WBS NO: 2024CPT.01.09.10661, ETC.

CONTRACT: DA00581

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

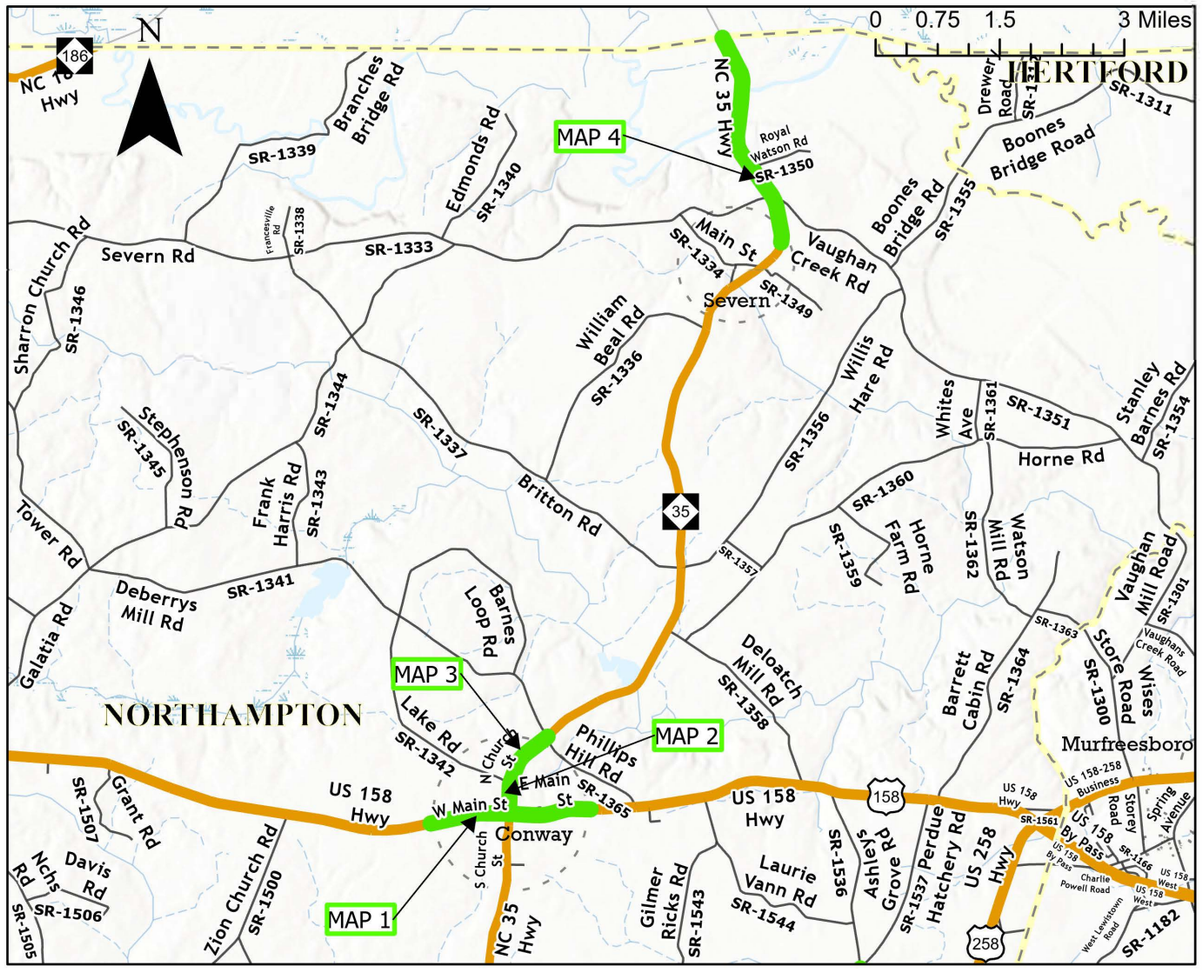
NORTHAMPTON

STATE	STATE PROJECT REFERENCE NUMBER	SHEET NO.
NC	2024CPT.01.09.10661, ETC.	1

STATE PROJECT NUMBER	DESCRIPTION
2024CPT.01.09.10661	PE, CONST.

TYPE OF WORK: MILLING, RESURFACING, & LONG LIFE PAVEMENT MARKINGS

MAP	ROUTE	FROM	TO
01	US 158	300FT West of Begin C&G	200FT East of End C&G
02	NC 35 (N. Church St.)	US 158	SR 1342 (Lake Rd.)
03	NC 35 (N. Church St.)	SR 1342 (Lake Rd.)	SR 1341 (Deberrys Mill Rd.)
04	NC 35	Mill Street	Virginia State Line



PROJECT LENGTH

MAP	LENGTH
01	1.58
02	0.29
03	0.62

MAP	LENGTH
04	2.15

Prepared in the Office of:

DIVISION OF HIGHWAYS

113 AIRPORT DR., EDENTON, NC 27932

B. N. BRASWELL, PE
DIV. PROJ. DEVELOPMENT ENGINEER

J. S. ABEL, JR.
DIVISION PROJECT TEAM LEAD

C. E. SLACHTA
DIVISION CONTRACT ENGINEER

D. H. STALLINGS
DIVISION DESIGN ENGINEER

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

WBS NO: 2024CPT.01.09.10661, ETC.

CONTRACT: DA00581

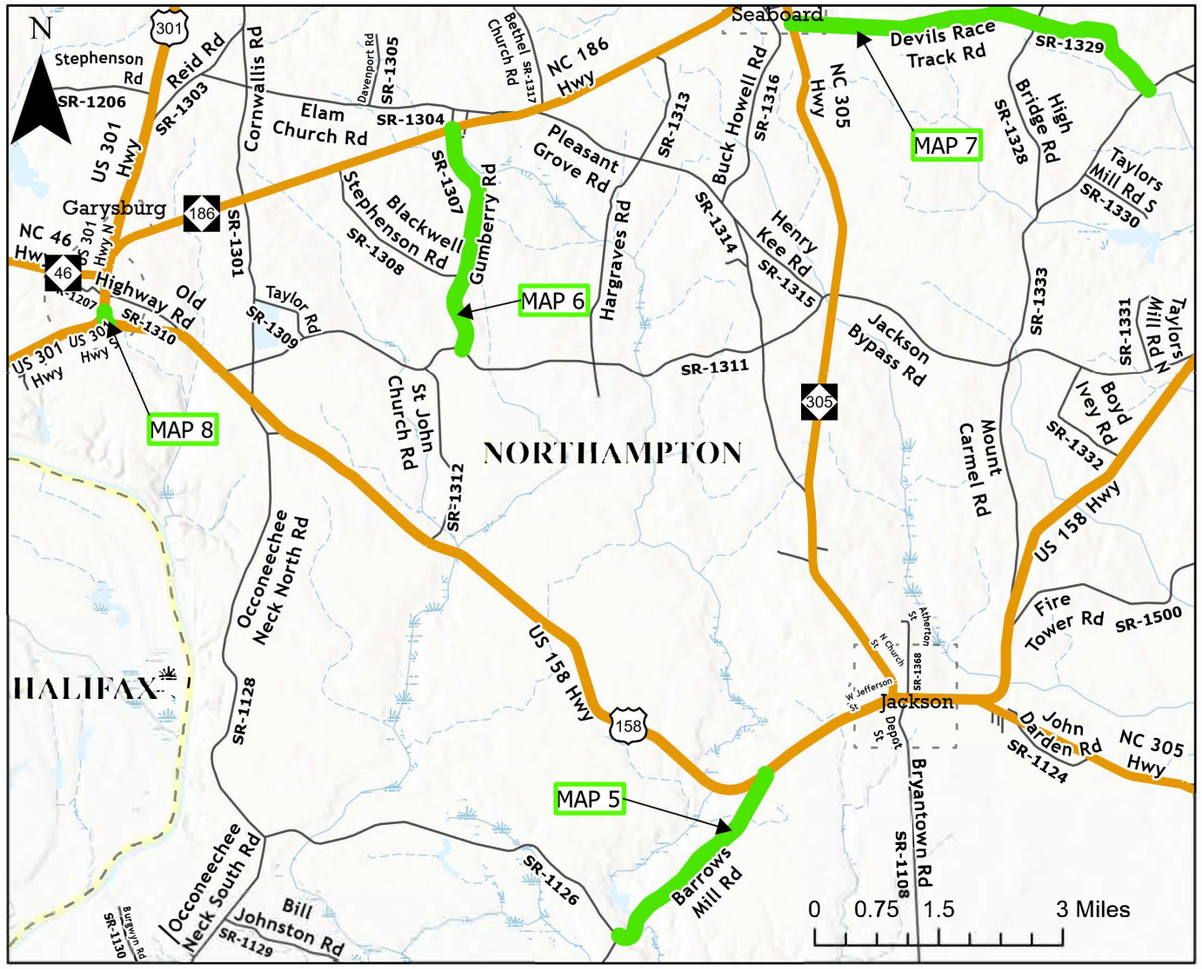
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NORTHAMPTON

STATE	STATE PROJECT REFERENCE NUMBER	SHEET NO.
NC	2024CPT.01.09.10661, ETC.	2
STATE PROJECT NUMBER		DESCRIPTION
2024CPT.01.09.20661		PE, CONST.

TYPE OF WORK: RESURFACING, LEVELING, SHOULDER RECONSTRUCTION, & LONG LIFE PAVEMENT MARKINGS

MAP	ROUTE	FROM	TO
05	SR 1126 (Barrows Mill Rd.)	SR 1127 (Bull Hill Rd.)	US 158
06	SR 1307 (Gumberry Rd.)	SR 1311 (Jackson Bypass Rd.)	NC 186
07	SR 1329 (Devils Racetrack Rd.)	SR 1333 (Mount Carmel Rd.)	NC 305
08	SR 1388 (Ramp Rd.)	US 158	US 301



PROJECT LENGTH

MAP	LENGTH
05	2.23
06	2.29
07	3.84
08	0.13

Prepared in the Office of:
DIVISION OF HIGHWAYS
113 AIRPORT DR., EDENTON, NC 27932

B. N. BRASWELL, PE
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D. H. STALLINGS
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

WBS NO: 2024CPT.01.09.10661, ETC.

