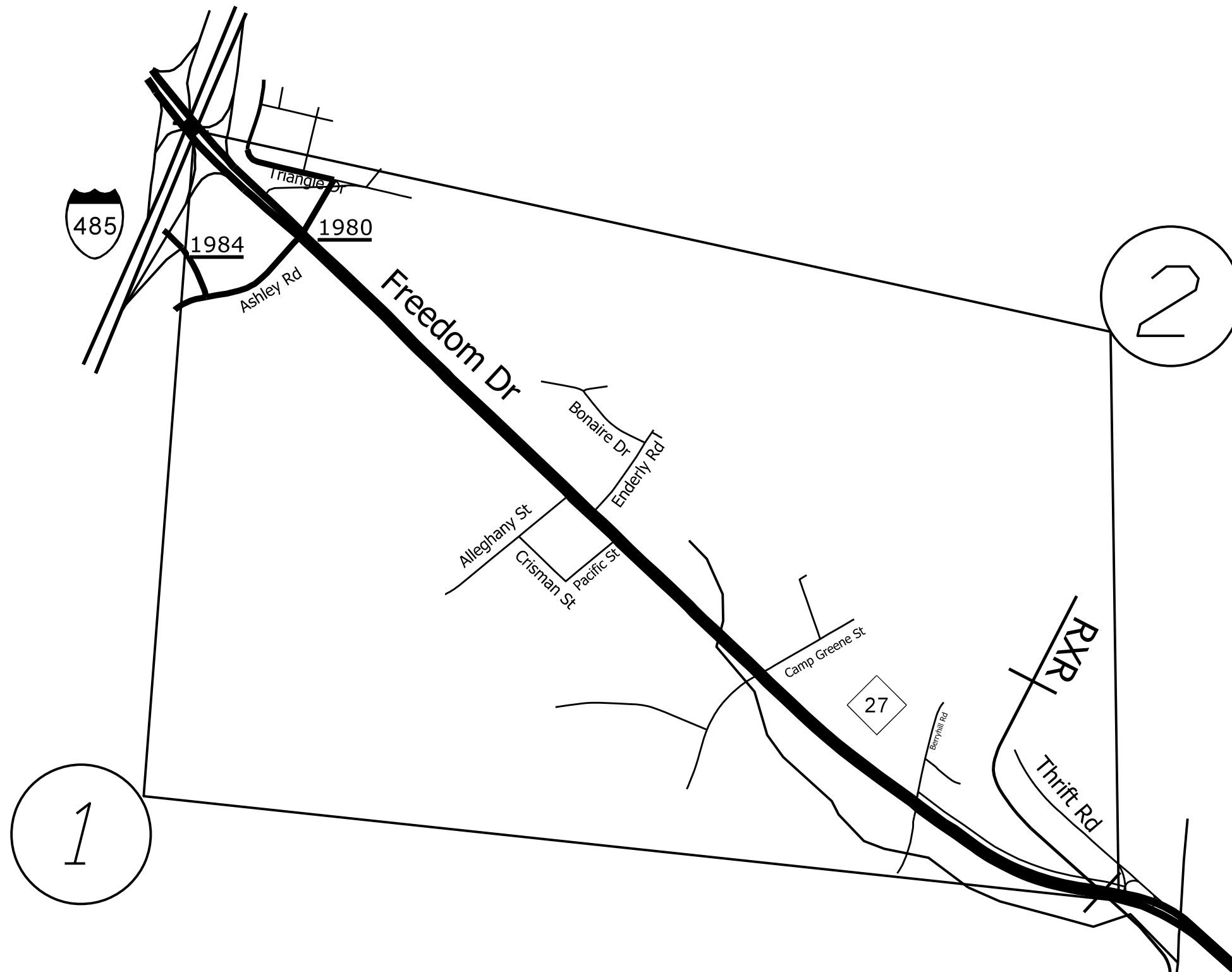


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		1	21
WBS NO.	2017CPT.10.06.10601.1		



MAP


# 1 EB NC 27 (FREEDOM DRIVE)

# 2 WB NC 27 (FREEDOM DRIVE)

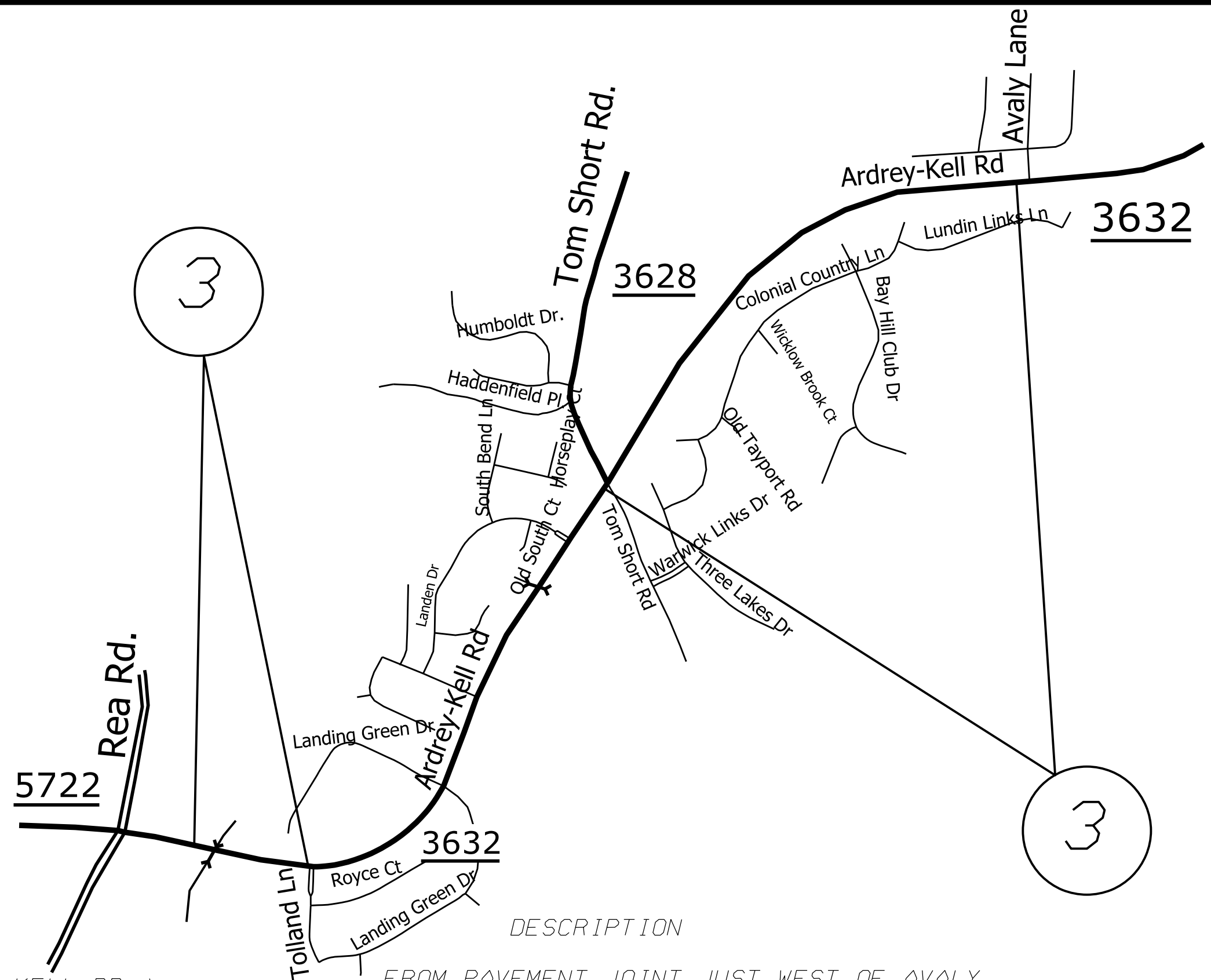
DESCRIPTION

FROM I-85 BRIDGE TO PAVEMENT JOINT JUST EAST OF RXR CROSSING

FROM PAVEMENT JOINT JUST EAST OF RXR CROSSING TO I-85 BRIDGE

2017/2018 MECKLENBURG COUNTY RESURFACING			REVISIONS	
SCALE	-NA-			
DATE	3/17			
DWG. BY	JHE			
DESIGN BY	JHE			
APPROVED	TJP			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		2	21
WBS NO.	2017CPT.10.06.20601.1		



MAP

DESCRIPTION

- # 3 SR 3632 (AUDREY KELL RD.)
- # 3 SR 3632 (AUDREY KELL RD.)

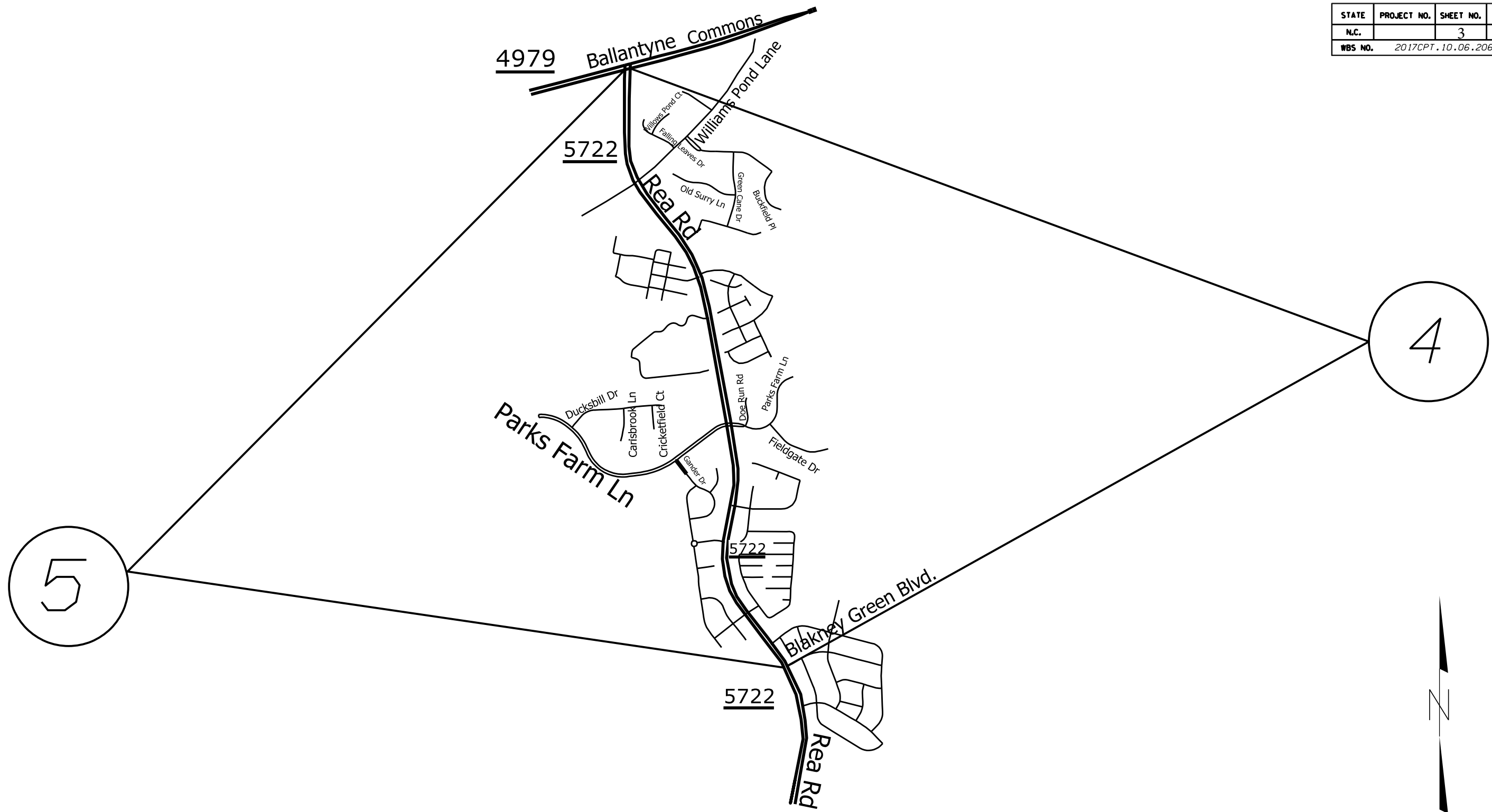
FROM PAVEMENT JOINT JUST WEST OF AVALY LANE TO WEST OF INTERSECTION AT TOM SHORT RD.

