09/08/99

37740

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Symbology of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

EDGECOMBE COUNTY

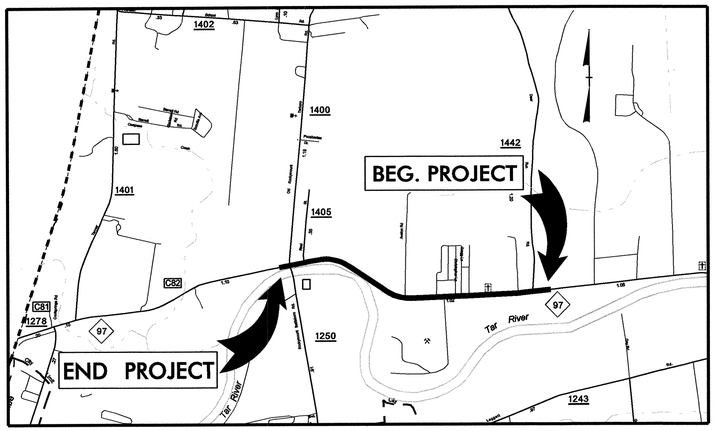
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	37740	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
37740		PE, R/W, UTILITIES,
37740		CONST.

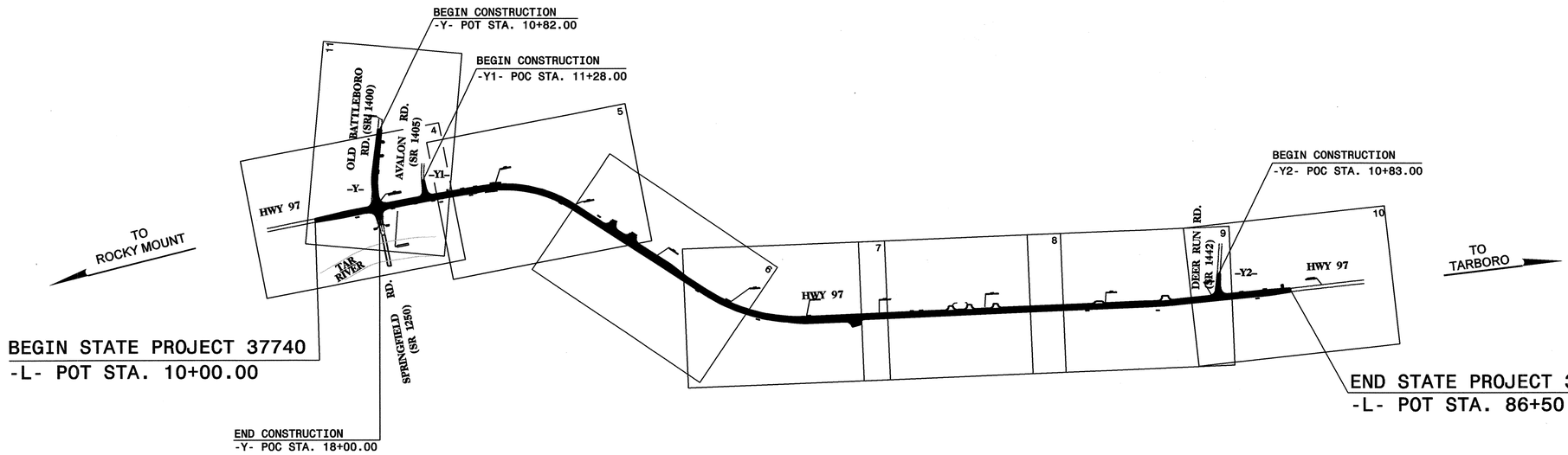
NAD 83

LOCATION: NC 97 FROM 0.1 MILES WEST OF SR 1400 (SPRING FIELD ROAD.) TO 0.1 MILES EAST OF SR 1442 (DEER RUN ROAD.)

TYPE OF WORK: GRADING, DRAINAGE, CURB AND GUTTER, WIDENING, PAVING AND GUARDRAIL.



VICINITY MAP



NCDOT CONTACT: JERRY PAGE, P.E.
DIVISION PROJECT MANAGER, DIVISION FOUR

GRAPHIC SCALES

PLANS 50 25 0 50 100

PROFILE (HORIZONTAL) 50 25 0 50 100

PROFILE (VERTICAL) 10 5 0 10 20

DESIGN DATA

ADT 2005 = 4100
DHV = 10 %
D = 60 %
T = 35 % *
V = 50 MPH

* TTST 10% DUAL 20%

PROJECT LENGTH

LENGTH ROADWAY PROJECT 37740 = 1.449 MILES

TOTAL LENGTH STATE PROJECT 37740 = 1.449 MILES

PB 1923 2008
PARSONS BRINCKERHOFF
909 AVIATION PARKWAY
SUITE 1500
MORRISVILLE, NC 27560

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 16, 2004

LETTING DATE:
—JUNE 19, 2007—

GREG HEINZ, P.E.
PROJECT ENGINEER

ROLAND ROBINSON
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 23924 ENGINEER DANIEL H. BRIDGES

SIGNATURE: 3-1-07 P.E.

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 29243 ENGINEER GREGORY C. HEINZ

SIGNATURE: 3-1-07 P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR *DATE*

CONTRACT: C201822

2/28/2007
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5/28/99

PROJECT REFERENCE NO.	SHEET NO.
37740	1-A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18537 ENGINEER JEFFREY A. ADER

3/7/07

STATE OF NORTH CAROLINA
EDGECOMBE COUNTY

INDEX OF SHEETS

GENERAL NOTES

2002 SPECIFICATIONS
EFFECTIVE: 01-15-02
REVISED: 05-14-03

GRADING AND SURFACING OR RESURFACING AND WIDENING:

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

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III. THE LIMITS ARE AS SHOWN AND THE CLEARING AND GRUBBING IS CONSIDERED A PART OF THE LUMP SUM ITEM FOR "CLEARING AND GRUBBING".

SUPERELEVATION:

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

SHOULDER CONSTRUCTION:

ASPHALT AND EARTH 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.

UNDERDRAINS:

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS IN PLANS USING 3'/900 MM RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

GUARDRAIL:

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

TEMPORARY SHORING:

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

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE:

EDGECOMBE-MARTIN EMC
SPRINT
CITY OF ROCKY MOUNT
EDGECOMBE COUNTY

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

WHEELCHAIR RAMPS:

CURB CUTS FOR FUTURE WHEELCHAIR RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. THE CONSTRUCTION OF ALL CURB CUTS FOR FUTURE WHEELCHAIR RAMPS SHALL BE IN ACCORDANCE WITH DETAILS IN PLANS.

ROADWAY STANDARD DRAWINGS

ROADWAY ENGLISH STANDARD DRAWINGS EFF. 01-15-02
REV.11-23-04

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" HIGHWAY DESIGN BRANCH - N. C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N. C., DATED JANUARY 15, 2002 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

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 SUPERELEVATION - TWO LANE PAVEMENT

DIVISION 3 - PIPE CULVERTS

300.01 METHOD OF PIPE INSTALLATION - METHOD 'A'
310.10 DRIVEWAY PIPE CONSTRUCTION

DIVISION 5 - SUBGRADE, BASES AND SHOULDERS

560.01 METHOD OF SHOULDER CONSTRUCTION - HIGH SIDE OF SUPERELEVATED CURVE METHOD I

DIVISION 6 - ASPHALT BASES AND PAVEMENTS

654.01 PAVEMENT REPAIRS

DIVISION 8 - INCIDENTALS

815.03 PIPE UNDERDRAIN AND BLIND DRAIN
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
840.00 CONCRETE BASE PAD FOR DRAINAGE STRUCTURES
840.01 BRICK CATCH BASIN - 12" THRU 54" PIPE
840.02 CONCRETE CATCH BASIN - 12" THRU 54" PIPE
840.03 FRAME, GRATES AND HOOD - FOR USE ON STANDARD CATCH BASIN
840.45 PRECAST DRAINAGE STRUCTURE
840.66 DRAINAGE STRUCTURE STEPS
840.71 CONCRETE AND BRICK PIPE PLUG
840.72 PIPE COLLAR
842.01 CONCRETE AND BRICK RETAINING WALLS - WITH NO SURCHARGE
846.01 CONCRETE CURB, GUTTER AND CURB & GUTTER
848.04 STREET TURNOUT
850.01 CONCRETE PAVED DITCHES
862.01 GUARDRAIL PLACEMENT
876.02 GUIDE FOR RIP RAP AT PIPE OUTLETS

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admin

PROJECT REFERENCE NO.	SHEET NO.
37740	1-B

Note: Not to Scale

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing High Quality Wetland Boundary — HQ WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB

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
- River Basin Buffer — RBB
- Flow Arrow
- Disappearing Stream
- Spring
- Swamp Marsh
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Guage — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — 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 Utility Easement — PUE

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Wheel Chair Ramp — WCR
- Curb Cut for Future Wheel Chair Ramp — CCFR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equaility 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 — PH
- 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
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — PH
- 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
- 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 — C
- TV Tower
- U/G TV Cable Hand Hole — PH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- A/G Tank; Water, Gas, Oil
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

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3/25/2005

PROJECT REFERENCE NO.	SHEET NO.
37740	2
R/W SHEET NO.	2

PAVEMENT DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 18537 ENGINEER JERRY P. PAGE 3/1/07

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 29243 ENGINEER GREGORY C. HEIMING 3-1-07

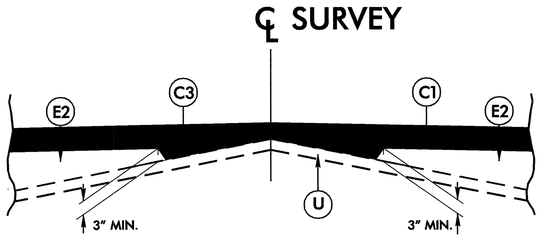
HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 29924 ENGINEER DONNIE H. BRIDGES 3-1-07

PB PARSONS BRINCKERHOFF

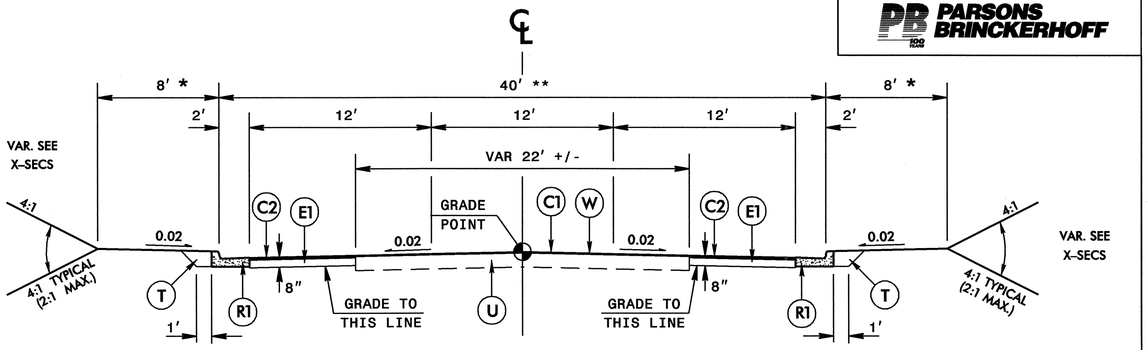
PAVEMENT SCHEDULE

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R1	2'-6" CONCRETE CURB AND GUTTER.
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	T	EARTH MATERIAL.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	U	EXISTING PAVEMENT.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" OR GREATER THAN 5½" IN DEPTH.		

NOTE: ALL PAVEMENT SLOPES ARE 1:1 UNLESS NOTED OTHERWISE



Detail Showing Method of Wedging

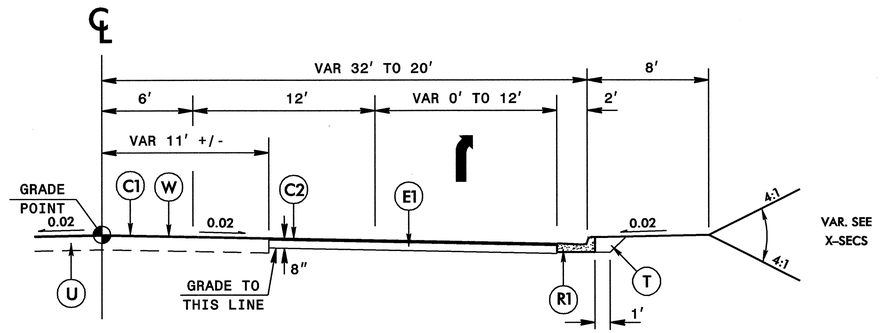


* USE 4' BERM AS FOLLOWS:

–L– RT STA 19+95 TO STA 20+85
–L– RT STA 23+00 TO STA 24+00
–L– RT STA 32+50 TO STA 34+70
–L– LT STA 43+45 TO STA 43+90
–L– LT STA 84+30 TO STA 84+85

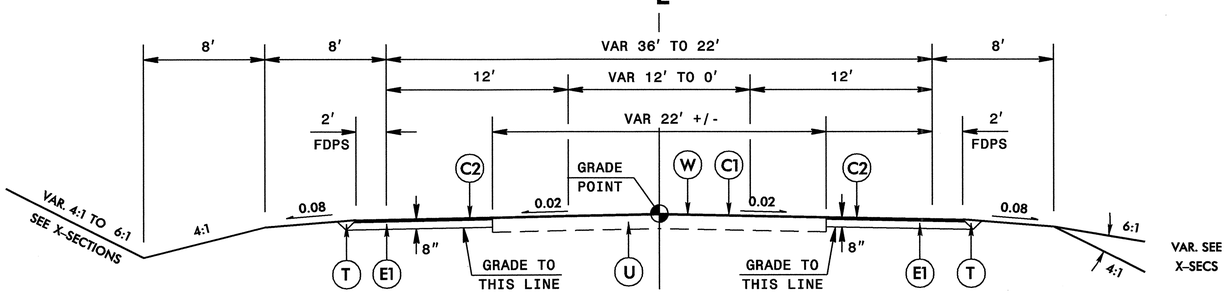
USE TYPICAL SECTION NO. 1 AS FOLLOWS:

–L– STA. 12+10 TO STA. 85+00
–Y– STA. 15+74 TO STA. 16+53.71
–Y– STA. 16+89.73 TO STA. 17+65 (17+45 LT)
–Y1– STA. 12+03 TO 12+50.61 (** 34' FF)
–Y2– STA. 11+83 TO STA. 12+45.55 (** 34' FF)



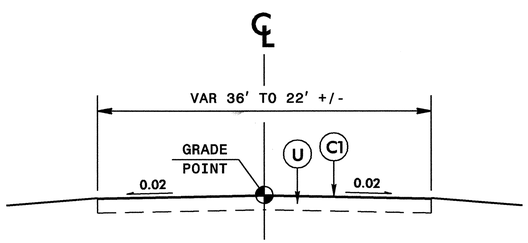
USE IN CONJUNCTION WITH TYPICAL SECTION NO. 1

–L– STA. 32+58.10 TO STA. 40+50.00 LT
–L– STA. 48+50.00 TO STA. 54+23.62 RT



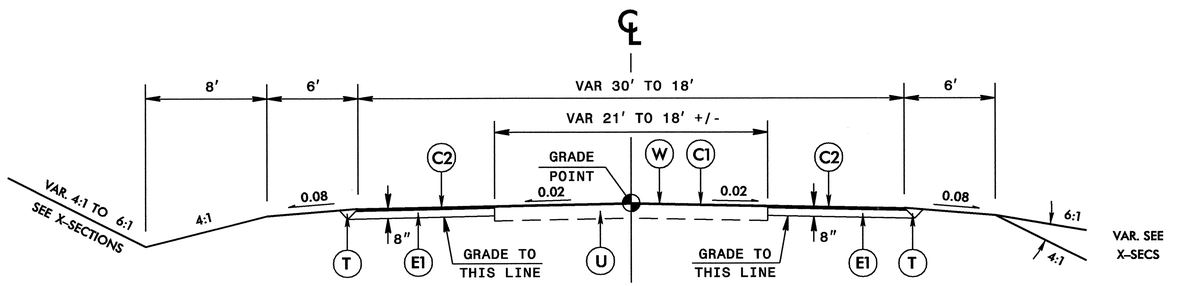
USE TYPICAL SECTION NO. 2 AS FOLLOWS:

–L– STA. 10+00 TO STA. 12+10
–L– STA. 85+00 TO STA. 86+50
–Y– STA. 10+82 TO STA. 15+74



USE TYPICAL SECTION NO. 5 AS FOLLOWS:

–Y– STA. 17+65 TO STA. 18+00



USE TYPICAL SECTION NO. 3 AS FOLLOWS:

–Y1– STA. 11+28 TO STA. 12+03
–Y2– STA. 10+83 TO STA. 11+83

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PROJECT REFERENCE NO.	SHEET NO.
37740	2A
R/W SHEET NO.	2A

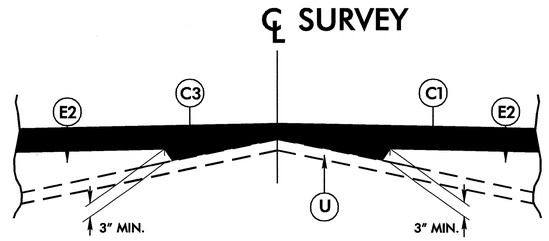
PAVEMENT DESIGN ENGINEER	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 19537 ENGINEER JERRY P. PAGE 3/6/07	NORTH CAROLINA PROFESSIONAL SEAL 29243 ENGINEER CORY C. HEWAY 3-1-07	NORTH CAROLINA PROFESSIONAL SEAL 23924 ENGINEER DANIEL H. BRIDGES 3-1-07

PB PARSONS BRINCKERHOFF

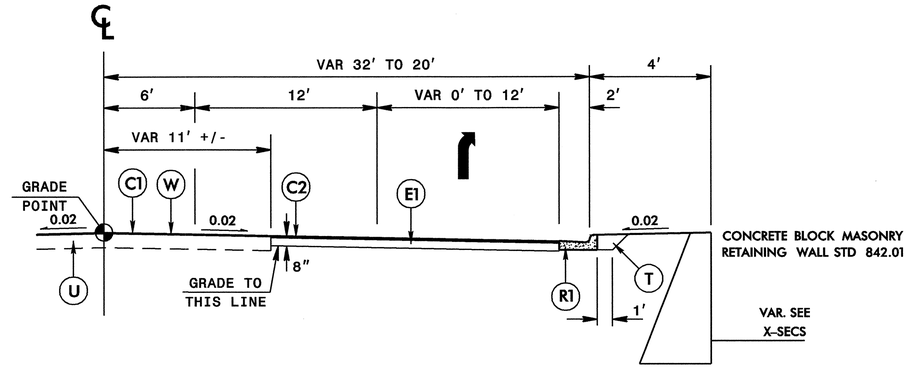
PAVEMENT SCHEDULE

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R1	2'-6" CONCRETE CURB AND GUTTER.
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	T	EARTH MATERIAL.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	U	EXISTING PAVEMENT.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" OR GREATER THAN 5½" IN DEPTH.		

