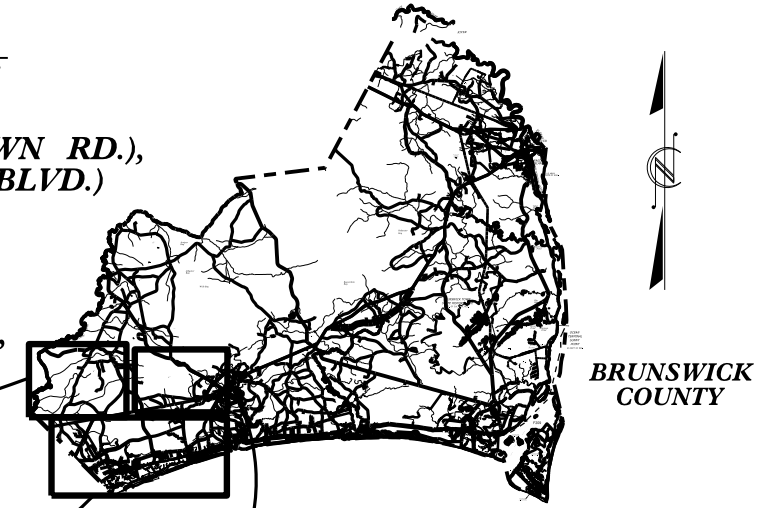
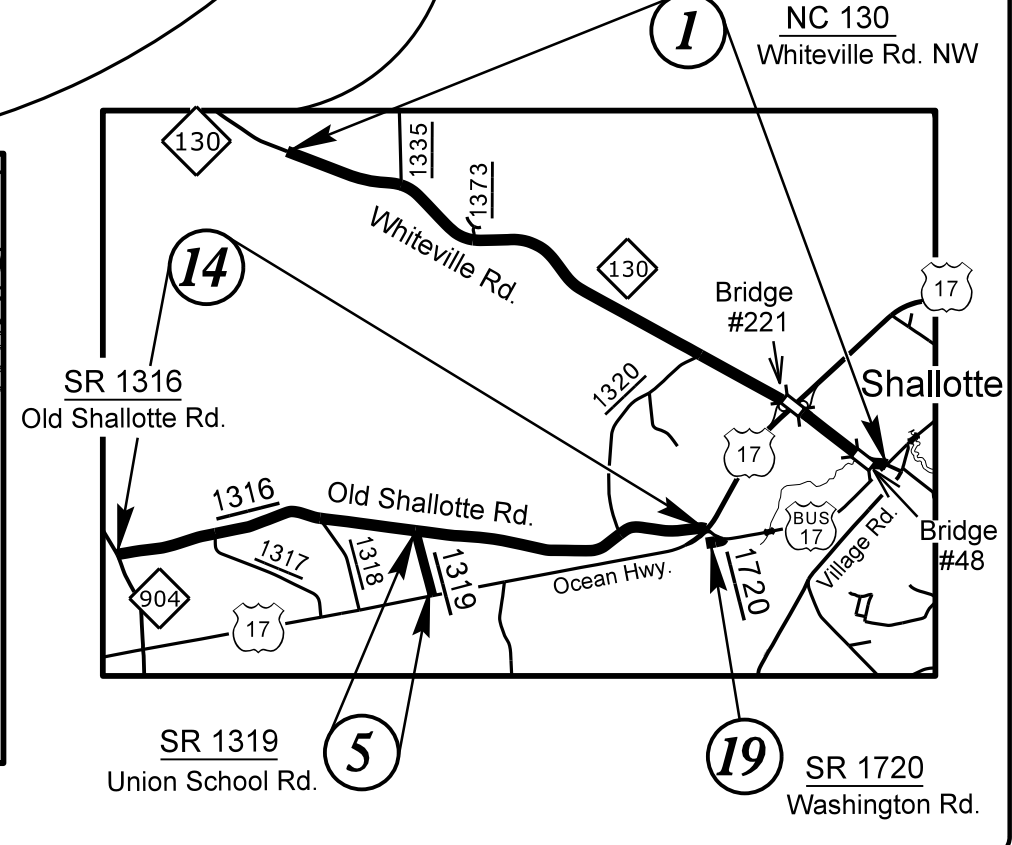
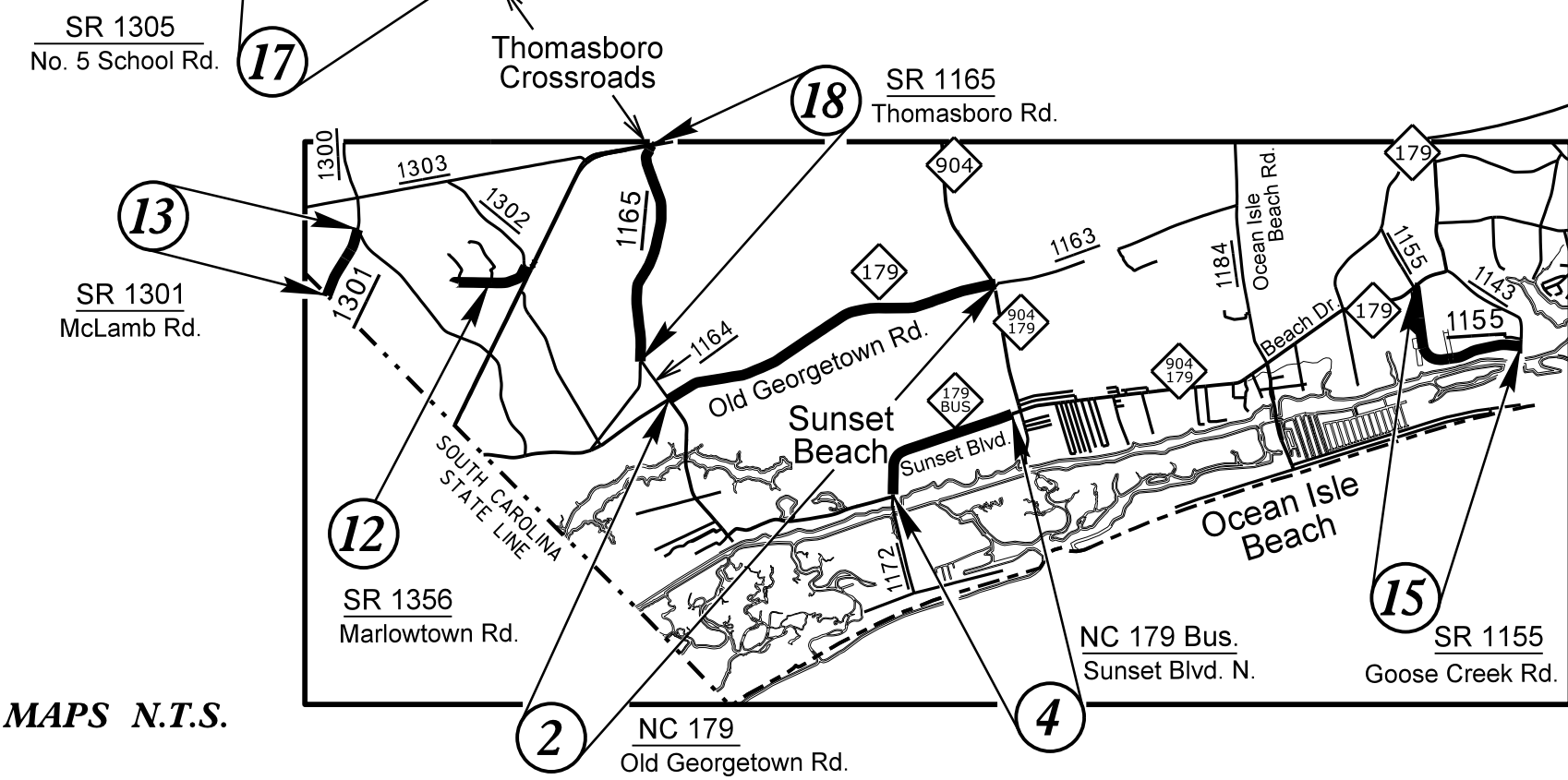
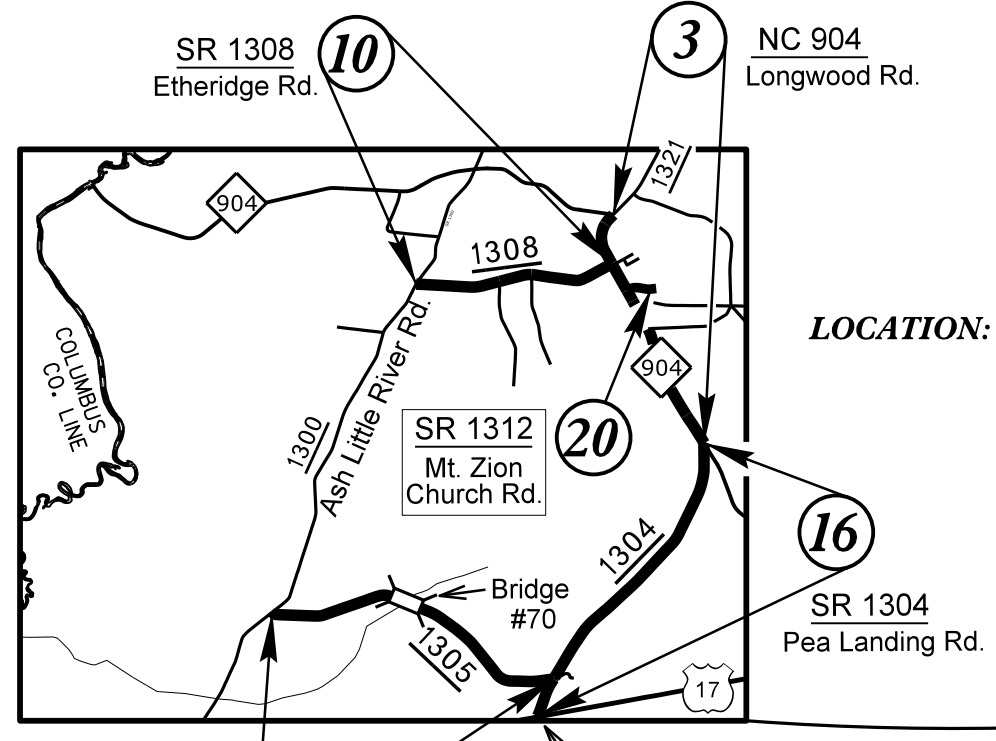


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5203Y & 2018CPT.03.03.10101, Etc.	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45333.1.FD25	HSIP-1115(020)	PE	
45333.3.25	HSIP-1115(020)	CONST.	
2018CPT.03.03.10101		RESURFAC.	
2018CPT.03.03.20101		RESURFAC.	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**BRUNSWICK COUNTY**

**LOCATION:** NC 130 (WHITEVILLE RD.), NC 179 (OLD GEORGETOWN RD.), NC 904 (LONGWOOD RD.) & NC 179 BUS. (SUNSET BLVD.)  
TIP W-5203Y SR 1115 (STONE CHIMNEY RD.) & 17 SECTIONS OF SECONDARY ROADS

**TYPE OF WORK:** DRAINAGE, MILLING, RESURFACING, SHOULDER RECONSTRUCTION

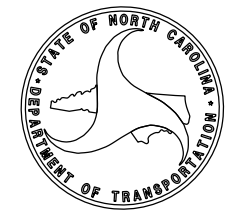


**CONTRACT: C204094 2018CPT.03.03.10101, Etc. & 45333.3.25**

MAPS N.T.S.

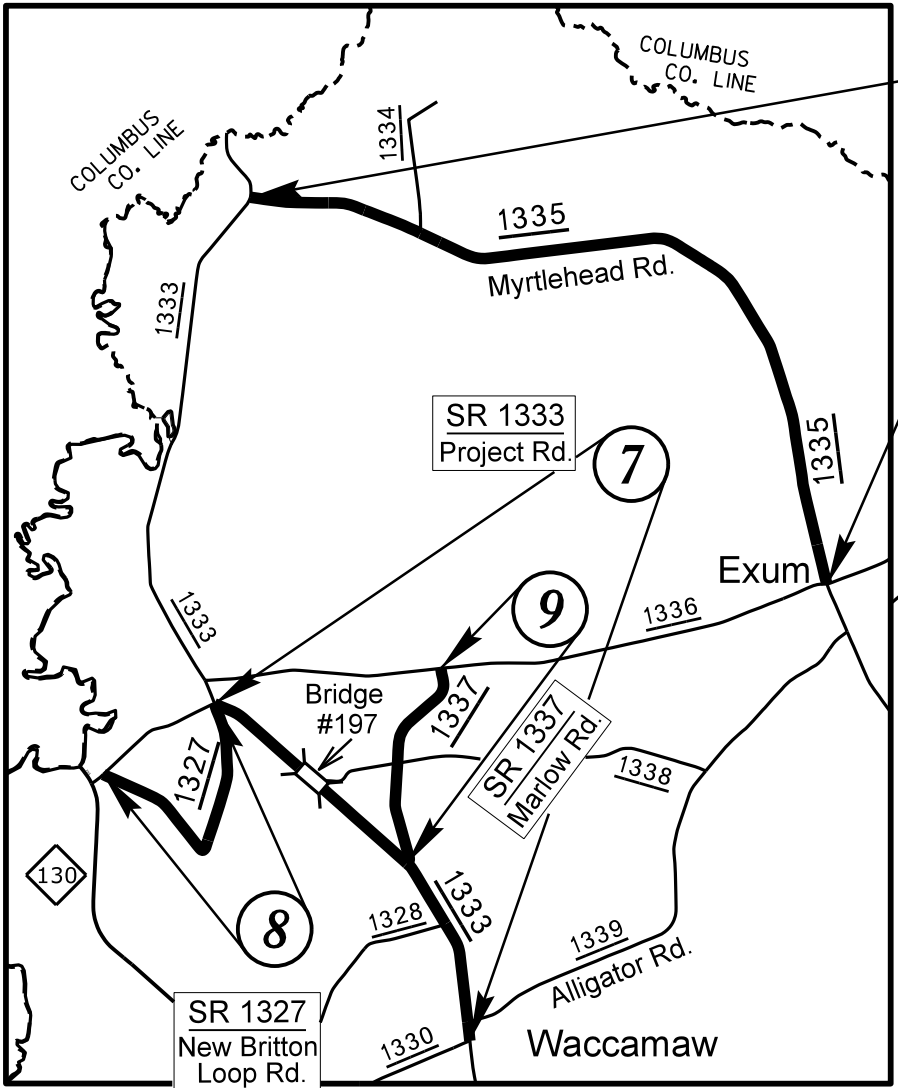
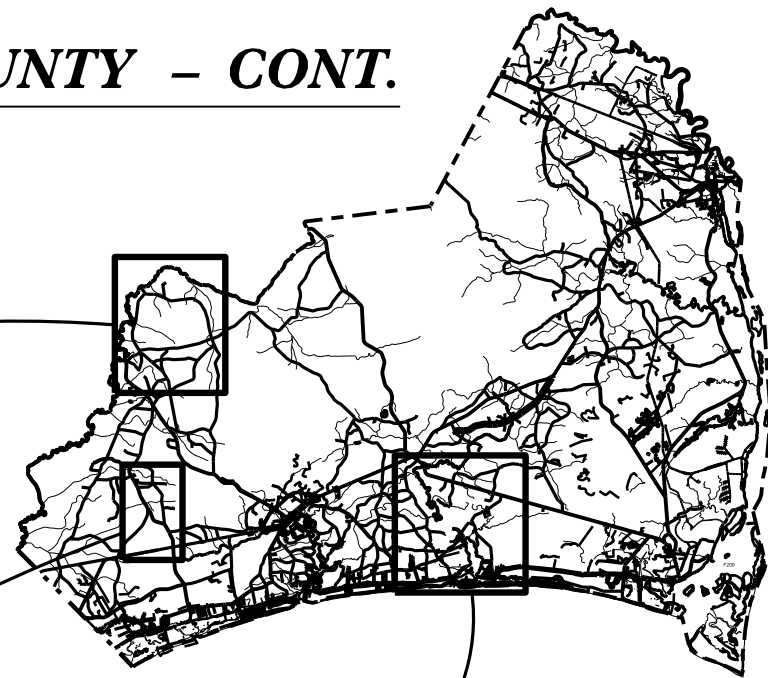
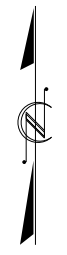
PROJECT LENGTH	
LENGTH OF RESURFACING PROJECT =	49.621 MILES
TIP W-5203Y (WBS 45333.3.25) MAP NO. 22	
LENGTH OF ROADWAY TIP PROJECT W-5203Y =	7.46 MILES
TOTAL LENGTH OF PROJECT =	57.081 MILES

Prepared in the Office of: <b>DIVISION OF HIGHWAYS</b> 5501 Barbados Blvd., Castle Hayne, NC 28429	
2018 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	MARY KIMMEL PROJECT DESIGN TECHNICIAN
LETTING DATE:	ERIC MURRAY PROJECT DESIGN TECHNICIAN
JANUARY 16, 2018	



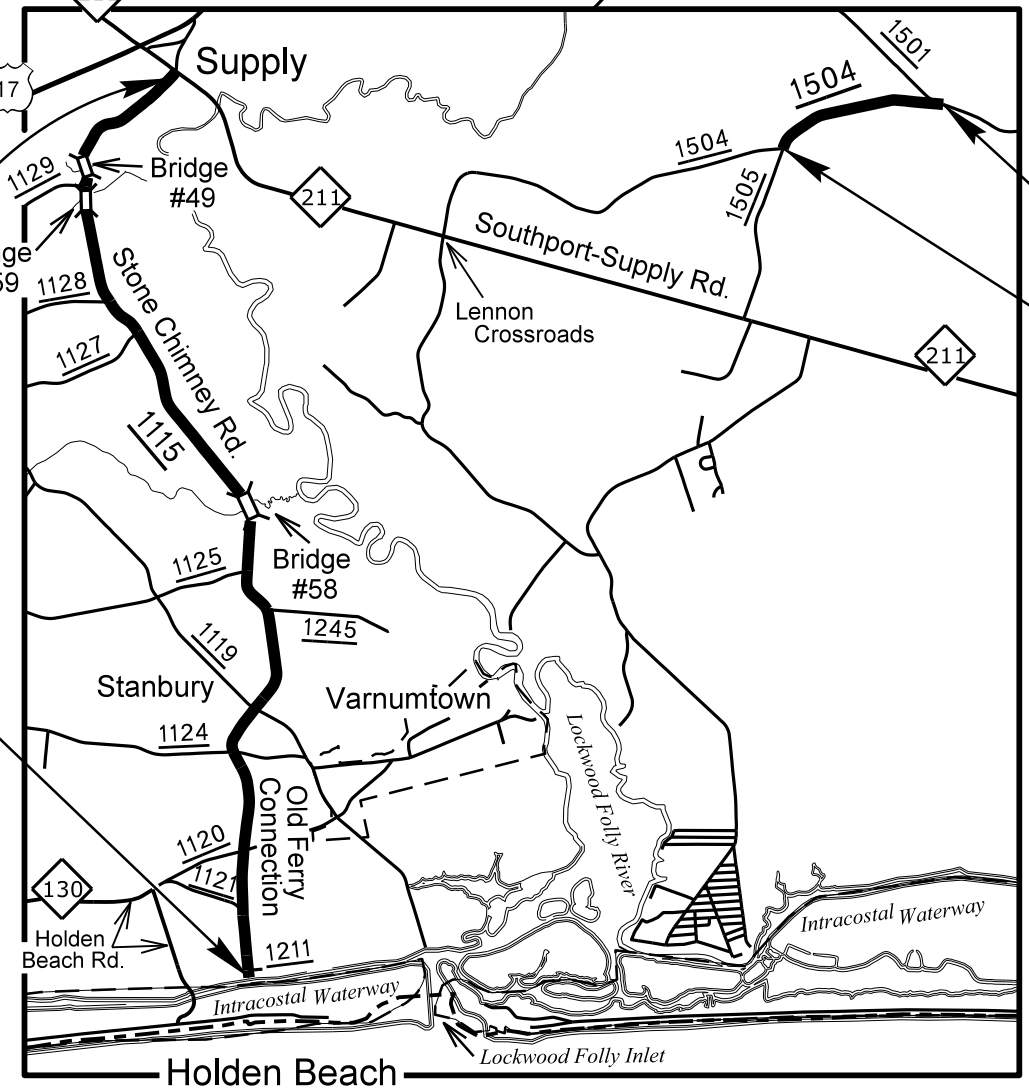
17-NOV-2017 17:14 S:\Contracts\Resurfacing Projects\Brunswick Jan 2018\2018CPT.03.03.10101, Etc..Rdy.-tsh.dgn

# BRUNSWICK COUNTY - CONT.



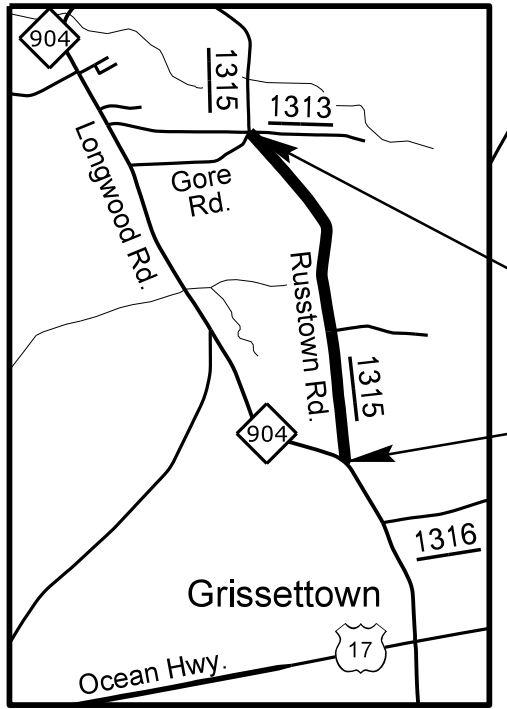
**11**  
SR 1335  
Myrtlehead Rd.

