ 50	⊗
P.S.L. ≥ 55	350'

*** ROAD WORK NEXT XX MILES G20-1A 60"x24"**

THIS SIGN TO BE USED ON PROJECTS LONGER THAN 2 MILES
 THE NUMBER DISPLAYED ON THE SIGN IS TO BE A WHOLE NUMBER ROUNDED UP TO THE NEXT MILE
 IT'S TO BE LOCATED 1,500 FEET INSIDE OF THE CONSTRUCTION LIMITS

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

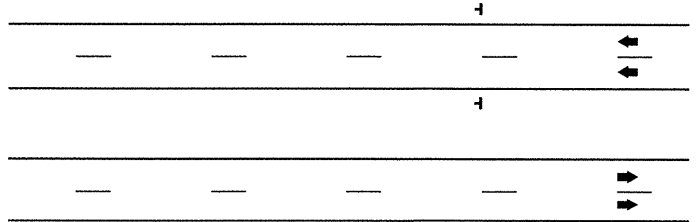
INTERSECTIONS (-Y- LINES)



FREEWAYS / INTERSTATES

DUAL MOUNT "ROAD WORK AHEAD" SIGNS 1,000' IN ADVANCE OF PROJECT LIMITS

DUAL MOUNT "MOVING AHEAD" SIGNS 500' IN ADVANCE OF PROJECT LIMITS





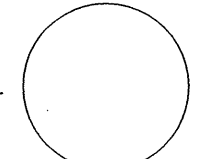

DETAIL DRAWING FOR ADVANCE WARNING WORK ZONE SIGNS

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED. USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

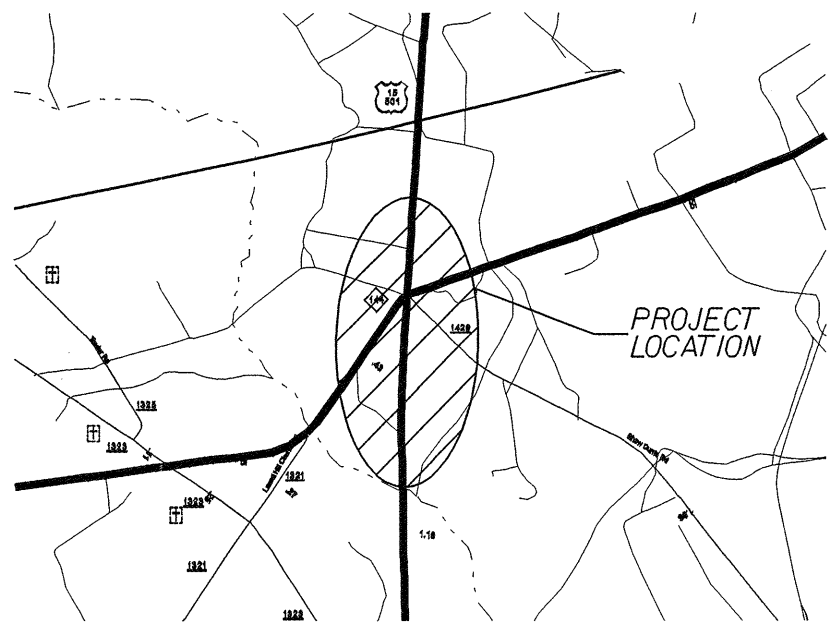
LEGEND

 STATIONARY SIGN
 DIRECTION OF TRAFFIC FLOW

APPROVED: _____ DATE: _____	ADVANCE WARNING WORK ZONE SIGNS FOR "MOVING AHEAD"	
SEAL 	SCALE: NONE	
	DATE: 07/03	
	DWG. BY: JSK	
	DESIGN BY: JSK	
REVIEWED BY: SK	REVISIONS 11/04 12/04	CAD FILE

PS3494

PROJECT: PART II, 39211



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SCOTLAND COUNTY

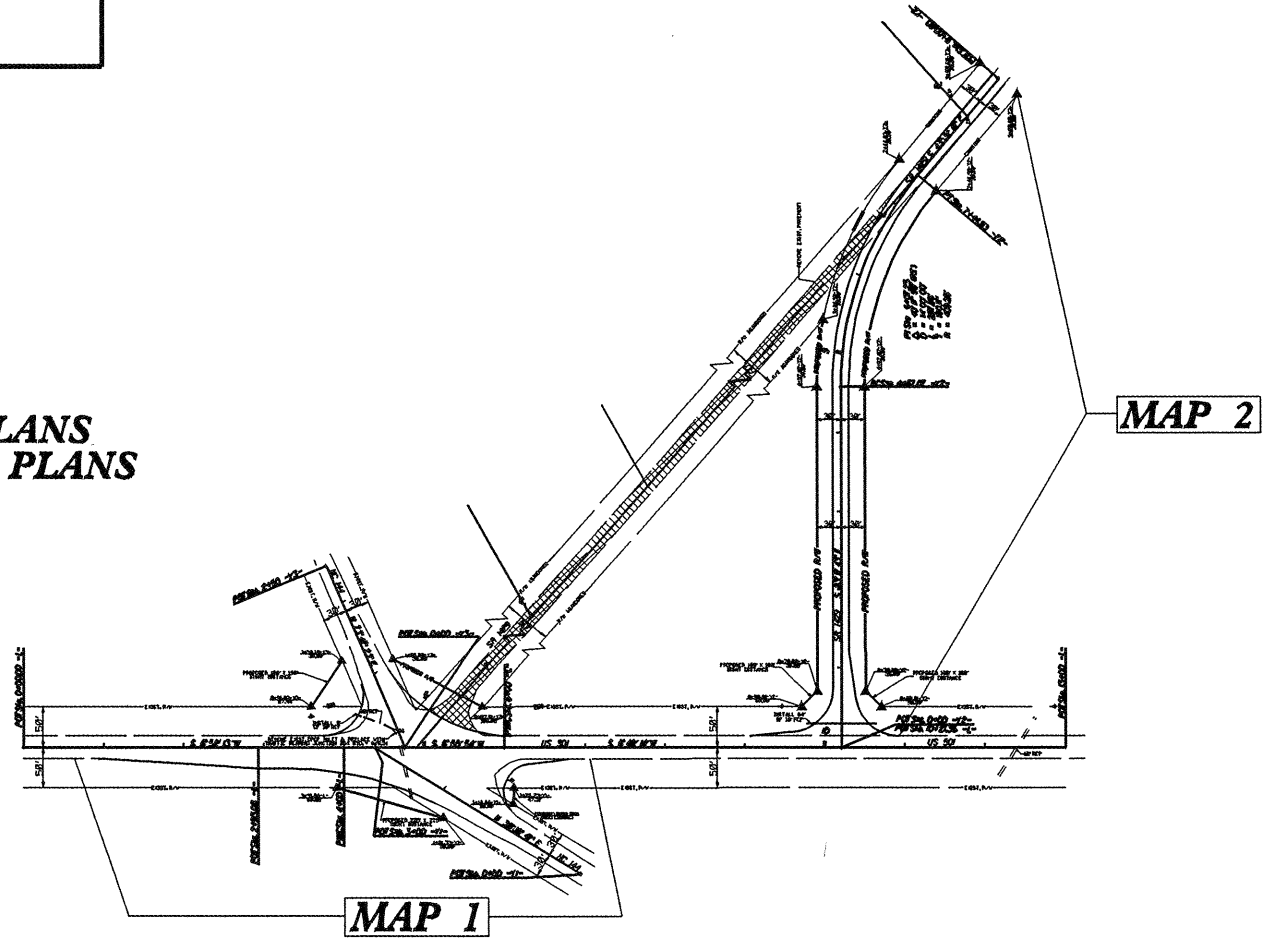
LOCATION: US 501 & NC 144 & SR 1429
LAUREL HILL TWNSP.

TYPE OF WORK: INSTALLATION OF CONCRETE
ISLAND AND REALIGN INTERSECTION

STATE	WBS ELEMENT	SHEET NO.	TOTAL SHEETS
N.C.	PART II, 39211	1	27
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
36283.8.4		PE & R/W	
39211		CONSTRUCTION	

PLAN SHEET INDEX

- SHEET 2 = TYPICAL SECTION
- SHEET 3 = DRAINAGE SUMMARY
- SHEET 3A = EARTHWORK SUMMARY
- SHEET 4-7 = PLAN SHEETS
- SHEET 8-9 = VERTICAL PROFILES
- SHEET U-1-U-3 = UTILITY PLANS
- SHEET PM-1-PM-3 = PVMT. MARKING PLANS
- SHEET EC-1-EC-4 = EROSION CONTROL PLANS
- SHEET X-1-X-7 = CROSS SECTIONS



DISTRICT ENGINEER SEAL

5-3-06

PLANS SCALE: 1"=50'

DESIGN DATA

ADT	-----	=	-----
ADT	-----	=	-----
DHV	=	---	%
D	=	---	%
T	=	---	%
V	=	---	MPH

Prepared By the

DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE

2002 STANDARD SPECIFICATIONS

SURVEY DATE: 1-28-2005	PLANS COMPLETE DATE: _____
SURVEYED BY: ROCKINGHAM DISTRICT OFFICE	RIGHT OF WAY PLANS DATE: _____
DRAWN BY: C.G. BROWN	CONSTRUCTION PLANS DATE: _____

K. R. HEDRICK P.E.
DISTRICT ENGINEER

DRAINAGE DESIGN P.E.

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SIGNATURE: P.E.

STATE HIGHWAY ENGINEER - DESIGN

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED FOR
DIVISION ADMINISTRATOR DATE