FROM TOLLAND LN WEST TO CONCRETE MEDIAN ISLAND

2017/2018 MECKLENBURG COUNTY RESURFACING												
SCALE	-NA-	<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	REVISIONS									
REVISIONS												
DATE	3/17											
DWG. BY	JHE											
DESIGN BY	JHE											
APPROVED	TJP											



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		3	21
WBS NO.	2017CPT.10.06.20601.2		




MAP

- # 4 SR-5722 (REA RD) NB
- # 5 SR-5722 (REA RD) SB

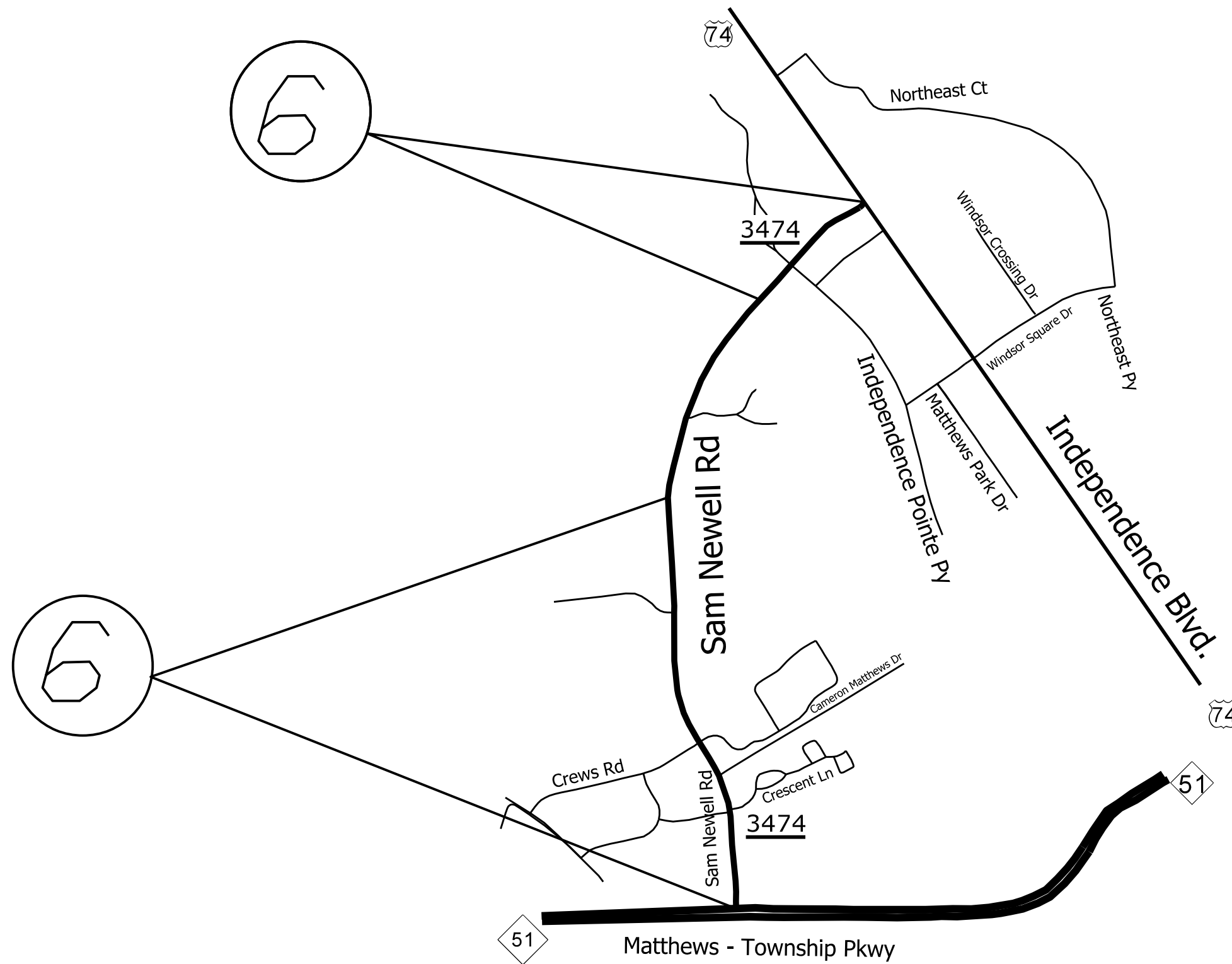
DESCRIPTION

FROM BLAKNEY GREEN BLVD. NORTH TO BALLANTYNE COMMONS PKWY

FROM BALLANTYNE COMMONS PKWY SOUTH TO BLAKNEY GREEN BLVD.

2017/2018 MECKLENBURG COUNTY RESURFACING		
SCALE	-NA-	
DATE	3/17	
DWG. BY	JHE	
DESIGN BY	JHE	
APPROVED	WAT	
		REVISIONS

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		4	21
WBS NO. 2017CPT.10.06.20601.3			



MAP

DESCRIPTION

#6 SR-3474 (SAM NEWELL RD)

FROM US 74 INDEPENDENCE BLVD. SOUTH  
0.20 MILE

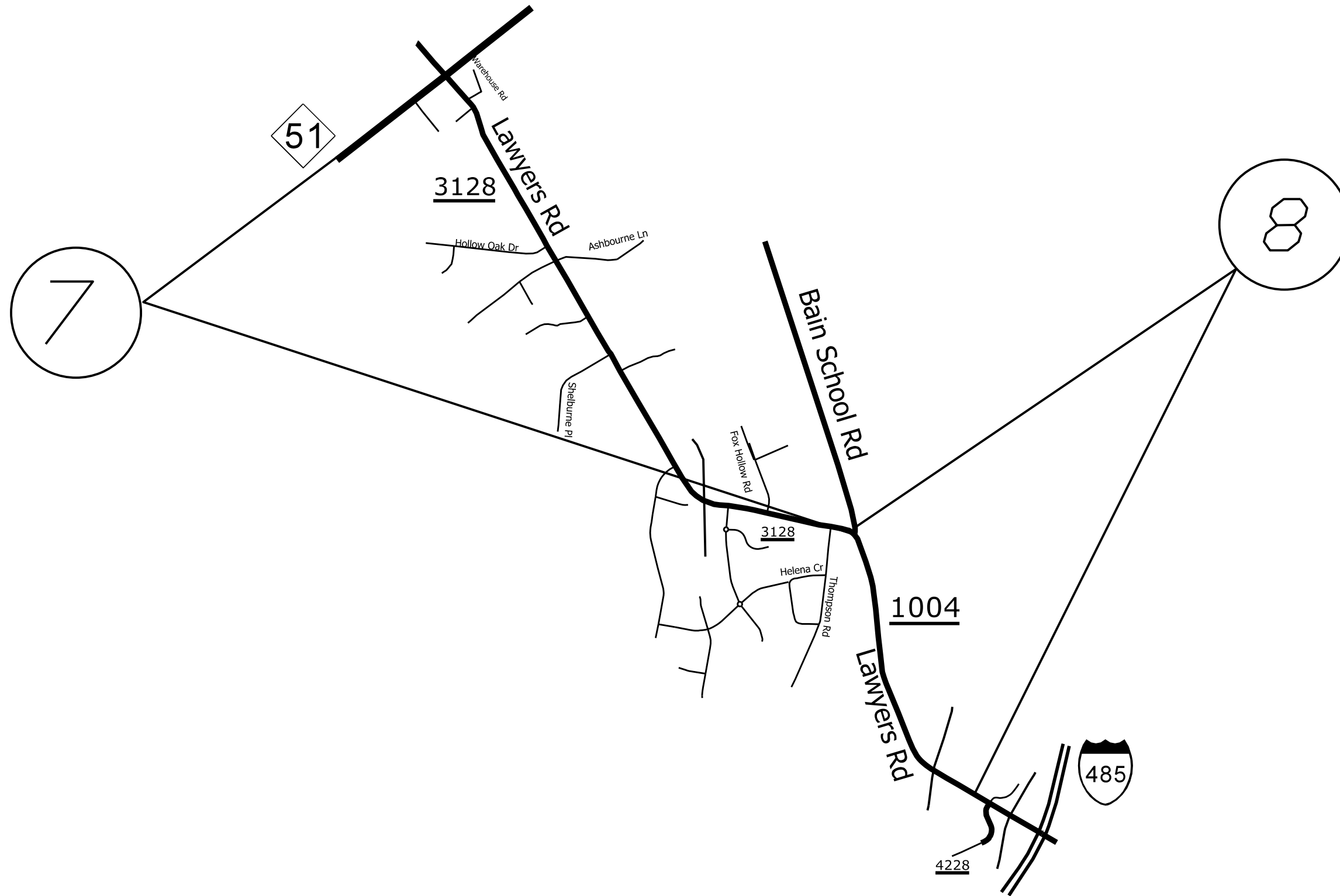
#6 SR-3474 (SAM NEWELL RD)

FROM JUST SOUTH OF MARTIN MARETTA  
ENTERANCE TO NC 51 MATTHEWS TOWNSHIP  
PARKWAY

2017/2018 MECKLENBURG COUNTY  
RESURFACING

SCALE	-NA-		REVISIONS
DATE	3/17		
DWG. BY	JHE		
DESIGN BY	JHE		
APPROVED	TJP		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		5	21
WBS NO. 2017CPT.10.06.20601.4			



MAP

DESCRIPTION

#7 SR-3128 (LAWYERS RD)

FROM NC 51 MATTHEWS-MINT HILL RD. TO BAIN SCHOOL ROAD

#8 SR 1004 (LAWYERS RD)

