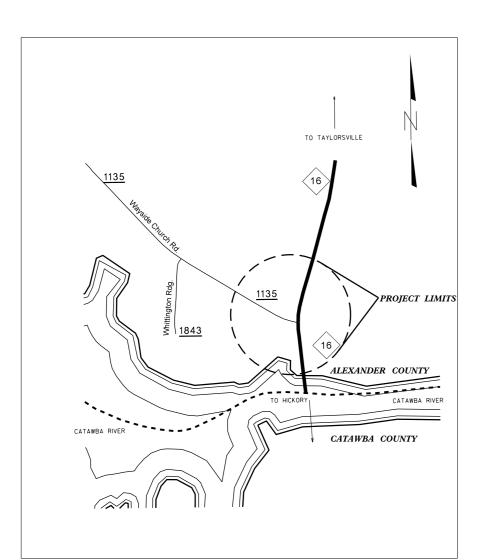
0008

See Sheet 1-A For Index of Sheets



VICINITY MAP NOT TO SCALE

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

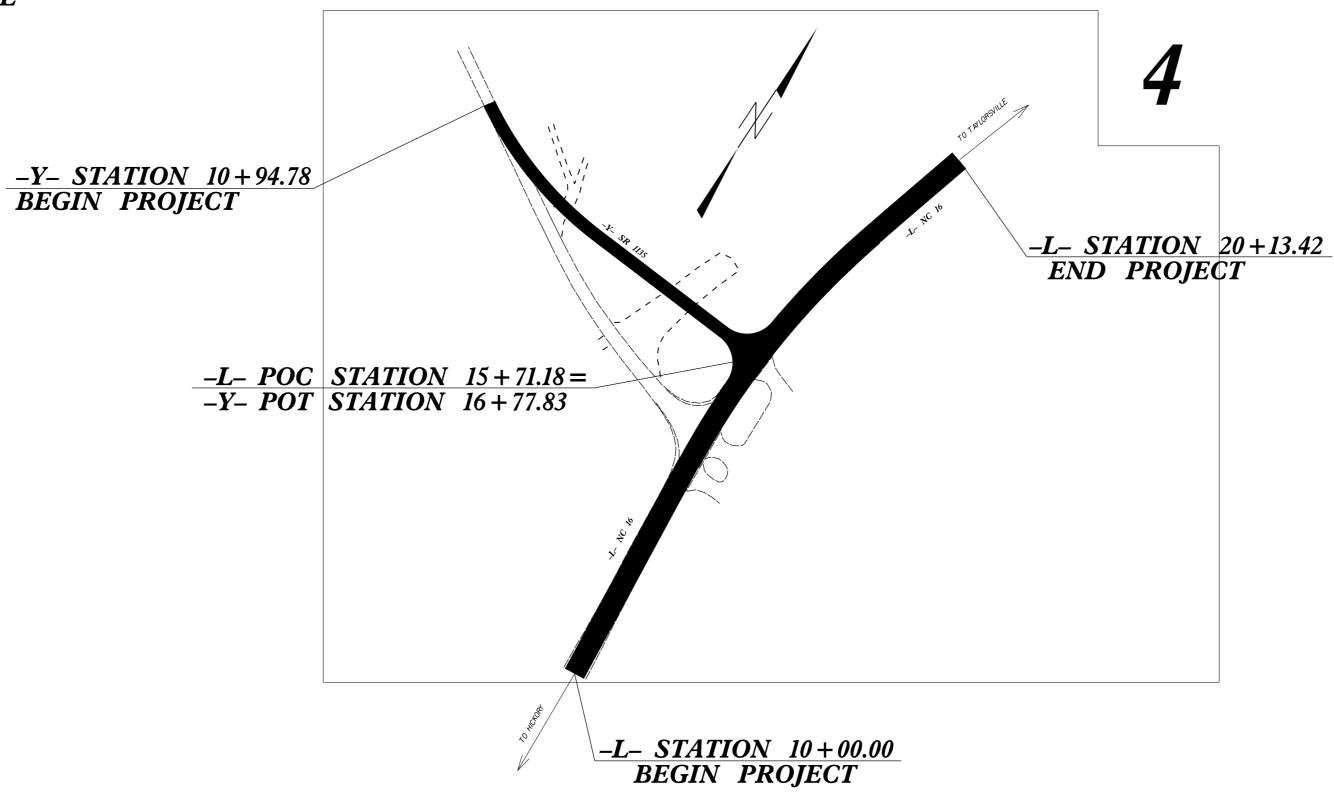
ALEXANDER COUNTY

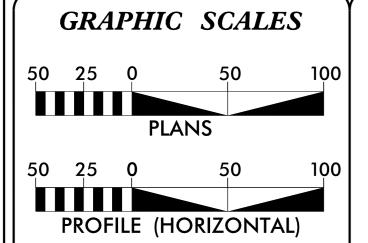
W-5212L STATE PROJ. NO. DESCRIPTION HRRR-1135(10) PE 45342.1.FD12 HRRR-1135(10) 45342.2.FD12 ROW CONST. 45342.3.FD12 HRRR-1135(10)

STATE

LOCATION: NC 16 AT INTERSECTION OF SR 1135 (WAYSIDE CHURCH RD.)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, PAVEMENT MARKINGS, AND PAVEMENT MARKERS.





PROFILE (VERTICAL)

DESIGN DATA ADT 2012 =9900 (-L-) ADT 2012 =2100 (-Y-)

V (-L-) = 50 MPH V (-Y-) = 45 MPH

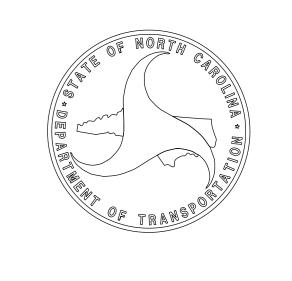
FUNC CLASS = -L- MINOR ARTERIAL -Y- MAJOR COLLECTOR

L STATEWIDE TIER -Y- SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT W-5212L 0.302 MILES TOTAL LENGTH OF ROADWAY PROJECT W-5212L = 0.302 MILES

Prepared in the Office of: **DIVISION OF HIGHWAYS** 1000 Birch Ridge Dr., Raleigh NC, 27610 2012 STANDARD SPECIFICATIONS RIGHT OF WAY DATE: J.B. McSWAIN PROJECT MANAGER JUNE 24, 2014 LETTING DATE: B.K. Sowell PROJECT DESIGN ENGINEER April 1, 2015



PROJECT REFERENCE NO) .	SHEET NO.	
W-5212L		/-A	
	Ro	OADWAY DESIGN ENGINEER	

INDEX OF SHEETS

SHEET NUMBER SHEET TITLE SHEET INDEX OF SHEETS, GENERAL NOTES, AND LIST OF 1 - ASTANDARD DRAWINGS 1 -B CONVENTIONAL SYMBOLS SURVEY CONTROL SHEET 1 -C 1 -D CENTERLINE COORDINATES SHEET PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS SUMMARY OF DRAINAGE QUANTITIES 3 A SUMMARY OF GUARDRAIL, EARTHWORK SUMMARY, AND ASPHALT PAVEMENT REMOVAL SUMMARY PLAN SHEET PROFILE SHEET TMP-1 THRU TMP-4 TRAFFIC MANAGEMENT PLANS PAVEMENT MARKING PLAN EC-1 THRU EC-5 EROSION CONTROL PLANS

CROSS-SECTIONS

X-1 THRU X-4

GENERAL NOTES:

2012 SPECIFICATIONS

EFFECTIVE: 01-17-12

REVISED: 07/30/12

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.

SUPERELEVATION:

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

SHOULDER CONSTRUCTION:

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

SOF ENEELYNIED SONVES SIMEL BE IN MOSSINDANSE WITH STEV NO. 900.01.

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.

GUARDRAIL:

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

TEMPORARY SHORING:

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

SUBSURFACE PLANS:

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

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE CITY OF HICKORY (WATER).

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.

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch – N. C. Department of Transportation – Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
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
225.06	Method of Grading Sight Distance at Intersections
DIVISION	3 - PIPE CULVERTS
300.01	Method of Pipe Installation
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	8 - INCIDENTALS
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
862.01	Guardrail Placement
862.02	Guardrail Installation
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

PROJECT REFERENCE NO.	SHEET 1
W-5212L	1-E

*S.U.E. = Subsurface Utility Engineering

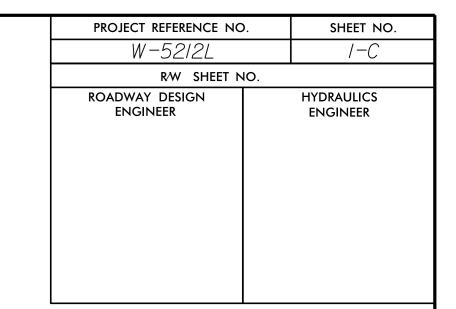
CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERI	Y :				
State Line		- 4 4			
County Line		RAILROADS:			
Township Line		Standard Gauge	CSX TRANSPORTATION	Orchard —	<u> </u>
City Line		RR Signal Milepost		Vineyard —	Vineyard
Reservation Line		Switch —	SWITCH	· ····oyara	
Property Line		RR Abandoned		EXISTING STRUCTURES:	
Existing Iron Pin	EIP	RR Dismantled		MAJOR:	
Property Corner	×	RIGHT OF WAY:		Bridge, Tunnel or Box Culvert ————	CONC
Property Monument	ECM	Baseline Control Point	•	Bridge Wing Wall, Head Wall and End Wall —	CONC WW
Parcel/Sequence Number ————————————————————————————————————		Existing Right of Way Marker	\triangle	MINOR:	
Existing Fence Line	×××_	Existing Right of Way Line		Head and End Wall	CONC HW
Proposed Woven Wire Fence		Proposed Right of Way Line	$\frac{\mathbb{R}}{\mathbb{W}}$	Pipe Culvert	
Proposed Chain Link Fence		Proposed Right of Way Line with	$-\frac{R}{W}$	Footbridge ————>	
Proposed Barbed Wire Fence		Iron Pin and Cap Marker	W –	Drainage Box: Catch Basin, DI or JB	СВ
Existing Wetland Boundary		Proposed Right of Way Line with Concrete or Granite R/W Marker		Paved Ditch Gutter	
Proposed Wetland Boundary		Proposed Control of Access Line with		Storm Sewer Manhole —	(\$)
Existing Endangered Animal Boundary —	EAB	Concrete C/A Marker		Storm Sewer Mannole	ss
Existing Endangered Plant Boundary ——	EPB	Existing Control of Access		Sioriii Sewei	
Known Soil Contamination: Area or Site –		Proposed Control of Access —————	<u> </u>	UTILITIES:	
Potential Soil Contamination: Area or Site		Existing Easement Line ————————————————————————————————————	———E——		
BUILDINGS AND OTHER CU	LTURE:	Proposed Temporary Construction Easement –	——Е——	POWER:	_
Gas Pump Vent or U/G Tank Cap		Proposed Temporary Drainage Easement ——	TDE	Existing Power Pole	↓
Sign		Proposed Permanent Drainage Easement ——	PDE	Proposed Power Pole	J
Well ———————————————————————————————————	S 	Proposed Permanent Drainage / Utility Easemer	nt —— DUE——	Existing Joint Use Pole	
Small Mine	w 	Proposed Permanent Utility Easement ———	PUE	Proposed Joint Use Pole	- 0-
Foundation —		Proposed Temporary Utility Easement ———	TUE	Power Manhole	(P)
Area Outline		Proposed Aerial Utility Easement ————	AUE	Power Line Tower	
		Proposed Permanent Easement with	•	Power Transformer	$[\mathcal{M}]$
Cemetery		Iron Pin and Cap Marker	♦	U/G Power Cable Hand Hole	
Building ————————————————————————————————————	<u> </u>	ROADS AND RELATED FEATURE	ES:	H_Frame Pole	•
School ———————————————————————————————————		Existing Edge of Pavement		Recorded U/G Power Line	P
Church —		Existing Curb		Designated U/G Power Line (S.U.E.*)	P
Dam —		Proposed Slope Stakes Cut	<u>C</u>	TELEPHONE:	
HYDROLOGY:		Proposed Slope Stakes Fill	<u>F</u>	TELEPHONE:	
Stream or Body of Water ——————		Proposed Curb Ramp —————	CR	Existing Telephone Pole	
Hydro, Pool or Reservoir ——————		Existing Metal Guardrail ————		Proposed Telephone Pole	-0-
Iurisdictional Stream		Proposed Guardrail ————	<u> </u>	Telephone Manhole	
Buffer Zone 1 ———————————————————————————————————	BZ 1	Existing Cable Guiderail		Telephone Booth	3
Buffer Zone 2 ———————————————————————————————————	BZ 2	Proposed Cable Guiderail		Telephone Pedestal	\Box
low Arrow —		Equality Symbol	•	Telephone Cell Tower	√ o ^
Disappearing Stream ————————————————————————————————————		Pavement Removal		U/G Telephone Cable Hand Hole ————	H_{H}
Spring ————————————————————————————————————		VEGETATION:	r v v v v v J	Recorded U/G Telephone Cable ————	тт
Wetland	<u> </u>	Single Tree	슌	Designated U/G Telephone Cable (S.U.E.*)—	T
Proposed Lateral, Tail, Head Ditch ———	FLOW	Single Tree Single Shrub	භ ස	Recorded U/G Telephone Conduit	тс
False Sump ————————————————————————————————————	FLOW	Hedge —		Designated U/G Telephone Conduit (S.U.E.*)	
		Woods Line	(),(),(),(),(),	Recorded U/G Fiber Optics Cable —	
		WOOUS LITTE	=	Designated U/G Fiber Optics Cable (S.U.E.*)	

rchard ————————————————————————————————————	·
ineyard ————————————————————————————————————	Vineyard
EXISTING STRUCTURES:	
AJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall –) CONC WW
INOR: Head and End Wall ——————————————————————————————————	CONC HW
Pipe Culvert	
ootbridge ————————————————————————————————————	———————— <i>→</i>
Orainage Box: Catch Basin, DI or JB	СВ
Paved Ditch Gutter	
Storm Sewer Manhole ————————————————————————————————————	<u>(S)</u>
Storm Sewer ———————————————————————————————————	s
UTILITIES:	
OWER: Existing Power Pole ————————————————————————————————————	_
Proposed Power Pole	b
Existing Joint Use Pole	<u> </u>
	-
Proposed Joint Use Pole ————————————————————————————————————	
	P \[\sum_{\text{initial}} \]
Power Line Tower ————————————————————————————————————	
	otin
J/G Power Cable Hand Hole	•
H-Frame Pole	•
Recorded U/G Power Line (S.I.E*)	
Designated U/G Power Line (S.U.E.*)	
ELEPHONE:	
xisting Telephone Pole	-
Proposed Telephone Pole	-0-
elephone Manhole	
elephone Booth —	9
elephone Pedestal ————————————————————————————————————	
elephone Cell Tower —	<u> </u>
J/G Telephone Cable Hand Hole ———	<u></u>
Recorded U/G Telephone Cable	
Designated U/G Telephone Cable (S.U.E.*)	
Recorded U/G Telephone Conduit	
Designated U/G Telephone Conduit (S.U.E.*)	
Recorded U/G Fiber Optics Cable ———	
Designated LI/C Eiber Ontice Cable (S.I.E *\-	

