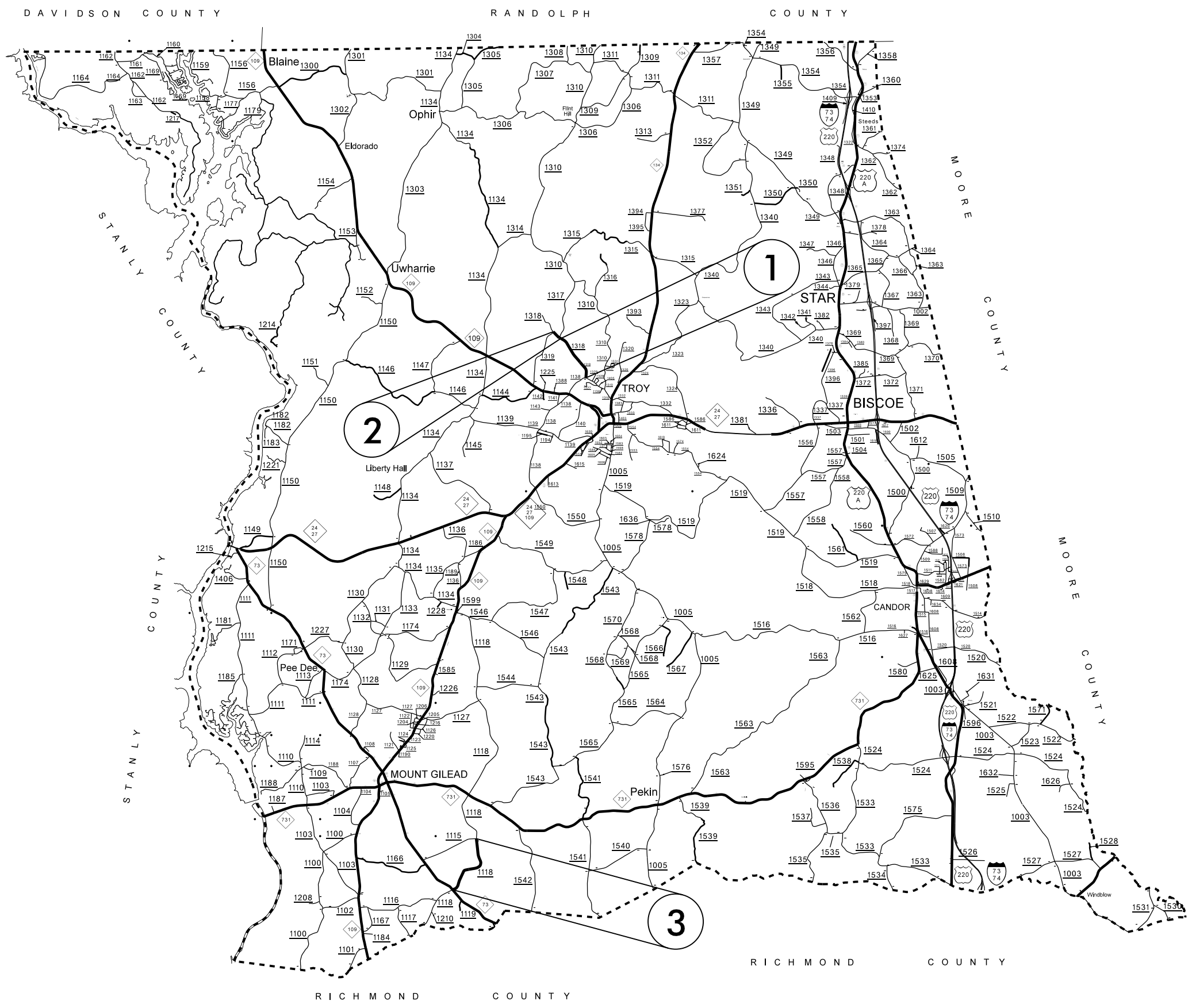


**This electronic collection of documents is provided
for the convenience of the user
and is Not a Certified Document –**

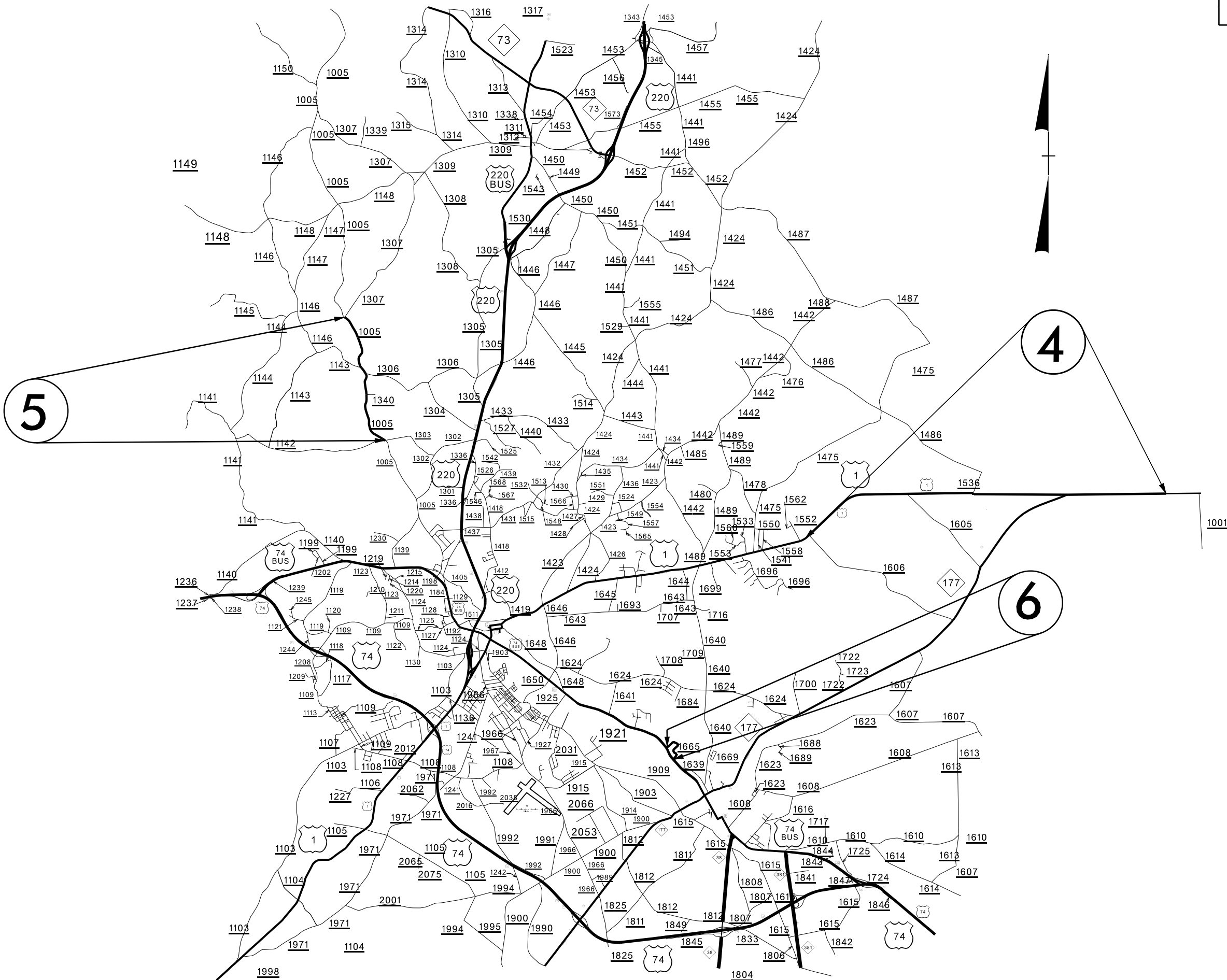
**The documents contained herein were originally issued
and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