FROM BAIN SCHOOL ROAD TO PAVEMENT JOINT PRIOR TO I-485

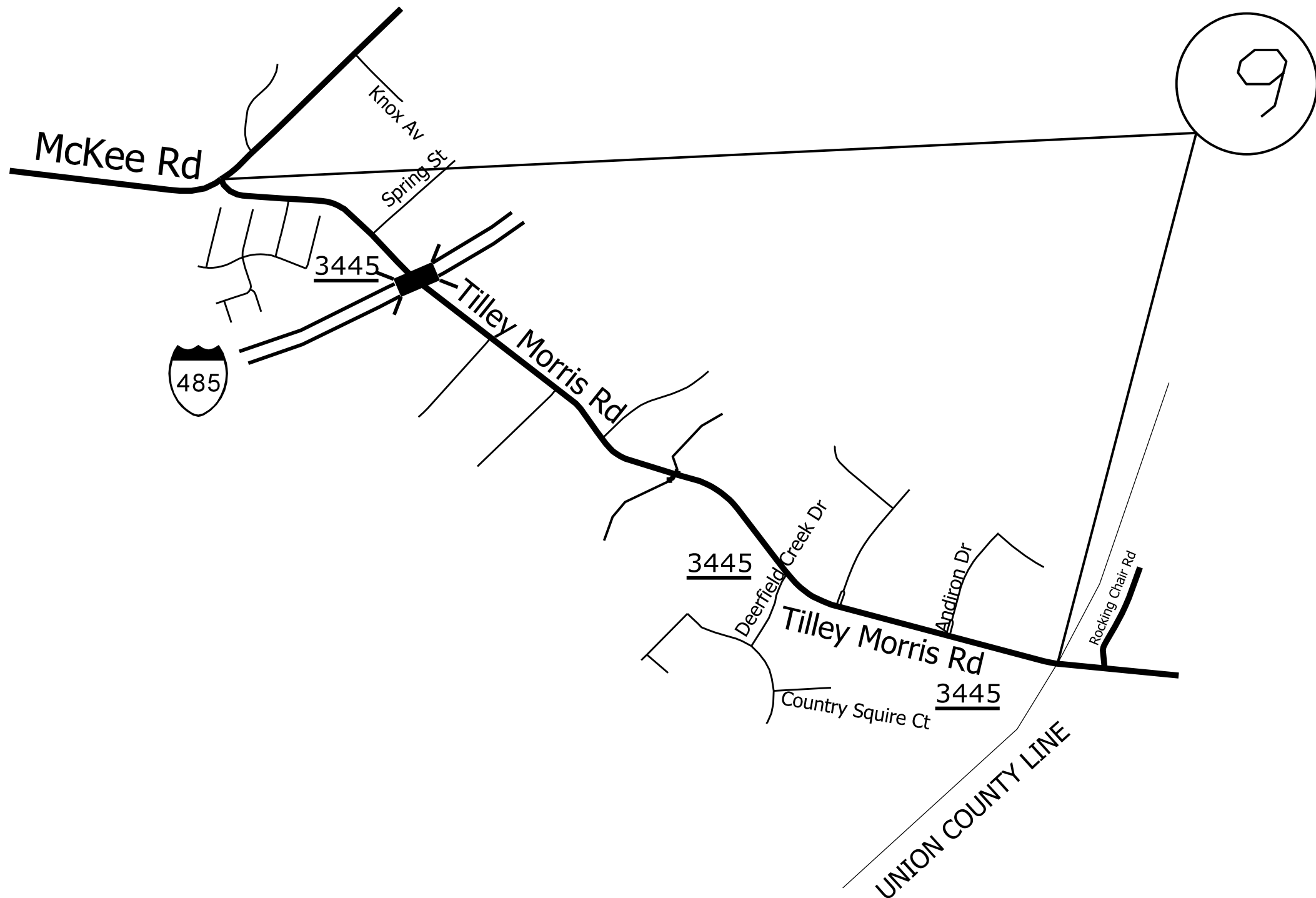
2017/2018 MECKLENBURG COUNTY RESURFACING

SCALE	-NA-
DATE	3/17
DWG. BY	JHE
DESIGN BY	JHE
APPROVED	TJP



REVISIONS	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		6	21
WBS NO.	2017CPT.10.06.20601.5		



MAP

DESCRIPTION

# 9 SR 3445 (TILLEY MORRIS RD)

FROM UNION COUNTY LINE TO MCKEE ROAD

2017/2018 MECKLENBURG COUNTY  
RESURFACING

SCALE	-NA-
DATE	3/17
DWG. BY	JHE
DESIGN BY	JHE
APPROVED	TJP



REVISIONS	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		7	21
WBS NO. 2017CPTJ0.06J060J			

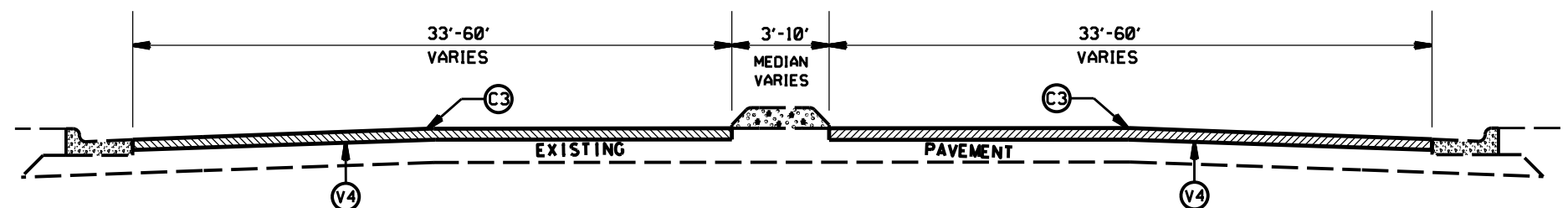
PAVEMENT SCHEDULE	
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C6	PROP. ASPHALT SURFACE TREATMENT, MATCOAT #67, AT AN AVERAGE RATE OF 38 LBS. PER SQ. YD. (STONE) AND 0.40 GALLONS PER SQ. YD. (LIQUID ASPHALT)
T1	SHOULDER RECONSTRUCTION
V1	PROFILE MILLING 0" TO 1.5"
V3	MILLING 1.5" DEPTH
V4	MILLING 2.0" DEPTH

Note: To ensure a good bond between the new surface course and the existing concrete pavement, the contractor shall not leave a thin layer of asphalt on the existing concrete slab on Freedom Dr.

The Contractor shall remove damaged slabs as directed by the Engineer and patch with B25.0C.

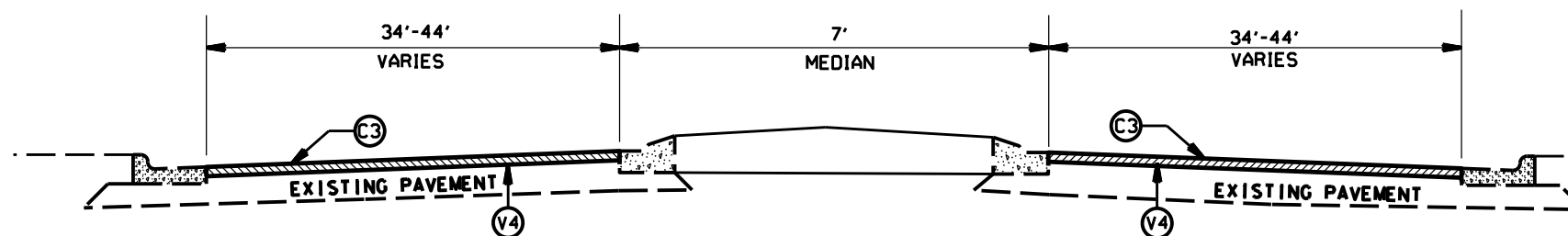
The Contractor shall place a pavement interlayer over the transverse joints to reduce reflective cracking. This treatment will be for the Eastbound section of Freedom Dr. only.

### FREEDOM DR. (EB&WB)



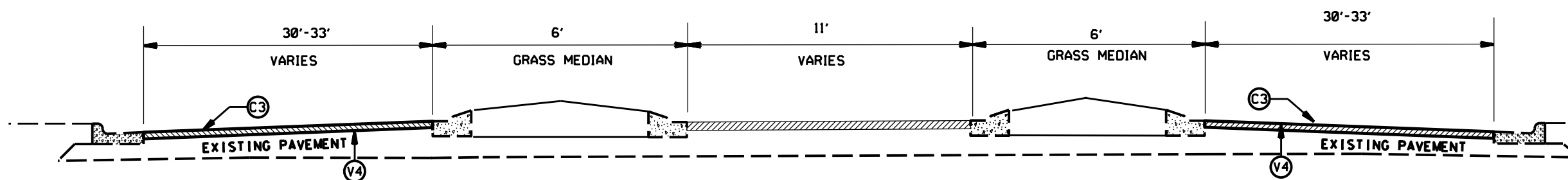
TYPICAL SECTION NO. 1

### FREEDOM DR. (EB&WB)



TYPICAL SECTION NO. 2

### FREEDOM DRIVE (EB&WB)



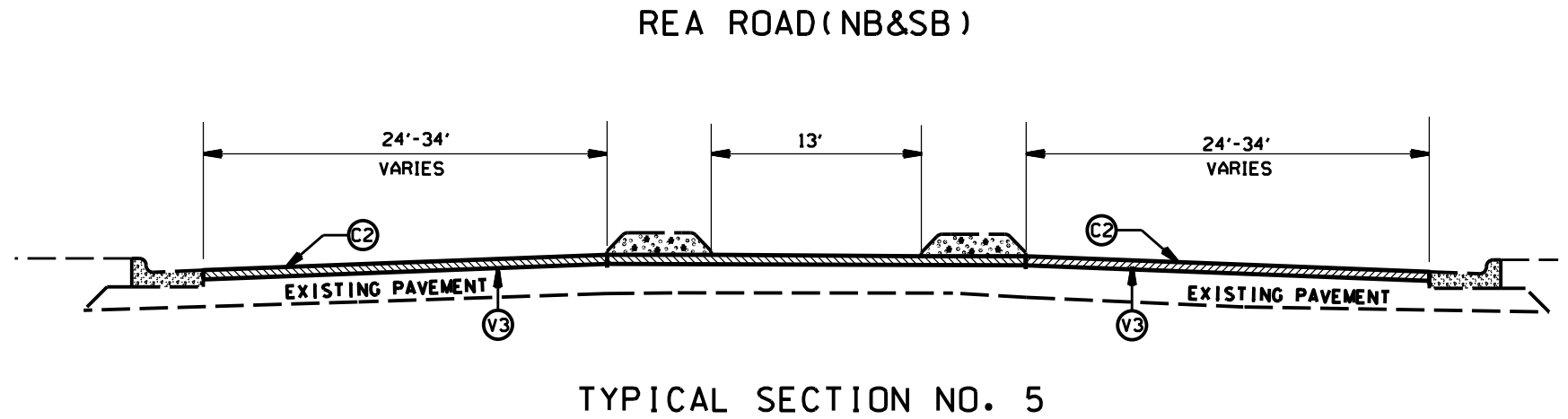
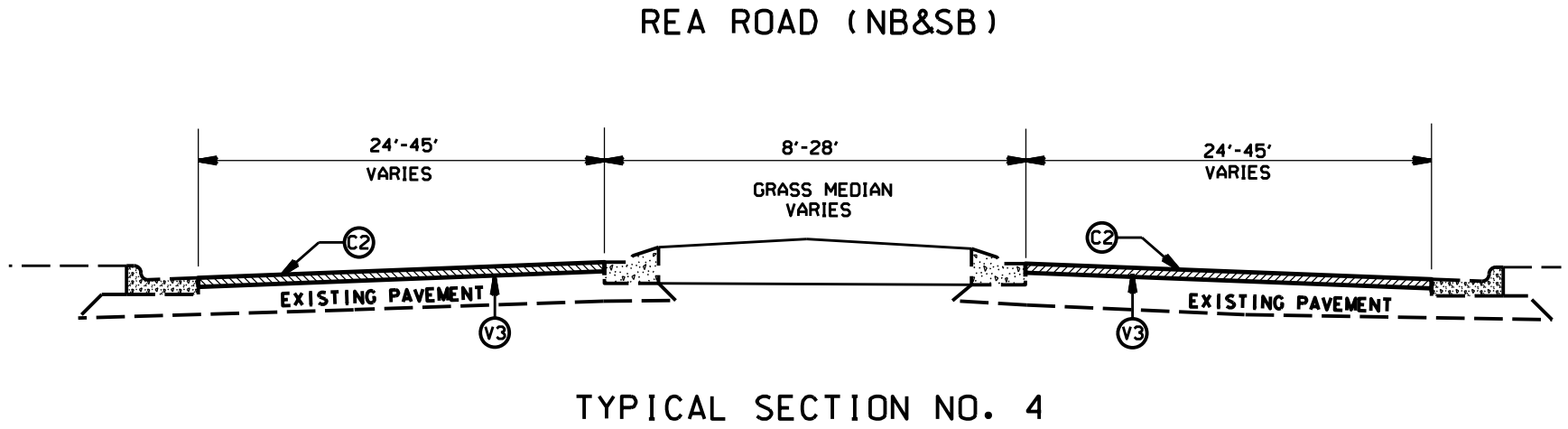
TYPICAL SECTION NO. 3