CONTRACT: DA00581

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

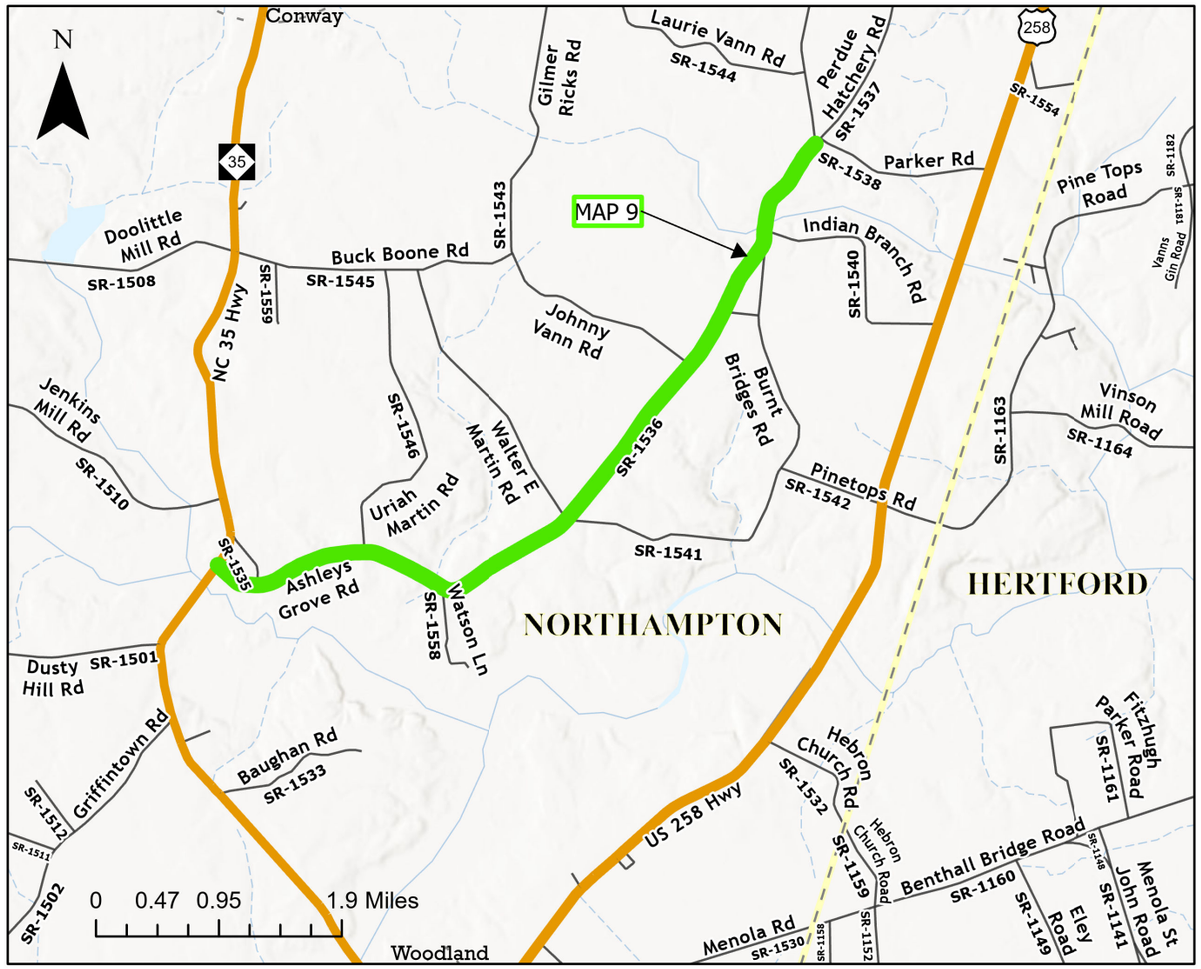
NORTHAMPTON

STATE	STATE PROJECT REFERENCE NUMBER	SHEET NO.
NC	2024CPT.01.09.10661, ETC.	3

STATE PROJECT NUMBER	DESCRIPTION
2024CPT.01.09.20661	PE, CONST.

TYPE OF WORK: RESURFACING, SHOULDER RECONSTRUCTION, & LONG LIFE PAVEMENT MARKINGS

MAP	ROUTE	FROM	TO
09	SR 1536 (Ashleys Grove Rd.)	NC 35	SR 1537 (Perdue Hatchery Rd)



PROJECT LENGTH

MAP	LENGTH
09	5.3

Prepared in the Office of:
DIVISION OF HIGHWAYS
113 AIRPORT DR., EDENTON, NC 27932

B. N. BRASWELL, PE
DIV. PROJ. DEVELOPMENT ENGINEER

C. E. SLACHTA
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J. S. ABEL, JR.
DIVISION PROJECT TEAM LEAD

D. H. STALLINGS
DIVISION DESIGN ENGINEER

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

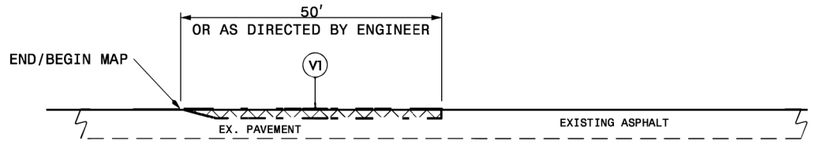
PROJECT REFERENCE NO.	SHEET NO.
2024CPT.01.09.10661, ETC.	4

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
V1	INCIDENTAL MILLING ASPHALT PAVEMENT.
V2	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
U	EXISTING PAVEMENT

NOTES:

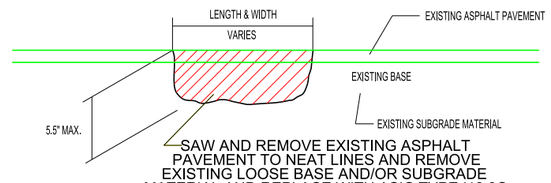
* ALL INTERSECTING ROADS ARE TO BE RESURFACED TO THE ENDS OF THEIR RADII, THE MAIN LINE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER. THIS SHALL INCLUDE ANY TAPERS AND TURN LANES LOCATED BOTH ON THE MAIN LINE OR INTERSECTING PAVED ROADWAY.
* EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE SUMMARY OF QUANTITIES.
* 1.5" OF S9.5C TO BE APPLIED THE FULL WIDTH OF THE ROADWAY
* CONTRACTOR SHALL PERFORM PATCHING EXISTING PAVEMENT, FULL DEPTH BEFORE APPLICATION OF 1.5" OF S9.5C



DETAIL 1

MAIN LINE MILLING

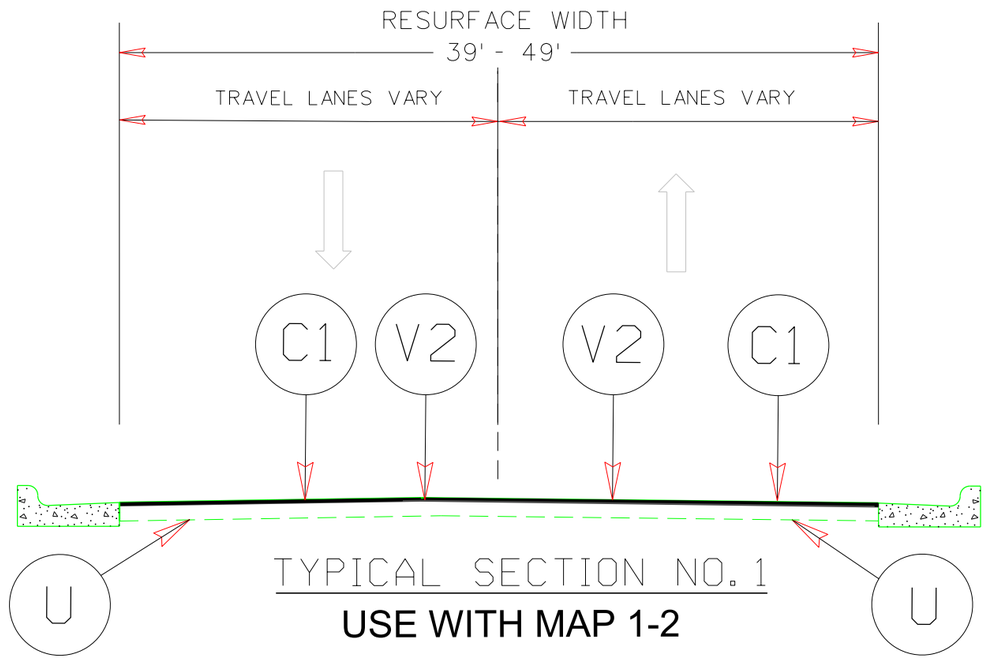
NOTE:
1. INCLUDES INCIDENTAL MILLING AT THE ENDS OF MAIN LINE SECTIONS, OR AS DIRECTED BY THE ENGINEER.
2. PAVE TO THE END OF THE MILLED SURFACE TO CREATE A SMOOTH TRANSITION.



SAW AND REMOVE EXISTING ASPHALT PAVEMENT TO NEAT LINES AND REMOVE EXISTING LOOSE BASE AND/OR SUBGRADE MATERIAL AND REPLACE WITH ASIC TYPE I19.0C OR ASBC B25.0C AS DIRECTED BY THE ENGINEER

*NOTE: EDGES OF PATCHED AREA ARE TO BE CLEANED OF ALL DEBRIS AND COATED WITH AN APPROVED TACK MATERIAL BEFORE PLACING ASPHALT.

PATCHING EXISTING PAVEMENT (FULL DEPTH)



TYPICAL SECTION NO. 1

USE WITH MAP 1-2

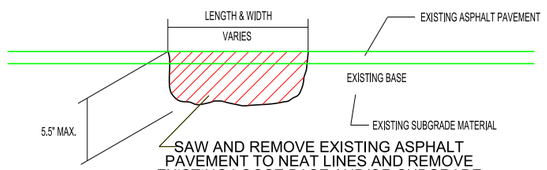
PROJECT REFERENCE NO.	SHEET NO.
2024CPT.01.09.10661, ETC.	5

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
V1	INCIDENTAL MILLING ASPHALT PAVEMENT.
T	EARTH MATERIAL
U	EXISTING PAVEMENT

NOTES:

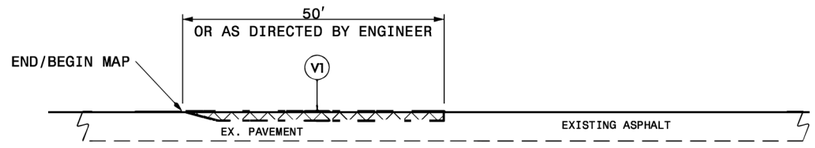
* ALL INTERSECTING ROADS ARE TO BE RESURFACED TO THE ENDS OF THEIR RADII, THE MAIN LINE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER. THIS SHALL INCLUDE ANY TAPERS AND TURN LANES LOCATED BOTH ON THE MAIN LINE OR INTERSECTING PAVED ROADWAY.
* EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE SUMMARY OF QUANTITIES.
* 1.5" OF S9.5C TO BE APPLIED THE FULL WIDTH OF THE ROADWAY
* CONTRACTOR SHALL PERFORM PATCHING EXISTING PAVEMENT, FULL DEPTH BEFORE APPLICATION OF 1.5" OF S9.5C
* NO AGGREGATE SHOULDER BORROW SHALL BE USED ON MAP 3.



SAW AND REMOVE EXISTING ASPHALT PAVEMENT TO NEAT LINES AND REMOVE EXISTING LOOSE BASE AND/OR SUBGRADE MATERIAL AND REPLACE WITH ACIC TYPE I19.0C OR ACBC B25.0C AS DIRECTED BY THE ENGINEER

*NOTE: EDGES OF PATCHED AREA ARE TO BE CLEANED OF ALL DEBRIS AND COATED WITH AN APPROVED TACK MATERIAL BEFORE PLACING ASPHALT.