**This file or an individual page
shall not be considered a certified document.**



MONTGOMERY COUNTY

040397
 15-JAN-2016 15:33
 C:\Users\jason.montgomery\Documents\Richmond_Mar_2016_Submittal\Montgomery_Richmond_Mar_2016.msp.dgn
 15-JAN-2016 15:33
 C:\Users\jason.montgomery\Documents\Richmond_Mar_2016_Submittal\Montgomery_Richmond_Mar_2016.msp.dgn



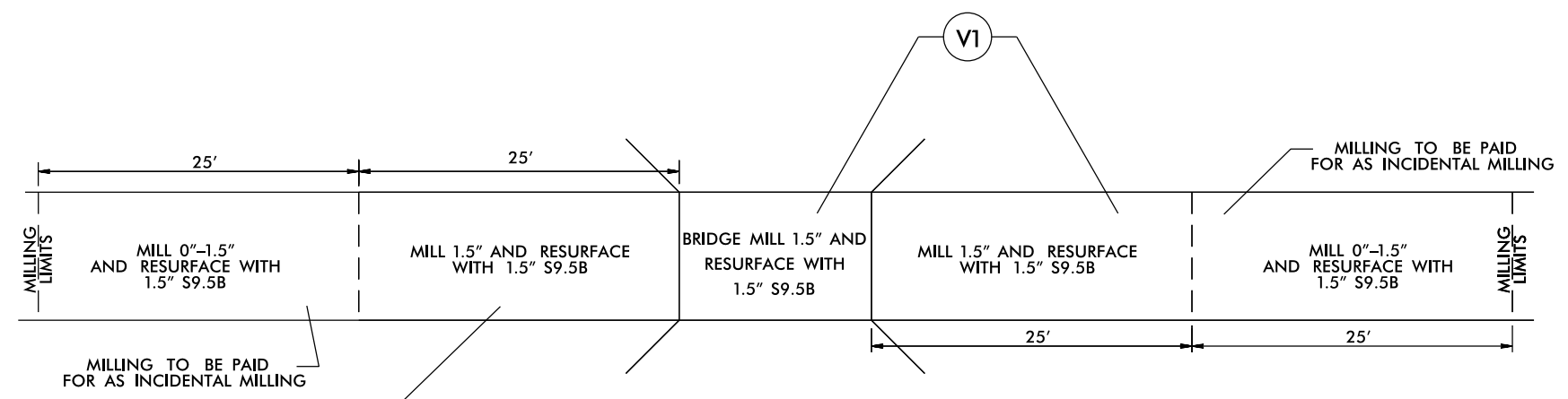
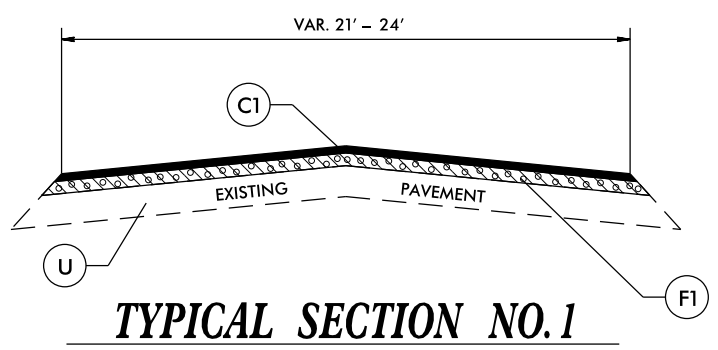
RICHMOND COUNTY

040397
25-JAN-2016 13:44
C:\Users\Montgomery_Richmond_Mer_2016_Submittal\Richmond_Overall.MAP.dgn
Drawing: 08.11.20621

