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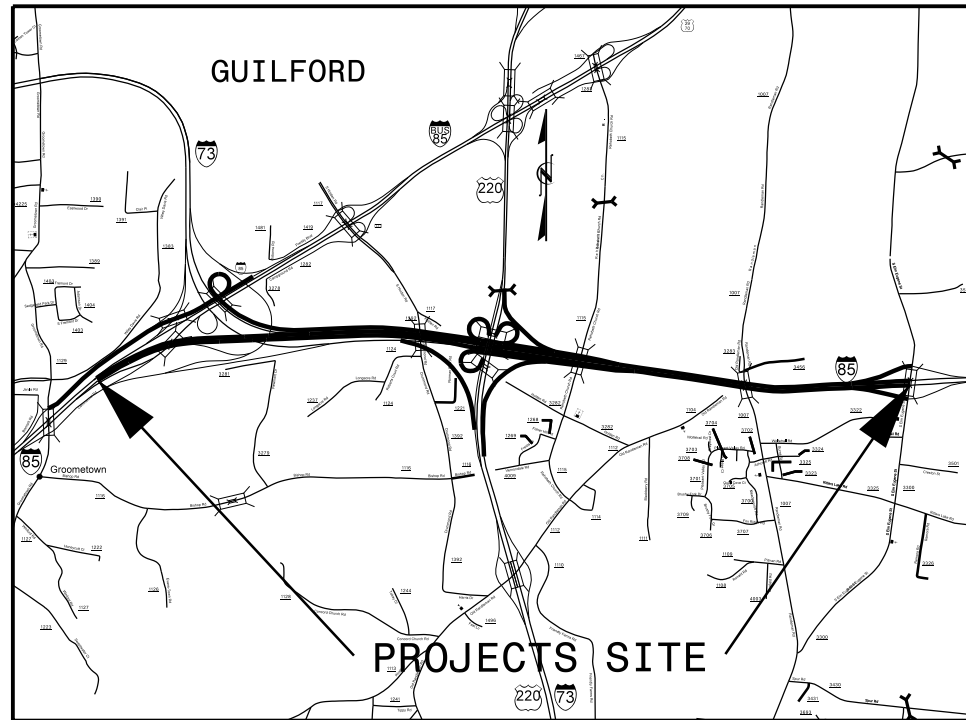
09/08/99

11-AUG-2016 10:44
S:\3-Guilford\I-5854_Renab\CADD\I-5854 Title.dgn
cwiles

TIP PROJECT: I-5854

CONTRACT: C203872

VICINITY



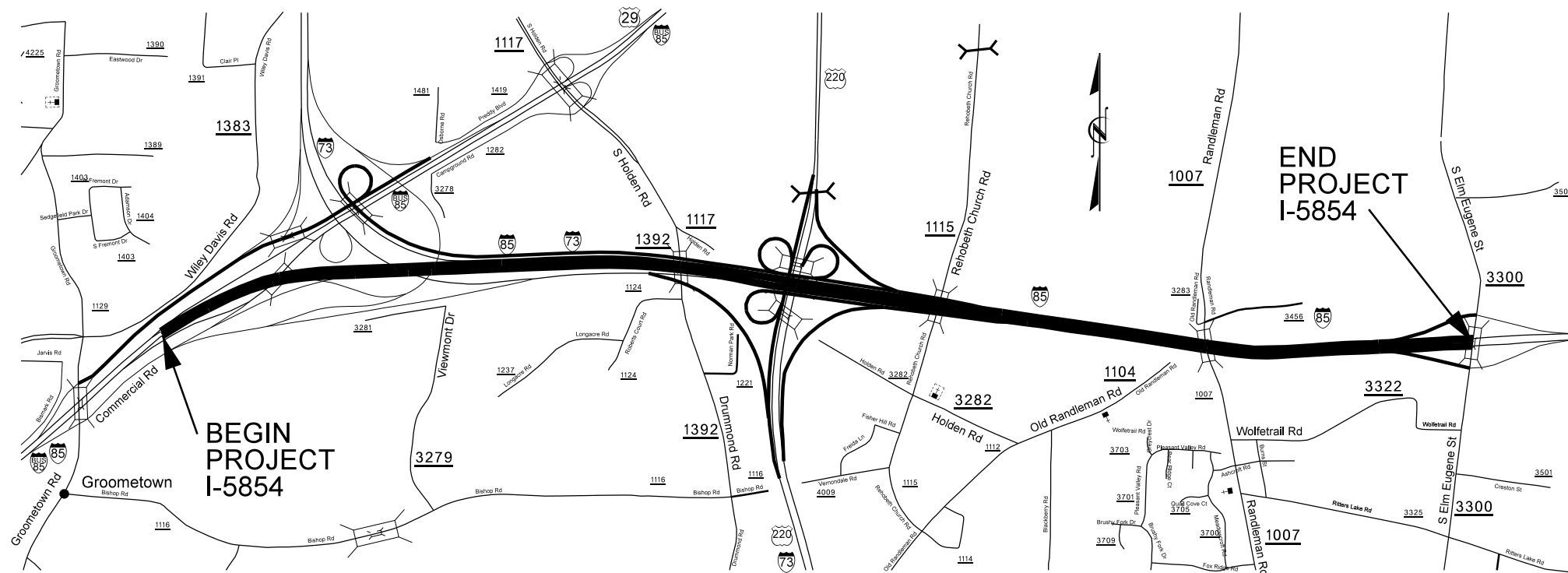
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

LOCATION: I-85 FROM 0.3 MILE NORTH OF BUSINESS
85 TO SR 3300 (SOUTH ELM EUGENE
STREET) IN GREENSBORO

TYPE OF WORK: PAVEMENT REHABILITATION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5854	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53058.1.1	NHPIM-0085(9)123	PE	
53058.3.1	NHPIM-0085(9)123	CONST	