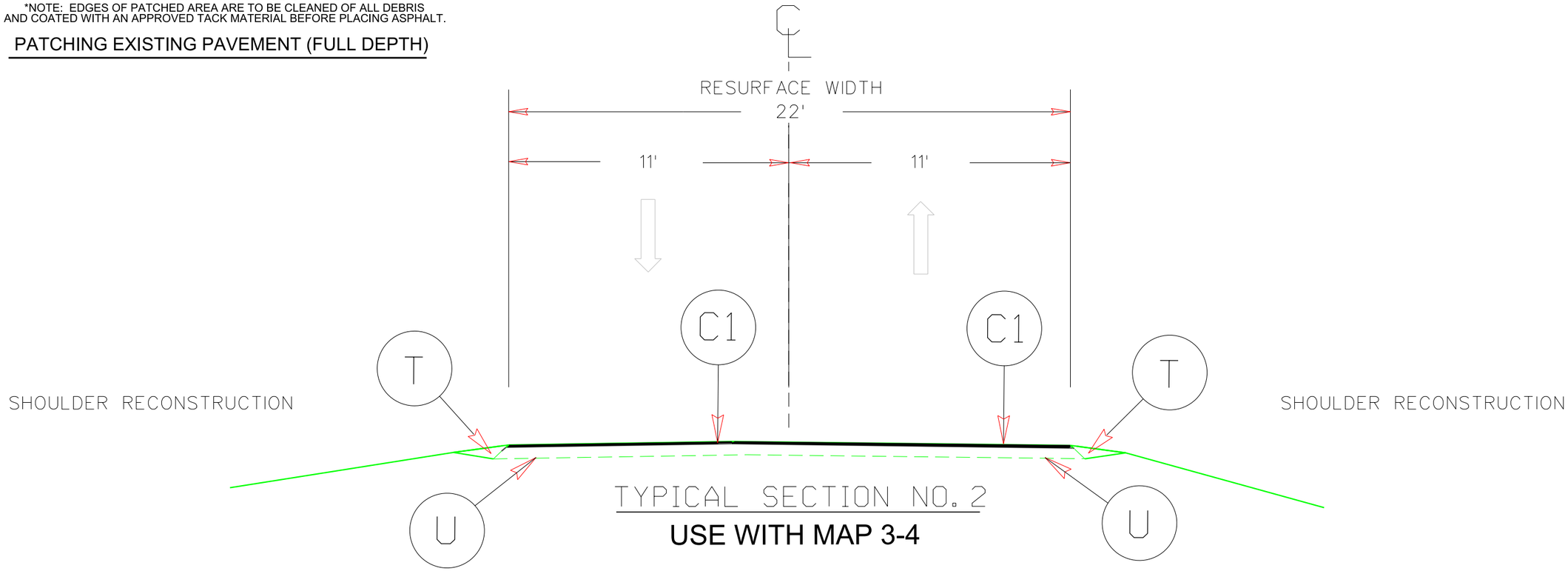
PATCHING EXISTING PAVEMENT (FULL DEPTH)



DETAIL 1

MAIN LINE MILLING

NOTE:
1. INCLUDES INCIDENTAL MILLING AT THE ENDS OF MAIN LINE SECTIONS, OR AS DIRECTED BY THE ENGINEER.
2. PAVE TO THE END OF THE MILLED SURFACE TO CREATE A SMOOTH TRANSITION.



TYPICAL SECTION NO. 2

USE WITH MAP 3-4

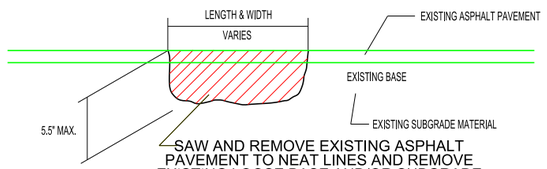
PROJECT REFERENCE NO.	SHEET NO.
2024CPT.01.09.10661, ETC.	6

PAVEMENT SCHEDULE

C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
V1	INCIDENTAL MILLING ASPHALT PAVEMENT.
T	EARTH MATERIAL
U	EXISTING PAVEMENT

NOTES:

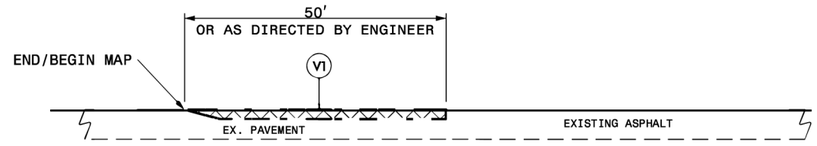
* ALL INTERSECTING ROADS ARE TO BE RESURFACED TO THE ENDS OF THEIR RADII, THE MAIN LINE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER. THIS SHALL INCLUDE ANY TAPERS AND TURN LANES LOCATED BOTH ON THE MAIN LINE OR INTERSECTING PAVED ROADWAY.
* EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE SUMMARY OF QUANTITIES.
* 1.5" OF S9.5B TO BE APPLIED THE FULL WIDTH OF THE ROADWAY
* CONTRACTOR SHALL PERFORM PATCHING EXISTING PAVEMENT, FULL DEPTH BEFORE APPLICATION OF 1.5" OF S9.5B



SAW AND REMOVE EXISTING ASPHALT PAVEMENT TO NEAT LINES AND REMOVE EXISTING LOOSE BASE AND/OR SUBGRADE MATERIAL AND REPLACE WITH ACIC TYPE I19.0C OR ACBC B25.0C AS DIRECTED BY THE ENGINEER

*NOTE: EDGES OF PATCHED AREA ARE TO BE CLEANED OF ALL DEBRIS AND COATED WITH AN APPROVED TACK MATERIAL BEFORE PLACING ASPHALT.

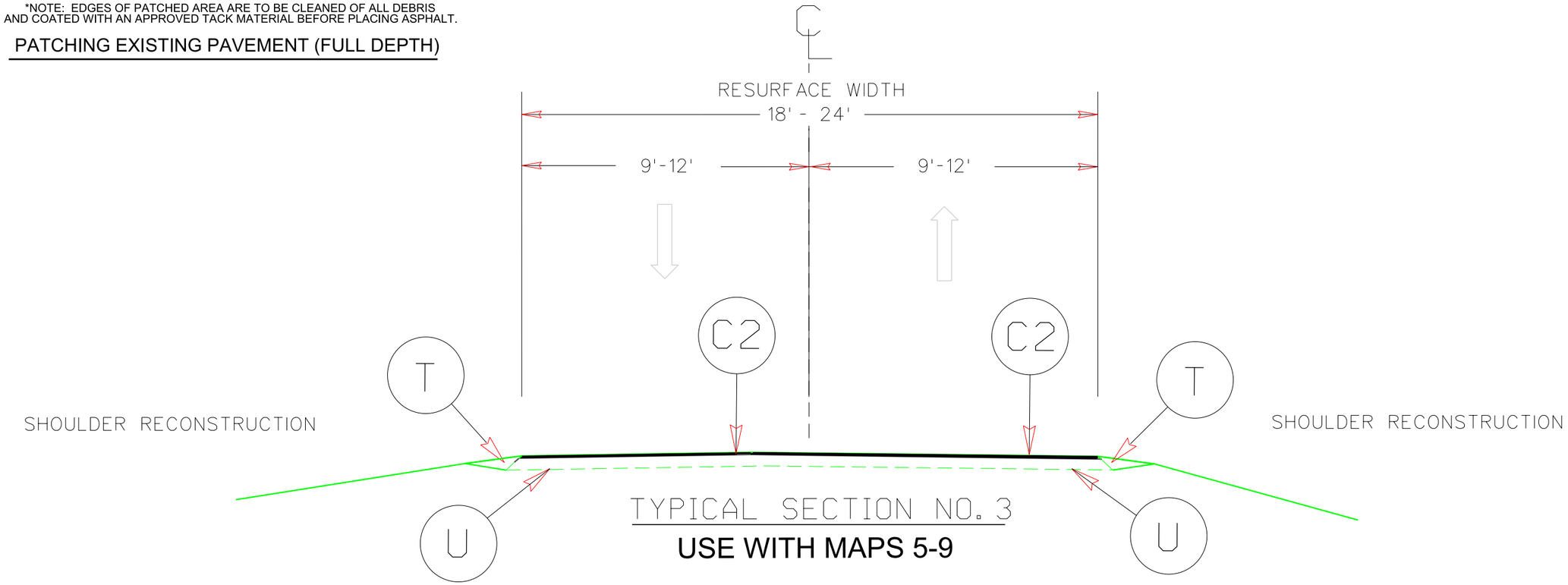
PATCHING EXISTING PAVEMENT (FULL DEPTH)



DETAIL 1

MAIN LINE MILLING

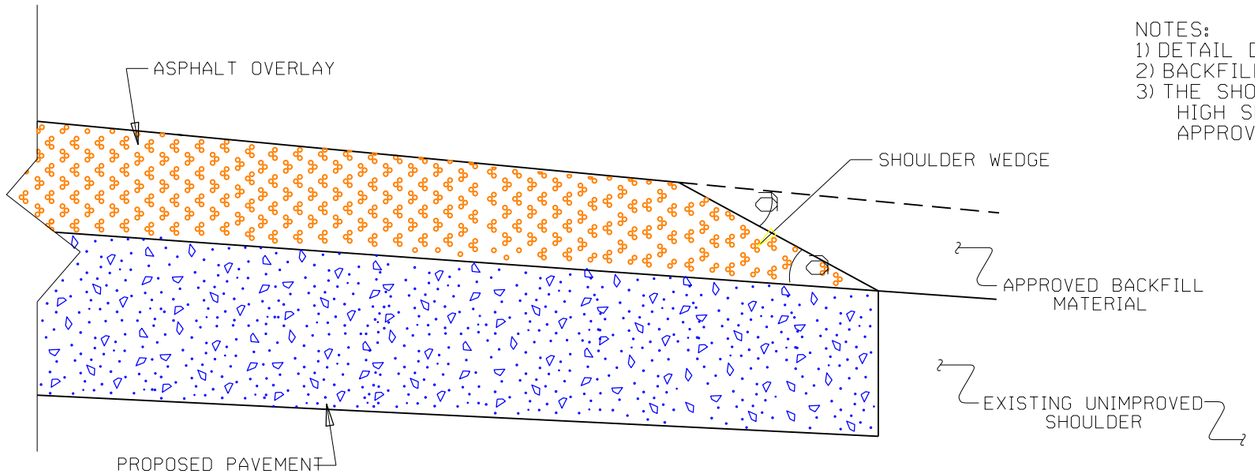
NOTE:
1. INCLUDES INCIDENTAL MILLING AT THE ENDS OF MAIN LINE SECTIONS, OR AS DIRECTED BY THE ENGINEER.
2. PAVE TO THE END OF THE MILLED SURFACE TO CREATE A SMOOTH TRANSITION.