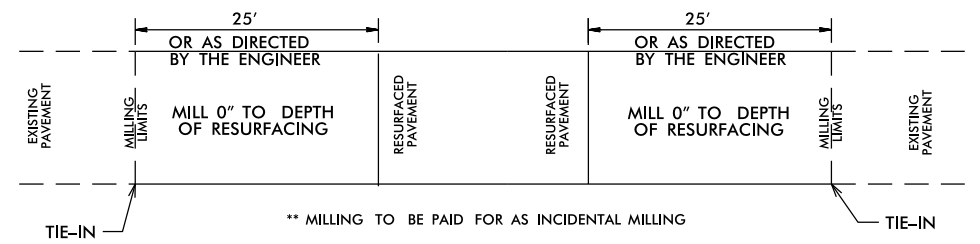
MONTGOMERY COUNTY TYPICAL SECTIONS

WBS ELEMENT	SHEET NO.
2016CPT.08.11.20621	4
2016CPT.08.11.10771	
2016CPT.08.11.20771	

NOTE: MONTGOMERY COUNTY MAINTENANCE WILL BE RESPONSIBLE FOR SHOULDER RECONSTRUCTION AND PATCHING OF EXISTING PAVEMENT



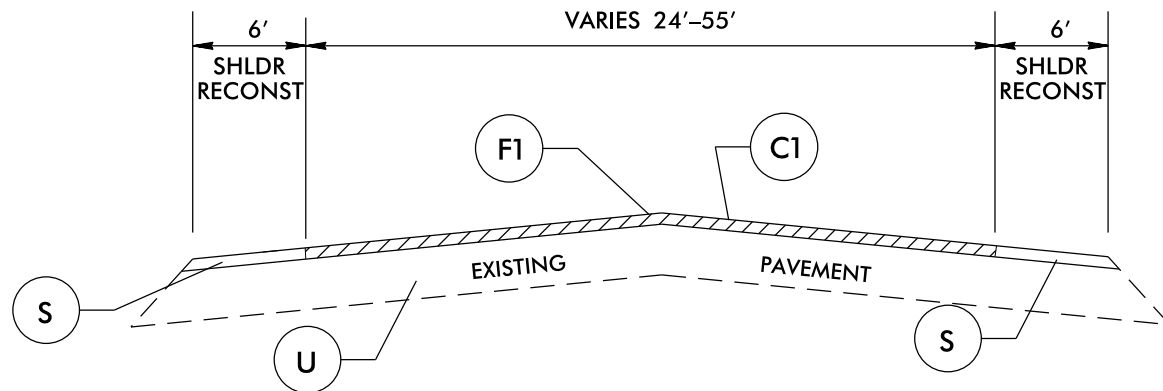
**BRIDGE DRAWING FOR SR 1118
USE FOR MAP #3
USE FOR BRIDGE #42
POSTED WEIGHT LIMIT OF 25 TON / 37 TON**



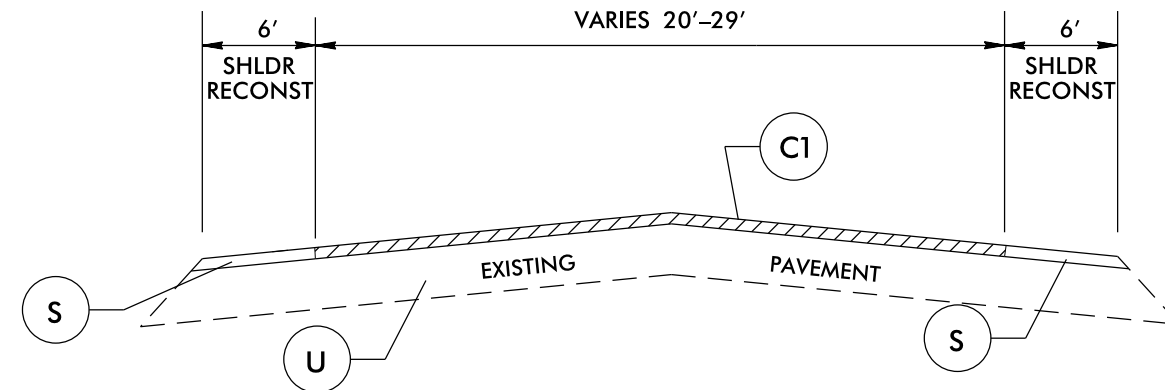
PAVEMENT TIE-IN DETAIL

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
F1	ASPHALT SURFACE TREATMENT, SINGLE SEAL (#78M STONE)
U	EXISTING PAVEMENT.
V1	MILLING EXISTING PAVEMENT 1.5"