2017/2018 MECKLENBURG COUNTY  
RESURFACING

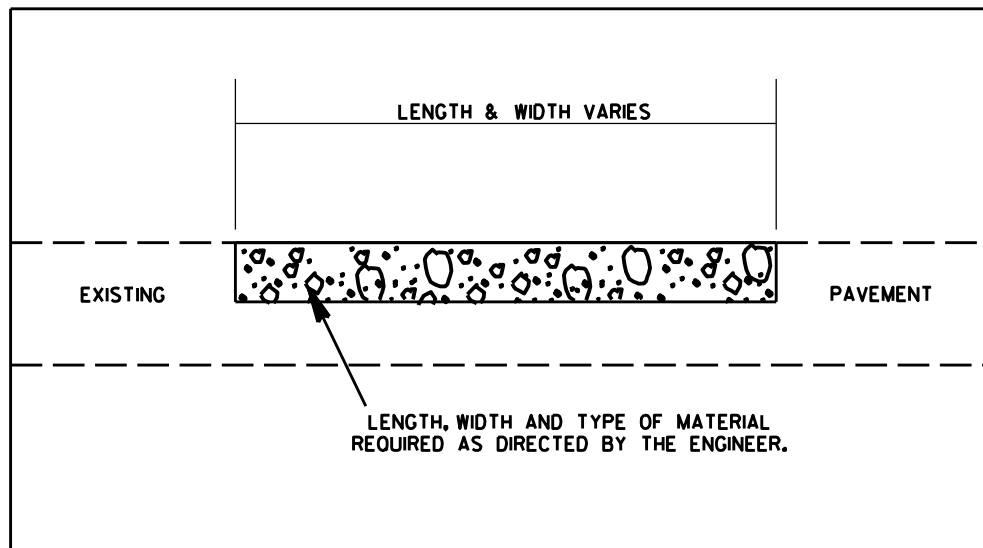
SCALE	-NA-		REVISIONS
DATE	4/17		
DWG. BY	JHE		
DESIGN BY	JHE		
APPROVED	TB		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		8	21
WBS NO.	2017CPT.J0.06.20601.2		

PAVEMENT SCHEDULE	
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C6	PROP. ASPHALT SURFACE TREATMENT, MATCOAT #67, AT AN AVERAGE RATE OF 38 LBS. PER SQ. YD. (STONE) AND 0.40 GALLONS PER SQ. YD. (LIQUID ASPHALT)
T1	SHOULDER RECONSTRUCTION
V1	PROFILE MILLING 0" TO 1.5"
V3	MILLING 1.5" DEPTH
V4	MILLING 2.0" DEPTH



### PATCHING DETAIL



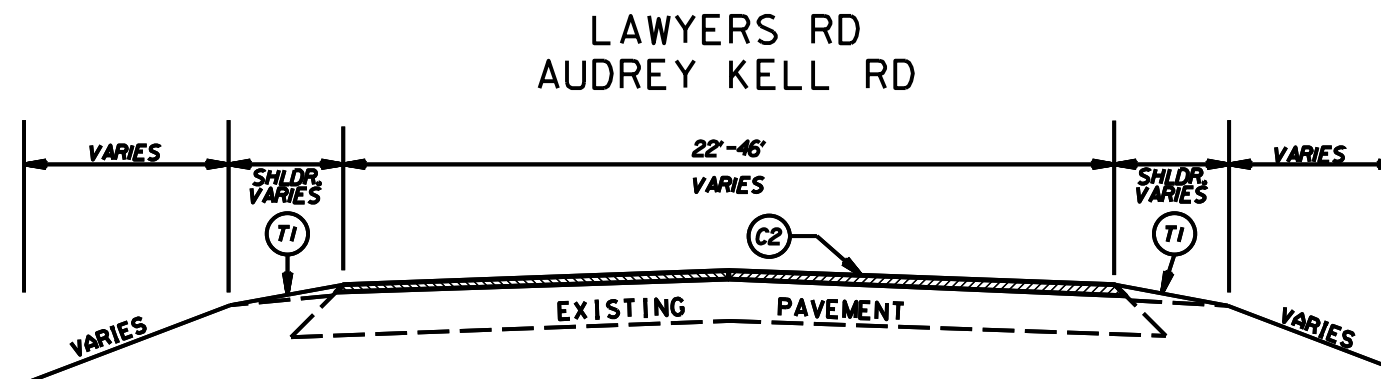
2017/2018 MECKLENBURG COUNTY  
RESURFACING

SCALE	-NA-		REVISIONS
DATE	4/17		
DWG. BY	JHE		
DESIGN BY	JHE		
APPROVED	TB		

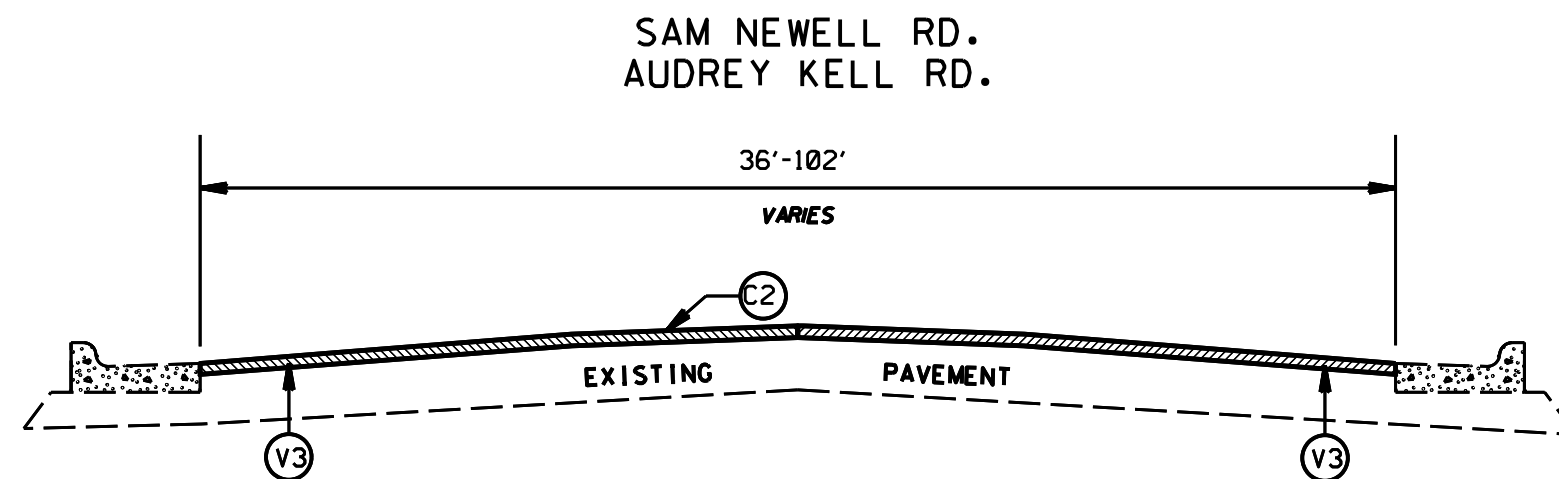


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		9	21
WBS NO. 2017CPT.J0.06.2060U, ETC.			

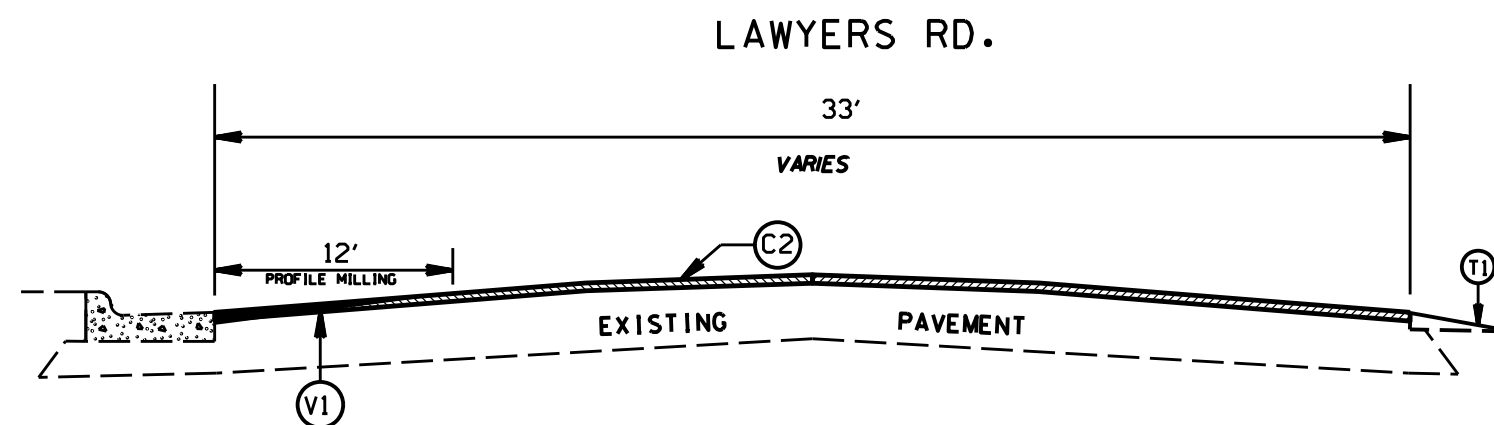
PAVEMENT SCHEDULE	
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C6	PROP. ASPHALT SURFACE TREATMENT, MATCOAT #67, AT AN AVERAGE RATE OF 38 LBS. PER SQ. YD. (STONE) AND 0.40 GALLONS PER SQ. YD. (LIQUID ASPHALT)
T1	SHOULDER RECONSTRUCTION
V1	PROFILE MILLING 0" TO 1.5"
V3	MILLING 1.5" DEPTH
V4	MILLING 2.0" DEPTH



TYPICAL SECTION NO. 6



TYPICAL SECTION NO. 7



TYPICAL SECTION NO. 8

2017/2018 MECKLENBURG COUNTY  
RESURFACING

SCALE	-NA-
DATE	4/17
DWG. BY	JHE
DESIGN BY	JHE
APPROVED	TB

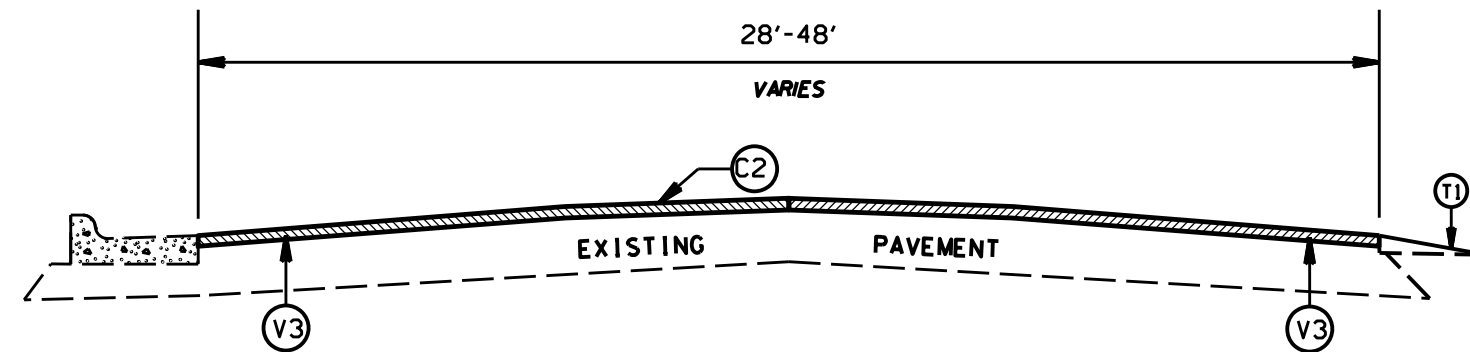


REVISIONS	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		10	21
WBS NO. 2017CPT.J0.06.2060U, ETC.			