WATER:	
Water Manhole	W
Water Meter	
Water Valve	\otimes
Water Hydrant	÷
Recorded U/G Water Line	w
Designated U/G Water Line (S.U.E.*)	w
Above Ground Water Line	A/G Water
TV:	
TV Satellite Dish	
TV Pedestal ————————————————————————————————————	
TV Tower	\bigotimes
U/G TV Cable Hand Hole	HH
Recorded U/G TV Cable —	ТV
Designated U/G TV Cable (S.U.E.*)	
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	
Designated U/G Gas Line (S.U.E.*)	
Above Ground Gas Line	A/G Gas
SANITARY SEWER:	
Sanitary Sewer Manhole	(
Sanitary Sewer Mannole Sanitary Sewer Cleanout	
U/G Sanitary Sewer Line —	•
Above Ground Sanitary Sewer —	
Recorded SS Forced Main Line	
Designated SS Forced Main Line (S.U.E.*) —	
Designated 33 Forced Main Line (3.0.L.)	
MISCELLANEOUS:	
Utility Pole —	•
Utility Pole with Base —	
Utility Located Object —	
Utility Traffic Signal Box	
Utility Unknown U/G Line ————	
U/G Tank; Water, Gas, Oil ————	
Underground Storage Tank, Approx. Loc. ——	
A/G Tank; Water, Gas, Oil ———————————————————————————————————	
Geoenvironmental Boring —	
U/G Test Hole (S.U.E.*)	•
Abandoned According to Utility Records —	•
End of Information —	E.O.I.
	

SURVEY CONTROL SHEET NOT TO SCALE





DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "BL-2"

WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 762232.721(f+) EASTING: 1350595.475(f+) ELEVATION: 885.95(f+)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT
(GROUND TO GRID) IS: 0.99988525

THE N.C. LAMBERT GRID BEARING AND
LOCALIZED HORIZONTAL GROUND DISTANCE FROM
"BL-2" TO -L- STATION 10+00 IS

S 10° 44′ 05″ E 383.77′ ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

POINT	NORTH	EAST	ELEVATION	L STATION	OFFSET
BL - 1	761844.7980	1350686.9530	881.04	OUT OF PROJEC	
BL - 2	762232.7210	1350595.4750	885.95	13+81.66	38.51 LT.
BL - 3	762812.4920	1350680.9030	915.64	19+58.81	32.Ø7 LT.
BL - 4	762666.3200	1349804.3590	895.43	OUT OF PROJEC	CT LIMITS
* * * * * * * * * * * * * * *		* * * * * * *			
BM#1 ELEV	/ATION = 881.04/				
N = 761844.798	E = 1350686.	953			

BM#1 ELEVATION = 881.04'
N = 761844.798 E = 1350686.953
L STATION- OUT OF PROJECT LIMITS
NCGS BM DISK IN BRIDGE

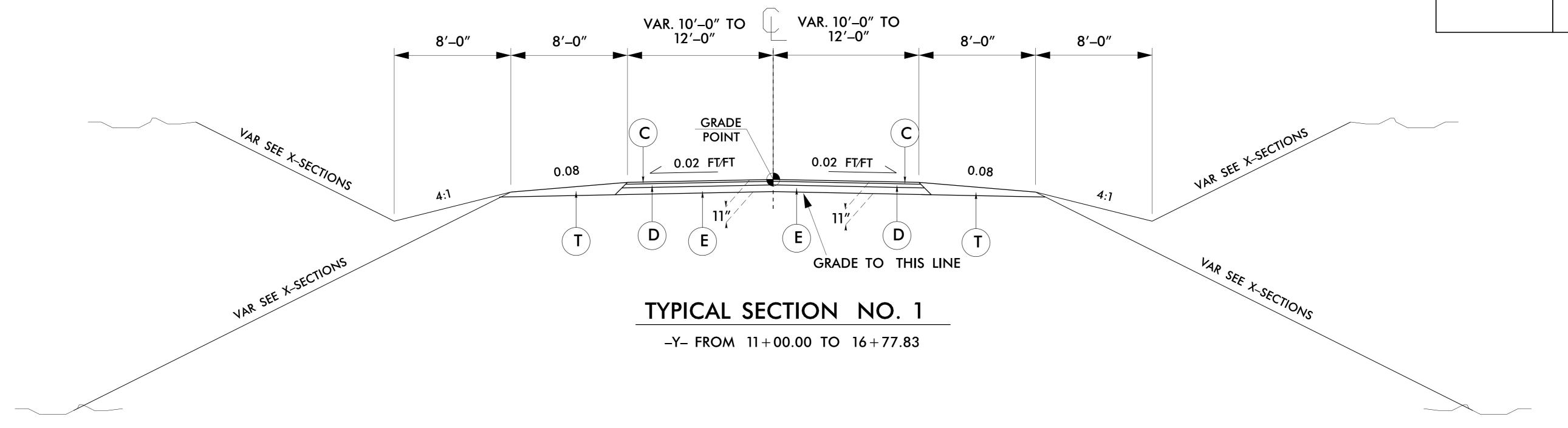
NUUS BM DISK IN BRIDGE

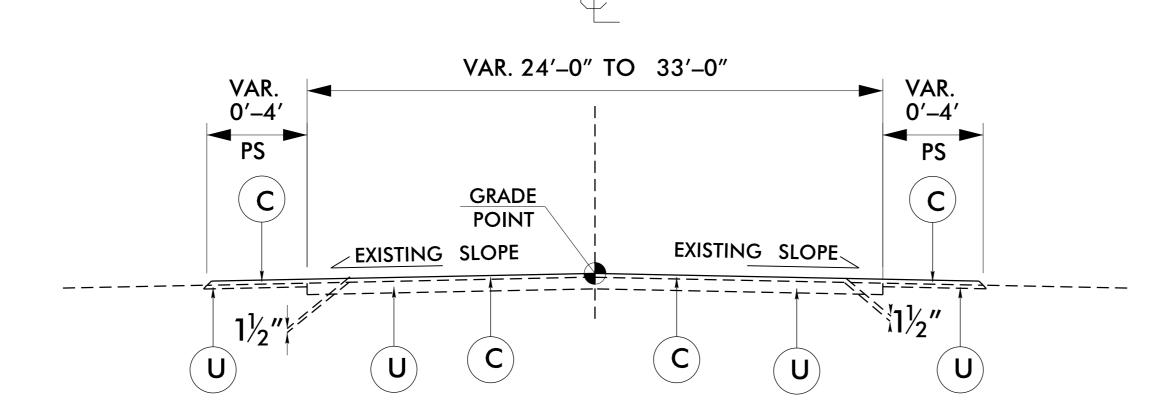
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

CENTERLINE COORDINATE LIST

Part Care State State	Point # Chain	Station	Northing (Y)	Easting (X)	Р	Point #	Chain	Station	Northing (Y)	Easting (X)	Poir	t# Cha	in Sta	ation	Northina (Y)	Easting (X)	Poin	it # (Chain I	Station	Northing (Y)	Easting (X)	Point #	Chain	Station	Northing (Y)	Easting (X)
4 -Y- 13+00.00 762454.5126 1350255.9524 5 -Y- 14+00.00 762444.1524 1350355.3448 6 -Y- 15+00.00 762437.3374 1350455.1123 7 -Y- 16+00.00 762430.5224 1350554.8798	1 -Y- 10	10+00.00	762574.7670	1349983.4380	Ė	On a	Onani	Oldion.						a.i.o.i.		Lucining (71)			O Hall	Oldion.	110.19 (17			Ond	Otation		
4 -Y- 13+00.00 762454.5126 1350255.9524 5 -Y- 14+00.00 762444.1524 1350355.3448 6 -Y- 15+00.00 762437.3374 1350455.1123 7 -Y- 16+00.00 762430.5224 1350554.8798	2 -Y- 1	11+00.00	762523.5494	1350069.3259	-																						
1	4 -Y- 1:	13+00.00	762454.5126	1350255.9524	-																						
1	5 -Y- 1	14+00.00	762444.1524	1350355.3448																							
	6 -Y- 15	15+00.00	762437.3374	1350455.1123							-																
	8 -Y- 10	16+77.83	762425.2180	1350632.5325		1					-																
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PROJECT REFERENCE NO	SHEET NO.
W-5212L	2
R/W SHEET N	Ю.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER





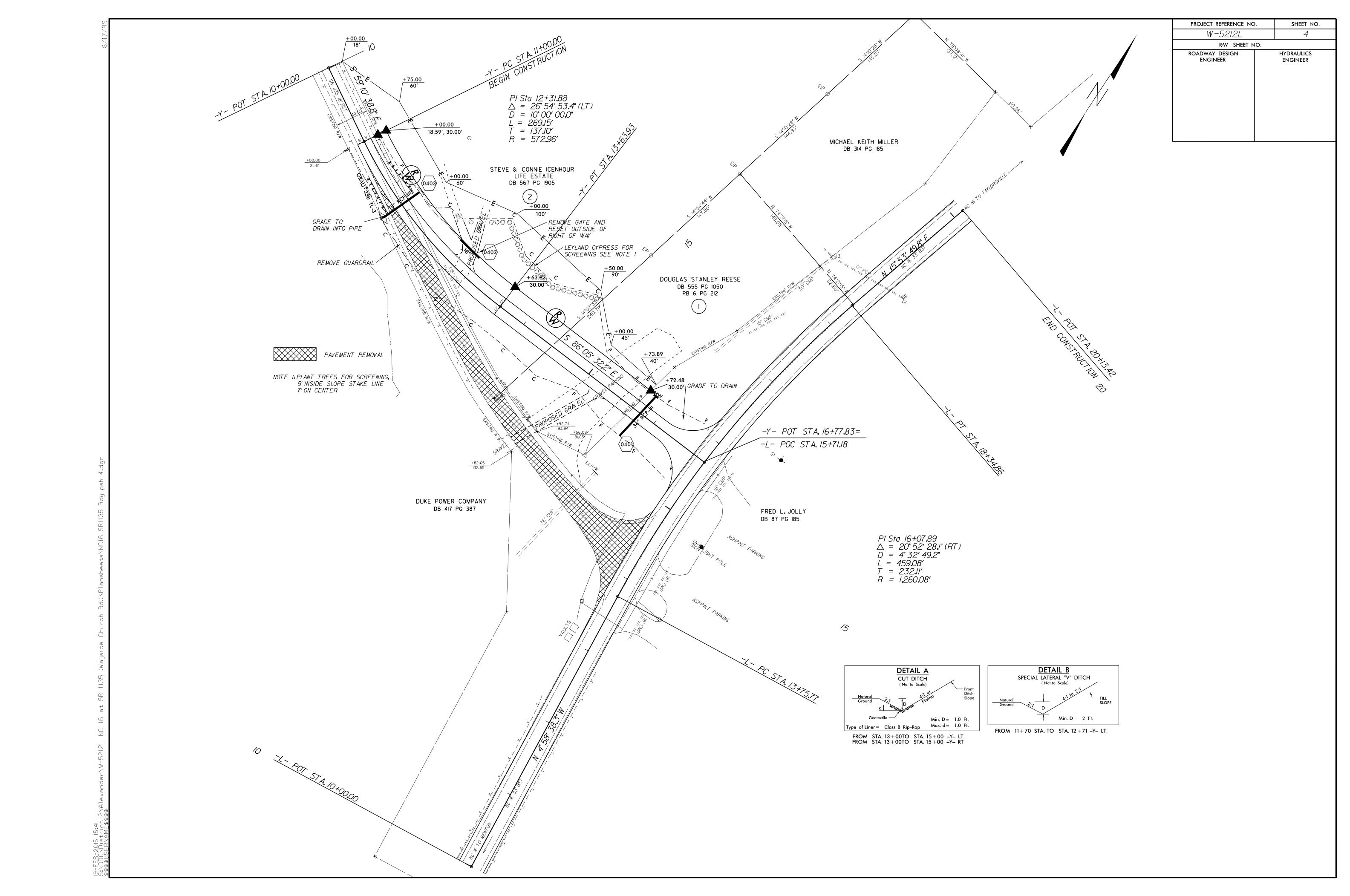
TYPICAL SECTION NO. 2

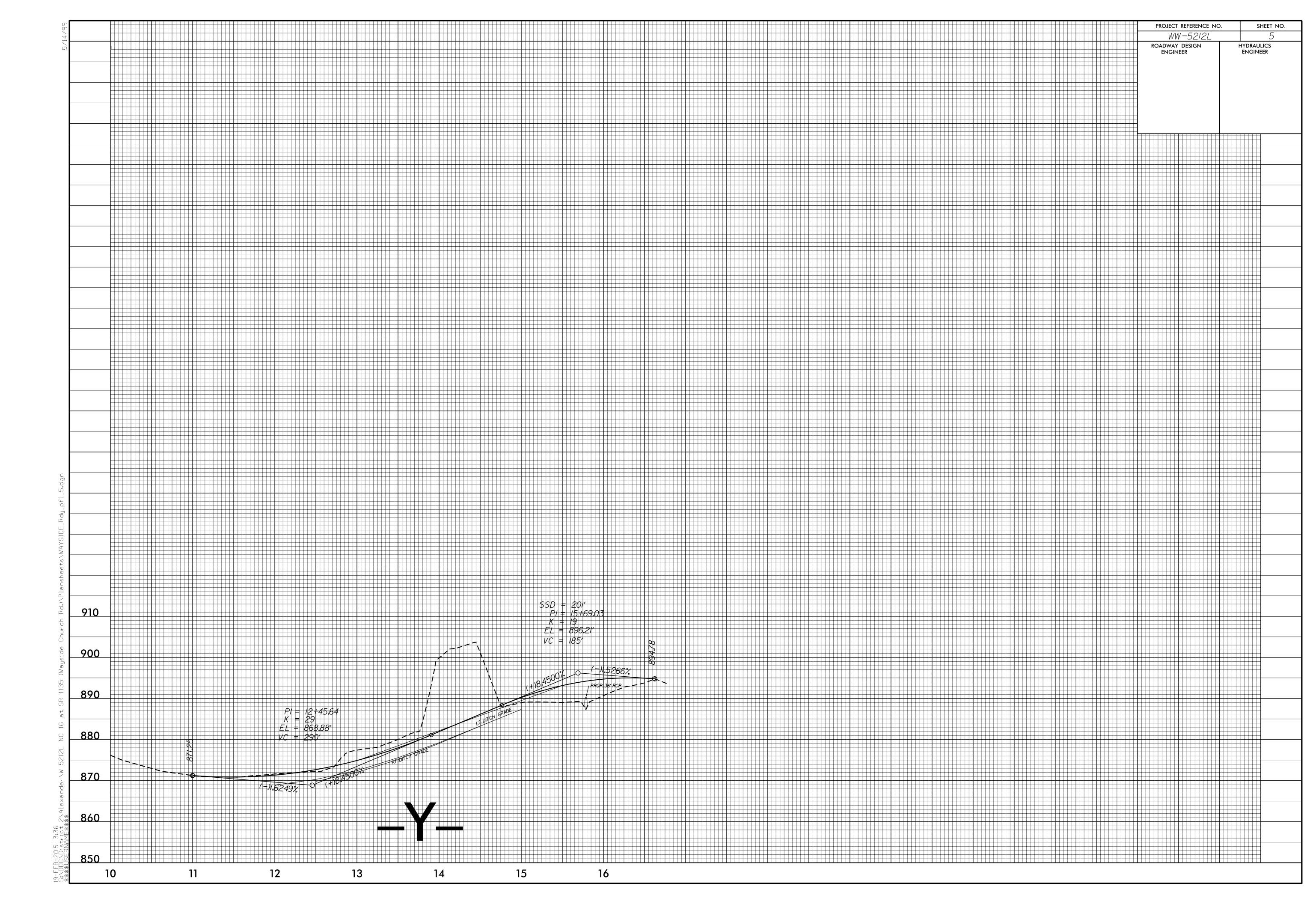
-L- FROM 10+00.00 TO 20+13.42

	PAVEMENT SCHEDULE
С	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E	PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
Т	EARTH MATERIAL
U	EXISTING PAVEMENT

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

COMPUTED BY	BAL				_	DATE:	2/18/2014	_																							!		PROJECT	ΓNO.	SHEET NO.
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STATION -	JRE NO	EVAT	EVAT.	į (DRAINAG RCP,CSP,CAAP,F			C.S	S.PIPE			R.C.PIPE CLASS III			R.C.PIPE CLASS IV		NGN	CEN	ST	0.838.01	OR DR.	OTAL LF NTIFY SH A'+ (L3x	FRAME, GRATES,		S P P P P P P P P P P P P P P P P P P P		22 4	.840						CB.	CATCH BASIN
I,OR (RUCIT	H T EI	ERT EI														R DES	R DES	ST	0.838.80	. F. o. F.	TOT* UANT TANT	AND HOOD STANDARD		840.16	10 2 8	20 840.2	IS SI		Œ	. 840.7	10.72		NDL	NARROW DROP INL DROP INLET
(LT, R.	SI		INI P														RACTO	RACTO	ľ	NLESS OTED		0	840.03		SID.	840.2¢	ES STI	GRATI		S SE	r.std	%. CT?		D I. G D I.	GRATED DROP INLE (NARROW SLOT)
NOTA								$\overline{}$									CONTE	CONT		ERW ISE)		LIN . 0.07 6.07 6.07 6.07 6.07 6.07 6.07 6.			840.15 RATES	17 OR 18 OR 19 OR	E SIL GRAT	TW 0		S NO	JG , CI 3	υ Κ		GDINS.) JB.	JUNCTION BOX
SZE C				12" 15" 18"	' 24" 30" 36" 42	48" "SD GSD "S	YAAP HDPE	.2" 15" 18" 24	" 30" 36"	42" 48" 12	2" 15" 1	18" 24" 30" 3	36" 42" 48'	12" 15" 1	8" 24" 30"	36" 42" 48	SSV)	ERTS,	CU	YARDS SQ	A	B CIS &		」 │	STD.	D.840 D.840	GRAT TWO	м пн 840.3		ILBOW	PE PLU	Ή. Β	표.	MH. TBDI	MANHOLE TRAFFIC BEARING
THICKNESS						TUSE	USE										E (CLA	CULVI	Id NA		- O	OVE	TYPE OF		N 140R 7 ITH T	A ST.	W III	7RAM E		PPE	CK PI	ARSO	ALLE	TBJB.	DROP INLET TRAFFIC BEARING
OR GAUGE	FROM					ON OO	TON C	.064 .064 .064	970.	109							C.PE	PPE	DE DR.	C.S.P	RU 10	ND AE	GRATE	NLET	I BAS: D.840 AME V	IYPE IYPE	FRAM!	(N.S.)		NAGE	.& BR	COLI	EMOV.		JUNCTION BOX
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15+79 10 -Y - CL	0401	888	885.4										68							3.4			,						+					10000	
12+75.86 -Y - RT 12+90.53 -Y - LT	0402	880 5	5 878.6																32														42 1	18"METAL	
11+90.00 -Y- CL	0403	868.	8, 868							+++		56								+				++					+++	-		++			
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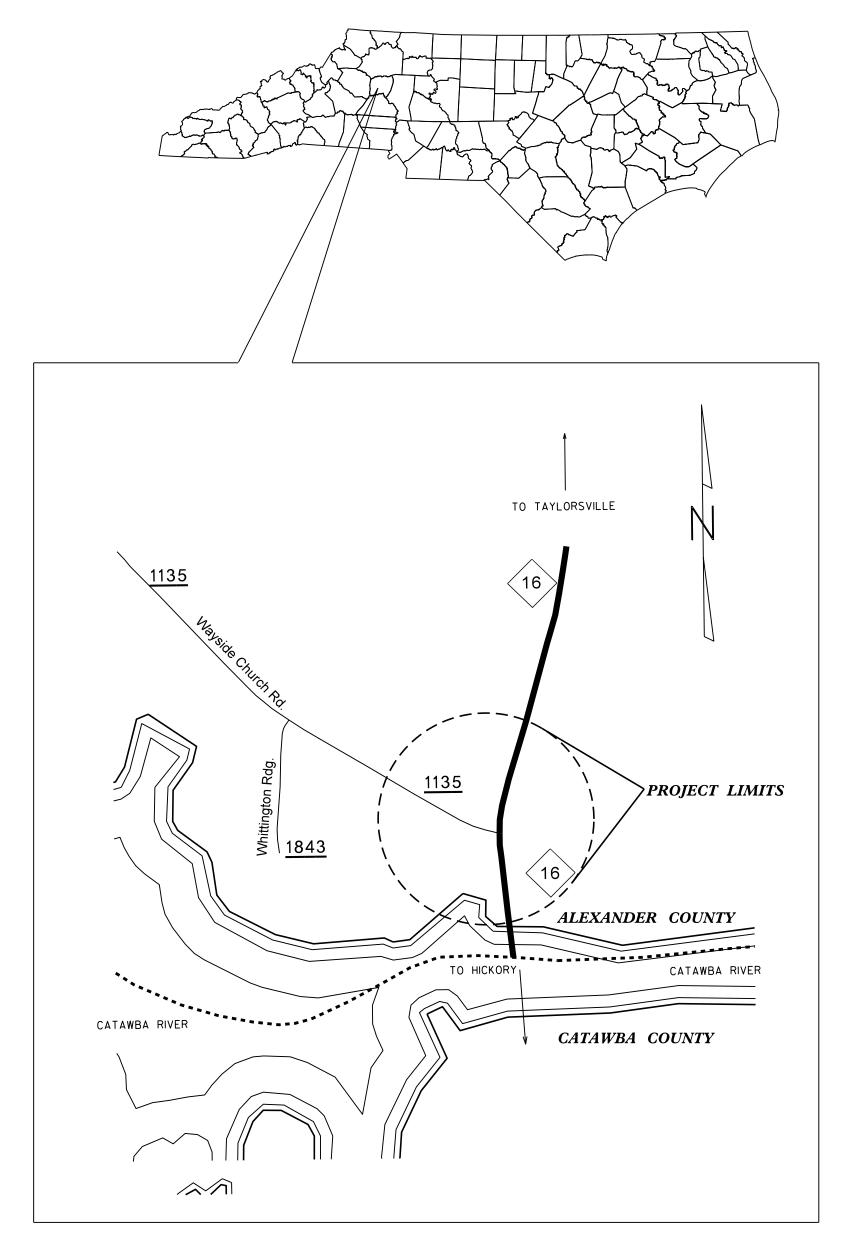




STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

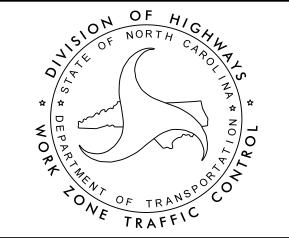
ALEXANDER COUNTY



VICINITY MAP NOT TO SCALE

WORK ZONE SAFETY & MOBILITY "from the MOUNTAINS to the COAST"

N.C.D.O.T. DIVISION 12 DDC UNIT 1710 EAST MARION STREET, SHELBY, NC 28152



INDEX OF SHEETS

SHEET NO.	<u>TITLE</u>
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP - 1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND LOCAL NOTES)
TMP-2	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-3	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE III DETAIL

APPROVED: DATE:_ SEAL

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	<u>TITLE</u>
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

DIRECTION OF PEDESTRIAN TRAFFIC FLOW

----- EXIST. PVMT.

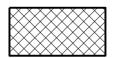
NORTH ARROW

PROPOSED PVMT.

TEMP. SHORING (LOCATION PURPOSES ONLY)

WORK

WORK AREA



REMOVAL

PAVEMENT MARKINGS

——EXISTING LINES
——TEMPORARY LINES

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

COI DRI

DRUM SKINNY DRUM © TUBULAR MARKER

TEMPORARY CRASH CUSHION

FLASHING ARROW BOARD

___ FLAGGER

LAW ENFORCEMENT

TRUCK MOUNTED ATTENUATOR (TMA)

TEMPORARY SIGNING

O PORTABLE SIGN

├─ STATIONARY SIGN

STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

CRYSTAL/RED

◆ YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

APPROVED:______ DATE:_____



ROADWAY STANDARD DRAWINGS & LEGEND

Xander\W-5212L NC 16 at SK 1135 (Wayside Church Kd.)\Irattic Control\W-5212L_IC_BIMP_ICP-1A.dgn

9-FEB-2015 07:23 S:\DDC\District 2\Alexdr

GENERAL NOTES / LOCAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

SR-1135

HOLIDAY

- I. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 4:00 P.M. DECEMBER 31st TO 9:00 A.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 A.M. THE FOLLOWING TUESDAY.
- 3. FOR EASTER, BETWEEN THE HOURS OF 4:00 P.M. THURSDAY AND 9:00 A.M. MONDAY.
- 4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 4:00 P.M. FRIDAY TO 9:00 A.M. TUESDAY.
- 5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 4:00 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 A.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 4:00 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.