GRAPHIC SCALES

NOT TO SCALE

DESIGN DATA

NA

PROJECT LENGTH

I-5854 = 3.713 miles

Prepared In the Office of:
DIVISION OF HIGHWAYS

1584 Yanceyville St. Greensboro NC, 27405

2012 STANDARD SPECIFICATIONS

C. B. SMITHERMAN, P.E.

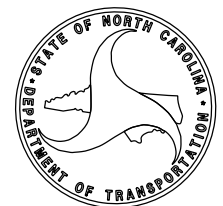
PROJECT ENGINEER

CLINTON A. WILES

ENGINEERING TECHNICIAN

LETTING DATE:

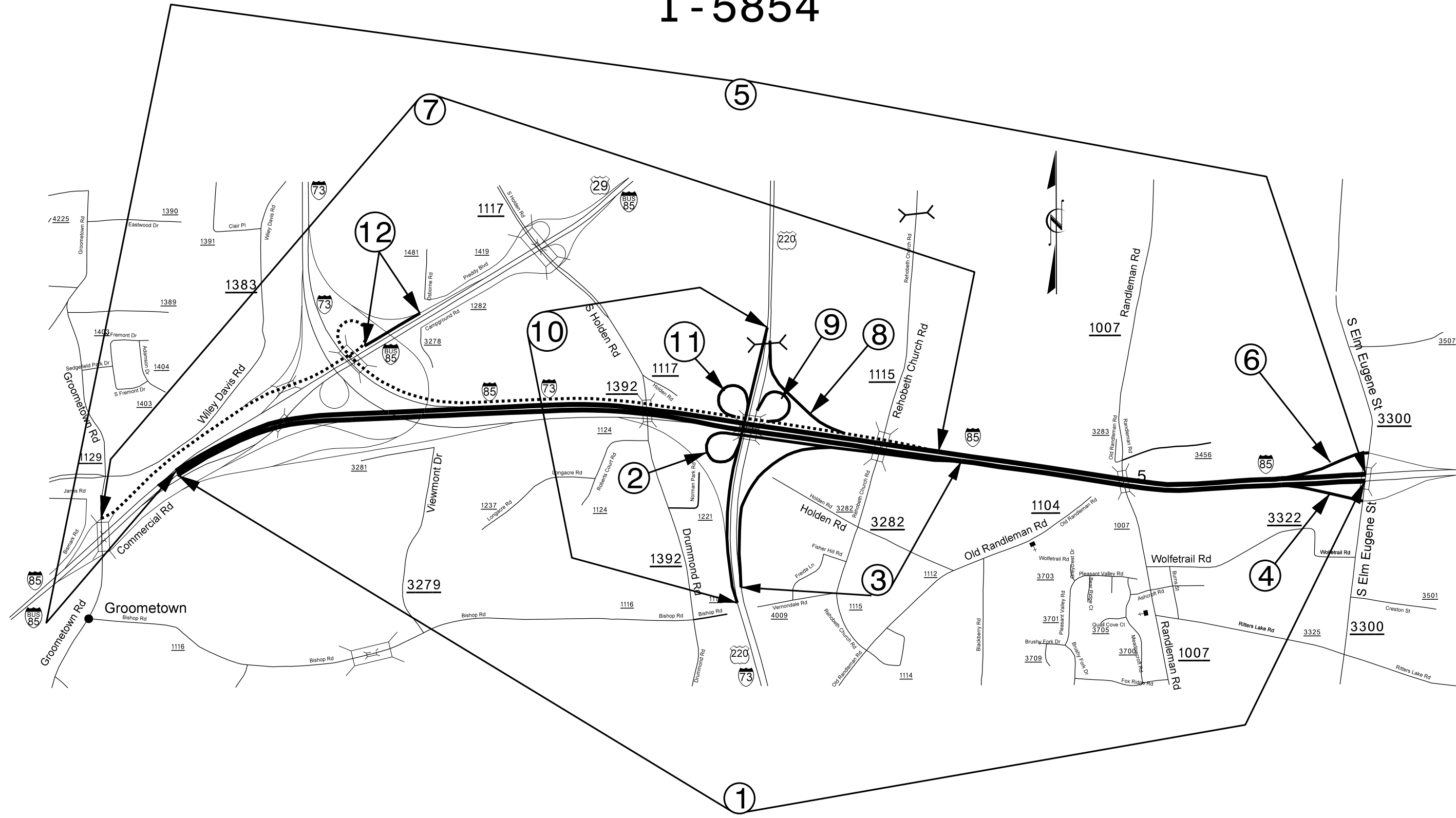
September 20, 2016



GUILFORD COUNTY

I - 5854

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5854	2	



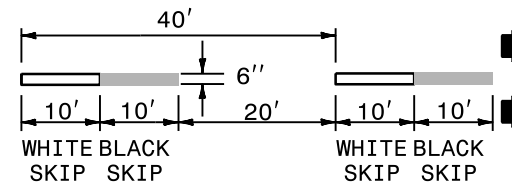
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c:\files\AT_D\CADD\271375

PAVEMENT SCHEDULE

C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVG. RATE OF 168 LBS PER SQ. YD. IN EACH OF TWO LAYERS
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, S9.5C AT AN AVG. RATE OF 168 LBS PER SQ. YD.
D	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, I19.0C AT AN AVG RATE OF 456 LBS PER SQ. YD. IN ONE LIFT
F	PROPOSED FOG SEAL TO BE APPLIED TO THE EXISTING ASPHALT SHOULDER
R	EXISTING CONCRETE STRUCTURE
U	EXISTING PAVEMENT
V1	3" MILLING FOR PATCHING
V2	MILLED RUMBLE STRIP
V3	MILLING ASPHALT PAVEMENT 1½" DEPTH
V4	4" MILLING FOR PATCHING
Y	PROPOSED DIAMOND GRINDING

BLACK - WHITE COMBINATION 10' WHITE SKIP LINES 10' BLACK SKIP LINES

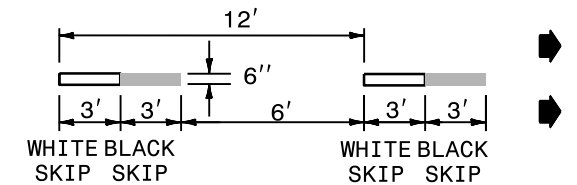
FOR USE ON CONCRETE PAVEMENTS TO PROVIDE CONTRAST FOR THE WHITE LANE LINE, ALONG THRU LANES AND RAMP LANES.



