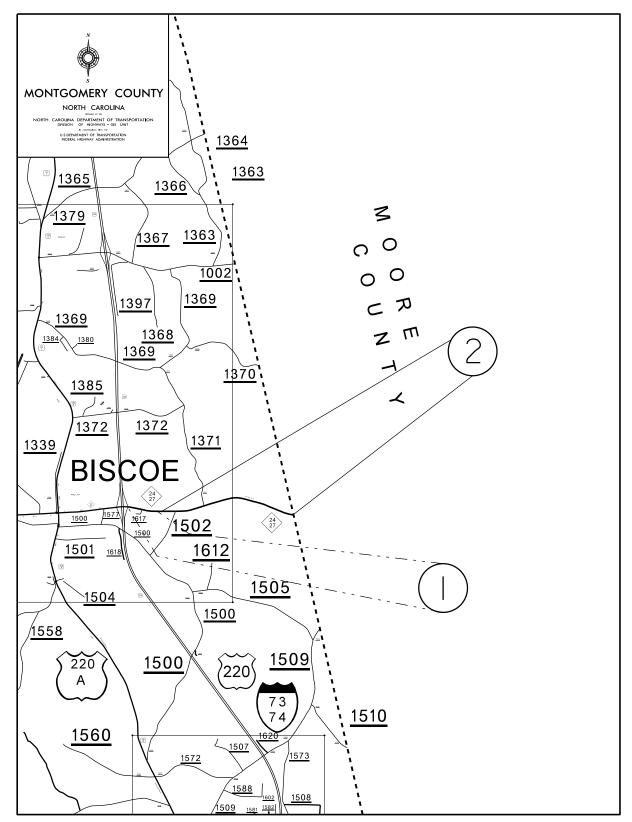
WBS ELEMENT SHEET NO. 2017CPT.08.28.10621 2017CPT.08.28.20621 D A V I D S O N C O U N T Y RAND OLPH COUNTY Ophir 1306 Úwḥarrie 8 1624 1148 1548 1562 <u>/1543</u> <u>1570</u> 1569 1568 1565 1565 1576 MOUNT GILEAD 1543 Pekin <u>1525</u> RICHMOND COUNTY **MONTGOMERY COUNTY** OVERALL RESURFACING REQUEST MAP RICHMOND COUNTY

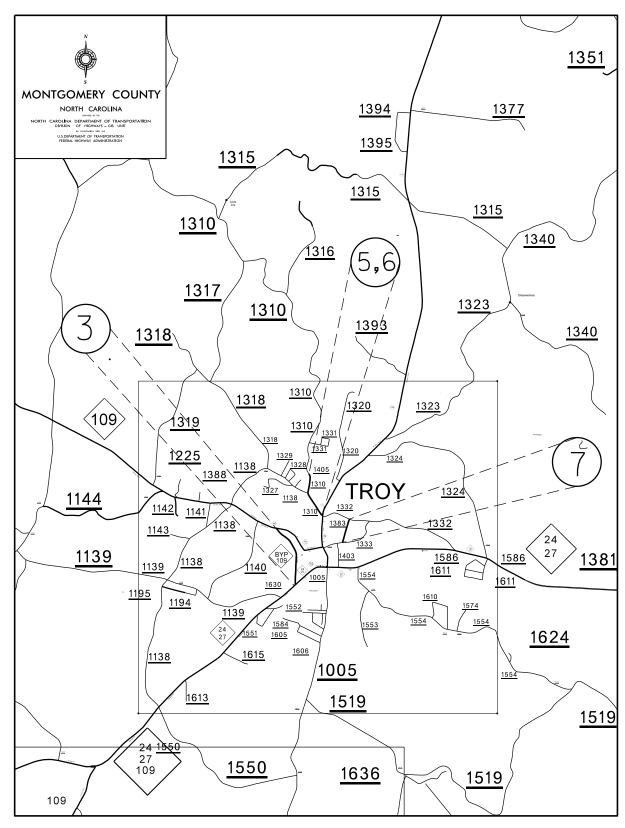
WBS ELEMENT SHEET NO.

