

CONTRACT: C204237

TIP PROJECT: I-6052 / 15BPR.35

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

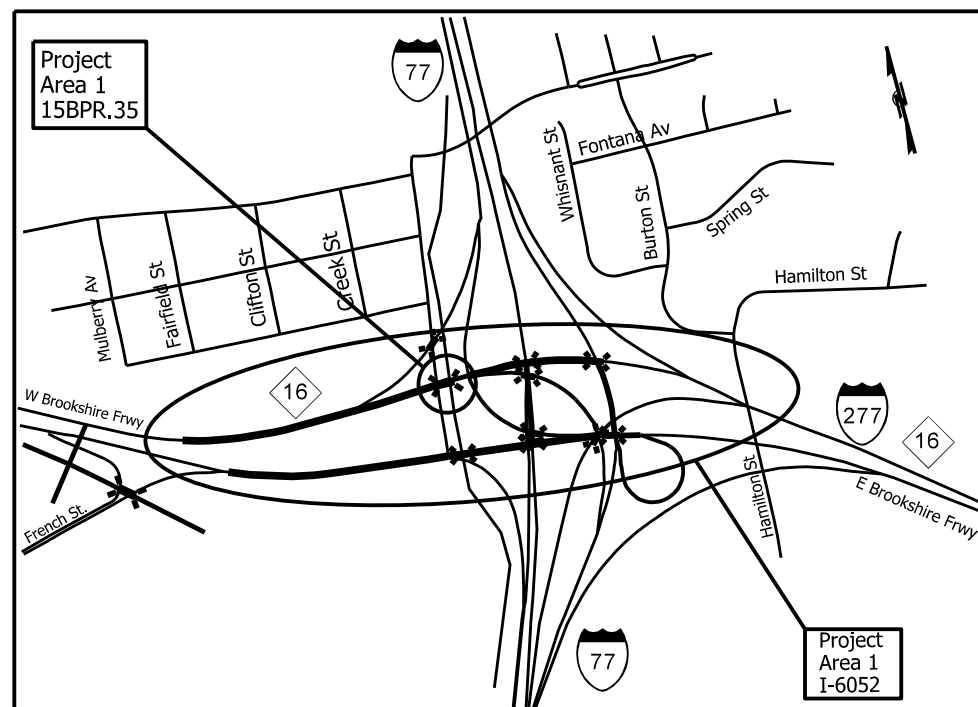
MECKLENBURG COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-6052 / 15BPR.35	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
48234.1.1	0277022	PE	
48234.3.1	0277022	CONST.	
15BPR.35	--	PE	
15BPR.35	--	CONST.	

LOCATION: I-277 BROOKSHIRE FRWY FROM WEST OF I-77 TO EAST OF I-77

TYPE OF WORK: ROADWAY REHABILITATION: CONCRETE SPALL REPAIR, SLAB REPLACEMENT
MILLING AND PAVING ASPHALT SHOULDERS

STRUCTURAL REHABILITATION: BRIDGE PRESERVATION



DESIGN DATA

ADT 2021 = 25,000
ADT =
K = %
D = %
T = % *
V = 55 MPH
* TTST = DUAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-6052 = 0.27 MILES
LENGTH STRUCTURE TIP PROJECT I-6052 = 0.315 MILES
TOTAL LENGTH TIP PROJECT I-6052 = 0.585 MILES

LENGTH ROADWAY TIP PROJECT 15BPR.35 = 0.00 MILES
LENGTH STRUCTURE TIP PROJECT 15BPR.35 = 0.06 MILES
TOTAL LENGTH TIP PROJECT 15BPR.35 = 0.06 MILES

TOTAL ROADWAY LENGTH TIP PROJECTS I-6052/15BPR.35 = 0.27 MILES
TOTAL STRUCTURE LENGTH TIP PROJECTS I-6052/15BPR.35 = 0.375 MILES
TOTAL LENGTH OF TIP PROJECT I-6052/15BPR.35 = 0.645 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS

DIVISION 10

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

N/A

LETTING DATE:

MAY 16, 2023

JOHN H. EDMONDS

PROJECT ENGINEER

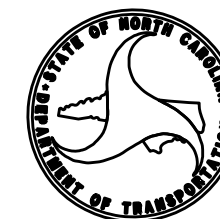
PROJECT DESIGN ENGINEER

STRUCTURE DESIGN
ENGINEER

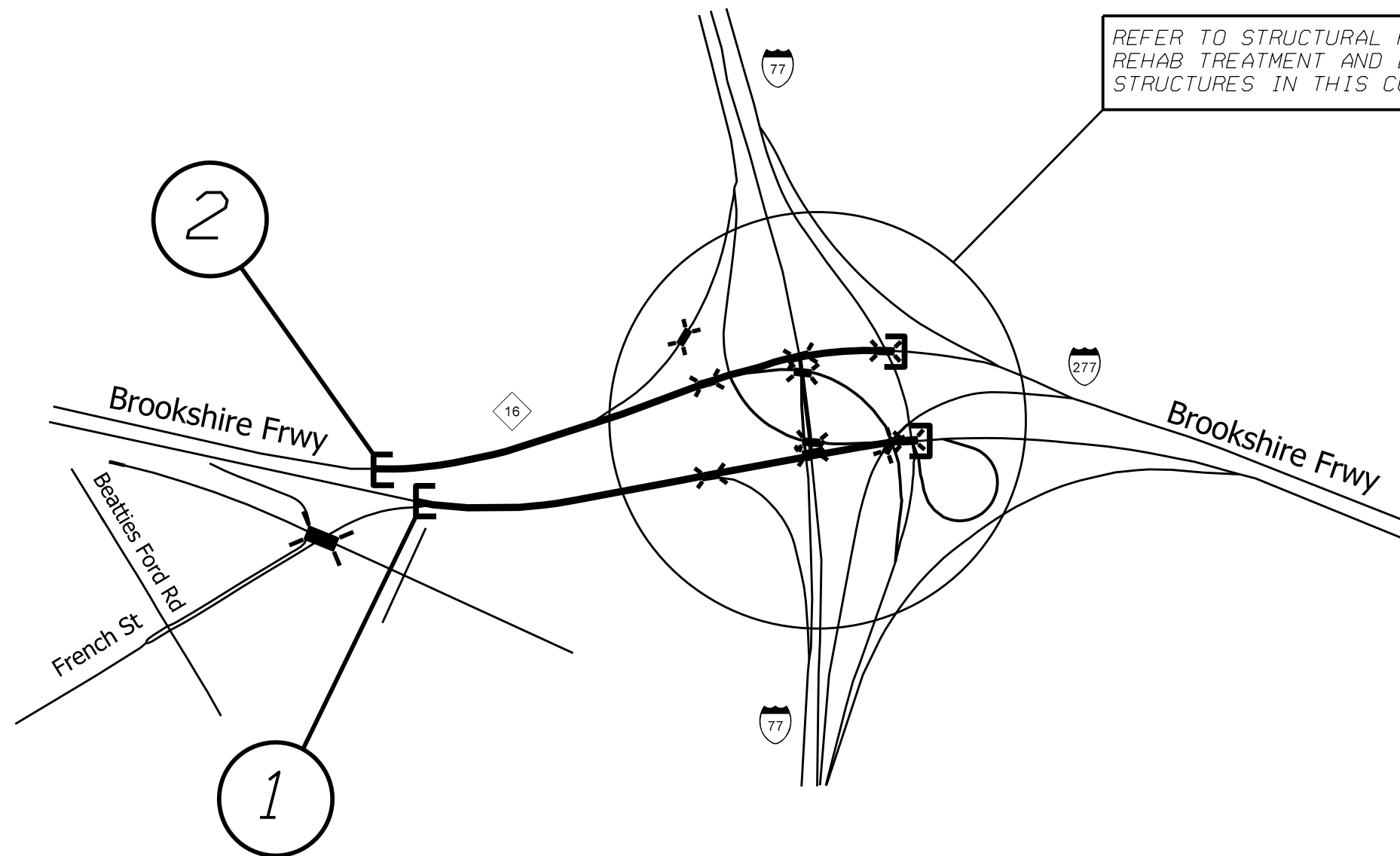
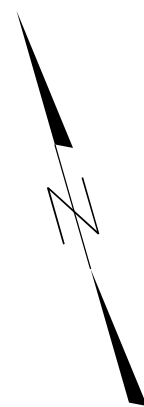
SIGNATURE: _____ P.E.