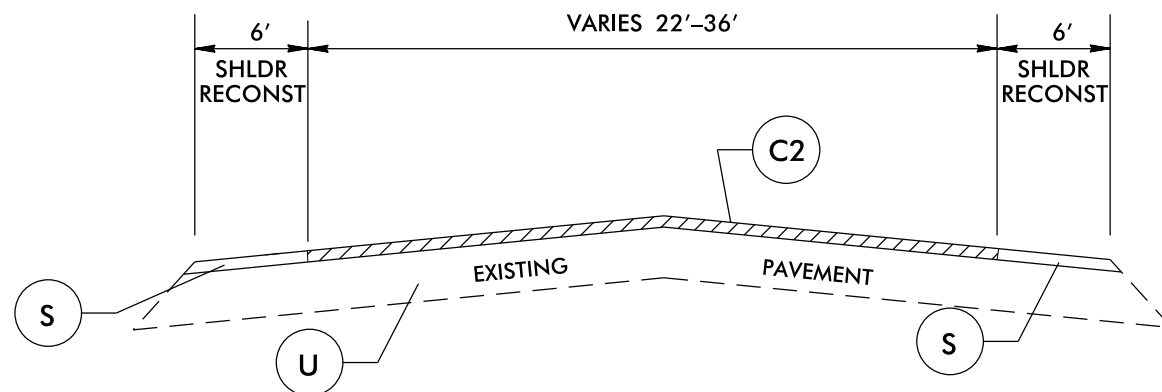
RICHMOND COUNTY TYPICAL SECTIONS



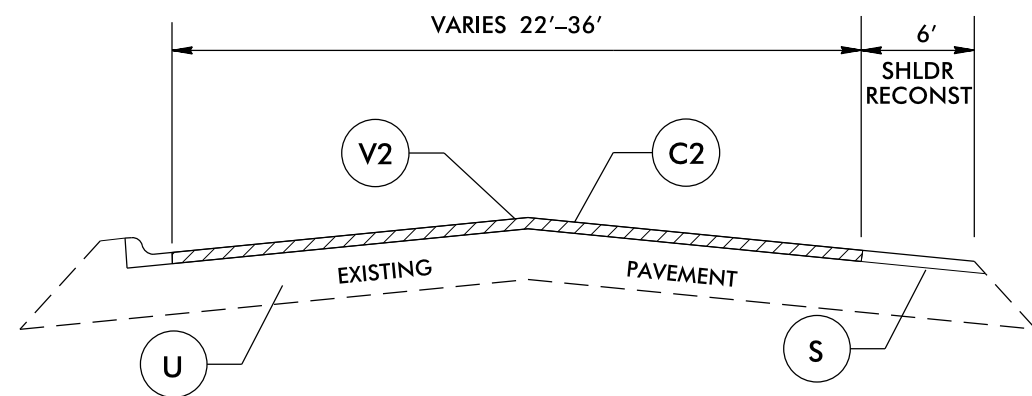
TYPICAL SECTION NO. 2



TYPICAL SECTION NO. 3



TYPICAL SECTION NO. 4

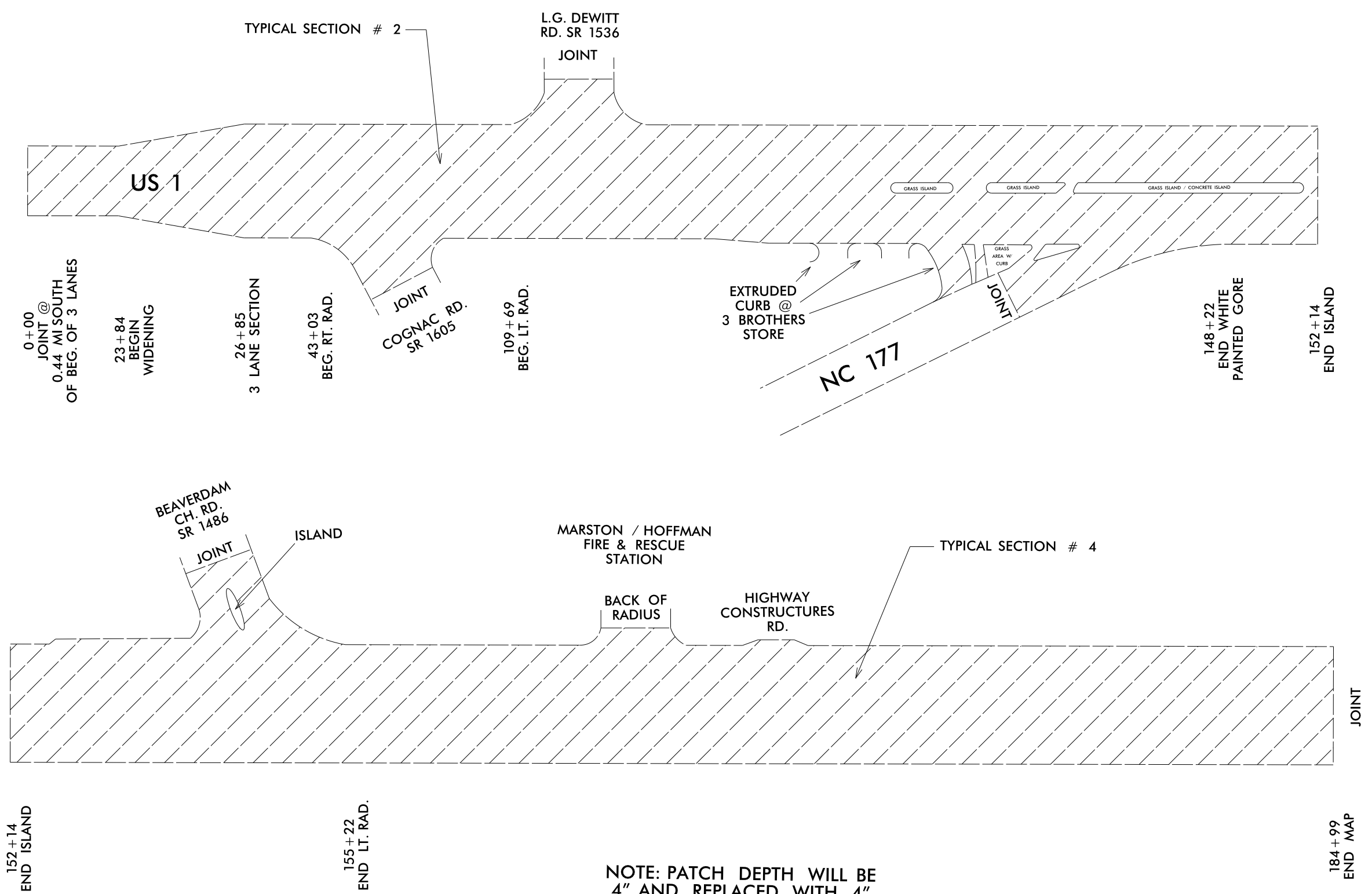


TYPICAL SECTION NO. 5

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT SURFACE COURSE TYPE S9.5B AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1¼" ASPHALT SURFACE COURSE TYPE SF9.5A AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
F1	ASPHALT SURFACE TREATMENT, SINGLE SEAL (#78M STONE)
S	AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT
V1	MILL EXISTING ASPHALT PAVEMENT 1½"
V2	MILL EXISTING ASPHALT PAVEMENT 1¼"