BRUNSWICK  
COUNTY



**6**  
SR 1504  
Clemmons Rd.

**22**  
TIP W-5203Y  
WBS 45333.3.25  
SR 1115  
Stone Chimney Rd.

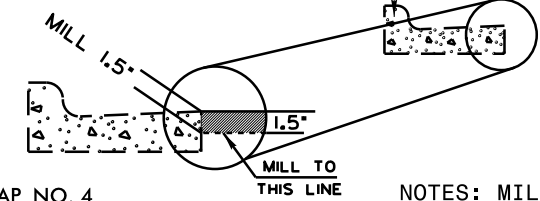
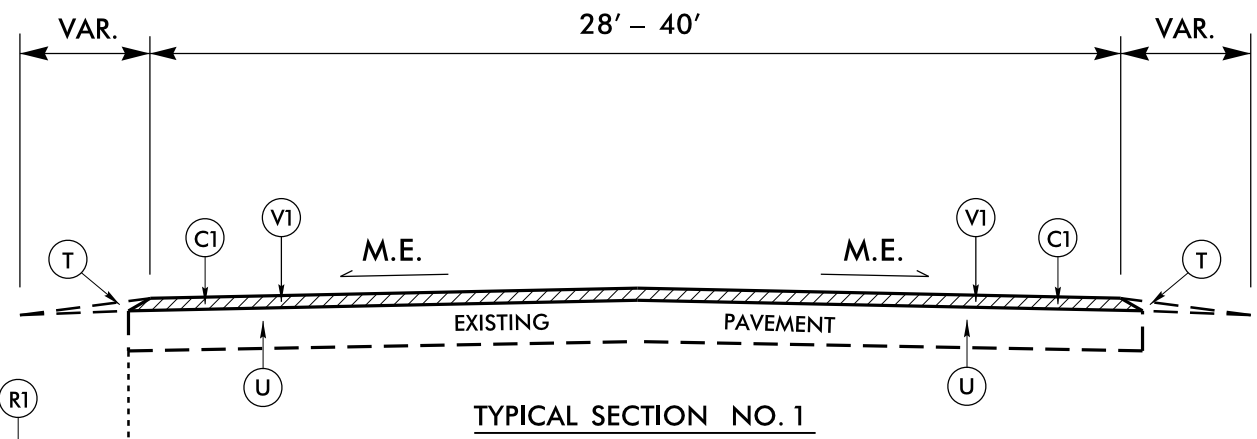


**21**  
SR 1315  
Russtown Rd.

MAPS N.T.S.

REVISIONS

20-NOV-2017 15:58  
 S:\Contracts\2018\2018CPT.03.03.10101, Etc., Rdy., tah2.dgn  
 8/17/99



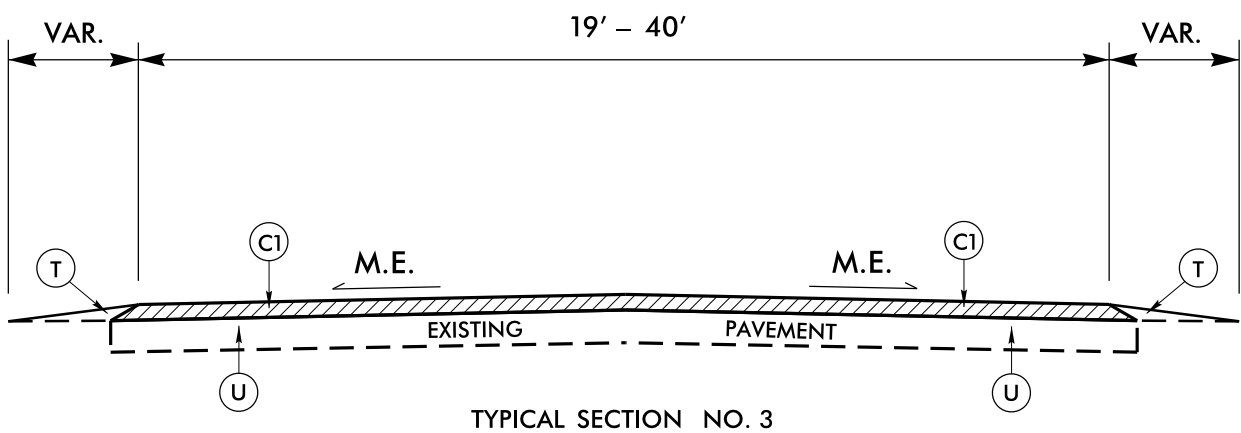
MAP NO. 4  
LEFT SIDE ONLY  
MP 5.158 – MP 5.305

MAP NO. 1  
NC 130 (WHITEVILLE RD.)  
MP 10.206 – MP 16.350

MAP NO. 3  
NC 904 (LONGWOOD RD.)  
MP 7.800 – MP 7.980

MAP NO. 4  
NC 179 BUS. (SUNSET BLVD.)  
MP 5.158 – MP 5.305

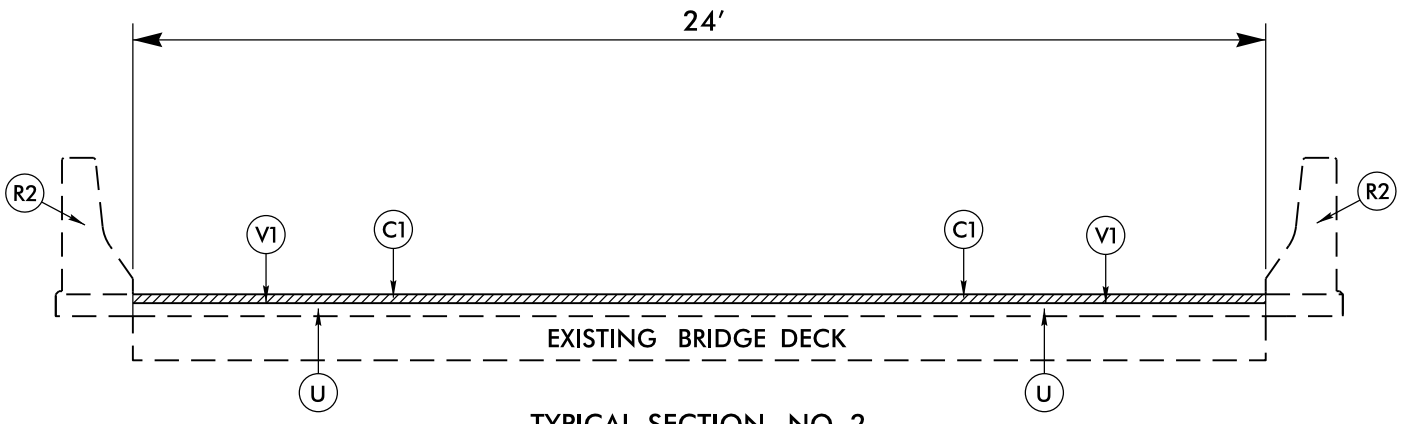
NOTES: MILL A SINGLE LANE AND PAVE BACK BY THE END OF EACH WORK DAY.  
SHOULDER WORK ON MAP NO.1, 3 & 4 AS NEEDED, TO BE DETERMINED BY ENGINEER.



MAP NO. 2  
NC 179 (OLD GEORGETOWN RD.)  
MP 2.185 – MP 5.910

MAP NO. 3  
NC 904 (LONGWOOD RD.)  
MP 5.608 – MP 7.800  
MP 7.980 – MP 8.185

MAP NO. 22  
SR 1115 (STONE CHIMNEY RD.)  
MP 7.860 – MP 7.910

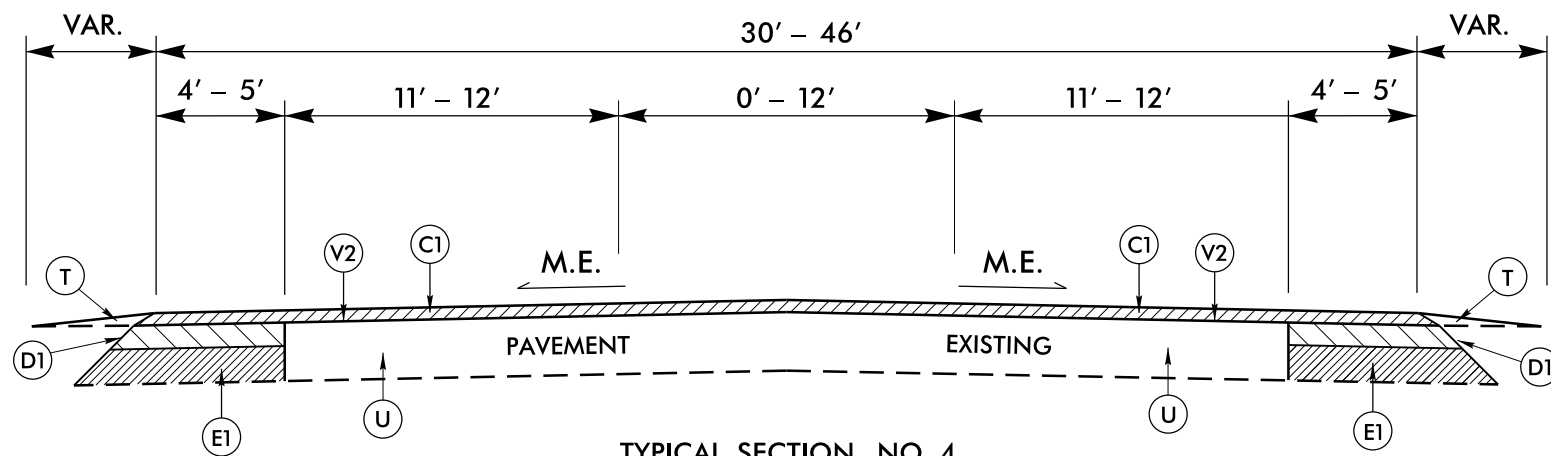


TYPICAL SECTION NO. 2  
MAP NO. 1  
NC 130 (WHITEVILLE RD.)  
BRUNSWICK BRIDGE NO. 48

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD.
C2	PROP. APPROX. 1¼" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 138 LBS. PER SQ.YD.
D1	PROP. APPROX. 3" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ.YD.
D2	PROP. APPROX. 2½" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ.YD.
E1	PROP. APPROX. 5½" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ.YD.
E2	PROP. APPROX. 5" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ.YD.
E3	PROP. APPROX. 4" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD.
R1	EXISTING CONCRETE 2'-6" CURB & GUTTER
R2	EXISTING CONCRETE BRIDGE RAIL
T	EARTH MATERIAL (SHOULDER RECONSTRUCTION)
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT, 1½" DEPTH
V2	MILLING ASPHALT PAVEMENT, 1" DEPTH
V3	MILLING ASPHALT PAVEMENT, 1¼" DEPTH
V4	MILLING ASPHALT PAVEMENT, 2½" DEPTH
V5	MILLING ASPHALT PAVEMENT, 5½" DEPTH

PAVEMENT EDGE SLOPES ARE 1:1, EXCEPT FINAL SURFACE COURSE. SEE SHOULDER WEDGE DETAIL.

17-NOV-2017 17:24 S:\Contracts\2018\2018CPT.03.03.10101.Etc.Rdy.tjpl.dgn  
 8/17/99  
 17-NOV-2017 17:24 S:\Contracts\2018\2018CPT.03.03.10101.Etc.Rdy.tjpl.dgn



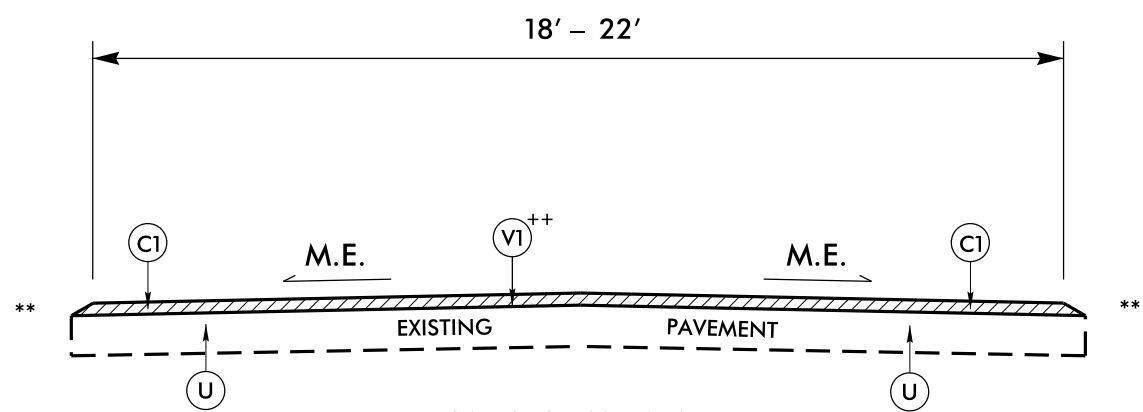
TYPICAL SECTION NO. 4

MAP NO. 4  
 NC 179 BUS. (SUNSET BLVD.)  
 MP 3.635 - MP 5.158

NOTE: MILL A SINGLE LANE AND PAVE BACK BY THE END OF EACH WORK DAY.

PAVEMENT SCHEDULE	
C1	1½" S9.5B
C2	1¼" SF9.5A
D1	3" I19.0B
E1	5½" B25.0B
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING 1-1/2" DEPTH
V2	MILLING 1" DEPTH

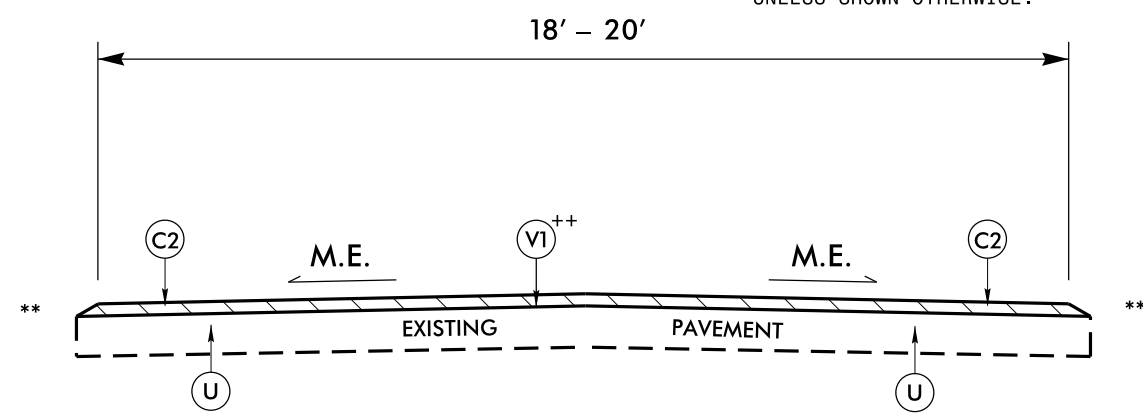
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION NO. 5

MAP NO. 5  
 SR 1319 (UNION SCHOOL RD.)  
 MP 0.000 - MP 0.585

MAP NO. 18  
 SR 1165 (THOMASBORO RD.)  
 MP 0.000 - MP 2.407



TYPICAL SECTION NO. 6

MAP NO. 6  
 SR 1504 (CLEMMONS RD.)  
 MP 0.000 - MP 1.280

MAP NO. 7  
 SR 1333 (PROJECT RD.)  
 MP 3.970 - MP 6.820

MAP NO. 8  
 SR 1327 (NEW BRITTON LOOP RD.)  
 MP 0.000 - MP 1.804

MAP NO. 9  
 SR 1337 (MARLOW RD.)  
 MP 0.000 - MP 1.382

MAP NO. 10  
 SR 1308 (ETHERIDGE RD.)  
 MP 0.000 - MP 1.993

MAP NO. 11  
 SR 1335 (MYRTLEHEAD RD.)  
 MP 1.320 - MP 2.250  
 MP 3.200 - MP 4.600

MAP NO. 12  
 SR 1356 (MARLOWTOWN RD.)  
 MP 0.000 - MP 0.840

MAP NO. 13  
 SR 1301 (McLAMB RD.)  
 MP 0.000 - MP 0.782

MAP NO. 14  
 SR 1316 (OLD SHALLOTTE RD.)  
 MP 0.000 - MP 5.202

MAP NO. 15  
 SR 1155 (GOOSE CREEK RD.)  
 MP 0.723 - MP 2.507

MAP NO. 17  
 SR 1305 (NO. 5 SCHOOL RD.)  
 MP 0.000 - MP 1.130  
 MP 1.750 - MP 3.123

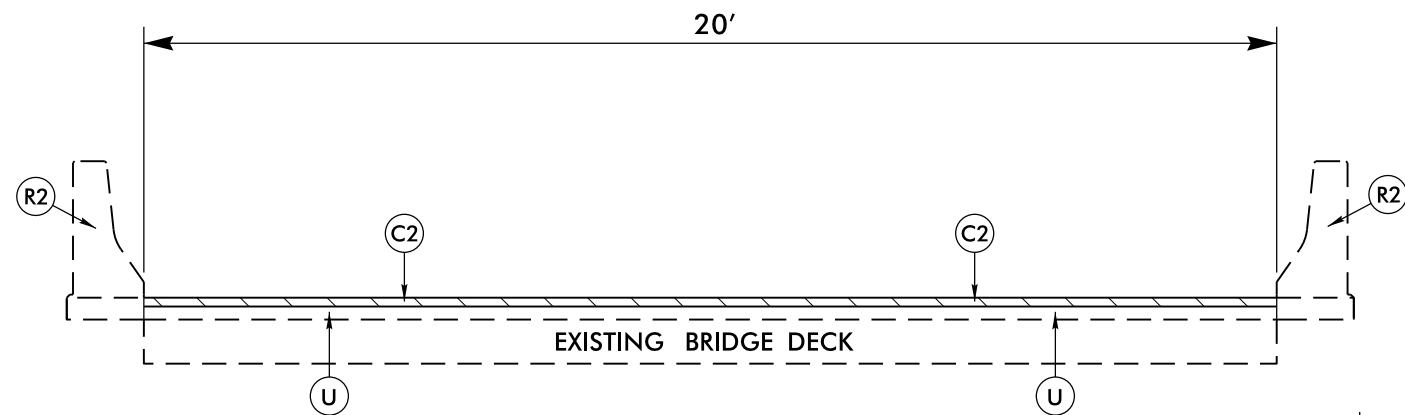
MAP NO. 19  
 SR 1720 (WASHINGTON RD.)  
 MP 0.000 - MP 0.157

MAP NO. 20  
 SR 1312 (MT. ZION CHURCH RD.)  
 MP 0.000 - MP 0.296

NOTE: \*\* SHOULDER WORK TO BE DONE BY STATE FORCES (MAP NO. 5 - 20)

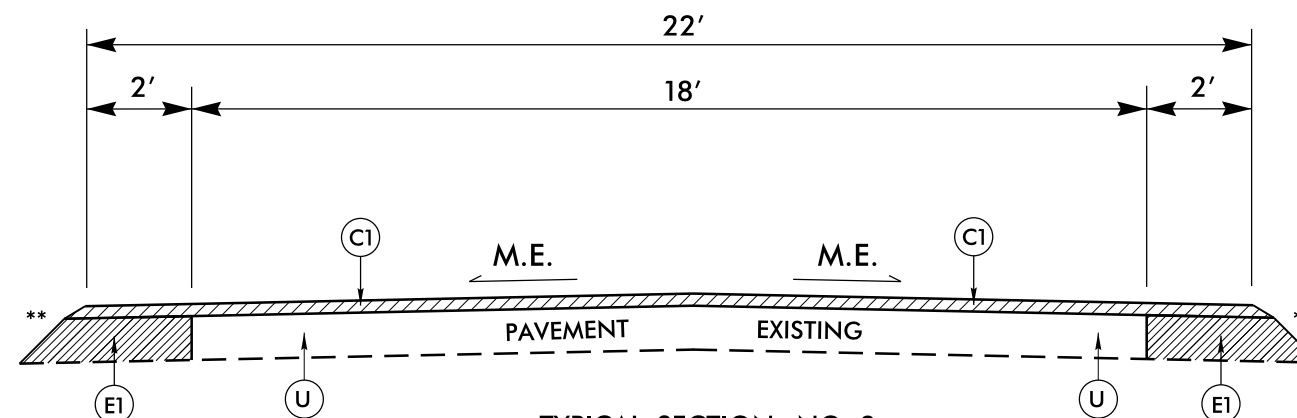
++ MAP NO. 6, 8, 9, 10, 18, 19

08-DEC-2017 13:50  
 S:\Contracts\2018\2018CPT\03\03.10101\etc\Rdy-tyr REV.dgn  
 8/17/99  
 08-DEC-2017 13:50  
 S:\Contracts\2018\2018CPT\03\03.10101\etc\Rdy-tyr REV.dgn



**TYPICAL SECTION NO. 7**

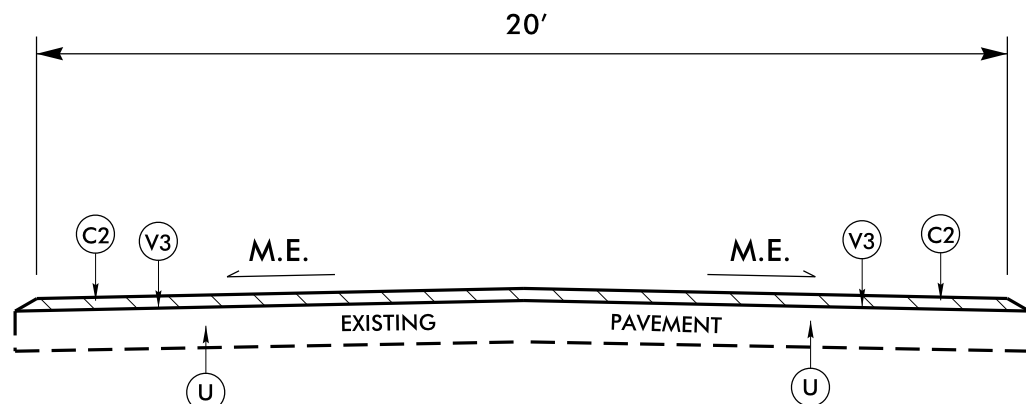
MAP NO. 7  
SR 1333 (PROJECT RD.)  
BRUNSWICK BRIDGE NO. 179



**TYPICAL SECTION NO. 8**

MAP NO. 16  
SR 1304 (PEA LANDING RD.)  
MP 0.000 – MP 3.271

\*\* NOTE: SHOULDER WORK TO BE DONE BY STATE FORCES (MAP NO. 16)