NOTE:
6" LINE REMOVAL SHALL BE USED TO REMOVE 100% OF THE 6" TEMPORARY PAINT ON THE CONCRETE SURFACE BY GRINDING METHOD ONLY. ALSO 6" LINE REMOVAL BY GRINDING SHALL BE USED IN THE AREA OF THE BLACK CONTRAST FOR SURFACE PREPARATION.

BLACK - WHITE COMBINATION 3' MINI WHITE SKIP LINES 3' MINI BLACK SKIP LINES

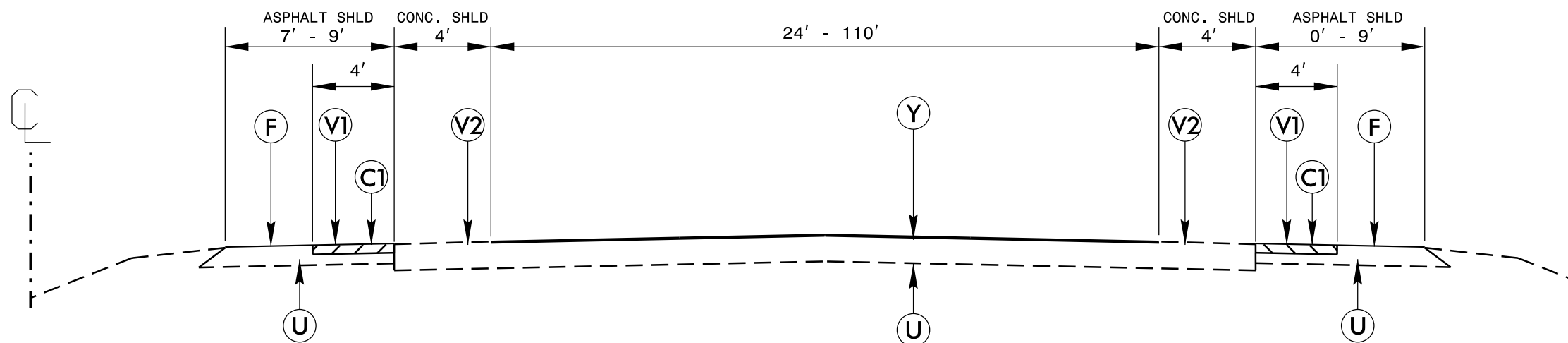
FOR USE ON CONCRETE PAVEMENTS TO PROVIDE CONTRAST FOR THE WHITE LANE LINE, ALONG THRU LANES AND RAMP LANES.



NOTE:
6" LINE REMOVAL SHALL BE USED TO REMOVE 100% OF THE 6" TEMPORARY PAINT ON THE CONCRETE SURFACE BY GRINDING METHOD ONLY. ALSO 6" LINE REMOVAL BY GRINDING SHALL BE USED IN THE AREA OF THE BLACK CONTRAST FOR SURFACE PREPARATION.

NOTES:

- DIAMOND GRIND EXISTING TRAVEL LANES, AUXILIARY LANES AND RAMPS INCLUDING GORE AREAS
- DIAMOND GRINDING OPERATION SHALL BE PERFORMED AFTER ALL CONCRETE REPAIRS ARE COMPLETE AND PRIOR TO JOINT SEALING OPERATION
- PRIOR TO PLACING FINAL PAVEMENT MARKING MATERIAL ON CONCRETE SURFACES THAT ARE DIAMOND GROUND, THE CONTRACTOR SHALL USE AN ACCEPTABLE METHOD TO GRIND RIDGES SMOOTH ONLY WHERE PAVEMENT MARKINGS WILL BE INSTALLED.



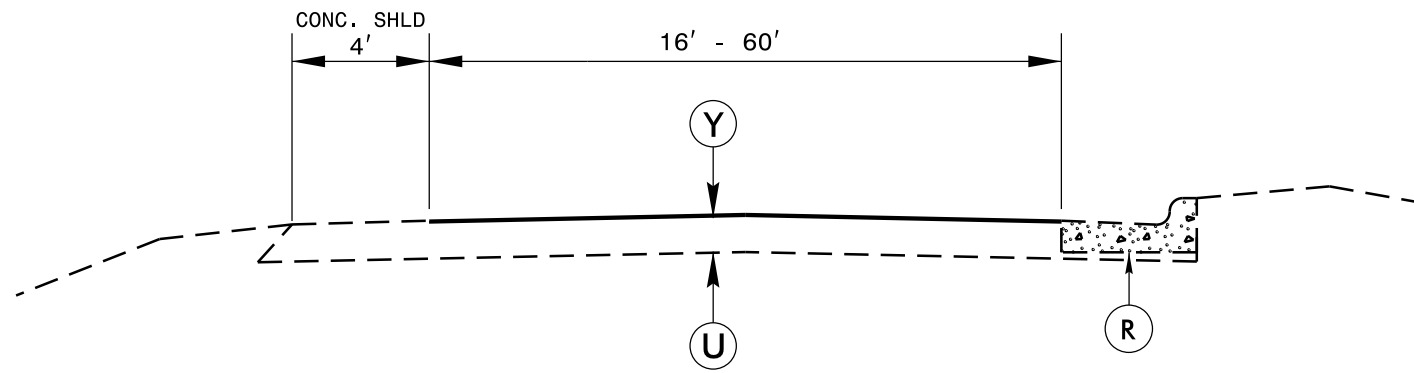
TYPICAL SECTION NO. 1

TO BE USED ON MAPS 1, 5

CONTRACTOR SHALL PERFORM MILL/FILL OPERATION ON SHOULDER BEFORE DIAMOND GRINDING TO AVOID TACK AND DEBRIS ON FINAL CONCRETE PAVEMENT SURFACE. (SEE 3" MILLING DETAILS)