2017CPT.08.28.10621
2017CPT.08.28.20621

## MAPS #1 & #2



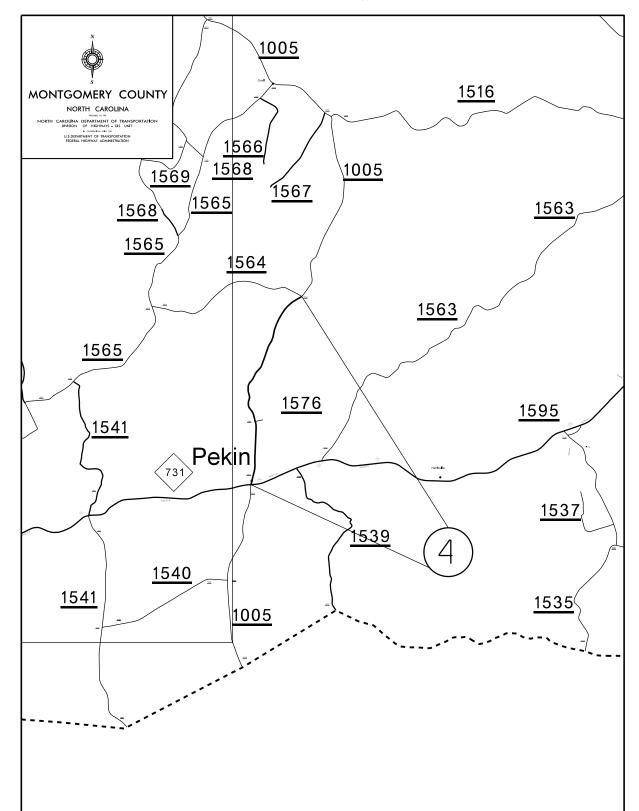
## MAPS #3 & #5-7



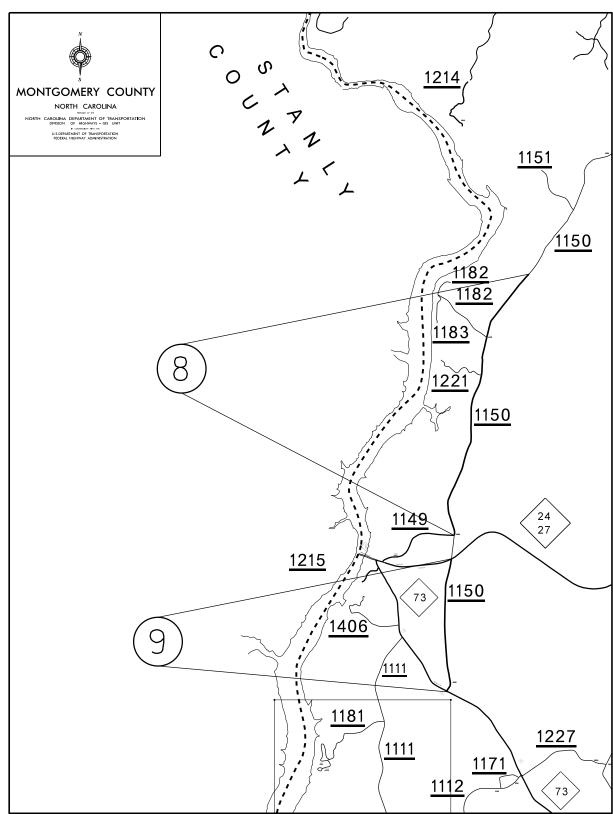
WBS ELEMENT SHEET NO.

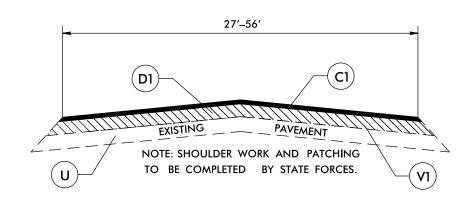
2017CPT.08.28.10621
2017CPT.08.28.20621

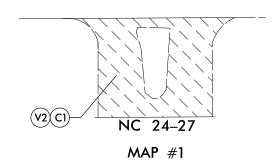
## MAP #4

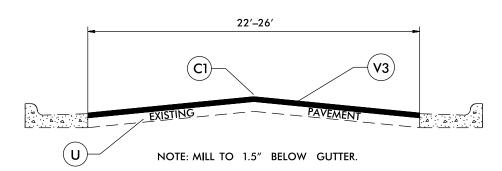


## MAPS #8 & #9

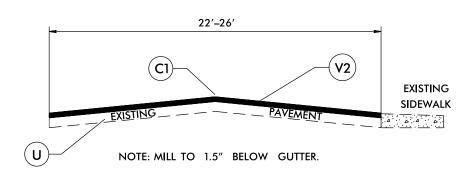








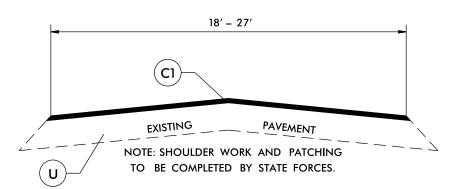
# TYPICAL SECTION NO. 5



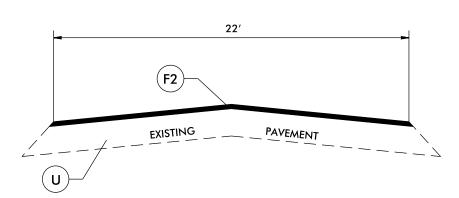
## TYPICAL SECTION NO. 6

	PAVEMENT SCHEDULE
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE \$9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
F1	PROPOSED ASPHALT SURFACE TREATMENT, MATCOAT #78M STONE
F2	PROPOSED LATEX MODIFIED MICROSURFACING, TYPE II
U	EXISTING PAVEMENT.
V1	2.5" MILLING
V2	1.5" MILLING
V3	3" MILLING
V4	1.25" MILLING

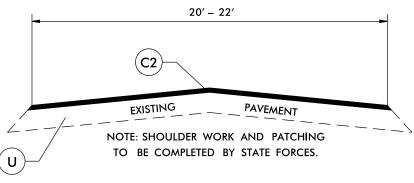
## TYPICAL SECTION NO. 1



# TYPICAL SECTION NO. 2



TYPICAL SECTION NO. 3

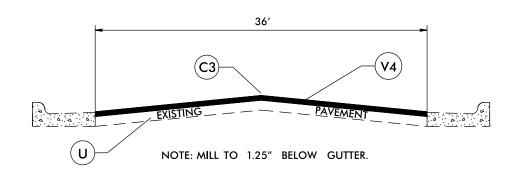


TYPICAL SECTION NO. 4

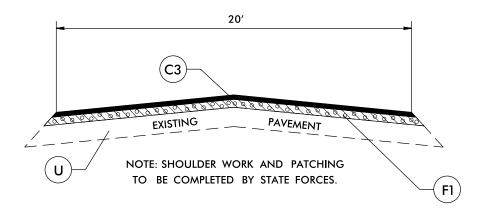


WBS ELEMENT SHEET NO.