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-6052	2	
WBS NO. 48234.3.1 15BPR.35			



PROJECT AREA LIMITS

DESCRIPTION

1 I-277 EB BROOKSHIRE FRWY

FROM PHYSICAL GORE TO BRIDGE OVER NB I-77

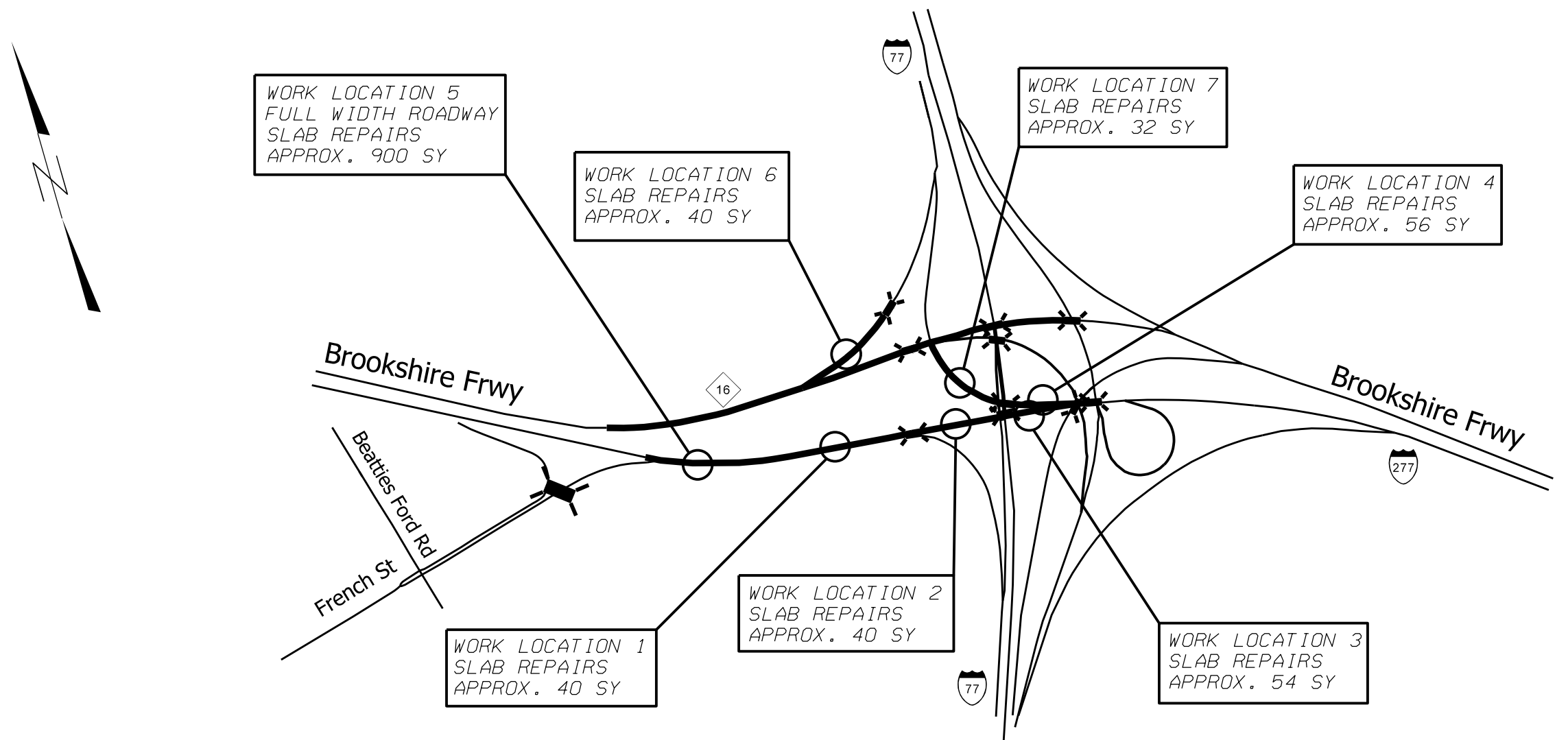
2 I-277 WB BROOKSHIRE FRWY

FROM BRIDGE OVER NB I-77 NB FOR APPROX. 2300 FEET

I-6052/15BPR.35 I-277 PAVEMENT PRESERVATION MECKLENBURG COUNTY		
SCALE	-NA-	REVISIONS
DATE	9/22	12/22
DWG. BY	JHE	
DESIGN BY	JHE	
APPROVED		



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-6052	3	
WBS NO.	48234.3.1 15BPR.35		



ROADWAY WORK LOCATIONS


- WORK LOCATION 1 I277 BROOKSHIRE FRWY
- WORK LOCATION 2 I277 BROOKSHIRE FRWY
- WORK LOCATION 3 I277 BROOKSHIRE FRWY
- WORK LOCATION 4 I277 BROOKSHIRE FRWY
- WORK LOCATION 5 I277 BROOKSHIRE FRWY
- WORK LOCATION 6 I277 BROOKSHIRE FRWY ON RAMP
- WORK LOCATION 7 I277 BROOKSHIRE FRWY ON RAMP

