STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION 6

PLANS - REV 10-24-2023

Letting Date: November 1, 2023

CONTRACT ID: DF00455

TIP NO.: -----

FEDERAL AID NO.: STATE FUNDED

WBS ELEMENT NO.: 2024CPT.06.07.20091.1 & 2024CPT.06.07.20241.1

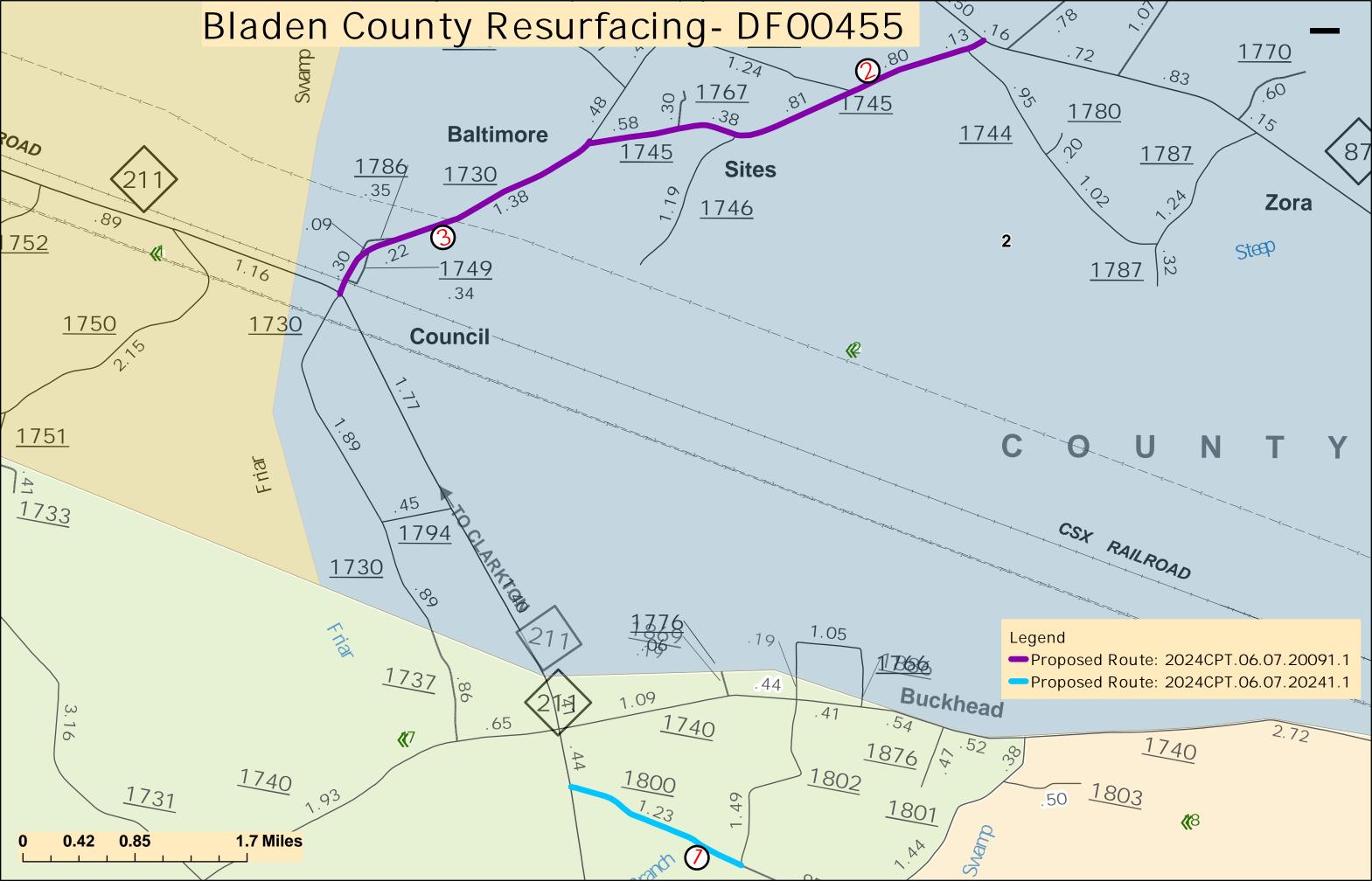
ROUTE NO.: VARIES

LOCATION: VARIES

COUNTY: BLADEN & COLUMBUS

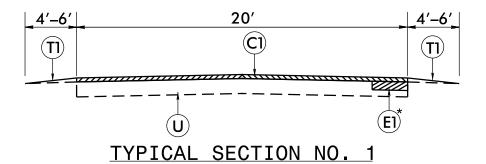
LENGTH OF PROJECT: 5.94 MILES

TYPE OF WORK: RESURFACING, WIDENING & PAVEMENT MARKINGS

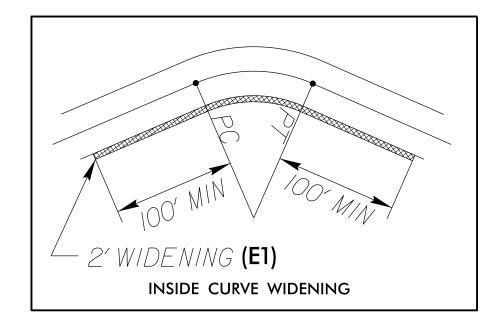


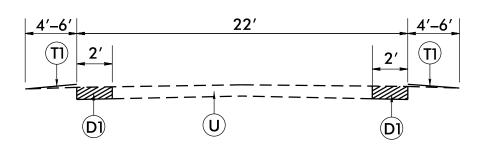
	PAVEMENT SCHEDULE
C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B,AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E1	4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
T1	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING ASPHALT PAVEMENT

PROJECT REFERENCE NO. SHEET 2024CPT.06.07.20091.J.etc



*2' INSIDE CURVE WIDENING (SEE DETAIL)

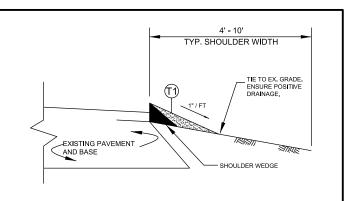




TYPICAL SECTION NO. 2

	PAVEMENT SCHEDULE
C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B,AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
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U	EXISTING ASPHALT PAVEMENT

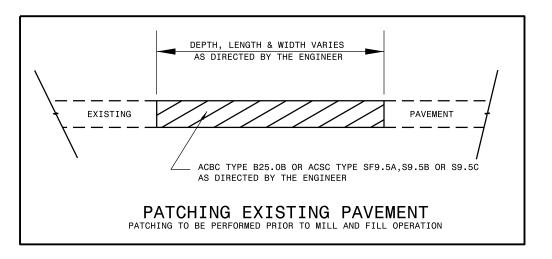
PROJECT REFERENCE NO. SHEET NO. 2024CPT.06.07.20091.J.etc