NOTE: ALL PAVEMENT SLOPES ARE 1:1 UNLESS NOTED OTHERWISE

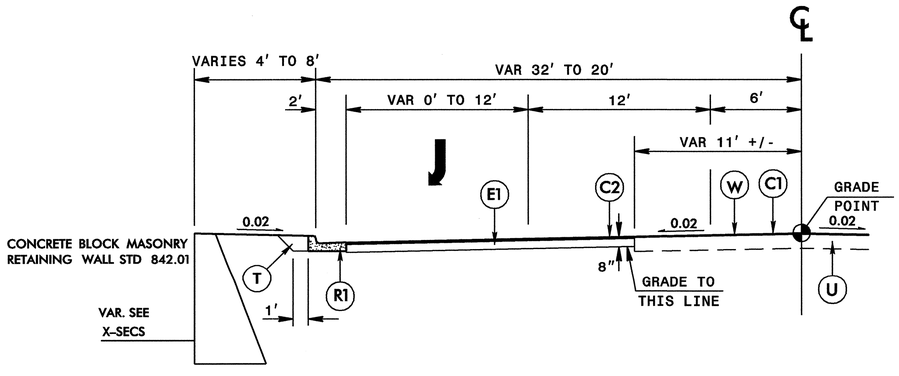


Detail Showing Method of Wedging



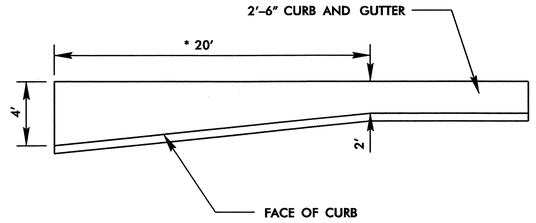
USE IN CONJUNCTION WITH TYPICAL SECTION NO. 1

–L– STA. 23+00.00 TO STA. 24+00.00 RT



USE IN CONJUNCTION WITH TYPICAL SECTION NO. 1

–L– STA. 23+45.02 TO STA. 24+30.00 LT
–L– STA. 43+45.01 TO STA. 43+90.00 LT
–L– STA. 84+40.76 TO STA. 84+72.70 LT



* 20' FLARE TO BE PAID FOR AT THE CONTRACT UNIT PRICE FOR 2'-6" CURB AND GUTTER

DETAIL FOR CURB AND GUTTER FLARE

–L– STA. 14+64.69 LT

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2/28/2007

PROJECT REFERENCE NO.	SHEET NO.
37740	2B

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

ENGLISH DETAIL DRAWING FOR

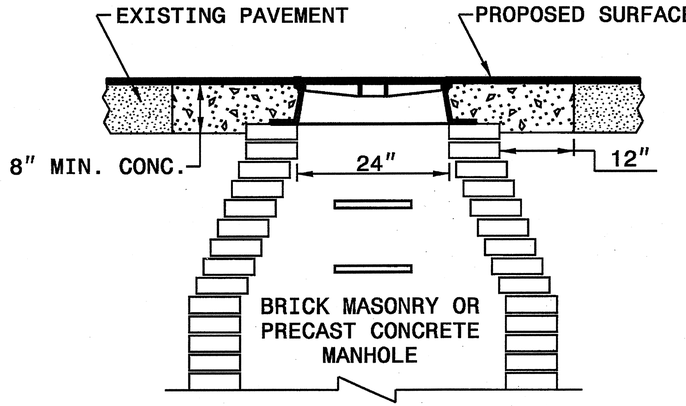
MANHOLE AND VALVE BOX ADJUSTMENTS

SHEET 1 OF 1

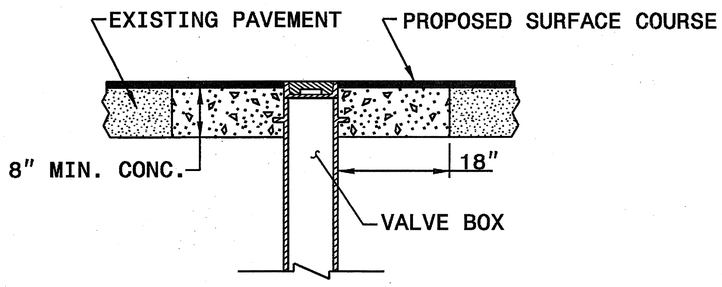
840D55

GENERAL NOTES:

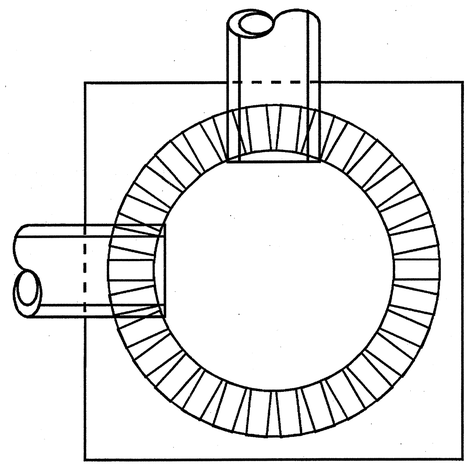
1. RAPID SET GROUT, MORTAR, OR CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGHT OF 4000 PSI.
2. ALL FAULTY EXISTING BRICKWORK TO BE REMOVED AND REPLACED WITH NEW BRICK MASONRY.
3. EXCAVATION FOR THE ADJUSTMENT SHALL BE SHEER CUT ON ALL SIDES.
4. AREA BELOW 8" DEPTH CAN BE FILLED WITH 78M OR NO. 57 CLEAN STONE.
5. MORTAR SHALL BE MIXED TO NCDOT SPECIFICATIONS.
6. MORTAR JOINTS ½" +/- ⅛"



MANHOLE CONCRETE ENCASEMENT



VALVE BOX CONCRETE ENCASEMENT



ELEVATION VIEW

PLACE BRICK ACCORDING TO ELEVATION VIEW

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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

MANHOLE AND VALVE BOX ADJUSTMENTS

SHEET 1 OF 1

840D55

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER JOEL S. HOWERTON 2/27/07

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PROJECT REFERENCE NO.	SHEET NO.
37740	2C

STATE OF
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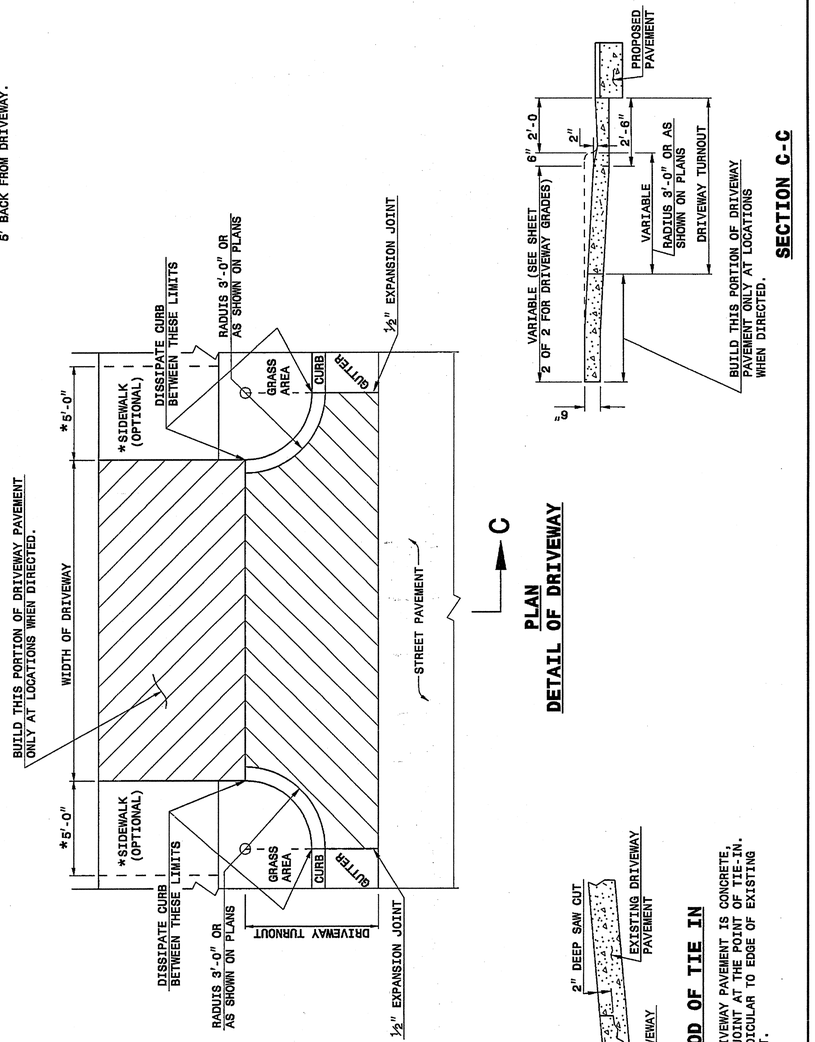
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
DRIVEWAY TURNOUT
RADIUS TYPE

SHEET 1 OF 2 — 848D02



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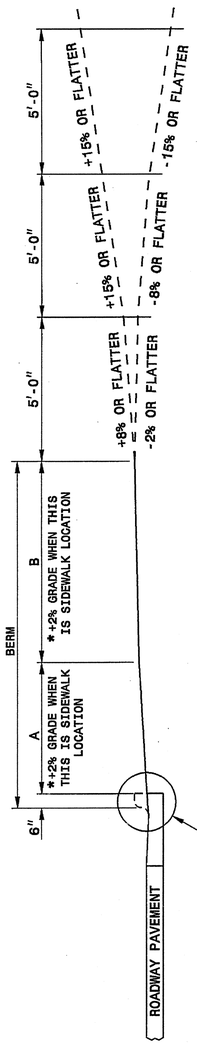
ENGLISH DETAIL DRAWING FOR
DRIVEWAY TURNOUT
DRIVEWAY GRADES

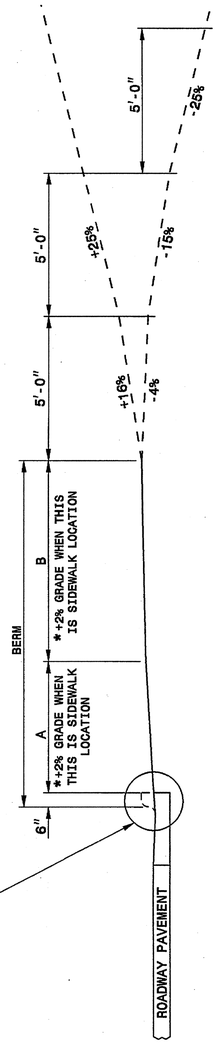
SHEET 2 OF 2 — 848D02

DESIRABLE DRIVEWAY GRADES



DESIRABLE OR MAXIMUM DRIVEWAY GRADES				
BERM WIDTH	A		B	
	DIST.	GRADE	DIST.	GRADE
8' OR LESS	5'-0"	+2%*	2'-6"	+5%
8' OR LESS	2'-0"	+6%	5'-6"	+2%*
10'	4'-0"	+4%	5'-6"	+2%*
12' & OVER	4'-6"	+4%	7'-0"	+2%*

MAXIMUM DRIVEWAY GRADES



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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
DRIVEWAY TURNOUT
DRIVEWAY GRADES

SHEET 2 OF 2 — 848D02

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PROJECT REFERENCE NO.	SHEET NO.
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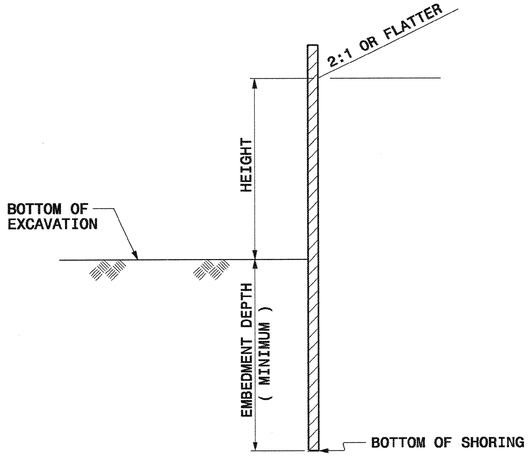
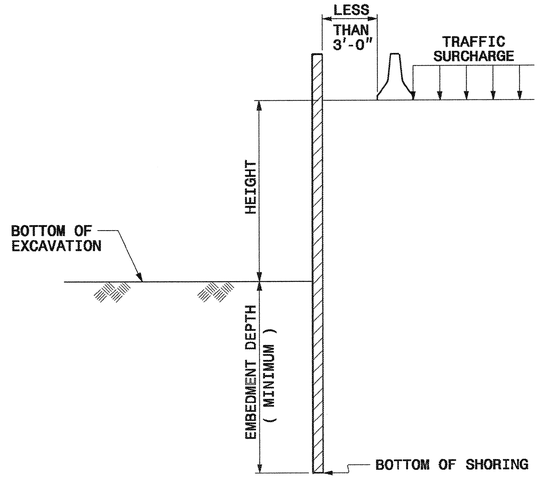


TEMPORARY SHORING

(SLOPING OR LEVEL WITH TRAFFIC SURCHARGE, NO BARRIER IMPACT)



TEMPORARY SHORING - BARRIER SUPPORTED

(LEVEL WITH TRAFFIC SURCHARGE, WITH BARRIER IMPACT)

NOTES

FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE SPECIAL PROVISIONS.

SELECT THE APPROPRIATE STANDARD SHORING DESIGN FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC IN LIEU OF SUBMITTING CONTRACTOR SHORING DESIGN. USE STANDARD SHORING DESIGN ONLY WHEN ALL OF THE FOLLOWING CRITERIA ARE MET:

- MAXIMUM HEIGHT OF SHORING EXCAVATION IS 11 FEET
- GROUNDWATER TABLE IS NOT ABOVE BOTTOM OF THE EXCAVATION
- BACKFILL SLOPE IS 2:1 OR FLATTER
- TRAFFIC SURCHARGE EQUAL TO 240 PSF
- SOLDIER PILE SPACING OF 6 FEET
- TIMBER LAGGING SHALL HAVE A MINIMUM THICKNESS OF 3 INCHES

SUBMIT "STANDARD SHORING SELECTION" FORM TO ENGINEER PRIOR TO CONSTRUCTION OF SHORING.

DO NOT USE THE STANDARD SHORING DESIGNS WHEN VERY SOFT SOIL OR MUCK IS PRESENT WITHIN THE SHORING EMBEDMENT ZONE.

CONTRACTOR MUST VERIFY LOCATION OF GROUNDWATER TABLE PRIOR TO CONSTRUCTION OF SHORING.

THE CONTRACTOR HAS THE OPTION OF USING SOLDIER PILES SET IN DRILLED HOLES WITH A SHORTENED LENGTH EQUAL TO 75% OF THE EMBEDMENT DEPTHS SHOWN IN THE TABLE. FOR DRILLING REQUIREMENTS, SEE TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC SPECIAL PROVISION.

IF DESIGN EMBEDMENT DEPTH IS NOT ACHIEVED, THEN NOTIFY THE ENGINEER IMMEDIATELY.

GROUNDWATER TABLE CONDITIONS

1) WHEN WATER TABLE IS ABOVE THE BOTTOM OF EXCAVATION, SUBMIT CONTRACTOR SHORING DESIGN TO THE ENGINEER FOR APPROVAL.

2) WHEN WATER TABLE IS BELOW THE BOTTOM OF EXCAVATION AND ABOVE THE BOTTOM OF SHORING, USE "WATER TABLE" CASE.

3) WHEN WATER TABLE IS BELOW BOTTOM OF SHORING, USE "NO WATER TABLE" CASE.

		TEMPORARY SHORING					TEMPORARY SHORING - BARRIER SUPPORTED				
		CANTILEVER SHEETING		DRIVEN SOLDIER PILE			CANTILEVER SHEETING		DRIVEN SOLDIER PILE		
CASE	HEIGHT (FT)	MINIMUM EMBEDMENT DEPTH (FT)	MINIMUM SECTION MODULUS (IN^3 / FT OF WALL)	MINIMUM EMBEDMENT DEPTH (FT)			MINIMUM EMBEDMENT DEPTH (FT)	MINIMUM SECTION MODULUS (IN^3 / FT OF WALL)	MINIMUM EMBEDMENT DEPTH (FT)		
				HP 10x42	HP 12x53	HP 14x73			HP 10x42	HP 12x53	HP 14x73
"NO WATER TABLE"	< 6	7.5	3.0	8.0	8.0	8.0	11.0	10.0	9.5	9.5	9.5
	7	8.5	4.5	9.5	9.5	9.5	12.0	12.0	10.5	10.5	10.5
	8	10.0	6.5	10.5	10.5	10.5	12.5	14.0	11.5	11.5	11.5
	9	11.0	9.5	--	12.0	12.0	13.5	16.5	--	12.5	12.5
	10	12.5	13.0	--	--	13.5	14.0	19.5	--	13.5	13.5
	11	13.5	17.0	--	--	14.5	15.0	22.5	--	--	14.5
"WATER TABLE"	< 6	11.5	4.5	11.5	11.5	11.5	16.0	12.0	13.0	13.0	13.0
	7	13.0	7.0	13.0	13.0	13.0	17.0	14.5	14.5	14.5	14.5
	8	15.0	10.0	--	15.0	15.0	18.0	17.0	--	15.5	15.5
	9	17.0	14.0	--	17.0	17.0	19.0	20.0	--	17.0	17.0
	10	18.5	19.5	--	--	18.5	20.0	23.5	--	--	18.5
	11	20.5	26.0	--	--	--	21.0	28.0	--	--	20.0

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER LOUIS S. HOWERTON
2/2/07

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STANDARD TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC

ORIGINAL BY: SOILS & FOUNDATIONS DATE: 10-2001
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
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PROJECT REFERENCE NO.	SHEET NO.
37740	2-E

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

SHEET 2 OF 4 **848D05**

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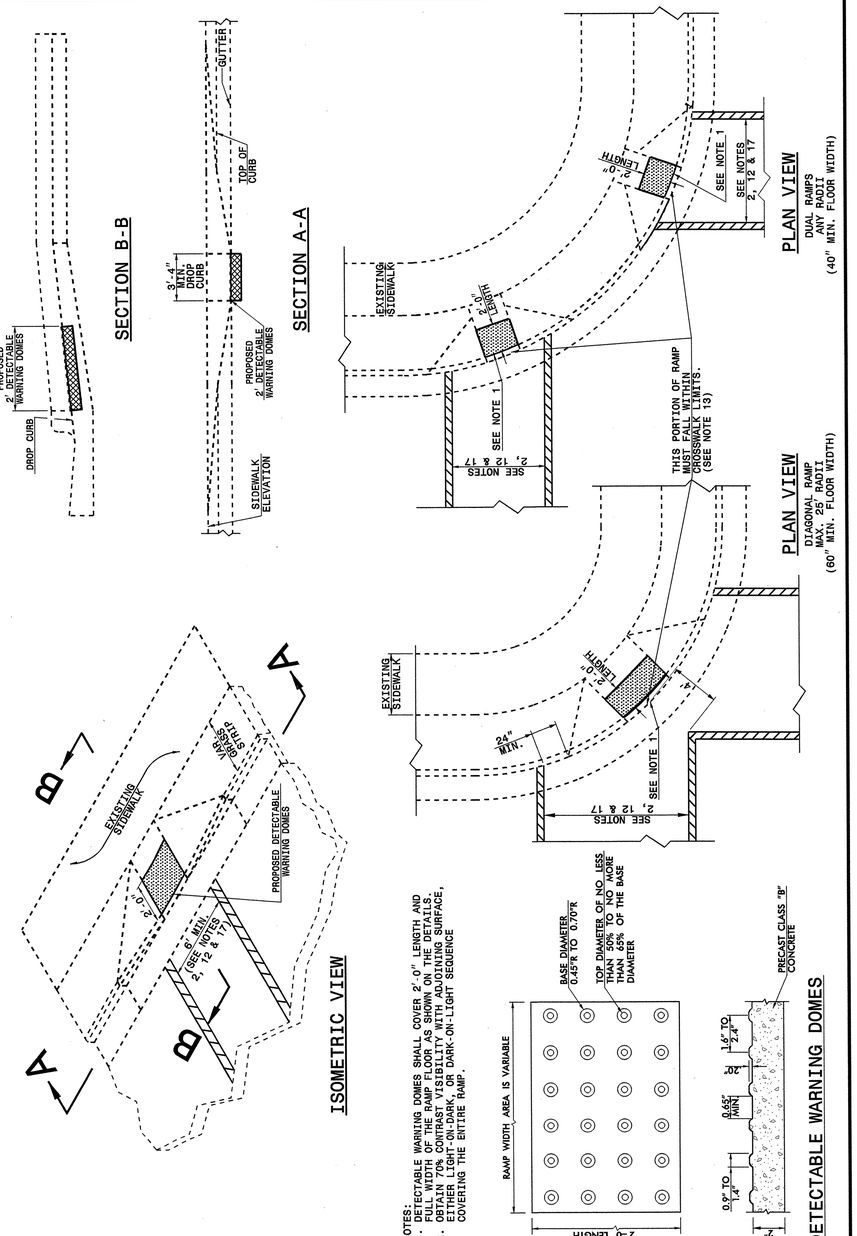
DIVISION OF HIGHWAYS
RALEIGH, N.C.