AREA DESCRIPTION

- APPROX. 200 FT PRIOR TO SBI77 ON RAMP STRUCTURE *0342
- BETWEEN STRUCTURES *0342 & *0341
- BETWEEN STRUCTURES *0341 & *0339
- BETWEEN STRUCTURES *0281 & *0339
- APPROX. 200 FT. BEYOND PHYSICAL GORE AREA UNDER ASPHALT OVERLAY
- APPROX. 120 FT BEYOND STRUCTURE *0283
- APPROX. 200 FT. PRIOR TO STRUCTURE *0281

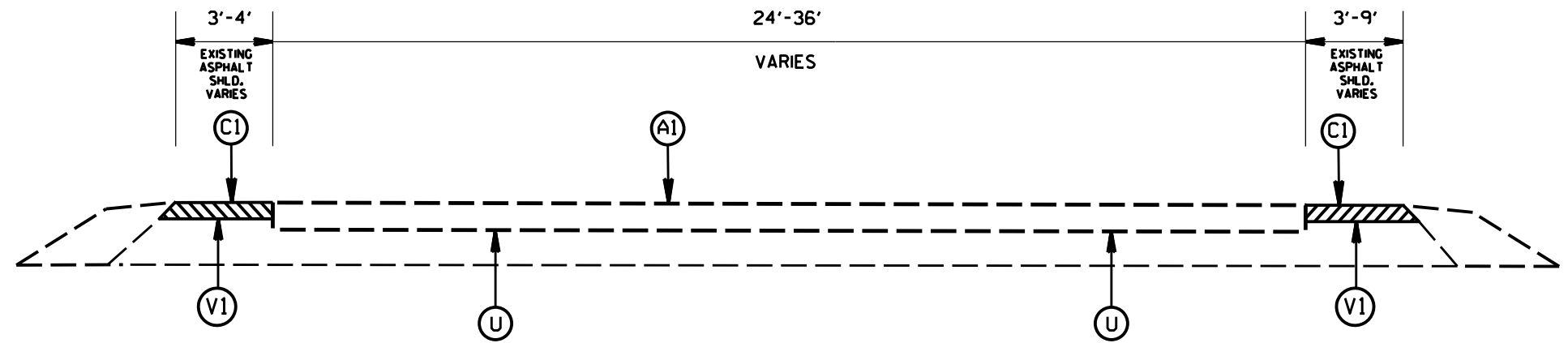
ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NCDOT STANDARDS SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER

**I-6052/15BPR.35
I-277 PAVEMENT PRESERVATION
MECKLENBURG COUNTY**

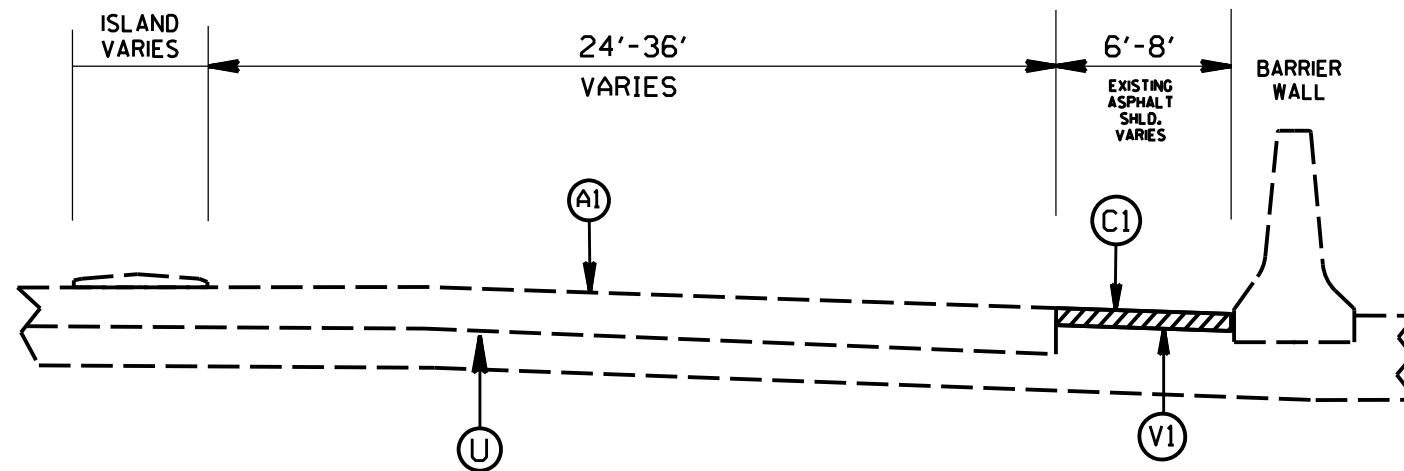
SCALE	-NA-		REVISIONS	
DATE	9/22		12/22	
DWG. BY	JHE			
DESIGN BY	JHE			
APPROVED				