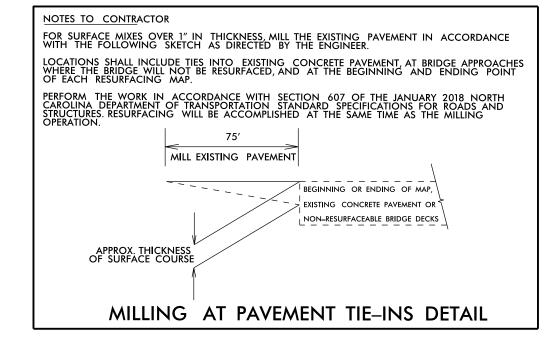


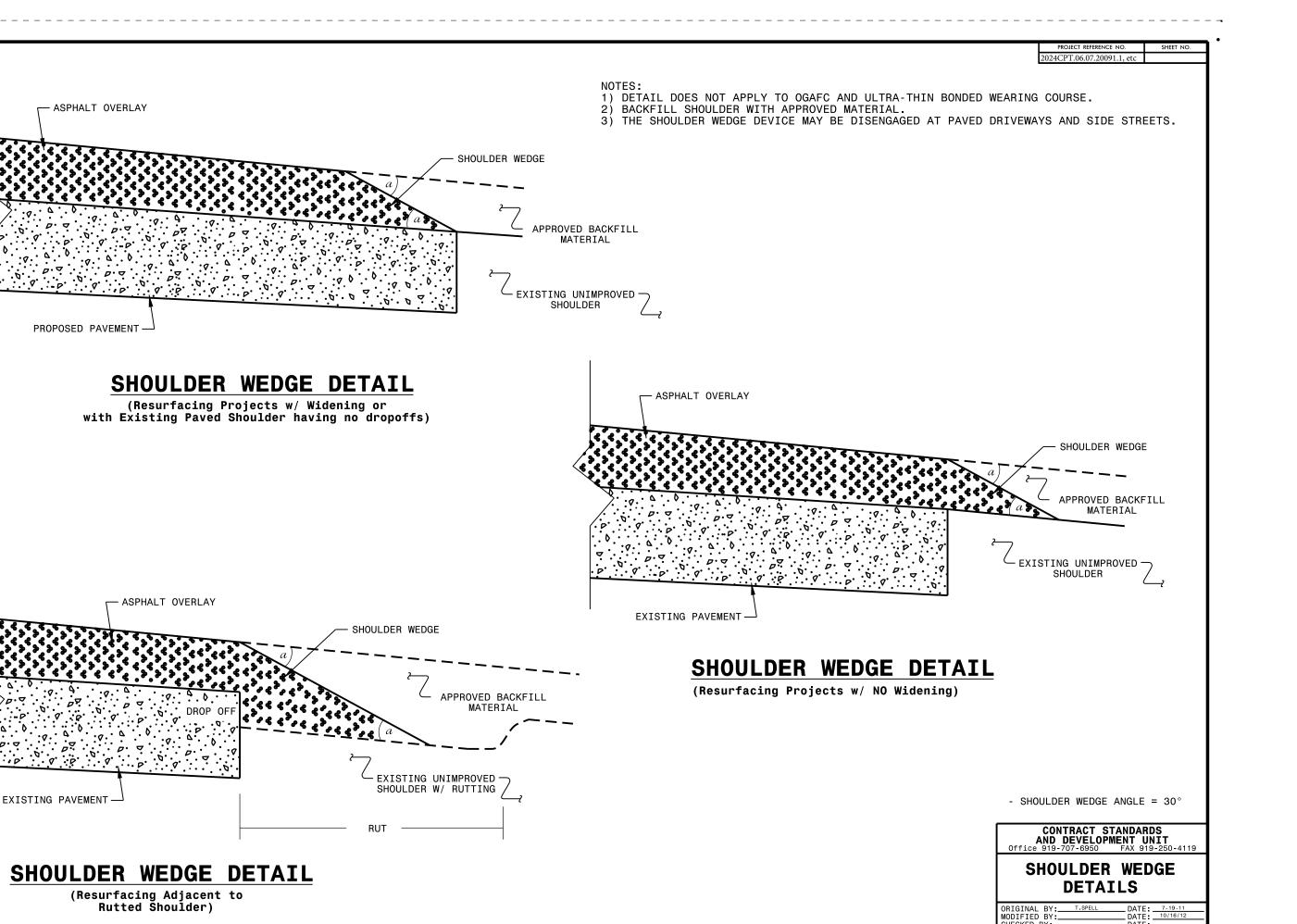
SHOULDER RECONSTRUCTION

NOTES:

- SHOULDER SHALL BE RECONSTRUCTED AS SHOWN IN STD. DWG. NO. 560.01 &
 560.02, WITH A MINIMUM SLOPE OF 1" PER FOOT TO ENSURE POSITIVE DRAINAGE AWAY
 FROM ROADWAY
- 2. AGGREGATE SHOULDER BORROW (ASB) MATERIAL SHALL BE PLACED USING A WIDENING MACHINE OR SIMILAR DEVICE AND COMPACTED USING A ROLLER ASB SHALL TIE FLUSH TO PAVEMENT AND EXISTING SHOULDER.