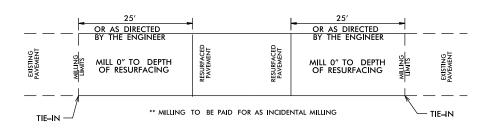
2017CPT.08.28.10621
2017CPT.08.28.20621



## TYPICAL SECTION NO. 7

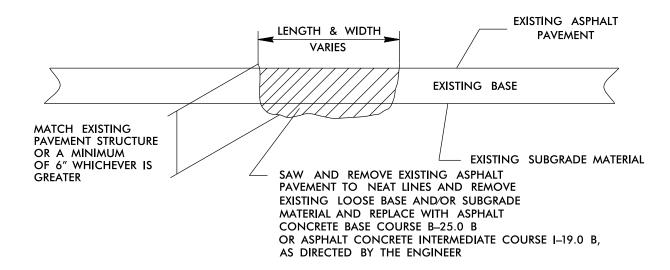


## TYPICAL SECTION NO. 8

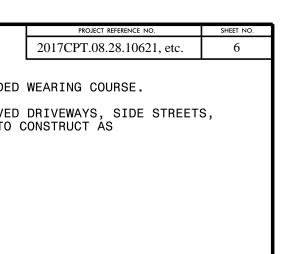


PAVEMENT TIE-IN DETAIL

# DETAILS OF PATCHING EXISTING PAVEMENT PRIOR TO RESURFACING DETAIL

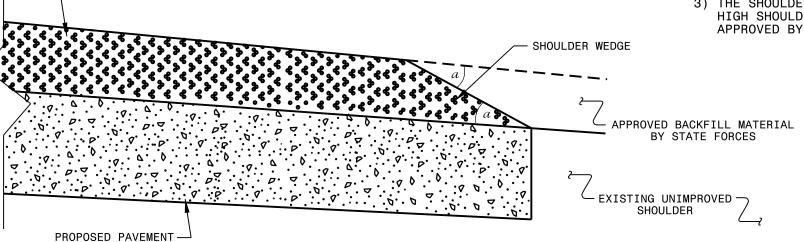


	PAVEMENT SCHEDULE									
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.									
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.									
C3	PROP. APPROX. 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.									
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.									
F1	PROPOSED ASPHALT SURFACE TREATMENT, MATCOAT #78M STONE									
U	EXISTING PAVEMENT.									
V1	2.5" MILLING									
V2	1.5" MILLING									
V3	3" MILLING									
V4	1.25" MILLING									



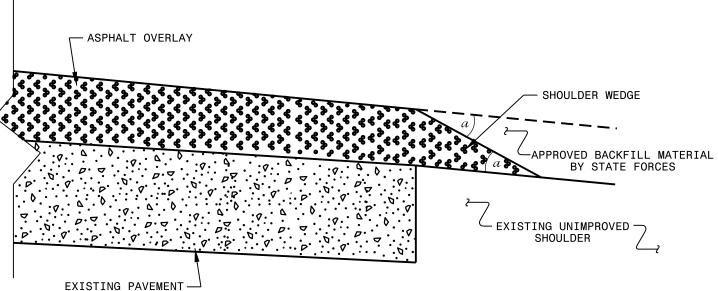
- 1) DETAIL DOES NOT APPLY TO OGAFC AND ULTRA-THIN BONDED WEARING COURSE.
- BACKFILL SHOULDER WITH APPROVED MATERIAL.

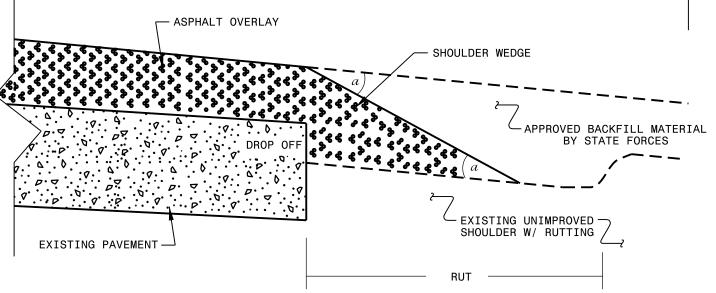
  THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THÉ ENGINEER.



## 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 ANGLE =  $30^{\circ}$ 

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

#### SHOULDER WEDGE **DETAILS**

ORIGINAL BY:	T.SPELL	DATE: 7-19-11	_1						
MODIFIED BY:		DATE: 10/16/12							
CHECKED BY:		DATE:							
FILE SPECs:usr/details/stand/shoulderwedgedetail.dgn									
TILL OLLOTT									

## SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- ASPHALT OVERLAY

PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.08.28.10621	7	
2017CPT.08.28.20621	,	