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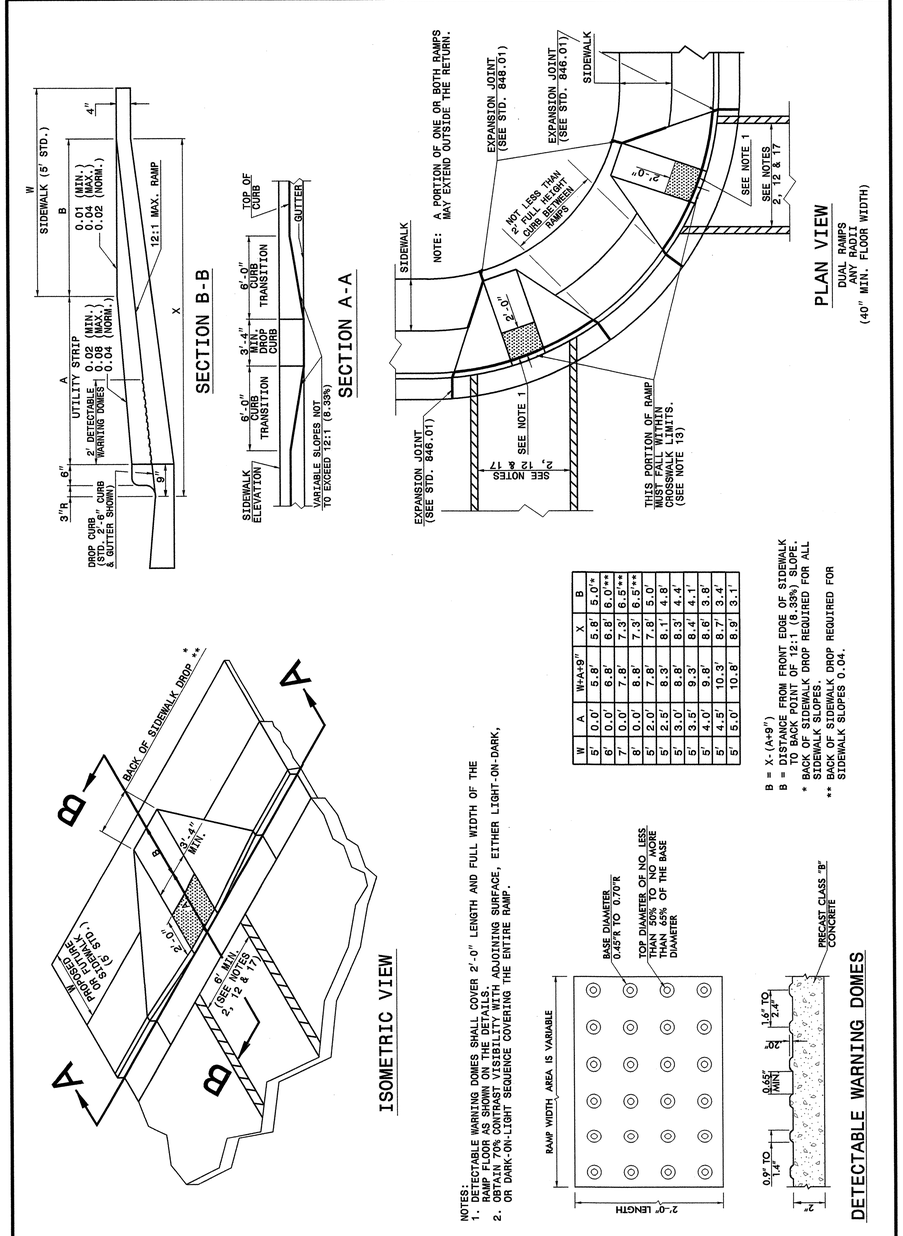
ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
CURB CUT

SHEET 1 OF 4 **848D05**



W	A	W+A+9"	X	B
5'	0.0'	5.8'	5.8'	5.0'*
6'	0.0'	6.8'	6.8'	6.0'**
7'	0.0'	7.8'	7.3'	6.5'**
8'	0.0'	8.8'	7.3'	6.5'**
5'	2.0'	7.8'	7.8'	5.0'
5'	2.5'	8.3'	8.1'	4.8'
5'	3.0'	8.8'	8.3'	4.4'
5'	3.5'	9.3'	8.4'	4.1'
5'	4.0'	9.8'	8.6'	3.8'
5'	4.5'	10.3'	8.7'	3.4'
5'	5.0'	10.8'	8.9	3.1'

B = X-(A+9")
B = DISTANCE FROM FRONT EDGE OF SIDEWALK TO BACK POINT OF 12:1 (8.33%) SLOPE.
* BACK OF SIDEWALK DROP REQUIRED FOR ALL SIDEWALK SLOPES.
** BACK OF SIDEWALK DROP REQUIRED FOR SIDEWALK SLOPES 0.04.

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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
CURB CUT

SHEET 1 OF 4 **848D05**

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NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER JOEL S. HOWESTON
9/27/07

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STATE OF
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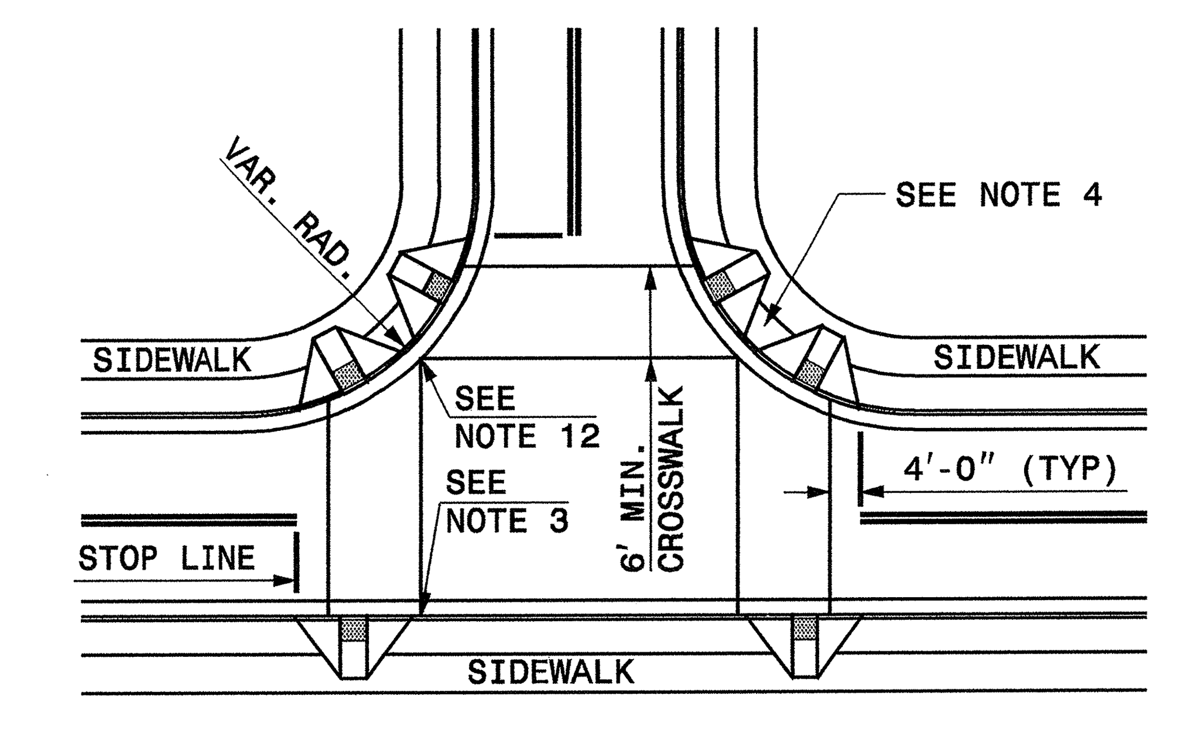
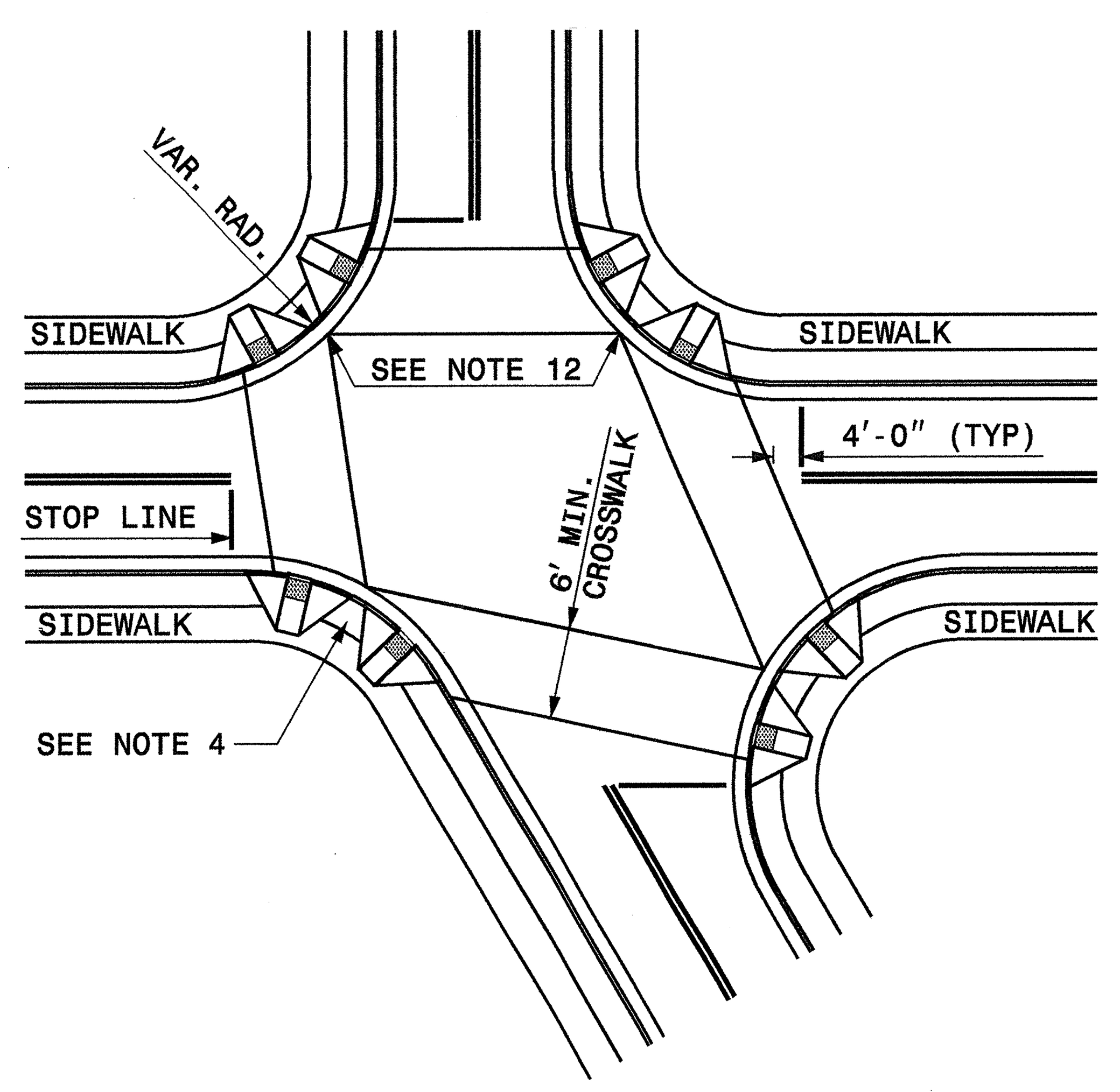
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
CURB CUT



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



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

ROADWAY PLAN SYMBOL (CCFR) CURB CUT FOR FUTURE RAMP

ROADWAY PLAN SYMBOL (WCR) FOR PROPOSED WHEELCHAIR RAMP

PROPOSED WHEELCHAIR RAMP

PROPOSED OR FUTURE SIDEWALK

ALLOWABLE LOCATIONS

DUAL RAMP RADII...........ANY

SHEET 3 OF 4
848D05

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ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
CURB CUT

SHEET 3 OF 4
848D05

STATE OF
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ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
CURB CUT

NOTES:

1. CONSTRUCT THE WALKING SURFACE WITH SLIP RESISTANTANCE AND A 70% CONTRASTING COLOR TO THE SIDEWALK.
2. CROSSWALK WIDTHS AND CONFIGURATION VARY BUT MUST CONFORM TO TRAFFIC DESIGN STANDARDS.
3. 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 SIMILIAR 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.
4. 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.
5. PAY FOR ALL VARIABLE DEPTH CONCRETE USED FOR CONSTRUCTION OF WHEELCHAIR RAMPS AS CONCRETE WHEELCHAIR RAMPS. (SQ. YDS.)
6. PAY FOR ALL DEPRESSED CURBS AT WHEELCHAIR RAMPS AS THE TYPE CURB AND GUTTER USED ADJACENT TO DEPRESSED CURB. (LN. FT.)
7. SUCH PRICES AND PAYMENTS IS CONSIDERED FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO SATISFACTORILY COMPLETE THE WORK.
8. DO NOT EXCEED 0.08 (12:1) SLOPE ON THE WHEELCHAIR RAMP IN RELATIONSHIP TO THE GRADE OF THE STREET.
9. CONSTRUCT WHEELCHAIR RAMPS 40" (3'-4") OR GREATER FOR DUAL RAMPS.
10. USE CLASS "B" CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NON-SKID TYPE SURFACE.
11. PLACE A ½" EXPANSION JOINT WHERE THE CONCRETE WHEELCHAIR RAMP JOINS THE CURB AND AS SHOWN ON STD. DWG. 848.01.
12. PLACE THE INSIDE PEDESTRIAN CROSSWALK LINES NO CLOSER IN THE INTERSECTION BY BISECTING THE INTERSECTION RADII, WITH ALLOWANCE OF A 4' CLEAR ZONE IN THE VEHICULAR TRAVELWAY WHEN ONE RAMP IS INSTALLED. (SEE NOTE 17)
13. 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.
14. CONSTRUCT THE PEDESTRIAN CROSSWALK A MINIMUM OF 6 FEET. A CROSSWALK WIDTH OF 10 FEET OR GREATER IS DESIRABLE.
15. 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.
16. TERMINATE PARKING A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK.
17. 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.

SHEET 4 OF 4
848D05

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ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
CURB CUT

SHEET 4 OF 4
848D05

PROJECT REFERENCE NO. 37740 | SHEET NO. 2-EE

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022966 JOEL S. HOWERTON 2/27/07

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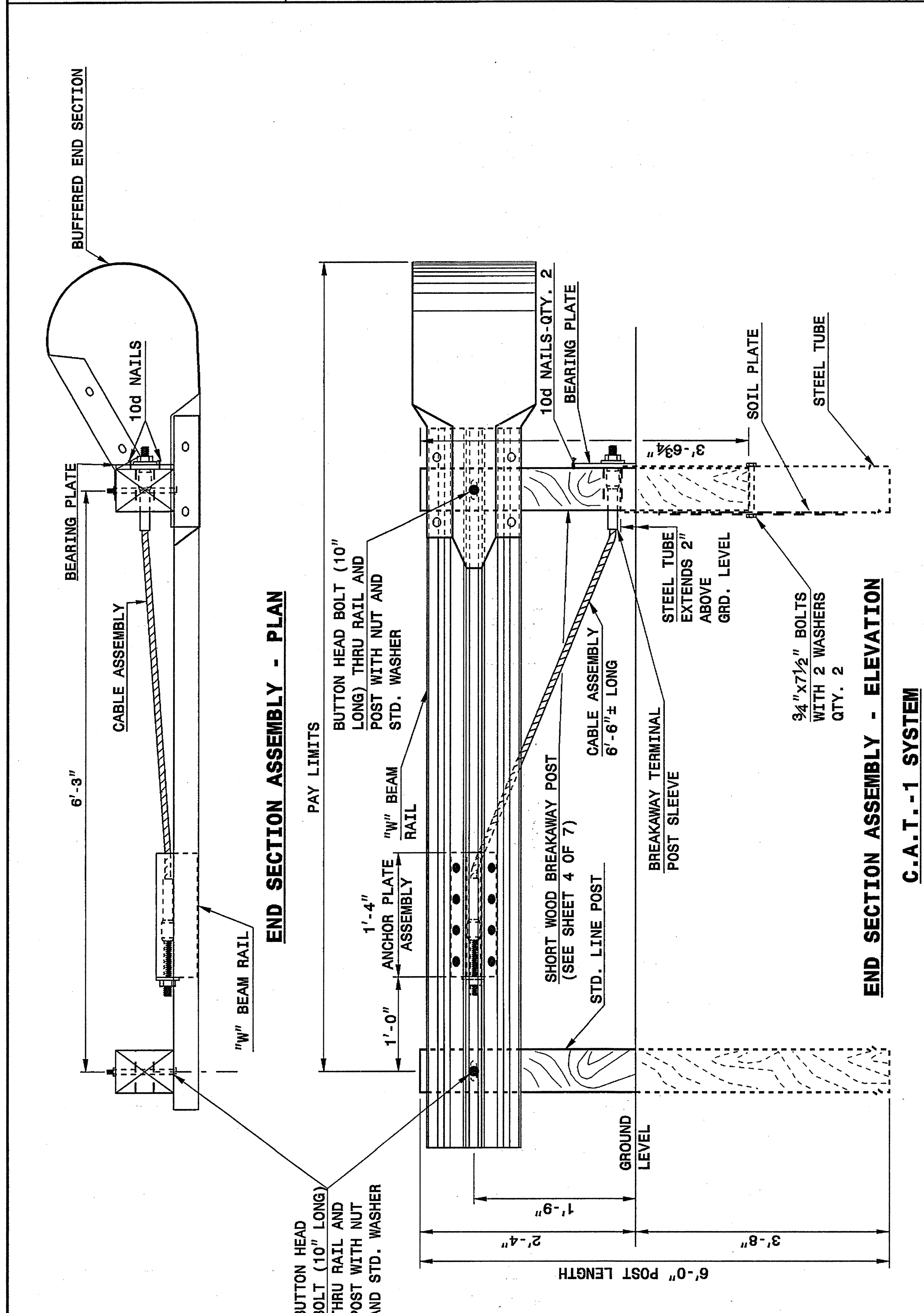
PROJECT REFERENCE NO.	SHEET NO.
37740	2F

ENGLISH DETAIL DRAWING FOR GUARDRAIL INSTALLATION — STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. — SHEET 1 OF 7 862D02



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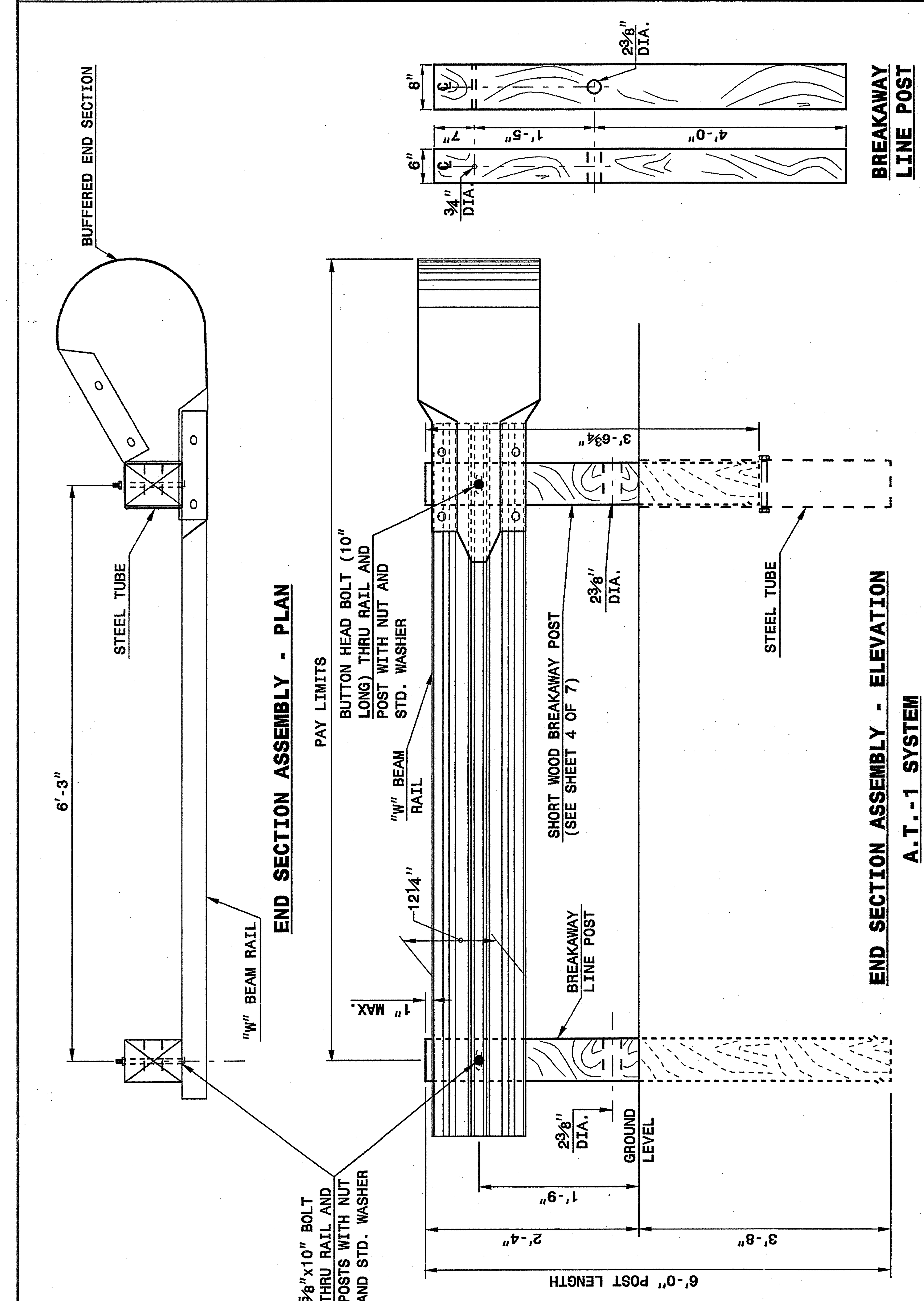
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 1 OF 7
862D02

ENGLISH DETAIL DRAWING FOR GUARDRAIL INSTALLATION — STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. — SHEET 2 OF 7 862D02



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ENGLISH DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 2 OF 7
862D02

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER JOEL S. HOWERTON
2/27/07

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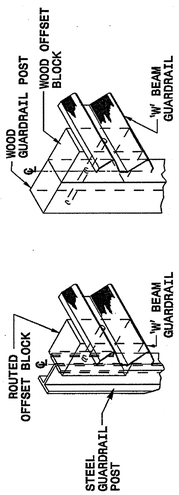
PROJECT REFERENCE NO.	SHEET NO.
37740	26

ISOMETRIC VIEWS



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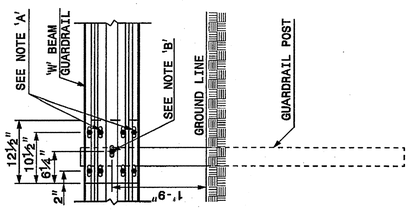
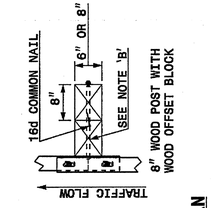


PLAN



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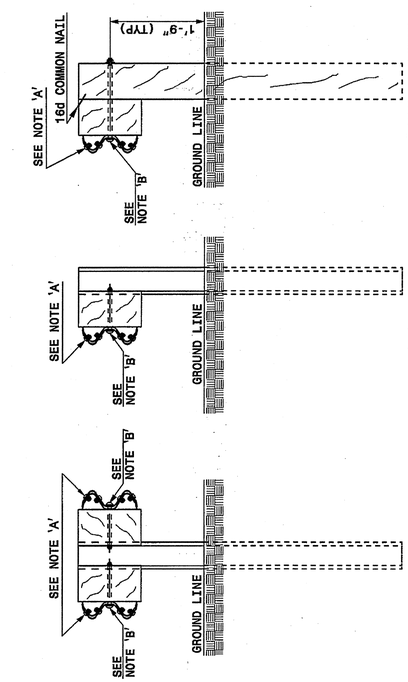
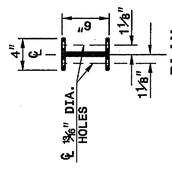


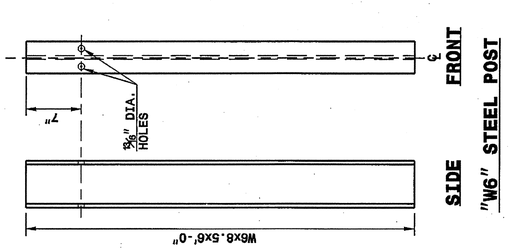
NOTES:
A - 5/8" DIA. BUTTON HEAD SPLICE BOLT 1¼" LONG (8 REQ. PER SPLICE JOINT).
B - 5/8" DIA. BUTTON HEAD BOLT 7½"/8" LONG WITH NUT FOR BOLTING 6"/8" ROUTED OFFSET BLOCK TO STEEL POSTS OR BOLTING 6"/8" LONG WITH STD. WASHER UNDER NUT FOR BOLTING TO WOOD POSTS (1 REQ. PER LOCATION)
C - 5/8" DIA. BUTTON 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.