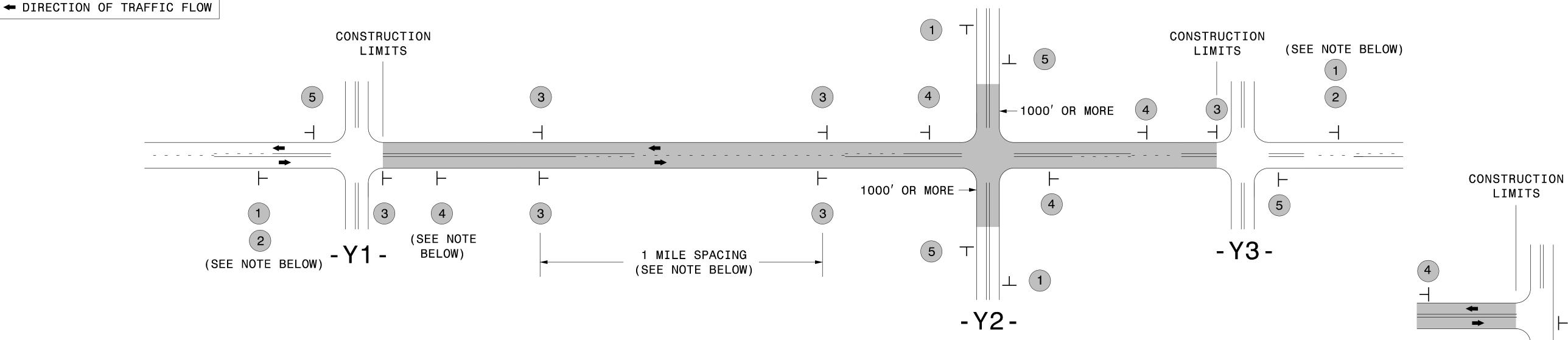




 PROJ. REFERENCE NO.
 SHEET NO.

 2024CPT.06.07.20091.1, etc

SIGNING FOR RESURFACING PROJECTS



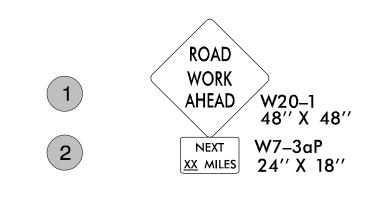
TEE INTERSECTION

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

IGNING NOTES AND EMENT PER DIRECTION

SO



PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS.
ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.

#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)



- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER.
- AT TEE INTERSECTIONS INSTALL INITIALLY ½ MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.
- 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.

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.

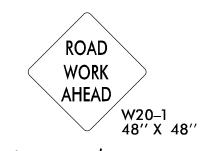
THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

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.

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

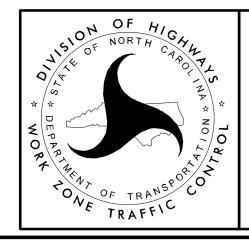
WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.



PLACED 500' IN ADVANCE OF FLAGGER.



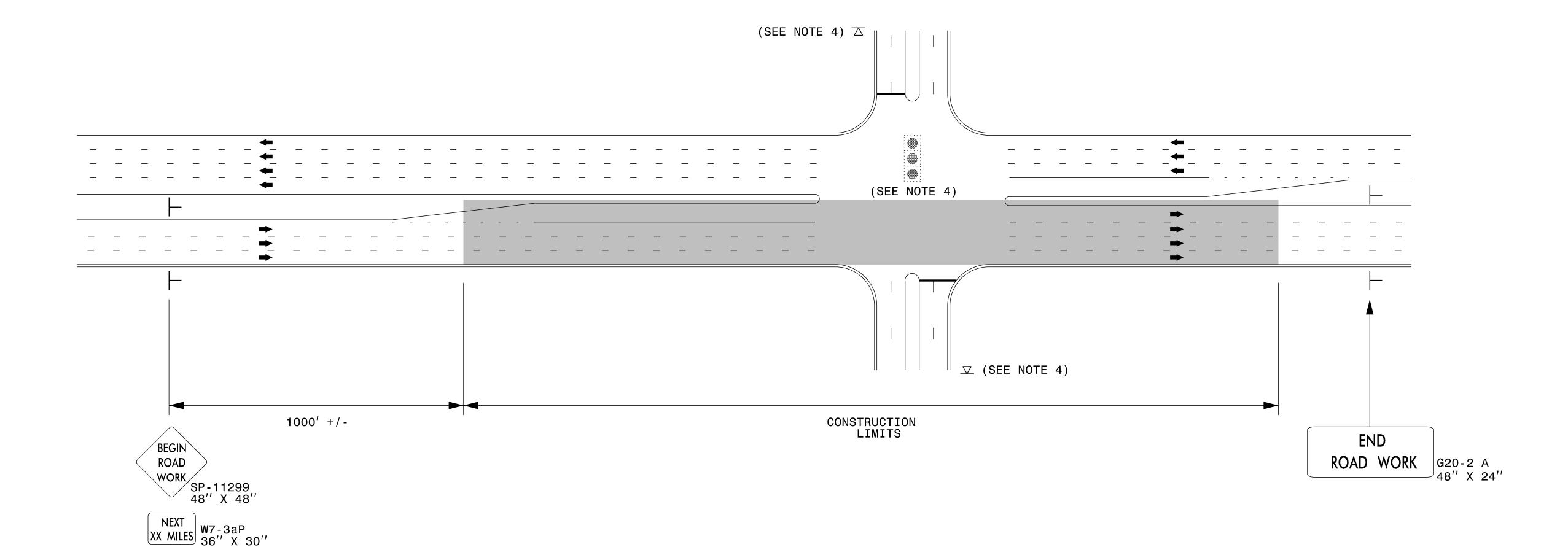
PLACED 250' IN ADVANCE OF FLAGGER.