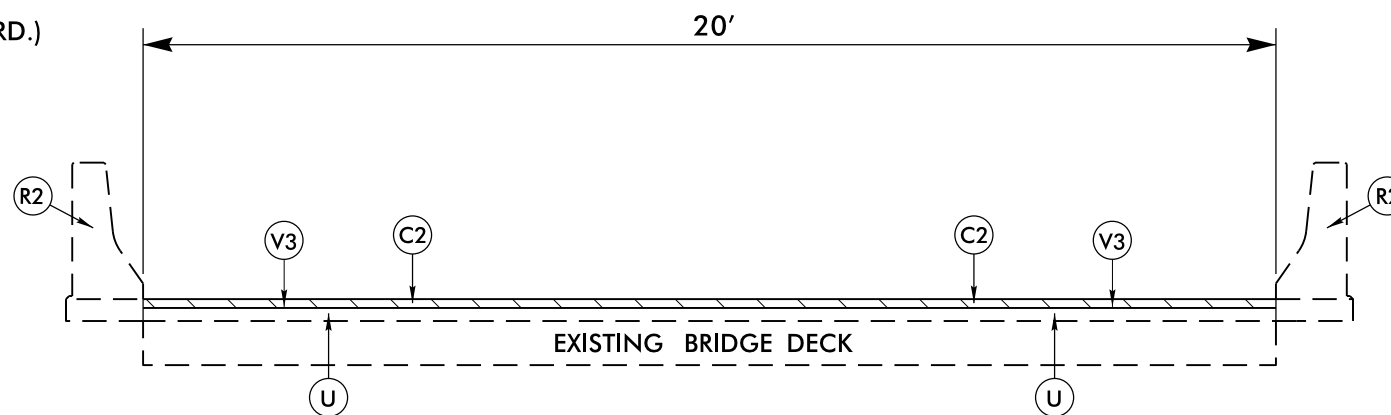


**TYPICAL SECTION NO. 9**

MAP NO. 11  
SR 1335 (MYRTLEHEAD RD.)  
MP 0.000 – MP 1.320  
MP 2.250 – MP 3.200  
MP 4.600 – MP 5.290

MAP NO. 17  
SR 1305 (NO. 5 SCHOOL RD.)  
MP 1.130 – MP 1.378  
MP 1.380 – MP 1.750

NOTES: MILL A SINGLE LANE AND PAVE BACK BY THE END OF EACH WORK DAY  
SHOULDER WORK ON MAP NO. 11 & 17 (TYP #9) AS NEEDED, TO BE PERFORMED BY STATE FORCES



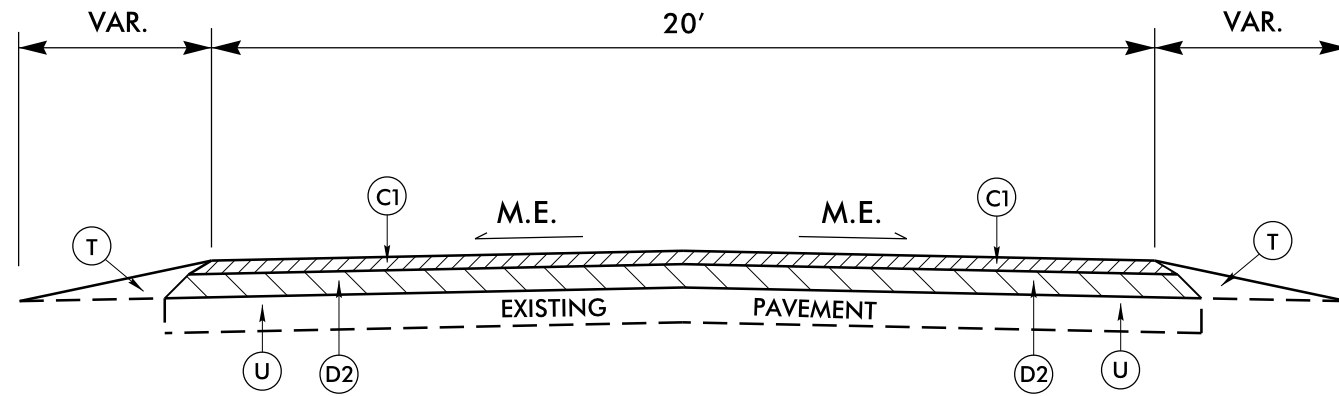
**TYPICAL SECTION NO. 10**

MAP NO. 17  
SR 1305 (NO. 5 SCHOOL RD.)  
BRUNSWICK BRIDGE NO. 70  
MP 1.378 – MP 1.380

PAVEMENT SCHEDULE	
C1	1½" S9.5B
C2	1¼" SF9.5A
E1	5½" B25.0B
R2	EXISTING BRIDGE RAIL
U	EXISTING PAVEMENT
V3	MILLING 1¼" DEPTH

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

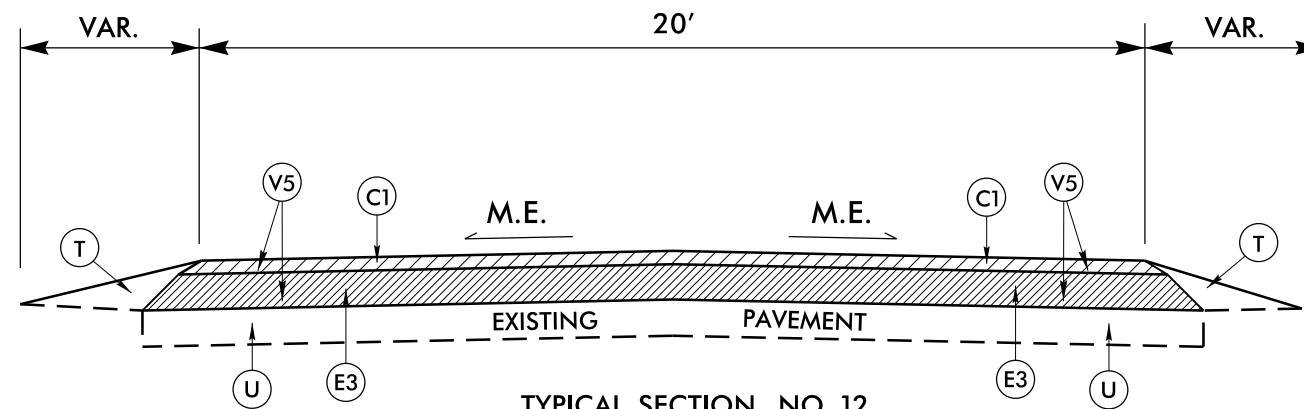
17-NOV-2017 17:20  
 S:\Contracts\2018\2018CPT.03.03.10101.Etc.Rdy.tjpb.dgn  
 8/17/99



**TYPICAL SECTION NO. 11**

MAP NO. 21  
 SR 1315 (RUSSTOWN RD.)  
 MP 1.744 – MP 2.778  
 MP 3.205 – MP 4.207

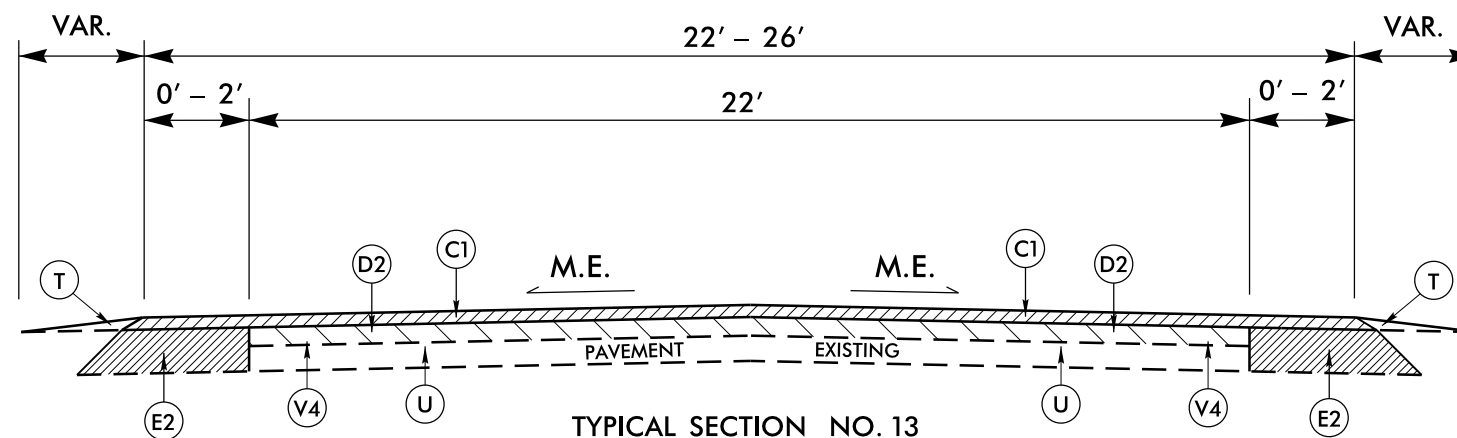
NOTE: MILLING 0" - 4" USED TO TRANSITION  
 BEFORE AND AFTER TYPICAL NO.12



**TYPICAL SECTION NO. 12**

MAP NO. 21  
 SR 1315 (RUSSTOWN RD.)  
 MP 2.778 – MP 3.205

NOTE: MILL A SINGLE LANE AND PAVE BACK BY THE  
 END OF EACH WORK DAY MAP 21 & 22 (TYP 12 & 13).



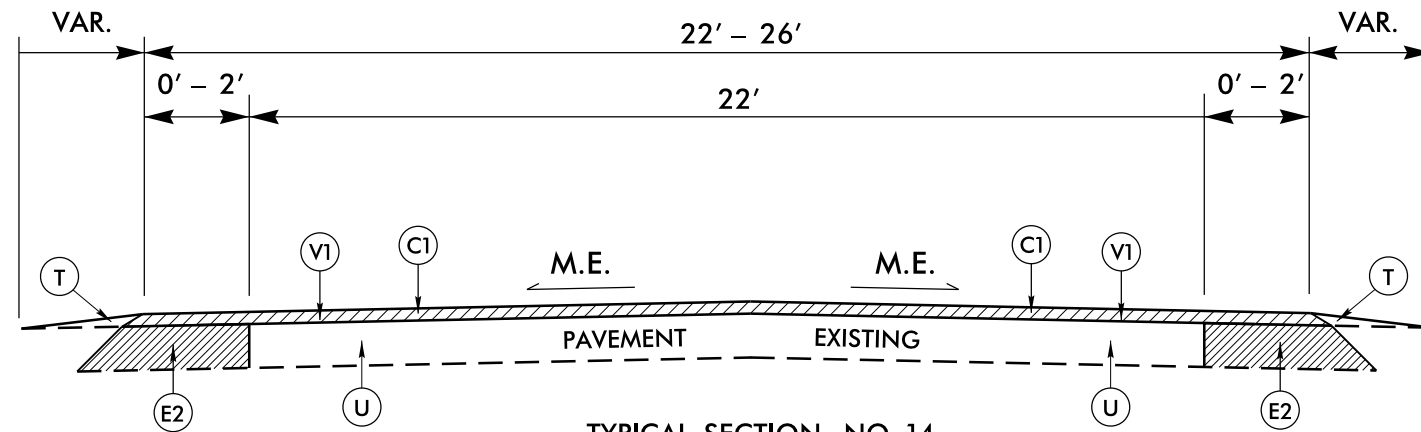
**TYPICAL SECTION NO. 13**

MAP NO. 22  
 SR 1115 (STONE CHIMNEY RD.)  
 MP 0.450 – MP 1.390

**NO WIDENING:**  
 MP 1.358 – MP 1.480  
 MP 1.587 – MP 1.678

PAVEMENT SCHEDULE	
C1	1 1/2" S9.5B
D2	2 1/2" I19.0B
E2	5" B25.0B
E3	4" B25.0B
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V4	MILLING 2 1/2" DEPTH
V5	MILLING 5 1/2" DEPTH

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



**TYPICAL SECTION NO. 14**

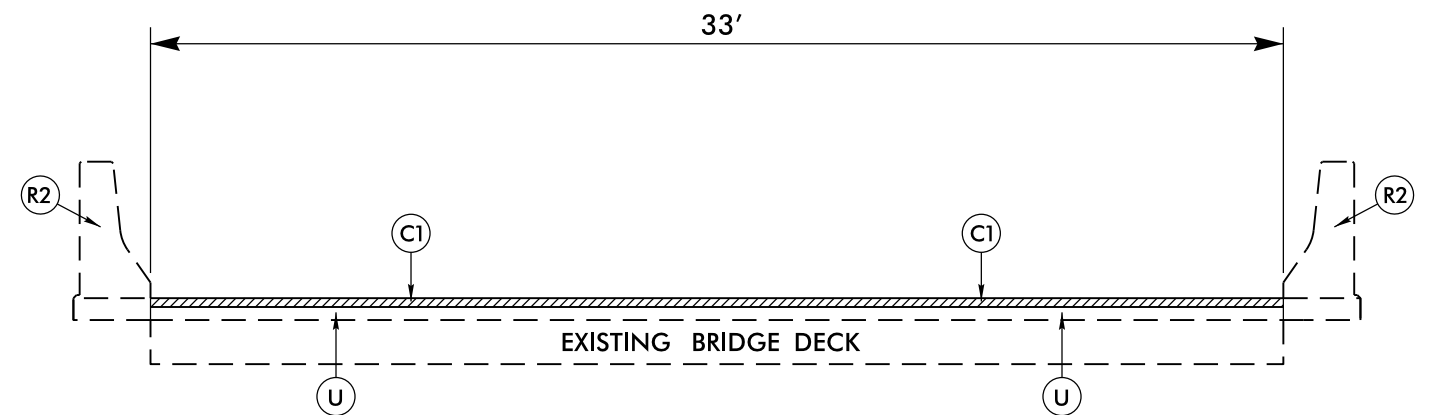
**INCLUDES MILLING & RESURFACING:**

BRUNSWICK BRIDGE NO. 49  
 WIDTH 33'  
 MP 1.442 – MP 1.462

BRUNSWICK BRIDGE NO. 58  
 WIDTH 33'  
 MP 4.262 – MP 4.281

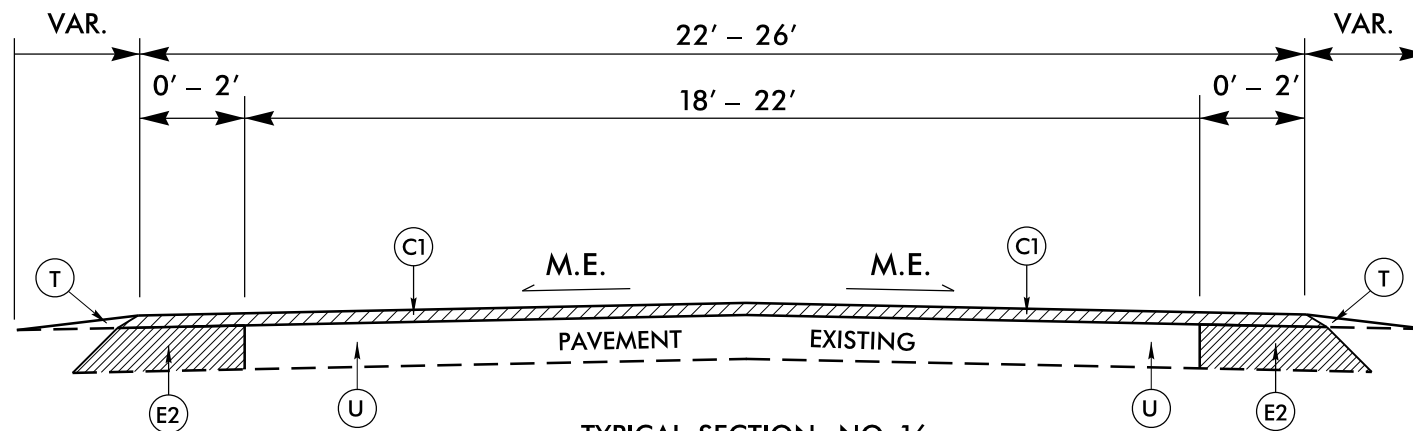
MAP NO. 22  
 SR 1115 (STONE CHIMNEY RD.)  
 MP 1.390 – MP 1.480  
 MP 4.180 – MP 4.370

**NOTE:** MILL A SINGLE LANE AND PAVE BACK BY THE END OF EACH WORK DAY.



**TYPICAL SECTION NO. 15**

MAP NO. 22  
 SR 1115 (STONE CHIMNEY RD.)  
 BRUNSWICK BRIDGE NO. 59



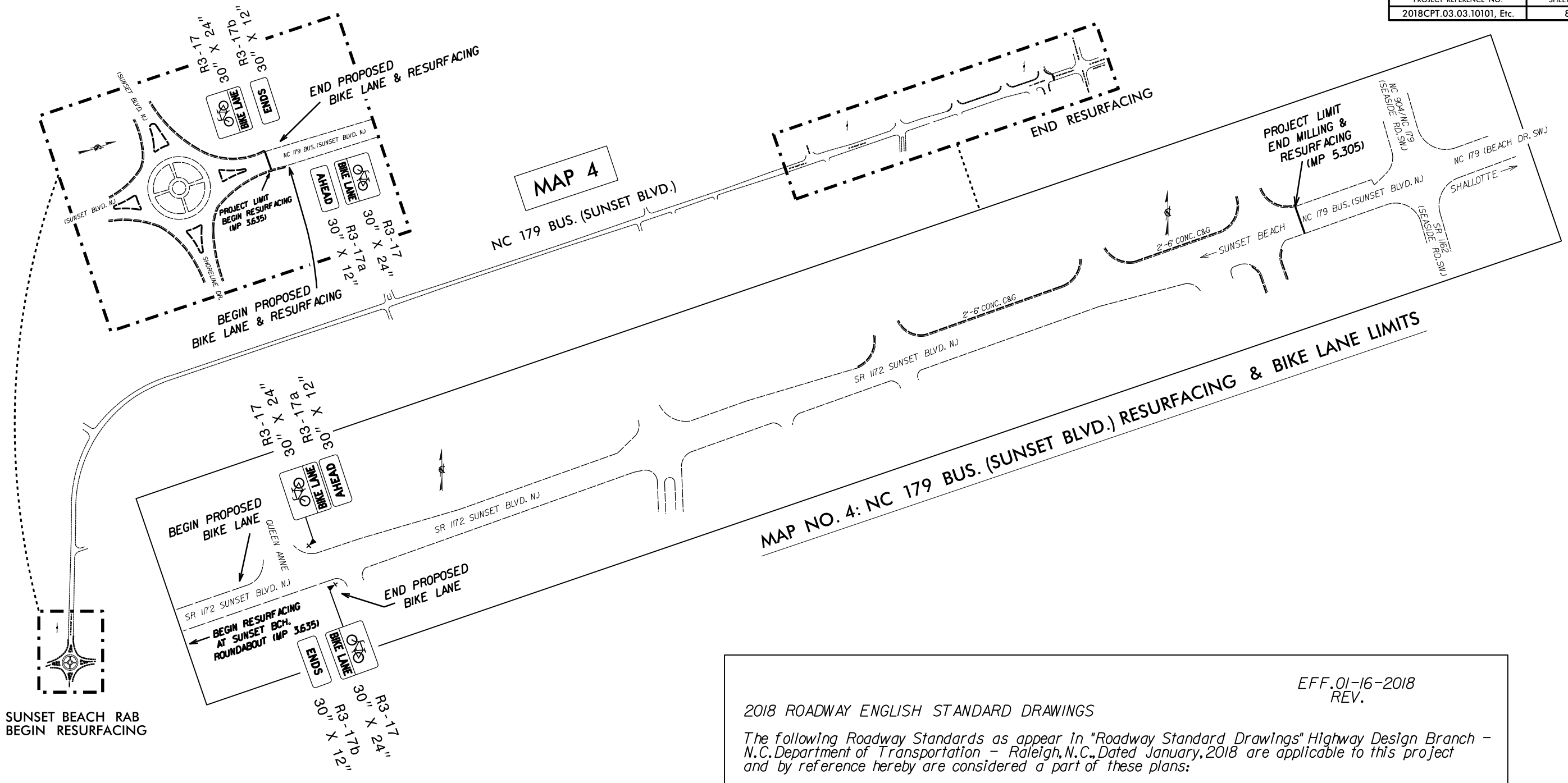
**TYPICAL SECTION NO. 16**

MAP NO. 22  
 SR 1115 (STONE CHIMNEY RD.)  
 MP 1.480 – MP 4.180  
 MP 4.370 – MP 7.910

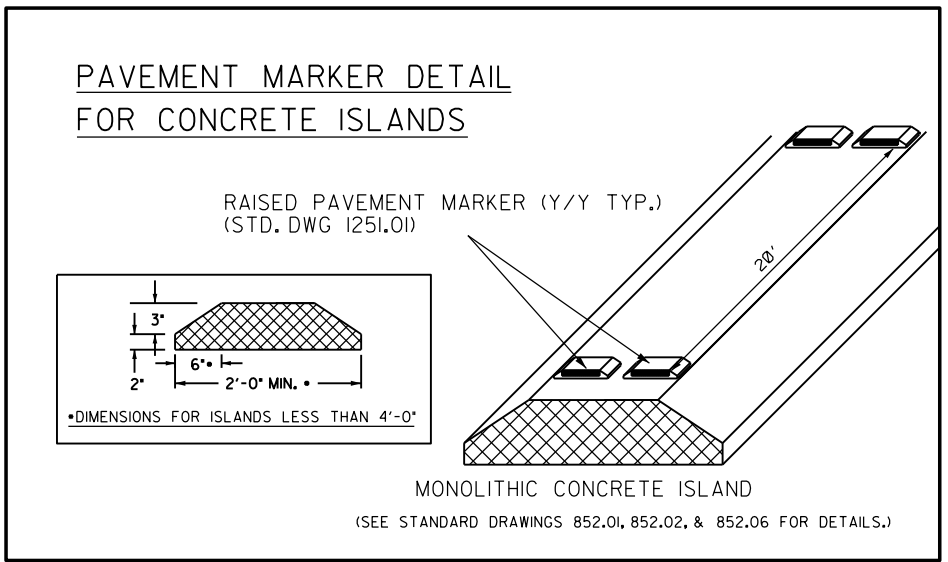
**NO WIDENING:**  
 MP 2.498 – MP 2.600  
 MP 5.765 – MP 5.981  
 MP 7.860 – MP 7.910

PAVEMENT SCHEDULE	
C1	1½" S9.5B
E2	5" B25.0B
R2	EXISTING BRIDGE RAIL
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING 1½" DEPTH