TYPICAL GUARDRAIL AND GUARDRAIL POST ALTERNATIVES

PLAN

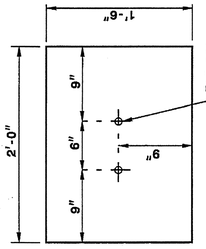


SIDE

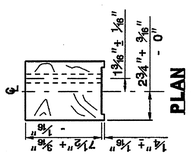


SOIL PLATE

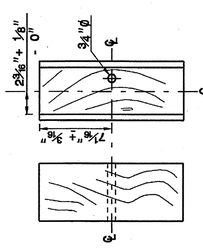
¼" THICK PLATE



PLAN

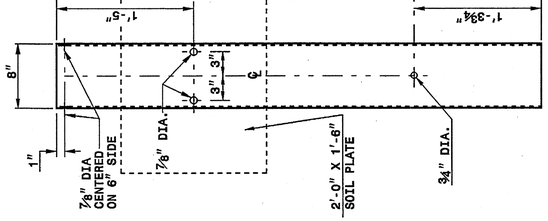


SIDE



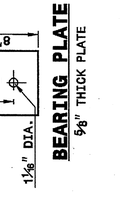
ROUTED WOOD OFFSET BLOCK

SYSTEM PARTS



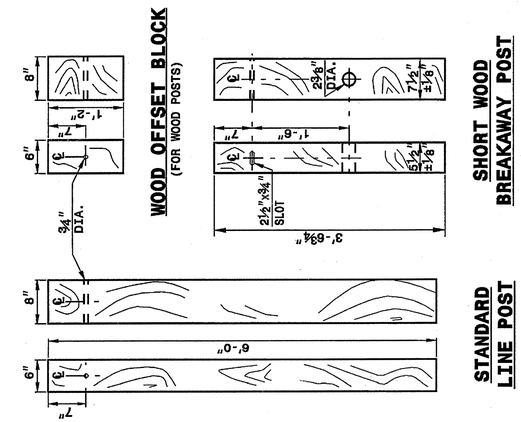
STEEL TUBE

TS 6"x8"xO.1875"



BEARING PLATE

⅝" THICK PLATE



WOOD OFFSET BLOCK

(FOR WOOD POSTS)

SHORT WOOD BREAKAWAY POST

STANDARD LINE POST

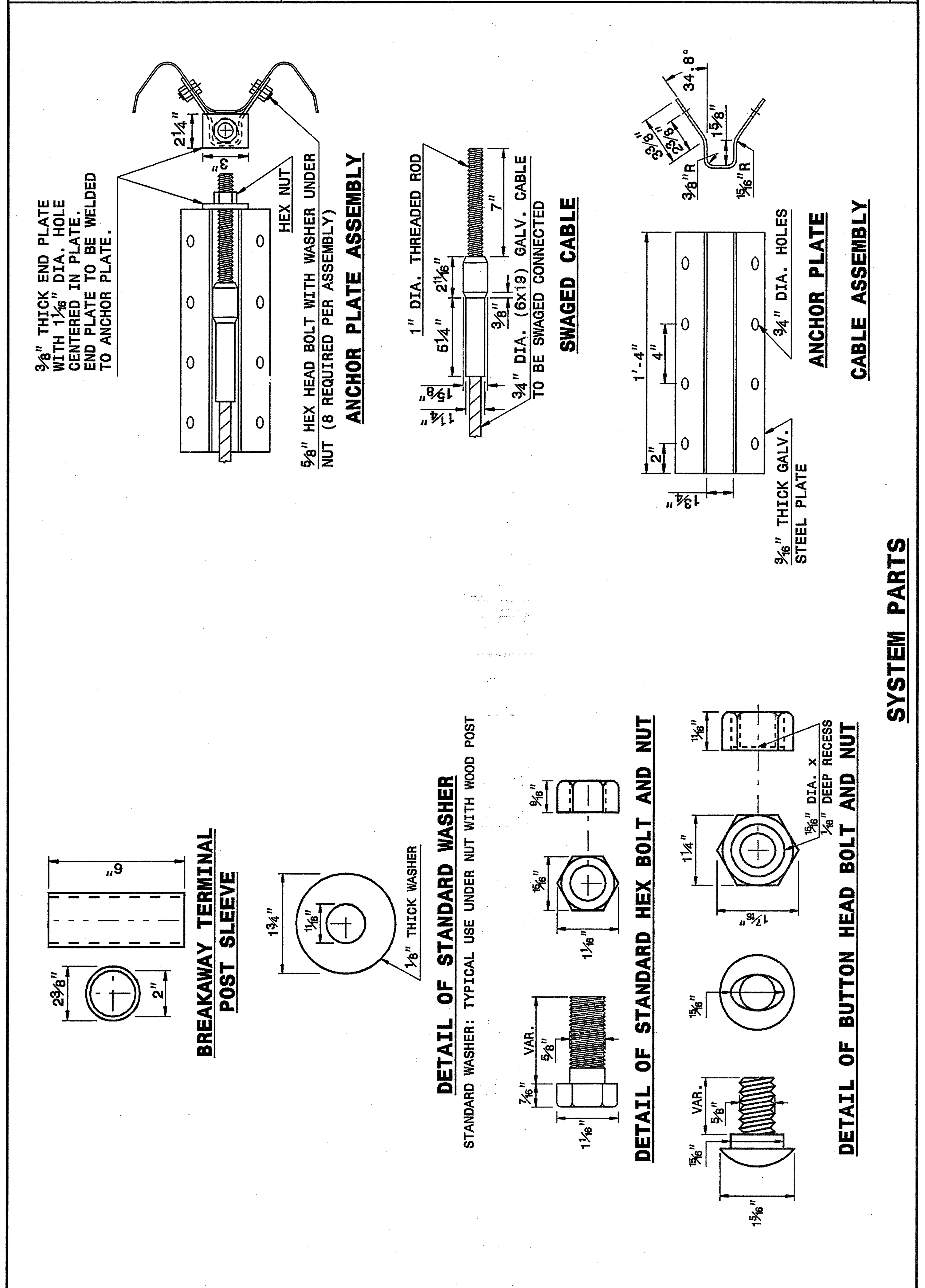
PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

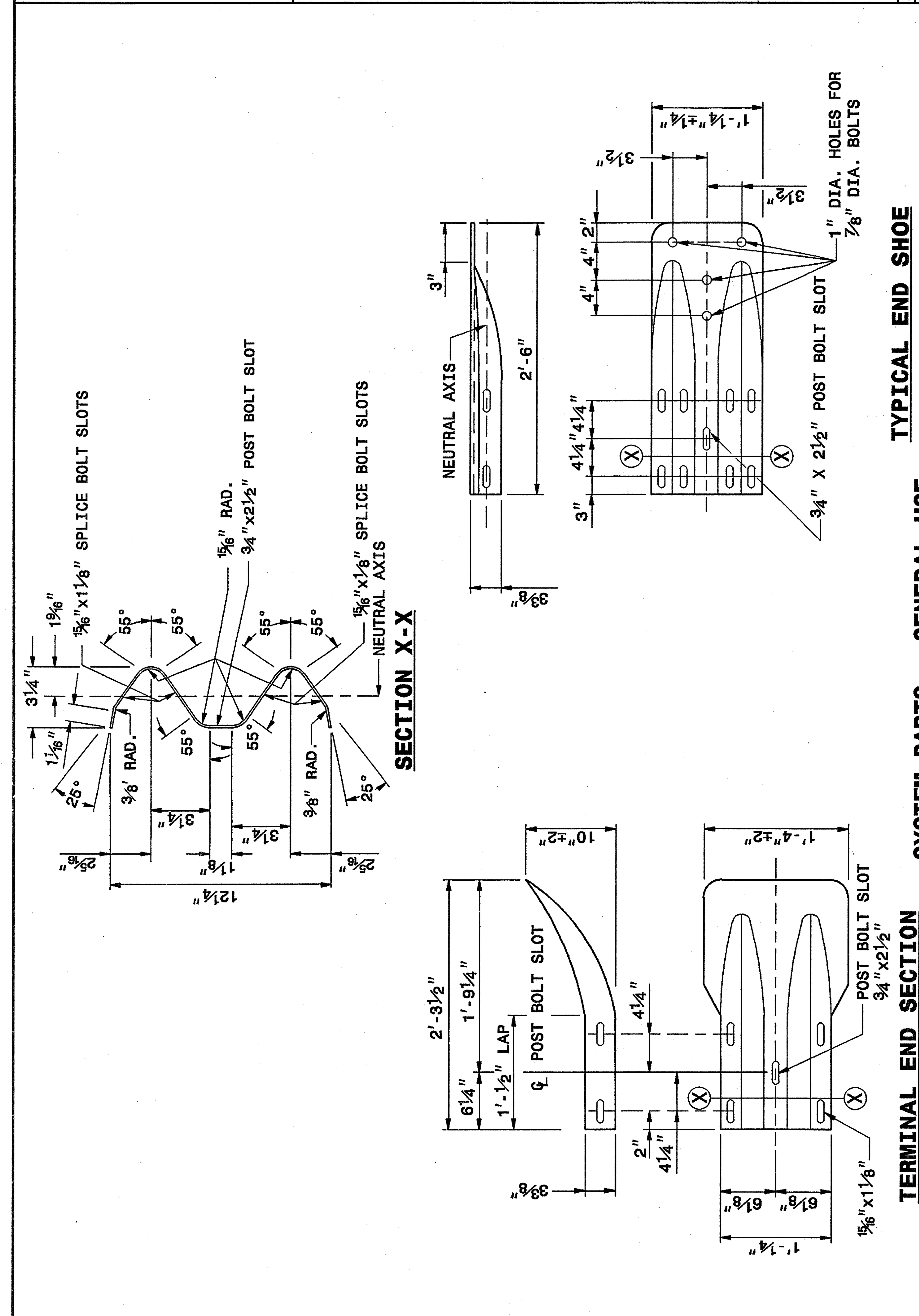
SEE PLATE FOR TITLE

ORIGINAL BY: 2002 STD.862.02 DATE:
MODIFIED BY: E.E. WARD DATE: 02-09-03
CHECKED BY: DATE:
FILE SPEC.: /usr/stds/02todetail/english/86202/862d02.dgn

PROJECT REFERENCE NO.	SHEET NO.
37740	2H

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 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

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022966 JOEL S. HOWERTON
7/27/07

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

SEE PLATE FOR TITLE

ORIGINAL BY: 2002 STD.862.02 DATE:
MODIFIED BY: E.E. WARD DATE: 02-09-03
CHECKED BY: DATE:
FILE SPEC.: /usr/stds/02todetail/english/86202/862d02.dgn

25-OCT-2004 13:55
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ericward AT DS212260

PROJECT REFERENCE NO.	SHEET NO.
37740	21

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ENGLISH DETAIL DRAWING FOR **GUARDRAIL INSTALLATION**	SHEET 7 OF 7 **862D02**

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ENGLISH DETAIL DRAWING FOR **GUARDRAIL INSTALLATION**	SHEET 7 OF 7 **862D02**

25-OCT-2004 13:55
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ericboard AT DS212260

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER JOEL S. HOMESLEY
12-7-07

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

SEE PLATE FOR TITLE

ORIGINAL BY: 2002 STD.862.02 DATE:
MODIFIED BY: E.E. WARD DATE: 02-09-03
CHECKED BY: DATE:
FILE SPEC.: /usr/stds/02todetail/english/86202/862d02.dgn

STATE OF NORTH CAROLINA
SUMMARY OF QUANTITIES

PROJECT REFERENCE No.	SHEET No.
37740	3

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201822

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0001000000-E	200	Lump Sum		CLEARING & GRUBBING .. ACRE(S)
0008000000-E	200	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING
0022000000-E	225	5,300	CY	UNCLASSIFIED EXCAVATION
0036000000-E	225	3,000	CY	UNDERCUT EXCAVATION
0080000000-E	SP	3,630	TON	CLASS IV SUBGRADE STABILIZATION
0106000000-E	230	15,500	CY	BORROW EXCAVATION
0134000000-E	240	688	CY	DRAINAGE DITCH EXCAVATION
0156000000-E	250	225	SY	REMOVAL OF EXISTING ASPHALT PAVEMENT
0163000000-E	250	45	SY	REMOVAL OF EXISTING CONCRETE PAVEMENT
0196000000-E	270	8,000	SY	FABRIC FOR SOIL STABILIZATION
0199000000-E	SP	2,000	SF	TEMPORARY SHORING
0318000000-E	300	510	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS
0366000000-E	310	3,894	LF	15" RC PIPE CULVERTS, CLASS III
0372000000-E	310	742	LF	18" RC PIPE CULVERTS, CLASS III
0378000000-E	310	124	LF	24" RC PIPE CULVERTS, CLASS III
0390000000-E	310	12	LF	36" RC PIPE CULVERTS, CLASS III
0408000000-E	310	12	LF	54" RC PIPE CULVERTS, CLASS III
0995000000-E	340	1,064	LF	PIPE REMOVAL
1011000000-N	500	Lump Sum		FINE GRADING
1220000000-E	545	630	TON	INCIDENTAL STONE BASE
1330000000-E	607	500	SY	INCIDENTAL MILLING
1489000000-E	610	3,400	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1519000000-E	610	10,400	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
1560000000-E	620	775	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
1693000000-E	654	150	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
2022000000-E	815	23	CY	SUBDRAIN EXCAVATION
2033000000-E	815	17	CY	SUBDRAIN FINE AGGREGATE
2044000000-E	815	100	LF	6" PERFORATED SUBDRAIN PIPE
2055000000-E	815	3	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS
2066000000-N	815	1	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET
2077000000-E	815	6	LF	6" OUTLET PIPE (SUBDRAINS)
2220000000-E	838	5	CY	REINFORCED ENDWALLS
2253000000-E	840	3.34	CY	PIPE COLLARS
2264000000-E	840	0.31	CY	PIPE PLUGS
2286000000-N	840	52	EA	MASONRY DRAINAGE STRUCTURES
2308000000-E	840	6	LF	MASONRY DRAINAGE STRUCTURES
2374000000-N	840	14	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)
2374000000-N	840	17	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)
2374000000-N	840	21	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)
2514000000-E	842	94	CY	CONCRETE BLOCK MASONRY RETAINING WALLS
2549000000-E	846	13,600	LF	2'-6" CONCRETE CURB & GUTTER
2612000000-E	848	600	SY	6" CONCRETE DRIVEWAY
2619000000-E	850	75	SY	4" CONCRETE PAVED DITCH
2830000000-N	858	2	EA	ADJUSTMENT OF MANHOLES
2845000000-N	858	2	EA	ADJUSTMENT OF METER BOXES OR VALVE BOXES
3030000000-E	862	875	LF	STEEL BM GUARDRAIL
3150000000-N	862	10	EA	ADDITIONAL GUARDRAIL POSTS
3210000000-N	862	5	EA	GUARDRAIL ANCHOR UNITS, TYPE CAT-1
3270000000-N	SP	10	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3360000000-E	863	242	LF	REMOVE EXISTING GUARDRAIL
3649000000-E	876	40	TON	PLAIN RIP RAP, CLASS B
3656000000-E	876	390	SY	FILTER FABRIC FOR DRAINAGE
3659000000-N	SP	1	EA	PREFORMED SCOUR HOLES WITH LEVEL SPREADER APRON
4412000000-E	SP	128	SF	WORK ZONE SIGNS (STATIONARY)
4412100000-E	SP	200	SF	WORK ZONE SIGNS (PORTABLE)
4420000000-N	1120	1	EA	CHANGEABLE MESSAGE SIGN
4430000000-N	1130	100	EA	DRUMS
4450000000-N	1150	4,000	HR	FLAGGER
4465000000-N	1160	2	EA	TEMPORARY CRASH CUSHIONS
4470000000-N	1160	1	EA	RESET TEMPORARY CRASH CUSHIONS
4490000000-E	1170	250	LF	PORTABLE CONCRETE BARRIER (ANCHORED)
4505000000-E	1170	125	LF	RESET PORTABLE CONCRETE BARRIER (ANCHORED)
4650000000-N	1251	100	EA	TEMPORARY RAISED PAVEMENT MARKERS
4685000000-E	1205	100	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
4686000000-E	1205	16,500	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
4697000000-E	1205	750	LF	THERMOPLASTIC PAVEMENT MARKING LINES (8", 120 MILS)
4710000000-E	1205	60	LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)
4725000000-E	1205	90	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)
4810000000-E	1205	50,000	LF	PAINT PAVEMENT MARKING LINES (4")
4835000000-E	1205	60	LF	PAINT PAVEMENT MARKING LINES (24")
4850000000-E	1205	200	LF	REMOVAL OF PAVEMENT MARKING LINES (4")
4900000000-N	1252	400	EA	PERMANENT RAISED PAVEMENT MARKERS
6000000000-E	1605	8,800	LF	TEMPORARY SILT FENCE
6006000000-E	1610	50	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	50	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	120	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	5	ACR	TEMPORARY MULCHING
6018000000-E	1620	4,000	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	2	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	100	LF	TEMPORARY SLOPE DRAINS
6027000000-N	1622	5	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
6029000000-E	SP	500	LF	SAFETY FENCE
6030000000-E	1630	450	CY	SILT EXCAVATION
6036000000-E	1631	1,000	SY	MATTING FOR EROSION CONTROL
6038000000-E	SP	200	SY	PERMANENT SOIL REINFORCEMENT MAT
6042000000-E	1632	1,200	LF	1/4" HARDWARE CLOTH
6070000000-N	SP	2	EA	SPECIAL STILLING BASINS
6084000000-E	1660	13	ACR	SEEDING & MULCHING
6087000000-E	1660	13	ACR	MOWING
6090000000-E	1661	2,000	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	2	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	1,000	LB	SEED FOR SUPPLEMENTAL SEEDING
6111000000-E	SP	150	LF	IMPERVIOUS DIKE
6114000000-N	SP	10	HR	SPECIALIZED HAND MOWING
6132000000-N	SP	12	EA	GENERIC EROSION CONTROL ITEM RESPONSE FOR EROSION CONTROL