- 6. FOR LABOR DAY, BETWEEN THE HOURS OF 4:00 P.M. FRIDAY AND 9:00 A.M. TUESDAY.
- 7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 4:00 P.M. TUESDAY TO 9:00 A.M. MONDAY.
- 8. FOR CHRISTMAS, BETWEEN THE HOURS OF 4:00 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 A.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- F) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

G) BACKFILL AT A 6:ISLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

H) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-II) 100 IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

I) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- J) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN
 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE
 (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- K) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

L) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, IO FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS II30 (DRUMS), II35 (CONES) AND II80 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

PAVEMENT MARKINGS AND MARKERS

M) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

N) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) AND RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

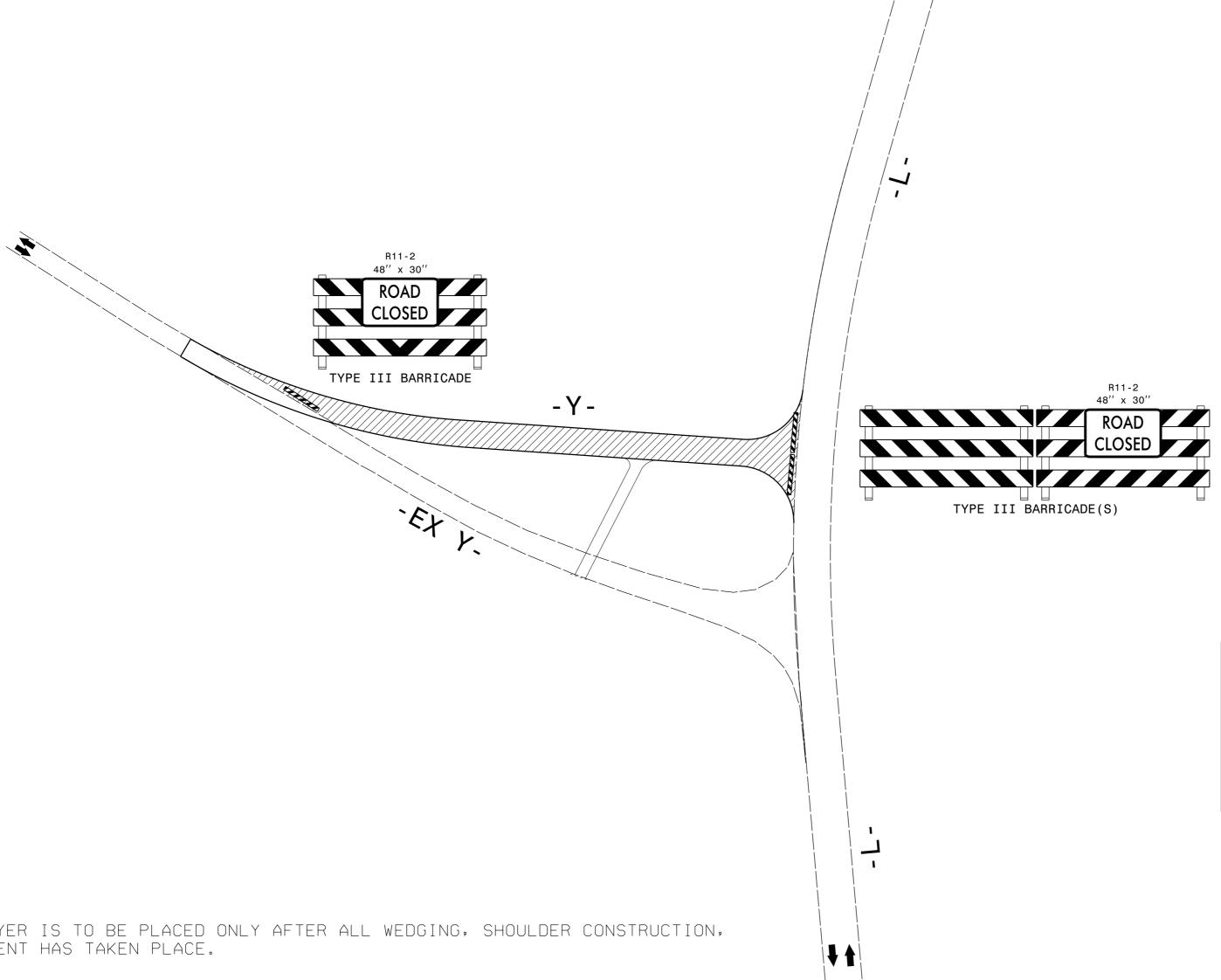
SEAL DATE:



TRANSPORTATION
OPERATIONS
PLAN

PROJ. REFERENCE NO. W-5212L TMP-2

PHASE 1



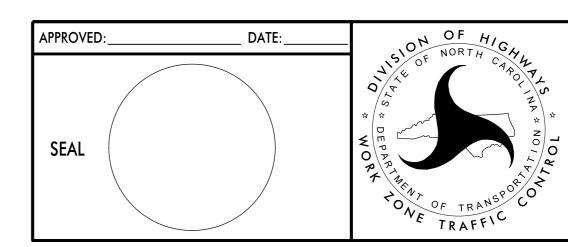
LEGEND

TYPE III BARRICADE PROPOSED CONSTRUCTION

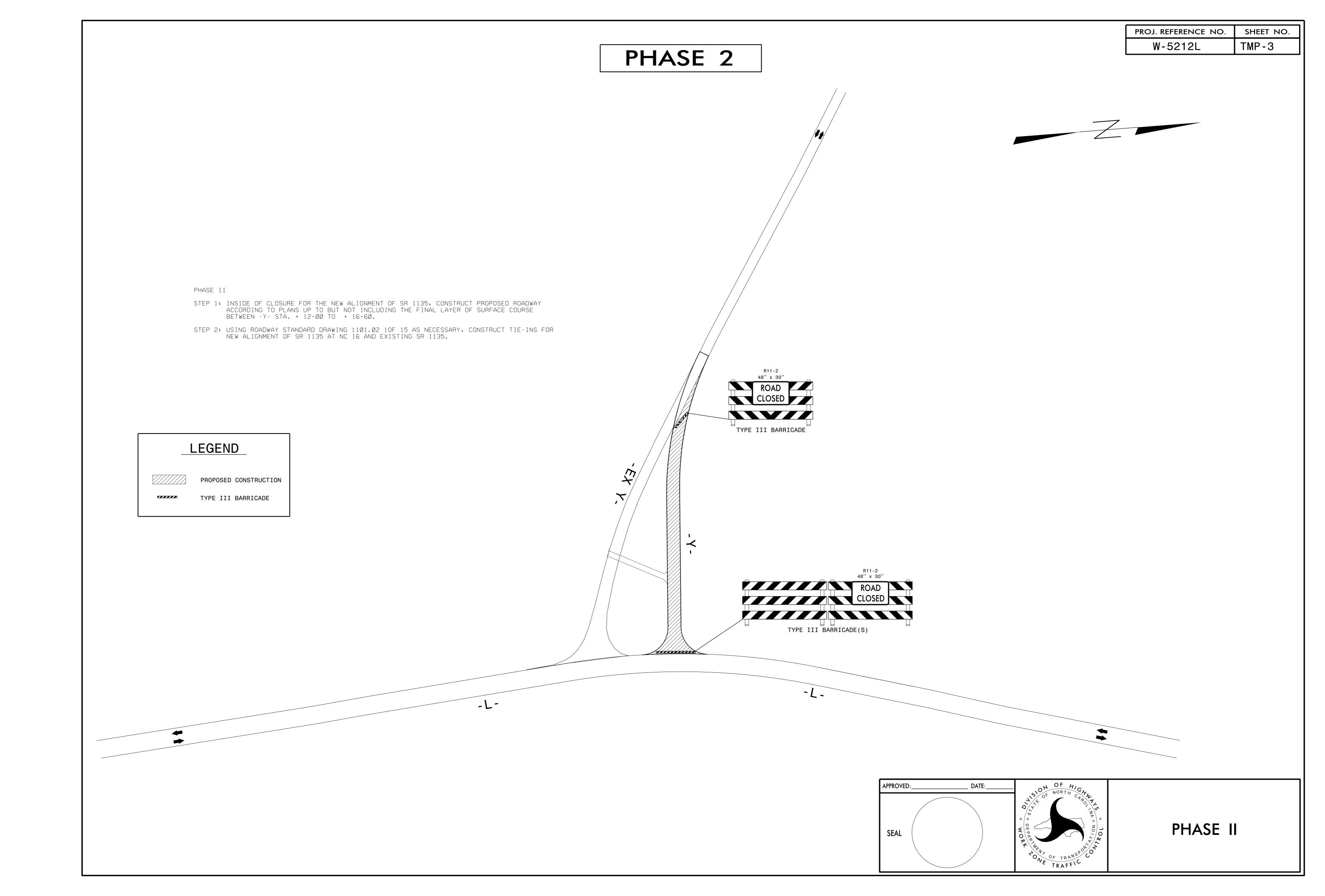
NOTE: THE FINAL SURFACE LAYER IS TO BE PLACED ONLY AFTER ALL WEDGING, SHOULDER CONSTRUCTION, AND GUARDRAIL PLACEMENT HAS TAKEN PLACE.

PHASE I

- STEP 1: PRIOR TO BGINNING ANY CONSTRUCTION ACTIVITY, INSTALL WORK ZONE ADVANCED WARNING SIGNS AS SHOWN ON ROADWAY STANDARD DRAWING 1101.01 SHEET 3 OF 3 FOR -L- AND -Y- LINE.
- STEP 2: THE CONTRACTOR SHALL PLACE BARRICADES, SIGNS AND DRUMS TO PRECENT TRAFFIC FROM ENTERING THE WORKSITE FOR THE NEWLY ALIGNED SR 1135.
- STEP 3: USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 15 AS NECESSARY, THE CONTRACTOR SHALL PLACE EROSION CONTROL MEASURES, BEGIN CLEARING AND GRUBBING, GRADING, AND DRAINAGE OPERATIONS FOR THE NEW ALIGNMENT OF SR 1136.



PHASE I



PROJ. REFERENCE NO.	SHEET NO.
W-5212L	TMP-4

PHASE 3



LEGEND

PAVEMENT REMOVAL

PROPOSED CONSTRUCTION

TYPE III BARRICADE

PHASE III

STEP 1: USING TRAFFIC CONTROL MEASURES AND ROADWAY STANDARD DRAWING 1101.02 1 OF 15, PERFORM REMAINING STEPS OF PHASE III TO COMPLETE THE PROJECT.

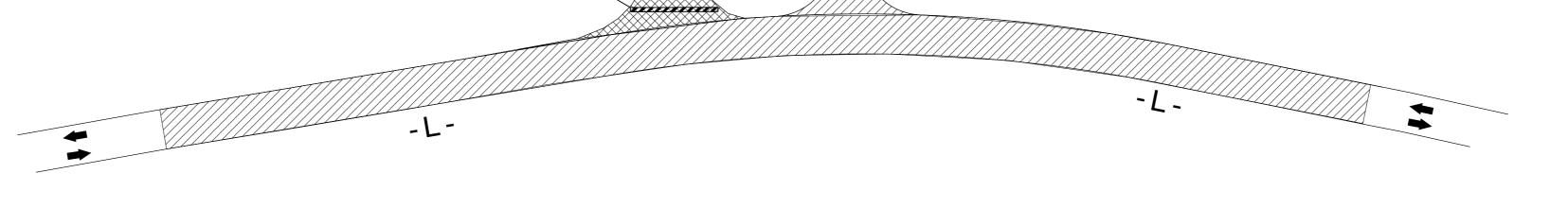
STEP 2: THE CONTRACTOR SHALL REMOVE EXISTING GUARDRAIL AND ANCHOR UNITS AND PLACE NEW GUARDRAIL AND ANCHOR UNITS AS SHOWN ON THE PLANS.

STEP 3: AFTER PROPOSED GUARDRAIL IS IN PLACE, THE CONTRACTOR SHALL PLACE FINAL PAVEMENT LAYER AND PAVEMENT MARKINGS AND MARKERS.

STEP 4: PLACE TRAFFIC ON NEW ALIGNMENT OF SR 1136.

STEP 5: PLACE BARRICADES, SIGNS, AND DRUMS TO PREVENT TRAFFIC FROM USING THE OLD SR 1136 ALIGNMENT.

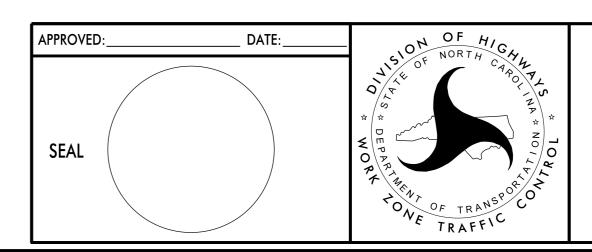
STEP 6: REMOVE PAVEMENT AS SHOWN ON PLANS FOR OLD ALIGNMENT OF SR 1136.