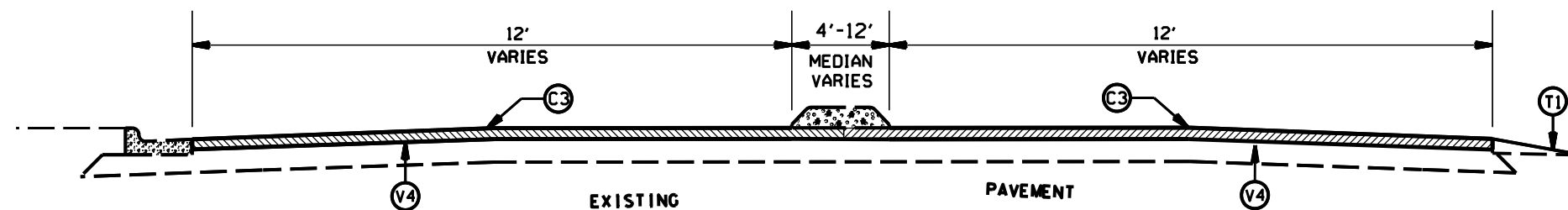
SAM NEWELL RD.

PAVEMENT SCHEDULE	
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C6	PROP. ASPHALT SURFACE TREATMENT, MATCOAT #67, AT AN AVERAGE RATE OF 38 LBS. PER SQ. YD. (STONE) AND 0.40 GALLONS PER SQ. YD. (LIQUID ASPHALT)
T1	SHOULDER RECONSTRUCTION
V1	PROFILE MILLING 0" TO 1.5"
V3	MILLING 1.5" DEPTH
V4	MILLING 2.0" DEPTH



TYPICAL SECTION NO. 9

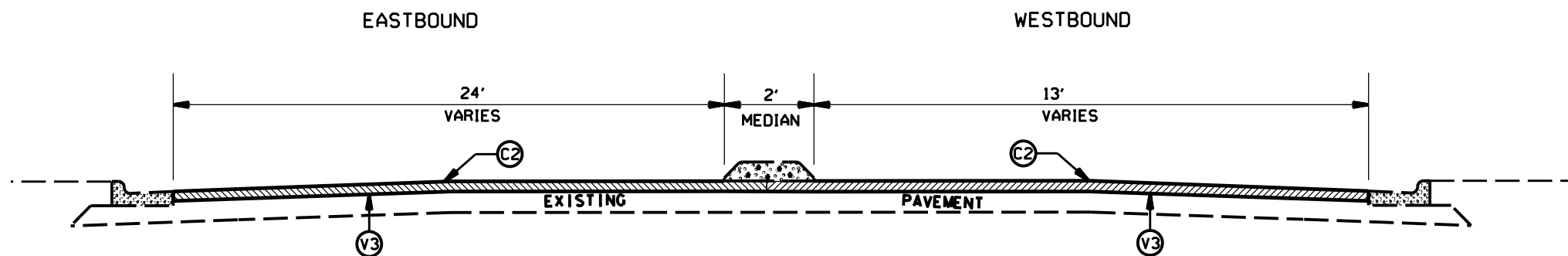
TILLEY MORRIS



TYPICAL SECTION NO. 10

FULL DEPTH MILL 2" FROM STA. 60+50 TO 70+30

AUDREY KELL RD.



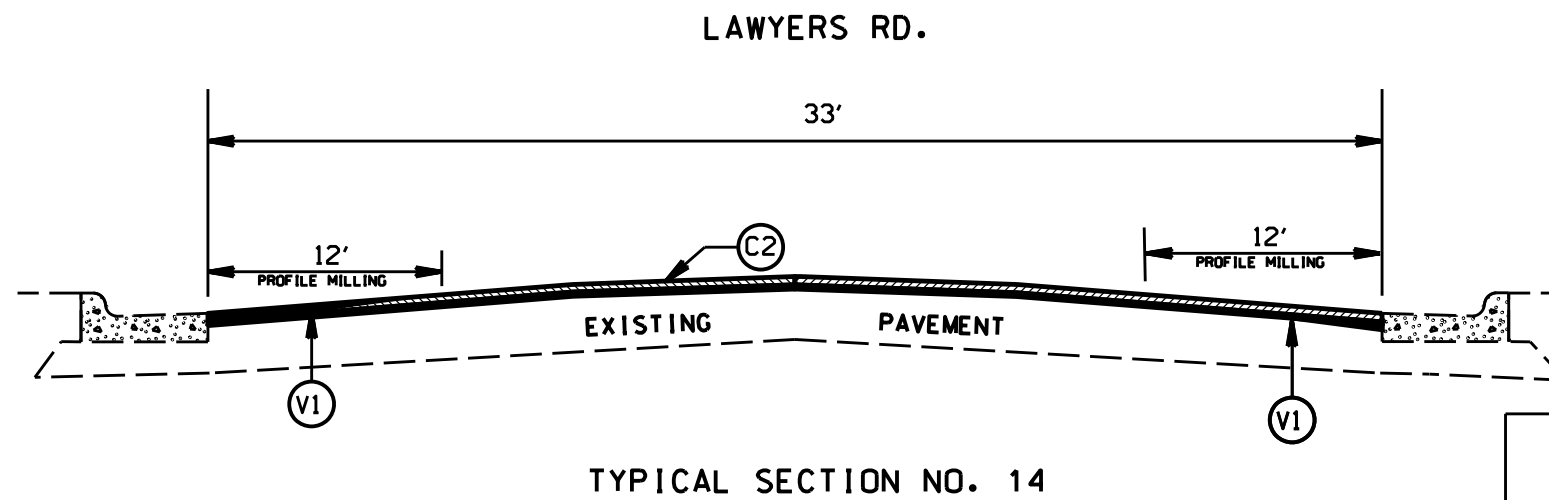
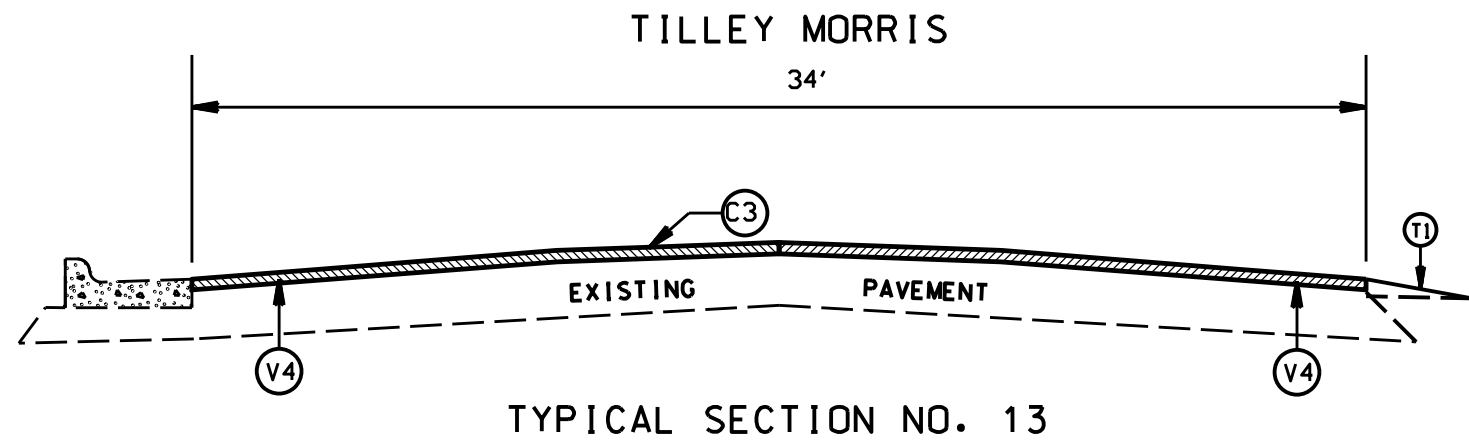
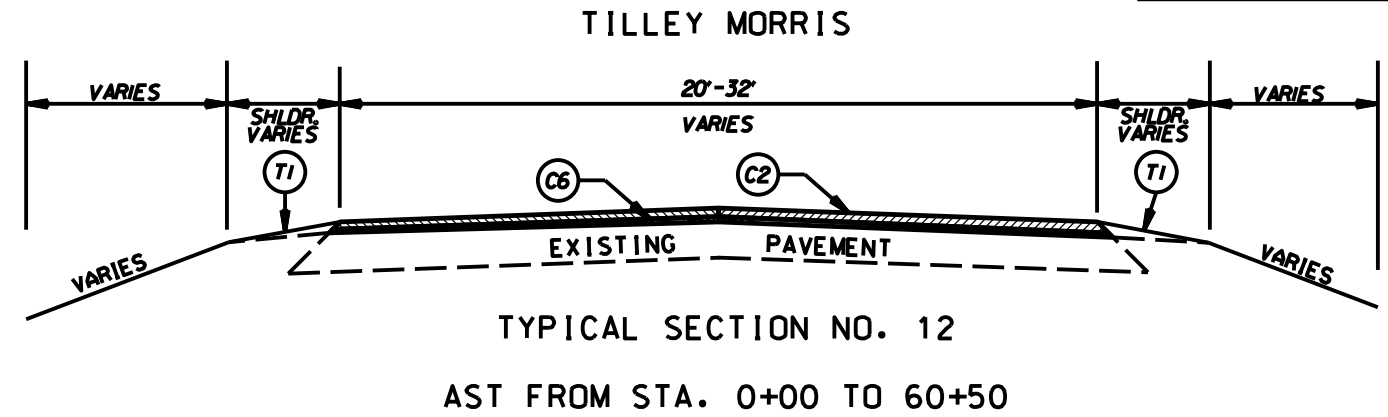
TYPICAL SECTION NO. 11

2017/2018 MECKLENBURG COUNTY RESURFACING

SCALE	-NA-		REVISIONS
DATE	4/17		
DWG. BY	JHE		
DESIGN BY	JHE		
APPROVED	TB		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		11	21
WBS NO.	2017CPTJ0.06J060L, ETC.		

PAVEMENT SCHEDULE	
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C6	PROP. ASPHALT SURFACE TREATMENT, MATCOAT #67, AT AN AVERAGE RATE OF 38 LBS. PER SQ. YD. (STONE) AND 0.40 GALLONS PER SQ. YD. (LIQUID ASPHALT)
T1	SHOULDER RECONSTRUCTION
V1	PROFILE MILLING 0" TO 1.5"
V3	MILLING 1.5" DEPTH
V4	MILLING 2.0" DEPTH



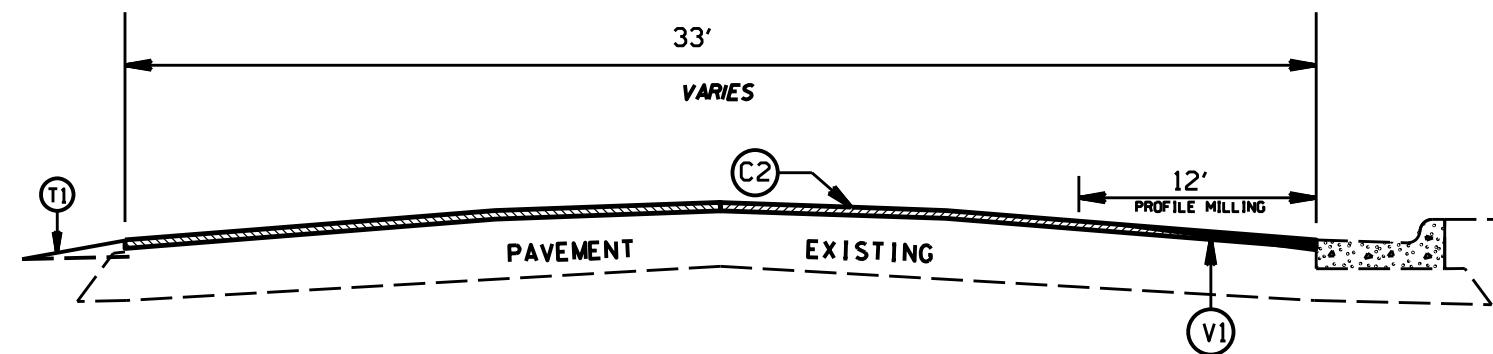
2017/2018 MECKLENBURG COUNTY  
RESURFACING

SCALE	-NA-		REVISIONS
DATE	4/17		
DWG. BY	JHE		
DESIGN BY	JHE		
APPROVED	TB		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		12	21
WBS NO.	2017CPT.JO.06.20601.3, ETC.		