TYPICAL SECTION NO. 3

USE WITH MAPS 5-9

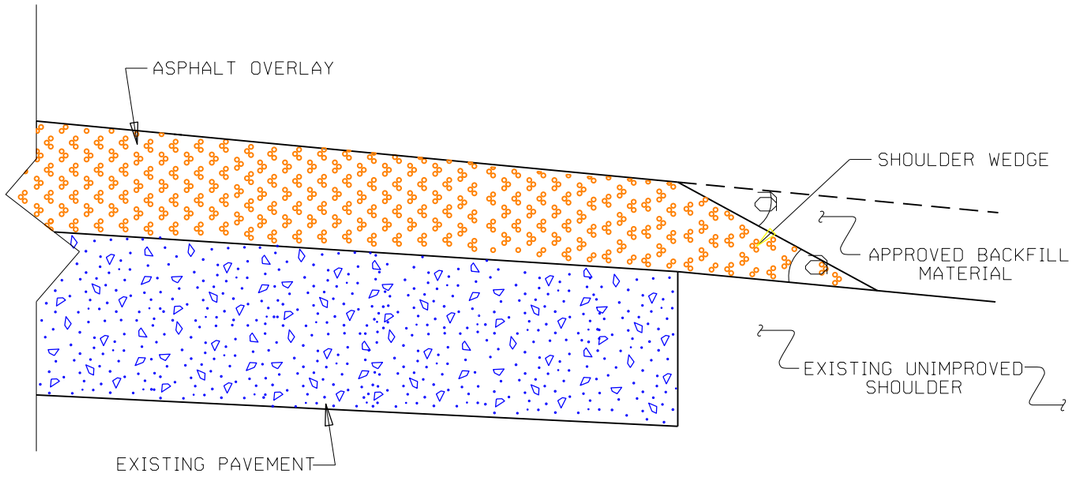
PROJECT REFERENCE NO.	SHEET NO.
2024CPT.01.09.10661, ETC.	7



NOTES:
1) DETAIL DOES NOT APPLY TO OGAFC AND ULTRA-THIN BONDED WEARING COURSE.
2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.

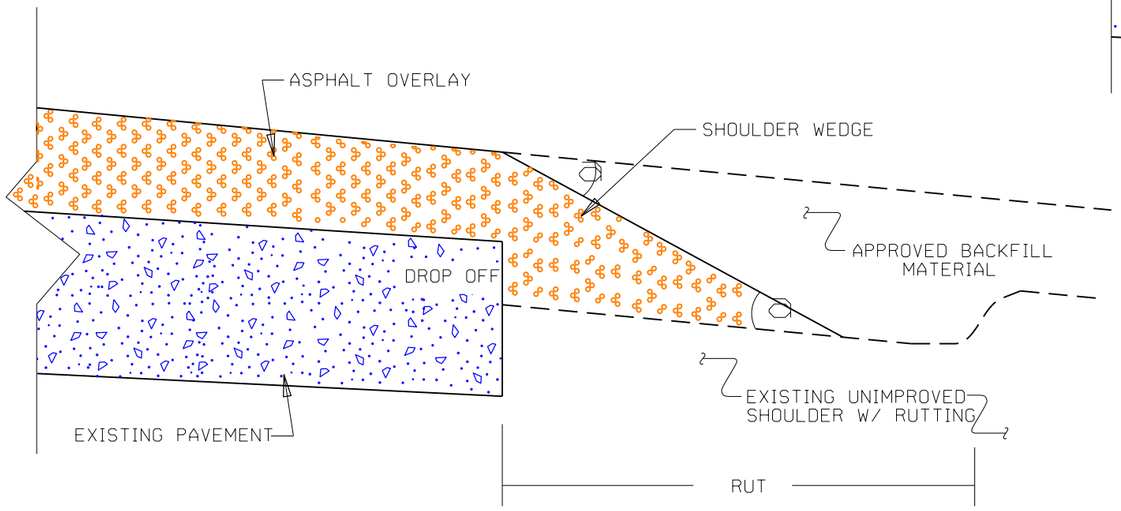
SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SHOULDER WEDGE DETAILS

ORIGINAL BY: T.SPELL DATE: 7-19-11
MODIFIED BY: DATE: 2/2/16
CHECKED BY: DATE:
FILE SPEC.: ssusr/details/stand/shoulderwedgedetail.dgn

PROJECT REFERENCE NO.	SHEET NO.
2024CPT.01.09.10661	8
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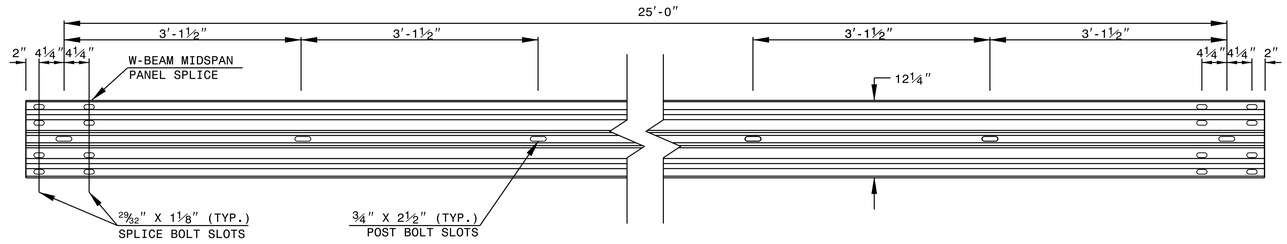
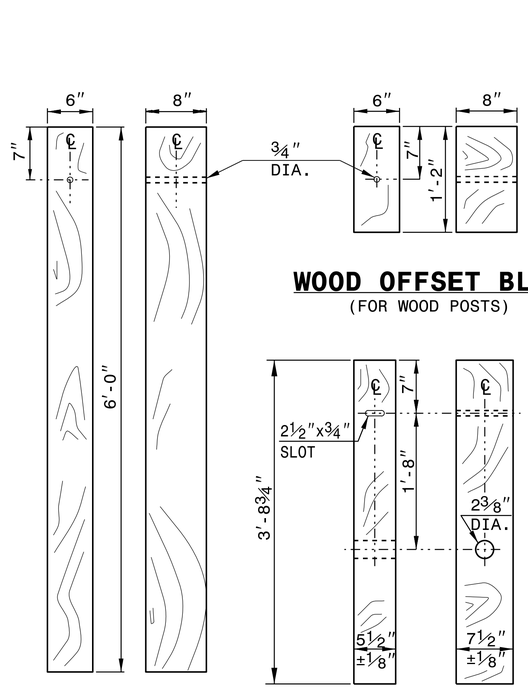
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02



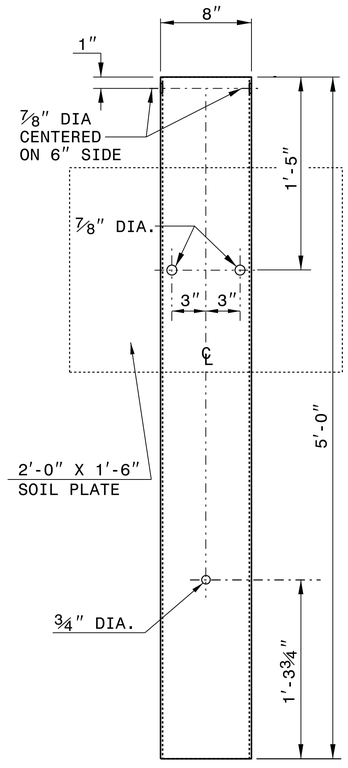
STANDARD W-BEAM GUARDRAIL



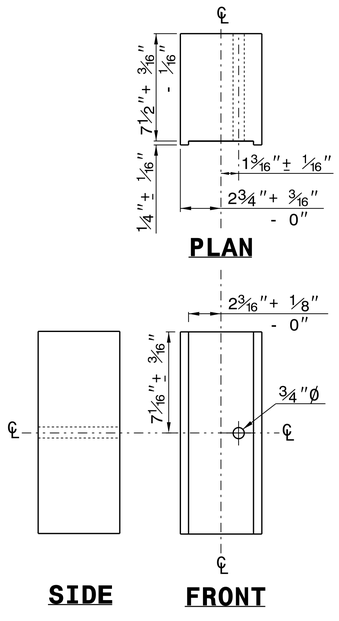
WOOD OFFSET BLOCK
(FOR WOOD POSTS)

STANDARD LINE POST

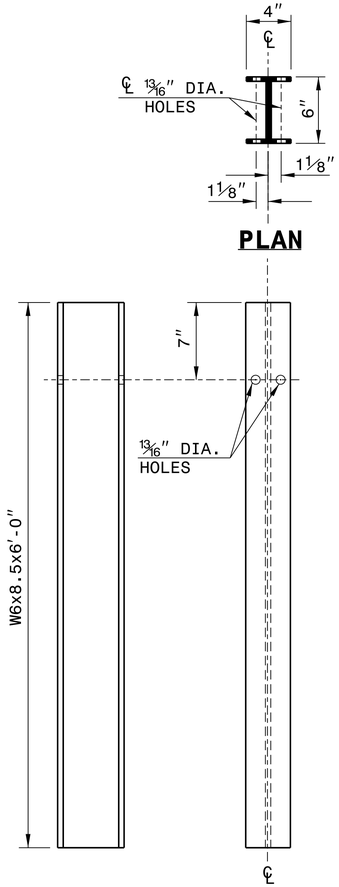
SHORT WOOD BREAKAWAY POST



STEEL TUBE
TS 6"x8"x0.1875"



ROUTED OFFSET BLOCK



"W6" STEEL POST

SYSTEM PARTS

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02

NORTH CAROLINA PROFESSIONAL SEAL 33144 ENGINEER NICOLE M WALKER

CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

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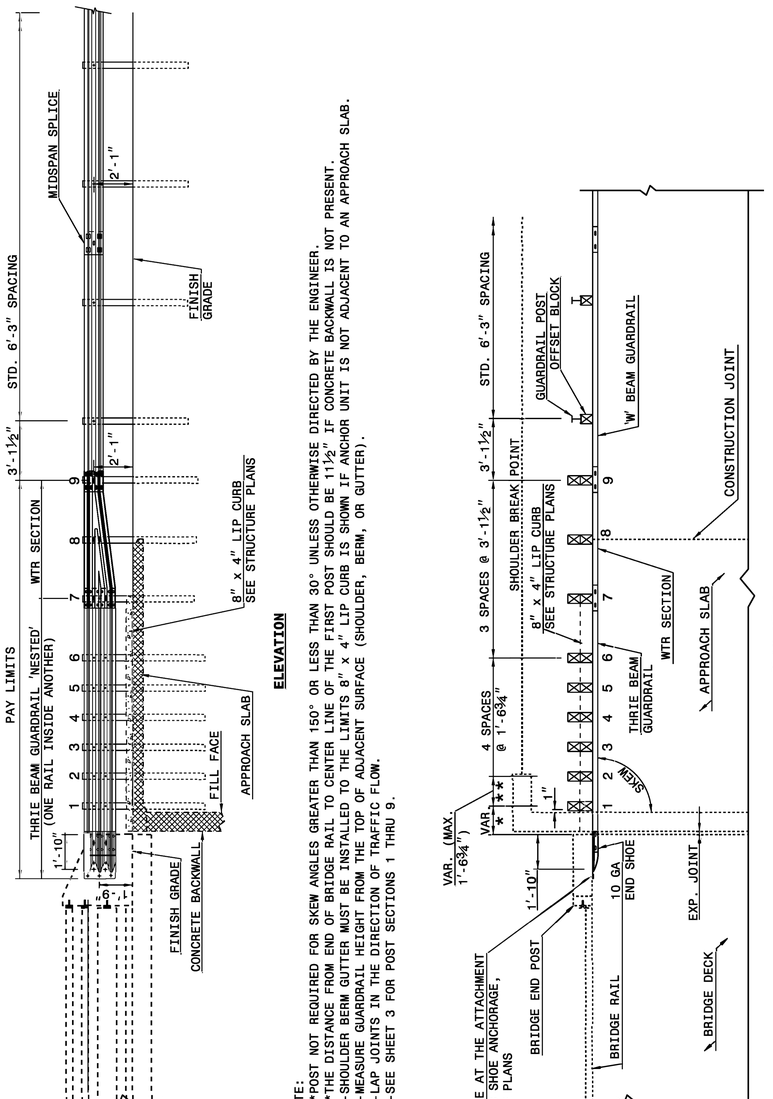
ORIGINAL BY: J.HOWERTON DATE: 3-7-2018
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

PROJECT REFERENCE NO.	SHEET NO.
2024CPT.01.09.10661	9

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

ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III
FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7
862D03



ELEVATION

PLAN VIEW

NOTE:
**POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
*THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT.
-SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
-MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
-LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
-SEE SHEET 3 FOR POST SECTIONS 1 THRU 9.