COMPUTED BY: D. GOURLEY DATE: 3/1/2005
CHECKED BY: D. BRIDGES DATE: 3/2/2005

PROJECT NO.	SHEET NO.
37740	3A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO.		TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL (%)	CLASS III R.C.P. PIPE (UNLESS NOTED OTHERWISE)								BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHERWISE)								15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS		QUANITIES FOR DRAINAGE STRUCTURES	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. FT.		C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE			D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE STD. 840.16	M.D.I. TYPE "A" STD. 840.17 OR 840.26	M.D.I. TYPE "B" STD. 840.18 OR 840.27	M.D.I. TYPE "D" STD. 840.19 OR 840.28	M.D.I. FRAME WITH GRATE STD. 840.20	M.D.I. FRAME WITH TWO GRATES STD. 840.22	M.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	M.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	TRAFFIC BEARING J.B. STD. 840.34	MANHOLE STD. 840.51	M.H. STD. 840.51 OR 840.53	M.H. FRAME AND COVER STD. 840.54	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD. 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN. FT.	REMARKS
SIZE		FROM	TO					12"	15"	18"	24"	30"	36"	42"	48"	12"	15"	18"	24"	30"	36"	42"	48"				R.C.P.	C.S.P.	PER EACH (0' THRU 5.0')	A 5.0' THRU 10.0'	B 10.0' AND ABOVE		E	F	G																			
THICKNESS OR GAUGE																.064	.064	.064	.064	.079	.079	.109	.109																															
-Y- 15+75.00	LT	6	7	N/A	73.80	73.55				20																																												
-Y- 15+75.00	LT	7	OUT	77.32	73.45	72.50				70																			1			1			1																		41	REM. 18" RCP
-L- 13+85.00	LT	1	2	N/A	72.25	72.11					28																			1.3																								
-L- 13+85.00	LT	2	3	78.31	72.01	71.83					36																		1	1.58		1		1																		0.116		
-L- 13+85.00	RT	3	OUT	78.31	71.73	71.57					36																		1			1			1																			
-Y- 17+41.00	LT	5	4	77.31	74.16	72.98																							1			1			1																			TIE CB TO EXIST. 12" RCP
-Y- 17+62.00	RT	4	OUT	77.80	72.98	72.40																							1			1		1																				TIE CB TO EXIST. 12" RCP
-L- 17+90.00	LT	8	8A	77.35	73.93	73.85			16																				1			1		1																				
-L- 18+10.13	LT	8B	8A	N/A	73.91	73.85			12																																													
-L- 18+10.13	LT	8A	11	77.23	73.75	72.75			200																				1			1		1																			50	REM. 15" RCP
-L- 20+00.00	LT	10	11	N/A	73.65	72.75			24																																													
-L- 20+13.52	LT	11	12	76.20	72.65	72.50			32																				1			1	1																					
-L- 18+30.00	RT	9A	9B	N/A	73.71	73.64			16																																													
-L- 18+30.00	RT	9B	9	77.1	73.54	73.09			92																				1			1			1																			
-L- 19+25.00	RT	9	12	76.49	72.99	72.50			84																				1			1			1																			
-L- 20+13.52	RT	12	15	76.20	72.40	72.00			80																				1			1	1																					
-L- 21+02.62	LT	14	13	N/A	72.50	72.35			24																																												87	REM. 12" & 18" RCP
-L- 21+02.62	LT	13	15	76.27	EX	EX																							1	1		1		1																				TIE CB TO EXIST 18 RCP
-L-21+00.00	RT	15	OUT	76.27	68.98	68.89			16																				1			1			1																			
-L- 24+25.00	RT	16	17	75.49	71.99	71.15			168																				1			1			1																		16	REM. 12" RCP
-L- 26+00.00	RT	17	18	75.10	71.10	70.63			96																				1			1			1																			
-L- 27+00.00	RT	18	19	74.95	70.58	70.30			56																				1			1	1																				17	REM. 18" RCP
-L- 27+85.95	LT	20	19	N/A	70.95	70.30				76																																											129	REM. 15" RCP
-L- 31+24.66	LT	23	22	77.98	74.48	74.15			40																				1			1			1																			
-L- 31+00.00	RT	22	21	77.55	74.05	71.85			196																				1			1		1																			63	REM. 12" & 18" RCP
-L- 29+00.00	RT	21	19	75.25	71.75	70.30			136																				1			1		1																			21	REM. 18" RCP
-L- 27+60.29	RT	19	OUT	74.92	70.20	69.00					24																		1			1	1																				52	REM. 15" RCP
-L- 35+75.00	LT	24	26	76.91	73.41	72.80			120																				1			1		1																				
-L- 37+00.00	LT	26	30	76.72	72.70	71.97			146																				1			1		1																				
-L- 38+50.00	LT	30	32	75.83	71.87	70.84			228																				1			1		1																				
-L- 37+50.00	RT	27	31	76.32	72.82	71.84			196																				1			1			1																	0.065		
-L- 39+50.00	RT	31	33	75.82	71.74	71.09			132																				1			1			1																			
-L- 40+79.64	RT	34	33	N/A	72.32	71.09			20																																													
-L- 40+79.64	RT	33	32	75.46	70.99	70.84			32																				1			1			1																			
-L- 40+80.00	LT	32	35	75.28	70.84	70.12				116																			1			1		1																				
-L- 42+72.38	LT	36	35	73.96	70.46	70.12			68																				1			1	1																					
-L- 42+00.00	LT	35	OUT	74.36	70.12	70.00				20																			1			1		1																				
-L- 45+00.00	LT	39	38	N/A	71.23	71.00			24																																													
-L- 45+00.00	LT	38	OUT	75.33	70.90	70.0			72																				1			1			1																			
-L- 49+38.17	LT	41	OUT	76.32	72.82	72.55			24																				1			1	1																					
-L- 51+23.40	LT	43	OUT	76.80	73.30	73.10			24																				1			1	1																					
-L- 51+23.40	RT	44	OUT	76.56	73.06	72.95			24																				1			1	1																					
-L- 58+00.00	LT	46	OUT	76.68	73.18	72.68			24																				1			1		1																				
-L- 59+83.70	LT	51	OUT	76.57	73.07	72.13			28																				1			1	1																					
-L- 61+75.00	LT	55	54	N/A	71.55	71.40				32																																												
-L- 61+75.00	LT	54	56	76.82	71.30	71.07				48																			1	0.52		1			1																			
-L- 58+00.00	RT	47	52	76.68	73.18	73.08			180																				1			1			1																			
-L- 59+83.70	RT	52	56	76.57	72.98	71.07			224																				1			1	1																					
-L- 62+10.00	RT	56	OUT	76.88	70.97	70.82				16																			1	0.91		1			1																		87	REM. DI, 15" & 18" RCP
-L- 68+50.00	RT	58	60	75.13	71.63	70.84			160																				1			1		1																				
-L- 70+12.81	LT	61	60	N/A	71.15	70.84			24																																													
-L- 70+12.81	LT	60	62	74.89	70.74	70.54			32																				1			1	1																					
-L- 68+50.00	LT	59	62	75.13	71.63	70.59			160																				1			1			1																			
-L- 70+12.81	RT	62	OUT	74.89	70.49	69.42			28																				1			1	1																				48	REM. 18" RCP
-L- 74+00.00	LT	67	64	75.93	72.43	71.70			144																				1			1			1																			
-L- 72+50.00	LT	65	64	N/A	72.36	71.70			20																																											0.065		
-L- 72+50.00	LT	64	66	75.20	71.60	71.45			32																				1			1			1																			
-L- 72+50.00	RT	66	OUT	75.20	71.35	71.20			24																				1			1		1																				
-L- 80+28.93	LT	68	69	76.85	73.35	73.15			40																				1			1	1																					
-L- 80+28.93	RT	69	71	76.85	73.05	72.32			148																				1			1	1																			0.065		
SHEET TOTALS									3666	398	124																		48.00	5.31		48	14	15	19																	0.31	611	

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
M.D.I.	MEDIAN DROP INLET
M.D.I.(N.S.)	MEDIAN DROP INLET (NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

COMPUTED BY: D. GOURLEY DATE: 3/1/2005

CHECKED BY: D. BRIDGES DATE: 3/2/2005

PROJECT NO.	SHEET NO.
37740	3B

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL (%)	CLASS III R.C. PIPE 12"	15"	18"	24"	30"	36"	42"	48"	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	TOTAL L.F. FOR PAY LIN. FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	TYPE OF GRATE E	F	G	CONC. COLLARS CL. "B" C.Y. STD. 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN. FT.	REMARKS
-L- 81+80.00	LT	70	71	77.03	73.53	72.32			40							1			1			1				
-L- 81+80.00	RT	71	OUT	77.03	72.22	71.93			32							1			1		1					
-L- 85+00.00	LT	74	73	N/A	71.96	71.67			32																	
-L- 85+00.00	LT	73	75	76.49	71.57	71.27			32							1			1		1					
-L- 85+00.00	RT	75	OUT	76.49	71.17	70.95			36							1			1			1				
-L- 37+87.84	RT	28	OUT	N/A	73.21	73.16				16																
-L- 38+37.67	RT	29	OUT	N/A	73.07	73.02				16																
-L- 36+15.31	RT	25	OUT	N/A	73.96	73.84				20															15	REM. 18" RCP
-L- 47+40.78	LT	40	OUT	N/A	71.98	71.93				20															15	REM. 18" RCP
-L- 57+84.89	LT	45	OUT	N/A	72.73	72.68				20															24	REM. 12" RCP
-L- 58+73.60	LT	49	OUT	N/A	72.48	72.43				16															55	REM. 15" AND 18" RCP
-L- 59+05.19	LT	50	OUT	N/A	72.38	72.33				20															90	REM. 15" AND 18" RCP
-L- 60+79.95	LT	53	OUT	N/A	71.79	71.71				36															20	REM. 18" RCP
-L- 62+19.04	LT	57	OUT	N/A	72.23	71.87				36															21	REM. 18" RCP
-L- 83+68.30	RT	72	OUT	N/A	69.35	67.91				24															36	REM. 15" RCP
-L- 85+90.77	LT	76	OUT	N/A	73.96	73.94				24																
-Y- 11+73.62	LT	77	OUT	N/A	75.03	74.90				20															50	REM. 18" RCP
-Y- 12+18.14	LT	78	OUT	N/A	74.76	74.66				20																
-L- 58+22.80	LT	48	OUT	N/A	72.64	72.59				20															28	REM. 12" RCP
-L- 71+15.74	RT	63	OUT	N/A	70.21	70.00				16															35	REM. 15" AND 12" RCP
-L- 50+15.16	LT	42	OUT	N/A	72.77	72.72				20															21	REM. 18" RCP
-L- 21+18.50	LT	14A		N/A	74.23	74.17			20																19	REM. 18" RCP
-L- 69+80.00	LT	61A		N/A	71.62	71.33			36																20	REM. 18" RCP
-L- 84+38.58	RT	79	OUT	N/A	65.31	65.21							12										0.764			
SHEET TOTALS									228	344			12			4.00			4		2	2	0.764		449	
PROJECT TOTALS									3894	742	124		12			52	5.31		52	14	17	21	0.8	0.311	1060	

Additional column headings (no entries on this sheet): SIZE; THICKNESS OR GAUGE; BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHERWISE) 12" .064, 15" .064, 18" .064, 24" .064, 30" .079, 36" .079, 42" .109, 48" .109; 15" SIDE DRAIN PIPE; 18" SIDE DRAIN PIPE; 24" SIDE DRAIN PIPE; ENDWALLS STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P., C.S.P.; TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B'); FRAME, GRATES, AND HOOD STANDARD 840.03; D.I. STD. 840.14 OR STD. 840.15; D.I. FRAME AND GRATE STD. 840.16; M.D.I. TYPE "A" STD. 840.17 OR 840.26; M.D.I. TYPE "B" STD. 840.18 OR 840.27; M.D.I. TYPE "D" STD. 840.19 OR 840.28; M.D.I. FRAME WITH GRATE STD. 840.20; M.D.I. FRAME WITH TWO GRATES STD. 840.22; M.D.I. (N.S.) FRAME WITH GRATE STD. 840.24; M.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24; J.B. STD. 840.31 OR 840.32; TRAFFIC BEARING J.B. STD. 840.34; MANHOLE STD. 840.51; M.H. STD. 840.51 OR 840.53; M.H. FRAME AND COVER STD. 840.54; CORR. STEEL ELBOWS NO. & SIZE.

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
M.D.I.	MEDIAN DROP INLET
M.D.I.(N.S.)	MEDIAN DROP INLET (NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

W-RAL4882123

COMPUTED BY: D.GOURLEY DATE: 2/1/2005

CHECKED BY: D.BRIDGES DATE: 2/2/2005

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
37740	3C

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

STATION	LOCATION (LT, RT, OR CL)*	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) SIZE							BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHERWISE) SIZE															STRUCTURAL PLATE PIPE SIZE									REINFORCED ENDWALLS		MASONRY DRAINAGE STRUCTURES CUBIC YARDS	C.B. STD. 840.01 OR 840.02	FRAMES, GRATES & HOOD STANDARD 840.03				REINF. CONC. FLARED END SECTIONS NO. & SIZE (STD. 838.21 OR STD. 838.60)	CORR. STEEL FLARED END SECTIONS NO. & Size	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD. 840.72		PIPE REMOVAL LIN. FT.	REMARKS
								54"	60"	66"	72"	78"	84"		54"					60"		66"		72"					60"		66"		72"																						
THICKNESS OR GAUGE															.109	.138	.168	SHOP ELON-GATED .138	.168	.138	.168	.138	.168	.139	.168			12	10	12	10	12	10				WITH R.C. - C.Y.	WITH C.S. - C.Y.			E	F	G										
-L- 43+67.13	CL	37			63.58	63.54		12																													5												2.5793		4	COLLAR & EXT. EXISTING 54" RCP
PROJECT TOTALS								12																													5												2.5793		4	

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
M.D.I.	MEDIAN DROP INLET
M.D.I.(N.S.)	MEDIAN DROP INLET (NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

COMPUTED BY: R. COMBS DATE: 2/1/2005
CHECKED BY: B. SMITH DATE: 2/1/2005

PROJECT NO.	SHEET NO.
37740	3D

W-RAL4682143I

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

Station	Station	Uncl. Excav.	Embank. +[redacted]%	Borrow	Waste
-L- 10+00.00	40+00.00	754	5728	4974	
-L- 40+00.00	70+00.00	2627	8846	6219	
-L- 70+00.00	86+50.00	536	4381	3845	
-Y- 10+82.00	16+53.71	1153	764		389
-Y- 16+89.73	18+00.00	48	79	31	
-Y1- 11+28.00	12+50.61	68	29		39
-Y2- 10+83.00	12+45.55	27	40	13	
SUBTOTALS:		5213	19867	15082	428
WASTE IN LIEU OF BORROW				-428	-428
EST 5% FOR TOPSOIL REPLACEMENT				804	
PROJECT TOTALS:		5213	19867	15458	
GRAND TOTALS:		5250	19900	15500	
SAY:		5300	20000	15500	
UNDERCUT = 3000					
DDE = 688					

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	YD²
-L-	13+97.09	14+69.18	LT	135.83
-L-	13+81.64	14+59.41	RT	37.00
-L-	15+43.34	16+48.40	RT	36.06
-L-	47+32.23	47+55.95	LT	10.75
			TOTAL:	219.65
			SAY:	225

SUMMARY OF EXISTING CONCRETE PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	YD²
-L-	18+77.80	19+04.82	RT	20.33
-L-	19+63.11	19+90.31	RT	22.86
			TOTAL:	43.19
			SAY:	45

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

LINE	BEG. STA.	END STA.	LOC.	LENGTH			WARRANT POINT		'N" DIST FROM E.O.L.	TOTAL SHLDR WIDTH	FLAIR LENGTH		W		ANCHORS							IMP. ATTEN. TYPE 350			REMOVE EXISTING GRDRAIL		REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPR. END	TRAIL. END			APPR. END	TRAIL. END	APPR. END	TRAIL. END	XI MOD	XI	GRAU 350	M-350	XII	CAT-1	VI MOD	EA	G	NG			
-L-	22+67.00	24+15.00	RT	148					2	N/A							1			1					102		
-L-	23+26.00	25+22.00	LT	196					2	N/A							1			1					140		
-L-	42+55.00	45+09.00	RT	254					2	N/A							1			1							
-L-	42+43.00	44+91.00	LT	248					2	N/A							1			1							
-L-	83+40.00	85+72.00	LT	232					2	N/A							1			1							
			SUBTOTAL	1078																							
		ANCHOR DEDUCTIONS		-225																							
			TOTAL	**853**													**5**			**5**					**242**		
			SAY	**875**													**5**			**5**					**242**		

ADDITIONAL GUARDRAIL POSTS **10**

10/26/98

COMPUTED BY: STEVE KAPLAN DATE: DEC 10, 2004
CHECKED BY: ROLAND ROBINSON DATE: DEC 14, 2004

PROJECT REFERENCE NO.	SHEET NO.
37740	3E

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

RIGHT OF WAY AREA DATA SHEET

PARCEL NO.	PROPERTY OWNERS NAME	TOTAL ACREAGE	AREA TAKEN	AREA REMAINING RIGHT	AREA REMAINING LEFT	CONSTR. EASEMENT	PERMANENT DRAINAGE EASEMENT	PARCEL NO.	PROPERTY OWNERS NAME	TOTAL ACREAGE	AREA TAKEN	AREA REMAINING RIGHT	AREA REMAINING LEFT	CONSTR. EASEMENT	PERMANENT DRAINAGE EASEMENT	
1	BILL & ALETHIA ORLANDO	1.67 AC				3,331 SF		34	EDGECOMBE COUNTY	21,370 SF				0 SF		
2	MRS. JAMES A. KEEL	1.83 AC	0.14 AC	1.69 AC		5,419 SF		35	JULIAN T. MAY	14,294 SF				556 SF	626 SF	
3	RICHARD T. FOUNDATION TRAINING SCHOOL	410.77 AC	0.39 AC	410.38 AC		18,839 SF		36	JULIAN T. MAY	14,836 SF				1,032 SF		
4	MRS. JAMES A. KEEL	15,235 SF	785 SF			1,010 SF		37	JULIAN T. MAY	15,113 SF				1,090 SF		
5	MRS. JAMES A. KEEL	12,359 SF				460 SF		38	DOROTHY JOYNER & LORETTA WINSTEAD	35,828 SF				1,685 SF	1,043 SF	
6	MRS. JAMES A. KEEL	12,564 SF				926 SF		39	GEORGE & VESSIE JOYNER	2.03 AC				5,762 SF	2,546 SF	
7	MRS. JAMES A. KEEL	12,767 SF				945 SF		40	GAYNELLE & JAMES ALFORD	2.15 AC				7,153 SF	198 SF	
8	MRS. JAMES A. KEEL	12,975 SF				941 SF		41	JANIS TURNER	27,302 SF				3,370 SF		
9	MRS. JAMES A. KEEL	13,212 SF				862 SF	77 SF	42	TRANSPORT LEASING CORP.	41.38 AC	785 SF		41.36 AC	13,972 SF	1,195 SF	
10	DINA & JAMES LANCASTER	1.09 AC				3155 SF	206 SF	43	DOROTHINE BROWN	2.85 AC				6,105 SF		
11	BOBBY REAMES	7,126 SF	406 SF		6,720 SF	225 SF		44	BARNHILL CONTRACTING CO. INC.	111.04 AC	0.14 AC		110.90 AC	42,430 SF	7,861 SF	
12	BOBBY REAMES	7,123 SF	500 SF		6,623 SF	738 SF		45	EDGECOMBE PROPERTY	23,056 SF				0 SF		
13	BOBBY REAMES	7,120 SF	500 SF		6,620 SF	828 SF		46	KENNETH & JOANN WALKER	40,987 SF				8,988 SF		
14	BOBBY REAMES	7,117 SF	500 SF		6,617 SF	892 SF		47	DONALD RAY PARKER	23,231 SF				3,065 SF		
15	BOBBY REAMES	7,114 SF	500 SF		6,614 SF	956 SF		48	CECIL PARKER & OTHERS	30.05 AC				10,420 SF	906 SF	
16	PEGGY K WEATHERFORD & ETHEL E KEEL	7,111 SF	500 SF		6,611 SF	1,055 SF		49	NELLO L. TEER CO.	24.24 AC				12,190 SF	10,709 SF	
17	PEGGY K WEATHERFORD & ETHEL E KEEL	7,108 SF	504 SF		6,604 SF	1,218 SF		50	NELLO L. TEER CO.	52.91 AC	0.14 AC		52.77 AC	34,353 SF	600 SF	
18	PEGGY K WEATHERFORD & ETHEL E KEEL	3,957 SF	540 SF		3,417 SF	1,050 SF		51	LORETTA J. WINSTEAD	121.11 AC				18,177 SF	611 SF	
19	PEGGY K WEATHERFORD & MRS JAMES A. KEEL	7,512 SF	2,347 SF		5,165 SF	2,419 SF		52	NELLO L. TEER CO.	21.32 AC				8,290 SF		
19A	PEGGY K WEATHERFORD & MRS JAMES A. KEEL	3,664 SF	3,664 SF		0			53	JIMMY & NORMA MERCER	1.75 AC				5,381 SF	456 SF	
20	PEGGY K WEATHERFORD & MRS JAMES A. KEEL	7,508 SF	398 SF		7,110 SF	468 SF		54	DONALD JOYNER	35,314 SF				2,743 SF	418 SF	
21	PEGGY K WEATHERFORD & MRS JAMES A. KEEL	7,507 SF				863 SF		55	WADELL CHERRY, JR. & OTHERS	32,745 SF				2,655 SF	266 SF	
22	JOHNNY & CAROLYN JOHNSON	7,505 SF				931 SF		56	LESLIE BURROUGHS	32,552 SF				2,343 SF	775 SF	
23	JOHNNY & CAROLYN JOHNSON	7,503 SF	131 SF		7,372 SF	868 SF		57	NELLO L. TEER CO.	10.21 AC				4,103 SF	420 SF	
24	JOHNNY & CAROLYN JOHNSON	7,501 SF	1,372 SF		6,129 SF	482 SF		58	HANSON AGGREGATES CAROLINA INC.	28.62 AC				18,719 SF	979 SF	
25	MATTIE PARKER BRANHAM	7,503 SF	1,694 SF		5,809 SF	579 SF		59	PHILLIPS HOLDING CO.	113.57 AC				17,508 SF	697 SF	
26	KENNETH & PATRICIA WHITLEY	7,512 SF	178 SF		7,334 SF	1,312 SF		60	ROBERT & JOYCE WOOTEN	28.77 AC				43,423 SF	2,090 SF	
27	KENNETH & PATRICIA WHITLEY	7,527 SF				735 SF	515 SF	61	PARSONS WOODWORKING INC.	23.27 AC				16,244 SF	589 SF	
28	KENNETH & PATRICIA WHITLEY	7,548 SF				1,174 SF		62	PARSONS WOODWORKING INC.	4.58 AC	3,102 SF		4.51 AC	6,803 SF		
29	MINNIE STALLINGS HEIRS	7,575 SF				1,244 SF	413 SF	63	DOROTHY WILKINSON	44.41 AC				3,609 SF	3,631 SF	
30	LUTHER & LOUISE BALKCUM	9,375 SF				1,789 SF		64	DONALD & JUDY BRAKE	3.62 AC	3,688 SF		3.54 AC	4,443 SF	274 SF	
31	unknown	unknown				1,304 SF		65	CITY OF ROCKY MOUNT	198.33 AC				4,506 SF	1,723 SF	
32	WALTER & MARY ANNE ONEAL	7,705 SF				1,185 SF										
33	WALTER & MARY ANNE ONEAL	19,693 SF	444 SF		19,249 SF	1,345 SF										