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



SUNSET BEACH RAB  
BEGIN RESURFACING



EFF. 01-16-2018  
REV.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

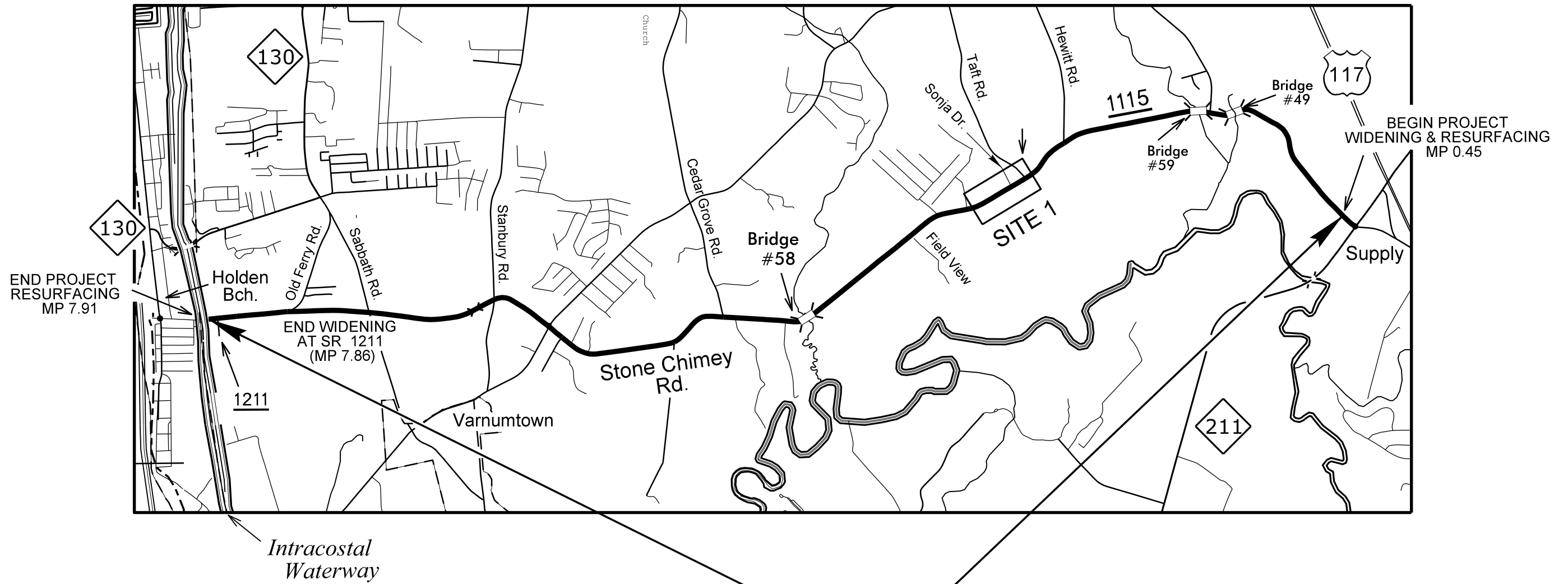
The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N.C. Department of Transportation - Raleigh, N.C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
<b>DIVISION 3 - PIPE CULVERTS</b>	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
<b>DIVISION 8 - INCIDENTALS</b>	
840.00	Concrete Base Pad for Drainage Structures
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.45	Precast Drainage Structure
846.01	Concrete Curb, Gutter and Curb & Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation

21-NOV-2017 09:59  
 C:\Users\mkjmm\OneDrive\Desktop\2018CPT.03.03.10101, Etc...DETAIL.dgn  
 \$\$\$\$\$\$USERNAME\$\$\$\$\$\$



## SITE FOR PIPE REPLACEMENTS & PROPOSED DRAINAGE



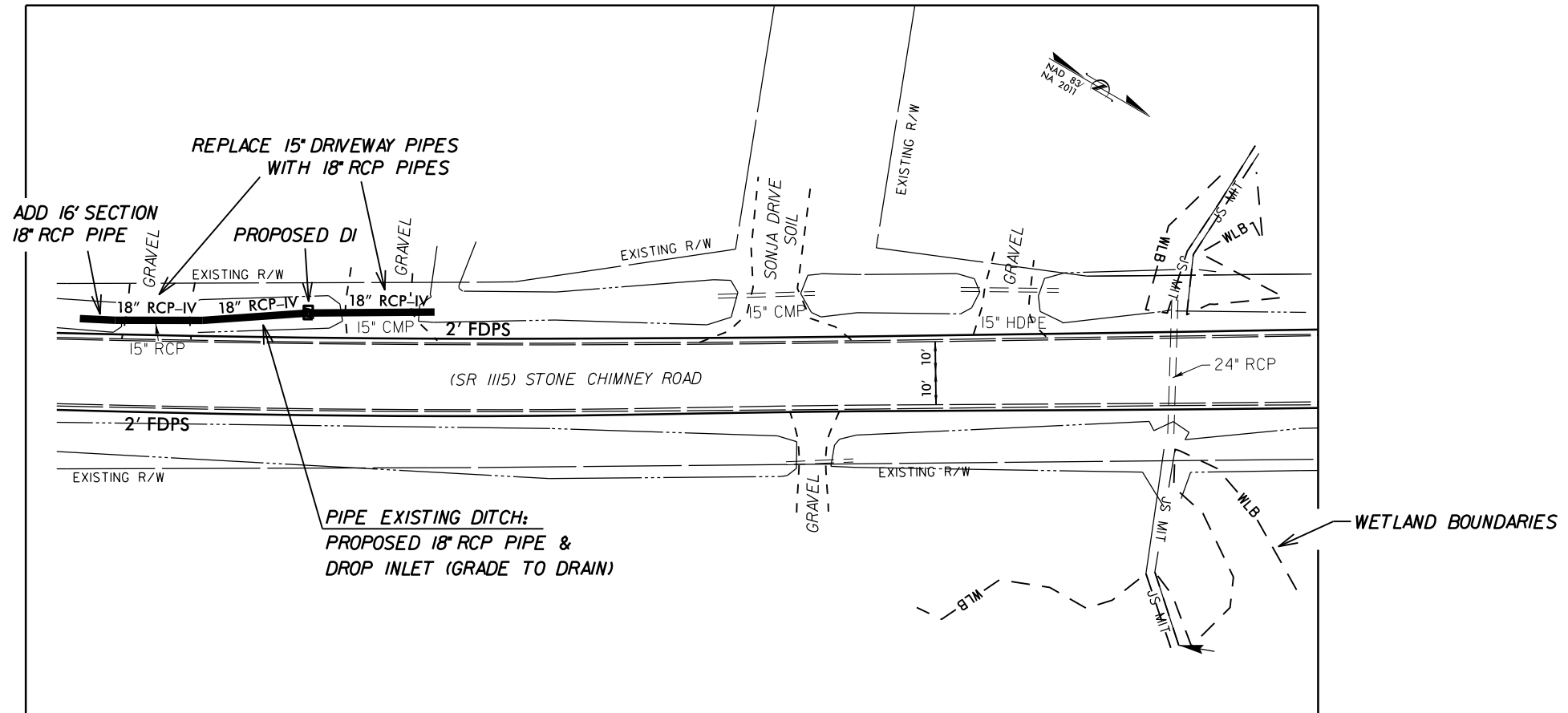
22  
 SR 1115  
 Stone Chimney Rd.  
 TIP: W-5203Y  
 WBS: 45333.3.25

**MAPS N.T.S.**

20-NOV-2017 13:08  
 S:\Division\Resurfacing\Resurfacing Data\2018  
 Resurfacing\Brunswick Co\2018CPT.03.03.10101.US 7.4.76.421 ETC.W5203Y.STONE CHIMNEY ENVIRONMENTAL\_PCE.W-5203Y\_Rdy\_tah\_mpkCopy.dgn  
 \$\$\$SERIAL\$\$\$  
 REVISIONS

8/17/99

## PIPE REPLACEMENT & PROPOSED DRAINAGE



**NOTE:** DRAINAGE INVERTS SHALL BE CALCULATED BY THE CONSTRUCTION OFFICE. NO DRAINAGE SUMMARY SHEET WILL BE PROVIDED.

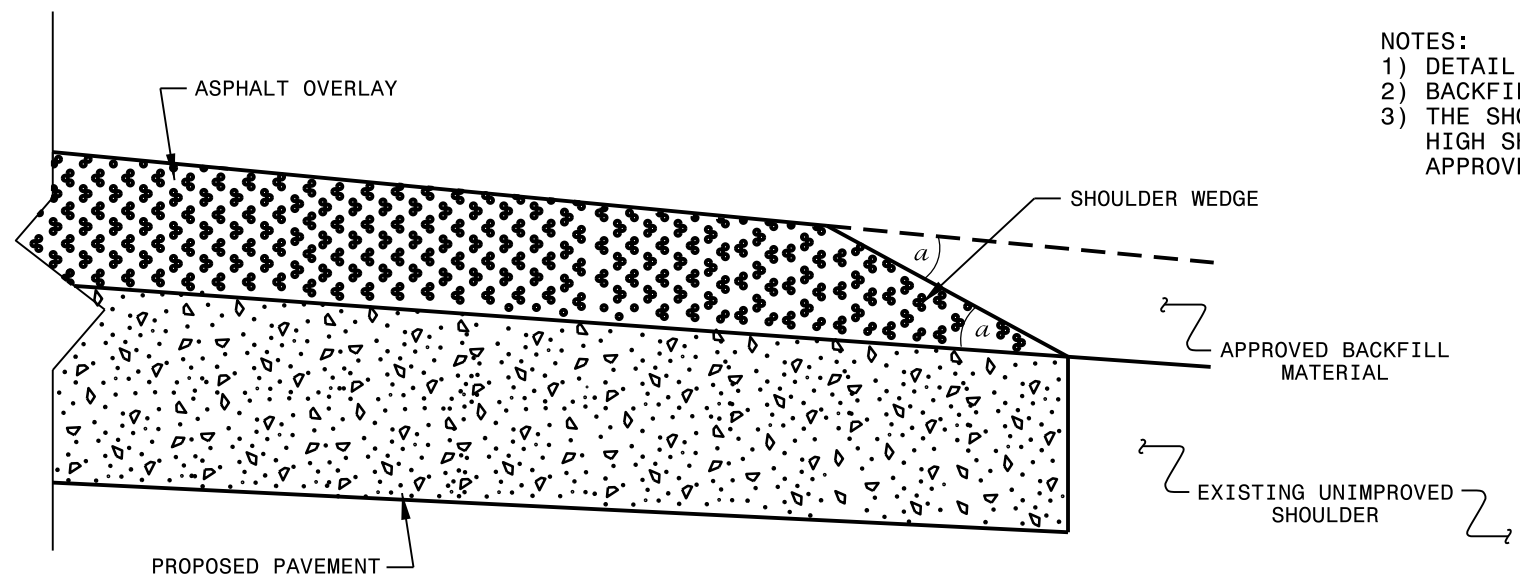
REVISIONS

20-NOV-2017 13:54  
 S:\Division\Resurfacing\Resurfacing Data\2018  
 Resurfacing\Brunswick Co\2018CPT.03.03.10101.US 7.4.76.421 ETC\W5203Y\_STONE CHIMNEY ENVIRONMENTAL\_PCE\W-5203Y\_Environmental Permits.dgn  
 8/17/99

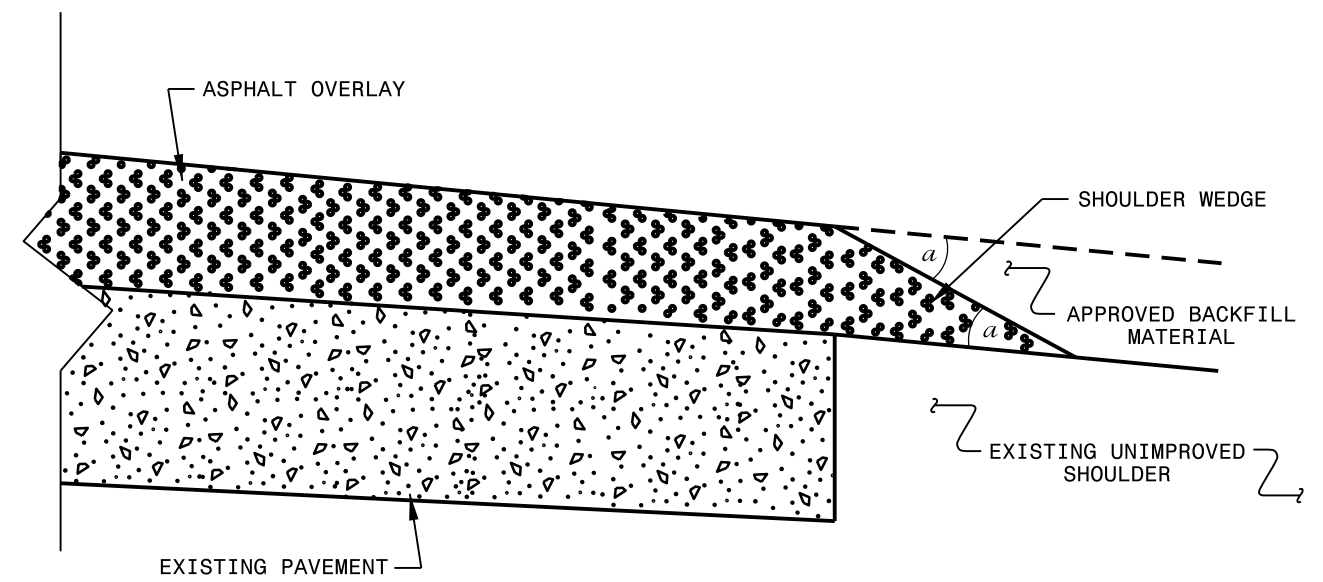




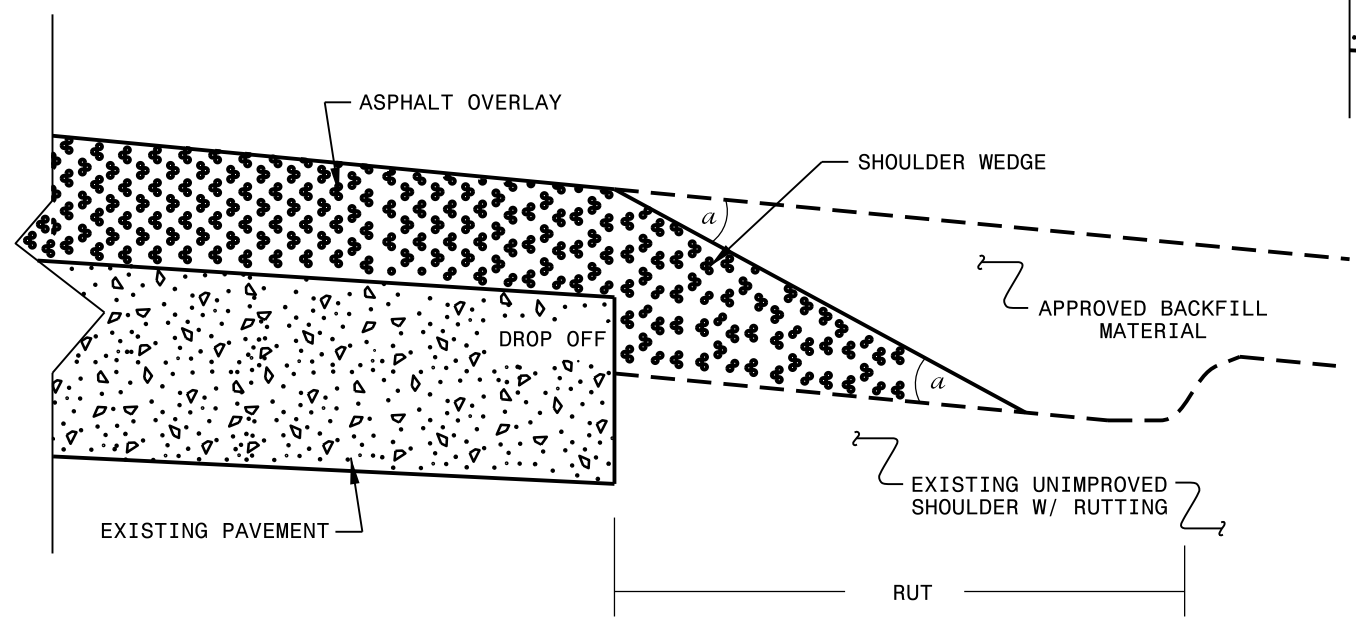
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



**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°

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>			
Office 919-707-6950		FAX 919-250-4119	
<b>SHOULDER WEDGE DETAILS</b>			
ORIGINAL BY:	T.SPELL	DATE:	7-19-11
MODIFIED BY:		DATE:	2/2/16
CHECKED BY:		DATE:	
FILE SPEC.:	s:\usr\details\stand\shoulderwedgedetail.dgn		

20-NOV-2017 16:00  
 S:\Contracts\100000000\Resurfacing Projects\Division 3\Brunswick Jan 2018\Revised Shoulder Wedge Detail.dgn  
 P:\pwr\at\USD-2152



### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	2286	236400	26120	27520000	284500	32870	34200000	40250000	407200000	41020	52550	600000	600900	601200000	601500	60180	602100	60290	60360	60420	6071	608400	609000	6093000	611700000	7444...E													
												MAS. DR. STRS	FRAME W/ 2 GRATES, STD 840.16	6" CONC RETE DRIVE WAY	REMOVE & REPLACE 2'-6" CURB & GUTTER	ADJ. OF METER OR VALVE BOXES	GREU TYPE TL-3	REMOVE & REPLACE EXI. GUARD-RAIL	CONTRACTOR FURNISHED, TYPE E SIGN	SUPPORTS, 3-LB STEEL U-CHANNEL	SIGN ERECTION, TYPE E	PORTABLE LIGHTING	TEMP. SILT FENCE	STONE FOR EC CLASS B	SEDIMENT CONTROL STONE	TEMP. MULCHING	SEED FOR TEMP. SEEDING	FERTILIZER FOR TEMP. SEEDING	SAFETY FENCE	MATTING FOR EC	1/4" HARDWARE CLOTH	WATTLE	SEED & MULCHING	SEED FOR REPAIR SEEDING	FERTILIZER FOR REPAIR SEEDING	RESPONSE FOR EC	INDUC. LOOP SAWCUT													
											MI	FT	EA	EA	SY	LF	EA	EA	LF	SF	LF	EA	LS	LF	TON	TON	ACR	LBS	TON	LF	SY	LF	LF	AC	LB	TON	EA	LF												
2018CPT.03.03.10101	Brunswick	1	NC 130 (WHITEVILLE RD.)	FROM US 17 BUS. TO SR 1335 + 1.216 MILES (MP 10.206 - MP 16.350) [NO WORK BRIDGE # 221- MP 11.124 - MP 11.172]	1 & 2	2 - 3	2WU	NO	NO	6.144	28 - 40					5						1	205														1													
		2	NC 179 (OLD GEORGETOWN RD.)	FROM 179 BUS. TO NC 904 (MP 2.185 - MP 5.910)	3	2 - 3	2WU	NO	NO	3.725	28 - 40													373	93	93	3.73	186	1.00		30	186	60	2.70	186	1.00	2	960												
		3	NC 904 (LONGWOOD RD.)	FROM SR 1321 TO SR 1304 (MP 5.608 - MP 8.185)	1 & 3	2	2WU	NO	NO	2.577	28						4	275																					2											
		4	179 BUSINESS (SUNSET BLVD.)	FROM TRAFFIC CIRCLE AT SHORELINE DRIVE TO PAVEMENT SEAM .045 WEST OF NC 904 (MP 3.635 - MP 5.305)	1 & 4	2 - 4	2WU	NO	NO	1.67	34 - 46																													2										
<b>TOTAL FOR PROJ NO. 2018CPT.03.03.10101</b>											<b>14.116</b>					<b>24</b>	<b>7</b>	<b>4</b>	<b>275</b>	<b>30</b>	<b>100</b>	<b>8</b>	<b>1</b>	<b>976</b>	<b>193</b>	<b>193</b>	<b>7.71</b>	<b>384</b>	<b>1.99</b>		<b>70</b>	<b>385</b>	<b>170</b>	<b>7.08</b>	<b>384</b>	<b>1.99</b>	<b>7</b>	<b>960</b>												
2018CPT.03.03.20101	Brunswick	5	SR 1319 (UNION SCHOOL RD)	FROM SR 1316 TO US 17 (MP 0.00 - MP 0.585)	5	2	2WU	NO	NO	0.585	20																																							
		6	SR 1504 (CLEMMONS RD)	FROM SR 1501 TO SR 1505 (MP 0.000 - MP 1.280)	6	2	2WU	NO	NO	1.28	20																																							
		7	SR 1333 (PROJECT RD)	FROM SR 1326 TO END PVM (MP 3.970 - MP 6.820)	7	2	2WU	NO	NO	2.85	20																																							
		8	SR 1327 (NEW BRITTON LOOP RD)	FROM SR 1333 TO SR 1326 (MP 0.000 - MP 1.804)	6	2	2WU	NO	NO	1.804	18																																							
		9	SR 1337 (MARLOW RD)	FROM SR 1336 TO SR 1333 (MP 0.000 - MP 1.382)	6	2	2WU	NO	NO	1.382	18																																							
		10	SR 1308 (ETHERIDGE RD)	FROM SR 1300 TO NC 904 (MP 0.000 - MP 1.993)	6	2	2WU	NO	NO	1.993	18																																							
		11	SR 1335 (MYRTLEHEAD RD)	FROM SR 1333 TO SR 1336 (MP 0.000 - MP 5.299)	6 & 9	2	2WU	NO	NO	5.299	18																																							
		12	SR 1356 (MARLOWTOWN RD)	FROM SR 1302 TO SR EOM (MP 0.000 - MP 0.840)	6	2	2WU	NO	NO	0.84	20																																							
		13	SR 1301 (MCLAMB RD)	FROM SR 1300 TO SC LINE (MP 0.000 - MP 0.782)	6	2	2WU	NO	NO	0.782	18																																							
		14	SR 1316 (OLD SHALLOTTE RD)	FROM NC 904 TO US 17 (MP 0.000 - MP 5.202)	6	2	2WU	NO	NO	5.202	20																																							
		15	SR 1155 (GOOSE CREEK RD)	FROM NC 179 TO SR 1143 (MP 0.723 - MP 2.507)	6	2	2WU	NO	NO	1.784	20																																							
		16	SR 1304 (PEA LANDING RD)	FROM US 17 TO NC 904 (MP 0.000 - MP 3.271)	8	2	2WU	NO	NO	3.271	22																																							
		17	SR 1305 (NO. 5 SCHOOL RD)	FROM SR 1300 TO SR 1304 (MP 0.000 - MP 3.123)	6, 9 & 10	2	2WU	NO	NO	3.123	20																																							
		18	SR 1165 (THOMASBORO RD)	FROM US 17 TO SR 1164 (MP 0.000 - MP 2.407)	5	2	2WU	NO	NO	2.407	22																																							
		19	SR 1720 (WASHINGTON RD)	FROM US 17 BUS. TO EOM (MP 0.000 - MP 0.157)	6	2	2WU	NO	NO	0.157	18																																							
		20	SR 1312 (MT. ZION CHURCH RD)	FROM NC 904 TO EOM (MP 0.000 - MP 0.296)	6	2	2WU	NO	NO	0.296	18																																							
		21	SR 1315 (RUSSTOWN RD)	FROM SR 1313 TO NC 904 (MP 1.75 - MP 4.20)	11 & 12	2	2WU	YES	NO	2.45	20																																							
		<b>TOTAL FOR PROJ NO. 2018CPT.03.03.20101</b>											<b>35.505</b>																																					
		45333.3.25	Brunswick	22	SR 1115 (STONE CHIMNEY RD./OLD FERRY CONNECTION)	FROM PAVEMENT SEAM AT NC 211 TO INTRACOASTAL WATERWAY (MP 0.45 - MP 7.91)	3, 13 - 16	2	2WU	NO	NO	7.46	18 - 26	1	1	40																																		
		<b>TOTAL FOR PROJ NO. 45333.3.25 W-5203Y</b>											<b>7.46</b>																																					
		<b>GRAND TOTAL</b>											<b>57.081</b>						<b>1</b>	<b>1</b>	<b>40</b>	<b>24</b>	<b>7</b>	<b>4</b>	<b>275</b>	<b>30</b>	<b>100</b>	<b>8</b>	<b>1</b>	<b>1,966</b>	<b>440</b>	<b>440</b>	<b>17.61</b>	<b>881</b>	<b>4.45</b>	<b>500</b>	<b>140</b>	<b>883</b>	<b>330</b>	<b>14.86</b>	<b>881</b>	<b>4.45</b>	<b>15</b>	<b>960</b>						