GUARDRAIL ANCHOR UNIT, TYPE III
FOR ATTACHMENT TO RAIL ON BRIDGE

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

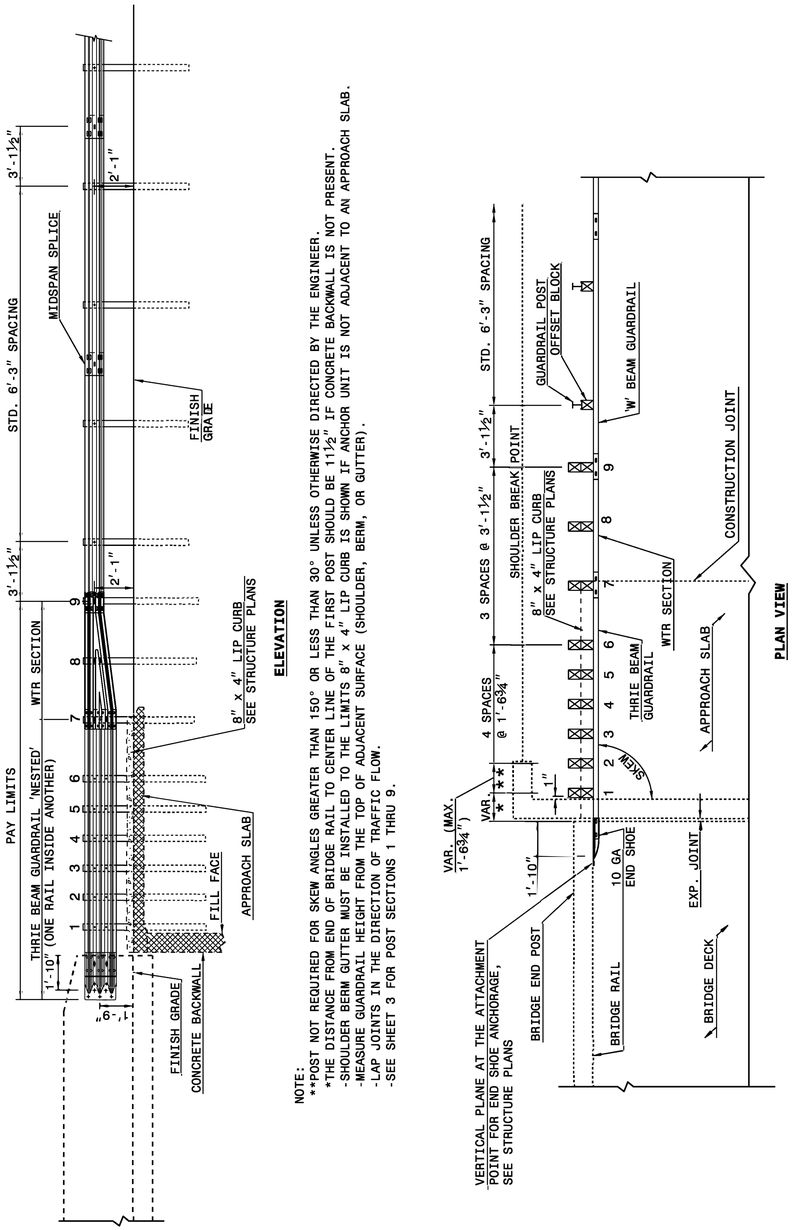
ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III
FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7
862D03

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

ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7
862D03



ELEVATION

PLAN VIEW

NOTE:
**POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
*THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT.
-SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
-MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
-LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
-SEE SHEET 3 FOR POST SECTIONS 1 THRU 9.

GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON BRIDGE - SUB REGIONAL TIER

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

ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III
FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7
862D03

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

ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7
862D03

14-DEC-2017 10:36
S:\Contracts\Contracts\Special Details\jhowerton\Standard Drawings\2018 Standard Drawings\Details in Lieu of Standards\Division 8\0862d0301.dgn
jhowerton AT CSD-2912595

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 33144 NICOLE M HACKLER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

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ORIGINAL BY: J HOWERTON DATE: 06-22-12
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

COMPUTED BY:	DHS	DATE:	01/30/2024
CHECKED BY:	DHS	DATE:	01/30/2024

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

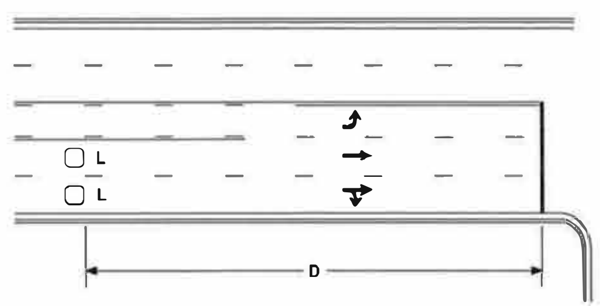
PROJECT REFERENCE NO.	SHEET NO.
2024CPT.01.09.10661, ETC.	10

GUARDRAIL SUMMARY

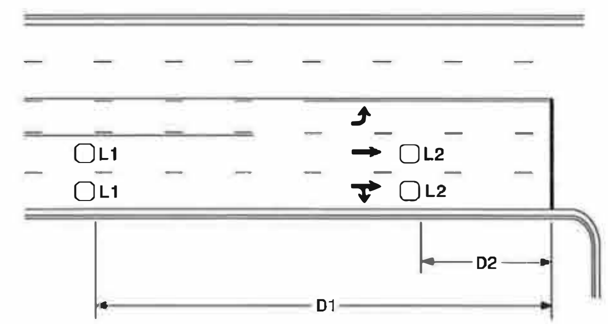
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

MAP NO.	BEG. STA.	END STA.	LOCATION	EXIST. LENGTH	EXISTING ANCHORS				PROPOSED ANCHORS							IMPACT ATTENUATOR TYPE TL-3		STEEL BEAM GUARDRAIL (LF)	REMOVE EXISTING GUARDRAIL (LF)	REMOVE & RESET EXISTING GUARDRAIL (LF)	REMARKS
					GREU, TL-2 / TL-3	GREU, CAT-1 / AT-1	GRAU TYPE III	GRAU TYPE B-83	GREU, TL-2	GREU, TL-3	GREU, TYPE AT-1	GREU, TYPE CAT-1	GRAU, TYPE III	GRAU, TYPE B-77	GRAU, TYPE B-83	G	NG				
4	70+75.00	72+71.00	RT	196.00'	1	N/A	N/A	1		1					1			121	196		APPROACH TO BRIDGE NORTHBOUND (1 TL-3 + 1 B-83 = -75 L.F.)
4	70+75.00	72+71.00	LT	196.00'	1	N/A	N/A	1		1					1			121	196		TRAILING EDGE FROM BRIDGE SOUTHBOUND (1 TL-3 + 1 B-83 = -75 L.F.)
4	77+14.00	79+25.00	RT	211.00'	1	N/A	N/A	1		1					1			136	211		TRAILING EDGE FROM BRIDGE NORTHBOUND (1 TL-3 + 1 B-83 = -75 L.F.)
4	77+14.00	79+25.00	LT	211.00'	1	N/A	N/A	1		1					1			136	211		APPROACH TO BRIDGE SOUTHBOUND (1 TL-3 + 1 B-83 = -75 L.F.)
		SUBTOTAL		814.00'																	**ANCHOR DEDUCTIONS**
	LESS ANCHOR DEDUCTIONS																				GREU, TL-3 50.00' / GRAU, TYPE III 18.75'
	GREU, TL-3	4 @ 50.00'	=	200.00'																	GREU, TL-2 50.00' / GRAU, TYPE B-77 22.875'
	B-83	4 @ 18.75'	=	100.00'																	GREU, AT-1 6.25' / GRAU, TYPE B-83 25.00'
																					GREU, CAT-1 6.25'
TOTALS:				**514.00'**	4			4		**4**					**4**			**514.00'**	**814.00'**		

High Speed Detection
(≥40 mph)



OR



Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired in series for TS1 Controllers
Wired separately for TS2, 170, and 2070L Controllers

Volume Density Operation

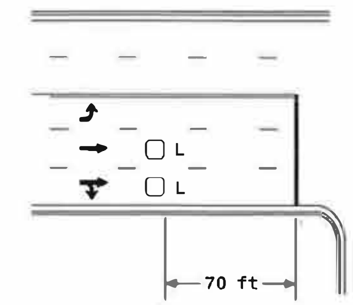
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

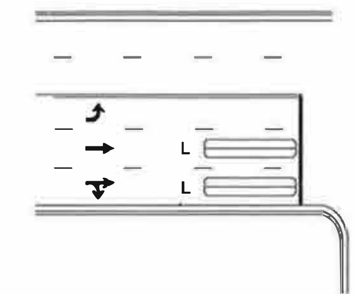
"Stretch" Operation

Low Speed Detection
(≤35 mph)



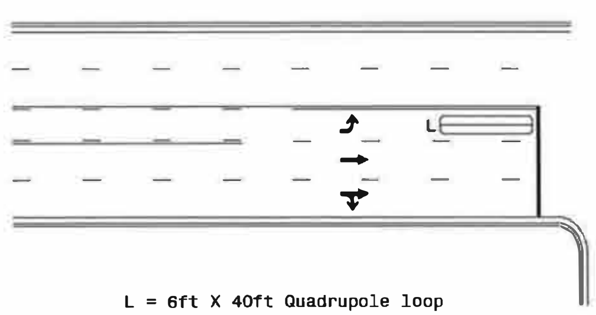
L = 6ft X 6ft
Wired in series

OR



L = 6ft X 40ft
Quadrupole loop, wired separately

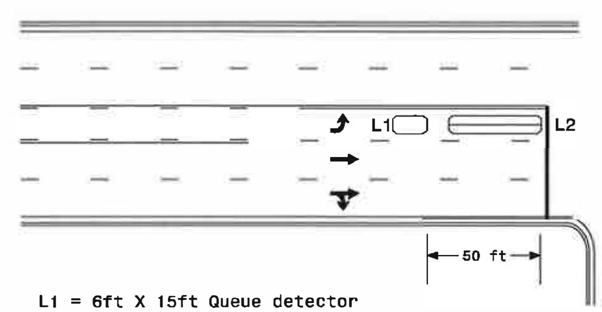
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