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

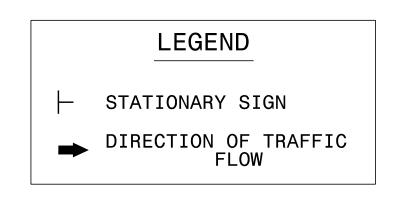
PROJ. REFERENCE NO. SHEET NO 2024CPT.06.07.20091.1, etc

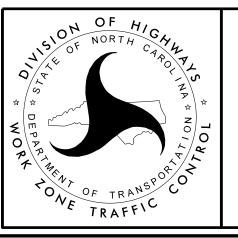
URBAN / SUBURBAN WORKZONES



NOTES:

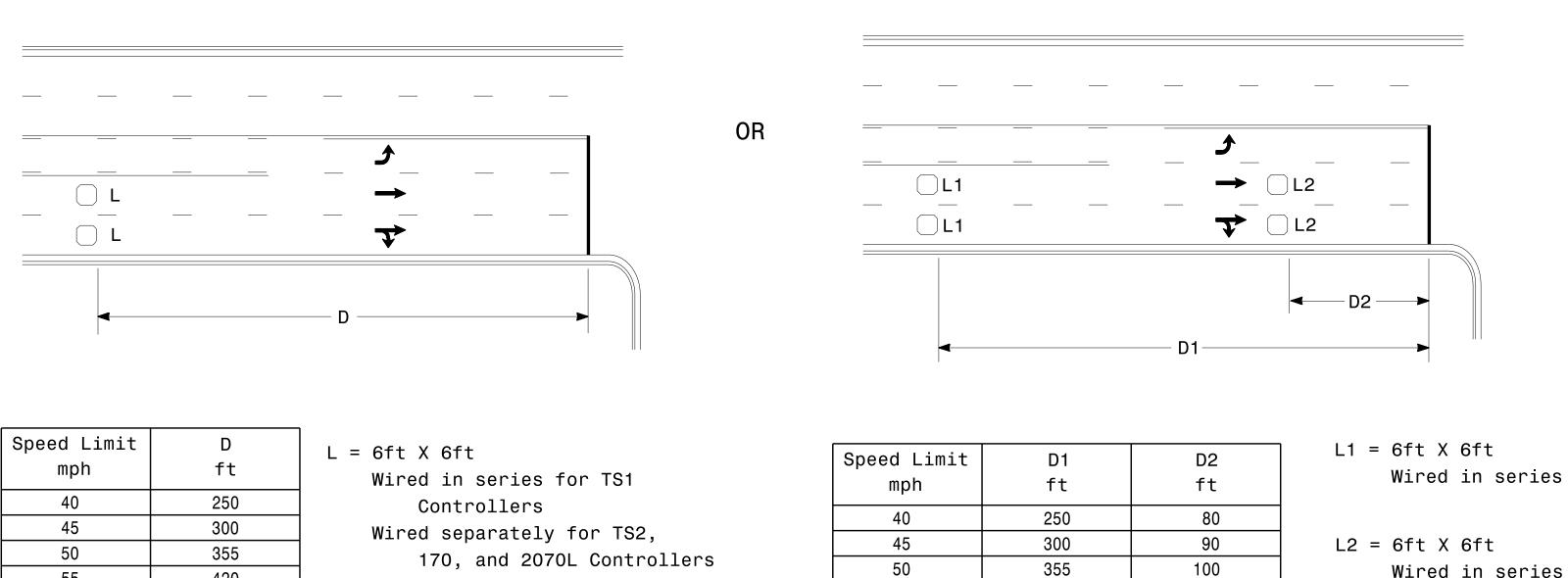
- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. 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.