**THERMOPLASTIC AND PAINT QUANTITIES**

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	441300000- WORK ZONE ADVANCE/G ENERAL WARNING SIGNING	44570000- TEMP. TRAFFIC CONTROL	451000- LAW ENFOR CEMENT	46850000- 4" X 90 M WHITE THERMO	468600000-E 4" X 120 M YELLOW THERMO	46950000- 4" X 120 M WHITE THERMO	47000000- 8" X 90 M YELLOW THERMO	47000000- 12" X 90 M YELLOW THERMO	4710000- 24" X 120 M WHITE THERMO	4721000- THERM O MSG SCHOOL 120 M	4721000- THERM O STR ARROW 90 M	4721000- THERM O LT ARROW 90 M	4721000- THERM O RT ARROW 90 M	472500000-E		4726110000-E		481000000-E		484701	485000	48900000	490000000-N		490500000-N		
																							MERGE ARROW 90 M	THERMO STR & RT ARROW 90 M	BICYCLE SYMBOL, HEATED- IN-PLACE 90 M	BICYCLE STRAIGHT ARROW, HEATED- IN-PLACE 90 M	4" WHITE PAINT	4" YELLOW PAINT	4" WHITE POLY- UREA 20 M	REM. OF PM LINES (4")	4" WHITE THERMO PROFIED EDGE LINES	YELLOW & YELLOW MARKER S	CRYSTAL & RED MARKER S	SNOW PLOW- ABLE MARKER S (Y/Y)	SNOW PLOW- ABLE MARKER S (C/R)	
									SF	LS	HR	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA			
2018CPT.03.03.10101	Brunswick	1	NC 130 (WHITEVILLE RD.)	FROM US 17 BUS. TO SR 1335 + 1.216 MILES (MP 10.206 - MP 16.350) [NO WORK BRIDGE # 221 MP 11.124 - MP 11.172]	1 & 2	2 - 3	2WU	6.144	28 - 40	688			66,109	47,150	2,185		167	310	12	5	37	16	2	4					520	520		185	5	610	92	
		2	NC 179 (OLD GEORGETOWN RD.)	FROM 179 BUS. TO NC 904 (MP 2.185 - MP 5.910)	3	2 - 3	2WU	3.725	28 - 40	416	*		40	40,081	36,875	3,505		1,171	220		27	32	11		18									558	156	
		3	NC 904 (LONGWOOD RD.)	FROM SR 1321 TO SR 1304 (MP 5.608 - MP 8.185)	1 & 3	2	2WU	2.577	28	288				27,729	17,730	199		90			2	1												196	5	
		4	179 BUSINESS (SUNSET BLVD.)	FROM TRAFFIC CIRCLE AT SHORELINE DRIVE TO PAVEMENT SEAM .045 WEST OF NC 904 (MP 3.635 - MP 5.305)	1 & 4	2 - 4	2WU	1.67	34 - 46	192				16,463	17,990	1,455	657	657	50		15	30	10			14	14							155	70	
<b>TOTAL FOR PROJ NO. 2018CPT.03.03.10101</b>									<b>14,116</b>			<b>40</b>	<b>150,382</b>	<b>119,745</b>	<b>7,344</b>	<b>657</b>	<b>2,085</b>	<b>580</b>	<b>12</b>	<b>49</b>	<b>100</b>	<b>37</b>	<b>2</b>	<b>22</b>	<b>14</b>	<b>14</b>			<b>520</b>	<b>520</b>		<b>185</b>	<b>5</b>	<b>1,519</b>	<b>323</b>	
													<b>127,089</b>										<b>210</b>		<b>28</b>						<b>190</b>		<b>1,842</b>			
2018CPT.03.03.20101	Brunswick	5	SR 1319 (UNION SCHOOL RD)	FROM SR 1316 TO US 17 (MP 0.00 - MP 0.585)	5	2	2WU	0.585	20	64																										
		6	SR 1504 (CLEMMONS RD)	FROM SR 1501 TO SR 1505 (MP 0.000 - MP 1.280)	6	2	2WU	1.28	20	144																										
		7	SR 1333 (PROJECT RD)	FROM SR 1326 TO END PVMT (MP 3.970 - MP 6.820)	7	2	2WU	2.85	20	320																										
		8	SR 1327 (NEW BRITTON LOOP RD)	FROM SR 1333 TO SR 1326 (MP 0.000 - MP 1.804)	6	2	2WU	1.804	18	208																										
		9	SR 1337 (MARLOW RD)	FROM SR 1336 TO SR 1333 (MP 0.000 - MP 1.382)	6	2	2WU	1.382	18	160																										
		10	SR 1308 (ETHERIDGE RD)	FROM SR 1300 TO NC 904 (MP 0.000 - MP 1.993)	6	2	2WU	1.993	18	224																										
		11	SR 1335 (MYRTLEHEAD RD)	FROM SR 1333 TO SR 1336 (MP 0.000 - MP 5.299)	6 & 9	2	2WU	5.299	18	592																										
		12	SR 1356 (MARLOWTOWN RD)	FROM SR 1302 TO SR EOM (MP 0.000 - MP 0.840)	6	2	2WU	0.84	20	96																										
		13	SR 1301 (MCLAMB RD)	FROM SR 1300 TO SC LINE (MP 0.000 - MP 0.782)	6	2	2WU	0.782	18	96																										
		14	SR 1316 (OLD SHALLOTTE RD)	FROM NC 904 TO US 17 (MP 0.000 - MP 5.202)	6	2	2WU	5.202	20	592					55,974	34,333	96																	343		
		15	SR 1155 (GOOSE CREEK RD)	FROM NC 179 TO SR 1143 (MP 0.723 - MP 2.507)	6	2	2WU	1.784	20	208																										
		16	SR 1304 (PEA LANDING RD)	FROM US 17 TO NC 904 (MP 0.000 - MP 3.271)	8	2	2WU	3.271	22	368					35,196	21,589	84			200	12			2									216	9		
		17	SR 1305 (NO. 5 SCHOOL RD)	FROM SR 1300 TO SR 1304 (MP 0.000 - MP 3.123)	6, 9 & 10	2	2WU	3.123	20	352																										
		18	SR 1165 (THOMASBORO RD)	FROM US 17 TO SR 1164 (MP 0.000 - MP 2.407)	5	2	2WU	2.407	22	272					25,899	15,886	575		154		1	4	6									159	42			
		19	SR 1720 (WASHINGTON RD)	FROM US 17 BUS. TO EOM (MP 0.000 - MP 0.157)	6	2	2WU	0.157	18	32																										
		20	SR 1312 (MT. ZION CHURCH RD)	FROM NC 904 TO EOM (MP 0.000 - MP 0.296)	6	2	2WU	0.296	18																											
		21	SR 1315 (RUSSTOWN RD)	FROM SR 1313 TO NC 904 (MP 1.75 - MP 4.20)	11 & 12	2	2WU	2.45	20	288																										
		<b>TOTAL FOR PROJ NO. 2018CPT.03.03.20101</b>									<b>35,505</b>				<b>117,069</b>	<b>71,808</b>	<b>755</b>		<b>154</b>	<b>200</b>	<b>12</b>	<b>1</b>	<b>4</b>	<b>8</b>			<b>5,110</b>	<b>3,835</b>			<b>718</b>	<b>51</b>				
															<b>72,563</b>									<b>13</b>		<b>8,945</b>	<b>3,835</b>			<b>769</b>						
		45333	Brunswick	22	SR 1115 (STONE CHIMNEY RD./OLD FERRY CONNECTION)	FROM PAVEMENT SEAM AT NC 211 TO INTRACOASTAL WATERWAY (MP 0.45 - MP 7.91)	3, 13 - 16	2	2WU	7.46	18 - 26	832	*		3,055	57,805	1,160		240								10,505	7,880			78,760	545	30			
		<b>TOTAL FOR PROJ NO. 45333.3.25 (W-5203Y)</b>									<b>7.46</b>				<b>3,055</b>	<b>57,805</b>	<b>1,160</b>		<b>240</b>										<b>10,505</b>	<b>7,880</b>			<b>78,760</b>	<b>545</b>	<b>30</b>	
													<b>58,965</b>									<b>9</b>		<b>18,385</b>			<b>575</b>									
<b>GRAND TOTAL</b>									<b>57,081</b>			<b>1</b>	<b>40</b>	<b>270,506</b>	<b>249,358</b>	<b>9,259</b>	<b>657</b>	<b>2,479</b>	<b>780</b>	<b>24</b>	<b>50</b>	<b>109</b>	<b>47</b>	<b>2</b>	<b>24</b>	<b>14</b>	<b>14</b>	<b>15,615</b>	<b>11,715</b>	<b>520</b>	<b>520</b>	<b>78,760</b>	<b>1,448</b>	<b>86</b>	<b>1,519</b>	<b>323</b>
													<b>258,617</b>									<b>232</b>		<b>28</b>	<b>27,330</b>			<b>1,534</b>		<b>1,842</b>						

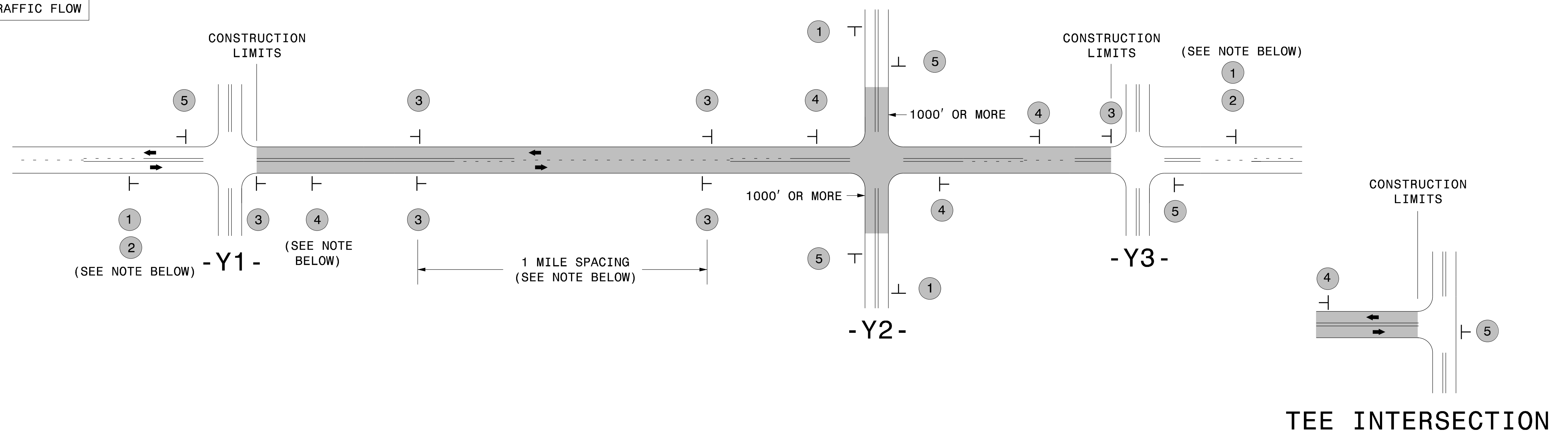


# SIGNING FOR RESURFACING PROJECTS

**LEGEND**

┆ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



## MAINLINE (-L-) SIGNING

## -Y- LINE SIGNING

<b>SIGNING NOTES AND PLACEMENT PER DIRECTION</b>	1	 <small>W20-1 48" X 48"</small>	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	
	2	 <small>W7-3aP 24" X 18"</small>	#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	 <small>SP 13107 48" X 48"</small>	- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.	
	4	 <small>SP 13106 48" X 48"</small>	- 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	 <small>G20-2 A 48" X 24"</small>	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.	

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

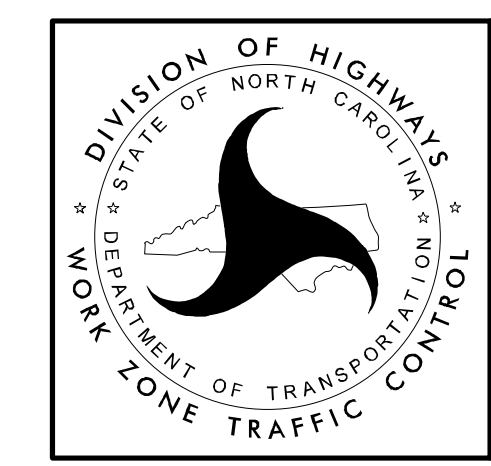
- 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE
- 2) SUBDIVISION ROADS
- 3) DEAD END ROADS

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.

 <small>W20-1 48" X 48"</small> PLACED 500' IN ADVANCE OF FLAGGER.	 <small>W20-7 A 48" X 48"</small> PLACED 250' IN ADVANCE OF FLAGGER.
--	--

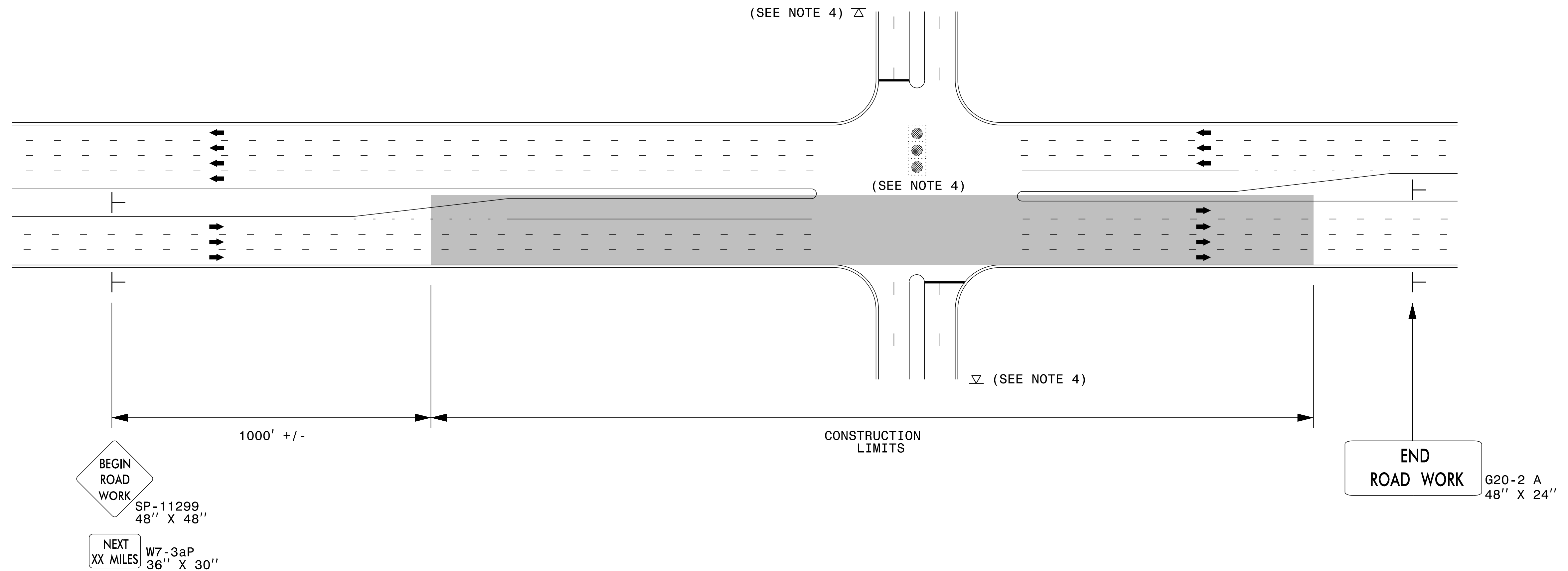
### MAPS LESS THAN 2 MILES

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.



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

## URBAN / SUBURBAN WORKZONES

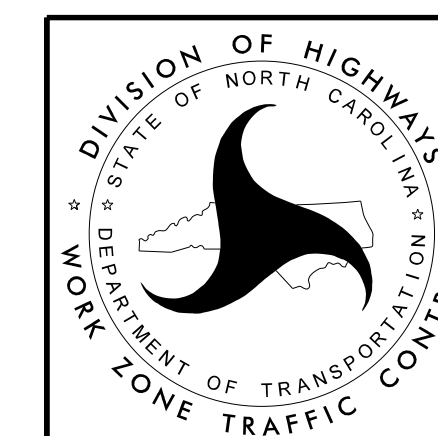


### NOTES:

- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) ADVANCE WARNING SIGNS NOT REQUIRED ON NON-SIGNALIZED SIDE STREETS.
- 4) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.
- 5) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 2' AS MEASURED FROM THE EDGE OF PAVEMENT OR THE FACE OF THE CURB. WHEN UNABLE TO OBTAIN THE LATERAL CLEARANCE WITHIN THE MEDIAN AREA USE SHOULDER MOUNTS ONLY.
- 6) SIGN MOUNT LOCATIONS SHALL NOT BLOCK SIDEWALKS OR DRIVEWAYS.
- 7) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 8) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER WHERE LATERAL CLEARANCE CAN BE OBTAINED WITHIN THE MEDIAN AREAS. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

### LEGEND

- ┆ STATIONARY SIGN
- ➔ DIRECTION OF TRAFFIC FLOW



**RESURFACING ADVANCE  
WARNING SIGNS FOR  
URBAN / SUBURBAN  
FACILITIES**

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

---



---

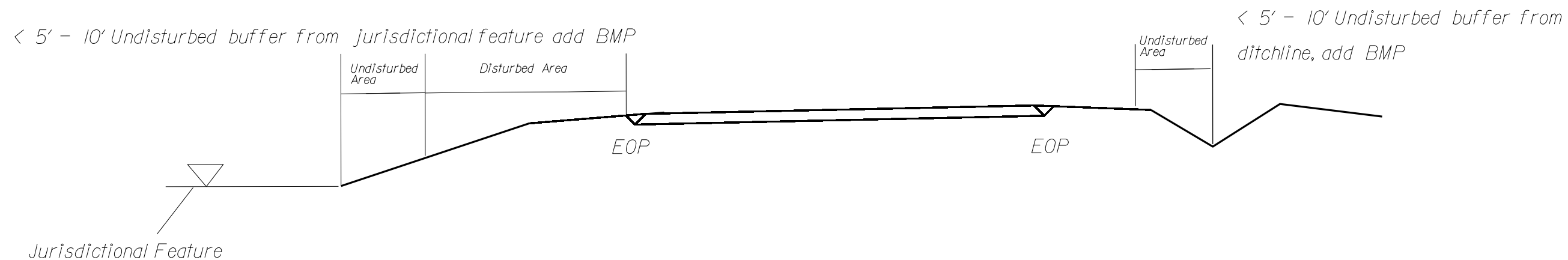
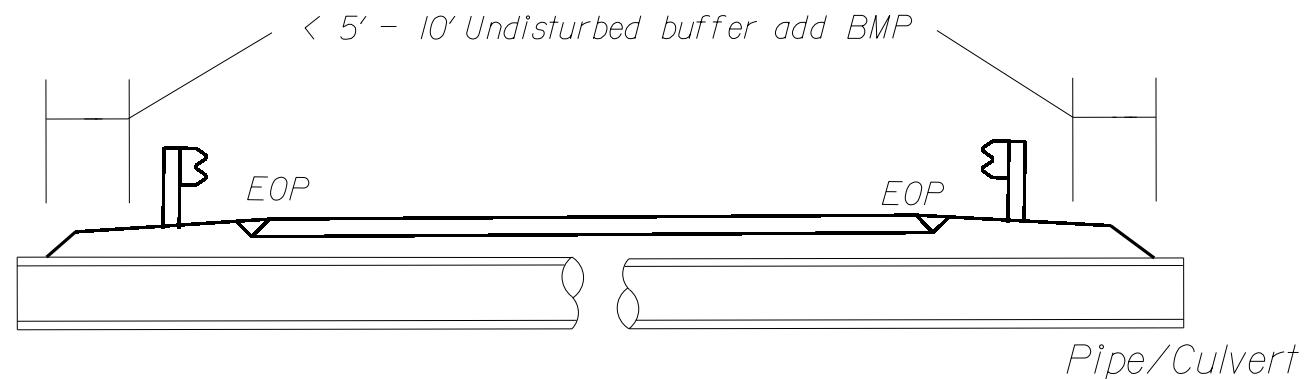
## ***SOIL STABILIZATION TIMEFRAMES***

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
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.