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-6052	4	
WBS NO. 48234.3,1 15BPR.35			

PAVEMENT SCHEDULE	
A1	APPROX. 12" PORTLAND CEMENT CONCRETE PAVEMENT REPAIR IN VARIOUS LOCATIONS
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ YD.
V1	MILLING 1.5" DEPTH
U	EXISTING CONCRETE PAVEMENT



TYPICAL SECTION NO.1



TYPICAL SECTION NO.2

I-6052/15BPR.35
I-277 PAVEMENT PRESERVATION
MECKLENBURG COUNTY

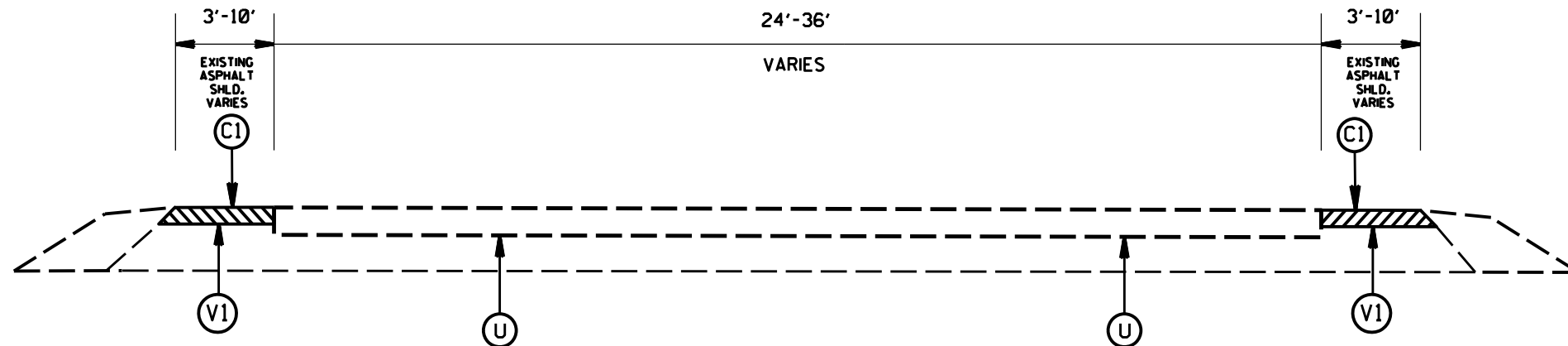
SCALE	-NA-
DATE	10/22
DWG. BY	JME
DESIGN BY	JME
APPROVED	



REVISIONS	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-6052	5	
WBS NO.	48234.3.I 15BPR.35		

PAVEMENT SCHEDULE	
A1	APPROX. 12" PORTLAND CEMENT CONCRETE PAVEMENT REPAIR IN VARIOUS LOCATIONS
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ YD.
V1	MILLING 1.5" DEPTH
U	EXISTING CONCRETE PAVEMENT