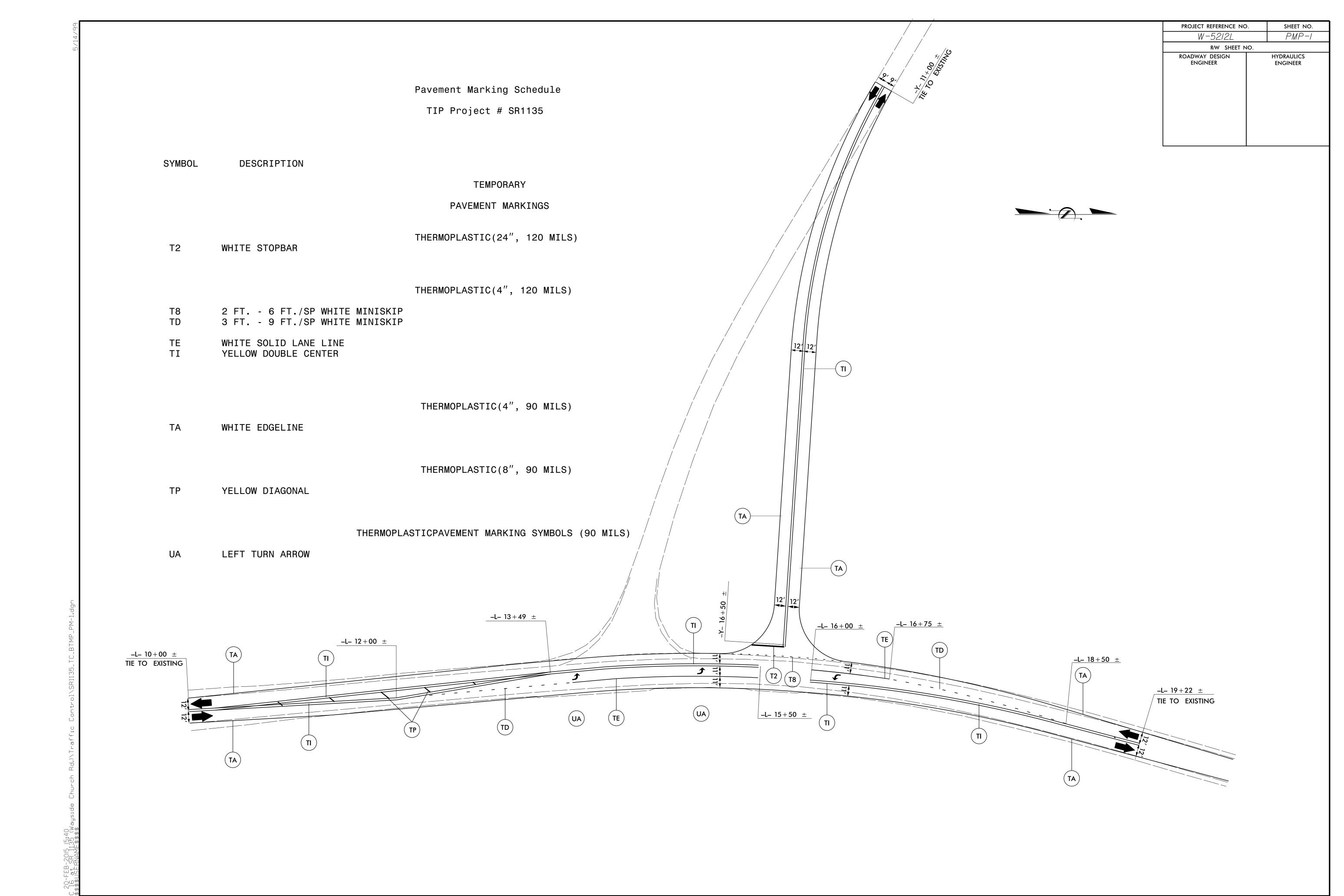
ROAD CLOSED

TYPE III BARRICADE(S)

TYPE III BARRICADE



PHASE III

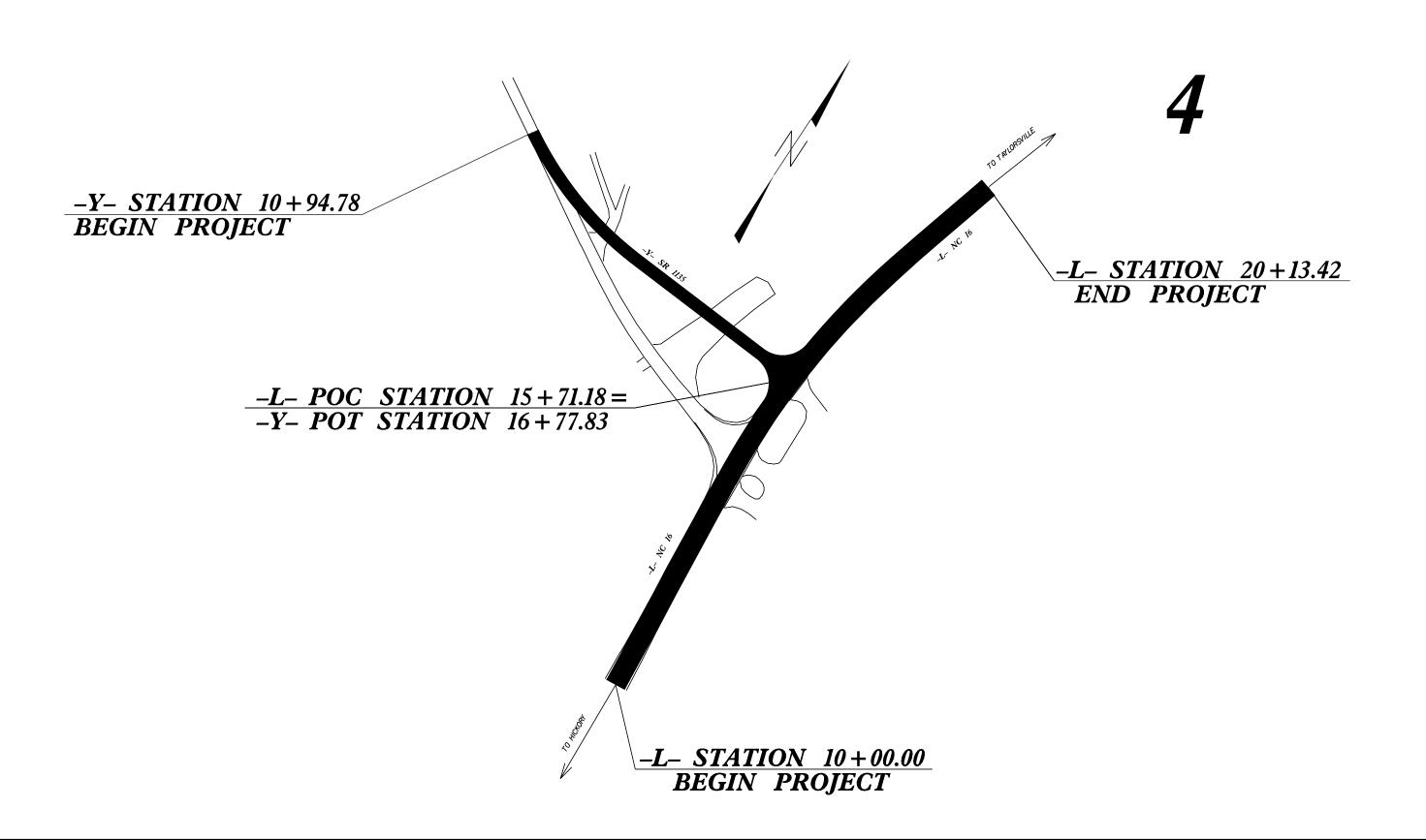


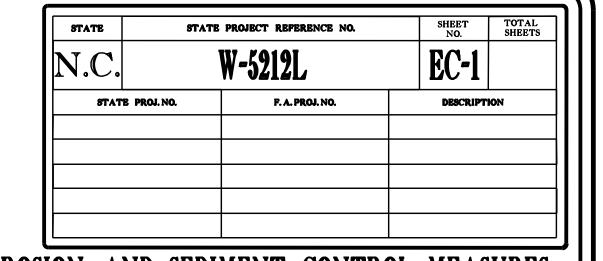
TO TAYLORSVILLE

VICINITY MAP NOT TO SCALE

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PLAN FOR PROPOSED HIGHWAY EROSION CONTROL





EROSION AND SEDIMENT CONTROL MEASURES **Description** Temporary Silt Ditch Temporary Silt Fence Special Sediment Control Fence Temporary Berms and Slope Drains Silt Basin Type B. Temporary Rock Silt Check Type-A. Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM) 1633.02 Temporary Rock Silt Check Type-B. Wattle / Coir Fiber Wattle. Wattle / Coir Fiber Wattle with Polyacrylamide (PAM) Temporary Rock Sediment Dam Type-A... Temporary Rock Sediment Dam Type-B.

Rock Pipe Inlet Sediment Trap Type-A. Rock Pipe Inlet Sediment Trap Type-B. Stilling Basin Special Stilling Basin. Rock Inlet Sediment Trap: Туре А 1632.01 Туре В. 1632.02 1632.03 Туре С. Skimmer Basin Tiered Skimmer Basin Infiltration Basin

> THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

GRAPHIC SCALE

PLANS

PROFILE (HORIZONTAL)

PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

> Erosion Control Plan B. Lehan Level III #3500

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND

NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:

DIVISION 12 DDC UNIT

1710 East Marion St. Shelby, NC 28152

2012 STANDARD SPECIFICATIONS

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail 1605.01 Temporary Silt Fence 1606.01 Special Sediment Control Fence

1607.01 Gravel Construction Entrance 1622.01 Temporary Berms and Slope Drains 1630.01 Riser Basin

1630.02 Silt Basin Type B 1630.03 Temporary Silt Ditch 1630.04 Stilling Basin 1630.05 Temporary Diversion 1630.06 Special Stilling Basin

1631.01 Matting Installation

1632.01 Rock Inlet Sediment Trap Type A 1632.02 Rock Inlet Sediment Trap Type B 1632.03 Rock Inlet Sediment Trap Type C 1633.01 Temporary Rock Silt Check Type A 1633.02 Temporary Rock Silt Check Type B 1634.01 Temporary Rock Sediment Dam Type A 1634.02 Temporary Rock Sediment Dam Type B
1635.01 Rock Pipe Inlet Sediment Trap Type A
1635.02 Rock Pipe Inlet Sediment Trap Type B
1640.01 Coir Fiber Baffle

1645.01 Temporary Stream Crossing

PROJECT REFERENCE NO. SHEET NO. W-52/2L EC-/A

EROSION CONTROL & PIPE INSTALLATION SCHEDULE GENERAL E&SC NOTES GROUND STABILIZATION CHART

Erosion Control Schedule and Notes

- 1. Generally, the order of installation of the erosion control measures will be as follows:
 - A. Temporary silt basins shall be installed before clearing and grubbing begins.
 - B. Silt fences and temporary silt ditches shall be installed after clearing and before grading.
 - C. Temporary stone ditch checks with PAM or wattles with PAM shall be installed in all disturbed areas as soon as the disturbance begins.
 - D. Final stone ditch checks or wattles shall be installed as soon as ditch line is established.
 - E. Pipe outlet and inlet protection will be done as soon as the pipe is installed.
 - F. Other permanent erosion control measures are to be implemented as soon as practical.
- 2. Temporary rock silt checks, type B will be spaced by percent grade as shown in the erosion control plan.
- 3. No. 5 stone, or equivalent, will be used in conjunction with the temporary rock silt checks in locations where water is leaving the project or entering a pipe.
- 4. All devices are to be cleaned out when half full.
- 5. Establish permanent vegetation per ground stabilization chart

Notes:

For silt basin size see the attached erosion control plans.

PAM is to be placed on all Type A checks and wattles in the erosion control chain except for the final device in HWQ and Trout projects.

Wet Pipe Installation Schedule and Notes

- 1. Prior to installing any E&SC measures identify permit conditions and impact area limits.
- 2. Install erosion control devices.
- 3. Manage the water course. The pipe must be placed in the dry. Install dewatering measures.
- 4. Remove material and existing pipe while limiting, material and sediment from entering stream and escaping the project.
- 5. Excavation of stream channel shall not exceed 10' on either side of new pipe or culvert unless indicated on permit.
- 6. Per permit conditions for Corps of Engineers and the Wildlife Resources Commission, all pipes in streams 48" or greater must be buried 12" below streambed elevation. Pipes less than 48" must be buried with 20% of the diameter below streambed elevation.
- 7. Place the new pipe and compact backfill.
- 8. Install slope protection on the outlet and inlet ends of the pipe. Also complete installation of erosion control measures and perform maintenance as needed on existing measures.
- 9. Establish permanent vegetation per ground stabilization chart.
- 10. More information on wet pipe installation can be found in the BMP manual section 4.2 "Pipe & Culvert installation"