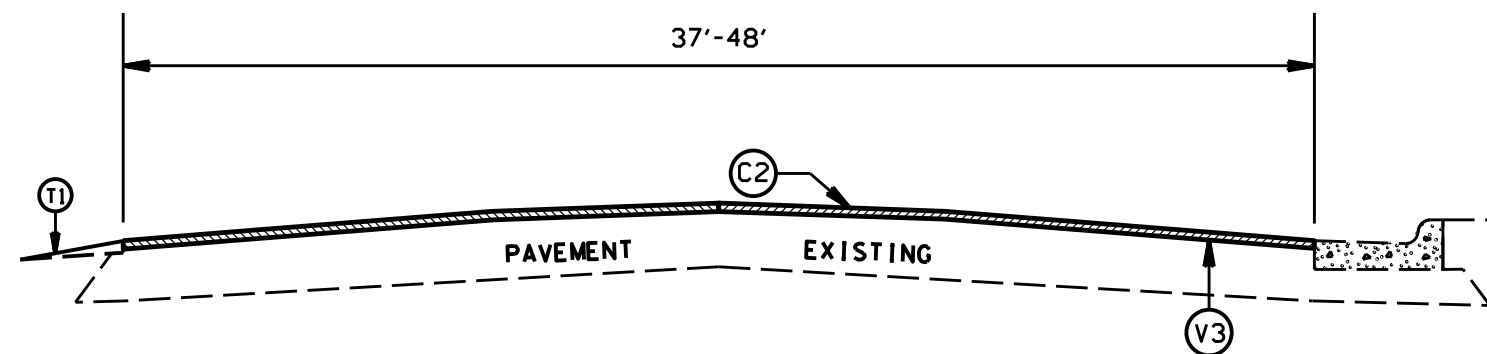
PAVEMENT SCHEDULE	
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C6	PROP. ASPHALT SURFACE TREATMENT, MATCOAT #67, AT AN AVERAGE RATE OF 38 LBS. PER SQ. YD. (STONE) AND 0.40 GALLONS PER SQ. YD. (LIQUID ASPHALT)
T1	SHOULDER RECONSTRUCTION
V1	PROFILE MILLING 0" TO 1.5"
V3	MILLING 1.5" DEPTH
V4	MILLING 2.0" DEPTH

LAWYERS ROAD



TYPICAL SECTION NO. 15

SAM NEWELL



TYPICAL SECTION NO. 16

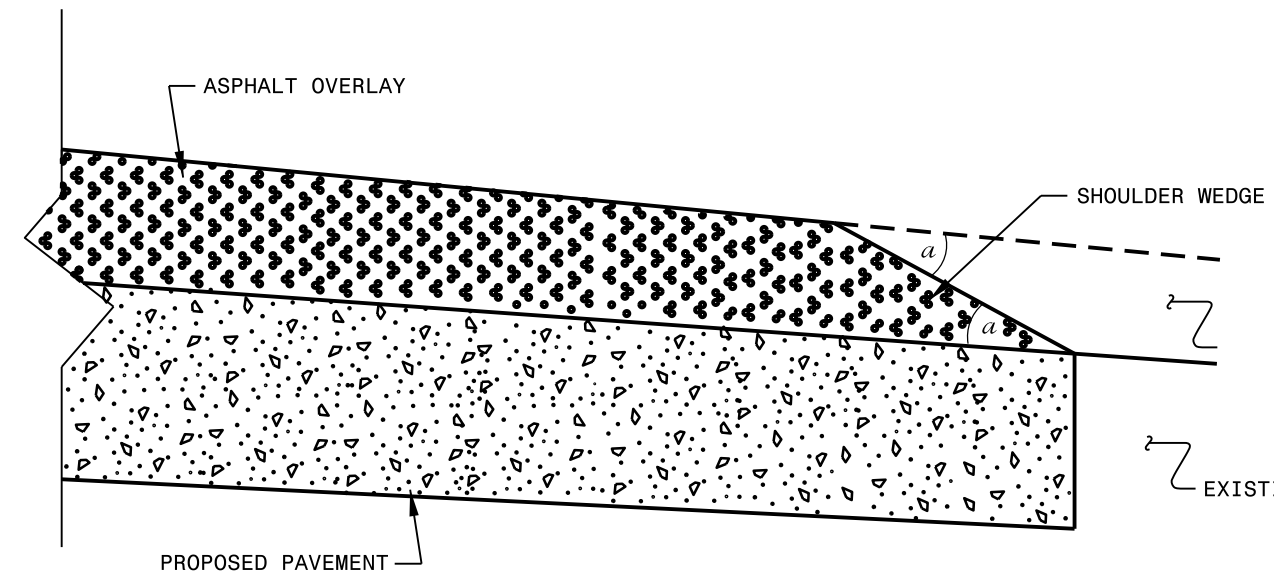
2017/2018 MECKLENBURG COUNTY RESURFACING

SCALE	-NA-
DATE	4/17
DWG. BY	JHE
DESIGN BY	JHE
APPROVED	TB

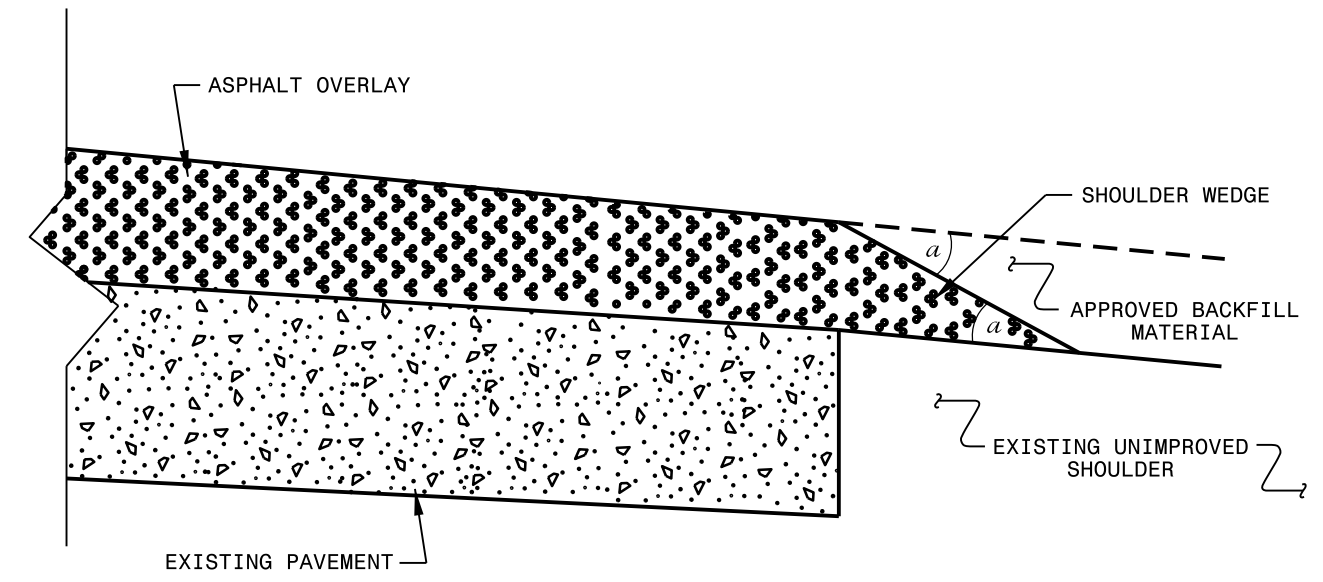


REVISIONS	

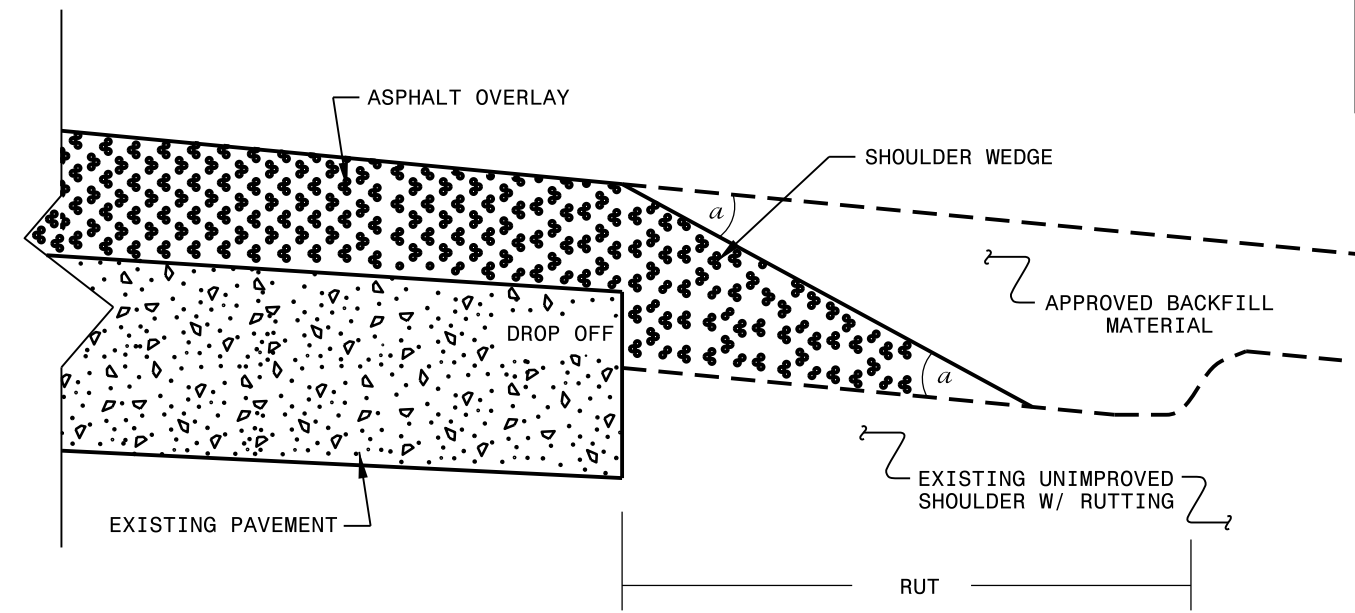
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



**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 DETAIL**  
 (Resurfacing Adjacent to  
 Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>			
Office 919-707-6950		FAX 919-250-4119	
<b>SHOULDER WEDGE DETAILS</b>			
ORIGINAL BY: T.SPELL	DATE: 7-19-11		
MODIFIED BY:	DATE: 2/2/16		
CHECKED BY:	DATE:		
FILE SPEC.: susr/details/stand/shoulderwedgedetail.dgn			