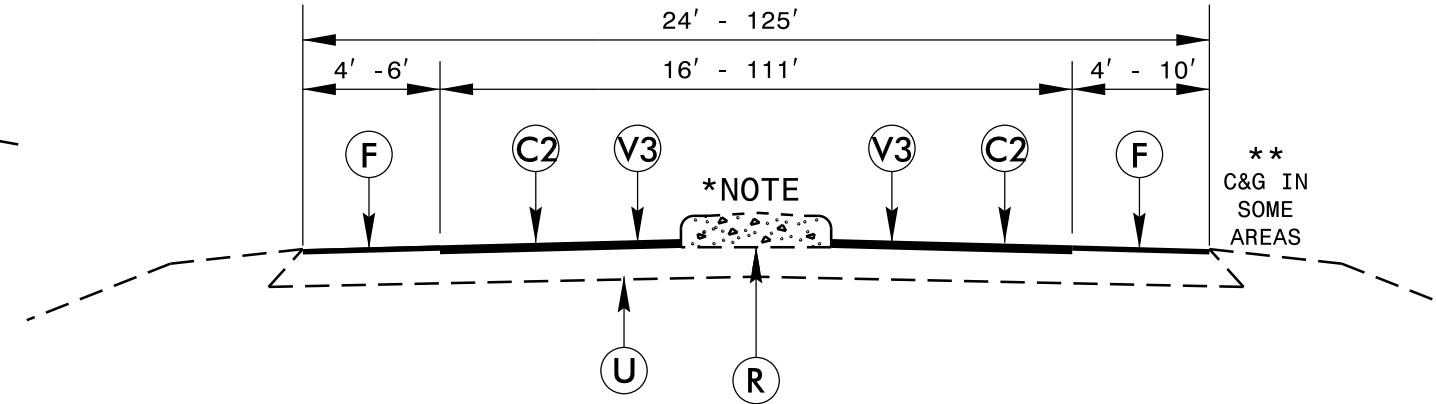
DIAMOND GRIND EXISTING TRAVEL LANES, AUXILIARY LANES AND RAMPS INCLUDING GORE AREAS

DIAMOND GRINDING OPERATION SHALL BE PERFORMED AFTER ALL CONCRETE REPAIRS ARE COMPLETE AND PRIOR TO JOINT SEALING OPERATION



TYPICAL SECTION NO. 2

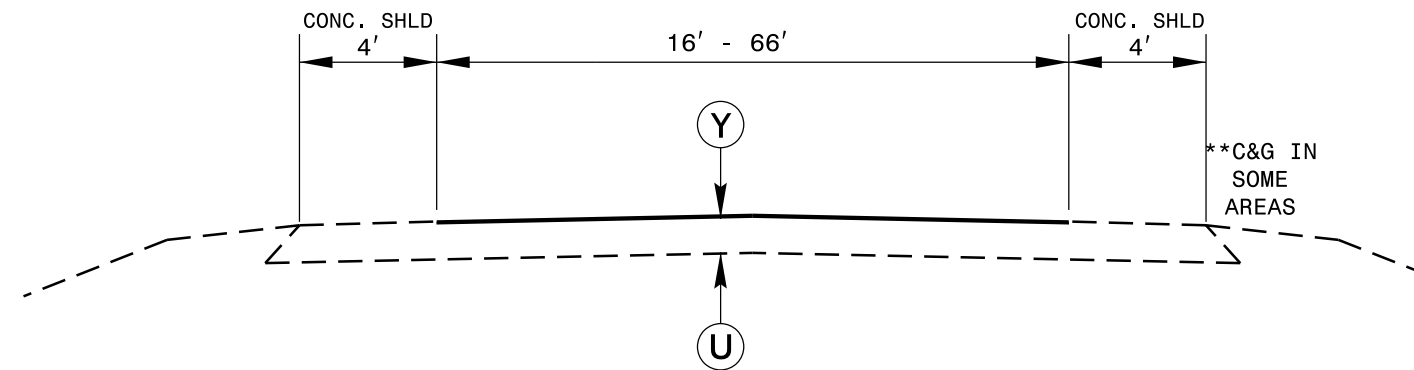
TO BE USED ON MAPS 2, 7, 9, 11
 MAP 2: STA. 10+00 TO STA. 22+10
 STA. 22+35 TO STA. 22+91
 MAP 7: STA. 34+54 TO STA. 35+59
 MAP 7: STA. 111+33 TO STA. 123+51
 MAP 9: STA. 10+00 TO STA. 19+45
 MAP 11: STA. 10+00 TO STA. 20+68



* NOTE: TRAFFIC ISLAND AT END OF RAMP (MAP 4)

TYPICAL SECTION NO. 4

TO BE USED ON MAPS 4, 6, 7
 MAP 4: STA. 10+00 TO STA. 14+76
 ** STA. 14+76 TO STA. 18+08 C&G RT
 STA. 18+08 TO STA. 19+81
 **MAP 6: STA. 10+00 TO STA. 10+35 C&G RT
 STA. 10+35 TO STA. 21+05
 MAP 7: STA. 173+14 TO STA. 176+80