RICHMOND COUNTY

MAP 4
US 1

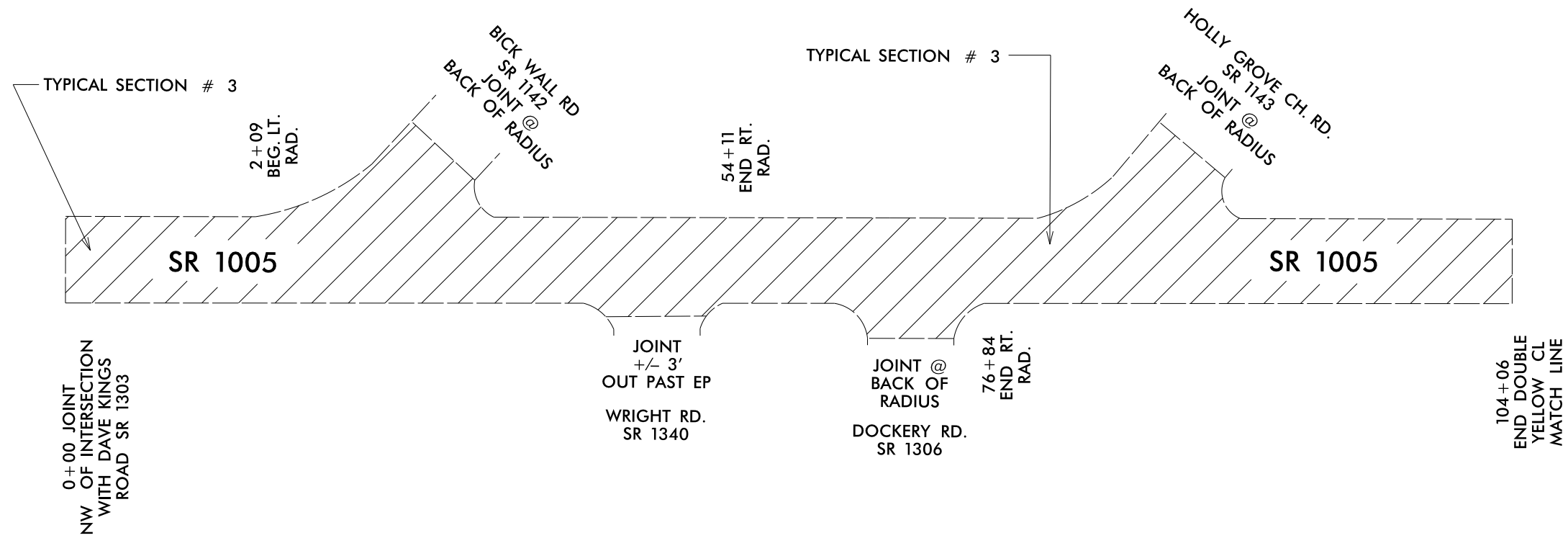


MAP 4
US 1

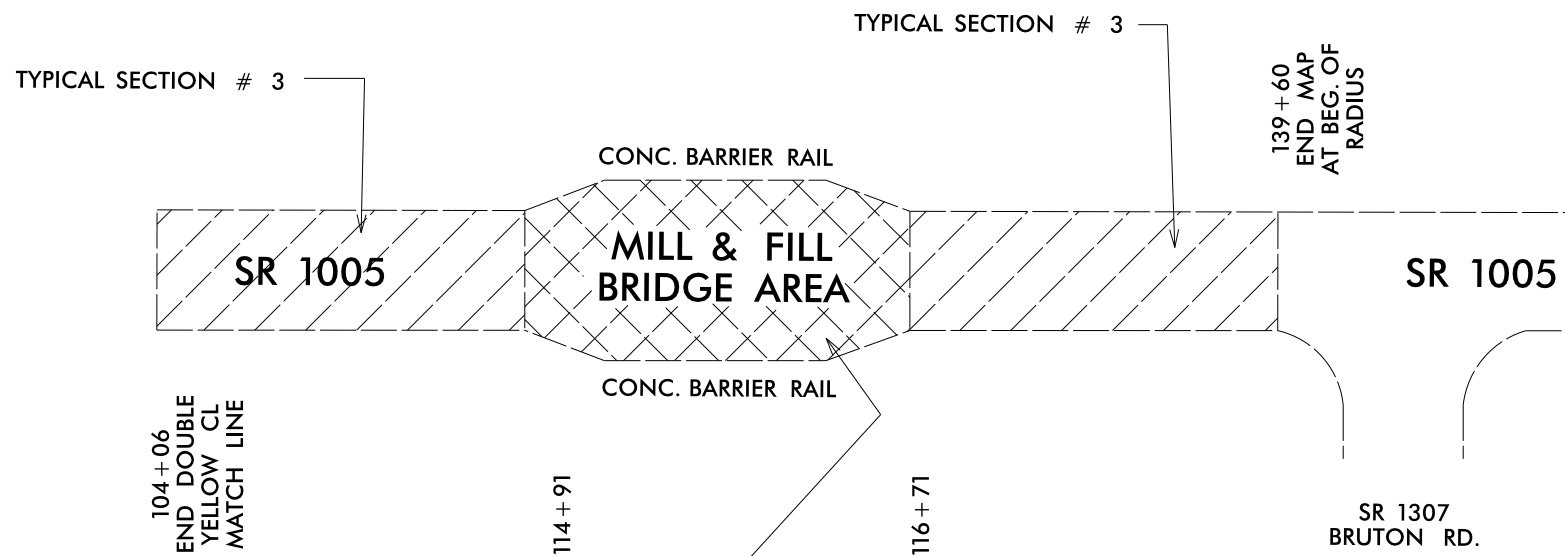
NOTE: PATCH DEPTH WILL BE
4" AND REPLACED WITH 4"
OF 119.0B.

RICHMOND COUNTY

MAP 5
SR 1005



MAP 5
SR 1005



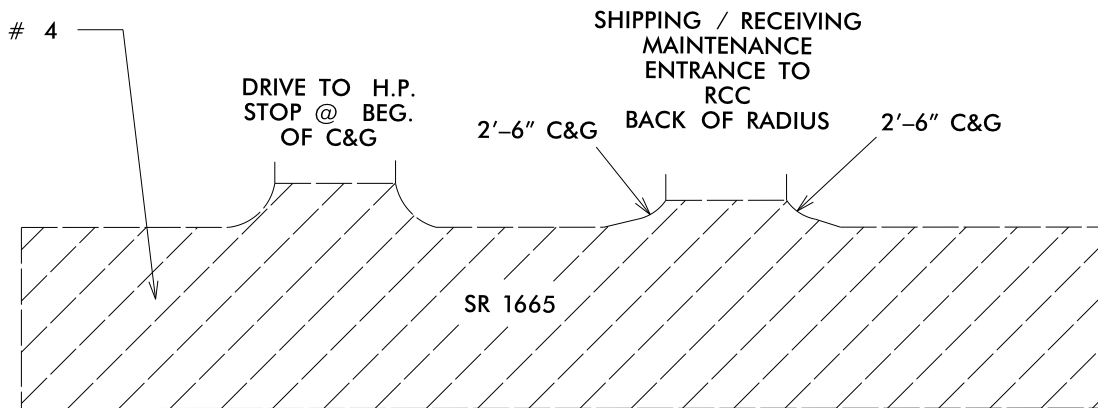
*NOTE: MILL 1.5" & PAVE 1.5"
OF S9.5B.

*NOTE: PATCHING DEPTH WILL BE
4" AND REPLACED WITH 4"
OF I19.0B

RICHMOND COUNTY

MAP 6
SR 1665
COLLEGE DRIVE

TYPICAL SECTION # 4



0+00
JOINT @
US 74 BUS.

6+56
BEG. LT.
RADIUS

16+65
BEG. C&G

17+19
END C&G

25+54
BEG. RAD.
WITH
GENE BURRELL RD.
MATCH LINE

* NOTE:

*NOTE: PATCHING DEPTH WILL BE
4" AND REPLACED WITH 4"
OF I19.0B

MAP 6
SR 1665
GENE BURRELL DRIVE

0+00
BEG. 2'-6" C&G
LT. SIDE
TOWARD
US 74 BUS.
BEG. 1/4" MILL & FILL

DRIVE TO
PARKING LOT
TAKE BACK TO
END OF C&G

DRIVE TO
PARKING LOT
TAKE BACK TO
JOINT IN C&G
JUST BEFORE
CATCH BASINS

DRIVE TO
PARKING LOT
TAKE BACK TO
JOINT IN C&G
JUST BEFORE
CATCH BASINS

* NOTE: TRANSITION THIS AREA
FROM MILL & FILL ON
GENE BURRELL DRIVE
(END OF C&G 4+39)
TO RESURFACING TO JOINT
AT BEG. OF RAD. AT
US 74 BUS.