SYSTEMS DESIGN  
 USER NAME

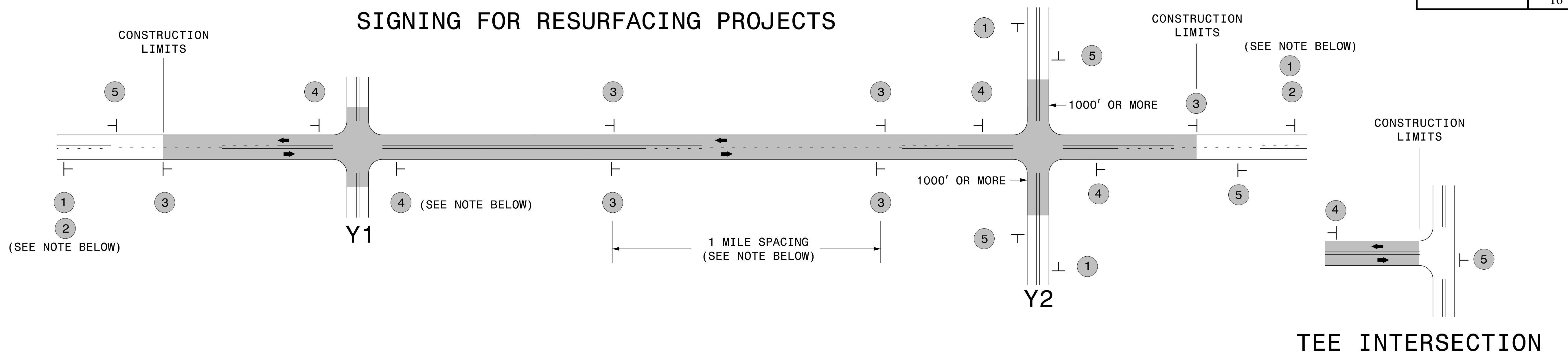
PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.10.06.10601.1, ETC.	14 REV	21

**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	BORROW CY	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	2.0" MILLING SY	1.5" MILLING SY	0.0" TO 1.5" MILLING SY	INCIDENTAL MILLING SY	SURFACE COURSE, S9.5B TONS	LEVELING COURSE, S9.5B TONS	ASPHALT BINDER FOR PLANT MIX TON	PATCHING EXISTING PAVEMENT TONS	REMOVAL OF EXISTING CONCRETE SLABS SY	AST MAT COAT #67 SY	EMULSION FOR ASPHALT SURFACE TREATMENT GAL	PAVEMENT INTERLAYER SY	ASPHALT FOR PAVEMENT INTERLAYER TON	WHEELCHAIR RAMPS EA	6" DRIVEWAYS SY	RETROFIT EXISTING WHEELCHAIR RAMPS EA	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA	PORTABLE LIGHTING LS	TEMPORARY SILT FENCE LF	STONE FOR EROSION CONTROL, CLASS B TN	SEDIMENT CONTROL STONE TN	WATTLE LF	POLYACRYLAMIDE (PAM) LB
2017CPT.10.06.10601.1	Mecklenburg	1	NC 27 FREEDOM DRIVE (EB)	FROM I-85 BRIDGE TO PAVEMENT JT. WEST OF MOREHEAD ST. INCLUDE RXR (MP 7.60 TO 9.43)		1,2,3	2	MD	NO	1.822	39.45				42,653				5,224		313	40	50			4,018.00	200.00			5	5	5	0.17	50	10	18	20	1
<b>TOTAL FOR MAP NO. 1</b>										<b>1.822</b>	<b>39.45</b>				<b>42,653</b>				<b>5,224</b>		<b>313</b>	<b>40</b>	<b>50</b>			<b>4,018.00</b>	<b>200.00</b>			<b>5</b>	<b>5</b>	<b>5</b>	<b>0.17</b>	<b>50</b>	<b>10</b>	<b>18</b>	<b>20</b>	<b>1</b>
2017CPT.10.06.10601.1	Mecklenburg	2	NC 27 FREEDOM DRIVE (WB)	DR FROM RXR TRACKS TO I-85 BRIDGE (MP 17.5 TO 19.33)		1,2,3	2	MD	NO	1.832	41.07				44,136				5,464		328	40	50							7	4	10	0.17	275	37	18	55	1
<b>TOTAL FOR MAP NO. 2</b>										<b>1.832</b>	<b>41.07</b>				<b>44,136</b>				<b>5,464</b>		<b>328</b>	<b>40</b>	<b>50</b>						<b>7</b>	<b>4</b>	<b>10</b>	<b>0.17</b>	<b>275</b>	<b>37</b>	<b>18</b>	<b>55</b>	<b>1</b>	
<b>TOTAL FOR PROJ NO. 2017CPT.10.06.10601.1</b>										<b>3.654</b>					<b>86,789</b>				<b>10,688</b>		<b>641</b>	<b>80</b>	<b>100</b>			<b>4,018.00</b>	<b>200.00</b>			<b>12</b>	<b>9</b>	<b>15</b>	<b>0.33</b>	<b>325</b>	<b>47</b>	<b>36</b>	<b>75</b>	<b>2</b>
2017CPT.10.06.20601.1	Mecklenburg	3	SR 3632 AUDREY KELL ROAD	FROM WEST OF AVALY LN TO TOM SHORT THEN FROM TOLLAND LN TO REA RD (MP 3.59 TO 2.91 THEN FROM 2.22 TO 2.08)		6,7,11	2		NO	0.82	36.9	232		3.17				1,646		99	405											0.17	140	19	9	28	1	
<b>TOTAL FOR MAP NO. 3</b>										<b>0.82</b>	<b>36.9</b>	<b>232</b>		<b>3.17</b>				<b>1,646</b>		<b>99</b>	<b>405</b>										<b>0.17</b>	<b>140</b>	<b>19</b>	<b>9</b>	<b>28</b>	<b>1</b>		
<b>TOTAL FOR PROJ NO. 2017CPT.10.06.20601.1</b>										<b>0.82</b>		<b>232</b>		<b>3.17</b>				<b>1,646</b>		<b>99</b>	<b>405</b>										<b>0.17</b>	<b>140</b>	<b>19</b>	<b>9</b>	<b>28</b>	<b>1</b>		
2017CPT.10.06.20601.2	Mecklenburg	4	SR 5722 REA ROAD (NB)	FROM BLANKNEY GREEN BLVD. TO BALLANTYNE COMMONS PARKWAY (MP 1.11 TO 2.56)		4,5	2	MD	NO	1.45	28.07							2,219		133	330											0.17	50	8	5	20	1	
<b>TOTAL FOR MAP NO. 4</b>										<b>1.45</b>	<b>28.07</b>							<b>2,219</b>		<b>133</b>	<b>330</b>										<b>0.17</b>	<b>50</b>	<b>8</b>	<b>5</b>	<b>20</b>	<b>1</b>		
2017CPT.10.06.20601.2	Mecklenburg	5	SR 5722 REA ROAD (SB)	FROM BALLANTYNE COMMONS PARKWAY TO BLAKNEY GREEN BLVD (MP 0.00 TO 1.47)		4,5	2	MD	NO	1.45	29.5							2,329		140	330											0.17	50	8	5	20		
<b>TOTAL FOR MAP NO. 5</b>										<b>1.45</b>	<b>29.5</b>							<b>2,329</b>		<b>140</b>	<b>330</b>										<b>0.17</b>	<b>50</b>	<b>8</b>	<b>5</b>	<b>20</b>			
<b>TOTAL FOR PROJ NO. 2017CPT.10.06.20601.2</b>										<b>2.9</b>								<b>4,548</b>		<b>273</b>	<b>660</b>										<b>0.33</b>	<b>100</b>	<b>16</b>	<b>10</b>	<b>40</b>	<b>1</b>		
2017CPT.10.06.20601.3	Mecklenburg	6	SR 3474 SAM NEWELL RD.	FROM US 74 TO NC 51 (MP 0.00 TO 0.20 THEN FROM 0.6 TO 1.09)		7,9,16	2	2WU	NO	0.69	44.05	142		1.94				1,650		99	664										0.17	124	17	8	25	1		
<b>TOTAL FOR MAP NO. 6</b>										<b>0.69</b>	<b>44.05</b>	<b>142</b>		<b>1.94</b>				<b>1,650</b>		<b>99</b>	<b>664</b>									<b>0.17</b>	<b>124</b>	<b>17</b>	<b>8</b>	<b>25</b>	<b>1</b>			
<b>TOTAL FOR PROJ NO. 2017CPT.10.06.20601.3</b>										<b>0.69</b>		<b>142</b>		<b>1.94</b>				<b>1,650</b>		<b>99</b>	<b>664</b>									<b>0.17</b>	<b>124</b>	<b>17</b>	<b>8</b>	<b>25</b>	<b>1</b>			
2017CPT.10.06.20601.4	Mecklenburg	7	SR 3128 LAWYERS RD.	FROM NC 51 TO BAIN SCHOOL RD (MP 0.00 TO 1.62)		6,8,14,15	2	2WU	NO	1.62	24.4	137	30	1.87				2,154	467	160	683											0.17	239	32	16	48	1	
<b>TOTAL FOR MAP NO. 7</b>										<b>1.62</b>	<b>24.4</b>	<b>137</b>	<b>30</b>	<b>1.87</b>					<b>2,154</b>	<b>467</b>	<b>160</b>	<b>683</b>									<b>0.17</b>	<b>239</b>	<b>32</b>	<b>16</b>	<b>48</b>	<b>1</b>		
2017CPT.10.06.20601.4	Mecklenburg	8	SR 1004 LAWYERS RD.	FROM BAIN SCHOOL RD TO I-485 PVT. JT. (MP 1.69 TO 2.36)		6	2	2WU	NO	0.67	22	211	25	2.88				804	290	67	525											0.17	108	14	7	22	1	
<b>TOTAL FOR MAP NO. 8</b>										<b>0.67</b>	<b>22</b>	<b>211</b>	<b>25</b>	<b>2.88</b>				<b>804</b>	<b>290</b>	<b>67</b>	<b>525</b>										<b>0.17</b>	<b>108</b>	<b>14</b>	<b>7</b>	<b>22</b>	<b>1</b>		
<b>TOTAL FOR PROJ NO. 2017CPT.10.06.20601.4</b>										<b>2.29</b>	<b>348</b>	<b>55</b>	<b>4.75</b>				<b>4,114</b>	<b>638</b>	<b>2,958</b>	<b>757</b>	<b>227</b>	<b>1,208</b>						<b>200</b>		<b>1</b>	<b>1</b>	<b>0.33</b>	<b>347</b>	<b>46</b>	<b>23</b>	<b>70</b>	<b>2</b>	
2017CPT.10.06.20601.5	Mecklenburg	9	SR 3445 TILLEY MORRIS RD.	FROM UNION CO TO MCKEE RD (MP 0.00 TO 1.33)		10,12,13	2	2WD	NO	1.33	23.76	171	45	2.33	3,770			86	1,722		103	879		16,268	6,508							0.17	200	27	13	40	1	
<b>TOTAL FOR MAP NO. 9</b>										<b>1.33</b>	<b>23.76</b>	<b>171</b>	<b>45</b>	<b>2.33</b>	<b>3,770</b>			<b>86</b>	<b>1,722</b>		<b>103</b>	<b>879</b>		<b>16,268</b>	<b>6,508</b>						<b>0.17</b>	<b>200</b>	<b>27</b>	<b>13</b>	<b>40</b>	<b>1</b>		
<b>TOTAL FOR PROJ NO. 2017CPT.10.06.20601.5</b>										<b>1.33</b>	<b>171</b>	<b>45</b>	<b>2.33</b>	<b>3,770</b>			<b>86</b>	<b>1,722</b>		<b>103</b>	<b>879</b>		<b>16,268</b>	<b>6,508</b>						<b>0.17</b>	<b>200</b>	<b>27</b>	<b>13</b>	<b>40</b>	<b>1</b>			
<b>GRAND TOTAL</b>										<b>11.684</b>		<b>893</b>	<b>100</b>	<b>12.19</b>	<b>90,559</b>	<b>77,734</b>	<b>5,437</b>	<b>724</b>	<b>23,212</b>	<b>757</b>	<b>1,442</b>	<b>3,896</b>	<b>100</b>	<b>16,268</b>	<b>6,508</b>	<b>4,018.00</b>	<b>200.00</b>	<b>6</b>	<b>390</b>	<b>49</b>	<b>18</b>	<b>24</b>	<b>1.00</b>	<b>1,236</b>	<b>172</b>	<b>99</b>	<b>278</b>	<b>8</b>