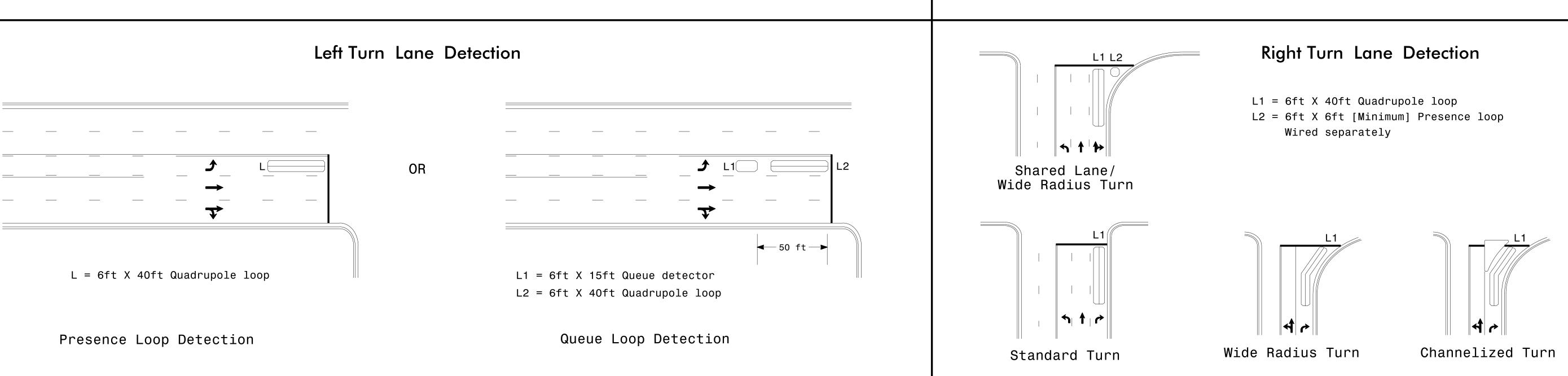


RESURFACING ADVANCE
WARNING SIGNS FOR
URBAN / SUBURBAN
FACILITIES



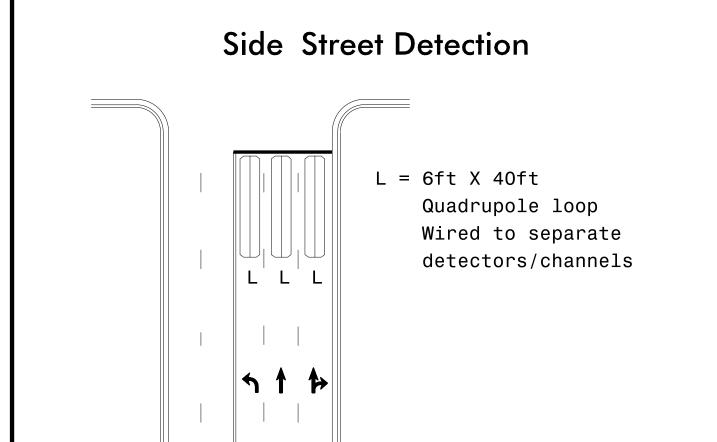






110

Wired in series

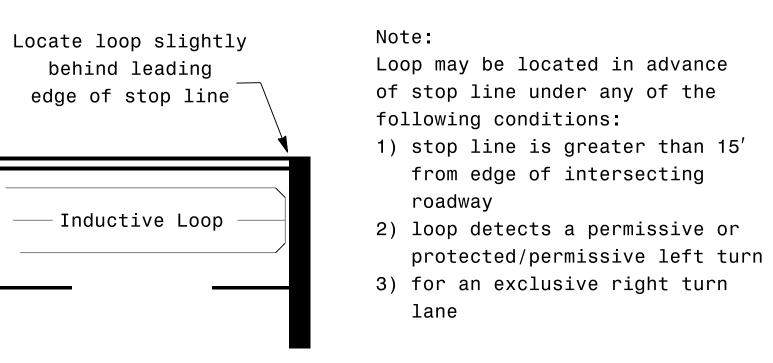


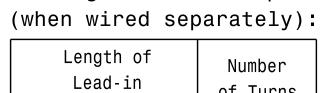
420

Volume Density Operation

55







Single 6' X 6' loop

ien 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

Recommended Number of Turns

N/A

OR

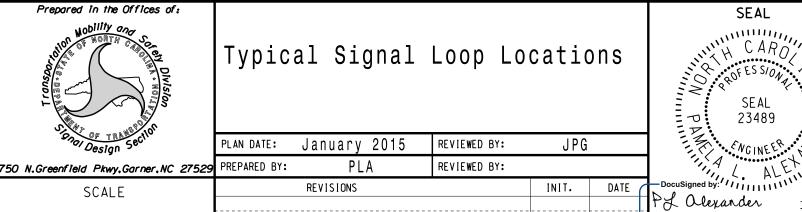
L = 6ft X 40ft

Quadrupole loop, wired separately

← 70 ft →

 $L = 6ft \times 6ft$

Wired in series



GUIDELINES FOR LANE WIDTHS ON RESURFACING PROJECTS

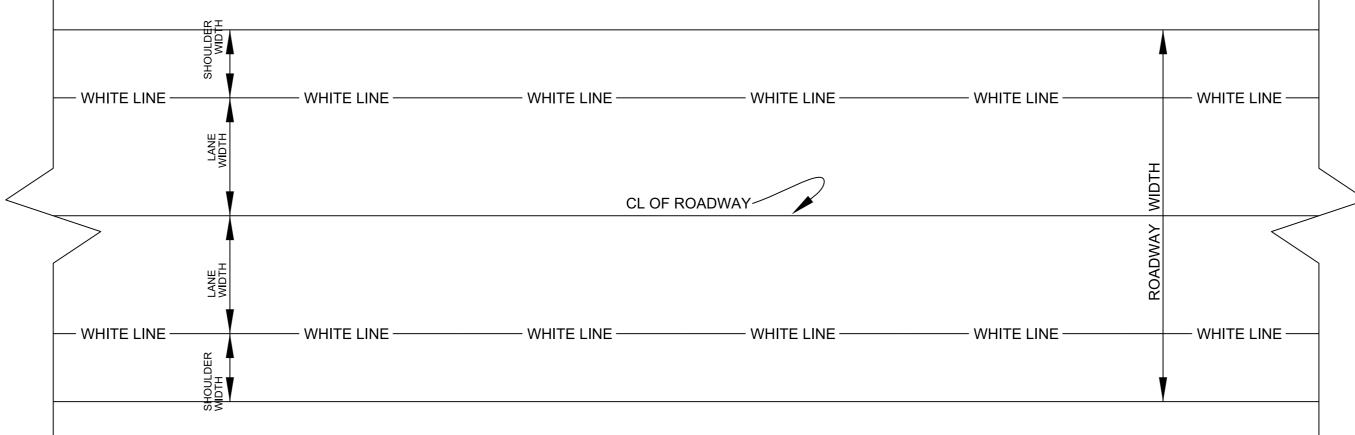
Contractor shall place the new pavement markings in accordance with this table and detail unless otherwise directed by the Engineer.

TWO LANE - TWO WAY ROADWAY - 55 MPH											
ROADWAY WIDTH	LANE WIDTH	SHOULDER WIDTH									
18'	9' *	0'									
20'	10' *	0'									
22'	10'	1'									
24'	10'	2'									
26'	11'	2'									
28'	12'	2'									
32'	12'	4'									

TWO LANE - TWO WAY ROADWAY MPH OR LESS											
ROADWAY WIDTH	LANE WIDTH	SHOULDER WIDTH									
18'	9' *	0'									
20'	10' *	0'									
22'	10'	1'									
24'	10'	2'									
26'	11'	2'									
28'	11'	3'									
32'	11'	5'									
* May vary due to pavement width											