DO NOT MILL SIGNAL LOOPS.
RESURFACE OVER PER ANDY COCHRAN
RICH. CO. MAINT. ENGINEER

TYPICAL SECTION # 4

* NOTE: TRANSITION THIS AREA
FROM RESURFACING ON
COLLEGE DRIVE TO
MILL & FILL
ON GENE BURRELL DRIVE

COLLEGE DR.

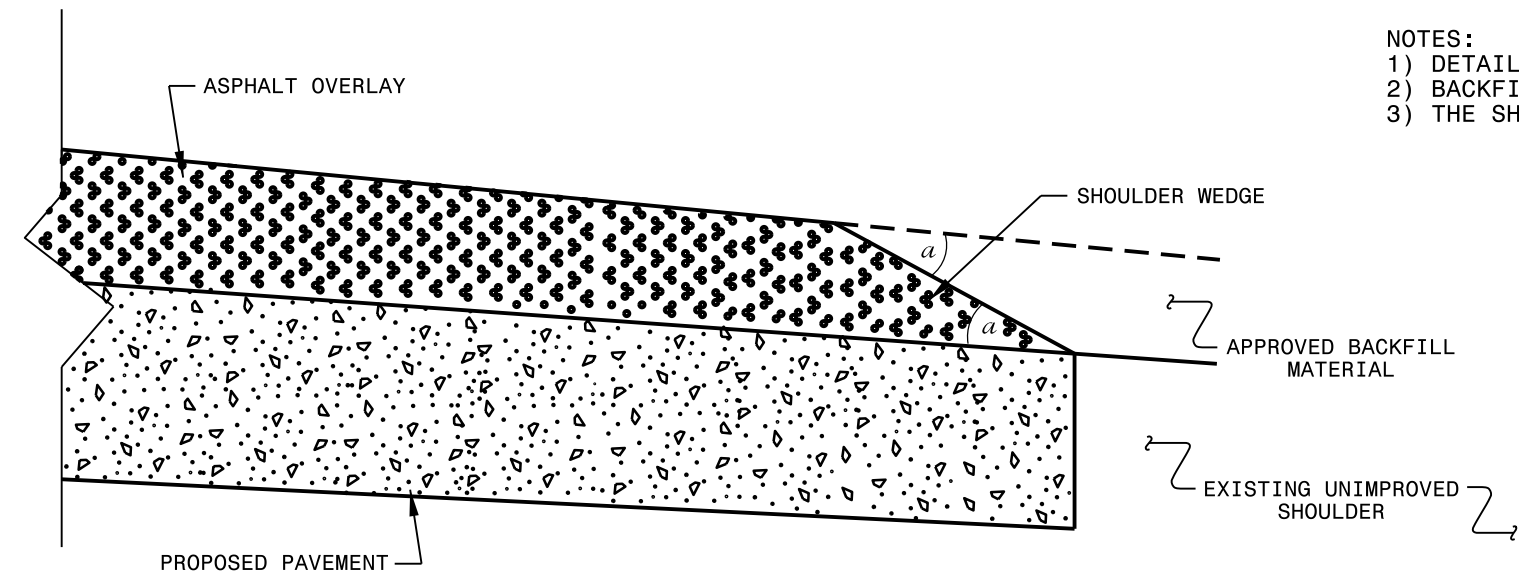
25+54
BEG. RAD.
WITH
GENE BURRELL RD.
MATCH LINE

TYPICAL SECTION # 5

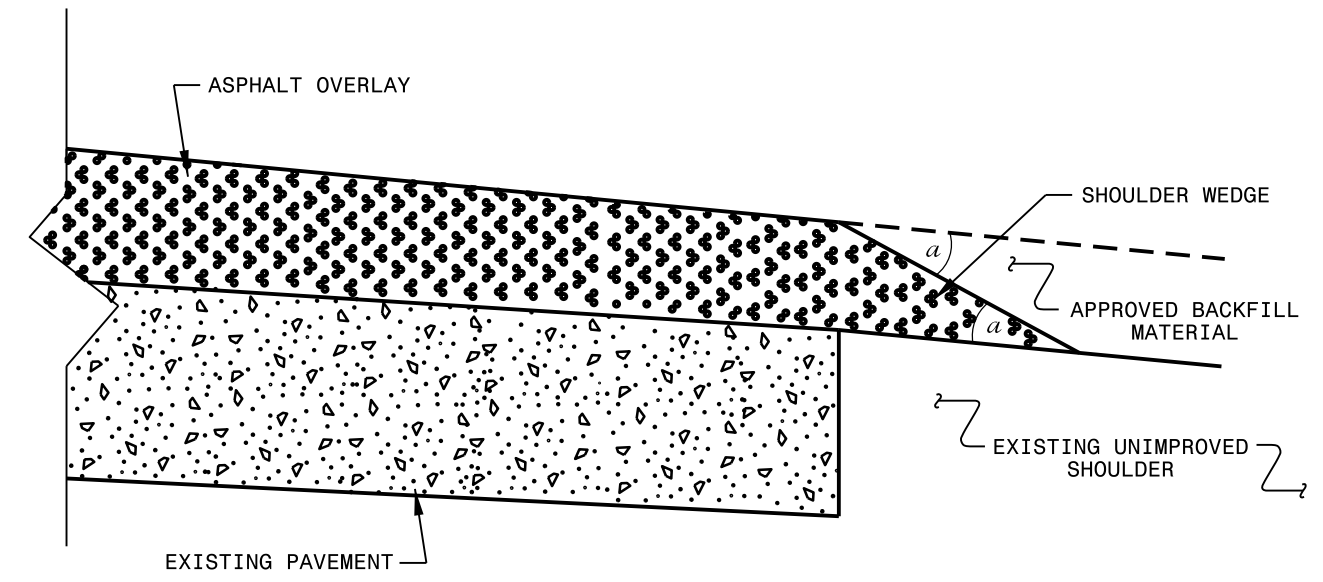
4+39
END 2'-6"
C&G
END 1/4" MILL & FILL

6+33
JOINT
BEG. RAD. TO
US 74 BUS.