PROJECT NO.	SHEET NO.
39211	1-B

PART II

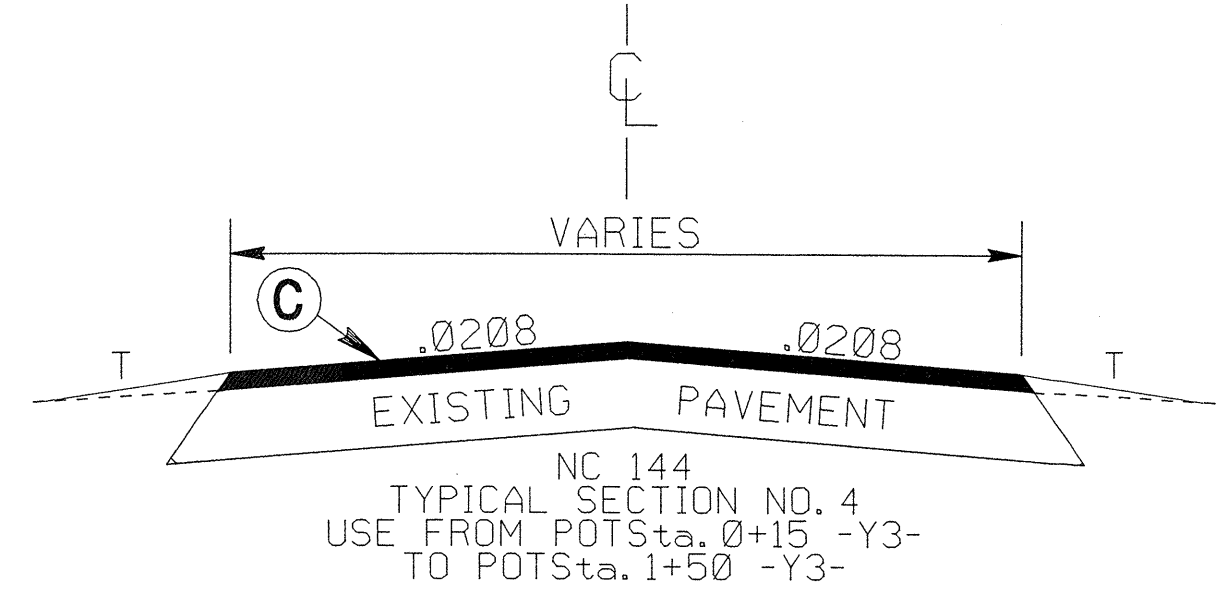
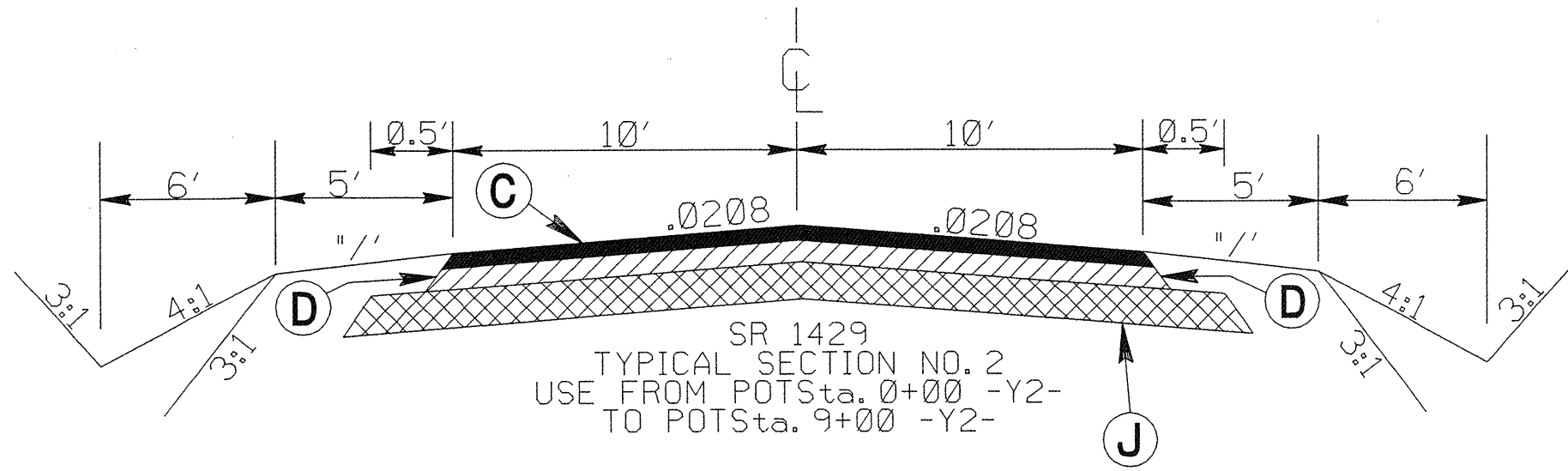
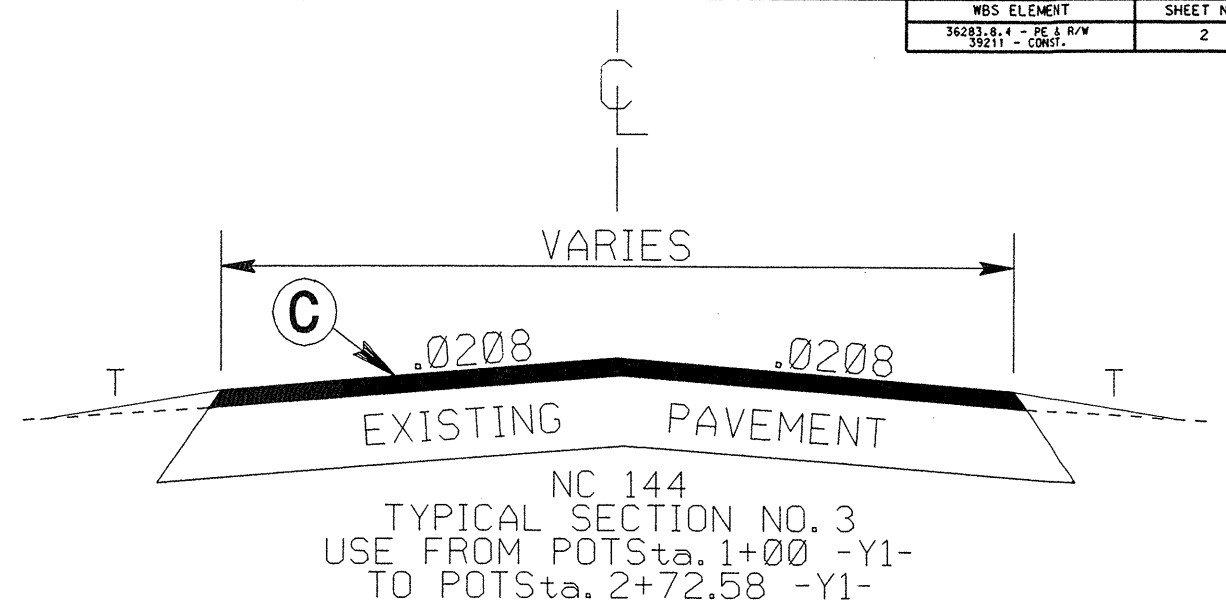
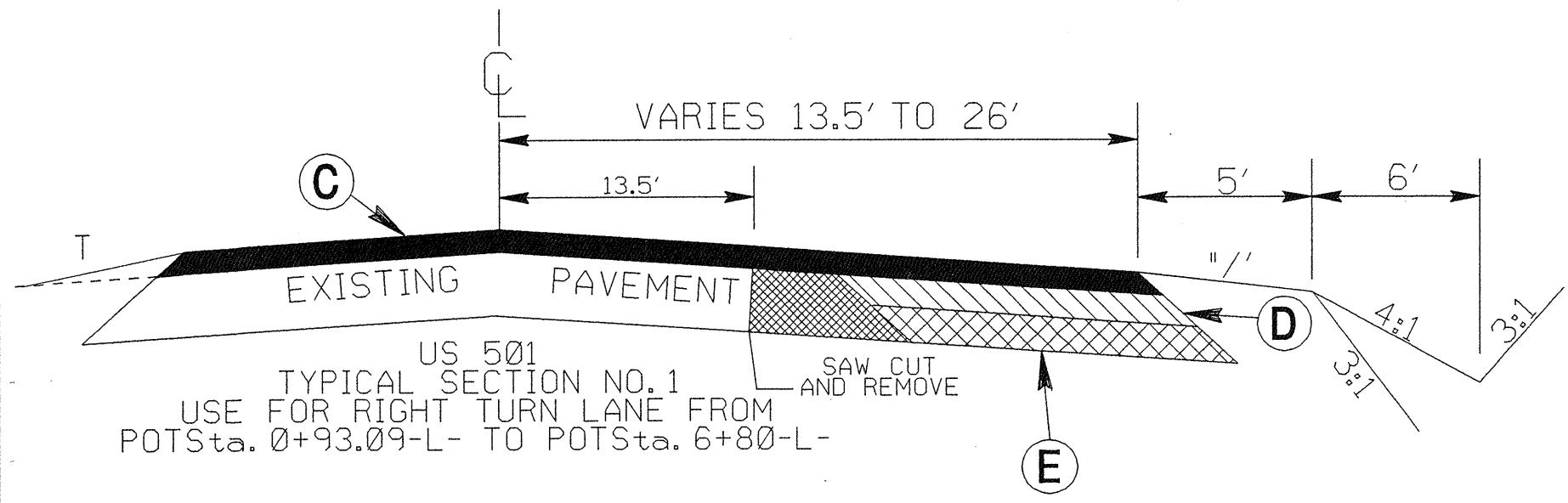
SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LENGTH MI	WIDTH FT	GRADING (LUMP SUM) EA	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES TON	15" RC PIPE CULVERTS, CLASS III LF	18" RC PIPE CULVERT, CLASS III LF	AGGREGATE BASE COURSE TONS	INCIDENTAL STONE BASE TONS	INCIDENTAL MILLING SY	BASE COURSE, TYPE B25.0B TONS	INTERMEDIATE COURSE, TYPE I19.0B TONS	SURFACE COURSE, TYPE S9.5B TONS	PG 64-22 PLANT MIX TONS
39211	Scotland	1	US 501	AT NC 144 & SR 1429	1,3,4	0.25	27	0.25	1	8			20	150	102	76	467	36
39211	Scotland	2	SR 1429	FROM 0.17 MI. EAST OF US 501 TO US 501	2	0.17	20	0.75	9	60	84	823		50		399	196	31
TOTAL FOR PROJ NO. 39211						0.42		1.00	10	68	84	823	20	200	102	475	663	67
GRAND TOTAL						0.42		1.00	10	68	84	823	20	200	102	475	663	67

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	RIGHT OF WAY MARKER EA	PIPE COLLAR CY	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED) SY	ADJUSTMENT OF METER OR VALVE BOX EA	CONVERT DI TO JB EA	TEMPORARY SILT FENCE LF	EROSION CONTROL STONE, CLASS B TONS	SEDIMENT CONTROL STONE TONS	SILT EXCAVATION CY	MATTING (EROSION CONTROL) SY	SEED & MULCHING AC
39211	Scotland	1	US 501	AT NC 144 & SR 1429	1,3,4	8	1	194	1	1	70	15	2	2	360	0.60
39211	Scotland	2	SR 1429	FROM 0.17 MI. EAST OF US 501 TO US 501	2	11					90	38	13	28	1,640	1.80
TOTAL FOR PROJ NO. 39211						19	1	194	1	1	160	53	15	30	2,000	2.40
GRAND TOTAL						19	1	194	1	1	160	53	15	30	2,000	2.40

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	4" X 90 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	4" X 120 M WHITE THERMO LF	8" X 90 M WHITE THERMO LF	THERMO RT ARROW 90 M EA	4" WHITE PAINT LF	4" YELLOW PAINT LF	YELLOW & YELLOW MARKERS EA	CYAN & RED MARKERS EA
39211	Scotland	1	US 501	AT NC 144 & SR 1429	1,3,4	1,500	1,800	65	340	1			14	3
39211	Scotland	2	SR 1429	FROM 0.17 MI. EAST OF US 501 TO US 501	2						3,800	3,650		
TOTAL FOR PROJ NO. 39211						1,500	1,800	65	340	1	3,800	3,650	14	3
GRAND TOTAL						1,500	1,800	65	340	1	3,800	3,650	14	3



PAVEMENT SCHEDULE	
C	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
E	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0 B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
J	PROP. 6" AGGREGATE BASE COURSE.

NOT TO SCALE

DESIGN DATA	
ADT	==
DHV	==
D	==
T	==
V	==
	%
	%
	MPH

Prepared By the
DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE
2002 PER STANDARD SPECIFICATIONS

SURVEY DATE: 1-28-05	PLANS COMPLETE DATE:
SURVEYED BY: ROCKINGHAM DISTRICT OFFICE	RIGHT OF WAY PLANS DATE:
DRAWN BY: C. G. BROWN	CONSTRUCTION PLANS DATE:

K. R. HEDRICK P.E.
DISTRICT ENGINEER

DRAINAGE DESIGN P.E.

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN

SIGNATURE: _____ P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY ENGINEER - DESIGN P.E.
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED FOR
DIVISION ADMINISTRATOR _____ DATE

STATE OF NORTH CAROLINA

SUMMARY OF EARTHWORK
IN CUBIC YARDS

	FROM STATION	TO STATION	SIDE	TOTAL UNCLASSIFIED EXCAVATION	UNDERCUT	EMBANKMENT +%	BORROW	WASTE
-L-	10+00.00	6+75.00	LT & RT					
-Y2-	0+00.00	9+00.60	LT & RT	667		1000	333	
INTERSECTION SUBTOTAL SUMMARY				667		1000	333	
ESTIMATED LOSS DUE TO CLEARING AND GRUBBING				-167			167	
SHOULDER MATERIAL						140		
EARTH WASTE TO REPLACE BORROW								
PROJECT TOTAL				500		1140	500	
ESTIMATE 5% FOR TOPSOIL FOR BORROW PITS							25	
TOTAL				500		1140	525	
SAY				500		1140	525	

APPROX. DDE = 300 CU. YD.
APPROX. PVMT. REMOVAL = 2422 SQ. YD.

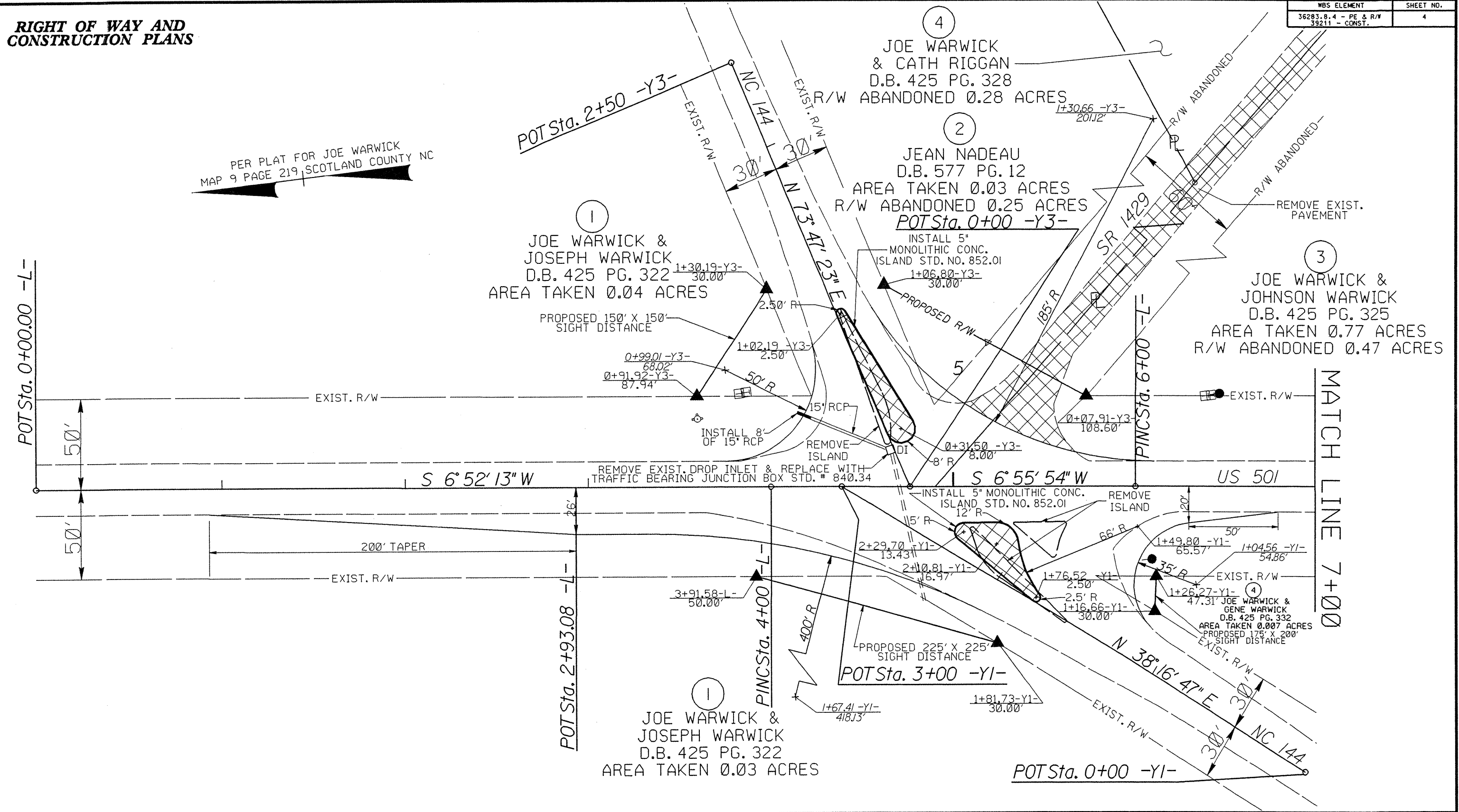
NOTE:
APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING AND GRUBBING, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".