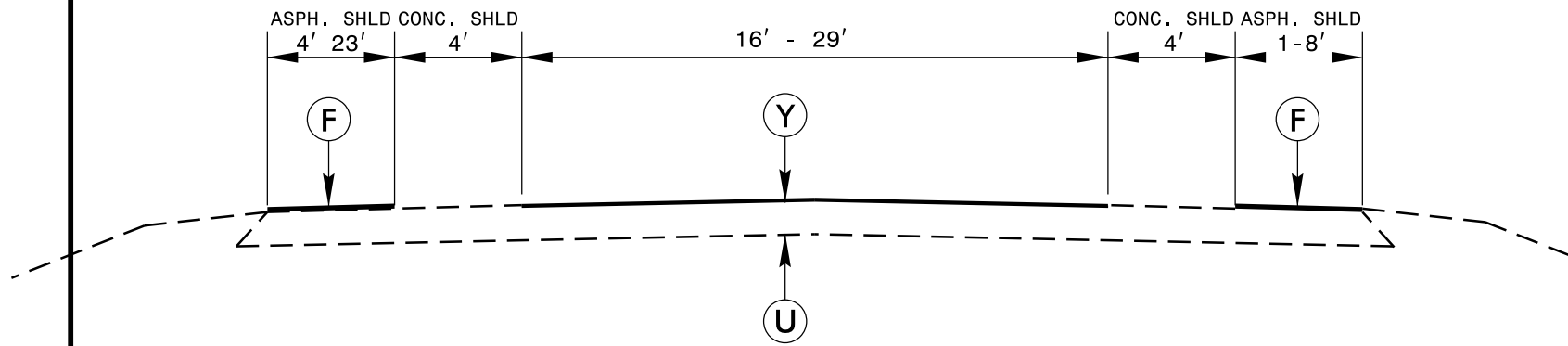
TYPICAL SECTION NO. 3

TO BE USED ON MAPS 2, 3, 7, 8, 10, 12
 MAP 2: STA. 22+10 TO STA. 22+35
 STA. 22+91 TO STA. 37+07
 MAP 3: STA. 10+00 TO STA. 37+31
 STA. 38+94 TO STA. 48+19
 MAP 7: STA. 10+00 TO STA. 15+22
 STA. 17+17 TO STA. 34+54
 ** STA. 35+59 TO STA. 56+20 C&G
 STA. 57+36 TO STA. 81+54
 STA. 84+71 TO STA. 111+33
 STA. 123+51 TO STA. 124+96
 STA. 130+86 TO STA. 173+14
 MAP 8: STA. 10+00 TO STA. 26+70
 MAP 10: STA. 10+00 TO STA. 43+95
 MAP 12: STA. 10+00 TO STA. 10+20
 STA. 13+33 TO STA. 17+10

PAVEMENT SCHEDULE

C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVG. RATE OF 168 LBS PER SQ. YD. IN EACH OF TWO LAYERS
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U	EXISTING PAVEMENT
V1	3" MILLING FOR PATCHING
V2	MILLED RUMBLE STRIP
V3	MILLING ASPHALT PAVEMENT 1½" DEPTH
V4	4" MILLING FOR PATCHING
Y	PROPOSED DIAMOND GRINDING

**C&G IN SOME AREAS

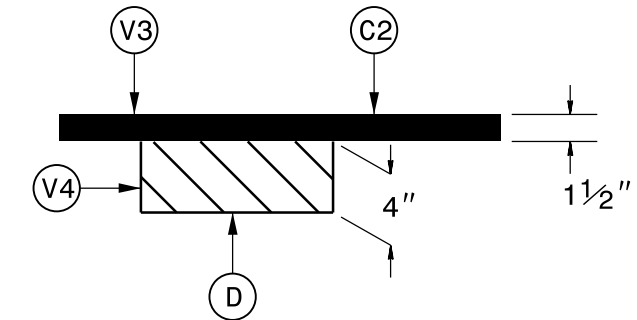


TYPICAL SECTION NO. 5

TO BE USED ON MAPS 3, 7, 12

- MAP 3: STA. 37+31 TO STA. 38+94
- MAP 7: STA. 15+22 TO STA. 15+89 RT
 STA. 15+89 TO STA. 16+75
 STA. 16+75 TO STA. 17+17 RT
 STA. 56+20 TO STA. 57+36
 STA. 81+54 TO STA. 84+71 RT
 STA. 124+96 TO STA. 130+86 LT
- MAP 12: STA. 10+20 TO STA. 13+33 LT

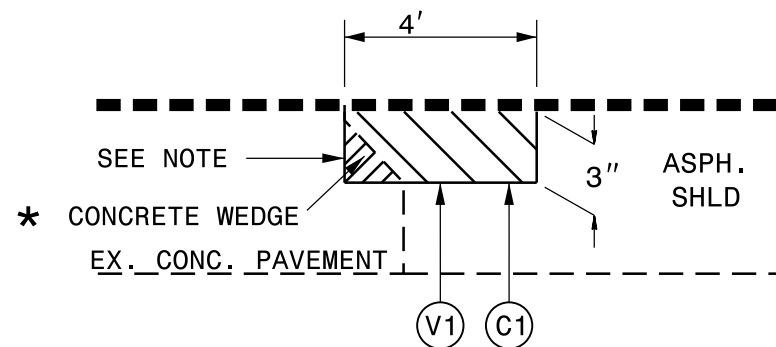
4" MILLING FOR PATCHING DETAIL 2



TO BE USED IN RUTTED AREAS AS DIRECTED BY THE ENGINEER IN CONJUNCTION WITH:

- MAP 7: STA. 175+80 TO STA. 176+80

3" MILLING FOR PATCHING DETAIL 1



NOTE: CONTRACTOR SHALL SAW CUT 3" DEPTH PRIOR TO MILLING OPERATION. SAW CUT IS INCIDENTAL TO MILLING OPERATION

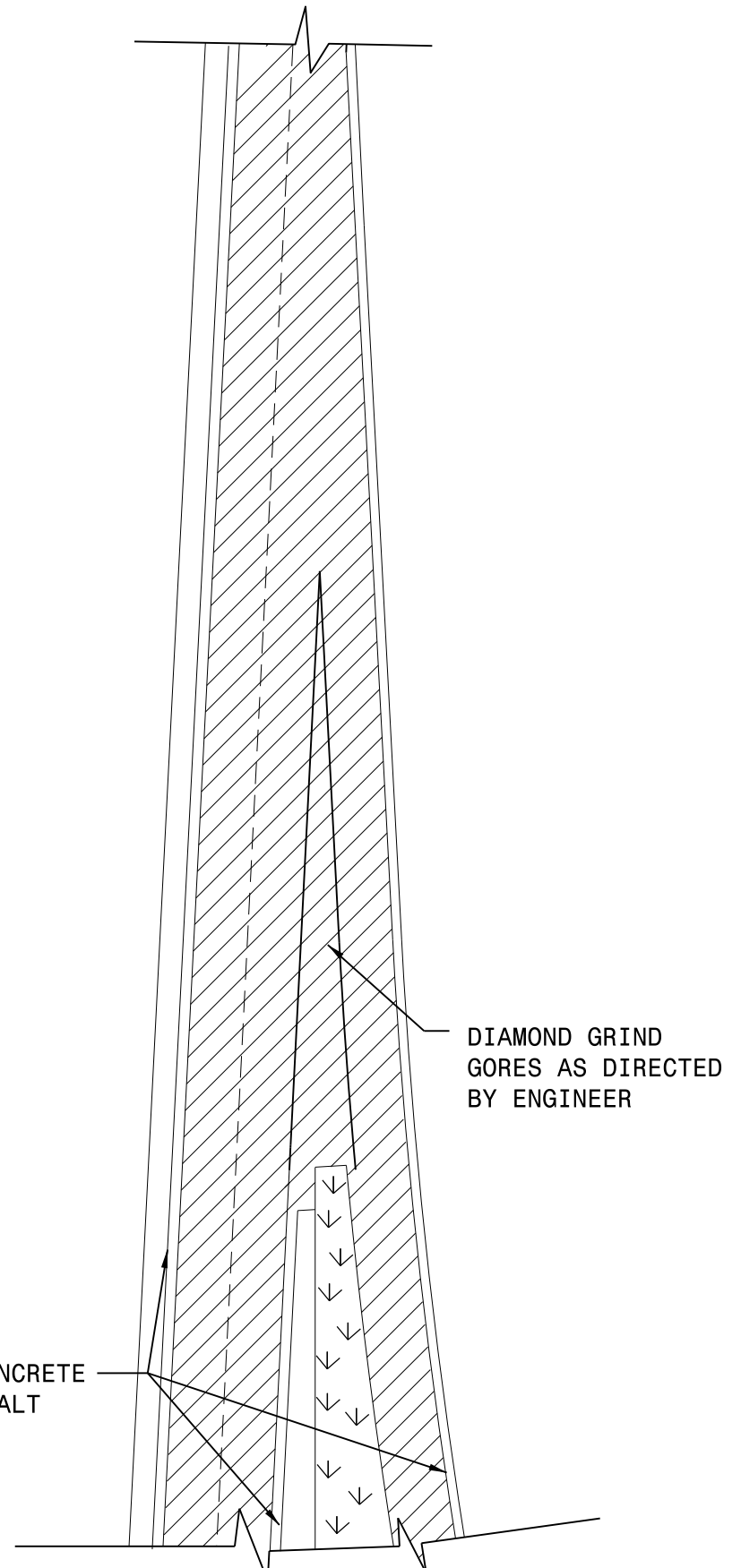
* CONCRETE WEDGE SHALL BE REMOVED

TO BE USED IN CONJUNCTION WITH MAPS 1 AND 5

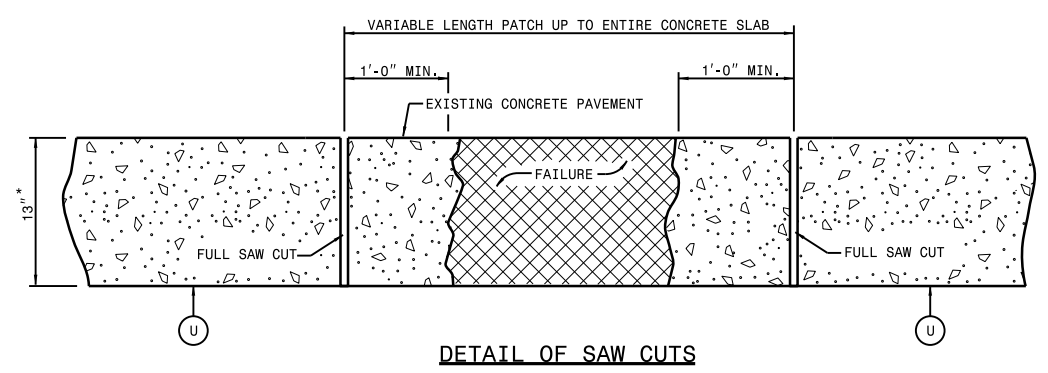
- MAP 1: 3" MILLING = 17427 SYD
 SURFACE COURSE, TYPE S9.5B = 2928 TONS
- MAP 5: 3" MILLING = 17427 SYD
 SURFACE COURSE, TYPE S9.5B = 2928 TONS