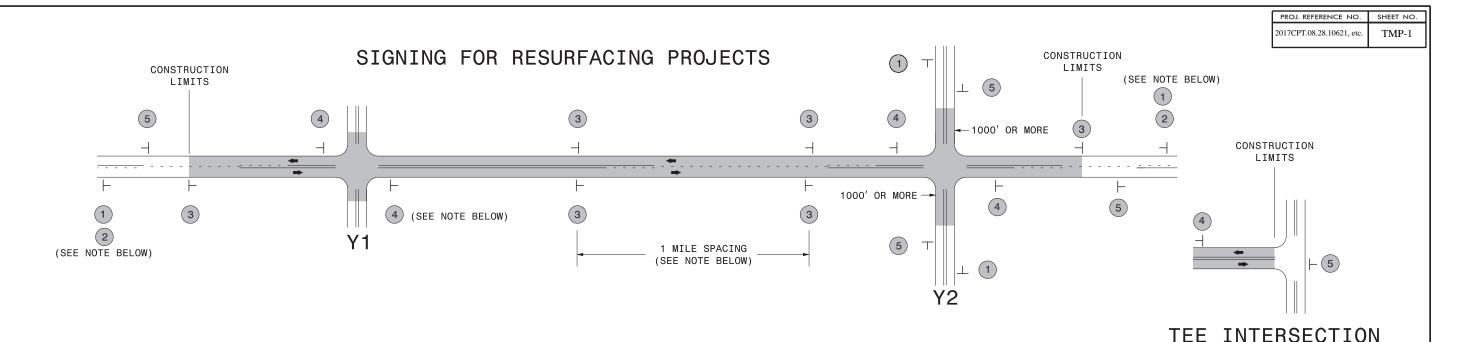
#### SUMMARY OF QUANTITIES

										O 171	141 /		<u> </u>	<del>4 0 ,</del>		1 L J													
PROJECT	COUNTY	MAP	ROUTE	DESCRIPTION	TYP LANES	TYPE		WARM MIX ASPHALT REQUIRED			2.5" MILLING		3" MILLING	1.25" MILLING		INTERMEDIATE COURSE, 119.0B		SURFACE COURSE, SF9.5A	BINDER FOR		ASPHALT SURFACE TREATMENT, MATCOAT, #78M STONE		MODIFIED MICROSURFA CING, TYPE II	CONCRETE CURB RAMP (STD 848.06)	ADJUST MANHOLES		LEAD-IN CABLE (14-2 PAIR)	INDUCTIVE LOOP SAWCUT	VACUUM TRUCK
NO		NO			NO				МІ	FT	SY	SY	SY	SY	SY	TONS	TONS	TON	TONS	TONS	SY	GAL	SY	EA	EA	EA	LF	LF	wĸ
				FROM E JT. BRIDGE# 35 TO PVT																									1
				WIDTH CHANGE 1,090FT W OF SR																									
2017CPT.08.28.10621	Montgomery	1	NC 24/27	1502 (MARTIN RD)	1 2	2WU	NO	NO	0.431	27-56	14,311	2,000			1,089	2,228	1,315		186										
			AP NO. 1		<del>                                      </del>				0.431		14,311				1,089	2,228	1,315		186										1
				PVT WIDTH CHANGE 1,090FT W OF SE	R						,-	,			,	,	,												1
				1502 (MARTIN RD) TO MOORE CO																									
2017CPT.08.28.10621	Montgomery	2	NC 24/27	LINE	2 2	2WU	NO	NO	1.8	27					225		2,650		159										
			AP NO. 2					_	1.8						225		2.650		159										1
				FROM NC 24 TO NC 109 BUS																									
2017CPT.08.28.10621	Montgomery	3	NC 109	(ELDORADO ST)	3 2	2WU	NO	NO	0.791	22					367					300			10,209				500	500	
	TOTAL	FOR MA	AP NO. 3						0.791						367					300			10,209				500	500	
TC	TAL FOR PROJ	NO. 201	17CPT.08.28.10621						3.022		14,311	2,000			1,681	2,228	3,965		345	300			10,209				500	500	
				FROM SR 1564 (HOLLY MT CH RD) TO	)																								
2017CPT.08.28.20621	Montgomery	4	SR 1005 (PEKIN RD)	NC 731	4 2	2WU	NO	NO	2.655	22					183			3,130	210										
	TOTAL	FOR MA	AP NO. 4						2.655						183			3,130	210										
				FROM PVT. JT. N OF NC 134 TO END																									
2017CPT.08.28.20621			SR 1310 (OPHIR AVE)	SIDEWALK AT TREMONT ST (PVT)	5,6 2	2WU	NO	NO	0.123	22-26		391	1,467		183		170		10								400	400	
	TOTAL	FOR MA	AP NO. 5		+				0.123			391	1,467		183		170		10								400	400	
				FROM END SIDEWALK AT TREMONT (PVT) TO PVT. JT. AT TROY CITY LIMIT	г																								
2017CPT.08.28.20621			SR 1310 (OPHIR AVE./LOVEJOY RD)	(0.35MI NO F HAITHCOCK ST - PVT.)	2 2	2WU	NO	NO	0.442	18					200		480		29						3	1			
	IOIAL	FOR MA	AP NO. 6	FROM CR 4222 (RRUTON CT) TO CR	+-+-	-			0.442						200		480		29						3	1			
2047607 00 20 20624		-	CD 4202 (WOOD CT)	FROM SR 1333 (BRUTON ST) TO SR		204/11	NO	NO	0.200	26				F 0F0	400			450	20					2	-	7			
2017CPT.08.28.20621			SR 1383 (WOOD ST) AP NO. 7	1332 (PAGE ST)	7 2	2000	NO	NO	0.308	36				5,850 <b>5,850</b>	100 100			450 <b>450</b>	30 <b>30</b>	+			+	2	5	7			+
	I	FUR IVIA	AP NO. 7	FROM PINE LAKE DR (NON-SYSTEM)	++-	+			0.308					3,830	100			450	30						3	,			+
2017CPT.08.28.20621	Montgomon		SR 1150 (RIVER RD)	TO SR 1149 (LEMON DR)	4 2	2WU	NO	NO	3.896	20					278			4.175	280										
2017CP1.06.26.20621			AP NO. 8	10 3N 1145 (LEIVION DR)	4 2	2000	NU	NU	3.896	20					278 278			4,175 4,175	280 280	1	<u> </u>		<del> </del>						<del>                                     </del>
2017CPT.08.28.20621			SR 1150 (RIVER RD)	FROM NC 24/27 TO NC 73	8 2	2\\/!!	NO	NO	1.663	20					2/0			1.485	99	1	19,515.00	6.831	<del> </del>						1
2017CF1.00.20.20021			AP NO. 9	1110101110 24/27 10 100 73	0 2	2000	INU	INU	1.663	20								1,485	99		19,515.00	6,831	<b>†</b>						1
	TOTAL	JIVIP	110.0		++-	1			1.003	<del>                                     </del>								1,403	33		19,313.00	0,031	<b>†</b>						<b>†</b>
то	TAL FOR PROJ	NO. 201	17CPT.08.28.20621						9.087			391	1,467	5,850	944		650	9,240	658		19,515.00	6,831		2	8	8	400	400	1
			·	<u> </u>																									
	GF	AND TO	DTAL						12.109		14,311	2,391	1,467	5,850	2,625	2,228	4,615	9,240	1,003	300	19,515.00	6,831	10,209	2	8	8	900	900	1

PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.08.28.10621	Q	
2017CPT.08.28.20621	0	