SYSTEMS
SERIALS

RIGHT OF WAY AND CONSTRUCTION PLANS

WBS ELEMENT	SHEET NO.
36283.8.4 - PE & R/W 39211 - CONST.	4

PER PLAT FOR JOE WARWICK
MAP 9 PAGE 219, SCOTLAND COUNTY NC



PLANS SCALE: 1" = 50'

DESIGN DATA	
ADT	==
DHV	==
T	==
V	==
	%
	MPH

Prepared By the DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE <small>2002 STANDARD SPECIFICATIONS</small>	
SURVEY DATE: 1-28-05	PLANS COMPLETE DATE:
SURVEYED BY: ROCKINGHAM DISTRICT OFFICE	RIGHT OF WAY PLANS DATE:
DRAWN BY: C. G. BROWN	CONSTRUCTION PLANS DATE:
	K. R. HEDRICK DISTRICT ENGINEER P.E.
	DRAINAGE DESIGN P.E.

HYDRAULICS ENGINEER	
SIGNATURE:	PE
	ROADWAY DESIGN
SIGNATURE:	PE

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA	
SIGNATURE:	PE
	STATE HIGHWAY ENGINEER - DESIGN
	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
APPROVED FOR	DATE
DIVISION ADMINISTRATOR	

**RIGHT OF WAY AND
CONSTRUCTION PLANS**

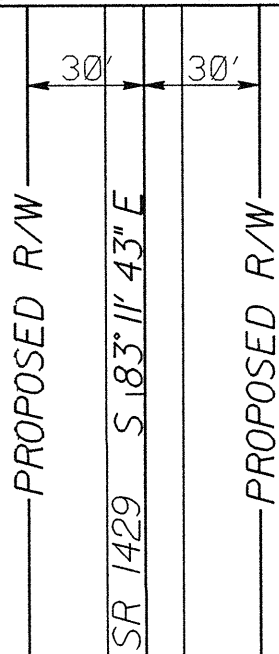
WBS ELEMENT	SHEET NO.
36283.8.4 - PE & R/W 39211 - CONST.	5

MATCH LINE 3+00

PER PLAT FOR JOE WARWICK
MAP 9 PAGE 219 SCOTLAND COUNTY NC

3
JOE WARWICK &
JOHNSON WARWICK
D.B. 425 PG. 325
AREA TAKEN 0.77 ACRES
R/W ABANDONED 0.47 ACRES

3
JOE WARWICK &
JOHNSON WARWICK
D.B. 425 PG. 325
AREA TAKEN 0.77 ACRES
R/W ABANDONED 0.47 ACRES



PROPOSED 100' X 100'
SIGHT DISTANCE

PROPOSED 100' X 100'
SIGHT DISTANCE

0+50.01-Y2-
50.00'

0+50.01-Y2-
50.00'

EXIST. R/W

EXIST. R/W

POT Sta. 0+00 -Y2-
POT Sta. 10+21.36 -L-

S 6° 48' 14" W

INSTALL 84'
OF 18" RCP

US 501

18" RCP

EXIST. R/W

EXIST. R/W

MATCH LINE 7+00

POT Sta. 13+00 -L-

PLANS SCALE: 1"=50'

DESIGN DATA	
ADT	==
DHV	==
T	==
V	==
	%
	%
	MPH

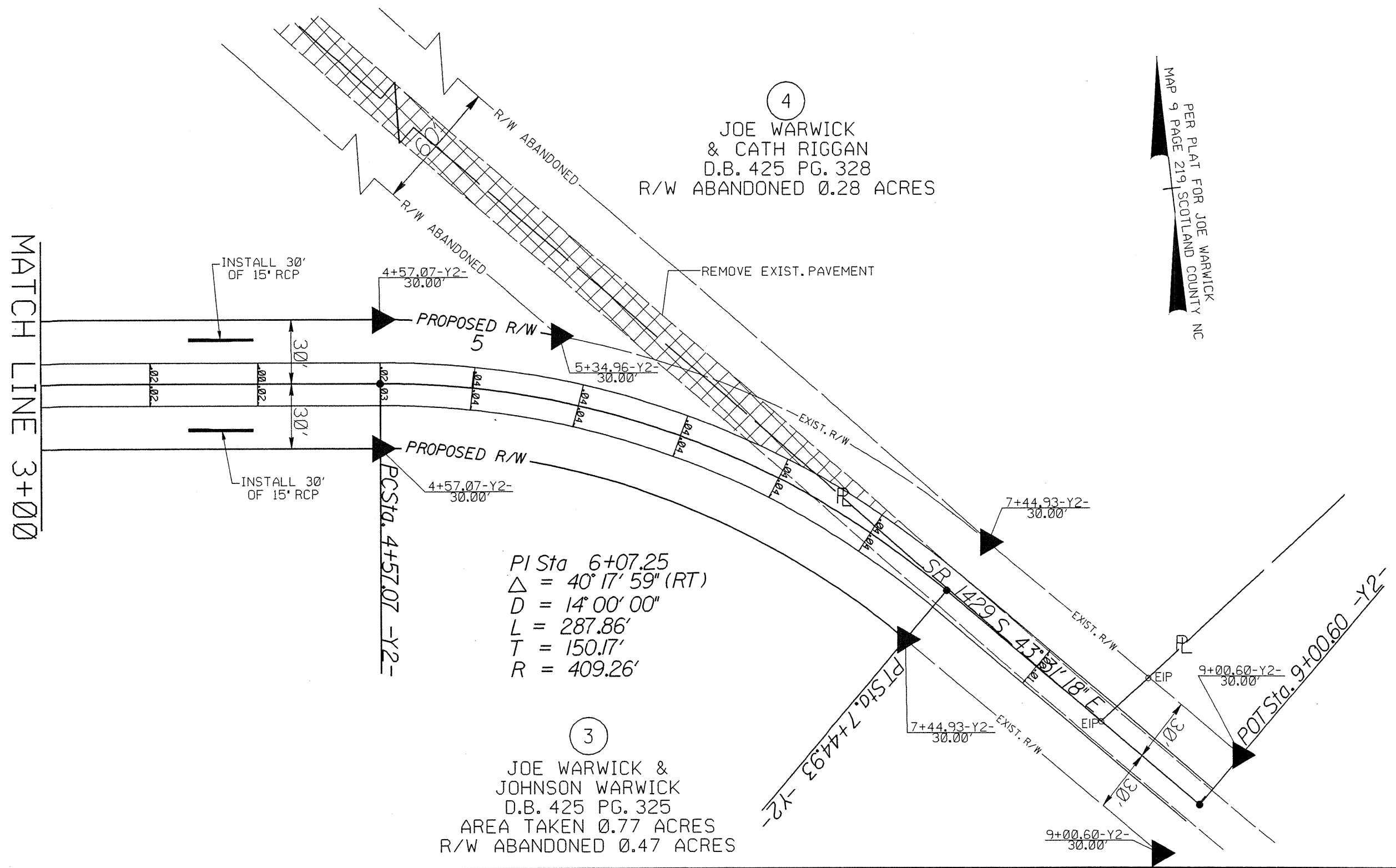
Prepared By the DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE	
SURVEY DATE: 1-28-05	PLANS COMPLETE DATE:
SURVEYED BY: ROCKINGHAM DISTRICT OFFICE	RIGHT OF WAY PLANS DATE:
DRAWN BY: C. G. BROWN	CONSTRUCTION PLANS DATE:
	K. R. HEDRICK P.E. DISTRICT ENGINEER
	DRAINAGE DESIGN P.E.

HYDRAULICS ENGINEER	
SIGNATURE:	P.E. ROADWAY DESIGN
SIGNATURE:	P.E.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA	
STATE HIGHWAY ENGINEER - DESIGN	P.E.
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED FOR	DATE
DIVISION ADMINISTRATOR	

**RIGHT OF WAY AND
CONSTRUCTION PLANS**

WBS ELEMENT	SHEET NO.
36283.8.4 - PE & R/W 39211 - CONST.	6



④
 JOE WARWICK
 & CATH RIGGAN
 D.B. 425 PG. 328
 R/W ABANDONED 0.28 ACRES

③
 JOE WARWICK &
 JOHNSON WARWICK
 D.B. 425 PG. 325
 AREA TAKEN 0.77 ACRES
 R/W ABANDONED 0.47 ACRES

MATCH LINE 3+00

PLANS SCALE: 1" = 50'

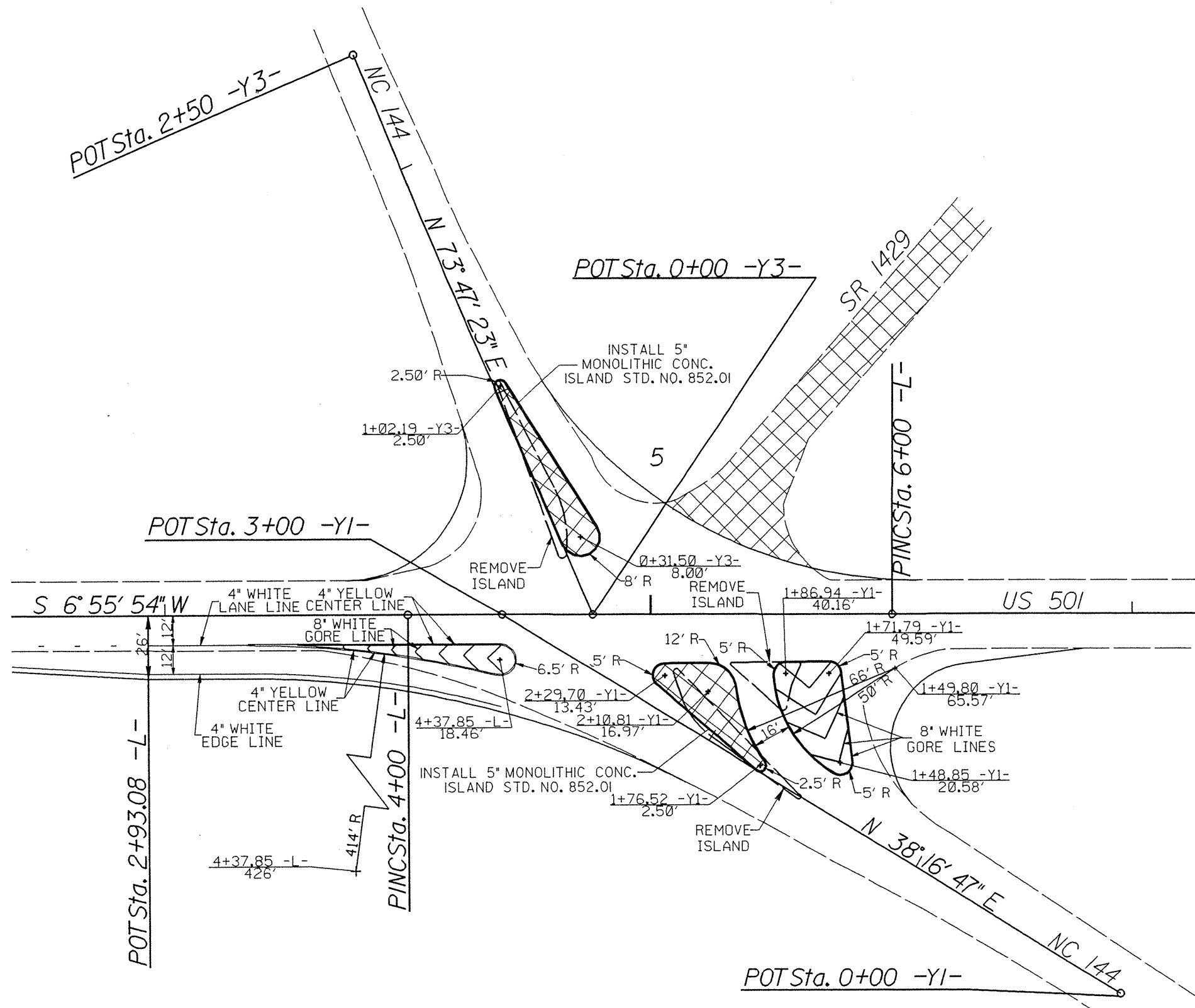
DESIGN DATA	
ADT	==
DHV	==
D	==
V	==
	%
	MPH

Prepared By the DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE	
SURVEY DATE: 1-28-05	PLANS COMPLETE DATE:
SURVEYED BY: ROCKINGHAM DISTRICT OFFICE	RIGHT OF WAY PLANS DATE:
DRAWN BY: C. G. BROWN	CONSTRUCTION PLANS DATE:
	K. R. HEDRICK P.E. DISTRICT ENGINEER
	P.E. DRAINAGE DESIGN

HYDRAULICS ENGINEER
 P.E.
 SIGNATURE: _____
 ROADWAY DESIGN
 P.E.
 SIGNATURE: _____

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 P.E.
 STATE HIGHWAY ENGINEER - DESIGN
 DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 APPROVED FOR
 DIVISION ADMINISTRATOR
 DATE

ISLAND DETAIL



PLANS SCALE: 1"=50'

DESIGN DATA

ADT	==	
ADT	==	
DHV	==	%
D	==	%
T	==	%
V	==	MPH

Prepared By the
DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE
2022 SEE STANDARD SPECIFICATIONS