1/28/05 Rev. Parcel 34, 35, 36, 41, 45, & 46

22-FEB-2007 16:10
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admin

PROJECT REFERENCE NO.	SHEET NO.
37740	4
R/W SHEET NO.	4

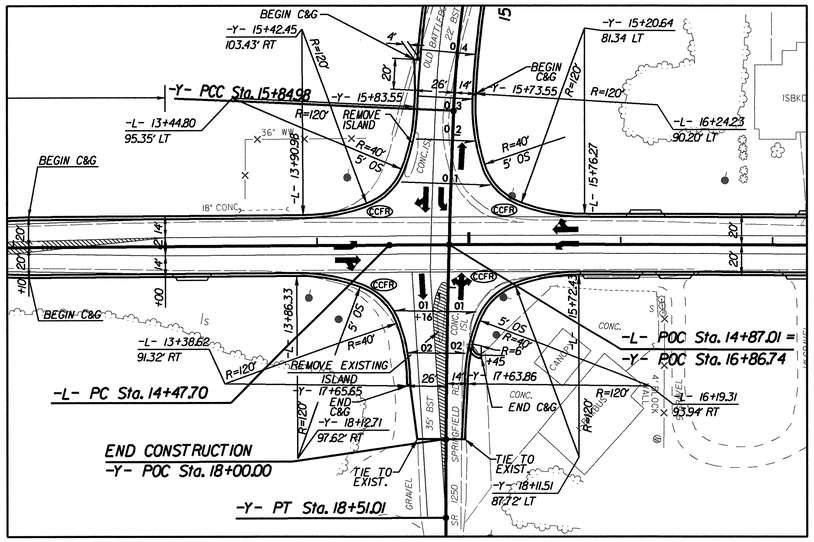
ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 29243 ENGINEER CORY C. HENNESSEY — 3-1-07

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 23924 ENGINEER DANIEL H. BRINKERHOFF — 3-1-07

PB PARSONS BRINCKERHOFF

NAD 83

INTERSECTION DETAIL



-L-

PI Sta 18+23.07
Δ = 1° 52' 12.1" (RT)
D = 0° 14' 56.8"
L = 750.68'
T = 375.37'
R = 23,000.00'
S.E. = NC

-Y-

PI Sta 14+98.45
Δ = 13° 38' 49.1" (LT)
D = 7° 50' 55.5"
L = 173.87'
T = 87.35'
R = 730.00'
S.E. = 0.04
RUNOFF = 112'

-Y-

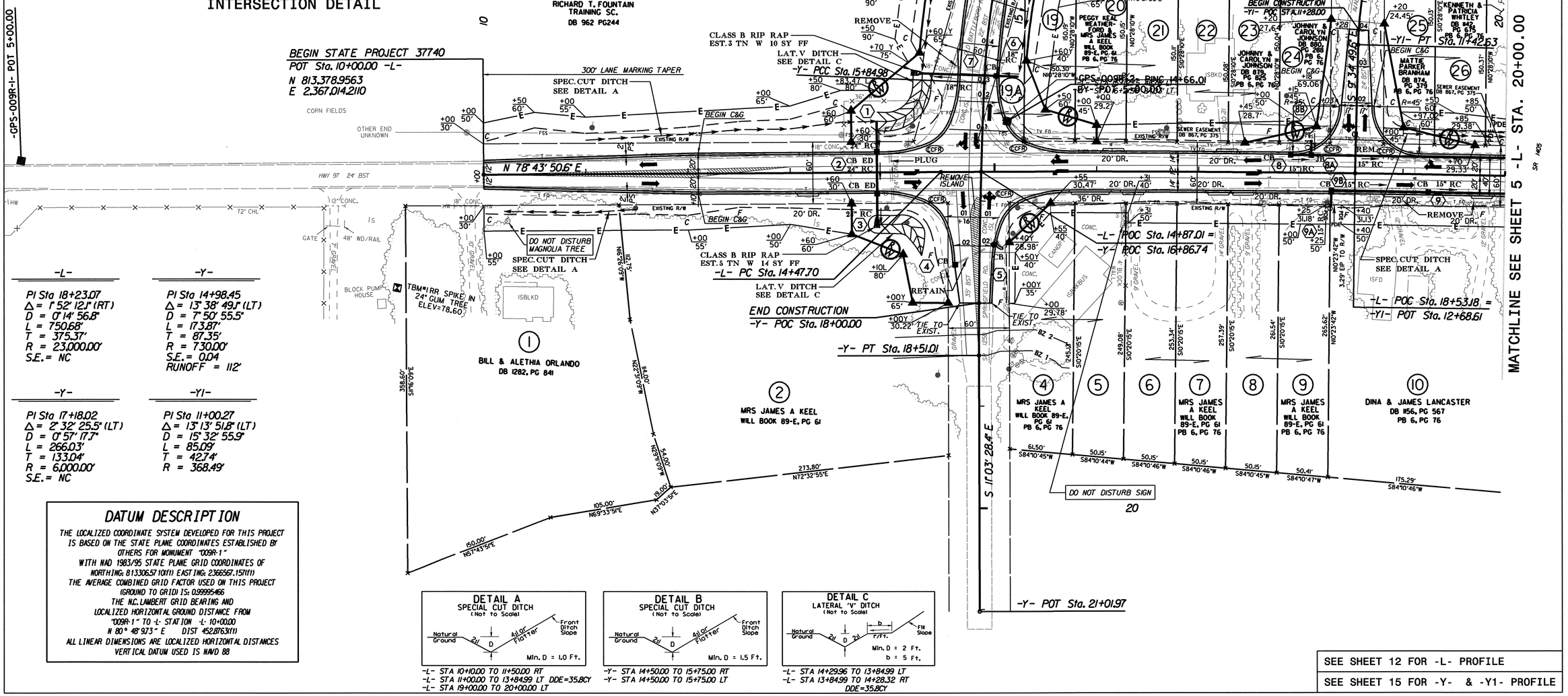
PI Sta 17+18.02
Δ = 2° 32' 25.5" (LT)
D = 0° 57' 17.7"
L = 266.03'
T = 133.04'
R = 6,000.00'
S.E. = NC

-Y1-

PI Sta 11+00.27
Δ = 13° 13' 51.8" (LT)
D = 15° 32' 55.9"
L = 85.09'
T = 42.74'
R = 368.49'

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY OTHERS FOR MONUMENT "009R-1" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 813306.571(ft) EASTING: 2366567.157(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99995466 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "009R-1" TO -L- STATION -L- 10+00.00 N 80° 48' 97.3" E DIST 452.876(ft) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



DETAIL A
SPECIAL CUT DITCH
(Not to Scale)

-L- STA 10+10.00 TO 11+50.00 RT
-L- STA 11+00.00 TO 13+84.99 LT DDE=35.8CY
-L- STA 19+00.00 TO 20+00.00 LT

DETAIL B
SPECIAL CUT DITCH
(Not to Scale)

-Y- STA 14+50.00 TO 15+75.00 RT
-Y- STA 14+50.00 TO 15+75.00 LT

DETAIL C
LATERAL 'V' DITCH
(Not to Scale)

-L- STA 14+29.96 TO 13+84.99 LT
-L- STA 13+84.99 TO 14+28.32 RT
DDE=35.8CY

SEE SHEET 12 FOR -L- PROFILE
SEE SHEET 15 FOR -Y- & -Y1- PROFILE

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2/28/2007

PROJECT REFERENCE NO.	SHEET NO.
37740	5
R/W SHEET NO.	5

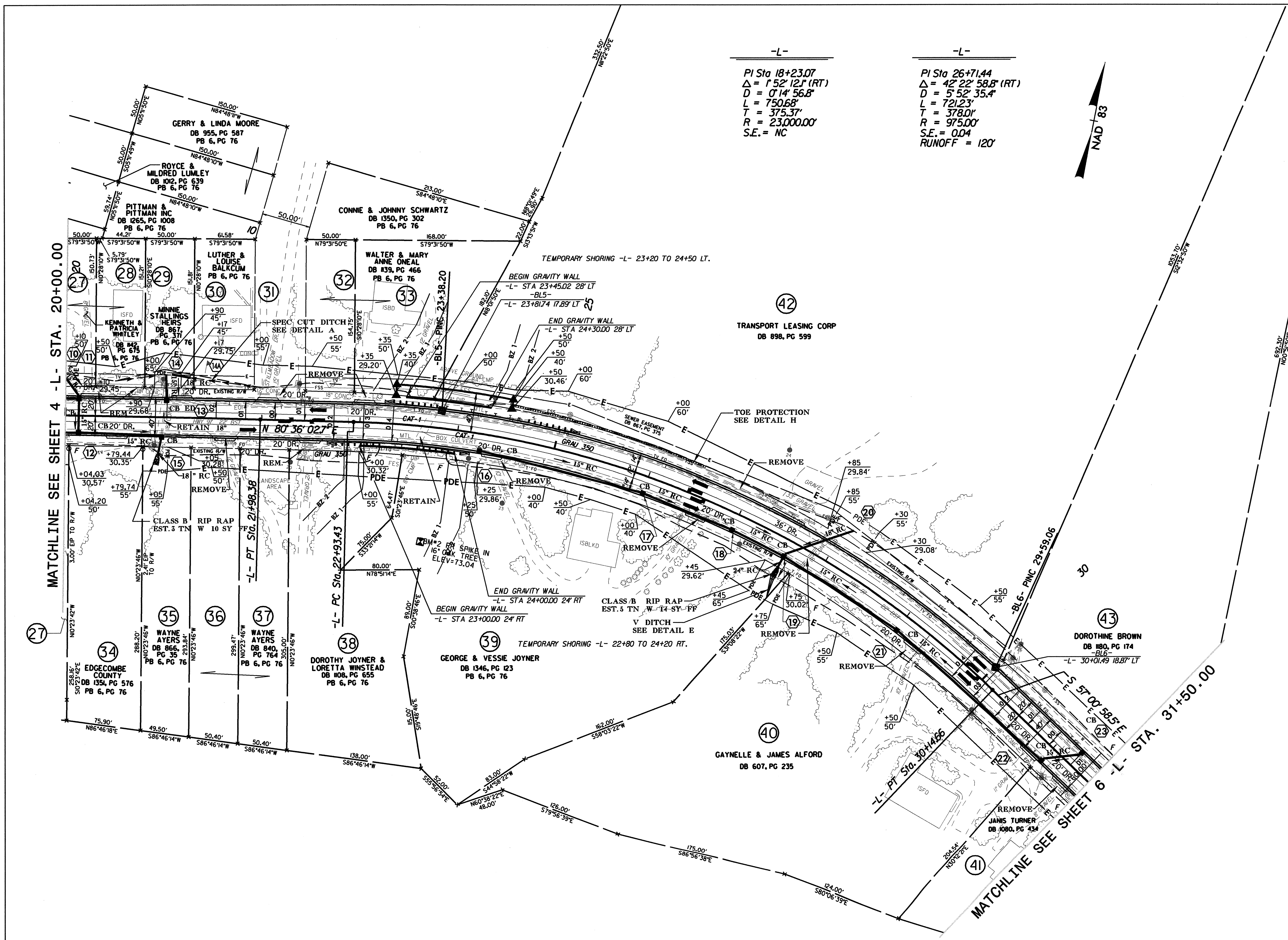
ROADWAY DESIGN ENGINEER — SEAL 29243 — 3-1-07

HYDRAULICS ENGINEER — SEAL 23924 — 3-1-07

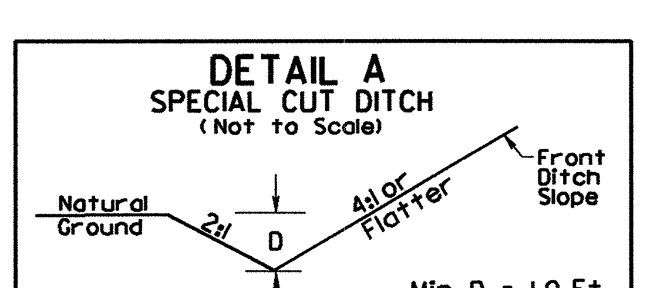
PARSONS BRINCKERHOFF

-L-
PI Sta 18+23.07
Δ = 1°52' 12.1" (RT)
D = 0°14' 56.8"
L = 750.68'
T = 375.37'
R = 23,000.00'
S.E. = NC

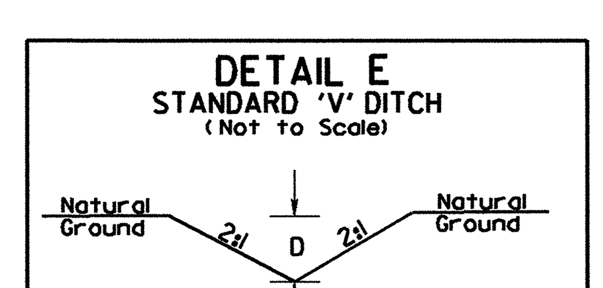
-L-
PI Sta 26+71.44
Δ = 42°22' 58.8" (RT)
D = 5°52' 35.4"
L = 721.23'
T = 378.01'
R = 975.00'
S.E. = 0.04
RUNOFF = 120'



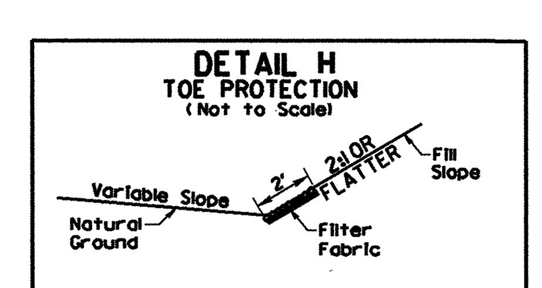
NAD 83
MATCHLINE SEE SHEET 4 -L- STA. 20+00.00
MATCHLINE SEE SHEET 6 -L- STA. 31+50.00
GERRY & LINDA MOORE
DB 955, PG 587
PB 6, PG 76
ROYCE & MILDRED LUMLEY
DB 1012, PG 639
PB 6, PG 76
PITTMAN & PITTMAN INC
DB 1265, PG 1008
PB 6, PG 76
CONNIE & JOHNNY SCHWARTZ
DB 1350, PG 302
PB 6, PG 76
WALTER & MARY ANNE ONEAL
DB 839, PG 466
PB 6, PG 76
LUTHER & LOUISE BALKCUM
PB 6, PG 76
MINNIE STALLINGS HEIRS
DB 867, PG 371
PB 6, PG 76
KENNETH & PATRICIA WHITLEY
TRANSPORT LEASING CORP
DB 898, PG 599
TEMPORARY SHORING -L- 23+20 TO 24+50 LT.
BEGIN GRAVITY WALL
-L- STA 23+45.02 28' LT
END GRAVITY WALL
-L- STA 24+30.00 28' LT
SPEC CUT DITCH SEE DETAIL A
TOE PROTECTION SEE DETAIL H
N 80°36' 02.7" E
-L- PC Sta. 22+93.43
-L- PT Sta. 21+98.38
-L- PT Sta. 30+14.66
BL5- PINC 23+38.20
-BL6- PINC 29+59.06
S 57°00' 58.5" E
CLASS B RIP RAP EST. 3 TN W 10 SY FF
CLASS B RIP RAP EST. 5 TN W 14 SY FF
V DITCH SEE DETAIL E
BM #2 SPIKE IN 16" OAK TREE ELEV=73.04
END GRAVITY WALL
-L- STA 24+00.00 24' RT
BEGIN GRAVITY WALL
-L- STA 23+00.00 24' RT
TEMPORARY SHORING -L- 22+80 TO 24+20 RT.
EDGECOMBE COUNTY
DB 1351, PG 576
PB 6, PG 76
WAYNE AYERS
DB 866, PG 35
PB 6, PG 76
WAYNE AYERS
DB 840, PG 764
PB 6, PG 76
DOROTHY JOYNER & LORETTA WINSTEAD
DB 808, PG 655
PB 6, PG 76
GEORGE & VESSIE JOYNER
DB 1346, PG 123
PB 6, PG 76
GAYNELLE & JAMES ALFORD
DB 607, PG 235
DOROTHINE BROWN
DB 1180, PG 174
-BL6-
-L- 30+01.49 18.87' LT
JANIS TURNER
DB 1080, PG 434



-L- STA 20+50.00 TO 22+00.00 LT



-L- STA 27+60.00 RT



-L- STA 24+50.00 TO 26+50.00 LT

SEE SHEET 12 FOR -L- PROFILE

1/2805 Rev. Parcel 34, 35, 36

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2/28/2007

PROJECT REFERENCE NO.	SHEET NO.
37740	6
R/W SHEET NO.	6

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 29243 ENGINEER GREGORY C. HENRY

3-1-07

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 23924 ENGINEER DANIEL H. BRIDGES

3-1-07

PB PARSONS BRINCKERHOFF

-L-

PI Sta 45+97.41
Δ = 35° 28' 16.4" (LT)
D = 4° 29' 37.6"
L = 789.34'
T = 407.78'
R = 1,275.00'
S.E. = 0.04
RUNOFF = 120'

NAD 83

35

40

(44) BARNHILL CONTRACTING CO INC
DB 889, PG 272
PB 18, PG 41

MATCHLINESEE SHEET 5 -L- STA. 31+50.00

MATCHLINESEE SHEET 7 -L- STA. 43+00.00

-BL7- PINC 36+85.79

-BL7- -L- 37+27.90 29.01' LT

-L- PC Sta. 41+89.64

(43) DOROTHINE BROWN
DB 180, PG 174

(41) JANIS TURNER
DB 1080, PG 434

(45) EDGECOMBE PROPERTY
DB 1301, PG 481

(46) KENNETH & JOANN WALKER
DB 1200, PG 1001

(47) DONALD RAY PARKER
DB 914, PG 334

(48) CECIL PARKER & OTHERS
DB 1022, PG 1

GRADE TO DRAIN SEE CROSS SECTIONS

PRE-FORMED SCOUR HOLE SEE DETAIL

REMOVE

SPEC CUT DITCH SEE DETAIL A

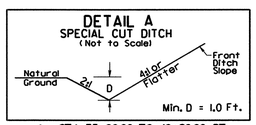
PLUG

REM

S 57° 00' 58.5" E

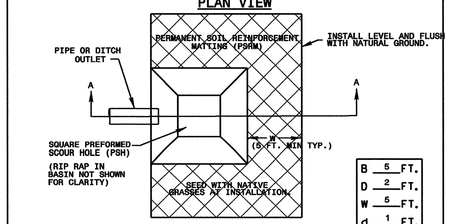
179.50' S83°53'38"E
106.40' S57°26'39"E
87.00' S64°31'38"E
174.50' N53°24'15"W
146.40' N29°49'15"W
123.71' S17°33'01"E
456.54' S17°54'36"E
123.70' N53°12'22"E
112.0' N37°09'22"E
191.40' S32°53'45"W
273.38' S32°54'04"W

DETAIL A
SPECIAL CUT DITCH
(Not to Scale)