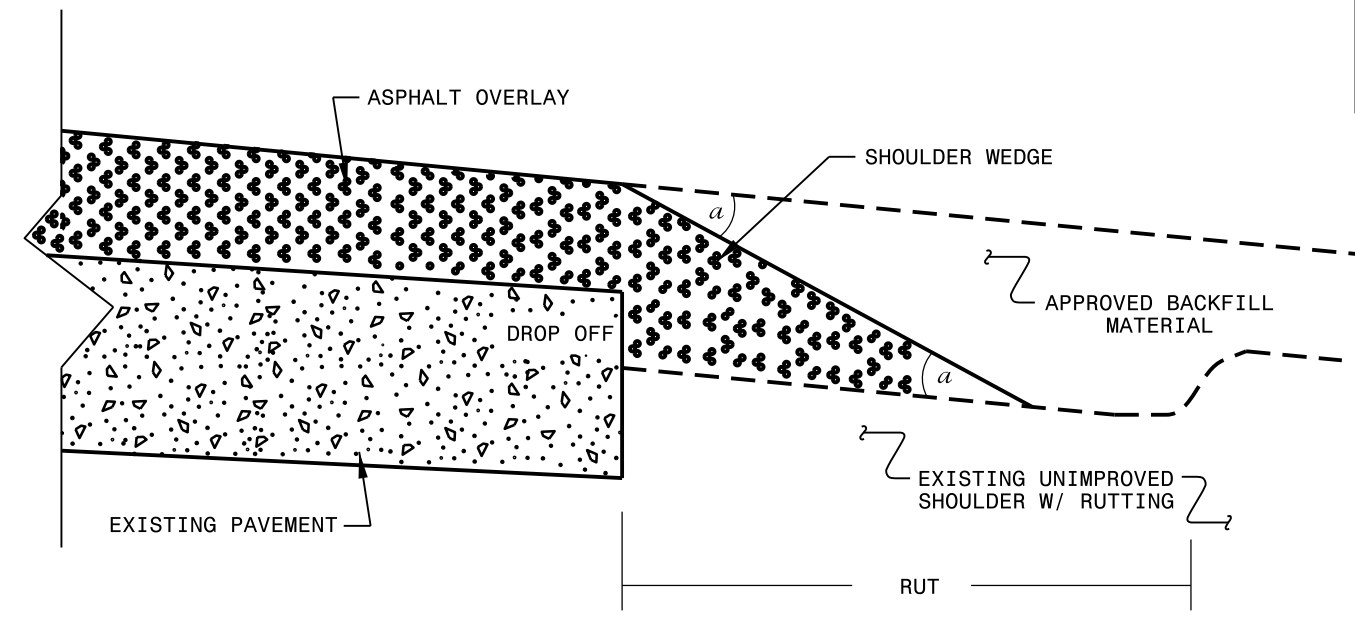
- NOTES:
 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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



SHOULDER WEDGE DETAIL
 (Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL
 (Resurfacing Adjacent to
 Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
SHOULDER WEDGE DETAILS	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 10/16/12
CHECKED BY:	DATE:
FILE SPEC.: s:\usr\details\stand\shoulderwedgedetail.dgn	

26-JAN-2016 07:43
 S:\Contracts\Resurfacing Projects\Shoulder Wedge Details\Revised Shoulder Wedge Detail.dgn
 \$\$\$USERNAME\$\$\$

PROJECT NO.	SHEET NO.	TOTAL NO.
2016CPT.08.11.20621, 2016CPT.08.11.10771 2016CPT.08.11.20771,	10	

SUMMARY OF QUANTITIES

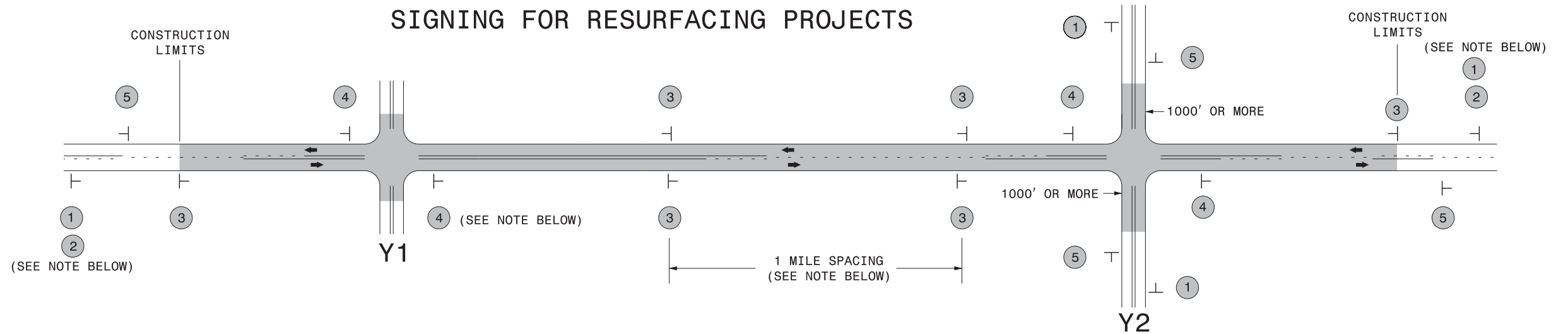
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	AGGREGATE SHOULDER BORROW TON	SHOULDER RECONSTRUCTION SMI	1.5" MILLING SY	1.25" MILLING SY	INCIDENTAL MILLING SY	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TON	ASPHALT BINDER FOR PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	ASPHALT SURFACE TREATMENT, SINGLE SEAL SY	EMULSION FOR ASPHALT SURFACE TREATMENT GAL	
2016CPT.08.11.20621	Montgomery	1	SR 1318 (SHILOH CHURCH RD)	FROM SR 1138 (SHILOH RD) TO S JT. OF BRIDGE# 130	1	2	2WU	NO	NO	1.281	24					267	1,675		101		18,100.00	6,350	
TOTAL FOR MAP NO. 1										1.281						267	1,675		101		18,100.00	6,350	
2016CPT.08.11.20621	Montgomery	2	SR 1318 (SHILOH CHURCH RD)	FROM PAVEMENT JT. N OF BRIDGE# 130 TO PAVEMENT JT. N OF SR 1319 (CORBETT RD)	1	2	2WU	NO	NO	0.257	22					300	310		19		3,300.00	1,200	
TOTAL FOR MAP NO. 2										0.257						300	310		19		3,300.00	1,200	
2016CPT.08.11.20621	Montgomery	3	SR 1118 (HAYWOOD RD)	FROM NC HWY 73 TO SR 1115 (GADDY FARM RD)	1	2	2WU	NO	NO	1.823	21			233		760	2,090		125		22,500.00	7,900	
TOTAL FOR MAP NO. 3										1.823				233		760	2,090		125		22,500.00	7,900	
TOTAL FOR PROJ NO. 2016CPT.08.11.20621										3.361				233		1,327	4,075		245		43,900.00	15,450	
2016CPT.08.11.10771	Richmond	4	US 1	FROM PVT. JOINT 0.44 MI SOUTH OF THE BEGINNING OF 3 LANE SECTION TO PVT. JOINT 0.32 MILES SOUTH OF SR 1001 (MARSTON RD)	2	2	MU	NO	NO	3.5	36	1,070.00	7.00				7,070		424		76,460.00	26,765	
TOTAL FOR MAP NO. 4										3.5		1,070.00	7.00				7,070		424		76,460.00	26,765	
TOTAL FOR PROJ NO. 2016CPT.08.11.10771										3.5		1,070.00	7.00				7,070		424		76,460.00	26,765	
2016CPT.08.11.20771	Richmond	5	SR 1005 (CARTLEDGE CREEK RD)	FROM SR 1303 (DAVE KINGS RD) TO SR 1307 (BURTON RD)	3	2	2WU	NO	NO	2.6	22	740.00	5.20			700	3,400		204	90			
TOTAL FOR MAP NO. 5										2.6		740.00	5.20			700	3,400		204	90			
2016CPT.08.11.20771	Richmond	6	SR 1665 (COLLEGE DR)	FROM US 74 BUS. TO US 74 BUS.	4.5	2	2WU	NO	NO	0.62	32	300.00	1.07		3,055	100		870	58				
TOTAL FOR MAP NO. 6										0.62		300.00	1.07		3,055	100		870	58				
TOTAL FOR PROJ NO. 2016CPT.08.11.20771										3.22		1,040.00	6.27		3,055	800	3,400	870	262	90			
GRAND TOTAL										10.081		2,110.00	13.27		233	3,055	2,127	14,545	870	931	90	120,360.00	42,215