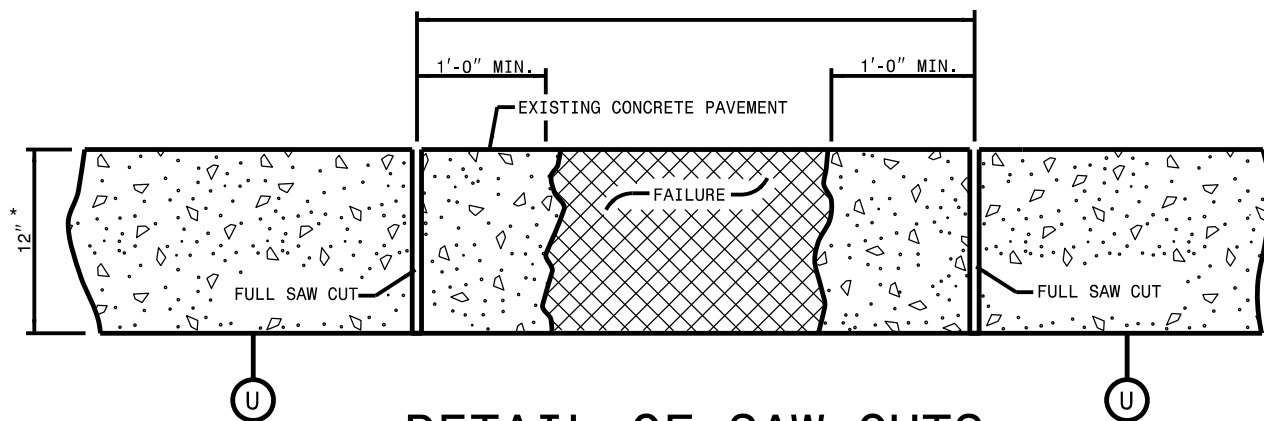


TYPICAL SECTION NO.3

I-6052/15BPR.35
I-277 PAVEMENT PRESERVATION
MECKLENBURG COUNTY

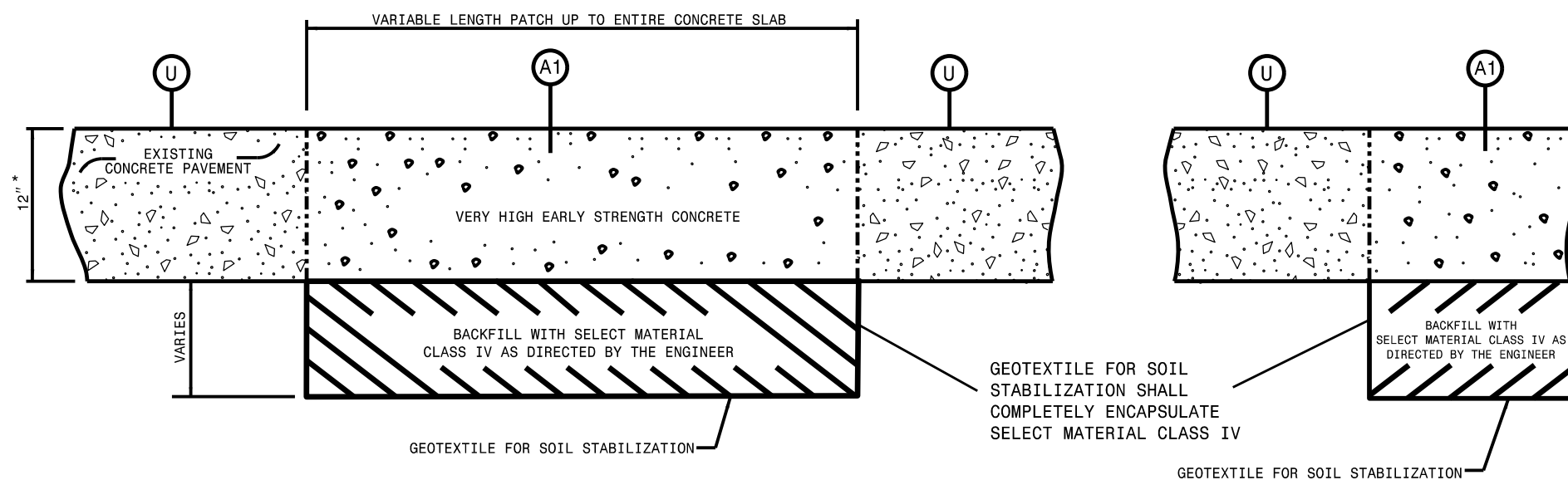
SCALE	-NA-		REVISIONS
DATE	10/22		
DWG. BY	JHE		
DESIGN BY	JHE		
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-6052/15BPR.35	6	
WBS NO. 48234.3J			



DETAIL OF SAW CUTS

PAVEMENT SCHEDULE	
A1	APPROX. 12" PCC SLAB REPAIR - VERY HIGH EARLY STRENGTH
U	EXISTING PAVEMENT



DETAIL OF CONCRETE PAVEMENT REPAIR

* DIMENSIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED
 ** UNDERCUT REQUIRED IN AREAS AS DIRECTED BY THE ENGINEER