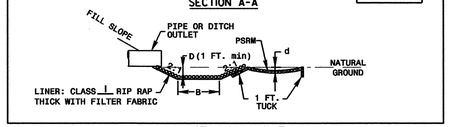


-L- STA 35+00.00 TO 40+80.00 RT

PREFORMED SCOUR HOLE
(NOT TO SCALE)
PLAN VIEW



SECTION A-A



-L- STA 42+00.00 LT

SEE SHEET 12 & 13 FOR -L- PROFILE

1/28/05 Rev. Parcel 41, 45, & 46
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2/28/2007

PROJECT REFERENCE NO.	SHEET NO.
37740	7
RW SHEET NO.	7

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 29243 GREGORY C. REAM
3-1-07

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23924 DANIEL H. BRIDGES ENG INTERN
3-1-07

PB PARSONS BRINCKERHOFF

-L-
PI Sta 45+97.41
Δ = 35° 28' 16.4" (LT)
D = 4° 29' 37.6"
L = 789.34'
T = 407.78'
R = 1,275.00'
S.E. = 0.04
RUNOFF = 120'

NAD 83

MATCHLINE SEE SHEET 6 -L- STA. 43+00.00

(44) BARNHILL CONTRACTING CO INC
DB 889, PG 272
PB 18, PG 41

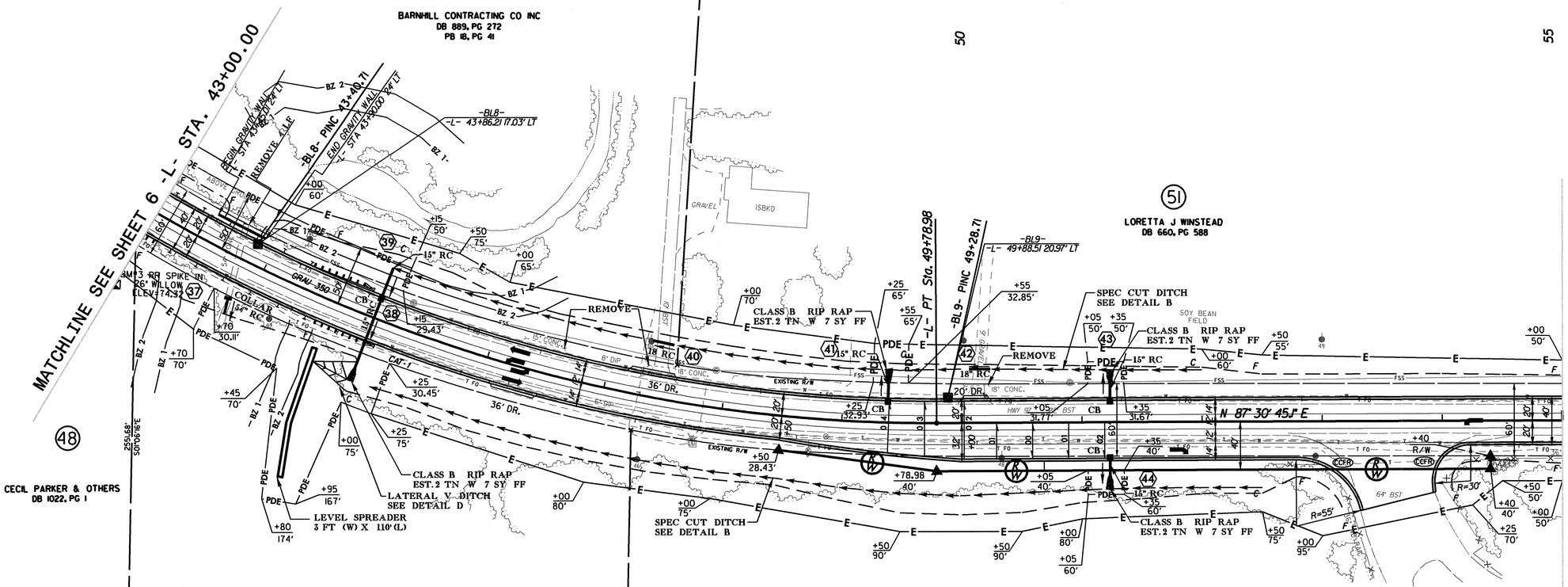
(48) CECIL PARKER & OTHERS
DB 1022, PG 1

(49) NELLO L TEER CO
DB 827, PG 526

(50) NELLO L TEER CO
DB 827, PG 537

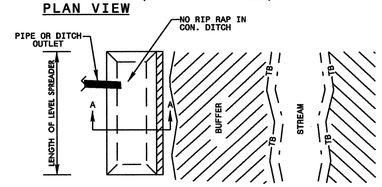
(51) LORETTA J WINSTEAD
DB 660, PG 588

MATCHLINE SEE SHEET 8 -L- STA. 55+00.00

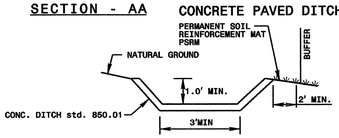


LEVEL SPREADER DETAIL
(NOT TO SCALE)

PLAN VIEW

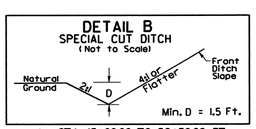


SECTION - AA CONCRETE PAVED DITCH LEVEL SPREADER



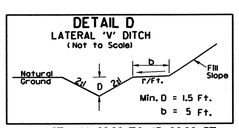
-L- STA 44+66.00 RT

DETAIL B
SPECIAL CUT DITCH
(Not to Scale)



-L- STA 45+00.00 TO 52+50.00 RT
-L- STA 45+00.00 TO 52+00.00 LT

DETAIL D
LATERAL "V" DITCH
(Not to Scale)



-L- STA 44+66.00 TO 45+00.00 RT
DDE=73.56

SEE SHEET 13 FOR -L- PROFILE

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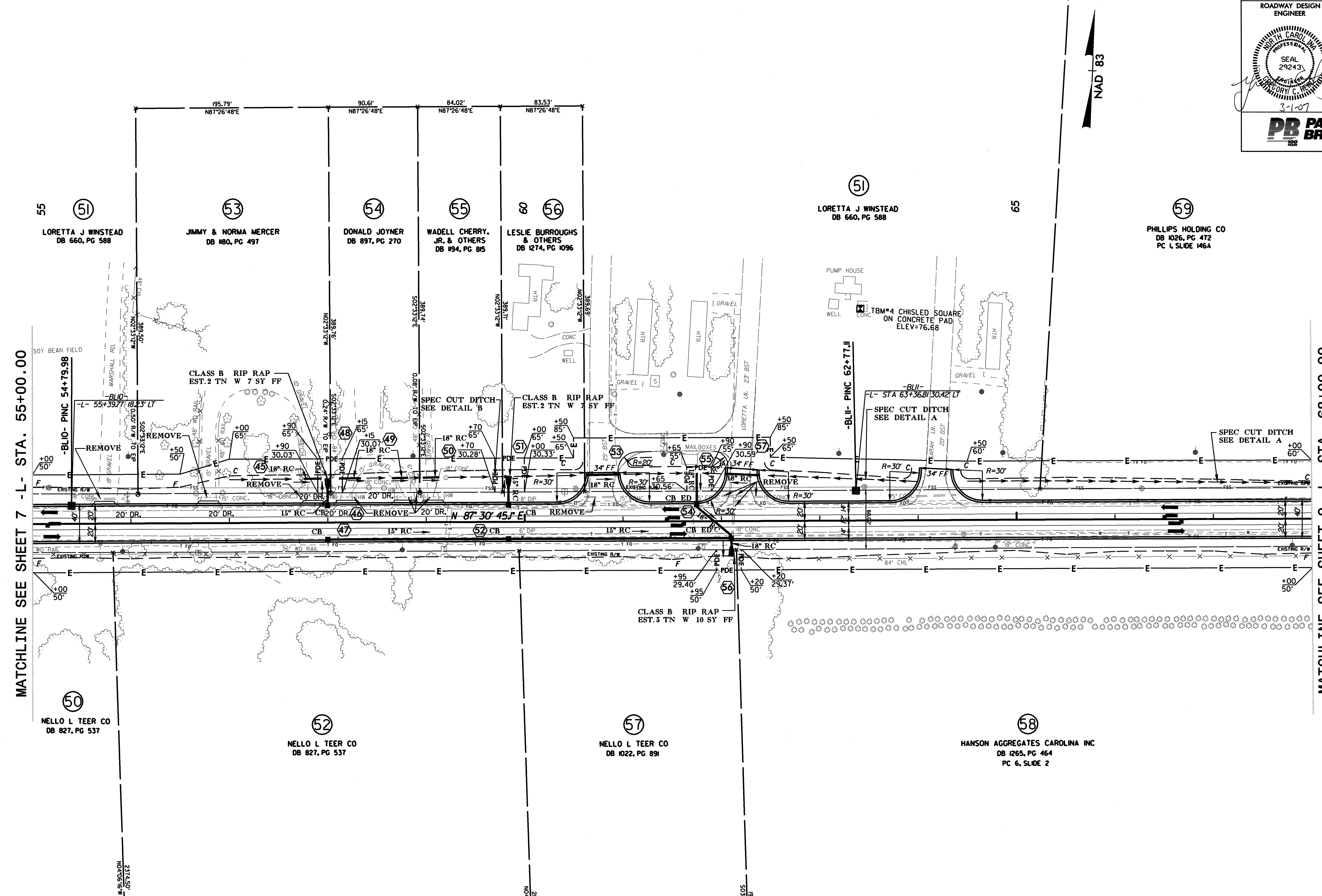
2/28/2007

PROJECT REFERENCE NO.	SHEET NO.
37740	8
R/W SHEET NO.	8

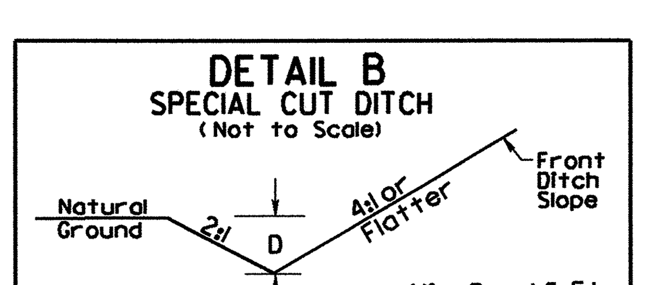
ROADWAY DESIGN ENGINEER — SEAL 29243, GREGORY C. HINTZ, 3-1-07

HYDRAULICS ENGINEER — SEAL 23924, DANIEL H. BRIDGES, 3-1-07

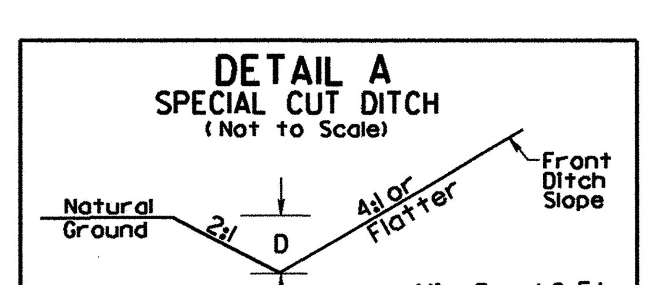
PB PARSONS BRINCKERHOFF



NAD 83
MATCHLINE SEE SHEET 7 -L- STA. 55+00.00
MATCHLINE SEE SHEET 9 -L- STA. 68+00.00
51 LORETTA J WINSTEAD DB 660, PG 588
53 JIMMY & NORMA MERCER DB 1180, PG 497
54 DONALD JOYNER DB 897, PG 270
55 WADELL CHERRY, JR. & OTHERS DB 1194, PG 815
56 LESLIE BURROUGHS & OTHERS DB 1274, PG 1096
51 LORETTA J WINSTEAD DB 660, PG 588
59 PHILLIPS HOLDING CO DB 1026, PG 472 PC 1, SLIDE 146A
50 NELLO L TEER CO DB 827, PG 537
52 NELLO L TEER CO DB 827, PG 537
57 NELLO L TEER CO DB 1022, PG 891
58 HANSON AGGREGATES CAROLINA INC DB 1265, PG 464 PC 6, SLIDE 2
195.79' N87°26'48"E
90.61' N87°26'48"E
84.02' N87°26'48"E
83.53' N87°26'48"E
SOY BEAN FIELD
PUMP HOUSE
TBM#4 CHISLED SQUARE ON CONCRETE PAD ELEV=76.68
-BLIO- PINC 54+79.98
-BLIO- -L- 55+39.77 18.23' LT
-BLII- PINC 62+77.11
-BLII- -L- STA 63+36.81 30.42' LT
CLASS B RIP RAP EST. 2 TN W 7 SY FF
CLASS B RIP RAP EST. 2 TN W 7 SY FF
CLASS B RIP RAP EST. 3 TN W 10 SY FF
SPEC CUT DITCH SEE DETAIL B
SPEC CUT DITCH SEE DETAIL A
SPEC CUT DITCH SEE DETAIL A
N 87° 30' 45.1" E
MAILBOXES
LORETTA LN. 23' BST



-L- STA 57+00.00 TO 61+75.00 LT



-L- STA 61+75.00 TO 64+00.00 LT
-L- STA 64+50.00 TO 68+00.00 LT

SEE SHEET 13 & 14 FOR -L- PROFILE

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2/28/2007

PROJECT REFERENCE NO.	SHEET NO.
37740	9
R/W SHEET NO.	9

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 29243 ENGINEER GREGORY C. HERMAN

3-1-07

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 29824 ENGINEER DANIEL H. BRIDGES

3-1-07

PB PARSONS BRINCKERHOFF

-L-

PI Sta 76+90.47
Δ = 3°09' 29.2" (LT)
D = 1°16' 23.7"
L = 248.04'
T = 124.05'
R = 4,500.00'
S.E. = 0.02
RUNOFF = 60'

NAD 83

70 75 80

(59) PHILLIPS HOLDING CO
DB 1026, PG 472
PC 1, SLIDE 146A

(61) PARSONS WOODWORKING INC
DB 1026, PG 475

(62) PARSONS WOODWORKING INC
DB 1090, PG 268
PC 1, SLIDE 179B

MATCHLINE SEE SHEET 8 -L- STA. 68+00.00

MATCHLINE SEE SHEET 10 -L- STA. 80+00.00

-BL12- PINC 71+87.26

-L- 72+46.86 17.38' LT

-L- PC Sta. 75+66.42

-L- PT Sta. 78+14.46

SPEC CUT DITCH SEE DETAIL A

REMOVE 17 LF

PLUG

REMOVE

15" RC

18" RC

20' DR.

36' DR.

CLASS B RIP RAP EST. 2 TN W 7 SY FF

LAT V DITCH SEE DETAIL D

TBM*5 RR SPIKE IN 30" OAK ELEV=76.07

GRADE TO DRAIN SEE CROSS SECTIONS

DO NOT DISTURB EXISTING TREE LINE OR EARTH BERM. USE MODIFIED TYPICAL SECTION AS SHOWN ON CROSS SECTIONS

ISFD ABANDONED

N 87° 30' 45.1" E

N 84° 21' 15.9" E

(58) HANSON AGGREGATES CAROLINA INC
DB 1265, PG 464
PC 6, SLIDE 2

(60) ROBERT & JOYCE WOOTEN
DB 969, PG 534
PC 6, SLIDE 2

DETAIL A
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, 2H, D, 4H or Flatter, Front Ditch Slope

Min. D = 1.0 Ft.

-L- STA 68+00.00 TO 71+50.00 LT
-L- STA 72+50.00 TO 76+75.00 LT
-L- STA 72+50.00 TO 76+00.00 RT

DETAIL D
LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 2H, D, 2H, b, F/Ft., Fill Slope

Min. D = 1.5 Ft.
b = 5 Ft.

-L- STA 70+35.00 TO 72+50.00 RT DDE=134.23 CY

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2/28/2007

SEE SHEET 14 FOR -L- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
37740	10
R/W SHEET NO.	10

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 29243 ENGINEER GREGORY C. HENDRICKS

3-1-07

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 23924 ENGINEER DANIEL H. BRIDGES

3-1-07

PB PARSONS BRINCKERHOFF

MATCHLINE SEE SHEET 9 -L- STA. 80+00.00

MATCHLINE SEE SHEET 11 -L- STA. 89+39.37

N84°21'32"E 305.85'

5' DRAINAGE EASEMENT PC 2, SLIDE 36A

-L-
PI Sta 84+26.94
Δ = 0° 40' 20.1" (LT)
D = 0° 34' 22.6"
L = 117.33'
T = 58.67'
R = 10,000.00'
S.E. = NC

-Y2-
PI Sta 84+26.94
Δ = 0° 36' 45.1" (LT)
D = 0° 57' 17.7"
L = 117.33'
T = 64.17'
R = 6,000.00'
S.E. = NC

OTHER END UNKNOWN

54" CONC

N02°18'32"E 510.78'

NAD 83

PARSONS WOODWORKING INC
DB 1090, PG 268
PC 1, SLIDE 179B

62

64
DONALD & JUDY BRAKE
DB 1031, PG 857
PC 2, SLIDE 36A

65
CITY OF ROCKY MOUNT
DB 875, PG 415

66
DOROTHY WILKINSON
DB 936, PG 944

10' UTILITY & DRAINAGE EASEMENT PC 1, SLIDE 179B

10' UTILITY & DRAINAGE EASEMENT PC 2, SLIDE 36A

-Y2- POT Sta. 10+00.00
BEGIN CONSTRUCTION
-Y2- Sta. 10+83.00

S 3° 32' 28.5" W 50.00'

-Y2- PC Sta. 10+55.50

TEMPORARY SHORING 84+20 TO 84+90 LT.

DO NOT DISTURB TREES

-Y2- PT Sta. 11+57.65

S 2° 55' 43.4" W

N87°04'12"W 2.86' EIP TO R/W

-BL1-
-L- 80+54.81 LT 83° LT

-L- PC Sta. 83+68.28

BEGIN GRAVITY WALL -L- STA 84+07.6 24' LT

END GRAVITY WALL -L- STA 84+21.0 24' LT

-L- PT Sta. 84+85.60

SPEC CUT DITCH SEE DETAIL A

END STATE PROJECT 37740
POT STA. 86+50.00 -L-

-GPS-009R-3- PINC 88+23.91
-L- 88+84.95 18.02' LT

-L- POT Sta. 89+39.37
N 812,875.1447
E 2,374,661.8133

SOY BEAN FIELD

HWY 97 22' BST

EXISTING R/W

20' DR.

REMOVE

N 84° 21' 15.9" E

N 83° 40' 55.8" E

GRAU 350

REMOVE 20' DR.

END C&G 85+00

LBM "6 RR SPIKE IN +50 PINE 40 ELEV=76.03

LAT V DITCH SEE DETAIL D

CLASS B RIP RAP EST. 2 TN W 7 SY FF

-L- POT Sta. 80+95.69 =
-Y2- POT Sta. 12+63.75

LAT V DITCH SEE DETAIL G

CLASS B RIP RAP EST. 2 TN W 7 SY FF

LAT V DITCH SEE DETAIL G

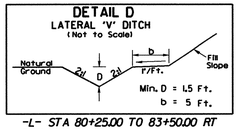
COLLAR & EXTEND 12" (36" RCP)

S78°46' S02°20'00"W 918.46'

60
ROBERT & JOYCE WOOTEN
DB 969, PG 534
PC 6, SLIDE 2

63
DOROTHY WILKINSON
DB 936, PG 944

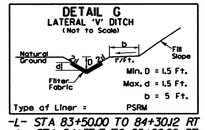
DETAIL D
LATERAL 'V' DITCH
(Not to Scale)



Min. D = 1.5 Ft.
b = 5 Ft.