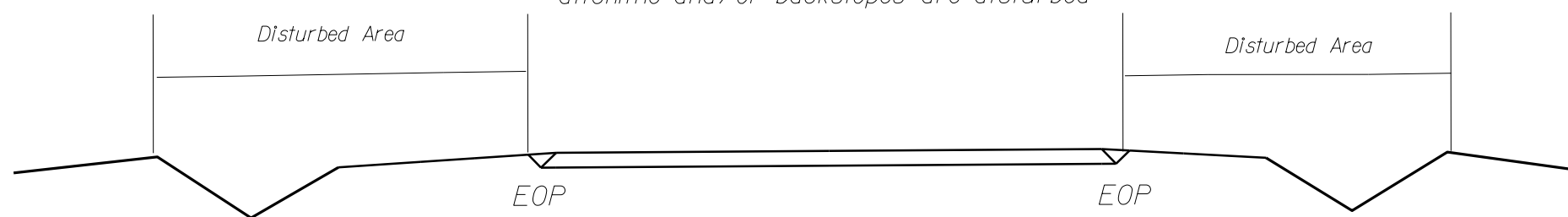
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

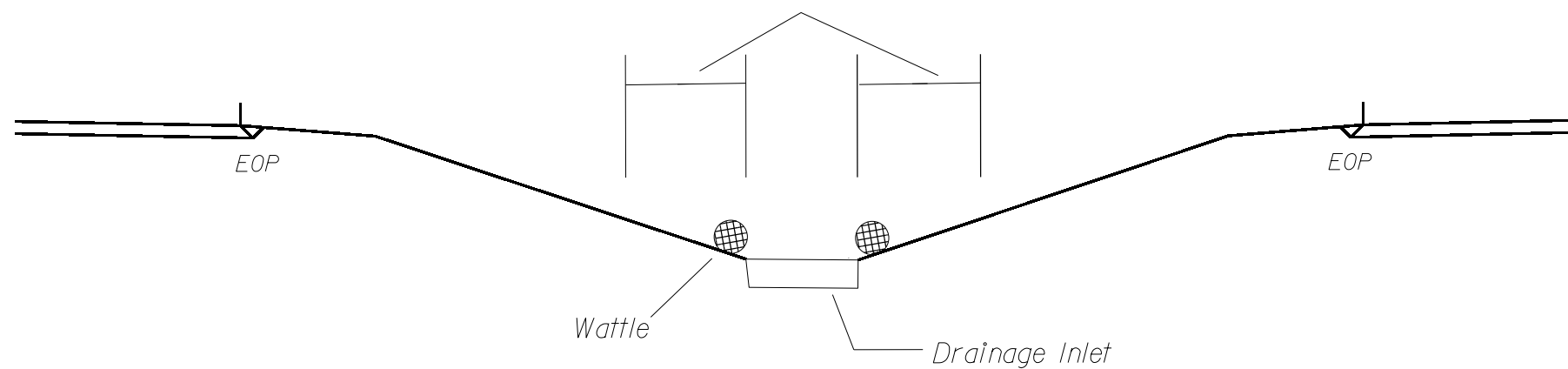
# EROSION CONTROL DETAIL



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

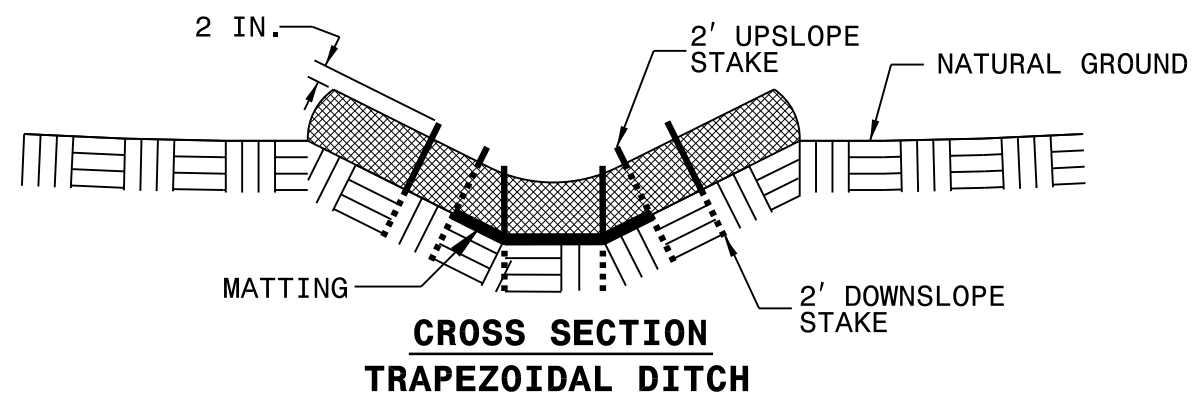
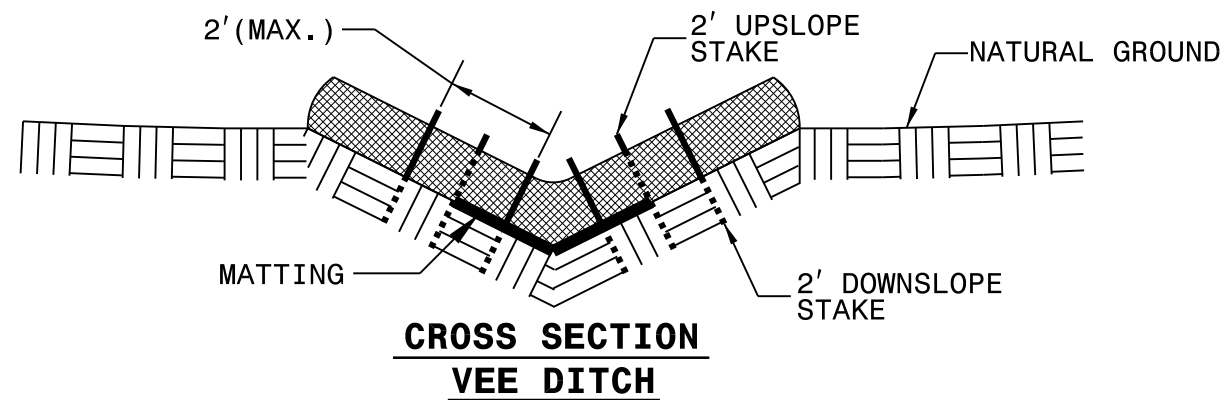
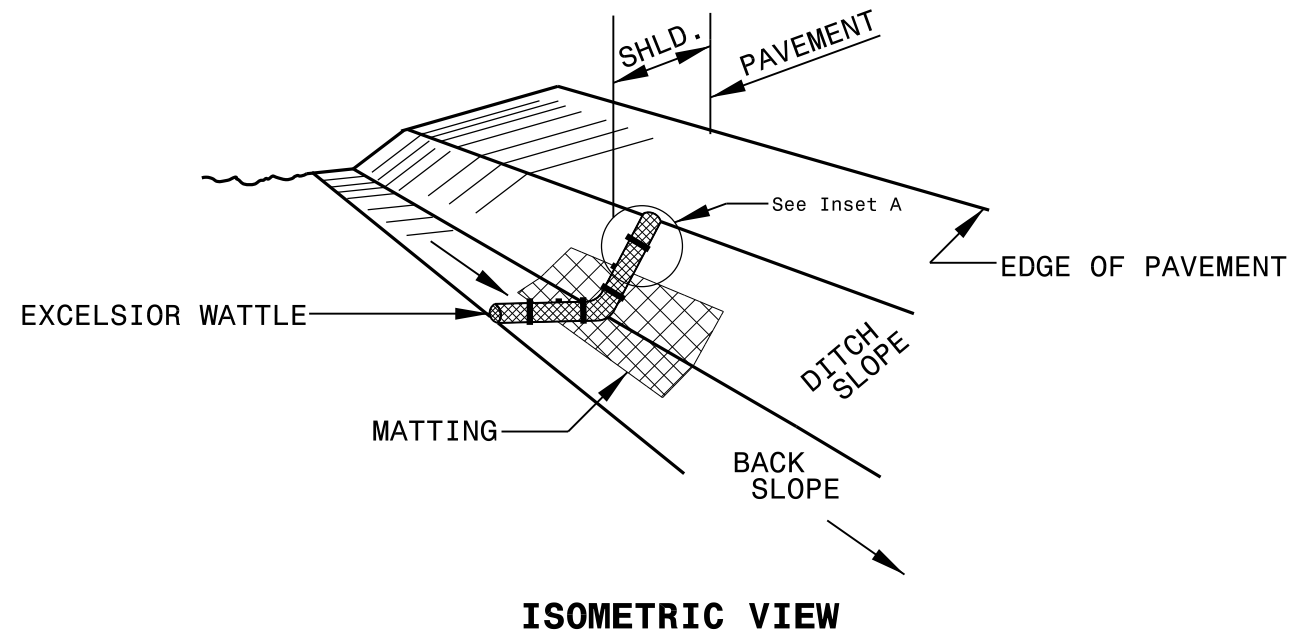


< 5' - 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE

# WATTLE DETAIL



**NOTES:**

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

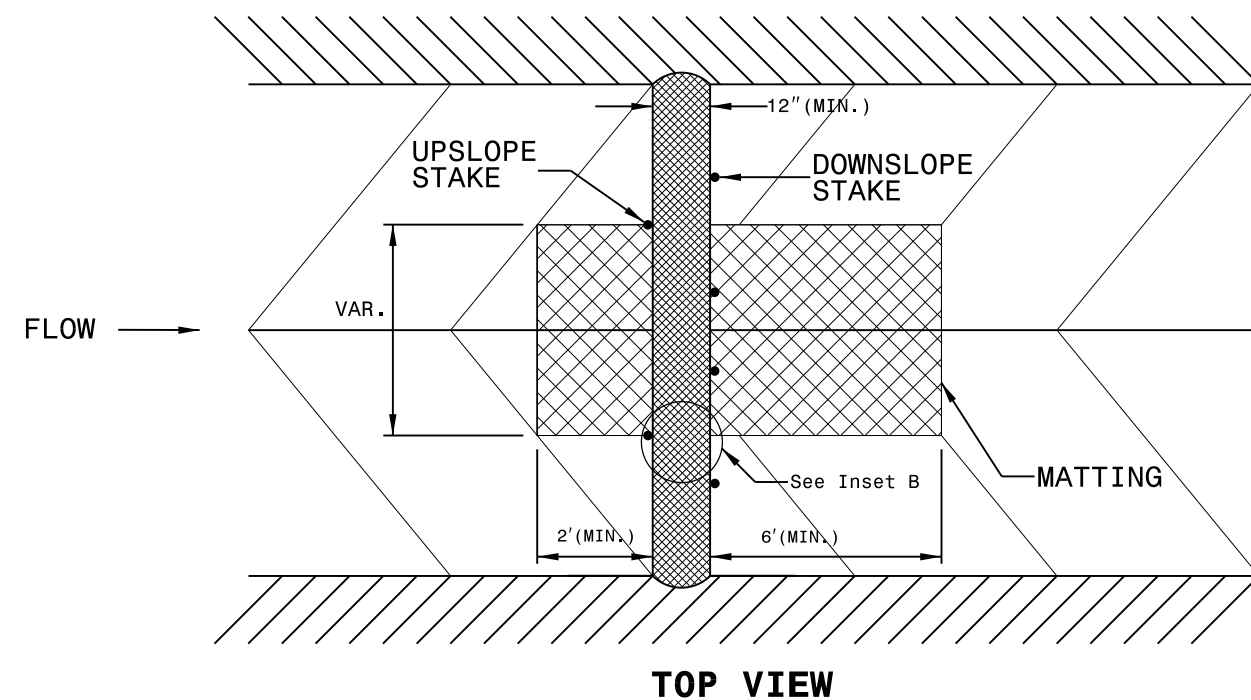
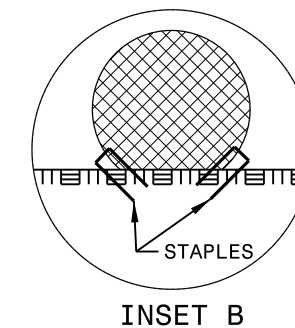
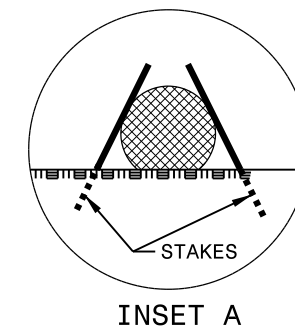
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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.



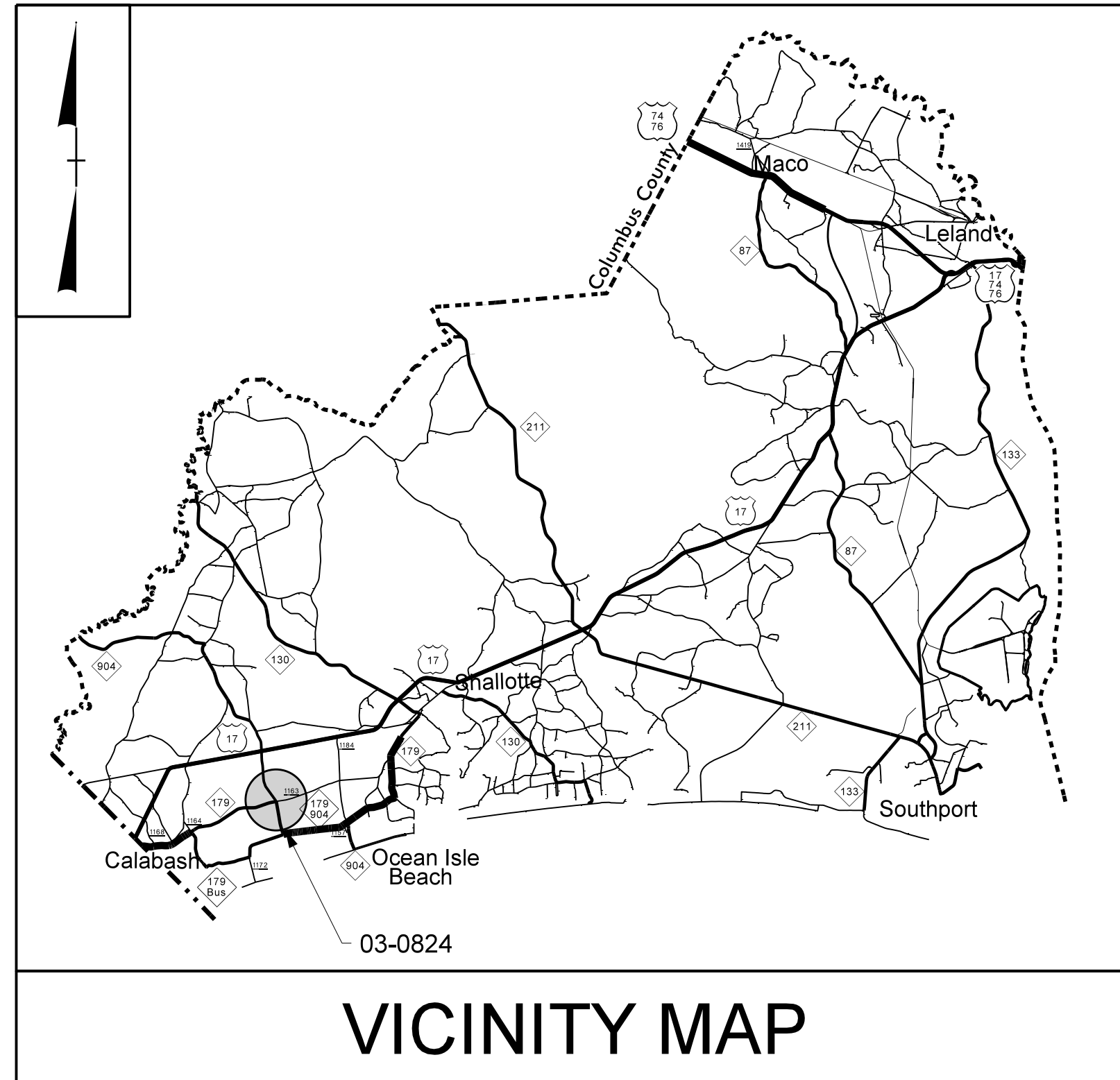
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# BRUNSWICK COUNTY

**LOCATION: DIVISION 3 – BRUNSWICK COUNTY: NC 904/NC 179-904 (Seaside Rd) at NC 179/SR 1163 (Old Georgetown Rd) MILLING & RESURFACING**

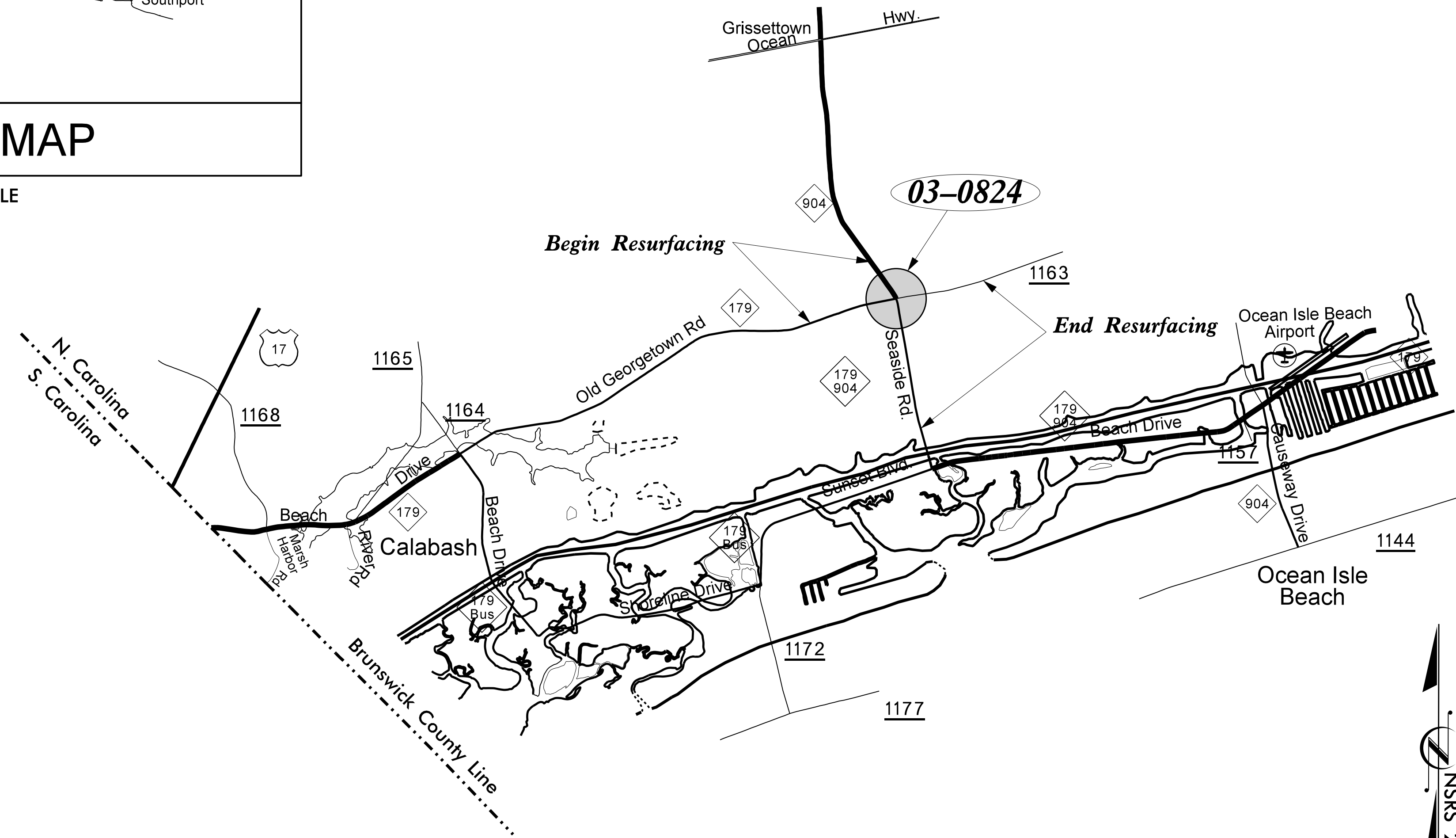
**TYPE OF WORK: TRAFFIC SIGNALS**

**Brunswick County Resurfacing**



**VICINITY MAP**

NOT TO SCALE

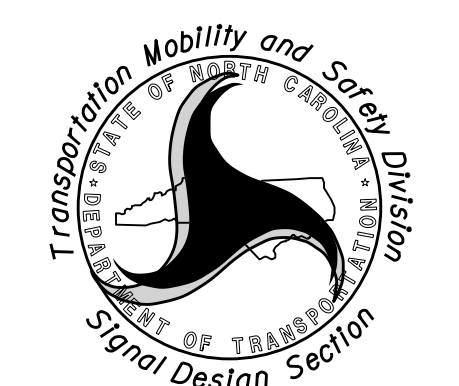


Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.