SCHEMATIC OF ROADWAY





PROJECT NO.	SHEET NO.	TOTAL NO.
PT.06.07.20091.1, 2024CPT.06.07.2		

SUMMARY OF QUANTITIES

														1220000000-E	1245000000-E	1260000000-E	1330000000-E	1491000000-E	1503000000-E	1519000000-E	1520000000-E	1575000000-E	1704000000-E
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE	FINAL	WARM MIX	LENGTH	WIDTH	BEGIN MP	END MP	INCIDENTAL	SHOULDER	AGGREGATE	INCIDENTAL	BASE COURSE,	INTERMEDIATE	SURFACE	LEVELING	ASPHALT	PATCHING
							TYPE	SURFACE	ASPHALT					STONE BASE	RECONSTRUCTI	SHOULDER	MILLING	B25.0C	COURSE, I19.0C	COURSE, S9.5B	COURSE, S9.5B	BINDER FOR	EXISTING
								TESTING	REQUIRED						ON	BORROW						PLANT MIX	PAVEMENT
								REQUIRED															
										MI	FT			TONS	SMI	TON	SY	TONS	TONS	TONS	TONS	TONS	TONS
2024CPT.06.07.20091.1	Bladen	2	SR-1745 / BALTIMORE RD	FROM SR 1730 TO NC 87	2	2		NO	NO	2.69	22	0	2.69	10	5.38	807			1,637			79	
	TOTAL F	OR MAP NO	0. 2							2.69				10	5.38	807			1,637			79	
2024CPT.06.07.20091.1	Bladen	3	SR-1730 / S ELWELL FERRY RD	FROM NC 211 TO SR 1745	1	2	2WU	NO	NO	2.01	20	2.78	4.79	10	4.02	603	170	260		2,216	20	158	10
	TOTAL F	OR MAP NO	0. 3							2.01				10	4.02	603	170	260		2,216	20	158	10
TOTAL FO	OR PROJ NO	D. 2024CPT	.06.07.20091.1							4.7				20	9.40	1,410	170	260	1,637	2,216	20	237	10
2024CPT.06.07.20241.1	Columbus	1	SR-1800 / BLACKSMITH RD	SR 1800 FROM SR 1802 TO NC 211	1	2	2WU	NO	NO	1.24	20	3.15	4.39	10	2.48	409	170	170		1,268		90	
	TOTAL F	OR MAP NO	0.1							1.24				10	2.48	409	170	170		1,268		90	
TOTAL FOR PROJ NO. 2024CPT.06.07.20241.1										1.24				10	2.48	409	170	170		1,268		90	
	GRA	ND TOTAL								5.94				30	11.88	1,819	340	430	1,637	3,484	20	327	10

PROJECT NO.	SHEET NO.	TOTAL NO.
.06.07.20091.1, 2024CPT.06.07		

THERMOPLASTIC AND PAINT QUANTITIES

												4413000000-E	4457000000-N	468500	0000-Е	4720000000-E	483000000-E	4835000000-E	4840000000-N	4709000000-E	4891000000-E	490000000-N
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE	LENGTH	WIDTH	BEGIN ME	END MP	WORK ZONE	TEMPORARY	4" X 90 M	4" X 90 M	THERMO	16" WHITE	24" WHITE	PAINT MSG	24" X 90 M	16" X 90 M	YELLOW &
							TYPE					ADVANCE/GE	TRAFFIC	WHITE	YELLOW	MSG RXR 90	PAINT	PAINT	RXR	WHITE	WHITE	YELLOW
												NERAL	CONTROL	THERMO	THERMO	M				THERMO	THERMO(RXR	MARKERS
												WARNING									CROSSBUCK)	
												SIGNING										
								MI	FT			SF	LS	LF	LF	EA	LF	LF	EA	LF	LF	EA
2024CPT.06.07.20091.1	Bladen	2	SR-1745 / BALTIMORE RD	FROM SR 1730 TO NC 87	2	2		2.69	22	0	2.69	184	1.00									
	TOTAL F	OR MAP N	0. 2					2.69				184	1									
2024CPT.06.07.20091.1	Bladen	3	SR-1730 / S ELWELL FERRY RD	FROM NC 211 TO SR 1745	1	2	2WU	2.01	20	2.78	4.79	144		21,808	14,673	8	80	50	8	50	80	141
	TOTAL F	OR MAP N	0. 3					2.01				144		21,808	14,673	8	80	50	8	50	80	141
TOTAL F	OR PROLNO	2024CPT	.06.07.20091.1					4.7				328	1.000	21,808	14,673	8	80	50	8	50	80	141
TOTAL	OK I NOS INC	7. 2024Ci i	.00.07.20031.1											36,	481							
						•																
2024CPT.06.07.20241.1	Columbus	1	SR-1800 / BLACKSMITH RD	SR 1800 FROM SR 1802 TO NC 211	1	2	2WU	1.24	20	3.15	4.39	96		10,560	9,300							93
	TOTAL F	OR MAP N	0. 1					1.24				96		10,560	9,300							93
TOTAL F	OR PROLNO	2024CPT	06 07 20241 1					1.24				96		10,560	9,300							93
TOTAL FOR PROJ NO. 2024CPT.06.07.20241.1													19,	860								
	GRΔ	ND TOTAL						5.94				424	1.000	32,368	23,973	8	80	50	8	50	80	234
	OILA													56,	341							