OR

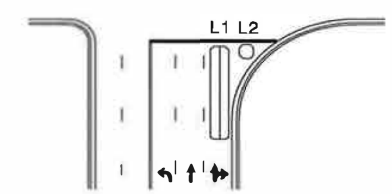


L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

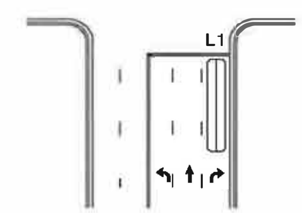
Queue Loop Detection

Right Turn Lane Detection

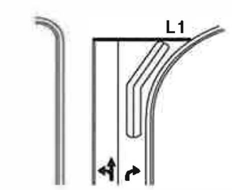
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



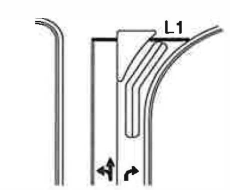
Shared Lane/
Wide Radius Turn



Standard Turn

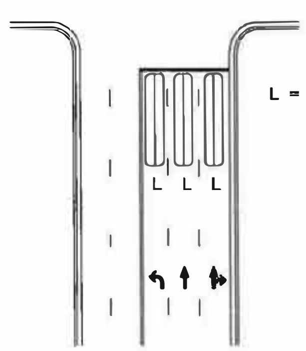


Wide Radius Turn



Channelized Turn

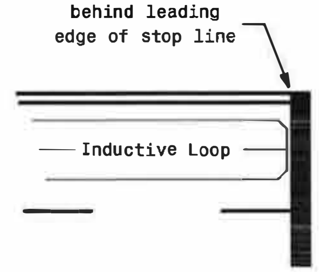
Side Street Detection



L = 6ft X 40ft
Quadrupole loop
Wired to separate detectors/channels

Presence Loop Placement at Stop Lines

Locate loop slightly behind leading edge of stop line



Note:
Loop may be located in advance of stop line under any of the following conditions:
1) stop line is greater than 15' from edge of intersecting roadway
2) loop detects a permissive or protected/permissive left turn
3) for an exclusive right turn lane

Recommended Number of Turns

Single 6' X 6' loop
(when wired separately):

Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' Loops:
Lead-in < 150', use 2 turns
Lead-in > 150', use 3 turns

Prepared in the Offices of:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy.Garner,NC 27529

Typical Signal Loop Locations

PLAN DATE: January 2015	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:

REVISIONS	INIT.	DATE

SCALE
N/A

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 23489 ENGINEER PAMELA L. ALEXANDER

P.L. Alexander 1/30/2015
DATE
SIG. INVENTORY NO.

30-JAN-2015 12:39
S:*ITS&SU*ITS Signals*Signal Design Section*Eastern Region*looptypical2015.dgn

PROJECT NO.	SHEET NO.	TOTAL NO.
2024CPT.01.09.10661, ETC.	12	

SUMMARY OF QUANTITIES

												0000100000-N	0106000000-E	1220000000-E	1245000000-E	1260000000-E	1297000000-E	1330000000-E	1519000000-E	1520000000-E	1523000000-E	1575000000-E	1705000000-E	2549000000-E
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	MATERIAL TRANSFER VEHICLE REQUIRED	MOBILIZATION	BORROW EXCAVATION	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	MILLING ASPHALT PAVEMENT (1½")	INCIDENTAL MILLING	ASPHALT CONC SURFACE COURSE, S9.5B	ASPHALT CONC LEVELING COURSE, S9.5B	ASPHALT CONC SURFACE COURSE, S9.5C	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT (FULL DEPTH)	2'-6" CONCRETE CURB & GUTTER
										MI	FT		LS	CY	TONS	SMI	TONS	SY	SY	TONS	TONS	TONS	TONS	TON	LF
2024CPT.01.09.10661	Northampton	1	US-158	FROM BEGIN C&G (MP 23.94) TO END C&G (MP 25.52)	1	2	2WU	NO	NO	1.57	39	YES	1		10			35,922	1,260			3,513	208	10	31
2024CPT.01.09.10661	Northampton	2	NC-35 (SECTION #1)	FROM US 158 (MP 11.54) TO SR 1342 (LAKE ROAD) (MP 11.82)	1	2	2WU	NO	NO	0.30	49	YES	*					8,682	140			817	48	5	
2024CPT.01.09.10661	Northampton	3	NC-35 (SECTION #2)	FROM SR 1342 (LAKE ROAD) (MP 11.82) TO SR 1341 (DEBERRYS MILL ROAD) (MP 12.44)	2	2	2WU	NO	NO	0.62	22	YES	*	19	50	1.24		8,002	250			837	50	5	
2024CPT.01.09.10661	Northampton	4	NC-35 (SECTION #3)	FROM MILL STREET (MP 18.28) TO VIRGINIA STATE LINE (MP 20.43)	2	2	2WU	NO	NO	2.15	22	YES	*		90	4.30	97	27,749	2,325			2,793	165	10	
TOTAL FOR PROJ NO. 2024CPT.01.09.10661										**4.64**			*	**19**	**150**	**5.54**	**97**	**80,355**	**3,975**			**7,960**	**471**	**30**	**31**
2024CPT.01.09.20661	Northampton	5	SR-1126 / BARROWS MILL ROAD	FROM SR 1127 (BULL HILL ROAD) (MP 3.98) TO US 158 (MP 6.20)	3	2	2WU	NO	NO	2.22	20	NO	*	67	60	4.44			1,235	2,490			175	267	
2024CPT.01.09.20661	Northampton	6	SR-1307 / GUMBERRY ROAD	FROM NC 186 (MP 0.00) TO SR 1311 (JACKSON BYPASS ROAD) (MP 2.29)	3	2	2WU	NO	NO	2.29	18	NO	*	69	65	4.58			825	2,285	30		151	15	
2024CPT.01.09.20661	Northampton	7	SR-1329 / DEVILS RACE TRACK ROAD	FROM SR 1333 (MOUNT CARMEL ROAD) (MP 0.00) TO NC 305 (MP 3.84)	3	2	2WU	NO	NO	3.84	18	NO	*	115	85	7.68			800	3,778			247	20	
2024CPT.01.09.20661	Northampton	8	SR-1388 / RAMP ROAD	FROM US 158 (MP 0.00) TO US 301 (MP 0.12)	3	2	2WU	NO	NO	0.13	24	NO	*	2		0.26			130	167			11	5	
2024CPT.01.09.20661	Northampton	9	SR-1536 / ASHLEYS GROVE ROAD	FROM NC 35 (MP 0.00) TO SR 1538 (PARKER ROAD) (MP 5.40)	3	2	2WU	NO	NO	5.32	20	NO	*	160	190	10.64			3,375	6,057			395	25	
TOTAL FOR PROJ NO. 2024CPT.01.09.20661										**13.80**			*	**413**	**400**	**27.60**			**6,365**	**14,777**	**30**		**979**	**332**	
GRAND TOTAL										**18.44**			**1**	**432**	**550**	**33.14**	**97**	**80,355**	**10,340**	**14,777**	**30**	**7,960**	**1,450**	**362**	**31**

					2830000000-N	2845000000-N	3030000000-E	3287000000-N	3319000000-N	3360000000-E	6000000000-E	6071012000-E	6084000000-E	6117000000-N	7324000000-N	7444000000-E	7456100000-E
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	ADJUSTMENT OF MANHOLES	ADJUSTMENT OF METER OR VALVE BOXES	STEEL BEAM GUARDRAIL	GUARDRAIL END UNITS, TYPE TL-3	GUARDRAIL ANCHOR UNITS, TYPE B-83	REMOVAL OF EXISTING GUARDRAIL	TEMPORARY SILT FENCE	COIR FIBER WATTLE	SEEDING & MULCHING	RESPONSE FOR EROSION CONTROL	JUNCT BOX (STD SIZE)	INDUCTIVE LOOP SAWCUT	LEAD-IN CABLE (14-2)
					EA	EA	LF	EA	EA	LF	LF	LF	ACR	EA	EA	LF	LF
2024CPT.01.09.10661	Northampton	1	US-158	FROM BEGIN C&G (MP 23.94) TO END C&G (MP 25.52)	26	14									2	205	115
2024CPT.01.09.10661	Northampton	2	NC-35 (SECTION #1)	FROM US 158 (MP 11.54) TO SR 1342 (LAKE ROAD) (MP 11.82)	5	7									2	265	230
2024CPT.01.09.10661	Northampton	3	NC-35 (SECTION #2)	FROM SR 1342 (LAKE ROAD) (MP 11.82) TO SR 1341 (DEBERRYS MILL ROAD) (MP 12.44)		3					50	25	0.6	1			
2024CPT.01.09.10661	Northampton	4	NC-35 (SECTION #3)	FROM MILL STREET (MP 18.28) TO VIRGINIA STATE LINE (MP 20.43)			514	4	4	814	50	25	2.2				
TOTAL FOR PROJ NO. 2024CPT.01.09.10661					**31**	**24**	**514**	**4**	**4**	**814**	**100**	**50**	**2.8**	**1**	**4**	**470**	**345**
2024CPT.01.09.20661	Northampton	5	SR-1126 / BARROWS MILL ROAD	FROM SR 1127 (BULL HILL ROAD) (MP 3.98) TO US 158 (MP 6.20)							50	25	2.2	1			
2024CPT.01.09.20661	Northampton	6	SR-1307 / GUMBERRY ROAD	FROM NC 186 (MP 0.00) TO SR 1311 (JACKSON BYPASS ROAD) (MP 2.29)							50	25	2.3				
2024CPT.01.09.20661	Northampton	7	SR-1329 / DEVILS RACE TRACK ROAD	FROM SR 1333 (MOUNT CARMEL ROAD) (MP 0.00) TO NC 305 (MP 3.84)	2						50	25	3.8				
2024CPT.01.09.20661	Northampton	8	SR-1388 / RAMP ROAD	FROM US 158 (MP 0.00) TO US 301 (MP 0.12)							50	25	0.1				
2024CPT.01.09.20661	Northampton	9	SR-1536 / ASHLEYS GROVE ROAD	FROM NC 35 (MP 0.00) TO SR 1538 (PARKER ROAD) (MP 5.40)							50	25	5.3				
TOTAL FOR PROJ NO. 2024CPT.01.09.20661					**2**						**250**	**125**	**13.7**	**1**			
GRAND TOTAL					**33**	**24**	**514**	**4**	**4**	**814**	**350**	**175**	**16.5**	**2**	**4**	**470**	**345**