Infiltration Basin Sizing Notes

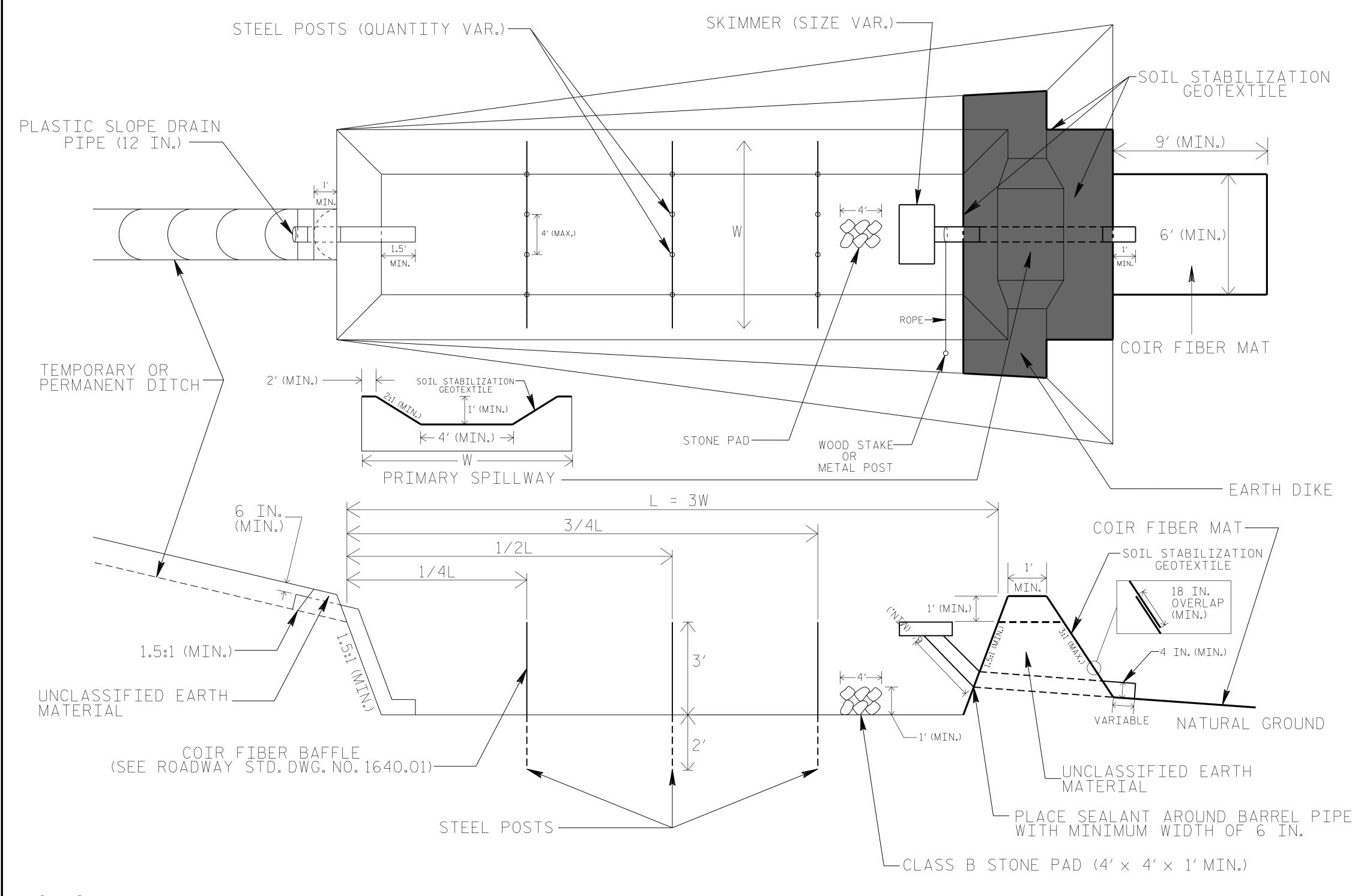
- 1. Infiltration basin on this project have been designed using the 60 day option.
- 2. This section must be permanently stabilized within 60 days from the time clearing and grubbing begins.

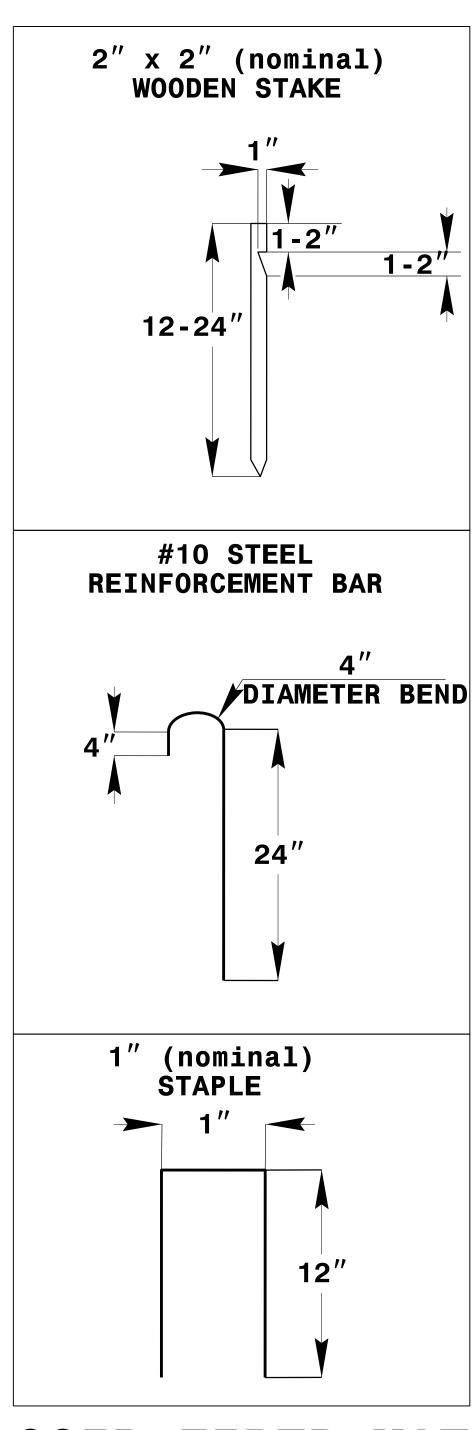
GROUND STABILIZATION CHART

Site Area Description	Stabilization Time Frame	Stabilization Time Frame Exceptions
Perimeter dikes, swales, ditches and slopes	7 days	None
High Quality Water Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10 ft. or less in length and are not steeper than 2:1, 14 days are allowed
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in lenght
All other areas flatter than 4:1	14 days	None (except for perimeters and HQW zones)

PROJECT REFERENCE NO) .	SHEET NO.	
W-5212L		EC-2	
R/W SHEET N	10.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

SKIMMER BASIN WITH BAFFLES DETAIL





COIR FIBER MAT ANCHOR OPTIONS

NOTES

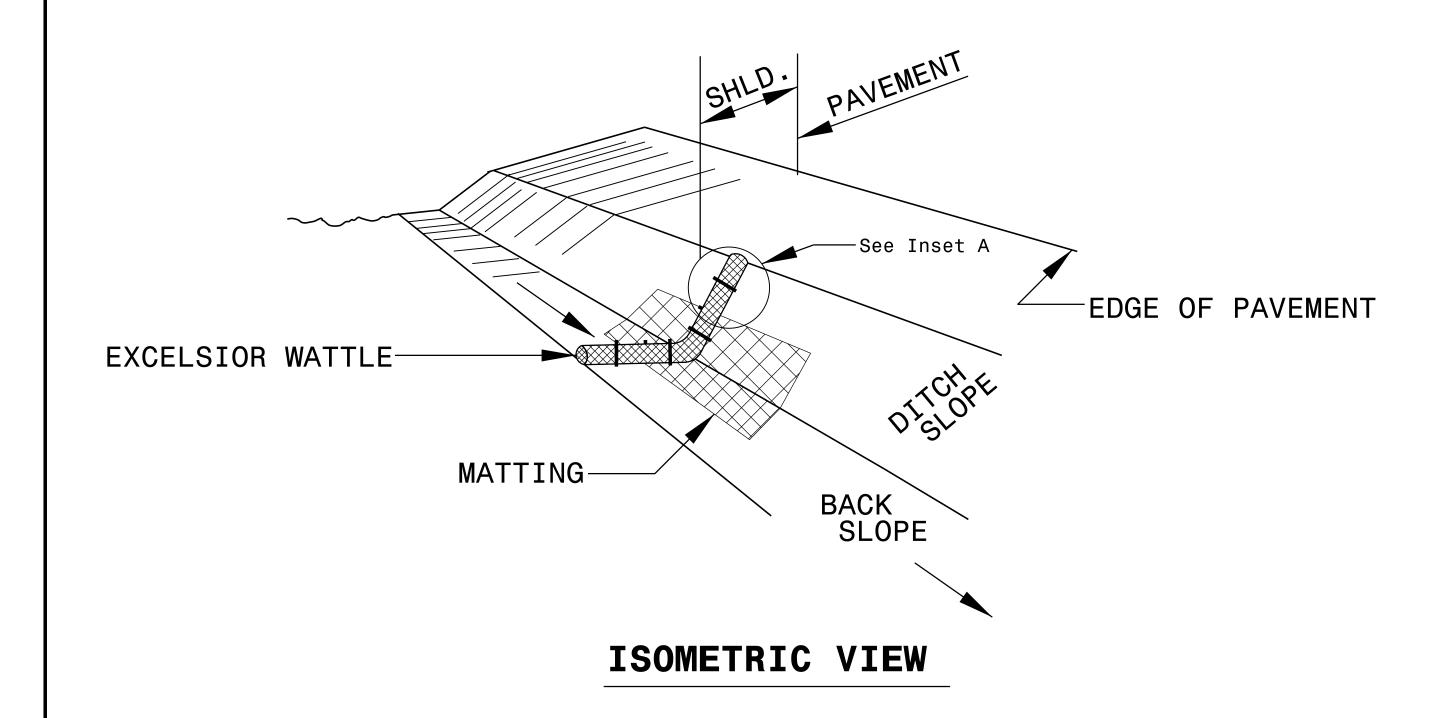
- 1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
- 2. LIMIT EARTH DIKE HEIGHT TO 5 FT.

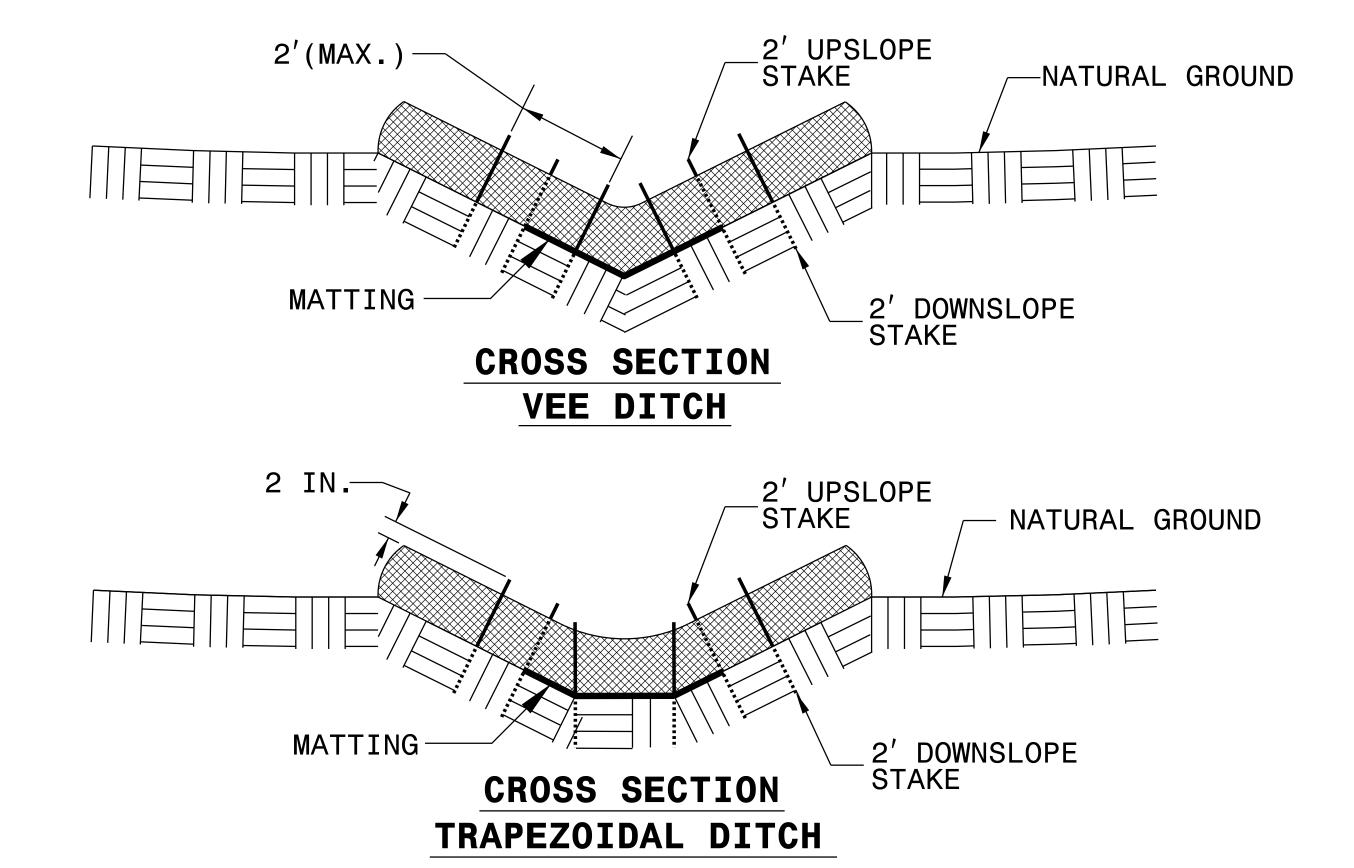
- 3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
 4. DETERMINE PRIMARY SPILLWAY WEIR LENGTH (FT.) USING Q/O.4, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
 5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
 6. SOIL STABILIZATION GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

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PROJECT REFERENCE NO	SHEET NO.	
W-5212L		EC-2A
R/W SHEET N		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
	I	





NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

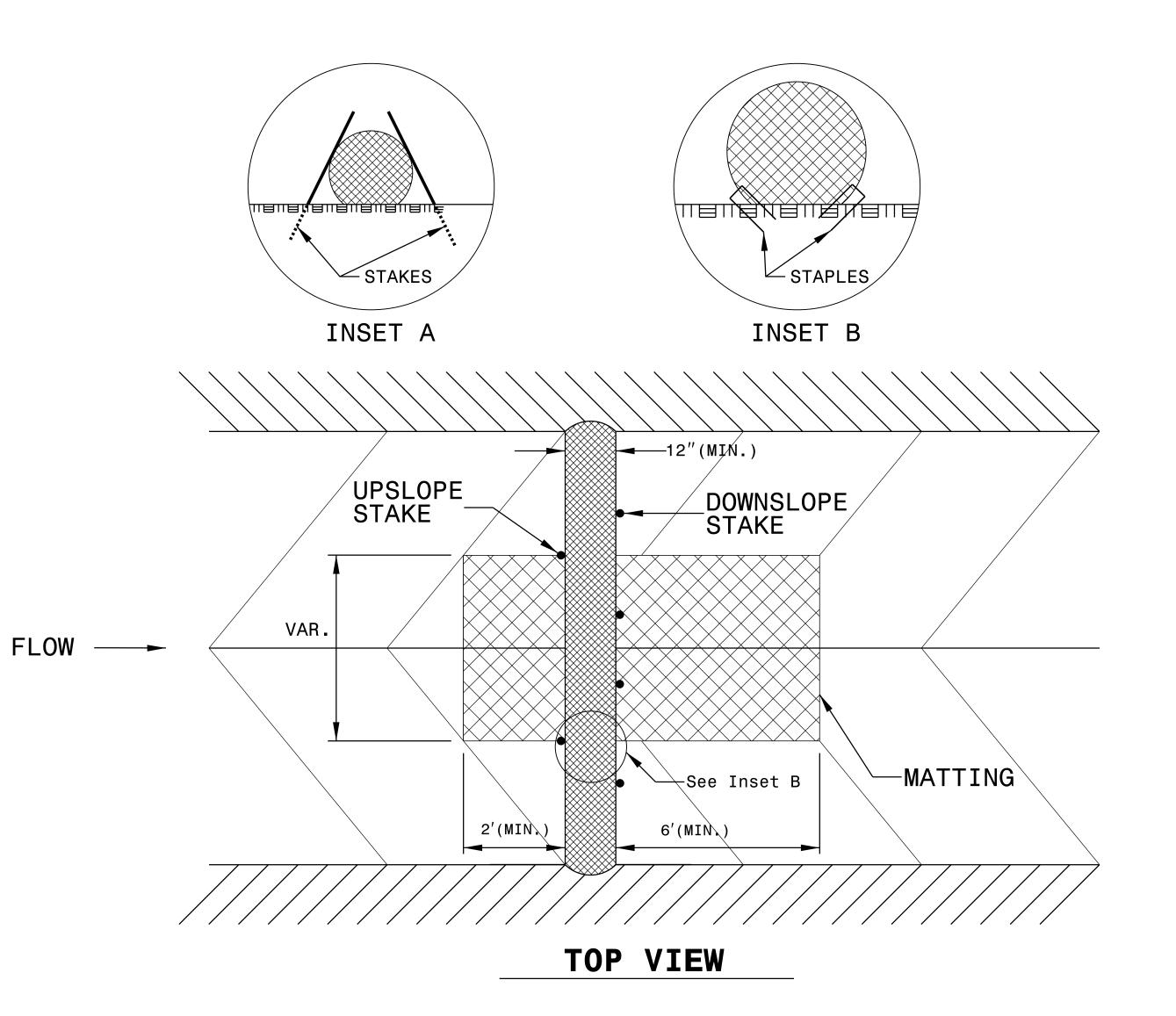
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

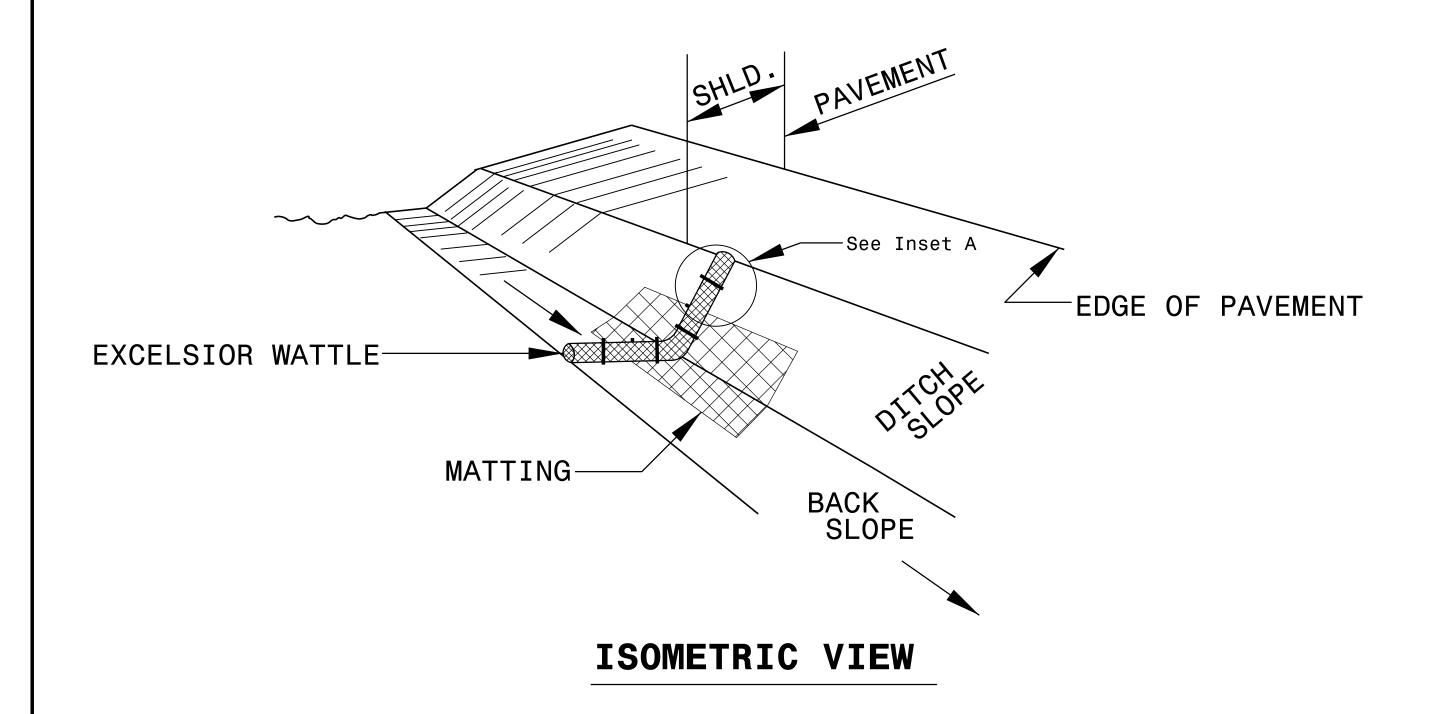
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

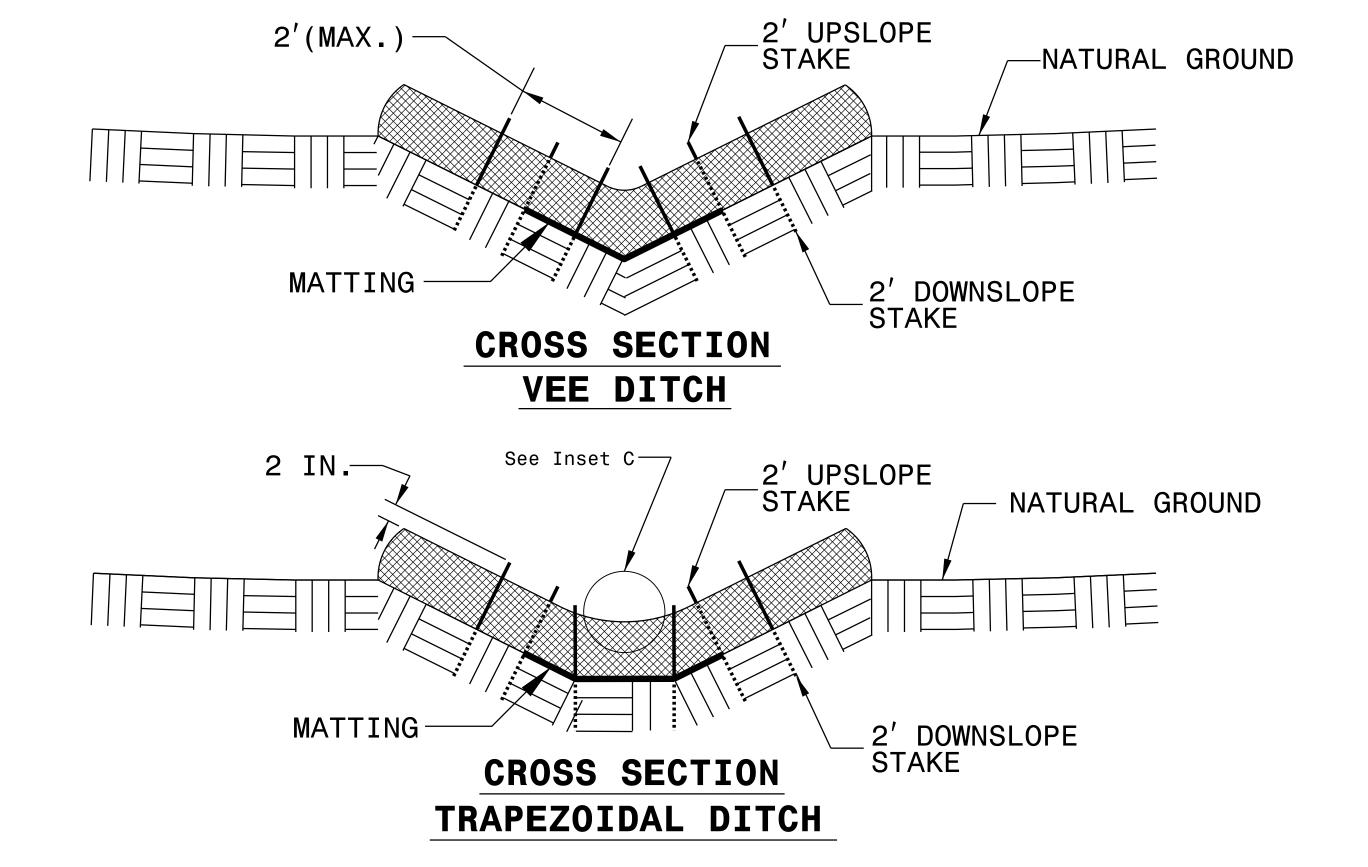
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

PROJECT REFERENCE NO). SHEET NO.
W-5212L	EC-2B
R/W SHEET N	IO
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER





NOTES:

FLOW

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

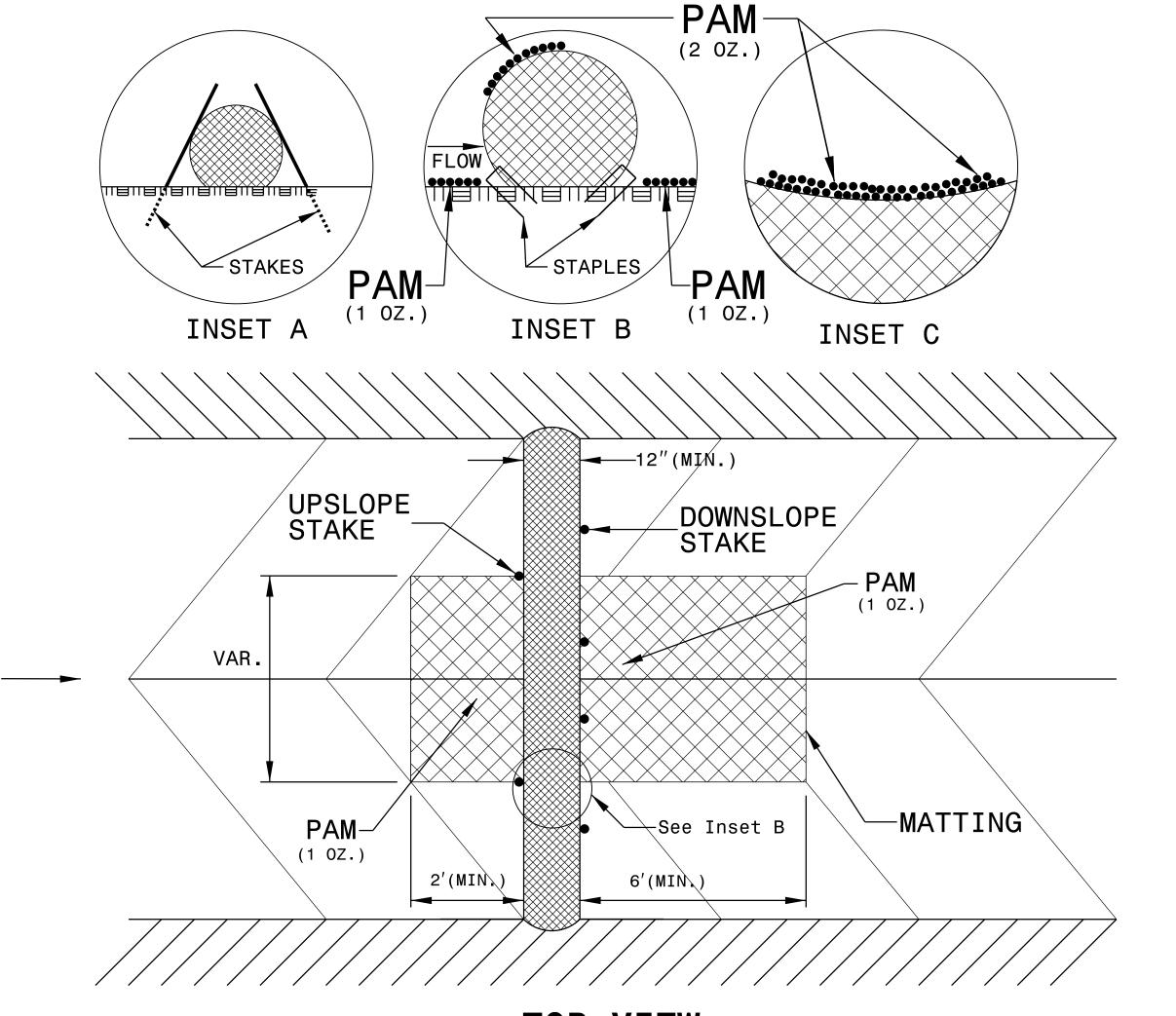
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