PAVEMENT SCHEDULE

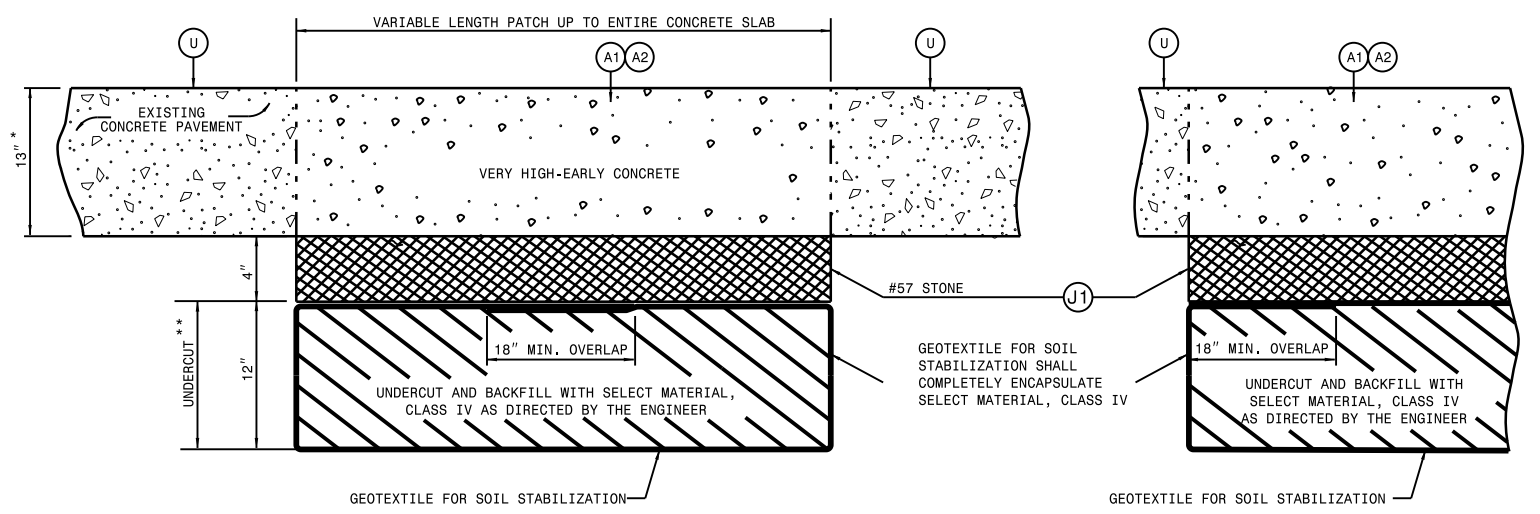
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVG. RATE OF 168 LBS PER SQ. YD. IN EACH OF TWO LAYERS
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V3	MILLING ASPHALT PAVEMENT 1 1/2" DEPTH
V4	4" MILLING FOR PATCHING
Y	PROPOSED DIAMOND GRINDING



DETAIL FOR LIMITS OF MILLING AND DIAMOND GRINDING AT GORE AREAS



DETAIL OF SAW CUTS



DETAIL OF CONCRETE PAVEMENT REPAIR

* DIMENSIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED
 MAPS 1, 5: 13"
 MAP 7: 10"
 ** UNDERCUT REQUIRED IN AREAS AS DIRECTED BY THE ENGINEER

PAVEMENT SCHEDULE	
A1	13" VERY HIGH-EARLY CONCRETE
A2	10" VERY HIGH-EARLY CONCRETE
J1	#57 STONE
U	EXISTING PAVEMENT

Refer to the North Carolina Department of Transportation "Partial and Full Depth Repair Manual" when Replacing Slabs and when Repairing Concrete Pavement.

DETAIL FOR REPAIR OF CONCRETE PAVEMENT

PROJECT REFERENCE NO.	SHEET NO.
I-5854	7

SUMMARY OF DRAINAGE REPAIR

MAP #	STATION	LOCATION LT or RT	REMOVE & REPLACE CONCRETE APRON & BACKFILL	DRAINAGE STRUCTURE REPAIR			CONCRETE PAD FOR SHOULDER DRAIN PIPE OUTLET
				REPLACE MISSING BRICK &/OR GROUT VOIDS	GROUT UNDER FRAME WITH GRATE & HOOD & BACKFILL DRAINAGE STRUCTURE	GROUT AROUND EXISTING SHOULDER DRAIN PIPE	
			EA	EA	EA	EA	EA
1	34+10	RT			1		
1	85+60	RT					1
1	129+70	RT	1				
1	144+50	RT			1		
1	151+59	RT				1	
1	162+65	RT	1				
1	172+20	RT	1	1			
1	192+50	RT					1
TOTAL FOR MAP 1			3		4		2
2	22+38	RT			1		
TOTAL FOR MAP 2			0		1		0
3	9+25	RT	1				
3	17+25	RT	1				
3	49+00	RT	1				
TOTAL FOR MAP 3			3		0		0
5	36+79	RT	1				
5	46+60	RT	1				
5	81+30	RT	1				
5	84+40	RT			1		
TOTAL FOR MAP 5			3		1		0
7	41+75	LT			1		
7	52+05	RT	1				
7	95+00	RT	1				
7	158+15	LT	1				
7	161+85	LT	1				
7	168+50	RT	1				
TOTAL FOR MAP 7			5		1		0
8	25+62	LT	1				
8	25+62	RT	1				
TOTAL FOR MAP 8			2		0		0
10	40+60	LT	1				
TOTAL FOR MAP 10			1		0		0
12	10+17	LT	1				
TOTAL FOR MAP 12			1		0		0
GRAND TOTAL			18		7		2