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**

I-6052/15BPR.35
 I-277 PAVEMENT PRESERVATION
 MECKLENBURG COUNTY

SCALE	-NA-		REVISIONS
DATE			
DWG. BY			
DESIGN BY			
APPROVED			

PROJECT NO.	SHEET NO.	TOTAL NO.
48234.3.1 15BPR.35	7	

SUMMARY OF QUANTITIES ROADWAY

PROJECT NO	COUNTY	PROJECT AREA	WORK LOCATION	STRUCTURE NUMBER	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH		WIDTH	0196000000-E	1297000000-E	1523000000-E	1575000000-E	1735000000-E	1736000000-E	1737000000-E	4600000000-N			5255000000-N	6000000000-E	6029000000-E	6117500000-N	
										MI	FT		GEOTEXTILE FOR SOIL STABILIZATION	1 1/2" MILLING	SURFACE COURSE, S9.5C	ASPHALT BINDER FOR PLANT MIX	REPAIR OF JOINTED CONCRETE PAVEMENT SLABS	SELECT MATERIAL, CLASS IV	PATCHING CONCRETE PAVEMENT SPALLS	SINGLE LANE CLOSURE	DOUBLE LANE CLOSURE	ROAD CLOSURE	PORTABLE LIGHTING	TEMPORARY SILT FENCE	SAFETY FENCE	CONCRETE WASHOUT STRUCTURE	
													SY	SY	TONS	TONS	SY	TON	SF	EA	EA	EA	LS	LF	LF	EA	
48234.3.1	Mecklenburg	1	1,2,3,4,5,7		I-277 EB BROOKSHIRE FRWY	FROM PHYSICAL GORE TO BRIDGE OVER NB I-77		1,2	2	MD	0.27	24	1,235	1,297	120	9	1,122	358	100					300	150	4	
TOTAL FOR WORK LOCATION NO. 1,2,3,4,5,7											0.27		1,235	1,297	120	9	1,122	358	100					300	150	4	
48234.3.1	Mecklenburg	1	6		I-277 WB BROOKSHIRE FRWY	FROM BRIDGE OVER IRWIN CREEK NB FOR APPROX. 1200 FT		3	2	MD	0.27	24	44	937	87	6	40	10	220					100	50	1	
TOTAL FOR WORK LOCATION NO. 6											0.27		44	937	87	6	40	10	220					100	50	1	
48234.3.1	Mecklenburg	1		590339	BRIDGE 590339 I-277 MAINLINE	EB BRIDGE OVER NB I-77		3	MD	0.05	70																
TOTAL FOR STRUCTURE NO. 590339											0.05		0														
48234.3.1	Mecklenburg	1		590337	BRIDGE 590337 I-277 MAINLINE	WB BRIDGE OVER NB I-77		2	MD	0.05	45																
TOTAL FOR STRUCTURE NO. 590337											0.05		0														
48234.3.1	Mecklenburg	1		590338	BRIDGE 590338 I-277 MAINLINE	WB BRIDGE OVER SB I-77		2	MD	0.04	40										124	139	291	*			
TOTAL FOR STRUCTURE NO. 590338											0.04		0														
48234.3.1	Mecklenburg	1		590341	BRIDGE 590341 I-277 MAINLINE	EB BRIDGE OVER SB I-77		2	MD	0.04	40																
TOTAL FOR STRUCTURE NO. 590341											0.04		0														
48234.3.1	Mecklenburg	1		590342	BRIDGE 590342 I-277 MAINLINE	EB BRIDGE OVER IRWIN CREEK		2	MD	0.05	81																
TOTAL FOR STRUCTURE NO. 590342											0.05		0														
48234.3.1	Mecklenburg	1		590281	BRIDGE 590281 I-77 SB RAMP	EB BRIDGE OVER SB I-77		1		0.04	30																
TOTAL FOR STRUCTURE NO. 590281											0.04		0														
48234.3.1	Mecklenburg	1		590282	BRIDGE 590282 I-77 NB RAMP	WB BRIDGE OVER SB I-77		1		0.04	300																
TOTAL FOR STRUCTURE NO. 590282											0.04		0														
48234.3.1	Mecklenburg	1		590283	BRIDGE 590283 I-77 SB RAMP	WB BRIDGE OVER IRWIN CREEK		2		0.06	25															1	
TOTAL FOR STRUCTURE NO. 590283											0.06		0													1	
TOTAL FOR PROJ NO. 48234.3.1											0.91		1,279	2,234	207	15	1,162	368	320	124	139	291	*	400	200	6	
15BPR.35	Mecklenburg	1		590345	BRIDGE 590345 I-277 MAINLINE	WB BRIDGE OVER IRWIN CREEK		3	MD	0.06	55										31	27	31	*			
TOTAL FOR STRUCTURE NO. 590345											0.06																
TOTAL FOR PROJ NO. 15BPR.35											0.06																
GRAND TOTAL											0.97		1,279	2,234	207	15	1,162	368	320	155	166	322	1	400	200	6	