#### THERMOPLASTIC AND PAINT QUANTITIES

March   Marc		т т												4705000000 5		4721000000 E		47250	100000-E		49100	00000-E	4850000000-E	4060000000	497000000	E 407E000000 N	49000	00000 E	4900000000-N	40050	100000 N
Part	PROJECT COUNTY	MAD	POLITE	DESCRIPTION	TVD I ANEC	LANE LENGTH											THERMO PT			THERMO											SNOW
Part	PROJECT	IVIAF	ROUTE	DESCRIPTION																											PLOWABLE
**************************************						IIFE										120 IVI					FAINT	FAINT	KEIVIOVAL	KEWIOVAL	KEIVIOVAL						
Part									-	THERIVIO	THERIVIO	THERIVIO	THERIVIO	THERIVIO	THERIVIO		30 IVI	30 IVI	30 IVI	30 IVI											
Mary																														IVIARRERS	IVIARRERS
**************************************							SIGN	NG																		CHARACTERS	4"X SUIVI WHITE				
March   Marc	***																														
1	NO	NO			NO		SI	LS	HR	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA		LF	LF	LF	LF	LF	EA	LF	LF	EA	EA	EA
Section   Sect																															
Part																															
Property				1502 (MARTIN RD)	1 2					.,		.,,					2	2	3	3	0,0-0									28	63
Note	TOTAL	L FOR MAP	P NO. 1			0.431	98	1		4,638	1,285	4,638					2	2	3	3	5,925	4,635								28	63
2000   10																															
TOTAL COLUMN TOTAL STORY				SR 1502 (MARTIN RD) TO MOORE C	:0																										
Property	2017CPT.08.28.10621 Montgomery	y 2	NC 24/27	LINE	2 2	2WU 1.8	27 20	5		19,368	50	19,368																		119	
2017F16 13 2021   Marganery   3	TOTAL	L FOR MAP	P NO. 2			1.8	20	5		19,368	50	19,368																		119	
2017F16 13 2021   Marganery   3				FROM NC 24 TO NC 109 BUS																											
TOTAL SOUTH AND ALTHOUGH SHOWN A	2017CPT.08.28.10621 Montgomery	y 3	NC 109		3 2	2WU 0.791	22 98	:	40			1		100	50	4			l	1	ĺ		17,055	200	50	4	8,540	8,515		52	
TOTAL FOR MAN PAN PAN PAN PAN PAN PAN PAN PAN PAN P	TOTAL	L FOR MAP	P NO. 3	,		0.791	98	*	40					100	50	4							17,055	200	50	4	8,540	8,515		52	
Company   Comp																															
State   Stat						3.022	40	1 *	40	24.006	1.335	24.006		100	50	4	2	2	3	3	5.925	4.635	17.055	200	50	4	8.540	8.515		199	63
20/20768 28-20621 Montgoonery & S1100 (MARKAN)	TOTAL FOR PROJ	J NO. 2017	/CPT.08.28.10621								25	.341							10	-	10	.560					17.				262
201/FOTO 282-82-0631 Montgomeny 6 M 251 Montgomeny 7 Mont												ĺ										ĺ					,				
201/FOTO 282-82-0631 Montgomeny 6 M 251 Montgomeny 7 Mont				FROM SR 1564 (HOLLY MT CH RD) T	0																										
TOTAL FOR MANY NO. 5  FROM FOR TITLE OF TRANSPORT OF TRAN	2017CPT 08 28 20621 Montgomery	ν 4	SR 1005 (PEKIN RD)			2WII 2 655	22 30	n		28 568	75	28 568																		175	
201/CFT 63 23 20221 Montgomery   S SR 13310 (OPHR AVE)   S C V V V V V V V V V V V V V V V V V V				NC 731	+ + + +					-7															+						
2017F0 (20 25 25 25 2	TOTAL	L FOR WIAF	F NO. 4			2.033	30	-		20,300	/3	20,300													+					1/3	
2017F0 (20 25 25 25 2				50014 DUT IT NI OF NG 434 TO 510																											
TOTAL FOR MAP NO. 5  TOTAL FOR MAP NO. 7  TOTAL FOR MAP NO. 9  TOTAL FOR	2047607 00 20 20624		CD 4240 (ODUUD AVE)			21441 0 422	22.26		40	400		4 222		50	25	2															
FROM END SIDEWALK AT TREMONT (PVTT IDPAT LAT TROY CITY UMT) 2017/PFT.08.28.26621   Montgomery   6   SR 1330 (GPHIR AVE /LOVELOY B)   0.5384 NOP FROM STRING SIGNET ON THE VIEW COLUMN STRING STRING SIGNET ON THE VIEW COLUMN STRING SIGNET ON THE VIEW STRING SIGNET ON THE VIEW COLUMN STRING SIGNET ON THE VIEW STRING SIGNET ON THE VIEW COLUMN STRING SIGNET ON THE VIEW STRING SIGNET ON THE VIEW COLUMN STRING SIGNET ON THE VIEW COLUMN STRING SIGNET ON THE VIEW COLUMN STRING SIGNET ON THE VIEW COLU				SIDEWALK AT TREMONT ST (PVT)	5,6 2			<u> </u>						50	25	2															ļ