PROJECT NO.	SHEET NO.	TOTAL NO.
2024CPT.01.09.10661, ETC.	13	

THERMOPLASTIC AND PAINT QUANTITIES

												4413000000-E	4457000000-N	4688000000-E		4704000000-E	4709000000-E	4720000000-E		4725000000-E	
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	MATERIAL TRANSFER VEHICLE REQUIRED		WORK ZONE ADVANCE / GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL (SP)	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS) WHITE	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS) YELLOW	THERMO PAVEMENT MARKING LINES (16" 90 MILS)	THERMO PAVEMENT MARKING LINES (24" 90 MILS)	THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS), RXR	THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS), SCHOOL	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS), LT ARROW	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS), RT ARROW
								MI	FT			SF	LS	LF	LF	LF	LF	EA	EA	EA	EA
2024CPT.01.09.10661	Northampton	1	US-158	FROM BEGIN C&G (MP 23.94) TO END C&G (MP 25.52)	1	2	2WU	1.57	39	YES		188	1	7,790	10,868	80	252	4	12	1	1
2024CPT.01.09.10661	Northampton	2	NC-35 (SECTION #1)	FROM US 158 (MP 11.54) TO SR 1342 (LAKE ROAD) (MP 11.82)	1	2	2WU	0.30	49	YES		120	*	3,275	3,215		20				
2024CPT.01.09.10661	Northampton	3	NC-35 (SECTION #2)	FROM SR 1342 (LAKE ROAD) (MP 11.82) TO SR 1341 (DEBERRYS MILL ROAD) (MP 12.44)	2	2	2WU	0.62	22	YES		120	*	6,823	4,156	80	80	4			
2024CPT.01.09.10661	Northampton	4	NC-35 (SECTION #3)	FROM MILL STREET (MP 18.28) TO VIRGINIA STATE LINE (MP 20.43)	2	2	2WU	2.15	22	YES		148	*	23,297	14,300						
TOTAL FOR PROJ NO. 2024CPT.01.09.10661								**4.64**				**576**	*	**41,185**	**32,539**	**160**	**352**	**8**	**12**	**1**	**1**
														73,724				**20**		**2**	
2024CPT.01.09.20661	Northampton	5	SR-1126 / BARROWS MILL ROAD	FROM SR 1127 (BULL HILL ROAD) (MP 3.98) TO US 158 (MP 6.20)	3	2	2WU	2.22	20	NO		175	*								
2024CPT.01.09.20661	Northampton	6	SR-1307 / GUMBERRY ROAD	FROM NC 186 (MP 0.00) TO SR 1311 (JACKSON BYPASS ROAD) (MP 2.29)	3	2	2WU	2.29	18	NO		286	*			80	54	4			
2024CPT.01.09.20661	Northampton	7	SR-1329 / DEVILS RACE TRACK ROAD	FROM SR 1333 (MOUNT CARMEL ROAD) (MP 0.00) TO NC 305 (MP 3.84)	3	2	2WU	3.84	18	NO		214	*								
2024CPT.01.09.20661	Northampton	8	SR-1388 / RAMP ROAD	FROM US 158 (MP 0.00) TO US 301 (MP 0.12)	3	2	2WU	0.13	24	NO			*								
2024CPT.01.09.20661	Northampton	9	SR-1536 / ASHLEYS GROVE ROAD	FROM NC 35 (MP 0.00) TO SR 1538 (PARKER ROAD) (MP 5.40)	3	2	2WU	5.32	20	NO		655	*			80	60	4			
TOTAL FOR PROJ NO. 2024CPT.01.09.20661								**13.8**				**1,330**	*			**160**	**114**	**8**			
																		8			
GRAND TOTAL								**18.44**				**1,906**	**1**	**41,185**	**32,539**	**320**	**466**	**16**	**12**	**1**	**1**
														73,724				**28**		**2**	

THERMOPLASTIC AND PAINT QUANTITIES

											4810000000-E		4830000000-E	4835000000-E	4840000000-N		4845000000-N		4890000000-E	
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	MATERIAL TRANSFER VEHICLE REQUIRED	PAINT PAVEMENT MARKING LINES (4") WHITE	PAINT PAVEMENT MARKING LINES (4") YELLOW	PAINT PAVEMENT MARKING LINES (16")	PAINT PAVEMENT MARKING LINES (24")	PAINT PAVEMENT MARKING CHARACTER (MSG RXR)	PAINT PAVEMENT MARKING CHARACTER (MSG SCHOOL)	PAINT PAVEMENT MARKING SYMBOL (LT ARROW)	PAINT PAVEMENT MARKING SYMBOL (RT ARROW)	GEN PAVEMENT MARKING ITEM, THERMO HOT SPRAY LINES (4" 55 MILS) WHITE	GEN PAVEMENT MARKING ITEM, THERMO HOT SPRAY LINES (4" 55 MILS) YELLOW
								MI	FT		LF	LF	LF	LF	EA	EA	EA	EA	LF	LF
2024CPT.01.09.10661	Northampton	1	US-158	FROM BEGIN C&G (MP 23.94) TO END C&G (MP 25.52)	1	2	2WU	1.57	39	YES	7,790	10,868	80	252	4	12	1	1		
2024CPT.01.09.10661	Northampton	2	NC-35 (SECTION #1)	FROM US 158 (MP 11.54) TO SR 1342 (LAKE ROAD) (MP 11.82)	1	2	2WU	0.302	49	YES	3,275	3,215		20						
2024CPT.01.09.10661	Northampton	3	NC-35 (SECTION #2)	FROM SR 1342 (LAKE ROAD) (MP 11.82) TO SR 1341 (DEBERRYS MILL ROAD) (MP 12.44)	2	2	2WU	0.62	22	YES	6,823	4,156	80	80	4					
2024CPT.01.09.10661	Northampton	4	NC-35 (SECTION #3)	FROM MILL STREET (MP 18.28) TO VIRGINIA STATE LINE (MP 20.43)	2	2	2WU	2.15	22	YES	23,297	14,300								
TOTAL FOR PROJ NO. 2024CPT.01.09.10661								**4.64**			**41,185**	**32,539**	**160**	**352**	**8**	**12**	**1**	**1**		
											73,724				**20**		**2**			
2024CPT.01.09.20661	Northampton	5	SR-1126 / BARROWS MILL ROAD	FROM SR 1127 (BULL HILL ROAD) (MP 3.98) TO US 158 (MP 6.20)	3	2	2WU	2.22	20	NO	23,443	14,652							23,443	14,652
2024CPT.01.09.20661	Northampton	6	SR-1307 / GUMBERRY ROAD	FROM NC 186 (MP 0.00) TO SR 1311 (JACKSON BYPASS ROAD) (MP 2.29)	3	2	2WU	2.29	18	NO	24,372	15,164	80	54	4				24,372	15,164
2024CPT.01.09.20661	Northampton	7	SR-1329 / DEVILS RACE TRACK ROAD	FROM SR 1333 (MOUNT CARMEL ROAD) (MP 0.00) TO NC 305 (MP 3.84)	3	2	2WU	3.84	18	NO	41,020	25,454							41,020	25,454
2024CPT.01.09.20661	Northampton	8	SR-1388 / RAMP ROAD	FROM US 158 (MP 0.00) TO US 301 (MP 0.12)	3	2	2WU	0.13	24	NO	1,372	858							1,372	858
2024CPT.01.09.20661	Northampton	9	SR-1536 / ASHLEYS GROVE ROAD	FROM NC 35 (MP 0.00) TO SR 1538 (PARKER ROAD) (MP 5.40)	3	2	2WU	5.32	20	NO	58,619	36,122	80	60	4				58,619	36,122
TOTAL FOR PROJ NO. 2024CPT.01.09.20661								**13.8**			**148,826**	**92,250**	**160**	**114**	**8**				**148,826**	**92,250**
											241,076				**8**				**241,076**	
GRAND TOTAL								**18.44**			**190,011**	**124,789**	**320**	**466**	**16**	**12**	**1**	**1**	**148,826**	**92,250**
											314,800				**28**		**2**		**241,076**	

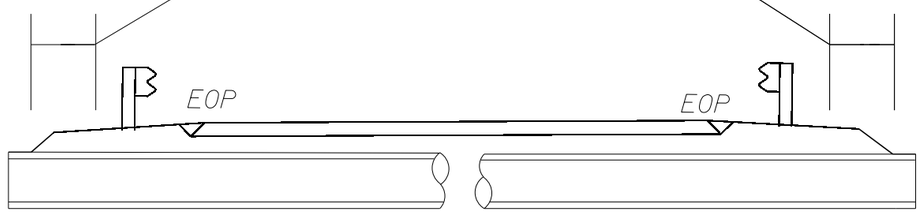
PROJECT REFERENCE NO.	SHEET NO.
2024CPT.01.09.10661, ETC.	EC-1

EROSION CONTROL DETAIL

NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

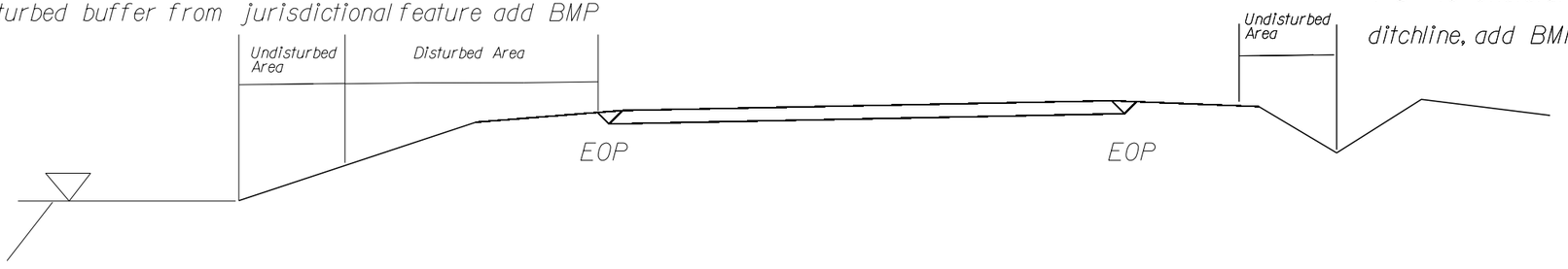
< 5' - 10' Undisturbed buffer add BMP



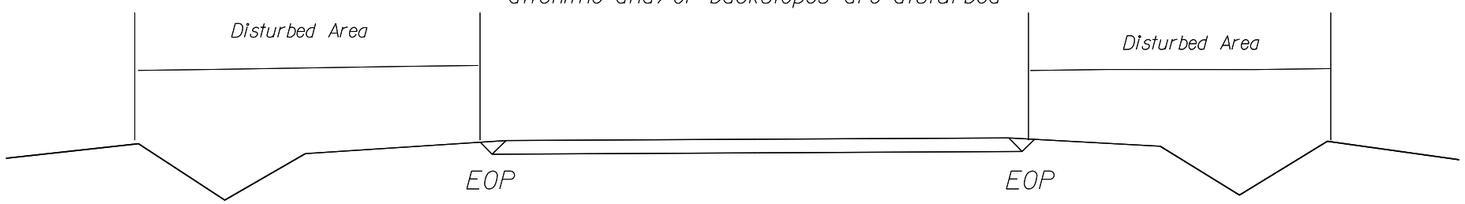
Pipe/Culvert

< 5' - 10' Undisturbed buffer from jurisdictional feature add BMP

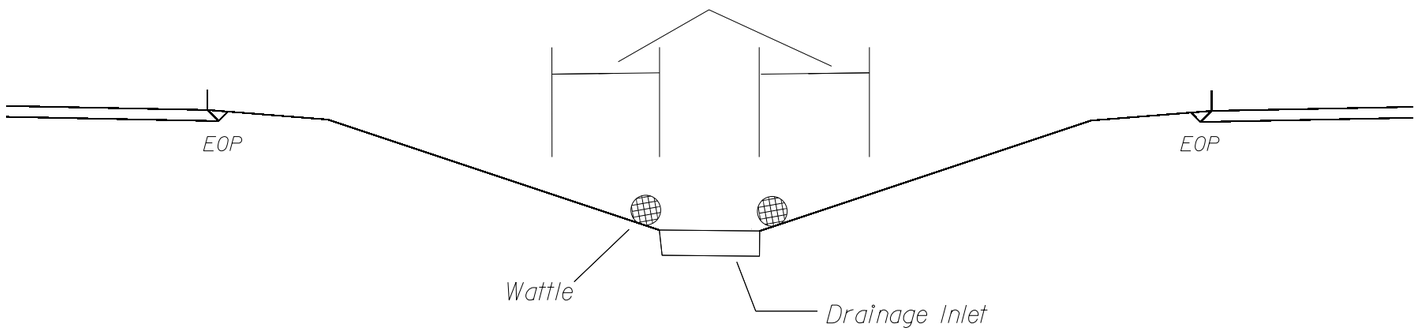
< 5' - 10' Undisturbed buffer from ditchline, add BMP



Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed



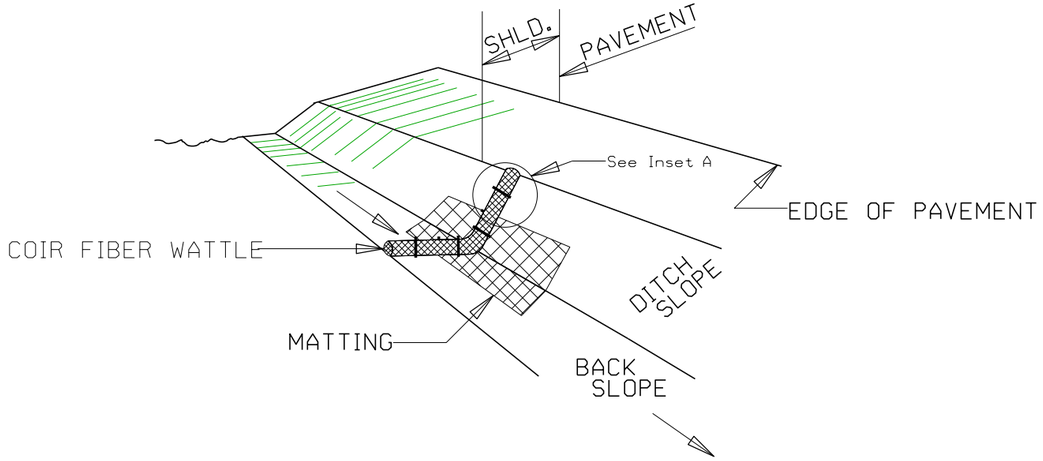
< 5' - 10' Undisturbed buffer from inlet, add wattle



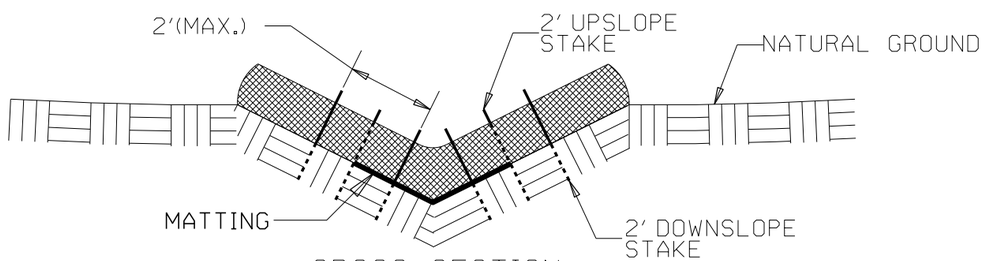
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
2024CPT.01.09.10661, ETC.	EC-2

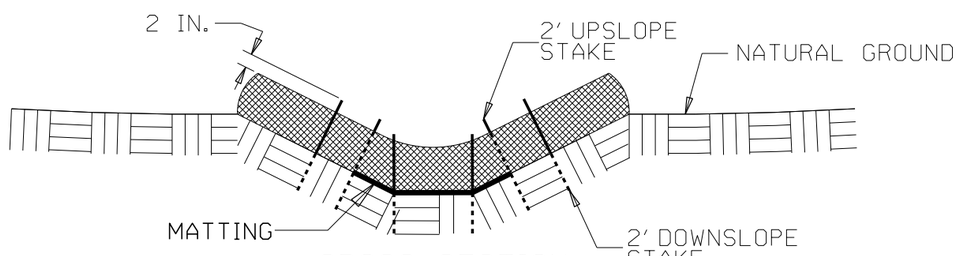
COIR FIBER WATTLE DETAIL



ISOMETRIC VIEW



CROSS SECTION
VEE DITCH



CROSS SECTION
TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

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

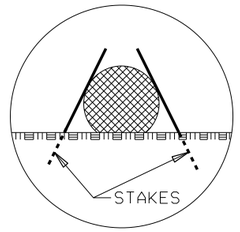
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

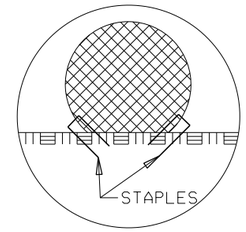
PROVIDE STAPLES MADE OF Ø.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

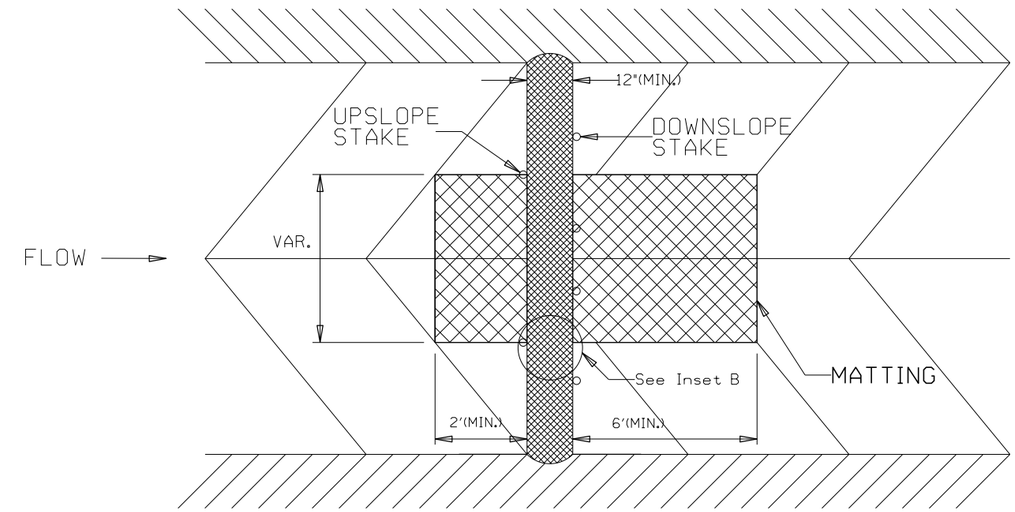
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



INSET B



TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
2024CPT.01.09.10661, ETC.	EC-3

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

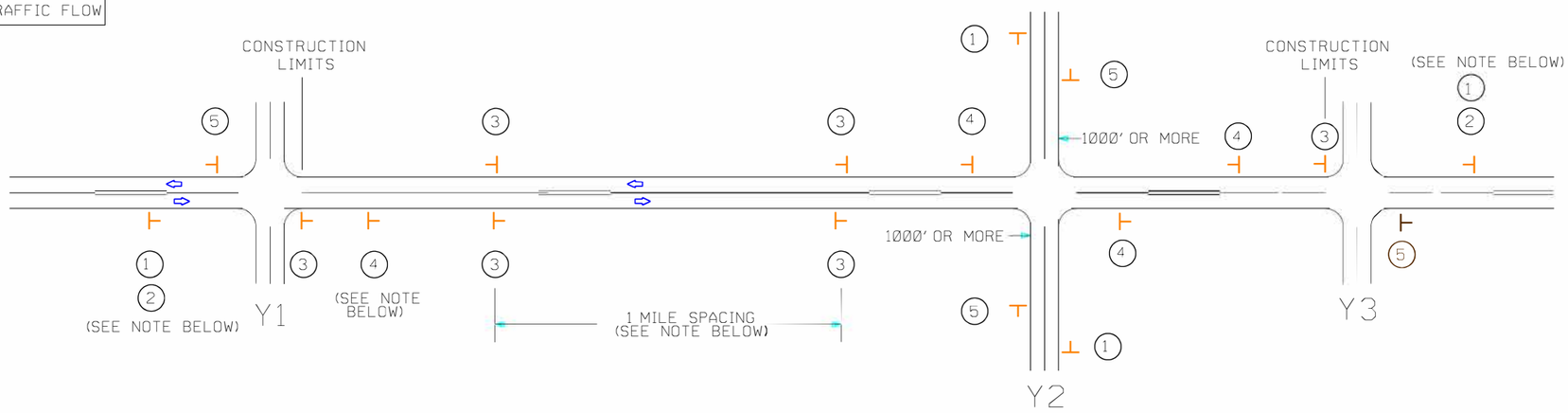
SOIL STABILIZATION TIMEFRAMES

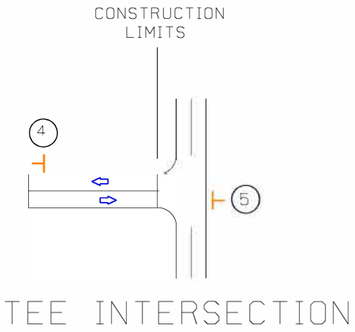
SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

PROJ. REFERENCE NO.	SHEET NO.
2024CPT.01.09.10661, ETC.	TMP-1

SIGNING FOR RESURFACING PROJECTS

LEGEND
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW





TEE INTERSECTION

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1. ROAD WORK AHEAD W20-1 48" X 48" — PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.
2. NEXT XX MILES W7-3aP 24" X 18" — #2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER.(NO FRACTIONAL OR DECIMAL NUMBERS)
3. LOW/SOFT SHOULDER SP 13107 48" X 48" / UNMARKED PAVEMENT SP 48" X 48"
   - ALTERNATE THE FOLLOWING TWO SIGNS:
   - PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER.
   - AT TEE INTERSECTIONS INSTALL INITIALLY 59/64 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.
4. ROAD UNDER CONST SP 13106 48" X 48"
   - THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS.
   - DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS.
   - INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE.
   - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH.
   - A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.
   - FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.
5. END ROAD WORK G20-2 A 48" X 24" — PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.

THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

MAPS LESS THAN 2 MILES

FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.

-Y- LINE SIGNING

NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:

1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE
2) SUBDIVISION ROADS
3) DEAD END ROADS

WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.

ROAD WORK AHEAD W20-1 48" X 48"

PLACED 500' IN ADVANCE OF FLAGGER.

W20-7 A 48" X 48"

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING

$$$$$$SYSTIME$$$$$$
$$$$$$USERNAME$$$$$$