SURVEY DATE:
1-28-05
SURVEYED BY:
ROCKINGHAM DISTRICT OFFICE
DRAWN BY:
C. G. BROWN

PLANS COMPLETE DATE:
RIGHT OF WAY PLANS DATE:
CONSTRUCTION PLANS DATE:

K. R. HEDRICK P.E.
DISTRICT ENGINEER
DRAINAGE DESIGN P.E.

HYDRAULICS ENGINEER

 SIGNATURE: P.E.
ROADWAY DESIGN

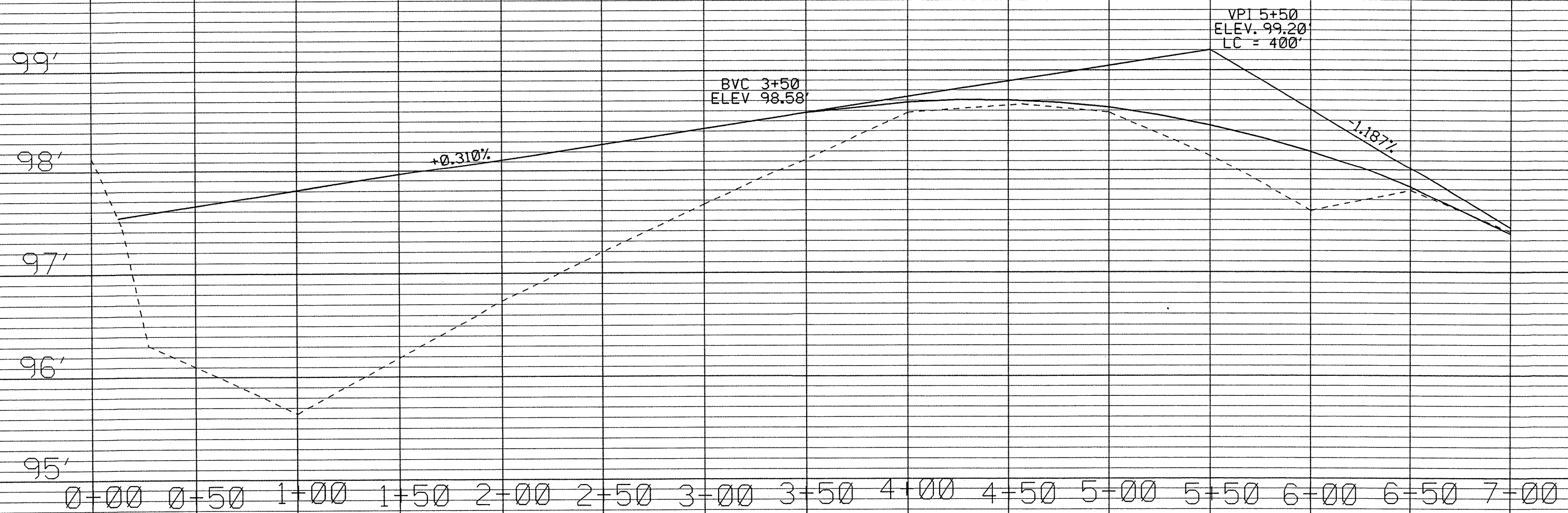
 SIGNATURE: P.E.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

 STATE HIGHWAY ENGINEER - DESIGN
FEDERAL HIGHWAY ADMINISTRATION
 APPROVED FOR
 DIVISION ADMINISTRATOR

 DATE

SR 1429 SHAW CURRIE ROAD
VERTICAL SCALE 1" = 1'
HORIZONTAL SCALE 1" = 50'



SR 1429 SHAW CURRIE ROAD
VERTICAL SCALE 1" = 1'
HORIZONTAL SCALE 1" = 50'

98'

97'

96'

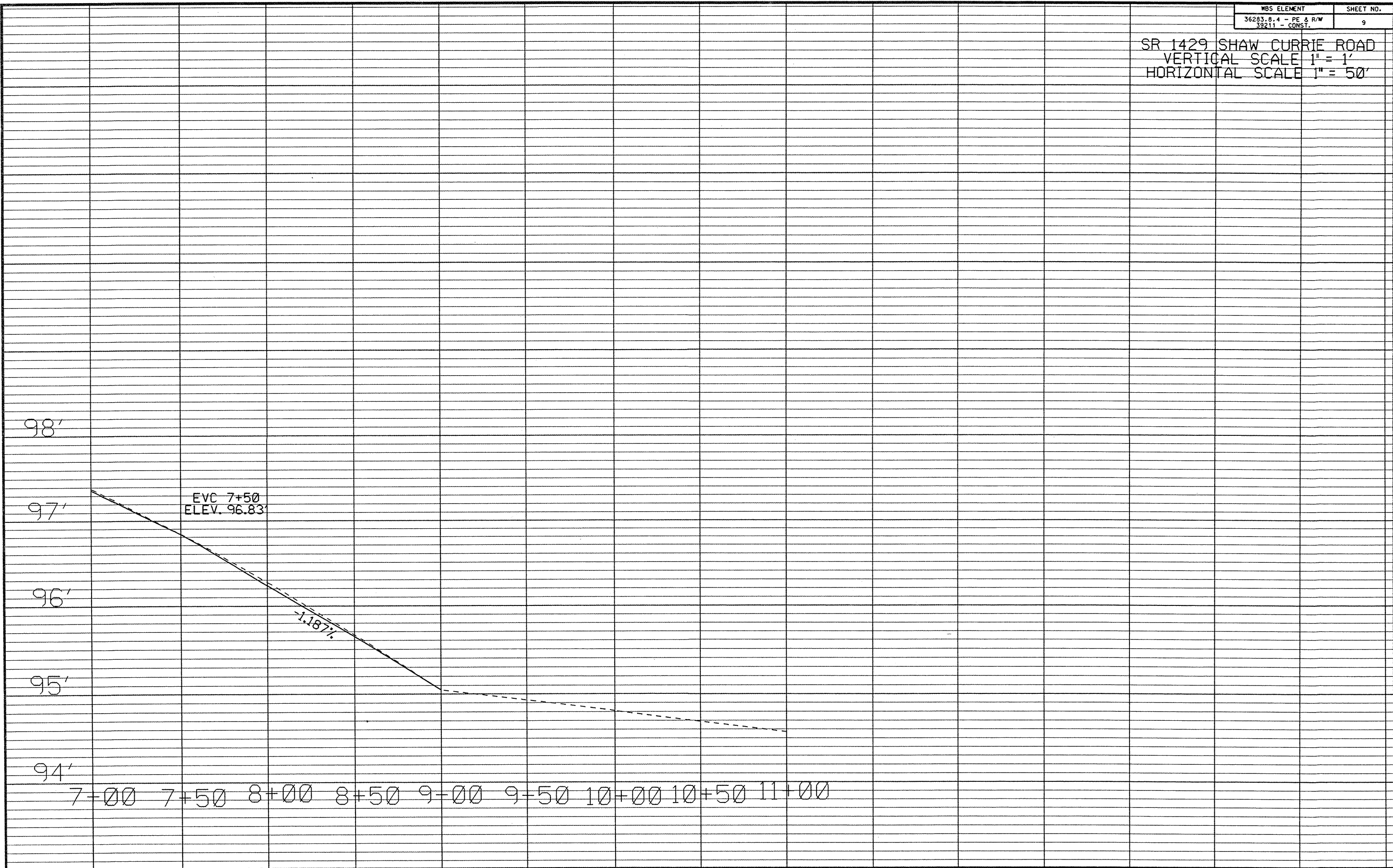
95'

94'

EVC 7+50
ELEV. 96.83'

-1.187%

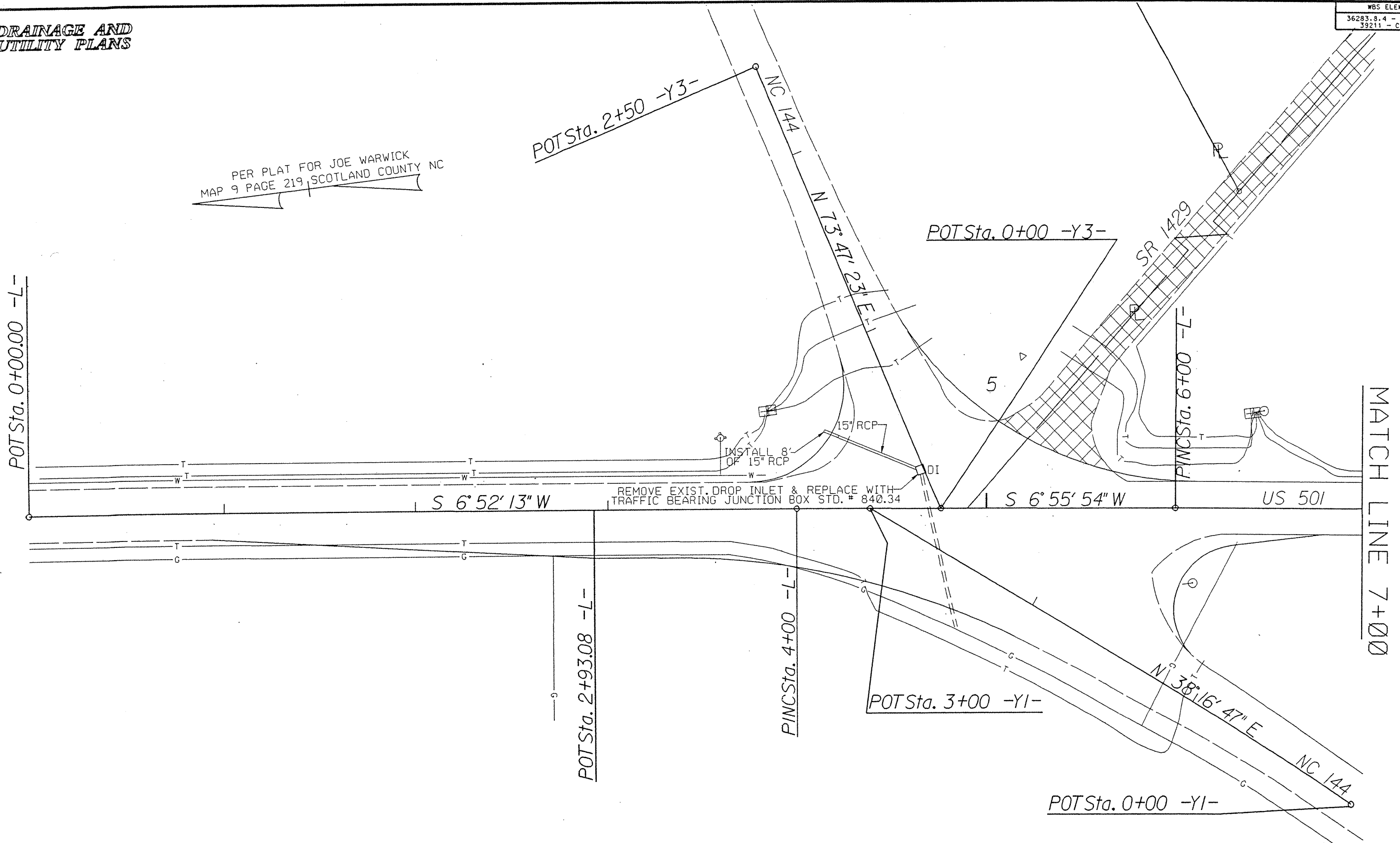
7+00 7+50 8+00 8+50 9+00 9+50 10+00 10+50 11+00



DRAINAGE AND UTILITY PLANS

WBS ELEMENT	SHEET NO.
36283.8.4 - PE & R/I 39211 - CONST.	U-1

PER PLAT FOR JOE WARWICK
MAP 9 PAGE 219, SCOTLAND COUNTY NC



PLANS SCALE: 1"=50'

DESIGN DATA	
ADT	==
DIV	==
T	==
V	==
	%
	%
	%
	MPH

Prepared By the
DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE

SURVEY DATE: 1-28-05	PLANS COMPLETE DATE:
SURVEYED BY: ROCKINGHAM DISTRICT OFFICE	RIGHT OF WAY PLANS DATE:
DRAWN BY: C. G. BROWN	CONSTRUCTION PLANS DATE:

HYDRAULICS ENGINEER

ROADWAY DESIGN

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

FEDERAL HIGHWAY ADMINISTRATION

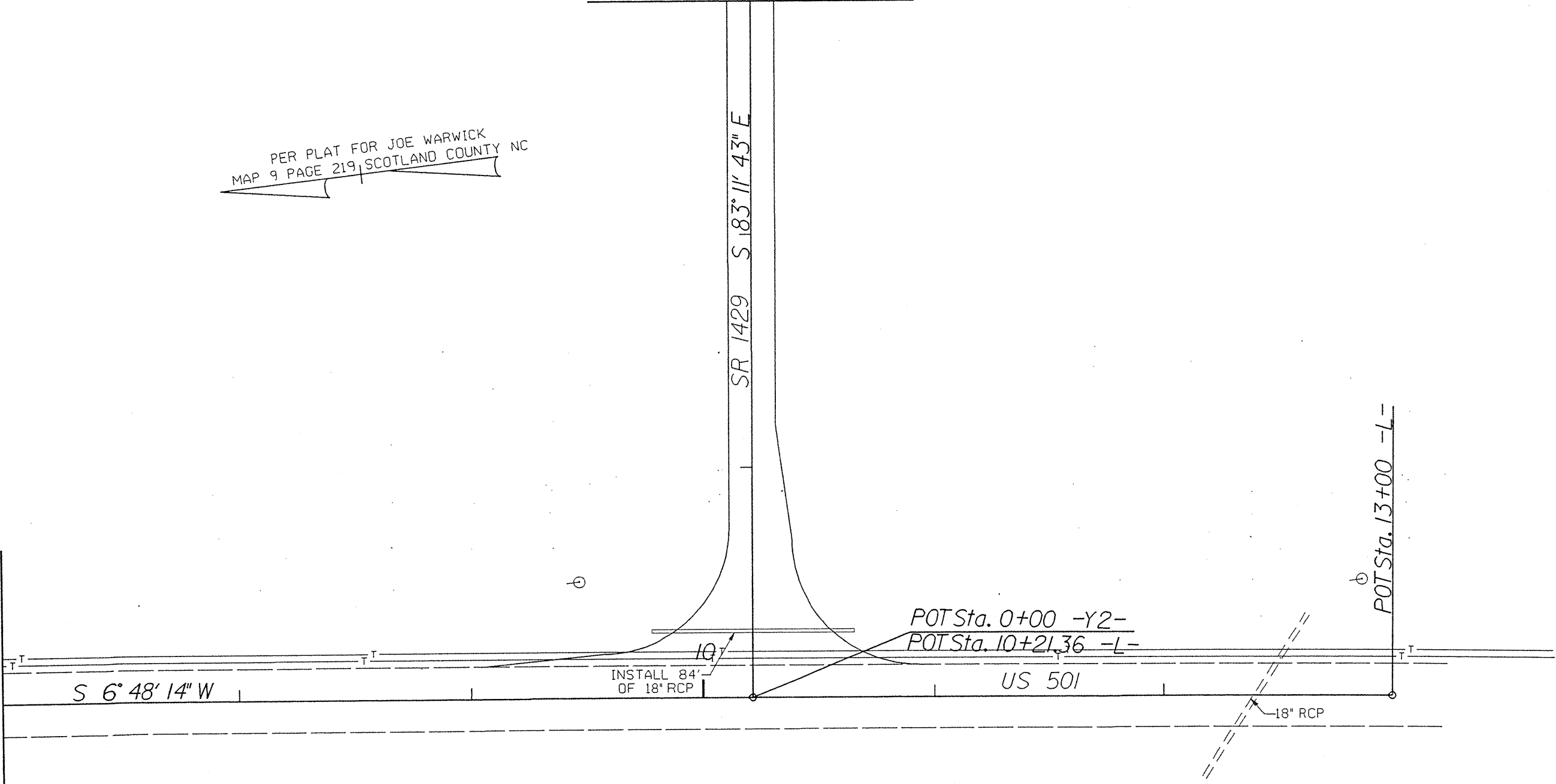
**DRAINAGE AND
UTILITY PLANS**

WBS ELEMENT	SHEET NO.
36283.8.4 - PE & R/I 39211 - CONST.	U-2

MATCH LINE 3+00

PER PLAT FOR JOE WARWICK
MAP 9 PAGE 219 SCOTLAND COUNTY NC

MATCH LINE 7+00



PLANS SCALE: 1"=50'

DESIGN DATA	
ADT	==
DHV	==
D	==
V	==
	%
	%
	MPH

Prepared By the
DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE

SURVEY DATE: 1-25-05	PLANS COMPLETE DATE:
SURVEYED BY: ROCKINGHAM DISTRICT OFFICE	RIGHT OF WAY PLANS DATE:
DRAWN BY: C. G. BROWN	CONSTRUCTION PLANS DATE:

K. R. HEDRICK
DISTRICT ENGINEER

DRAINAGE DESIGN

HYDRAULICS ENGINEER

ROADWAY DESIGN

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

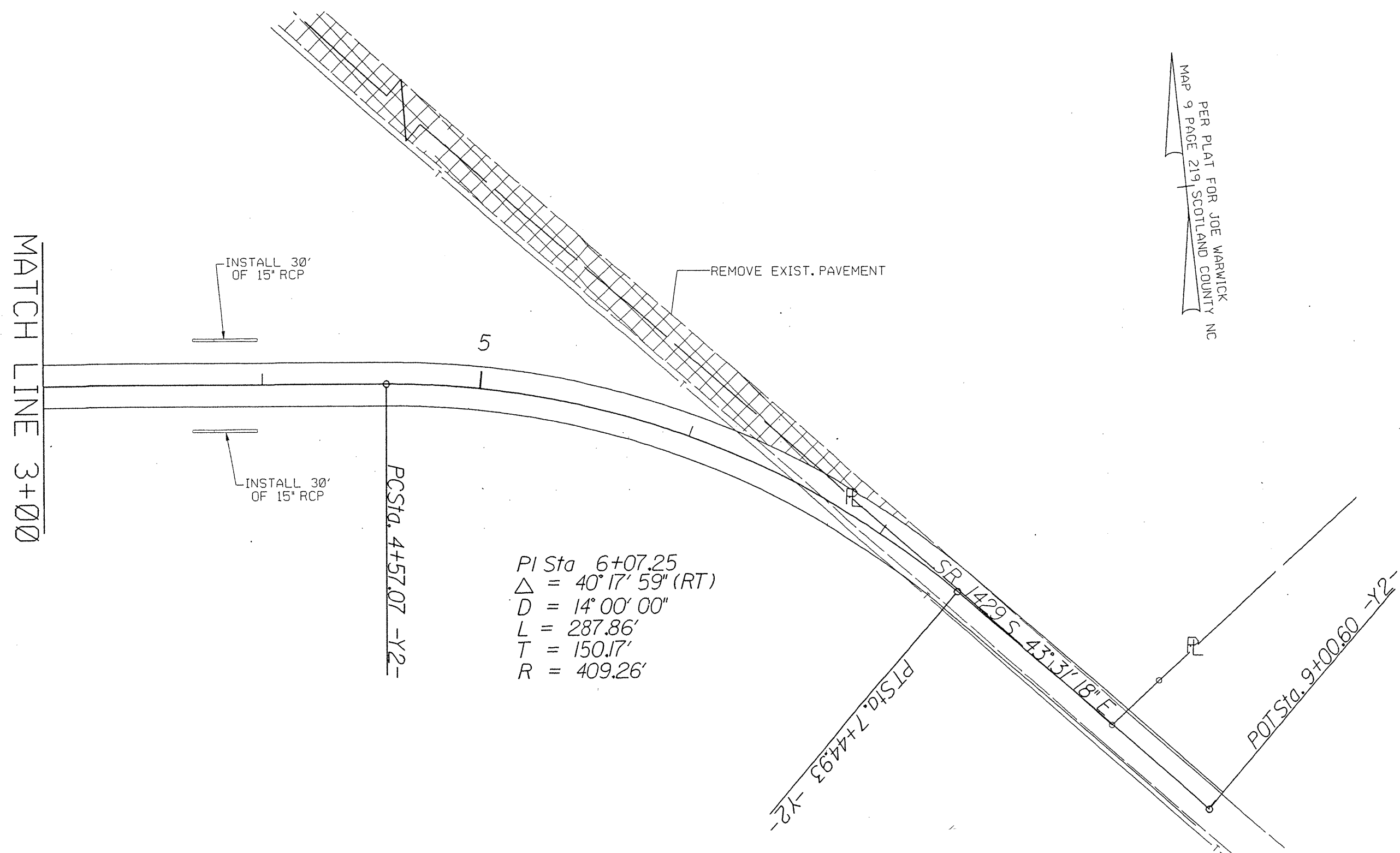
STATE HIGHWAY ENGINEER - DESIGN

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED FOR
DIVISION ADMINISTRATOR

**DRAINAGE AND
UTILITY PLANS**

WBS ELEMENT	SHEET NO.
36283.8.4 - PE & R/W 39211 - CONST.	U-3



PLANS SCALE: 1"=50'

DESIGN DATA

ADT	=	
ADT	=	
DHV	=	$\frac{3}{8}$
D	=	$\frac{3}{8}$
T	=	$\frac{3}{8}$
V	=	MPH

Prepared By the
 DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE

SURVEY DATE:
 1-28-05
 SURVEYED BY:
 ROCKINGHAM DISTRICT OFFICE
 DRAWN BY:
 C. G. BROWN

PLANS COMPLETE DATE:
 RIGHT OF WAY PLANS DATE:
 CONSTRUCTION PLANS DATE:

K. R. HEDRICK P.E.
 DISTRICT ENGINEER
 DRAINAGE DESIGN

HYDRAULICS ENGINEER

ROADWAY DESIGN

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

STATE HIGHWAY ENGINEER - DESIGN
 DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

APPROVED FOR
 DIVISION ADMINISTRATION

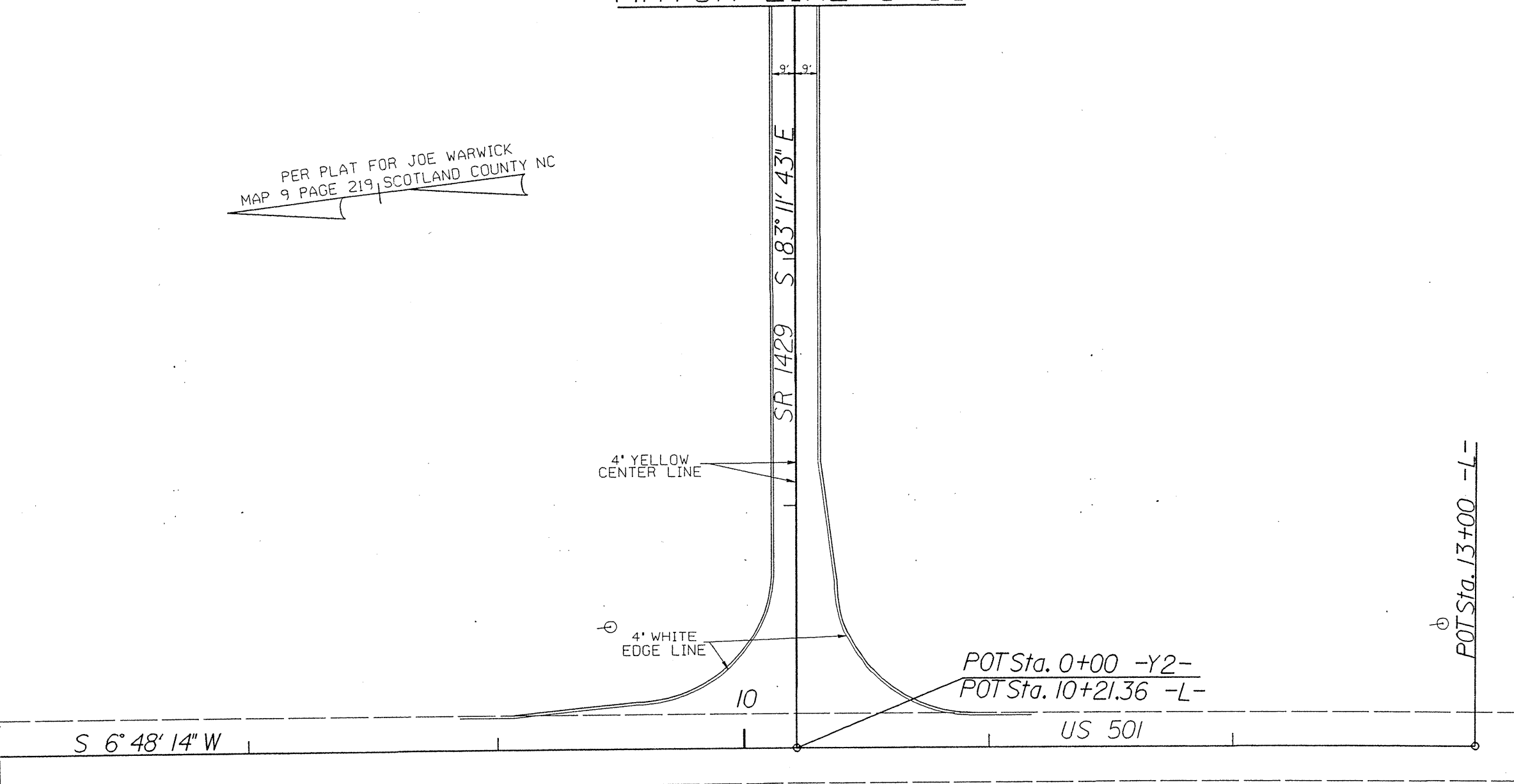
PAVEMENT MARKING PLANS

WBS ELEMENT	SHEET NO.
36283.8.4 - PE & R/I	PM-2
39211 - CONST.	