2017CFF (0.8.8.2.0.0.1   Montgomery   6   St 13.0 (OPHIRA WE (LOUVE) OR D)   (0.5 MIN POST)   (0.5 MIN POST)	TOTAL	L FOR MAI	P NO. 5		+	0.123	15	<u> </u>	40	400		1,323		50	25	2									1						
2017CFF (0.8.8.2.0.0.1   Montgomery   6   St 13.0 (OPHIRA WE (LOUVE) OR D)   (0.5 MIN POST)   (0.5 MIN POST)																															
2017CF108.82 2002   Montgomery   6   Sh 31310 (PMIR PAC)   FOR MAP PLOE   FOR MAR																															
TOTAL FOR MAP NO. 6  FROM SR 1333 (BRUTONST) TO SR  TOTAL FOR MAP NO. 7  SR 1383 (WOOD ST)  132 (PAGE ST)  7																															
2017CFT 0.8.2.8.2.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.				(0.35MI NO F HAITHCOCK ST - PVT.	.) 2 2		10 50																								
2017CFT.08.28.20621   Montgomery   S 13.38 (MOOD ST)   13.32 (PAGE ST)   7   8   8   3.34   6   8   40   9   9   9   9   9   9   9   9   9	TOTAL	L FOR MAP	P NO. 6			0.442	50	)		4,756	15	4,756																			
TOTAL FOR MAP NO. 7    FROM PINE LAKE DR (NON-SYSTEM   1   2   2   2   2   2   3   3   4   5   5   4   5   4   4   4   4   4				FROM SR 1333 (BRUTON ST) TO SF	₹																										
2017CF1.08.28.20621 Montgomery 8 SR 1150 (RIVER RD)	2017CPT.08.28.20621 Montgomery	y 7	SR 1383 (WOOD ST)	1332 (PAGE ST)	7 2		36 40	)				3,314	75									3,314							20		
2017CPT.08.28.20621 Montgomery 8 SR 1150 (RIVER RD) TO SR 1149 (LEMON DR) 4 2 2WJ 3.896 5 060 SR 149.25 75 41.925 TO AL PORT SR ND DTAL FOR PAUL DE TRAND DE TAIL FOR PAUL DE TAIL F	TOTAL	L FOR MAP	P NO. 7			0.308	40	)				3,314	75									3,314							20		
TOTAL FOR MAP NO. 8  2017CPT.08.28.20621   Montgomery   9   SR 1150 (RIVER RD)   FROM NC24/27TO NC73   8   2   2WU   1.663   20   30				FROM PINE LAKE DR (NON-SYSTEM	1)					1	1	1												1							
2017CPT.08.28.20621 Montgomery 9 SR 1150 (RIVER RD) FROM NC 24/27 TON C73 8 2 2WU 1.663 20 300 * 17,900 50	2017CPT.08.28.20621 Montgomery	y 8	SR 1150 (RIVER RD)	TO SR 1149 (LEMON DR)	4 2	2WU 3.896	20 60	0		41,925	75	41,925	<u> </u>				<u> </u>			<u> </u>	<u> </u>	<u> </u>	<u> </u>	1	<u> </u>	<u> </u>	<u> </u>	<u> </u>		<u> </u>	1
2017CPT.08.28.20621 Montgomery 9 SR 1150 (RIVER RD) FROM NC 24/27 TO NC 73 8 2 2WU 1.663 20 300 * 17,900 50 17,900 5	TOTAL	L FOR MAP	P NO. 8			3.896	60	0		41,925	75	41,925																			
TOTAL FOR MAP NO. 9    1.663   300    17,900   50    17,900   50    17,900	2017CPT.08.28.20621 Montgomery	y 9	SR 1150 (RIVER RD)	FROM NC 24/27 TO NC 73	8 2	2WU 1.663	20 30	0		17,900	50	17,900																			
TOTAL FOR PROJ NO. 2017CPT.08.28.20621    9.087   1,305 * 40 93,549 215 97,786 75 50 25 2   3,314   3,	TOTAL	L FOR MAP	P NO. 9	•		1.663	30	0 *		17,900	50	17,900																			
98,001 3,314 175  GRAND TOTAL  GRAND TOTAL					1 1 1								İ	İ			İ		İ	İ		1	1			1				İ	1
98,001 3,314 175  GRAND TOTAL  GRAND TOTAL	TOTAL 5		20T 00 20 20C24		1 1 1	9.087	1.30	)5 *	40	93.549	215	97.786	75	50	25	2						3.314							20	175	1
GRAND TOTAL 12.109 1,706 1 80 117,555 1,550 121,792 75 150 75 6 2 2 3 3 3 5,925 7,949 17,055 200 50 4 8,540 8,515 20 374 63	TOTAL FOR PROJ	I NO. 2017	7CP1.U8.28.20621		1 1	1.23,	1 2,5			1,			1	1		_	İ	•	•	İ	3.		1	1		İ		•			175
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#### **LEGEND**

- STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW

### MAINLINE (-L-) SIGNING

# -Y- LINE SIGNING

#### PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ROAD ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. WORK NOTES AND PER DIRECTION AHEAD W20-1 #2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. NEXT W7-3aP 24" X 18" ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS) - PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART LOW/SOFT THEREAFTER. SHOULDER - AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER. SIGNING PLACEMENT P - THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. - DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. ROAD - INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. UNDER - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, CONST 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 PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN ROAD WORK WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION. G20-2 A

#### 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, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE

-Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.



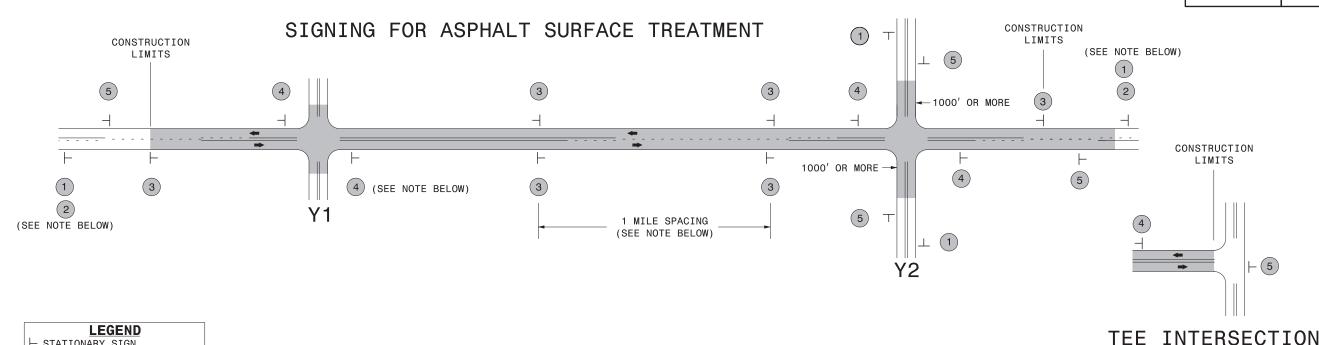


PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER



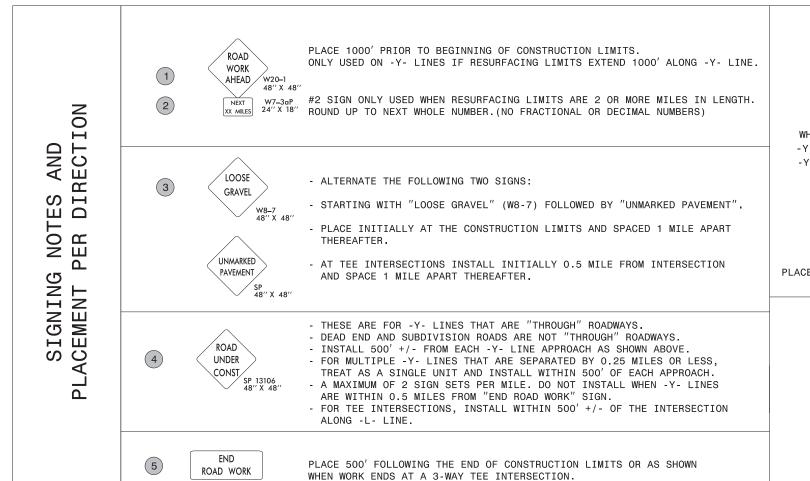
RESURFACING ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2 LANE ROADWAYS

PROJ. REFERENCE NO. SHEET NO. TMP-2 2017CPT.08.28.10621, etc



#### MAINLINE (-L-) SIGNING

-Y- LINE SIGNING



G20-2 A

- 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, ADVANCE WARNING PORTABLE 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.



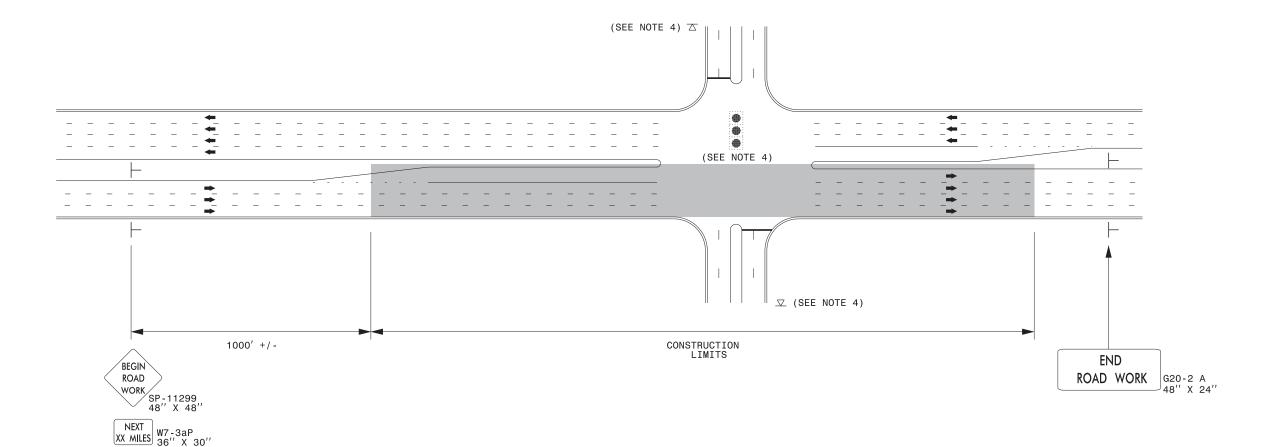
ADVANCE WARNING SIGNS FOR ASPHALT SURFACE TREATMENTS 2 LANE ROADWAYS

- STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW

PROJ. REFERENCE NO. SHEET NO. 2017CPT.08.28.10621, etc. TMP-3

#### URBAN / SUBURBAN WORKZONES



#### NOTES:

- 1)  $48" \times 48"$  SIZED SIGNS (SP- 11299) MAY BE REDUCED TO  $36" \times 36"$  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

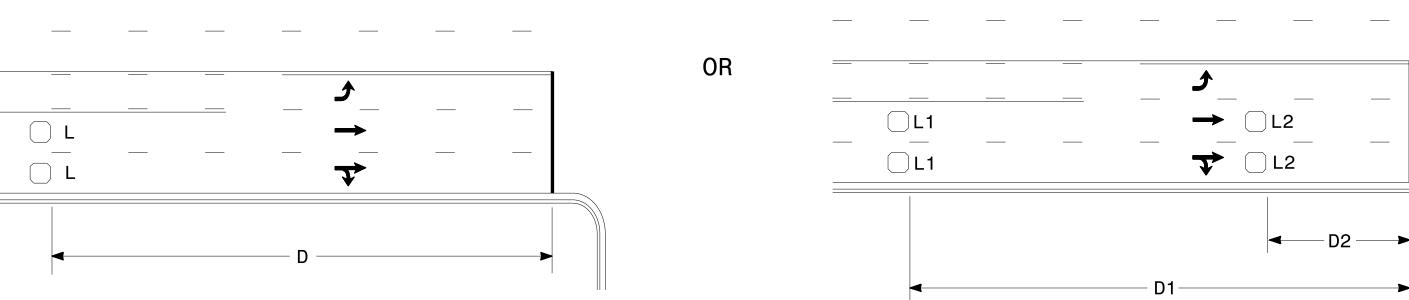


L1 = 6ft X 6ft

L2 = 6ft X 6ft

Wired in series

Wired in series

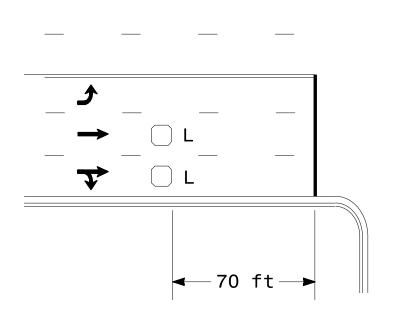


Speed Limit mph	D ft	L = 6ft X 6ft Wired in series for TS1
40	250	Controllers
45	300	Wired separately for TS2,
50	355	170, and 2070L Controlle
55	420	