PROJECT NO.	SHEET NO.	TOTAL NO.
2016CPT.08.11.20621, 2016CPT.08.11.10771 2016CPT.08.11.20771,	11	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	441300000-E	445700000-N	468500000-E	468600000-E			469500000-E		469700000-E	471000000-E	472100000-E	472500000-E				490000000-N		490500000-N		
										WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	4" X 90 M WHITE THERMO	4" X 120 M WHITE THERMO	4" X 120 M YELLOW THERMO	8" X 90 M WHITE THERMO	8" X 90 M YELLOW THERMO	8" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MSG STOP 120 M	THERMO LT ARROW 90 M	THERMO STR ARROW 90 M	THERMO RT ARROW 90 M	YELLOW & YELLOW MARKERS	CRYSTAL & RED MARKERS	SNOW PLOWABLE MARKERS Y & Y MARKERS	SNOW PLOWABLE MARKERS C & R MARKERS			
										SF	LS	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA			
2016CPT.08.11.20621	Montgomery	1	SR 1318 (SHILOH CHURCH RD)	FROM SR 1138 (SHILOH RD) TO S JT. OF BRIDGE# 130	1	2	2WU	1.281	24	150		13,785		13,785															
TOTAL FOR MAP NO. 1										150		13,785		13,785															
2016CPT.08.11.20621	Montgomery	2	SR 1318 (SHILOH CHURCH RD)	FROM PAVEMENT JT. N OF BRIDGE# 130 TO PAVEMENT JT. N OF SR 1319 (CORBETT RD)	1	2	2WU	0.257	22	30	*	2,770		2,770															
TOTAL FOR MAP NO. 2										30		2,770		2,770															
2016CPT.08.11.20621	Montgomery	3	SR 1118 (HAYWOOD RD)	FROM NC HWY 73 TO SR 1115 (GADDY FARM RD)	1	2	2WU	1.823	21	205		19,620		19,620											120				
TOTAL FOR MAP NO. 3										205		19,620		19,620											120				
TOTAL FOR PROJ NO. 2016CPT.08.11.20621										385	1	36,175		36,175											120				
2016CPT.08.11.10771	Richmond	4	US 1	FROM PVT. JOINT 0.44 MI SOUTH OF THE BEGINNING OF 3 LANE SECTION TO PVT. JOINT 0.32 MILES SOUTH OF SR 1001 (MARSTON RD)	2	2	MU	3.5	36	392	*	37,500	1,190	38,150	645	235	185	80		74	5					400	81		
TOTAL FOR MAP NO. 4										392		37,500	1,190	38,150	645	235	185	80		74	5				400	81			
TOTAL FOR PROJ NO. 2016CPT.08.11.10771										392	1	37,500	1,190	38,150	645	235	185	80		74	5				400	81			
												39,340		880						79						481			
2016CPT.08.11.20771	Richmond	5	SR 1005 (CARTLEDGE CREEK RD)	FROM SR 1303 (DAVE KINGS RD) TO SR 1307 (BURTON RD)	3	2	2WU	2.6	22	292	*	28,060		26,860											186				
TOTAL FOR MAP NO. 5										292		28,060		26,860											186				
2016CPT.08.11.20771	Richmond	6	SR 1665 (COLLEGE DR)	FROM US 74 BUS. TO US 74 BUS.	4,5	2	2WU	0.62	32	70	*	5,400	1,000	6,625		130		70	12	11		5		63	20				
TOTAL FOR MAP NO. 6										70		5,400	1,000	6,625		130		70	12	11		5		63	20				
TOTAL FOR PROJ NO. 2016CPT.08.11.20771										362		33,460	1,000	33,485		130		70	12	11		5		249	20				
												34,485		130						16				269					
GRAND TOTAL										10,081	1	107,135	2,190	107,810	645	365	185	150	12	85	5	5		369	20	400	81		
												110,000		1,010						95			389		481				

SIGNING FOR RESURFACING PROJECTS



LEGEND	
┆	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	MAINLINE (-L-) SIGNING		-Y- LINE SIGNING	
	1	 W20-1 48" X 48"	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS <p>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.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> W20-1 48" X 48" </div> <div style="text-align: center;"> W20-7 A 48" X 48" </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p>
	2	 W7-3aP 24" X 18"	#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)	
	3	 SP 13107 48" X 48"	PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET 1/2 MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.	
	4	 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.	
5	 G20-2 A 48" X 24"	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.		

3/19/2015
 C:\Users\rmgarrett\Downloads\Resurfacing_AdvWarn_2Ln (2).dgn
 User:rmgarrett

**RESURFACING
ADVANCE WARNING SIGNS
FOR
RURAL AND SUBURBAN
2 LANE ROADWAYS**