MATCH LINE 3+00

PER PLAT FOR JOE WARWICK
MAP 9 PAGE 219 SCOTLAND COUNTY NC

MATCH LINE 7+00



PLANS SCALE: 1"=50'

DESIGN DATA

ACT	ADT	=	
CHY	↓		%
			%
			MPH

Prepared By the
DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE

SURVEY DATE:
1-25-05
SURVEYED BY:
ROCKINGHAM DISTRICT OFFICE
DRAWN BY:
C. G. BROWN

PLANS COMPLETE DATE:
RIGHT OF WAY PLANS DATE:
CONSTRUCTION PLANS DATE:

K. R. HEDRICK P.E.
DISTRICT ENGINEER
DRAINAGE DESIGN

HYDRAULICS ENGINEER

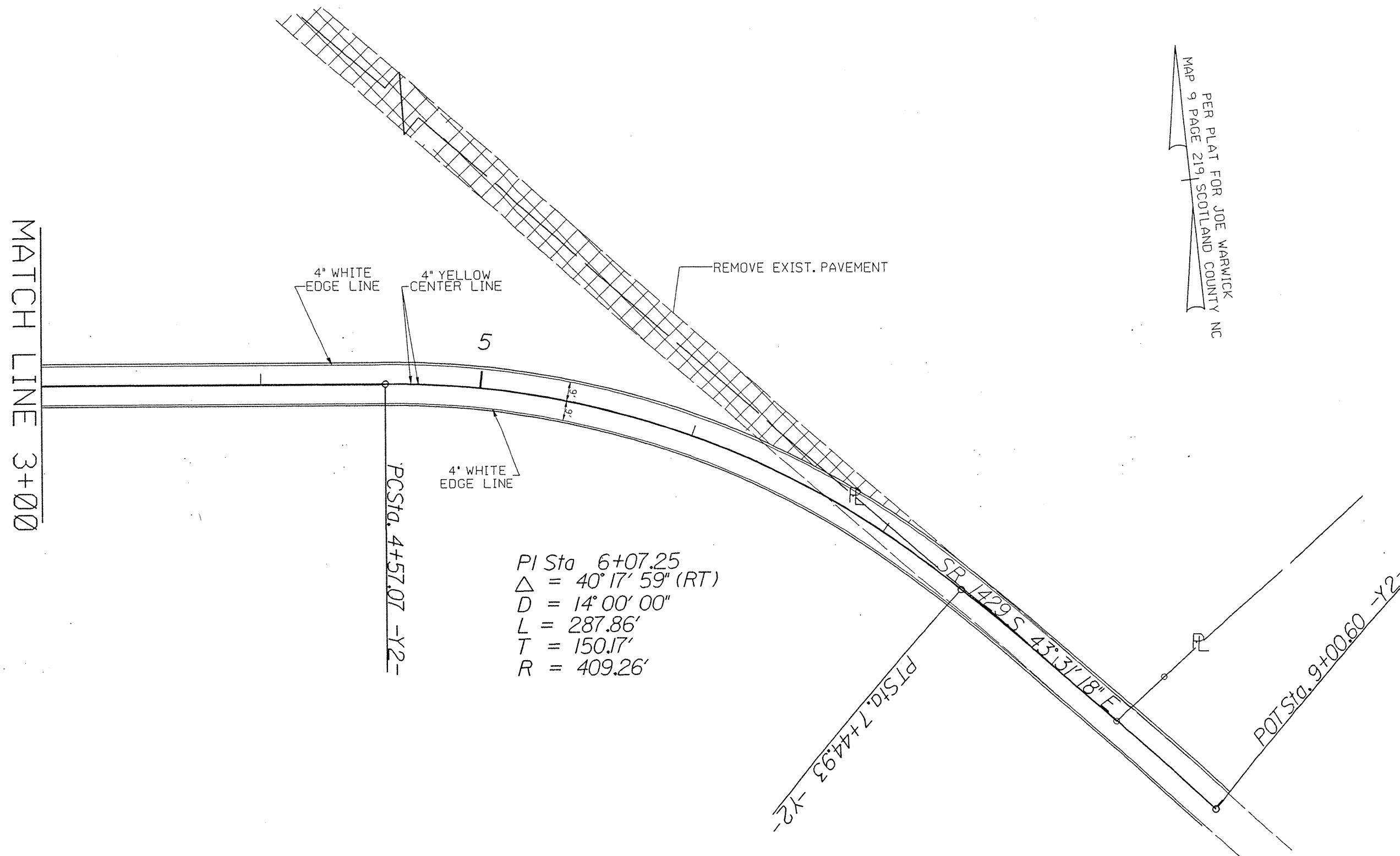
SIGNATURE: P.E.
ROADWAY DESIGN
SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY ENGINEER - P.E.
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED FOR
SYSTEM ADMINISTRATION DATE

PAVEMENT MARKING PLANS

WBS ELEMENT	SHEET NO.
36293.8.4 - PE & R/W 39211 - CONST.	PM-3



PLANS SCALE: 1"=50'

DESIGN DATA

ADT =
 CHY =
 D =
 V =
 MPH

Prepared By the
 DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE

SURVEY DATE:
 1-29-05
 SURVEYED BY:
 ROCKINGHAM DISTRICT OFFICE
 DRAWN BY:
 C. G. BROWN

PLANS COMPLETE DATE:
 RIGHT OF WAY PLANS DATE:
 CONSTRUCTION PLANS DATE:

K. E. HEDRICK P.E.
 DISTRICT ENGINEER
 DRAINAGE DESIGN

HYDRAULICS ENGINEER

ROADWAY DESIGN
 DIVISION ADMINISTRATOR

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

STATE HIGHWAY ENGINEER - DESIGN
 DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 APPROVED FOR
 DIVISION ADMINISTRATOR

US 501, NC 144, & SR 1429 - RICHMOND COUNTY

PROJECT NARRATIVE

This project will involve grading, improving drainage, installing erosion control measures, installing base material, and paving on SR 1429, NC144, & US 501. the section length is 0.45 miles.

Proper erosion control measures will be required. Installation of these measures will be facilitated by the use of existing drainage patterns and features. Erosion Control Plans will be on-site whenever crews are working on this project. Copies of Erosion Control Standard Drawings are kept on-site with the Transportation Supervisor.

Maintenance of erosion control devices is critical and will be performed as follows:

- A. Silt Ditch - Remove sediment from the flow area and repair the diversion ridge - Carefully check outlets and make timely repairs as needed.
- B. Silt Fence - Remove sediment deposits as necessary to provide adequate storage volume for the next rain and to reduce pressure on the fence - Avoid undermining the fence.
- C. Slope Drains - Inspect the slope drains and the supporting diversions.
- D. Sediment Basins - Remove sediment and restore the basin to its original dimensions when sediment accumulates to one-half the design depth - check the embankment, spillways, and outlet for erosion damage, and inspect the embankment for piping and settlement - Remove all trash and other debris from the riser and pool area.
- E. Check Dam - Remove settlement accumulated behind the dams as needed to prevent damage to channel vegetation - Add stone to dams as needed to maintain design height and cross section.
- F. Rock Dam - Remove sediment and restore original volume when sediment accumulates to one-half the design volume - Check the structure for erosion, piping, and rock displacement after each significant rainstorm and repair immediately.
- G. Drop Inlet Protection (Type C) - Remove sediment from the pool areas as necessary to provide adequate storage volume for the next rain.
- H. Sediment Trap - Remove sediment and restore the trap to its original dimensions when settlement has accumulated to one-half the design depth of the trap - Check the structure for damage from the erosion or piping to ensure it is a minimum of 1.5ft. below the low point of the embankment.

NOTE: Sediment should be placed in designated disposal areas and not allowed to flow into streams or drainage ways during structure removal.

EROSION CONTROL SEQUENCE

1. Review Erosion Control Plans and Standards. Identify all release points where runoff leaves the project.
2. Install all measures at release points prior to any grubbing work. See Erosion Control Standards for proper installation and construction.
3. Begin grading operations. Install all measures as grading progresses and monitor their effectiveness. If any measures need to be changed, consult the Highway Maintenance Engineer. Show changes to the Erosion Control Plans.
4. Continue to inspect and maintain all measures after each rainfall or weekly until all disturbed areas are stabilized.
5. Remove all temporary measures as soon as the permanent measures are established.

SPECIAL NOTE: DITCH TREATMENT

THE GRADE OF COMPLETED DITCHLINES WILL DETERMINE THE TYPE AND SPACING OF DITCH TREATMENTS.

- 0-1% GRADE - STRAW AND TACK
- 1-3% GRADE - EROSION CONTROL MATTING
- 3- 5% GRADE - SYNTHETIC ROVING
- 5% OR GREATER GRADE - STONE LINED DITCH

FOR DITCHES WITH 3-5% GRADE, TEMPORARY ROCK SILT CHECK TYPE-B SHALL BE INSTALLED WITH SPACING DETERMINED BY THE FOLLOWING FORMULA:

$$\text{SPACING (ft)} = (3/\% \text{GRADE}) \times 100 \text{ ft.}$$

EROSION CONTROL DETAILS AND SPECIFICATIONS

2002 ROADWAY STD. DRAWINGS

STD.*	DESCRIPTION	SYMBOL
1605.01	TEMPORARY SILT FENCE	
1630.02	SILT BASIN TYPE-B	
1633.02	TEMPORARY ROCK SILT CHECK TYPE-B	
1634.02	TEMPORARY ROCK SEDIMENT DAM TYPE-B	
1635.01	ROCK PIPE INLET SEDIMENT TRAP TYPE A	
	PIPE OUTLET ENERGY DISIPATOR	

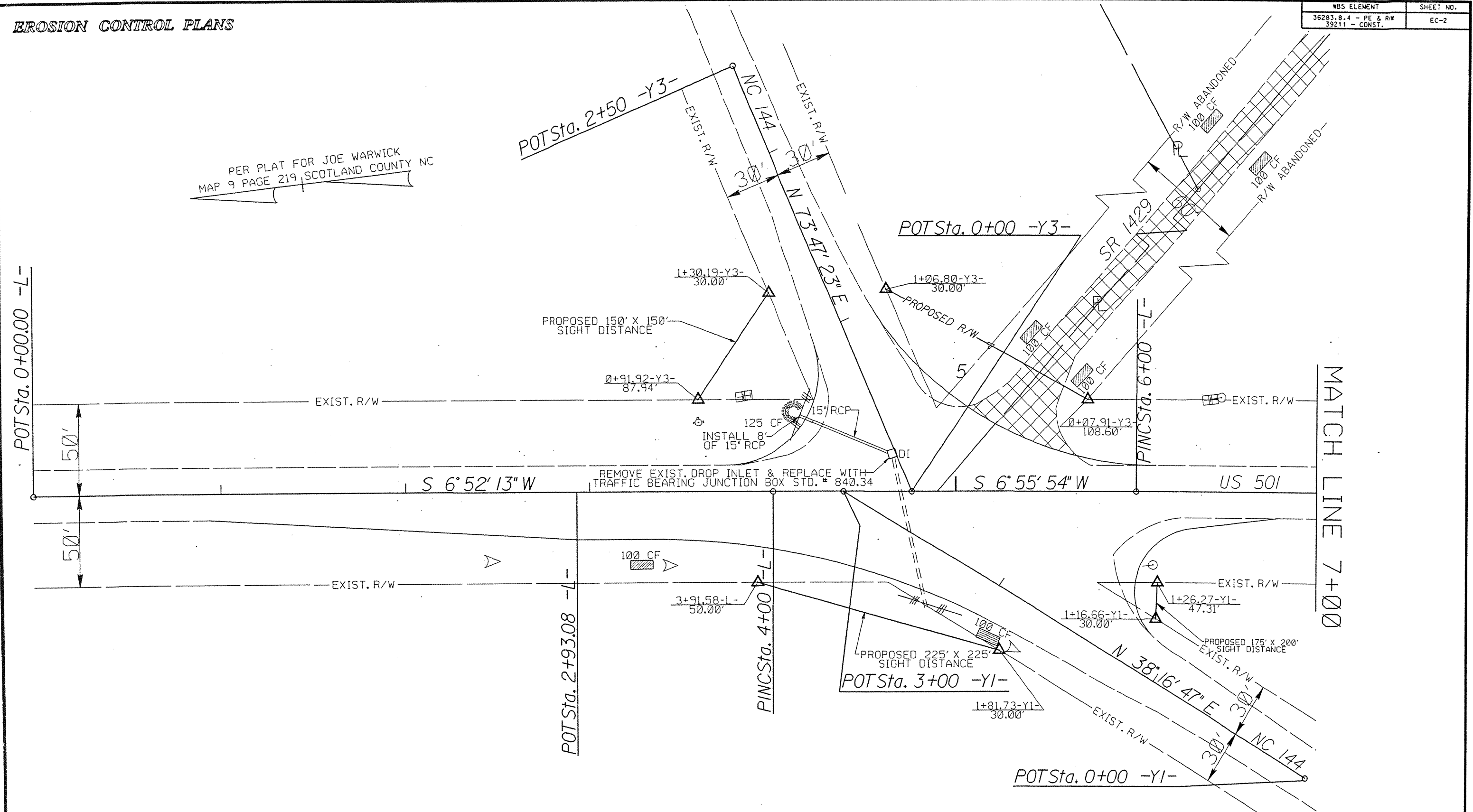
CALCULATIONS

CALCULATED AREA = 1.97 ACRES 1.97 ACRES X 900 CF = 1775 CF
 SILT BASIN TYPE-B 2 X 2.5 X 20 = 100CF EA. X 14 = 1400CF
 ROCK SEDIMENT DAM TYPE-B 125 CF X 3 EA =375CF
 ROCK PIPE INLET SEDIMENT TRAP TYPE A 125 CF X 4 EA =500CF
 TOTAL STORAGE = 1400 + 375 + 500 = 2275CF

EROSION CONTROL PLANS

WBS ELEMENT	SHEET NO.
36293.0.4 - PE & R/W 39211 - CONST.	EC-2

PER PLAT FOR JOE WARWICK
MAP 9 PAGE 219 SCOTLAND COUNTY NC



MATCH LINE 7+00

PLANS SCALE: 1"=50'

DESIGN DATA

ADT	==	
ADT	==	
DIV	==	%
TO	==	%
V	==	MPH

Prepared By the
DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE

SURVEY DATE: 1-28-05	PLANS COMPLETE DATE:
SURVEYED BY: ROCKINGHAM DISTRICT OFFICE	RIGHT OF WAY PLANS DATE:
DRAWN BY: C. G. BROWN	CONSTRUCTION PLANS DATE:

HYDRAULICS ENGINEER

ROADWAY DESIGNER

DRAINAGE DESIGN

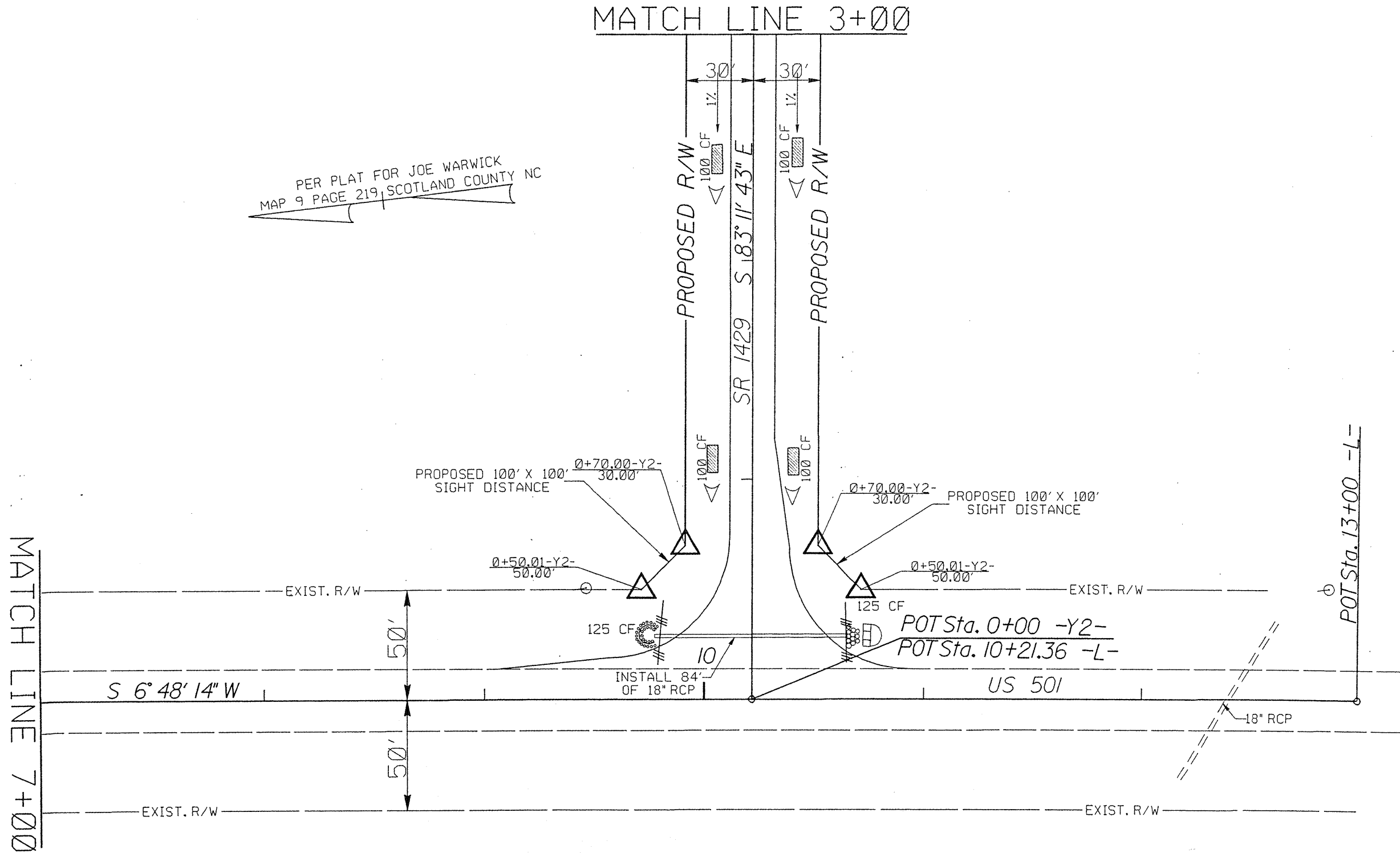
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY ENGINEER - DISTRICT

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED FOR
SUPERVISOR

EROSION CONTROL PLANS



PER PLAT FOR JOE WARWICK
MAP 9 PAGE 219, SCOTLAND COUNTY NC

PLANS SCALE: 1"=50'

DESIGN DATA	
ADI	=
ADT	=
DHV	=
DTV	=
V	=
	%
	MPH

Prepared By the
DIVISION OF HIGHWAYS ROCKINGHAM DISTRICT OFFICE

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SURVEYED BY: ROCKINGHAM DISTRICT OFFICE	RIGHT OF WAY PLANS DATE:
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K. R. HEDRICK
DISTRICT ENGINEER

DRAINAGE DESIGN

HYDRAULICS ENGINEER

ROADWAY DESIGNER

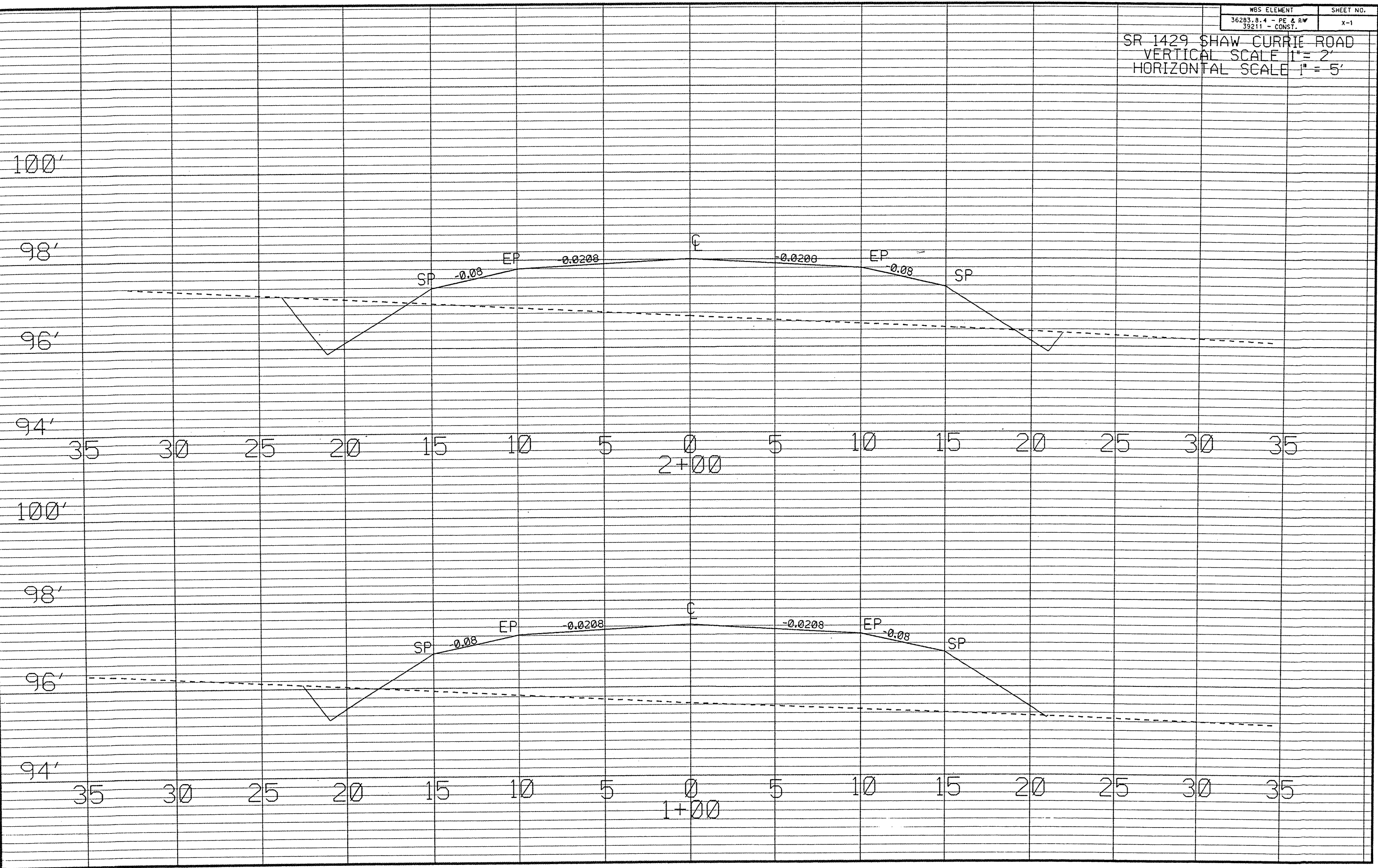
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY ENGINEER - DESIGN

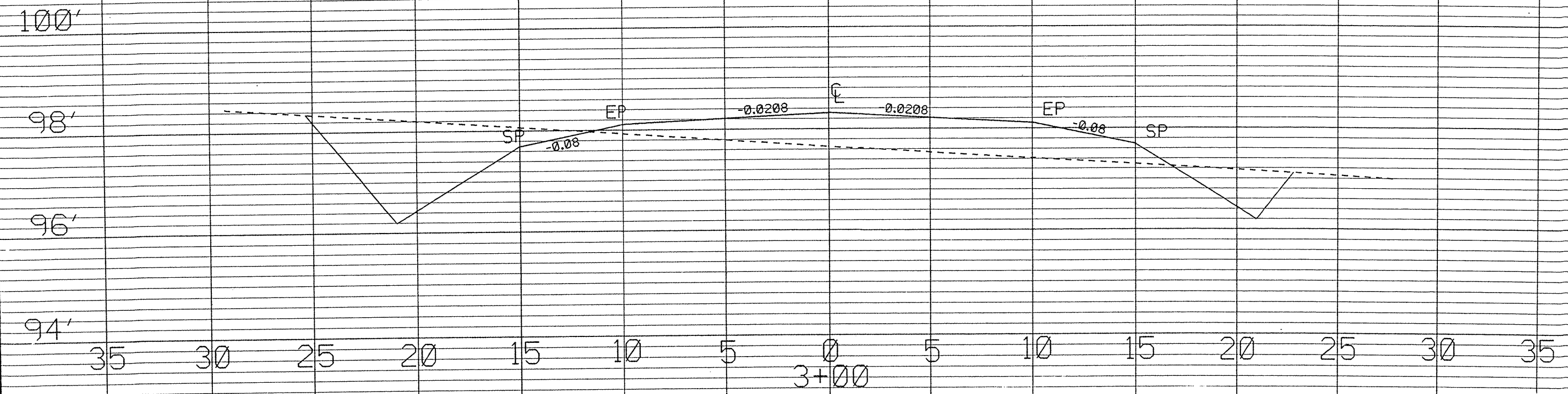
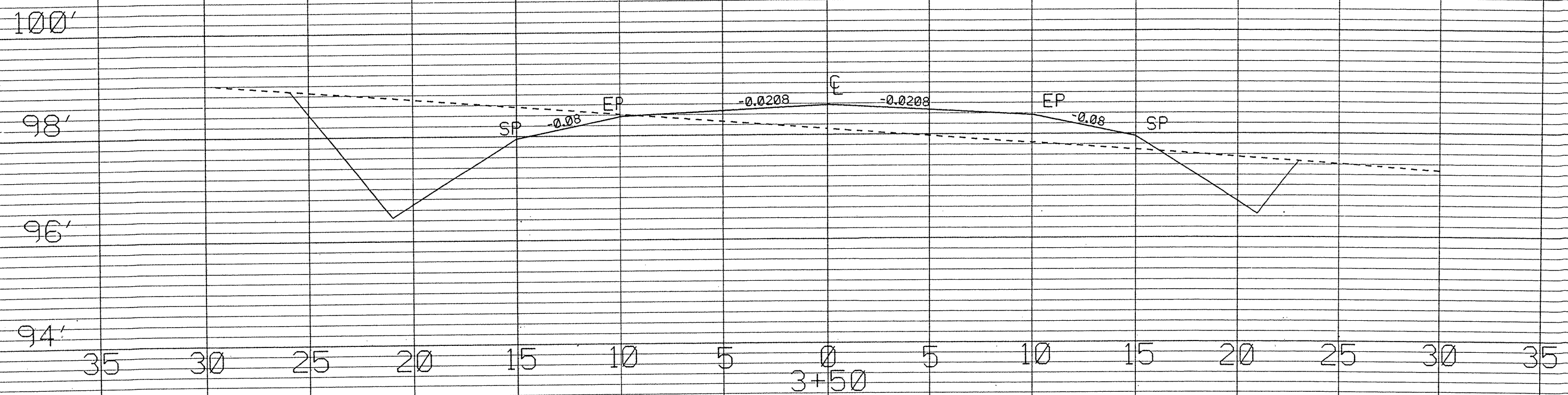
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED FOR
DIVISION ADMINISTRATION