Volume Density Operation

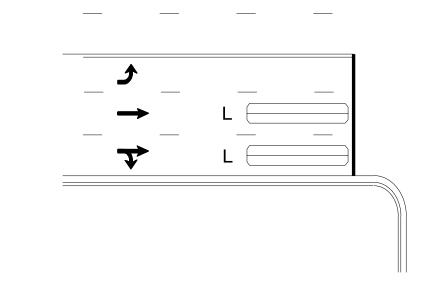
Speed Limit	D1	D2
mph	ft	ft
40	250	80
45	300	90
50	355	100
55	420	110

"Stretch" Operation



OR

L = 6ft X 6ft Wired in series



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

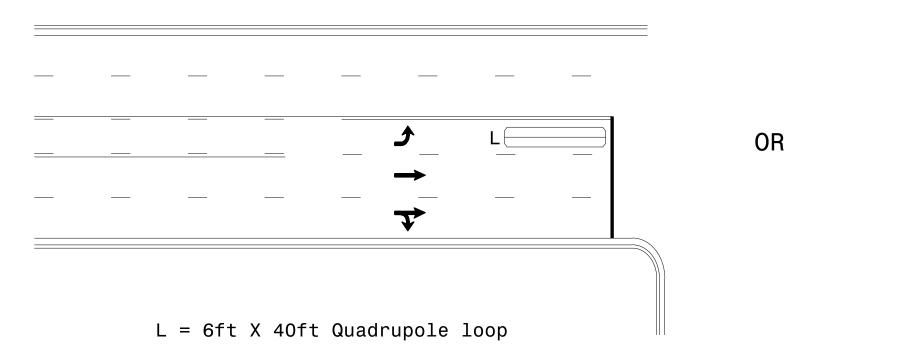
Right Turn Lane Detection

L2 = 6ft X 6ft [Minimum] Presence loop

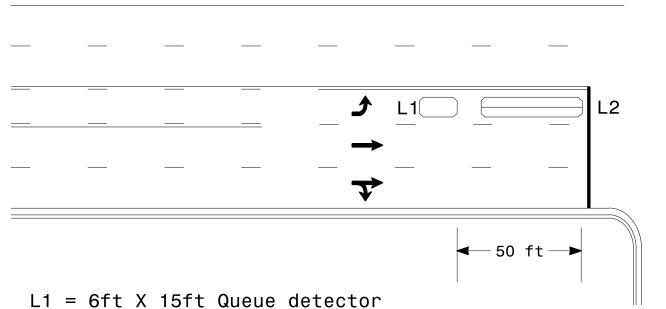
L1 = 6ft X 40ft Quadrupole loop

Wired separately

# Left Turn Lane Detection

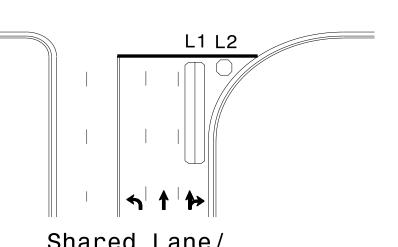


Presence Loop Detection

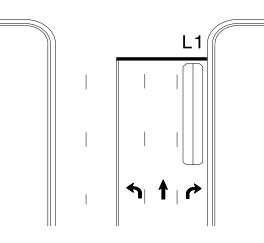


Queue Loop Detection

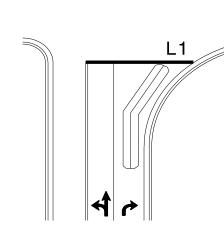
L2 = 6ft X 40ft Quadrupole loop



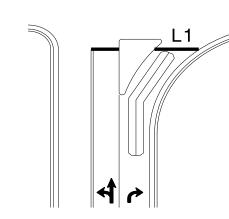
Shared Lane/ Wide Radius Turn



Standard Turn

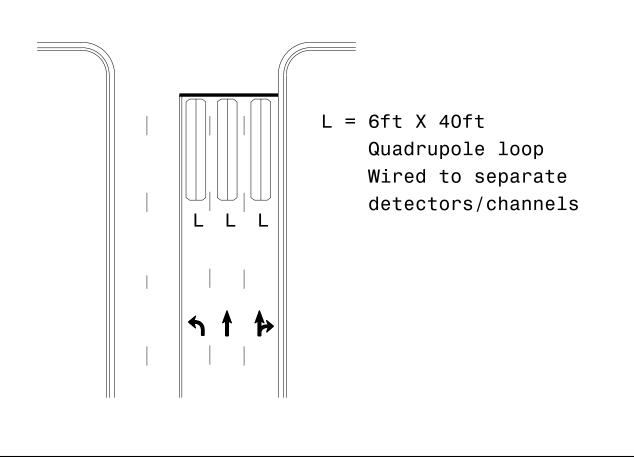


Wide Radius Turn

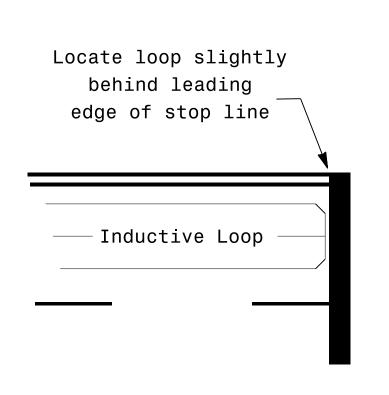


Channelized Turn

# Side Street Detection



# Presence Loop Placement at Stop Lines



Note:

Loop may be located in advance of stop line under any of the following conditions:

- 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):

ion withou ook	oar a cory , i
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



SCALE

N/A

Typical Signal Loop Locations

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

REVISIONS INIT. DATE