Index of Plans		
Sheet #	Reference #	Location/Description
Sig. 1.0	-----	Title Sheet
Sig. 2.0 - 2.3	03-0824	NC 904/NC 179 - 904 (Seaside Rd) at NC 179/SR 1163 (Old Georgetown Rd)

Transportation Mobility and Safety Division  
Contacts:  
**Jason P. Galloway, PE - State Signals Engineer**  
**Keith M. Mims - Signal Equipment Project Design Engineer**

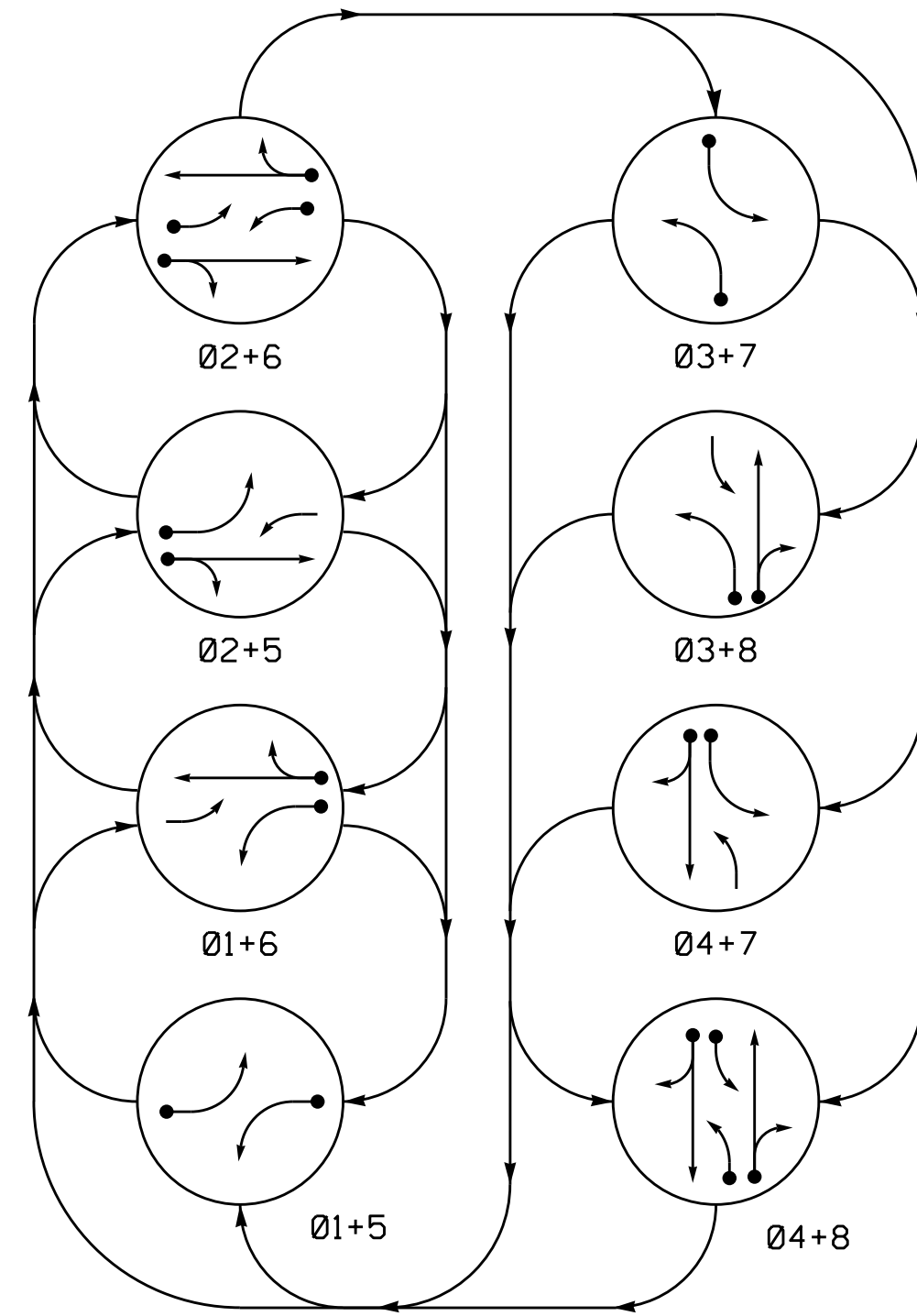
Prepared In the Office of:  
DIVISION OF HIGHWAYS  
TRANSPORTATION MOBILITY AND SAFETY  
DIVISION



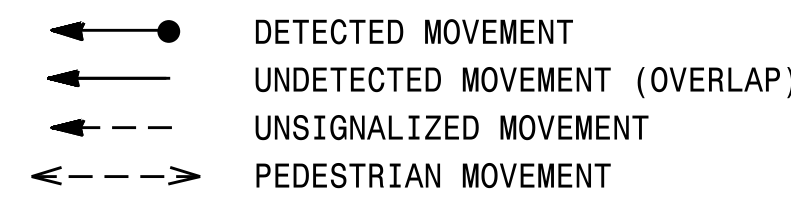
I:\MAY\SIG\SignalDesign Region\Eastern Region\Div-03\Brunswick county resurfacing 2018\3CR-PE tsh\_2018brunswick.dgn



PHASING DIAGRAM



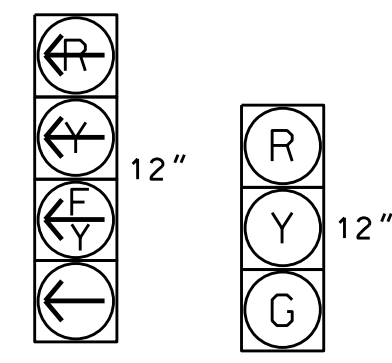
PHASING DIAGRAM DETECTION LEGEND



SIGNAL FACE	PHASE							
	01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8
11	—	—	—	—	—	—	—	—
21,22	R	R	G	G	R	R	R	Y
31	R	R	R	R	—	—	—	—
41,42	R	R	R	R	R	R	G	G
51	—	—	—	—	—	—	—	—
61,62	R	G	R	G	R	R	R	Y
71	R	R	R	R	—	—	—	—
81,82	R	R	R	R	R	G	R	G

SIGNAL FACE I.D.

All Heads L.E.D.



11	21, 22
31	41, 42
51	61, 62
71	81, 82

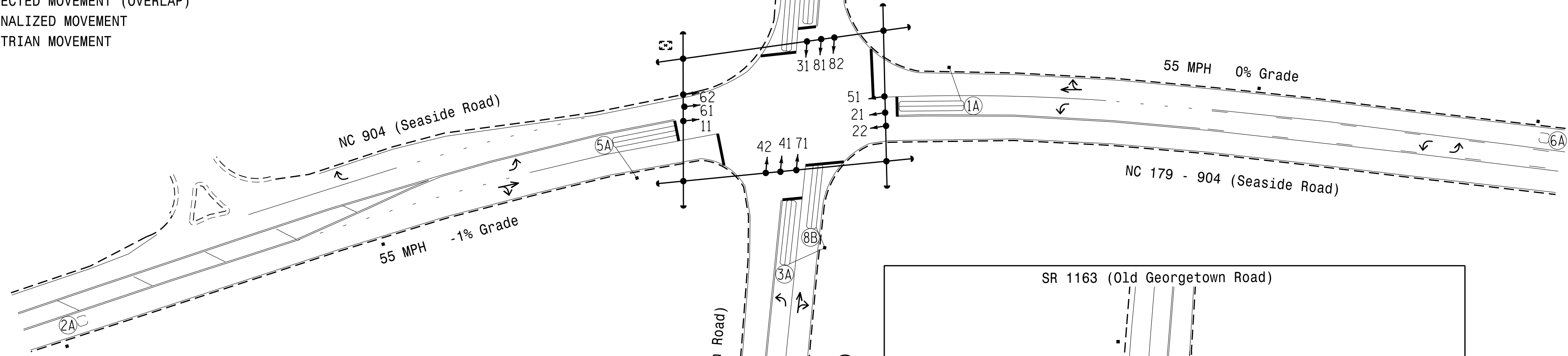
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING							
					PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	Y	1	Y	Y	-	-	15	-	-
2A	6X6	406	6	-	2	Y	Y	-	-	3	-	-
3A	6X40	0	2-4-2	Y	3	Y	Y	-	-	15	-	-
4A	6X6	420	6	Y	4	-	Y	-	-	-	-	-
4B	6X40	0	2-4-2	Y	4	Y	Y	Y	2.0	5	-	-
5A	6X40	0	2-4-2	Y	5	Y	Y	-	-	15	-	-
6A	6X6	414	6	-	6	Y	Y	-	-	-	-	-
7A	6X40	0	2-4-2	Y	7	Y	Y	-	-	15	-	-
8A	6X6	420	6	Y	8	-	Y	-	-	-	-	-
8B	6X40	0	2-4-2	Y	8	Y	Y	Y	2.0	5	-	-

8 Phase Fully Actuated Isolated

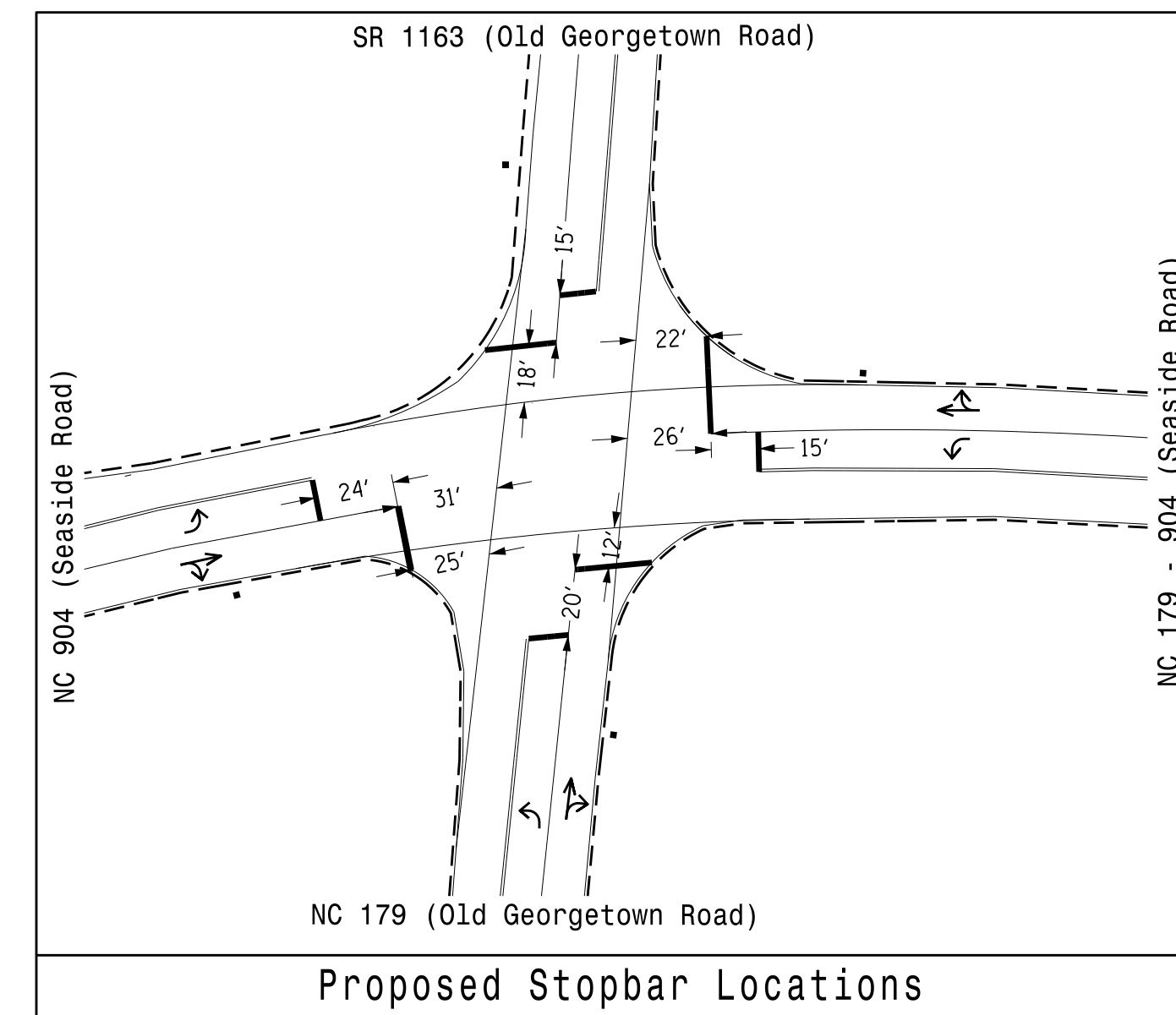
NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Phase 3 and/or phase 7 may be lagged.
5. Set all detector units to presence mode.
6. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.

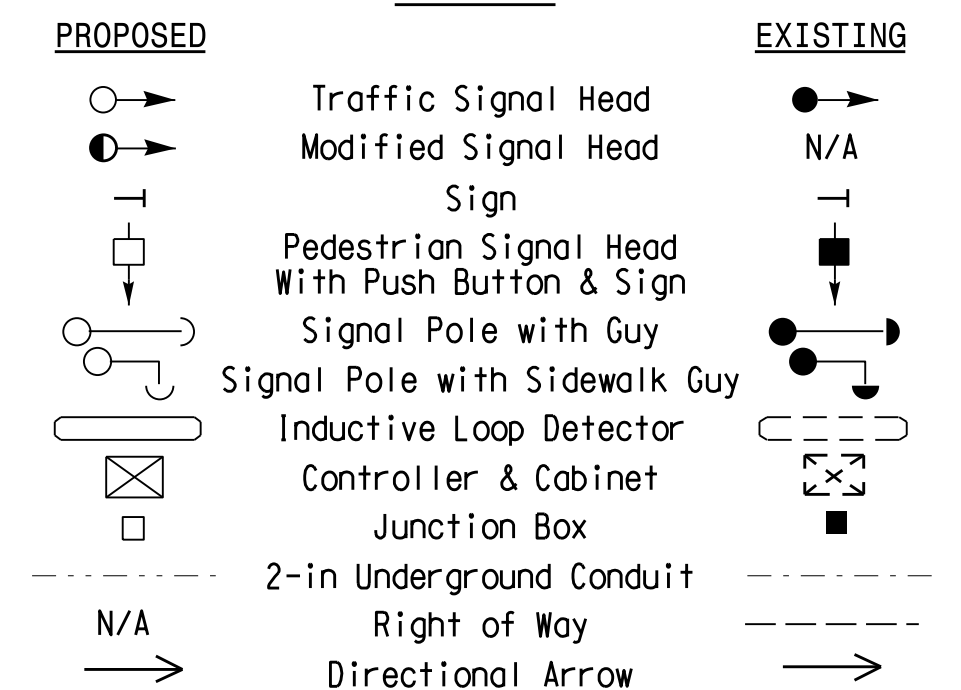


FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green 1 *	7	14	7	7	7	14	7	7
Extension 1 *	2.0	6.0	2.0	6.0	2.0	6.0	2.0	6.0
Max Green 1 *	30	90	20	75	20	90	35	75
Yellow Clearance	3.0	5.3	3.0	5.2	3.0	5.3	3.0	5.2
Red Clearance	2.8	1.0	2.3	1.0	3.3	1.0	2.3	1.0
Walk 1 *	-	-	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-	-	-
Seconds Per Actuation *	-	2.5	-	-	-	2.5	-	-
Max Variable Initial *	-	46	-	-	-	46	-	-
Time Before Reduction *	-	30	-	20	-	30	-	20
Time To Reduce *	-	45	-	30	-	45	-	30
Minimum Gap	-	3.4	-	3.4	-	3.4	-	3.4
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	-
Dual Entry	-	-	-	-	-	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON	ON

\* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.



LEGEND



Signal Upgrade

Prepared in the Offices of:  
 Transportation Mobility and Safety Solutions  
 STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 Signal Design Section

750 N. Greenfield Pkwy, Garner, NC 27529

NC 904/NC 179 - 904 (Seaside Rd) at NC 179/SR 1163 (Old Georgetown Rd)

Division 3 Brunswick County Sunset Beach

PLAN DATE: March 2017 REVIEWED BY: JPG, PE

PREPARED BY: EM Minshew REVIEWED BY:

REVISIONS: INIT. DATE

SCALE: 1" = 50'

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL: JASON P. GALLAWAY, PROFESSIONAL ENGINEER, No. 029904

DATE: 5/12/2017

SIG. INVENTORY NO. 03-0824



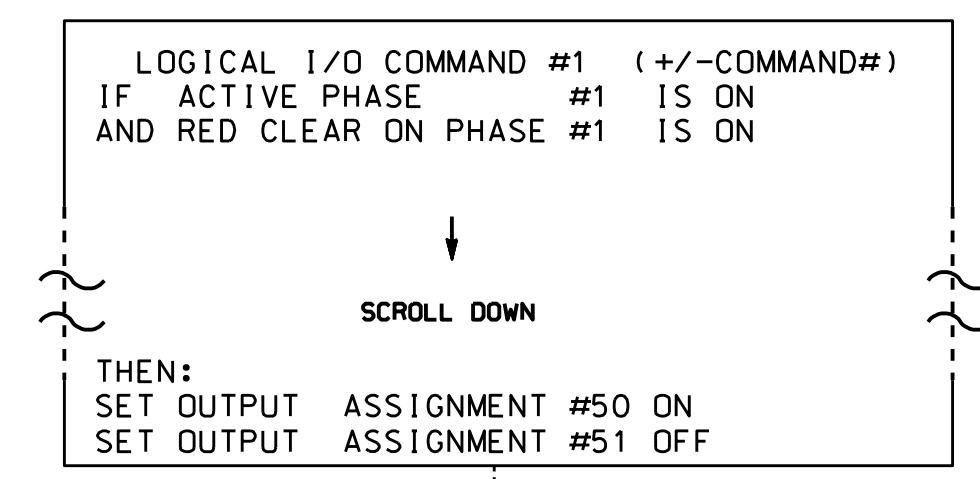




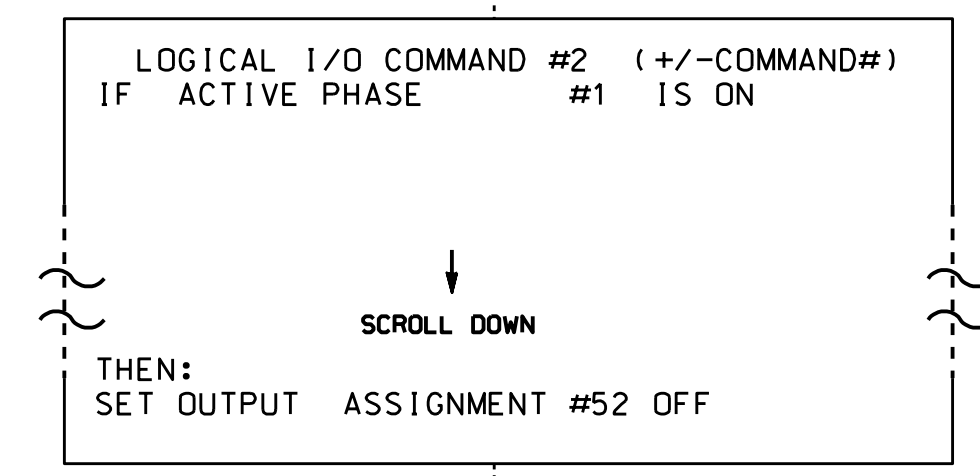
## LOGICAL I/O PROCESSOR PROGRAMMING DETAIL TO PRODUCE SPECIAL FYA-PPLT SIGNAL SEQUENCE

(program controller as shown below)

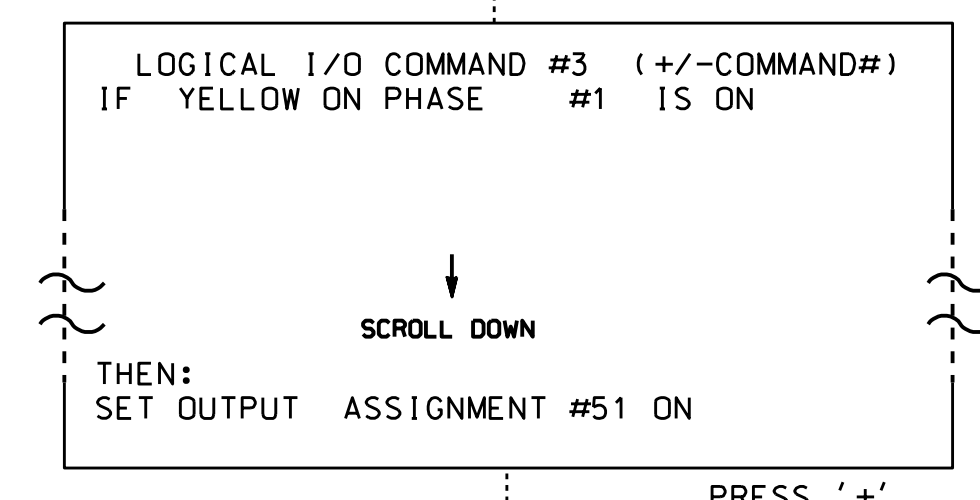
1. FROM MAIN MENU PRESS '2' (PHASE CONTROL), THEN '1' (PHASE CONTROL FUNCTIONS). SCROLL TO THE BOTTOM OF THE MENU AND ENABLE ACT LOGIC COMMANDS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, AND 12.
2. FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '3' (LOGICAL I/O PROCESSOR).



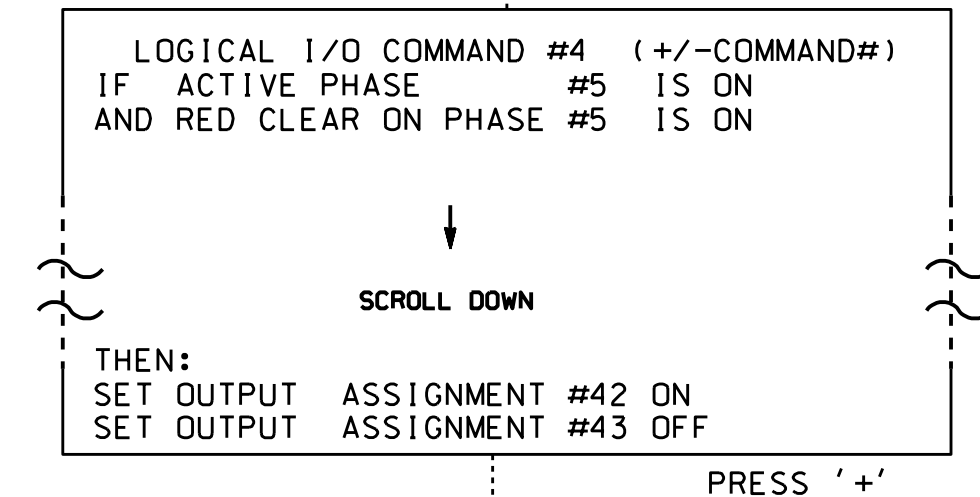
NOTE: LOGIC FOR PHASE 1 RED CLEAR WHEN TRANSITIONING FROM PHASE 1 TO PHASE 2 (HEAD 11).



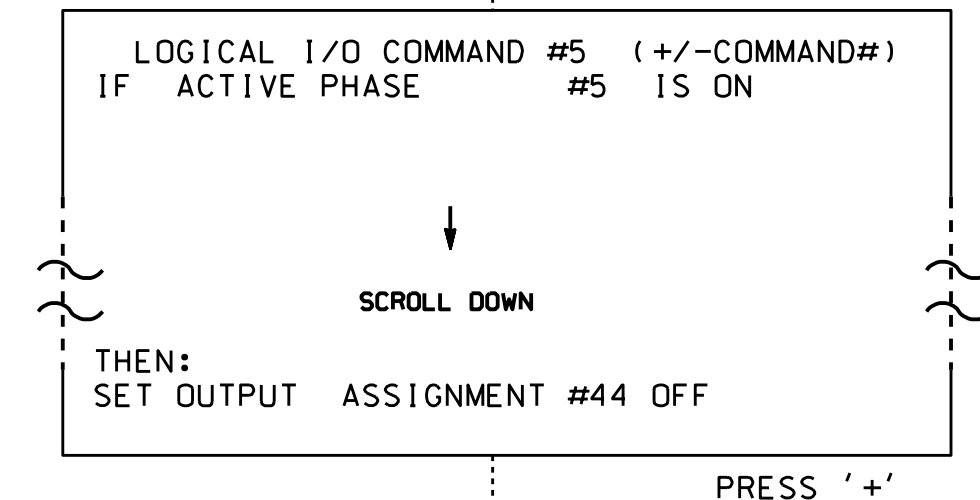
NOTE: LOGIC FOR SWITCHING FLASHING YELLOW ARROW OFF DURING PHASE 1 (HEAD 11).