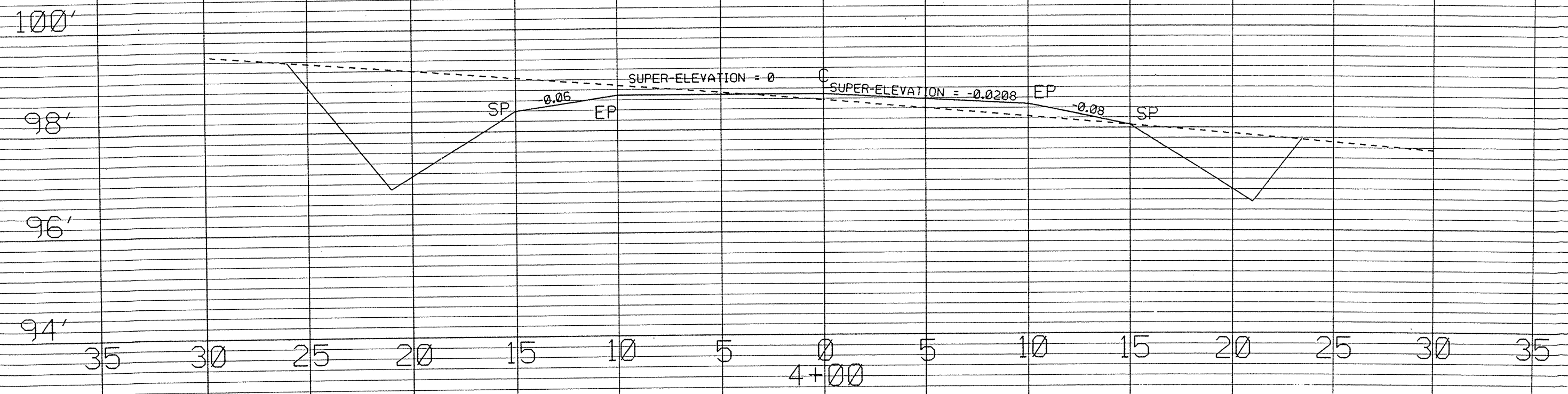
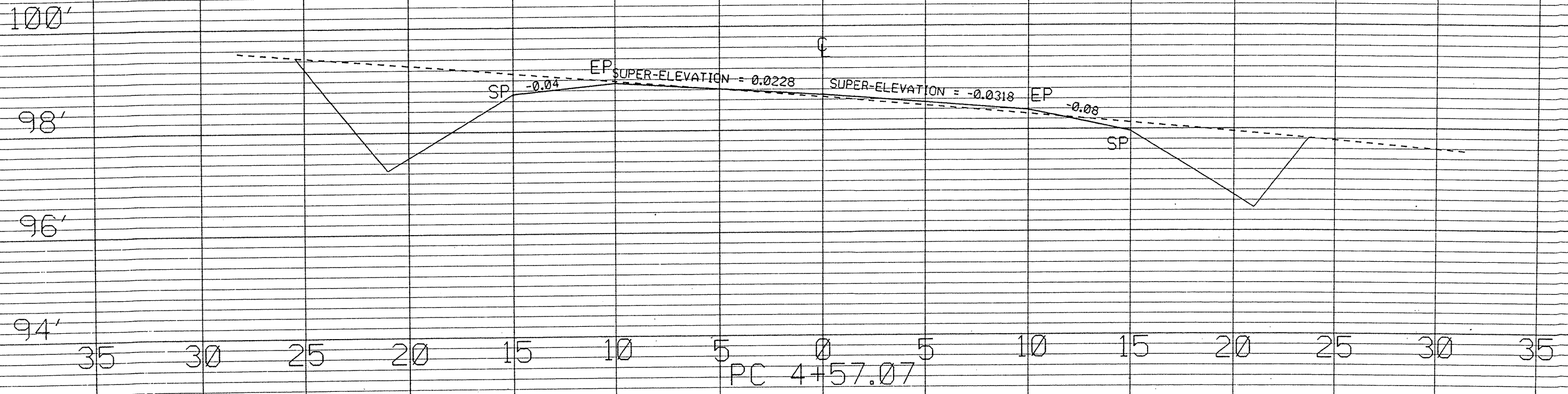
SR 1429 SHAW CURRIE ROAD
 VERTICAL SCALE 1" = 2'
 HORIZONTAL SCALE 1" = 5'



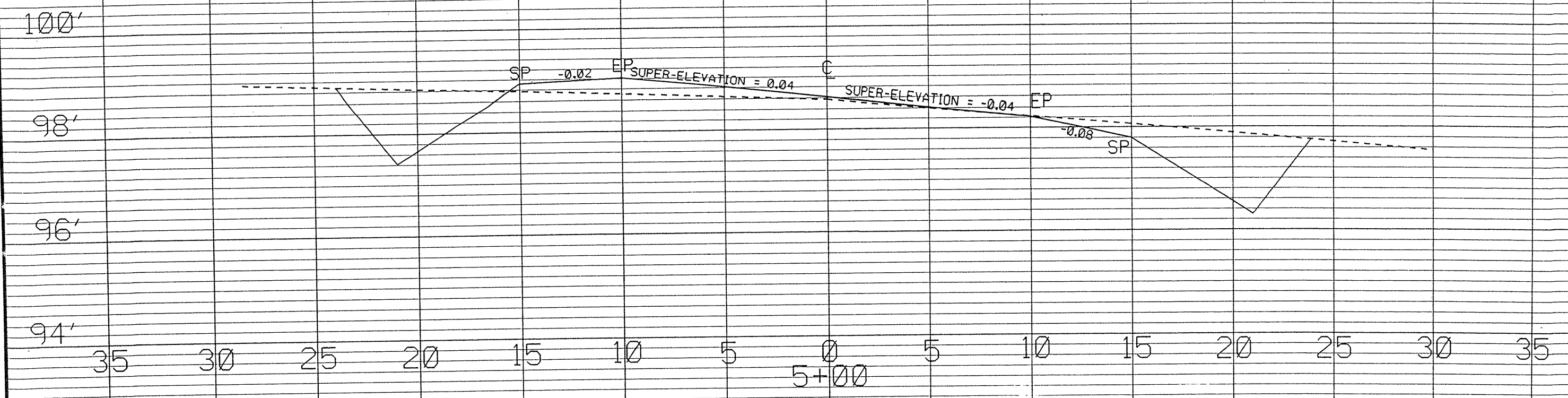
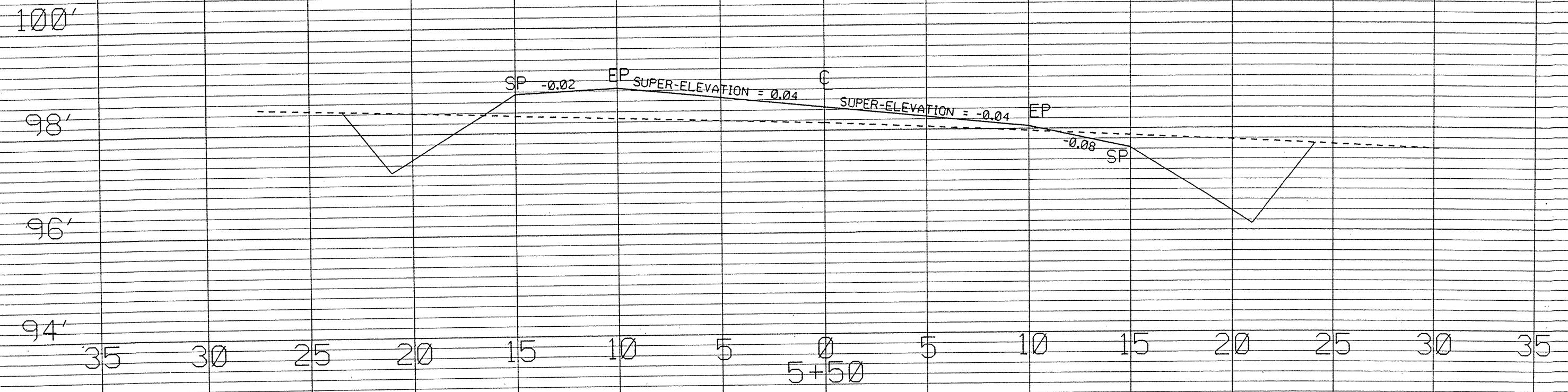
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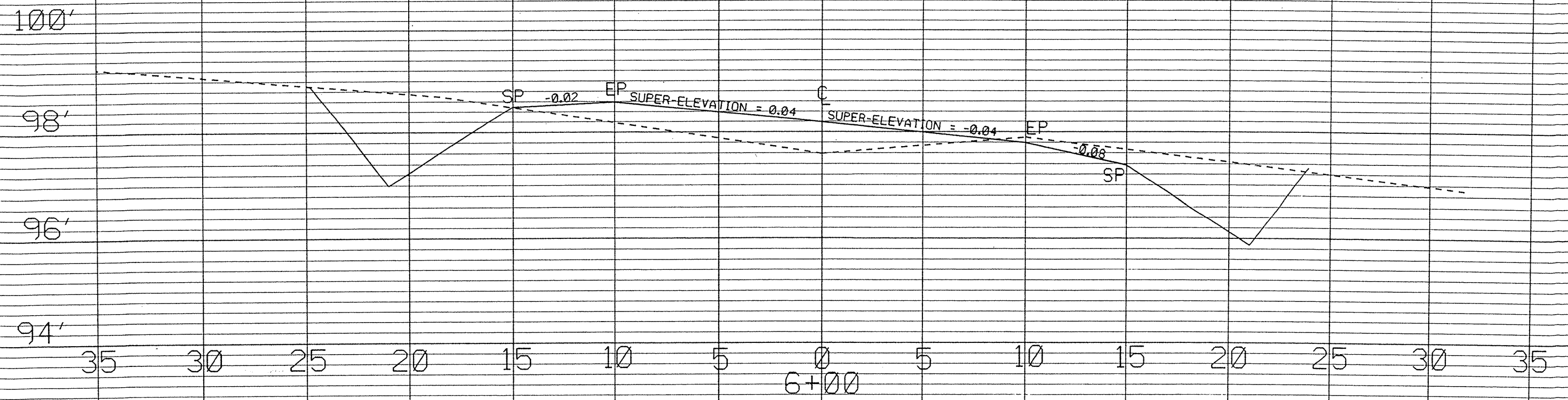
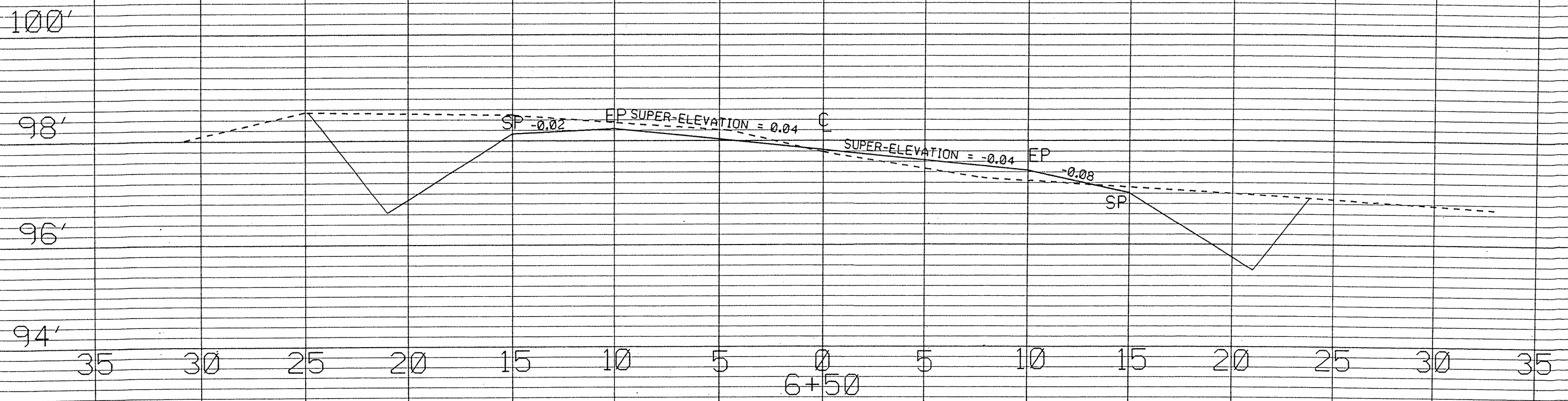
SR 1429 SHAW CURRIE ROAD
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SR 1429 SHAW CURRIE ROAD
 VERTICAL SCALE 1" = 2'
 HORIZONTAL SCALE 1" = 5'

100'

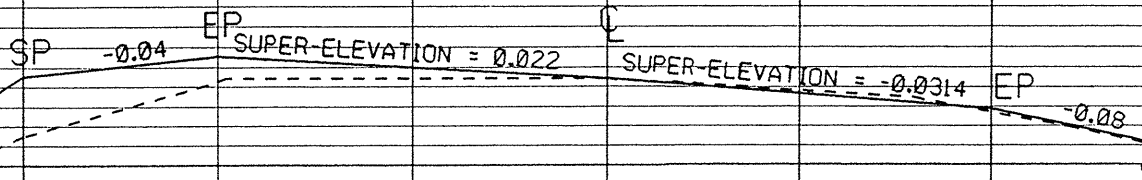
98'

96'

94'

35 30 25 20 15 10 5 0 5 10 15 20 25 30 35

PT 7+44.93



100'

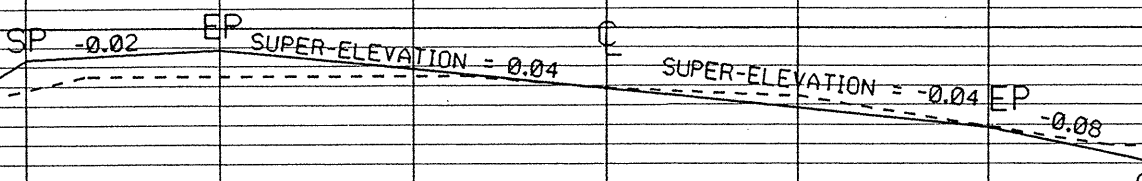
98'

96'

94'

35 30 25 20 15 10 5 0 5 10 15 20 25 30 35

7+00



SR 1429 SHAW CURRIE ROAD
 VERTICAL SCALE 1" = 2'
 HORIZONTAL SCALE 1" = 5'

98'

96'

94'

92'

35 30 25 20 15 10 5 0 5 10 15 20 25 30 35

9+00

100'

98'

96'

94'

35 30 25 20 15 10 5 0 5 10 15 20 25 30 35

8+00