PROJECT NO.	SHEET NO.	TOTAL NO.
48234.3.1 15BPR.35	8	

THERMOPLASTIC AND PAINT QUANTITIES ROADWAY & BRIDGE

PROJECT NO	COUNTY	PROJECT AREA	WORK LOCATION	STRUCTURE LOCATION	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4400000000-E	4434000000-N	5100000000-	4892000000-N	4726110000-E			4815000000-E		4825000000-E	4847096000-E		4847096000-E	4890000000-E	4905100000-N			
												STATIONARY WORK ZONE SIGN	SEQUENTIAL FLASHING WARNING LIGHTS	LAW ENFORCEMENT	HEATED-IN-PLACE THERMOPLASTIC PAVEMENT MARKING CHARACTER	HEATED-IN-PLACE THERMOPLASTIC PAVEMENT MARKING SYMBOL RT ARROW (90 MILS)	HEATED-IN-PLACE THERMOPLASTIC PAVEMENT MARKING SYMBOL MERGE ARROW (90 MILS)	6" WHITE PAINT	6" YELLOW PAINT	12" WHITE PAINT	POLYUREA PAVEMENT MARKING YELLOW LINES (6", 30 MILS) (STANDARD GLASS BEADS)	POLYUREA PAVEMENT MARKING WHITE LINES (6", 30 MILS) (STANDARD GLASS BEADS)	POLYUREA PAVEMENT MARKING WHITE LINES (12", 30 MILS) (STANDARD GLASS BEADS)	CONTRAST COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE II (9")	NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKER				
												SF	EA	HR	EA	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	EA			
48234.3.1	Mecklenburg	1	1,2,3,4,5,7		I-277 EB BROOKSHIRE FRWY	FROM PHYSICAL GORE TO BRIDGE OVER NB I-77	1,2	2	MD	0.27	24					4	2					1,210	1,215	400	550	61			
TOTAL FOR WORK LOCATION NO. 1,2,3,4,5,7															4	2						1,210	1,215	400	550	61			
48234.3.1	Mecklenburg	1	6		I-277 WB BROOKSHIRE FRWY	FROM BRIDGE OVER IRWIN CREEK NB FOR APPROX. 1200 FT	3	2	MD	0.27	24											1,190	1,420	435	490	50			
TOTAL FOR WORK LOCATION NO. 6																													
48234.3.1	Mecklenburg	1		590339	BRIDGE 590339 I-277 MAINLINE	EB BRIDGE OVER NB I-77		3	MD	0.05	70											275	290	615	290	275	615	160	
TOTAL FOR STRUCTURE NO. 590339																													
48234.3.1	Mecklenburg	1		590337	BRIDGE 590337 I-277 MAINLINE	WB BRIDGE OVER NB I-77		2	MD	0.05	45											290	280	280	290	80			
TOTAL FOR STRUCTURE NO. 590337																													
48234.3.1	Mecklenburg	1		590338	BRIDGE 590338 I-277 MAINLINE	WB BRIDGE OVER SB I-77		2	MD	0.04	40											230	225	225	230	60			
TOTAL FOR STRUCTURE NO. 590338																													
48234.3.1	Mecklenburg	1		590341	BRIDGE 590341 I-277 MAINLINE	EB BRIDGE OVER SB I-77		2	MD	0.04	40											270	235	235	270	80			
TOTAL FOR STRUCTURE NO. 590341																													
48234.3.1	Mecklenburg	1		590342	BRIDGE 590342 I-277 MAINLINE	EB BRIDGE OVER IRWIN CREEK		2	MD	0.05	81											300	275	500	275	300	500	80	
TOTAL FOR STRUCTURE NO. 590342																													
48234.3.1	Mecklenburg	1		590281	BRIDGE 590281 I-77 SB RAMP	EB BRIDGE OVER SB I-77		1		0.04	30											235	225	225	235				
TOTAL FOR STRUCTURE NO. 590281																													
48234.3.1	Mecklenburg	1		590282	BRIDGE 590282 I-77 NB RAMP	WB BRIDGE OVER SB I-77		1		0.04	300											225	220	220	225				
TOTAL FOR STRUCTURE NO. 590282																													
48234.3.1	Mecklenburg	1		590283	BRIDGE 590283 I-77 SB RAMP	WB BRIDGE OVER IRWIN CREEK		2		0.06	25											335	345	345	335				
TOTAL FOR STRUCTURE NO. 590283																													
TOTAL FOR PROJ NO. 48234.3.1												384	14	6,258	4	2	2	2,160	2,095	1,115	4,495	4,795	1,950	1,500	111				
															4			4,255			9,290								
15BPR.35	Mecklenburg	1		590345	BRIDGE 590345 I-277 MAINLINE	WB BRIDGE OVER IRWIN CREEK		3	MD	0.06	55											365	360	130	360	365	130	180	
TOTAL FOR STRUCTURE NO. 590345																													
TOTAL FOR PROJ NO. 15BPR.35																													
																		365	360	130	360	365	130	180					
TOTAL FOR PROJ NO. 15BPR.35																		725			725								
GRAND TOTAL												384	28	6,546	4	2	2	2,525	2,455	1,245	4,855	5,160	2,080	1,680	111				
															4			4,980			10,015								