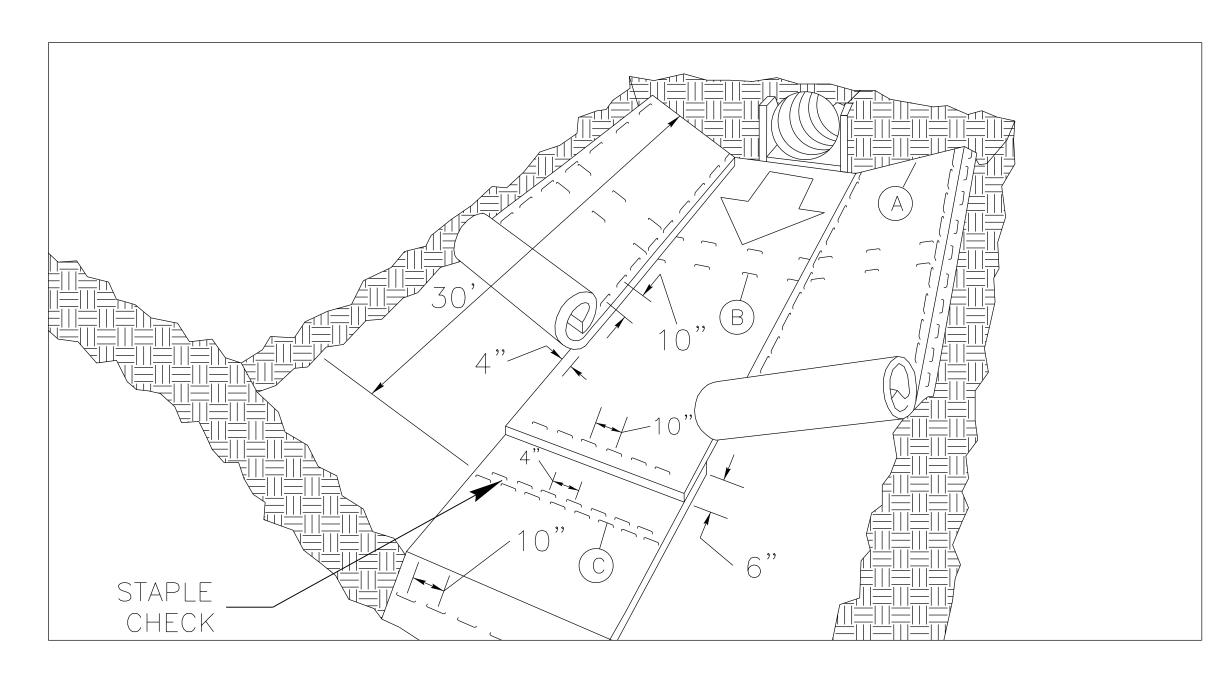
INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



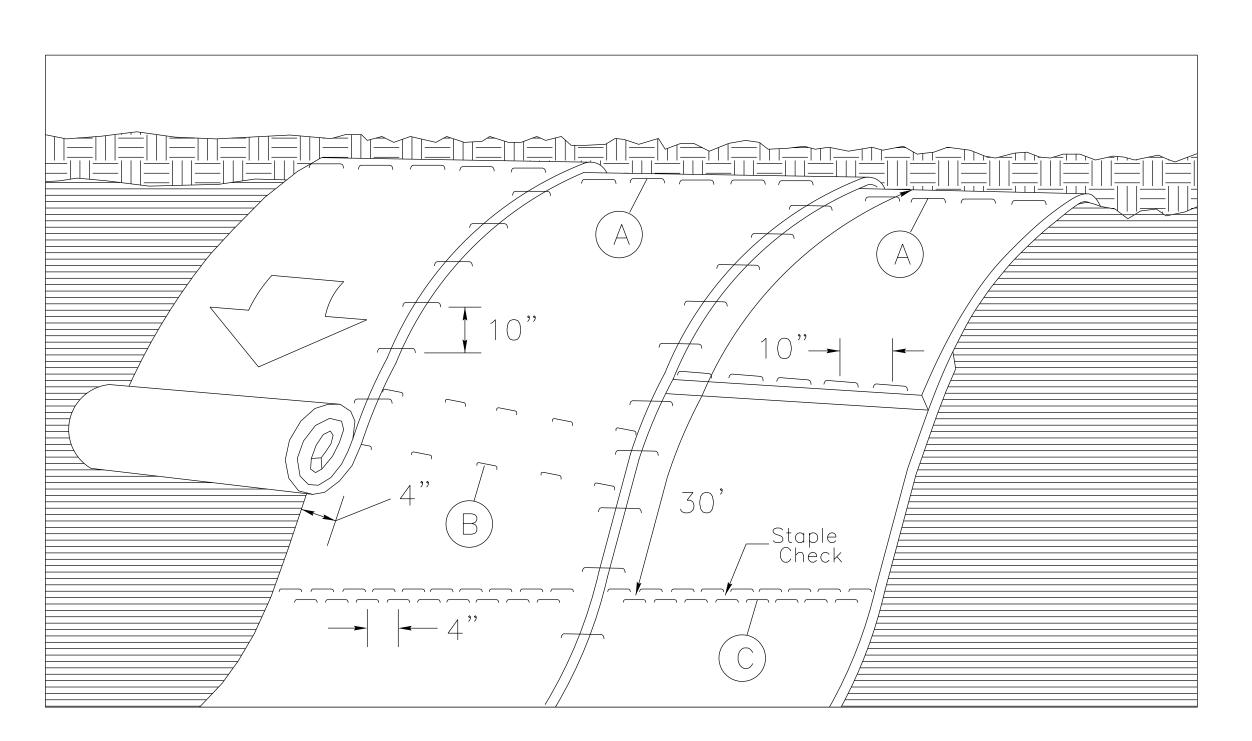
TOP VIEW

PROJECT REFERENCE NO	SHEET NO.	
W-5212L	EC-2C	
R/W SHEET N		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES



MATTING ON SLOPES

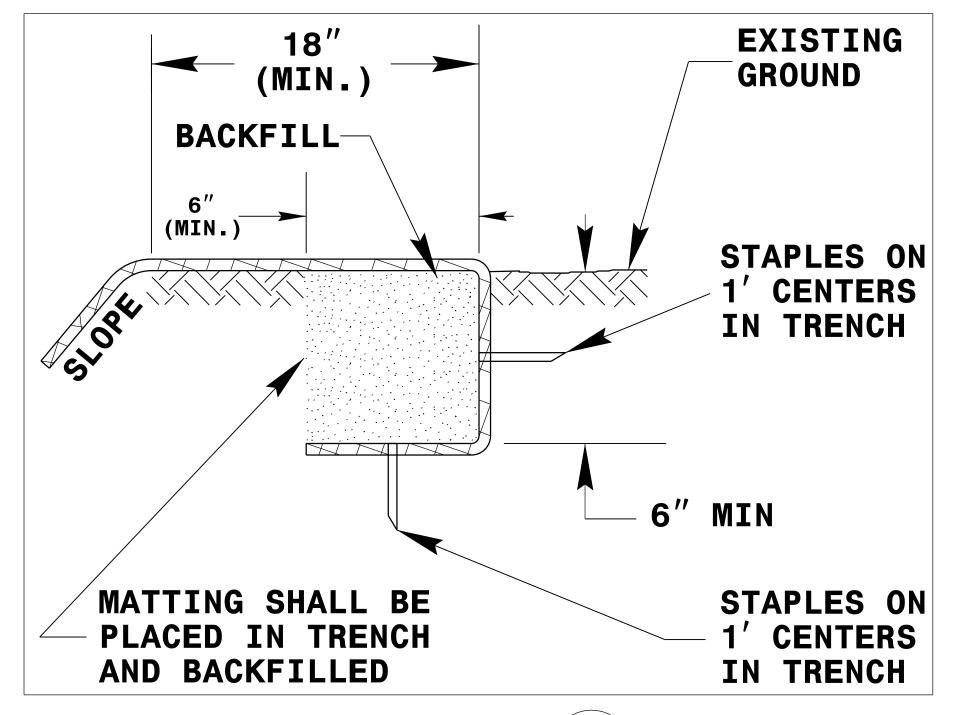
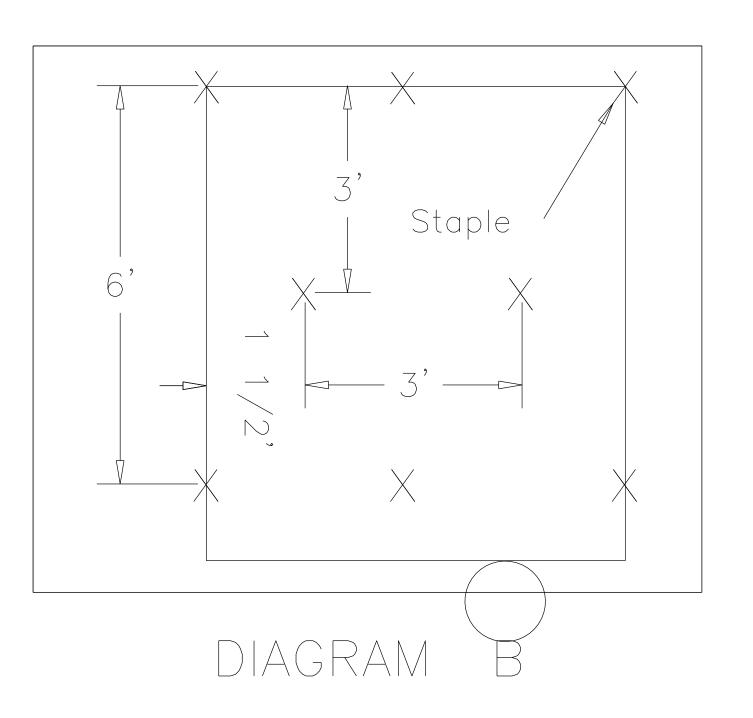


DIAGRAM (A)



Staple Check Pattern

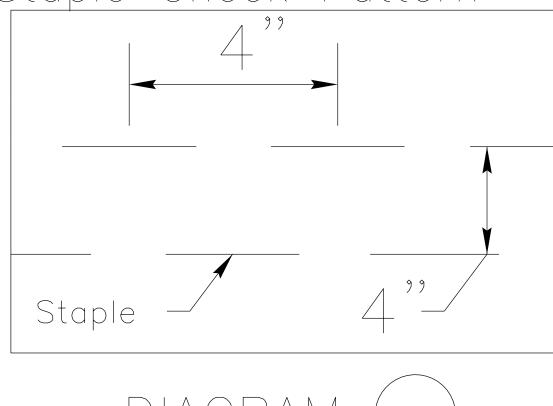


DIAGRAM (C

NOTES:

THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.

STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.		SHEET NO.
W-5212L	EC-3	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR FROSION CONTROL

DEDIMANIENT CON DEINIEODOEMENT MAT

Second S	MATTING FOR EROSION CONTROL					PERMANENT SOIL REINFORCEMENT MAT							
4 -L- 12+00 12+50 RT 70 4 -L- 15+00 15+50 LT 105 4 -L- 16+00 16+50 LT 70 4 -L- 12+50 13+50 RT 140 SUBTOTAL 685 MISCELLANEOUS MATTING 10 BE INSTALLED AS DIRECTED BY THE ENGINEER 350 TOTAL 1035 TOTAL 585	CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)	CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE	(SY)
4	4	- -	12+00	16+00	LT	615	4	- L -	12+00	13+50	LT	120	
4 -L- 12+50 13+50 RT 140	4	-レ-	12+00	12+50	R1	70	4	-レ-	15+00	15+50	LT	105	
SUBTOTAL 685 MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER 350 TOTAL 1035 ADDITIONAL PSRM TO BE INSTALLED 150 TOTAL 585							4	- L -	16+00	16+50	レイ	70	
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER 350 TOTAL 1035 ADDITIONAL PSRM TO BE INSTALLED 150 TOTAL 585							4	- -	12+50	13+50	RT	140	
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER 350 TOTAL 1035 ADDITIONAL PSRM TO BE INSTALLED 150 TOTAL 585				SU	BTOTAL	685				SUE	BTOTAL	435	
TOTAL 1035 TOTAL 585	MISCELLANEC	DUS MATTING TO BE	INSTALLED AS DIRE						ADDITIONAL				