-L- STA 80+25.00 TO 83+50.00 RT
DDE=236.57 CY

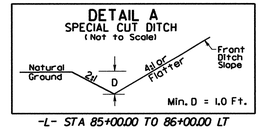
DETAIL G
LATERAL 'V' DITCH
(Not to Scale)



Min. D = 1.5 Ft.
Max. d = 1.5 Ft.
b = 5 Ft.
Type of Liner = PSRM

-L- STA 83+50.00 TO 84+30.12 RT
-L- STA 84+37.17 TO 85+00.00 RT
DDE=208.60 CY

DETAIL A
SPECIAL CUT DITCH
(Not to Scale)



-L- STA 85+00.00 TO 86+00.00 LT

SEE SHEET 14 FOR -L- PROFILE

SEE SHEET 15 FOR -Y2- PROFILE

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2/28/2007

PROJECT REFERENCE NO.	SHEET NO.
37740	11
R/W SHEET NO.	11

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 29243 ENGINEER GREGORY C. HEMPEL

3-1-07

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 23924 ENGINEER DANIEL H. BRIDGES

3-1-07

PB PARSONS BRINCKERHOFF

-Y-

PI Sta 14+98.45
Δ = 13° 38' 49.1" (LT)
D = 7° 50' 55.5"
L = 173.87'
T = 87.35'
R = 730.00'
S.E. = 0.04
RUNOFF = 11.2'

-Y-

PI Sta 17+18.02
Δ = 2° 32' 25.5" (LT)
D = 0° 57' 17.7"
L = 266.03'
T = 133.04'
R = 6,000.00'
S.E. = NC

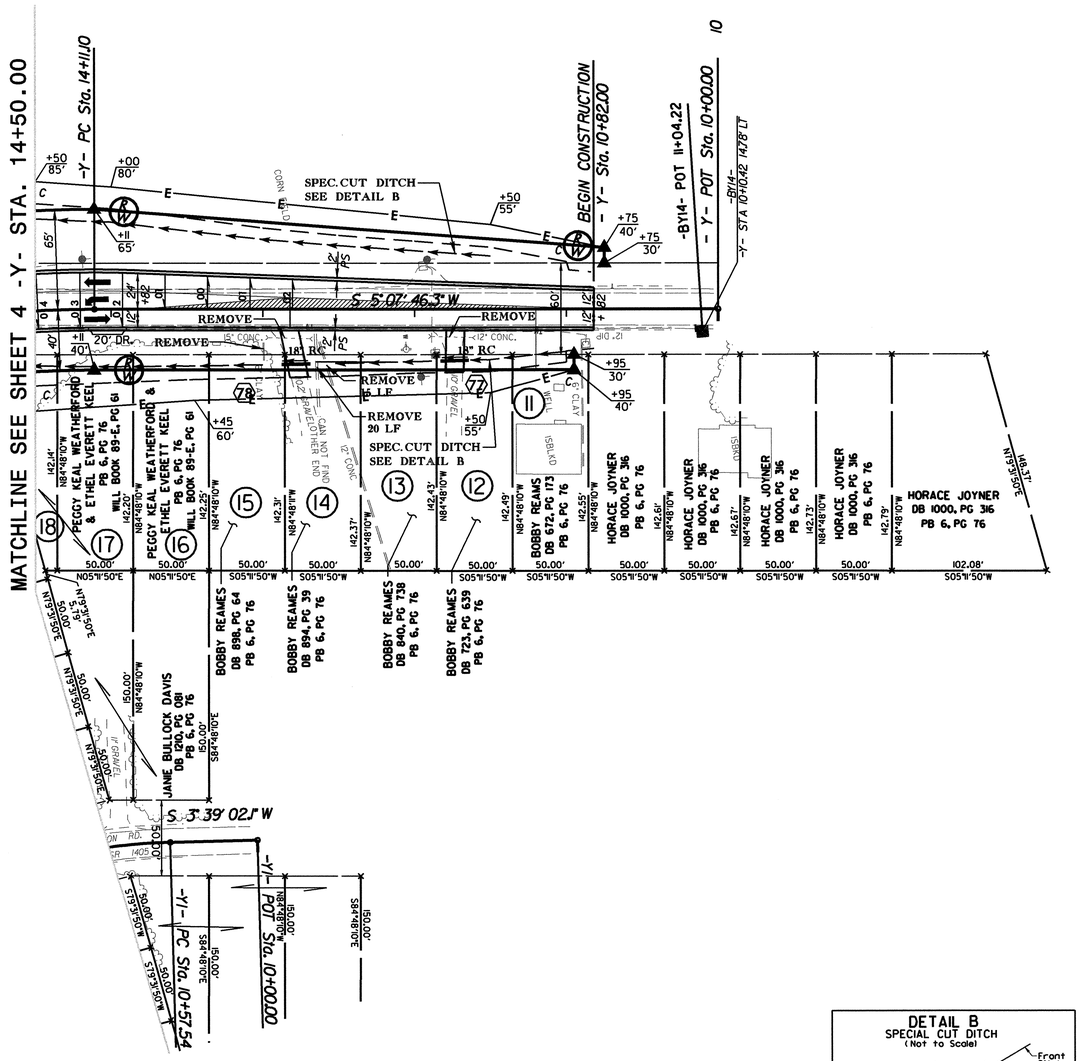
-Y1-

PI Sta 11+00.27
Δ = 13° 13' 51.8" (LT)
D = 15° 32' 55.9"
L = 85.09'
T = 42.74'
R = 368.49'

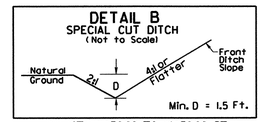
NAD 83

③

RICHARD T. FOUNTAIN TRAINING SC.
DB 962 PG244



DETAIL B
SPECIAL CUT DITCH
(Not to Scale)



-Y- STA 11+50.00 TO 14+50.00 RT
-Y- STA 11+00.00 TO 14+50.00 LT

SEE SHEET 15 FOR -Y- & -Y1- PROFILE

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prf
2/28/2007


PROJECT REFERENCE NO. 37740
SHEET NO. 12
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 29243 ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER DANIEL H. BRIDGES
4-15-05
4-7-05
PB PARSONS BRINCKERHOFF
-L- (NC 97)
BM #1 ELEV = 78.60'
N=813,254 E=2,366,952
-BL- STA 8+63 139' RIGHT
RR SPIKE IN
24" GUM TREE
-L- POT Sta.10+00.00
BEGIN CONSTRUCTION
ELEV.78.47
PI = 10+75.00
EL = 78.22'
VC = 100'
K = 179
PI = 13+00.00
EL = 78.72'
VC = 200'
K = 261
PI = 15+00.00
EL = 77.63'
VC = 100'
K = 148
PI = 17+00.00
EL = 77.89'
VC = 230'
K = 295
PI = 19+75.00
EL = 76.10'
VC = 100'
K = 136
PI = 22+00.00
EL = 76.29'
VC = 100'
K = 326
(-)0.3373% (+)0.2222%
(+)0.2222% (-)0.5450%
(-)0.5450% (+)0.1300%
(+)0.1300% (-)0.6509%
(-)0.6509% (+)0.0844%
(+)0.0844% (-)0.2220%
0.30% 4.06% 0.30% 3.27% 0.30% (DITCH CL) 0.30% (DITCH CL) 0.30% 3.81% 3.91%
75.85
BEGIN DITCH RT STA 10+10.00 EL 73.394
BEGIN DITCH LT STA 11+00.00 EL 75.632
PI DITCH RT STA 11+00.00 EL 73.664
END DITCH RT STA 11+50.00 EL 75.696
PI DITCH LT STA 13+00.00 EL 75.032
PI DITCH LT STA 13+84.99 EL 72.250
BEGIN DITCH RT STA 13+89.99 EL 71.565
END DITCH RT STA 14+28.32 EL 71.372
END DITCH LT STA 14+29.96 EL 72.500
PI DITCH LT STA 19+00.00 EL 73.950
PI DITCH LT STA 20+00.00 EL 73.650
BEGIN DITCH LT STA 20+50.00 EL 74.407
PI DITCH LT STA 21+00.00 EL 72.500
END DITCH LT STA 22+00.00 EL 75.690
100 90 80 70 60 50
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
-L- (NC 97)
BM #2 ELEV = 73.04'
N=813,510 E=2,368,375
-BL- STA 23+74 130' RIGHT
RR SPIKE IN
16" OAK TREE
PI = 27+00.00
EL = 75.18'
VC = 200'
K = 722
PI = 29+00.00
EL = 75.29'
VC = 200'
K = 191
PI = 31+50.00
EL = 78.04'
VC = 120'
K = 183
PI = 33+30.00
EL = 78.84'
VC = 240'
K = 207
PI = 36+60.00
EL = 76.48'
VC = 100'
K = 214
(-)0.2220% (+)0.0550%
(+)0.0550% (+)1.1000%
(+)1.1000% (+)0.4444%
(+)0.4444% (-)0.7152%
(-)0.7152% (-)0.2472%
0.70% 0.30%
75.85
76.13
73.16
BEGIN DITCH RT STA 34+90.00 EL 74.730
PI DITCH RT STA 36+30.00 EL 73.610
100 90 80 70 60 50
24 25 26 27 28 29 30 31 32 33 34 35 36 37 38
5/28/99
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3/25/2005

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
37740	13

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 29243 ENGINEER

4-15-05

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 23924 ENGINEER MICHAEL H. BRITT

4-7-09

PB PARSONS BRINCKERHOFF

-L- (NC 97)

BM #3 ELEV = 74.32'
N=812,717 E=2,370,024
-BL- STA 42+63 95' RIGHT
RR SPIKE IN
26" WILLOW

PI = 40+20.00
EL = 75.59'
VC = 100'
K = 272

PI = 42+80.00
EL = 73.99'
VC = 160'
K = 118

PI = 46+80.00
EL = 76.97'
VC = 330'
K = 369

PI = 49+50.00
EL = 76.57'
VC = 100'
K = 258

PI = 50+50.00
EL = 76.81'
VC = 100'
K = 286

PI = 51+50.00
EL = 76.70'
VC = 100'
K = 213

76.13
73.16
76.88
73.18

(-)0.2472%
(-)0.6154%
(-)0.6154%
(+)0.7450%
(+)0.7450%
(-)0.1481%
(-)0.1481%
(+)0.2400%
(-)0.1100%
(+)0.3600%

0.30 %
0.00 %
2.46 %
0.30 %
0.30 %

END DITCH RT
STA 40+80.00
EL 72.320

BEGIN DITCH RT
STA 43+93.00
EL 71.000

PI DITCH RT
STA 45+00.00
EL 70.000

BEGIN DITCH LT
STA 45+00.00
EL 71.230

PI DITCH RT
STA 45+50.00
EL 71.230

END DITCH LT
STA 52+00.00
EL 73.300

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

100 90 80 70 60 50

-L- (NC 97)

BM #4 ELEV = 76.68'
N=812,902 E=2,372,063
-BL- STA 62+80 184' LEFT
CHISLED SQUARE
ON CONCRETE PAD

PI = 54+50.00
EL = 77.78'
VC = 200'
K = 242

PI = 56+50.00
EL = 76.85'
VC = 200'
K = 566

PI = 60+00.00
EL = 76.46'
VC = 150'
K = 527

PI = 64+50.00
EL = 77.24'
VC = 250'
K = 335

76.88
73.18
73.85
76.38

(+)0.3600%
(-)0.4650%
(-)0.4650%
(-)0.1114%
(-)0.1114%
(+)0.1733%
(+)0.1733%
(-)0.5721%

0.30 %
0.30 %
1.27 %
0.30 %

END DITCH RT
STA 52+50.00
EL 73.330

BEGIN DITCH LT
STA 57+00.00
EL 72.980

PI DITCH LT
STA 61+75.00
EL 71.550

END DITCH LT
STA 64+00.00
EL 74.100

BEGIN DITCH LT
STA 64+50.00
EL 74.300

52 53 54 55 56 57 58 59 60 61 62 63 64 65 66

100 90 80 70 60 50

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3/25/2005

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
37740	14

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 29243 ENGINEER JOSEPH C. HUNT

1-15-05

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 23924 ENGINEERING INFRASTRUCTURE DANIEL H. BRITTAIN

1-13-05

PB PARSONS BRINCKERHOFF

-L- (NC 97)

BM #5 ELEV. = 76.07'
N=812,806 E=2,373,192
-BL- STA. 74+07 47' LEFT
RR SPIKE IN
12" OAK

PI = 68+80.00
EL = 74.78'
VC = 300'
K = 494

PI = 72+25.00
EL = 74.90'
VC = 220'
K = 426

PI = 77+00.00
EL = 77.52'
VC = 300'
K = 350

PI = 80+00.00
EL = 76.60'
VC = 300'
K = 583

76.38
73.85
76.79

(-)0.57 21%
(+)0.0348%
(+)0.0348%
(+)0.5516%
(+)0.5516%
(-)0.3067%
(-)0.3067%

0.30 %
0.99 %
1.57 %
0.83 %
0.64 %
0.73 %

PI DITCH LT
STA 68+00.00
EL 73.250

PI DITCH LT
STA 70+12.81
EL 71.150

BEGIN DITCH RT
STA 70+35.00
EL 69.420

END DITCH LT
STA 71+50.00
EL 71.150

BEGIN DITCH LT
STA 72+50.00
EL 72.360

PI DITCH RT
STA 72+50.00
EL 71.200

END DITCH RT
STA 76+00.00
EL 73.170

END DITCH LT
STA 76+75.00
EL 75.060

66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

90 80 70 60 50

BM #6 ELEV. = 76.03'
N=812,805 E=2,374,360
-BL- STA. 85+71 55' RIGHT
RR SPIKE IN
24" PINE

Sta. 86+00.00
END GRADE
ELEV. 76.63

-L- POT Sta. 86+50.00
END CONSTRUCTION

PI = 84+00.00
EL = 77.43'
VC = 300'
K = 495

(+)0.207 5%
(-)0.3990%

1.01 %
5.25 %
1.56 %
2.00 %

BEGIN DITCH RT
STA 80+25.00
EL 73.500

PI DITCH RT
STA 83+00.00
EL 70.210

END DITCH RT
STA 84+30.12
EL 66.000

BEGIN DITCH RT
STA 84+37.17
EL 66.000

END DITCH RT
STA 85+00.00
EL 70.750

END DITCH LT
STA 86+10.00
EL 73.964

BEGIN DITCH LT
STA 85+00.00
EL 71.964

80 81 82 83 84 85 86 87 88 89

90 80 70 60 50 40

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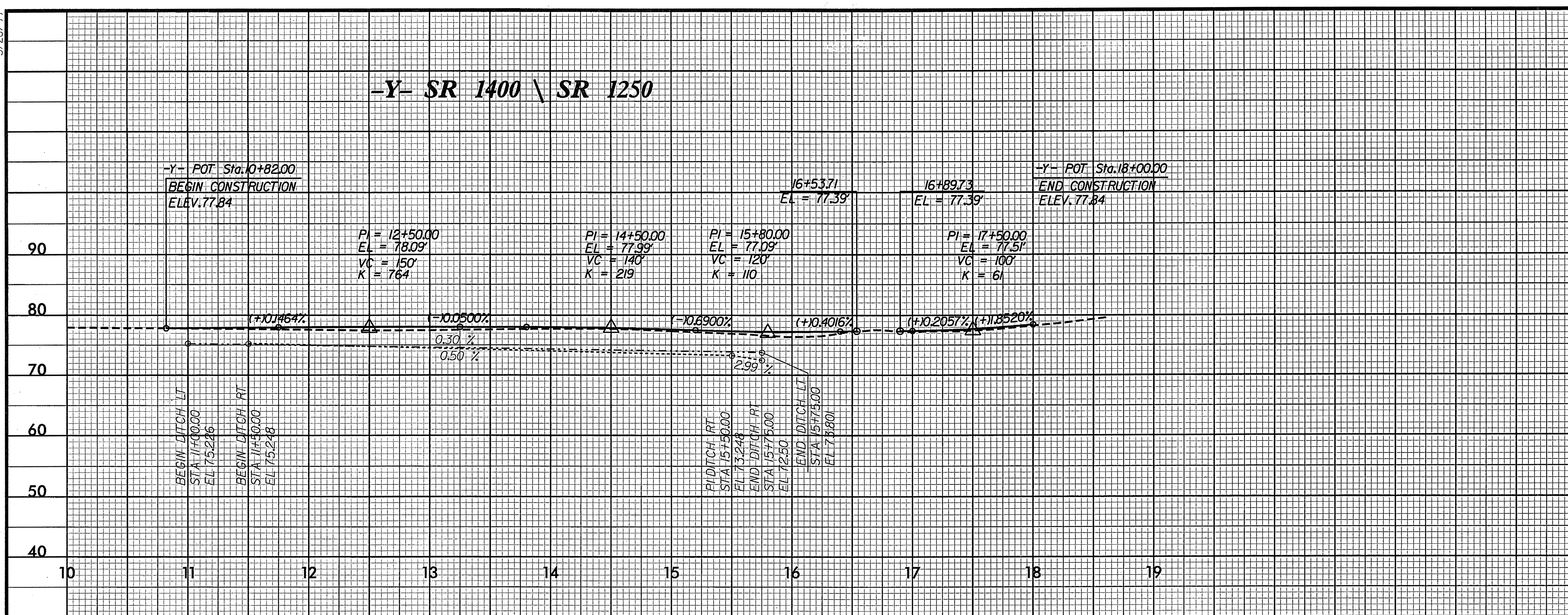
3/25/2005

PROJECT REFERENCE NO.	SHEET NO.
37740	15

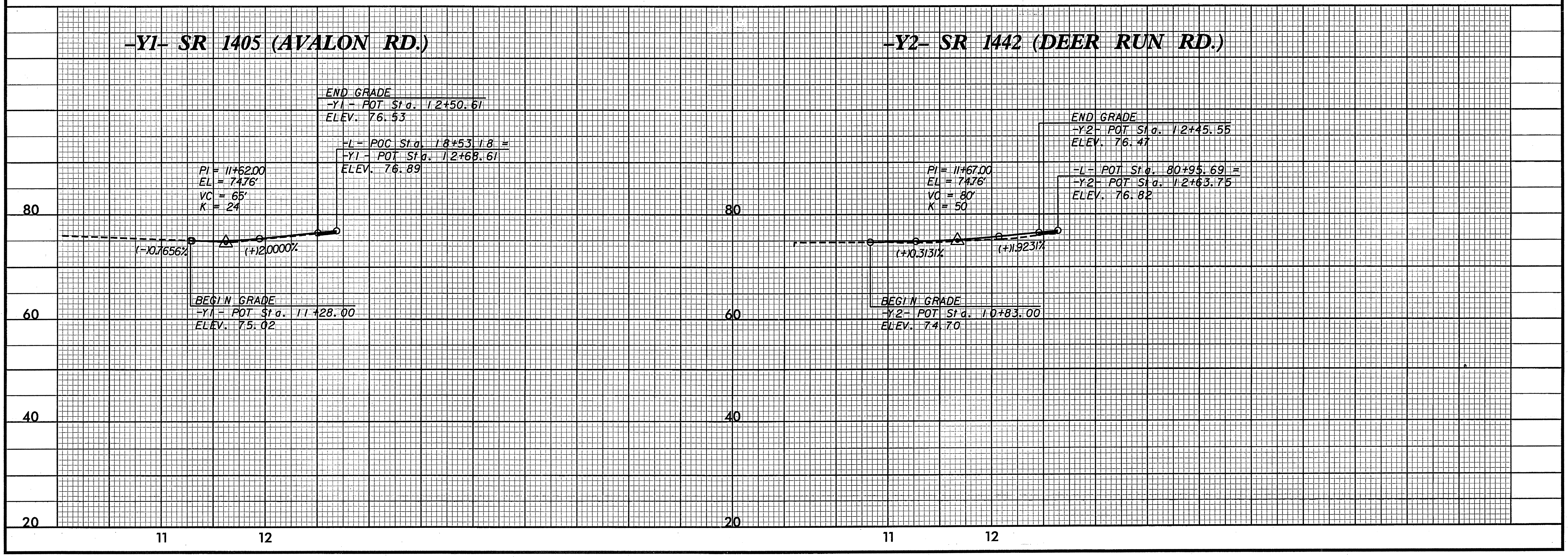
ROADWAY DESIGN ENGINEER — SEAL 29243, NORTH CAROLINA PROFESSIONAL ENGINEER — 4-15-05

HYDRAULICS ENGINEER — SEAL 23924, NORTH CAROLINA PROFESSIONAL ENGINEER, DANIEL H. BRIDGES — 4-7-05

PB PARSONS BRINCKERHOFF



-Y- SR 1400 \ SR 1250
-Y- POT Sta. 10+82.00
BEGIN CONSTRUCTION
ELEV. 77.84
PI = 12+50.00
EL = 78.09'
VC = 150'
K = 764
PI = 14+50.00
EL = 77.99'
VC = 140'
K = 219
PI = 15+80.00
EL = 77.09'
VC = 120'
K = 110
16+53.71
EL = 77.39'
16+89.73
EL = 77.39'
PI = 17+50.00
EL = 77.51'
VC = 100'
K = 61
-Y- POT Sta. 18+00.00
END CONSTRUCTION
ELEV. 77.84
(+)0.1464%
(-)0.0500%
(-)0.6900%
(+)0.4016%
(+)0.2057%
(+)1.8520%
0.30 %
0.50 %
2.99 %
BEGIN DITCH LT
STA 11+00.00
EL 75.226
BEGIN DITCH RT
STA 11+50.00
EL 75.248
PI DITCH RT
STA 15+50.00
EL 73.248
END DITCH RT
STA 15+75.00
EL 72.50
END DITCH LT
STA 15+75.00
EL 73.801
90
80
70
60
50
40
10
11
12
13
14
15
16
17
18
19



-Y1- SR 1405 (AVALON RD.)
END GRADE
-Y1- POT Sta. 12+50.61
ELEV. 76.53
-L- POC Sta. 18+53.18 =
-Y1- POT Sta. 12+68.61
ELEV. 76.89
PI = 11+62.00
EL = 74.76'
VC = 65'
K = 24
(-)0.7656%
(+)2.0000%
BEGIN GRADE
-Y1- POT Sta. 11+28.00
ELEV. 75.02
-Y2- SR 1442 (DEER RUN RD.)
END GRADE
-Y2- POT Sta. 12+45.55
ELEV. 76.47
-L- POT Sta. 80+95.69 =
-Y2- POT Sta. 12+63.75
ELEV. 76.82
PI = 11+67.00
EL = 74.76'
VC = 80'
K = 50
(+)0.3131%
(+)1.9231%
BEGIN GRADE
-Y2- POT Sta. 10+83.00
ELEV. 74.70
80
60
40
20
11
12

5/28/99

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3/25/2005