PROJECT NO.	SHEET NO.	TOTAL NO.
I-5854	8	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	DRAINAGE STRUCTURE REPAIR EA	REPAIR OF JOINTED CONCRETE PAVEMENT SLAB SYD	UNDERCUT EXCAVATION CY	SELECT MATERIAL, CLASS IV TON	SEALING EXISTING PAVEMENT CRACKS LB	#57 STONE TON	GEOTEXTILE FOR SOIL STABILIZATION SY	INCIDENTAL STONE BASE TONS	MILLING ASPHALT PAVEMENT, 1 1/2" DEPTH SY	ASPHALT CONC SURFACE COURSE, TYPE S9.5C TON	ASPHALT BINDER FOR PLANT MIX TONS	3" PATCHING EXISTING PAVEMENT TON	4" PATCHING EXISTING PAVEMENT TON	PATCHING CONCRETE PAVEMENT SPALLS SF	ASPHALT SURFACE TREATMENT, FOG SEAL SY	JOINT CONSTRUCTION, REPAIR & SEALING LF	DIAMOND GRINDING PCC SY	CONCRETE PAD FOR SHOULDER DRAIN PIPE OUTLET (STD. 816.01) EA	REMOVE & REPLACE CONCRETE APRON EA	MILLED RUMBLE STRIPS IN EXISTING PCC SHOULDERS (STD. 720.01) LF	PORTABLE LIGHTING LS	PULL BOX (STANDARD) EA	TEMPORARY SILT FENCE LF	WATTLE LF	INDUCTIVE LOOP SAW CUT LF					
I-5854	Guilford	1	I-85 NORTHBOUND	FROM JOINT AT I-85 BUS TO ELM-EUGENE ST	1	3-6	MD	NO	NO	1.677	36-72	4	44	15	40	96	13	88	624			1,364		76	17,709	120,710	110,794	2	3	38,464	1		375	187.5							
				SKIP BRIDGE OVER US 220		6	MD	NO	NO	0.063	72																														
						1	4-6	MD	NO	NO	0.582	48-72												474			6,146														
						1	5	MD	NO	NO	0.221	60															93														
						1	4-5	MD	NO	NO	1.162	48-60															945														
TOTAL FOR MAP NO. 1										3.705		4	44	15	40	96	13	88	624			2,876		76	37,293	120,710	110,794	2	3	38,464			375	187.5	0						
I-5854	Guilford	2	ON LOOP	FROM US 220 SB TO I-85 NB	2,3	1		NO	NO	0.513	24	1	0			120											7,600	4,222				*									
TOTAL FOR MAP NO. 2										0.513		1	0			120						0						7,600	4,222												
I-5854	Guilford	3	ON RAMP	FROM US 220 NB TO I-85 NB	3,5	1		NO	NO	0.723	36					678			249						2	293	14,982	8,710			3		*								
TOTAL FOR MAP NO. 3										0.723		0	0			678			249			0			2	293	14,982	8,710			3										
I-5854	Guilford	4	OFF RAMP	FROM I-85 NB TO ELM-EUGENE ST	4	1		NO	NO	0.202	16								78	1,896	161	9				1,422						*									
							4	1		NO	NO	0.078	16																												
							4	1		NO	NO	0.019	18																												
							4	2		NO	NO	0.019	28																												
							4	3		NO	NO	0.047	36																												
TOTAL FOR MAP NO. 4										0.375		0	0			0			78	4,527	383	23	0			2,450	0	0			1			1			600				
I-5854	Guilford	5	I-85 SOUTHBOUND	FROM ELM-EUGENE ST TO I-85 BUS	1	4-5	MD	NO	NO	1.287	48-60	1	9	3	8	1,194	3	18	618				1,047		94	13,591	122,544	111,946			3	38,528	*		375	187.5					
						1	5-6	MD	NO	NO	0.077	60-72																													
						1	6	MD	NO	NO	0.046	72																													
						1	5-6	MD	NO	NO	0.033	60-72																													
						1	4-5	MD	NO	NO	0.517	48-60																													
				SKIP BRIDGE OVER US 220		5	MD	NO	NO	0.065	60																														
TOTAL FOR MAP NO. 5										3.713		1	9	3	8	1,194	3	18	618				1,373		94	17,825	122,544	111,946			3	38,528			375	187.5					
I-5854	Guilford	6	ON RAMP	FROM ELM-EUGENE ST TO I-85 SB	4	2		NO	NO	0.007	50								216	205	17	1											*								
						4	2		NO	NO	0.014	27																													
						4	2		NO	NO	0.074	24																													
						4	1		NO	NO	0.044	20																													
						4	1		NO	NO	0.071	16																													
TOTAL FOR MAP NO. 6										0.21		0	0			0			216	2,652	224	13	0			969	0	0													
I-5854	Guilford	7	I-85 SB COLLECTOR RAMP	FROM I-85 SB TO GROOMETOWN ROAD	2,3,5	2		NO	NO	3	36	1	39	13	35	2,154	12	78	1,032						149	1,901	56,594	50,789			5		*								
					4	3		NO	NO	0.048	38																														
					4	3		NO	NO	0.021	81																														
TOTAL FOR MAP NO. 7										3.069		1	39	13	35	2,154	12	78	1,032	2,068	174	10	0	92	149	2,307	56,594	50,789			5		1				600				
I-5854	Guilford	8	OFF RAMP	FROM I-85 SB COLLECTOR RAMP TO US 220 NB	3	1		NO	NO	0.316	24								180								5,344	2,969			2		*								
TOTAL FOR MAP NO. 8										0.316		0	0						180								5,344	2,969			2										
I-5854	Guilford	9	ON LOOP	FROM US 220 NB TO I-85 SB COLLECTOR RAMP	2	1		NO	NO	0.178	20								78									3,024	1,680				*								
TOTAL FOR MAP NO. 9										0.178		0	0						78									3,024	1,680												
I-5854	Guilford	10	US 220 SB COLLECTOR RAMP	FROM US 220 SB TO I-85 NB	3	2		NO	NO	0.642	36					1,212			378									28,149	18,569			1		*							
TOTAL FOR MAP NO. 10										0.642		0	0			1,212			378									28,149	18,569			1									
I-5854	Guilford	11	OFF LOOP	FROM I-85 SB COLLECTOR RAMP TO US 220 SB	2	1		NO	NO	0.202	20								186						24			3,418	1,899				*								
TOTAL FOR MAP NO. 11										0.202		0	0			0			186						24			3,418	1,899												
I-5854	Guilford	12	OFF RAMP	FROM I-85 BUS SB TO I-85 SB COLLECTOR RAMP	3,5	2		NO	NO	0.189	36					1,290			156								400	2,272	1,262			1		*							
TOTAL FOR MAP NO. 12										0.189		0	0			1,290			156								400	2,272	1,262			1									
TOTAL FOR PROJ NO. I-5854										13.835		7	92	31	83	6,744	28	184	4,020	9,247	781	46	5,802	92	345	81,655	364,637	312,840	2	18	76,992	1	2	750	375	1,200					
GRAND TOTAL																																									