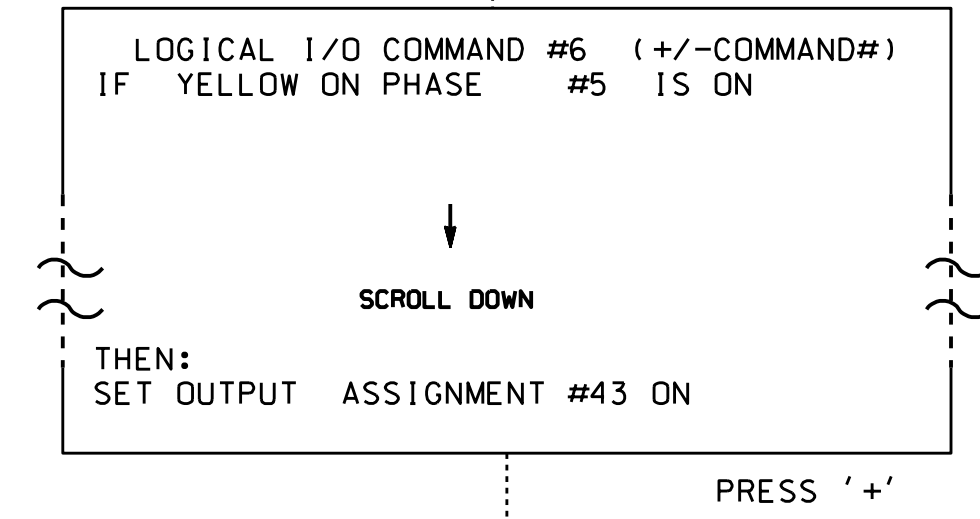
NOTE: LOGIC FOR YELLOW ARROW CLEARANCE FROM PHASE 1 (HEAD 11).



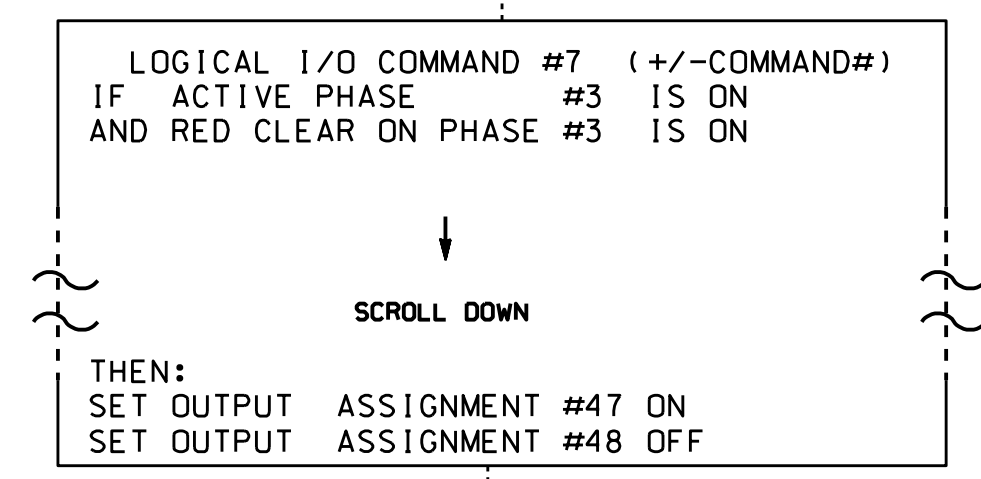
NOTE: LOGIC FOR PHASE 5 RED CLEAR WHEN TRANSITIONING FROM PHASE 5 TO PHASE 6 (HEAD 51).



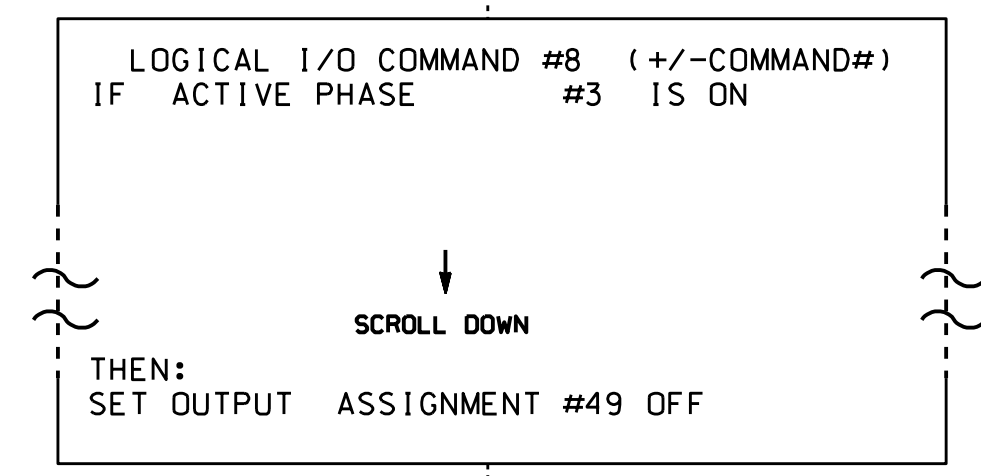
NOTE: LOGIC FOR SWITCHING FLASHING YELLOW ARROW OFF DURING PHASE 5 (HEAD 51).



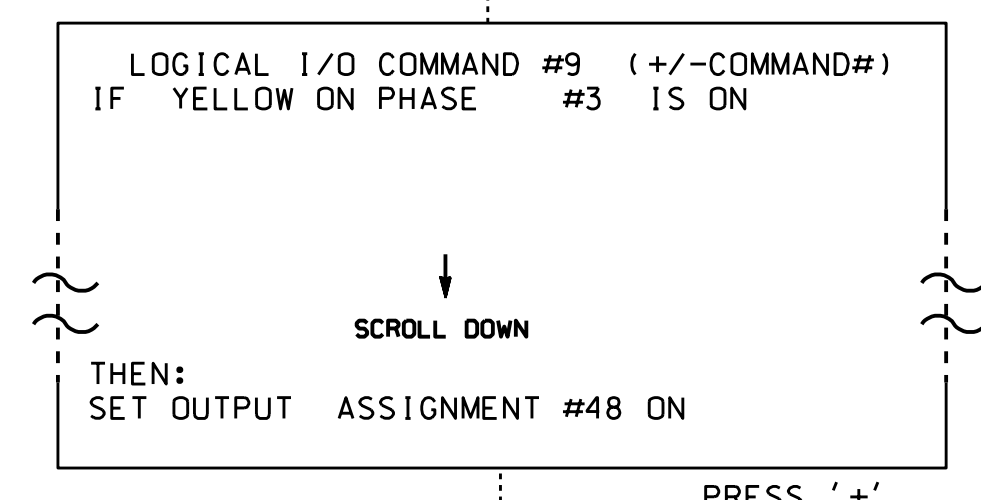
NOTE: LOGIC FOR YELLOW ARROW CLEARANCE FROM PHASE 5 (HEAD 51).



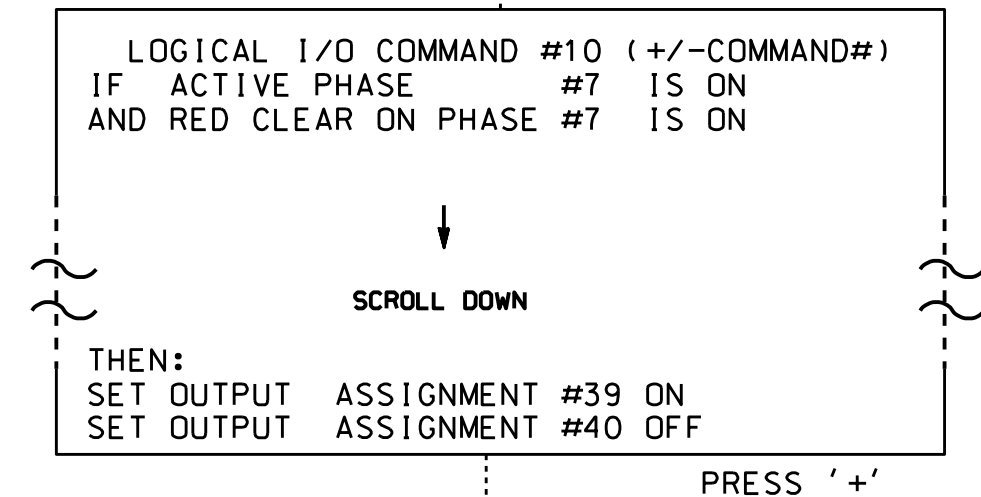
NOTE: LOGIC FOR PHASE 3 RED CLEAR WHEN TRANSITIONING FROM PHASE 3 TO PHASE 4 (HEAD 31).



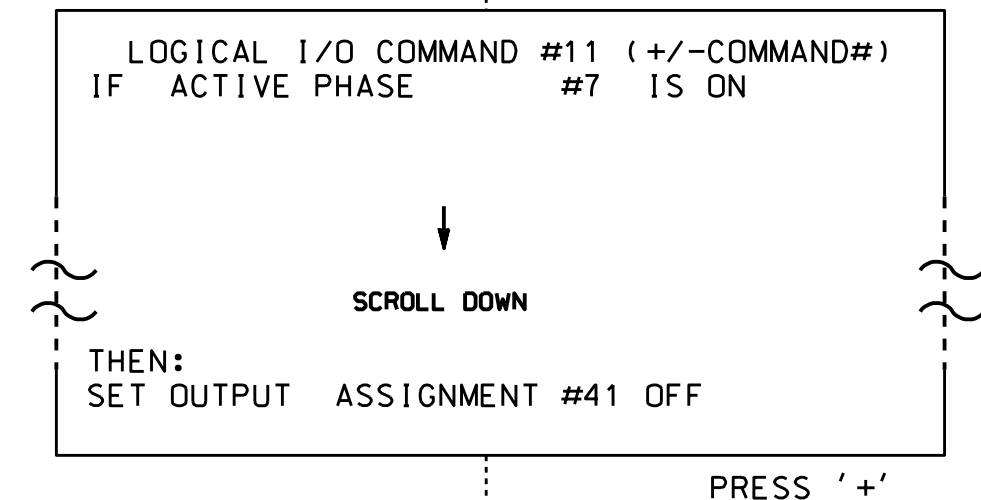
NOTE: LOGIC FOR SWITCHING FLASHING YELLOW ARROW OFF DURING PHASE 3 (HEAD 31).



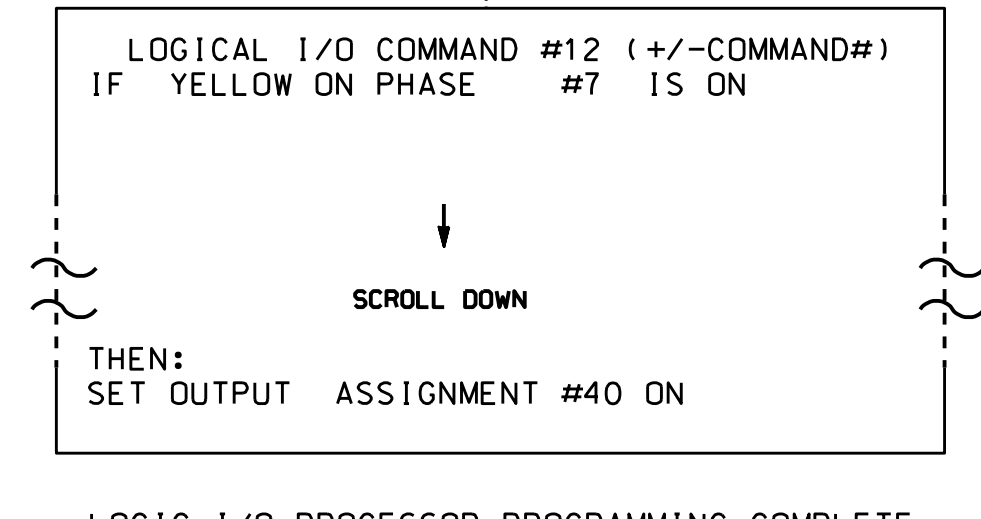
NOTE: LOGIC FOR YELLOW ARROW CLEARANCE FROM PHASE 3 (HEAD 31).



NOTE: LOGIC FOR PHASE 7 RED CLEAR WHEN TRANSITIONING FROM PHASE 7 TO PHASE 8 (HEAD 71).



NOTE: LOGIC FOR SWITCHING FLASHING YELLOW ARROW OFF DURING PHASE 7 (HEAD 71).



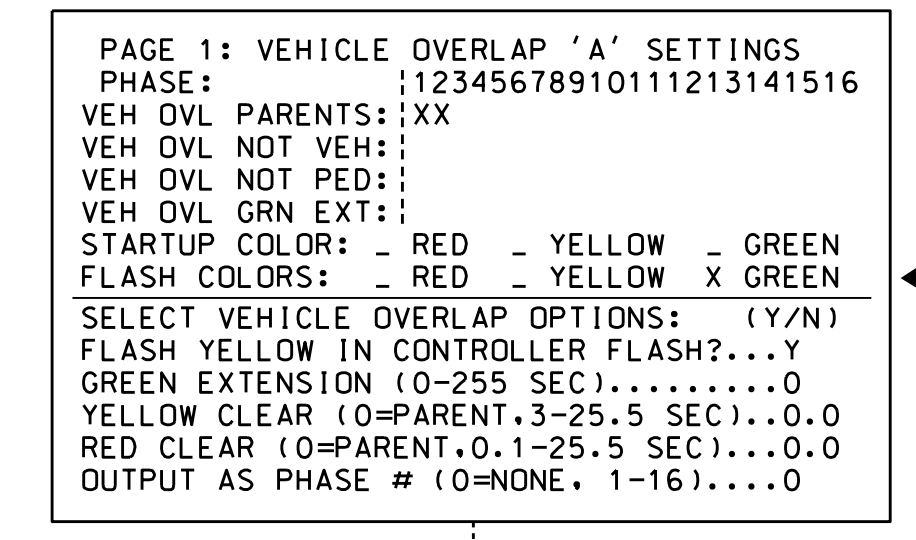
NOTE: LOGIC FOR YELLOW ARROW CLEARANCE FROM PHASE 7 (HEAD 71).

LOGIC I/O PROCESSOR PROGRAMMING COMPLETE

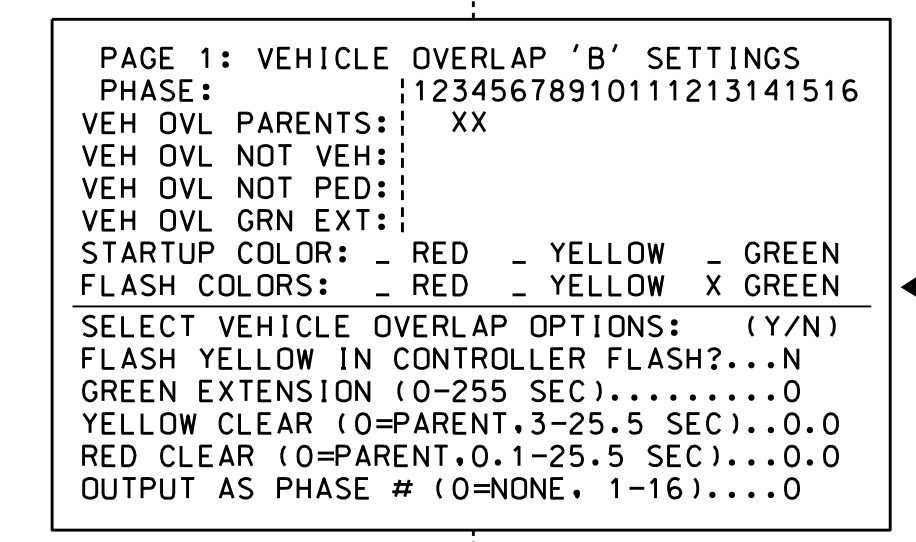
## OVERLAP PROGRAMMING DETAIL

(program controller as shown below)

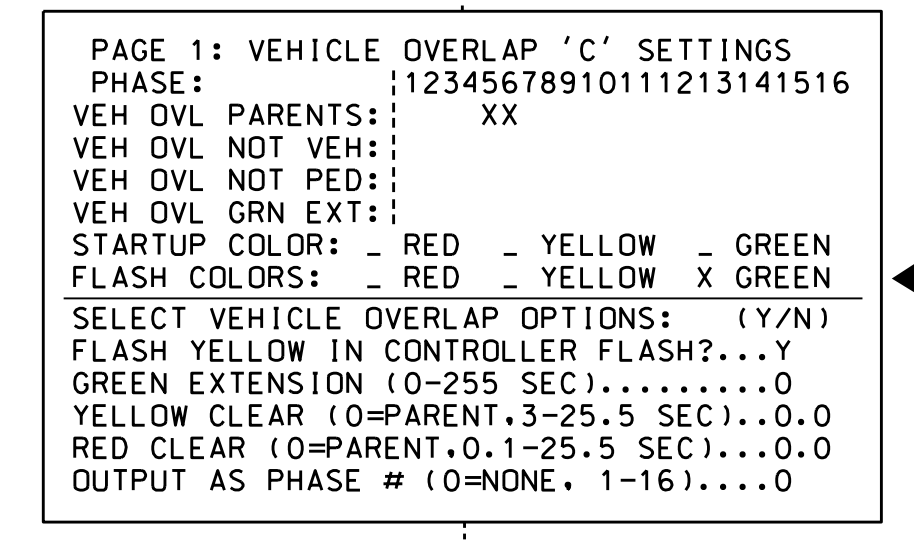
FROM MAIN MENU PRESS '8' (OVERLAPS), THEN '1' (VEHICLE OVERLAP SETTINGS).



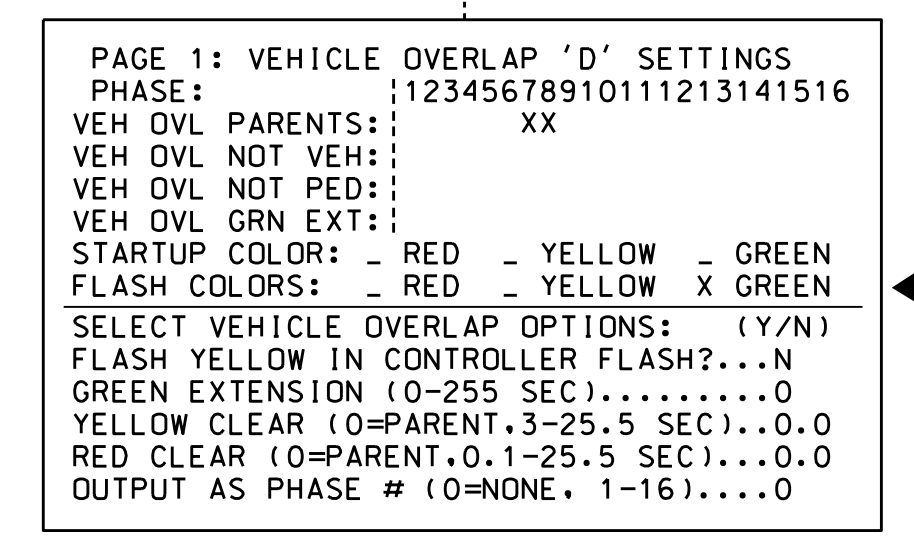
← NOTICE GREEN FLASH



← NOTICE GREEN FLASH



← NOTICE GREEN FLASH



← NOTICE GREEN FLASH

OVERLAP PROGRAMMING COMPLETE

## FLASHER CIRCUIT MODIFICATION DETAIL

IN ORDER TO INSURE THAT SIGNALS FLASH CONCURRENTLY ON THE SAME APPROACH, MAKE THE FOLLOWING FLASHER CIRCUIT CHANGES:

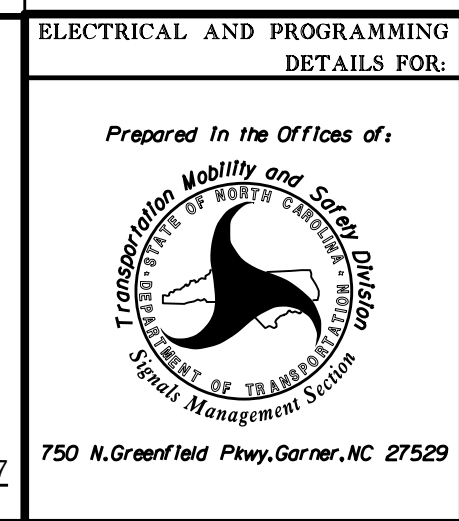
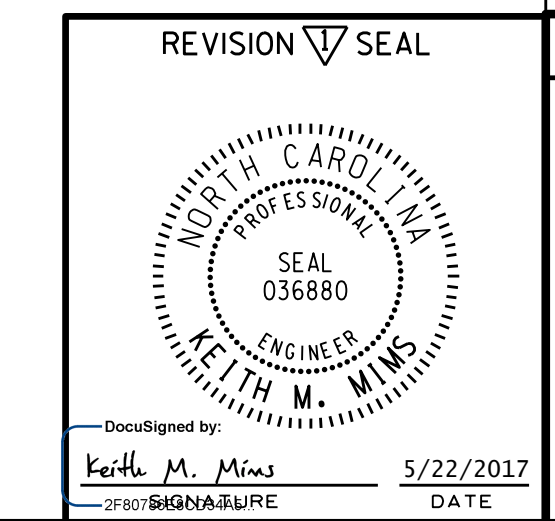
1. ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-4 AND TERMINATE ON T2-2.
2. ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-5 AND TERMINATE ON T2-3.
3. REMOVE FLASHER UNIT 2.

THE CHANGES LISTED ABOVE TIES ALL PHASES AND OVERLAPS TO FLASHER UNIT 1.

<b>OUTPUT REFERENCE SCHEDULE</b>	
USE TO INTERPRET LOGIC PROCESSOR	
OUTPUT 39 =	Overlap D Red
OUTPUT 40 =	Overlap D Yellow
OUTPUT 41 =	Overlap D Green
OUTPUT 42 =	Overlap C Red
OUTPUT 43 =	Overlap C Yellow
OUTPUT 44 =	Overlap C Green
OUTPUT 47 =	Overlap B Red
OUTPUT 48 =	Overlap B Yellow
OUTPUT 49 =	Overlap B Green
OUTPUT 50 =	Overlap A Red
OUTPUT 51 =	Overlap A Yellow
OUTPUT 52 =	Overlap A Green

THIS ELECTRICAL DETAIL IS FOR  
THE SIGNAL DESIGN: 03-0824  
DESIGNED: March 2017  
SEALED: 5-12-17  
REVISED: N/A

Electrical Detail - Sheet 2 of 2



NC 904/NC 179 - 904 (Seaside Rd) at NC 179/SR 1163 (Old Georgetown Rd)	
Division 3	Brunswick County
PLAN DATE: June 2009	REVIEWED BY: R. Hinshaw
PREPARED BY: K. Moore	REVIEWED BY:
REVISIONS	DATE
Changed head 42 to a 3-section head, added Note 8 and eliminated loop 4C. (KMM)	5/22/2017

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

Not a certified document as to the Original Document but only as to the Revisions - This document originally issued and sealed by F. Royal Hinshaw, PE #032117, on 7-27-09. This document is only certified as to the revisions.

SIG. INVENTORY NO. 03-0824

2017-05-17 13:59 C:\MTS\03\03\10101\Sig\03-0824\_Sig.ele\_20170517.dgn