# SIGNING FOR RESURFACING PROJECTS



LEGEND	
┆	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

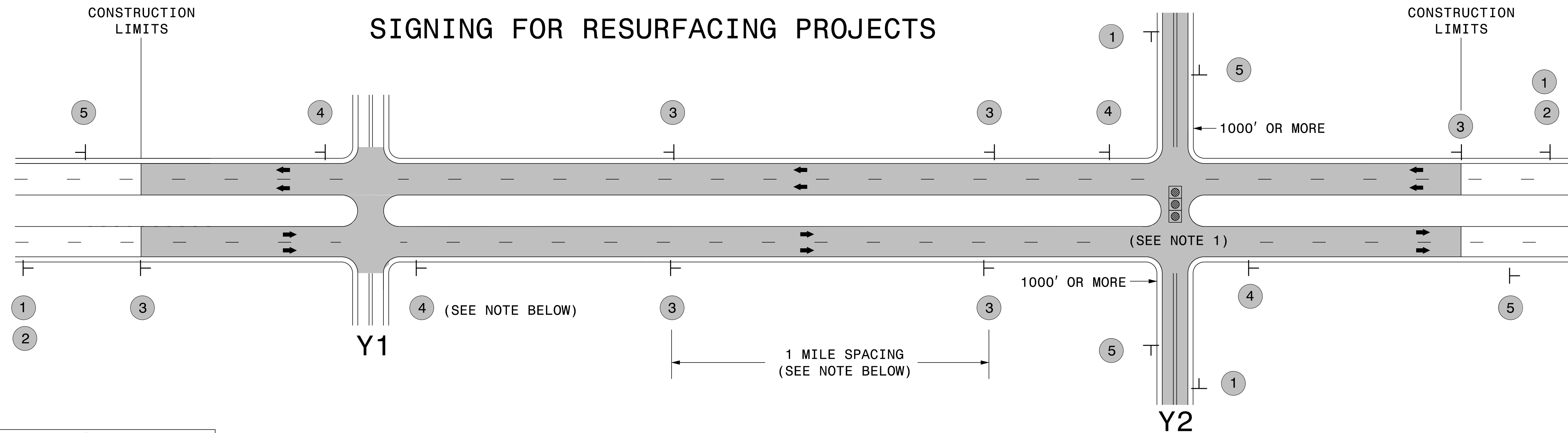
## MAINLINE (-L-) SIGNING

## -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	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.	
	 	#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)		 
		- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.		
		- 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.		PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.
		PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.		

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



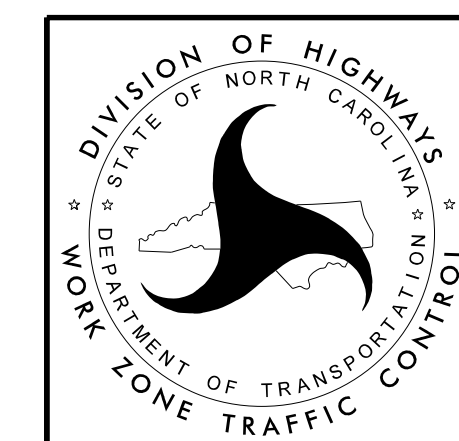


LEGEND	
┆	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

### MAINLINE (-L-) SIGNING

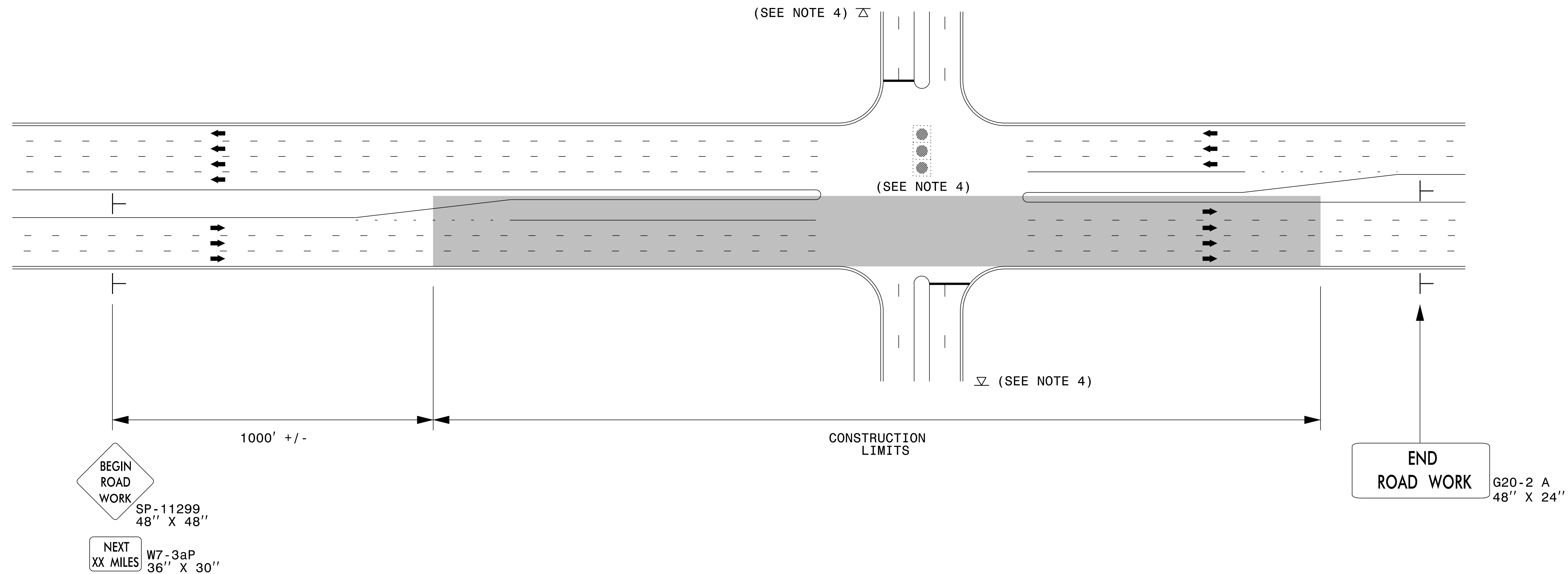
### -Y- LINE SIGNING

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"> <li>1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>2) SUBDIVISION ROADS</li> <li>3) DEAD END ROADS</li> </ol> <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.		
			<p>NOTES:</p> <ol style="list-style-type: none"> <li>1) 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.</li> </ol>	



RESURFACING  
ADVANCE WARNING SIGNS  
FOR RURAL AND SUBURBAN  
MULTI-LANE ROADWAYS  
W/ SHOULDER SECTIONS

## URBAN / SUBURBAN WORKZONES

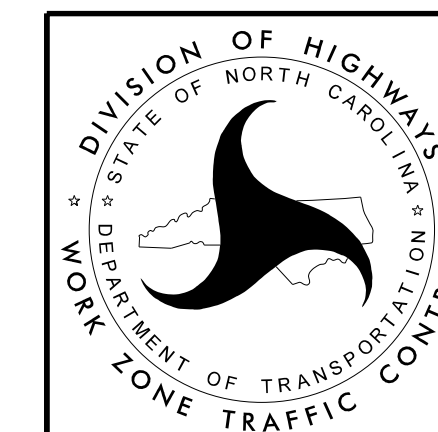


### NOTES:

- 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.

### LEGEND

- ├ STATIONARY SIGN
- ➔ DIRECTION OF TRAFFIC FLOW

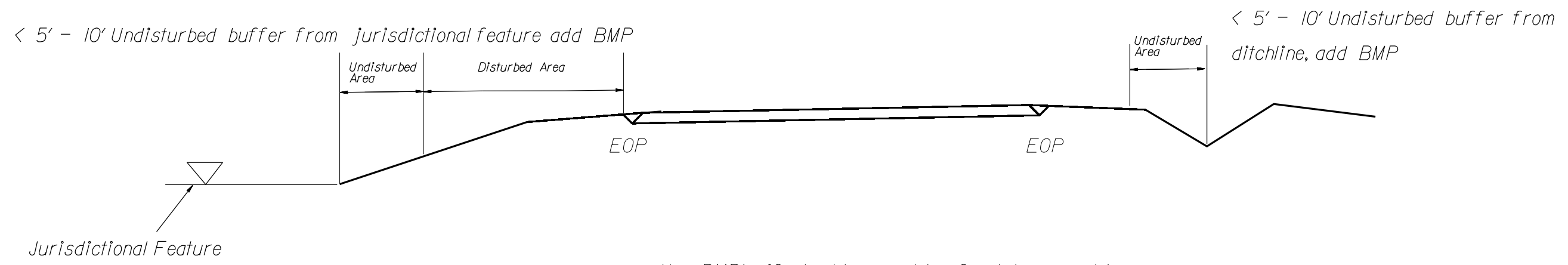
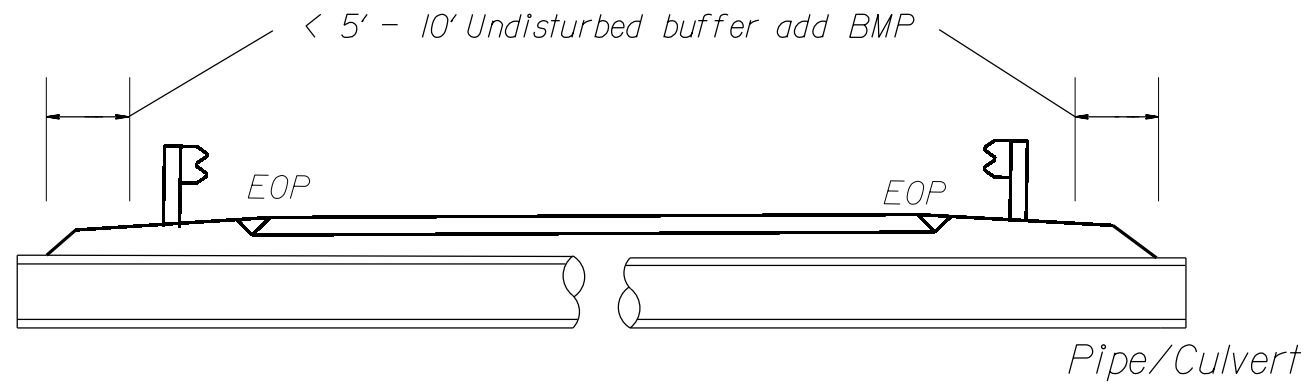


**RESURFACING ADVANCE  
WARNING SIGNS FOR  
URBAN / SUBURBAN  
FACILITIES**

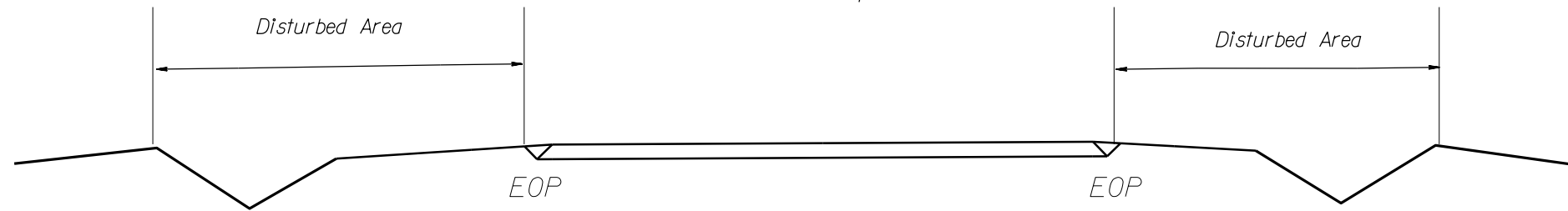
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

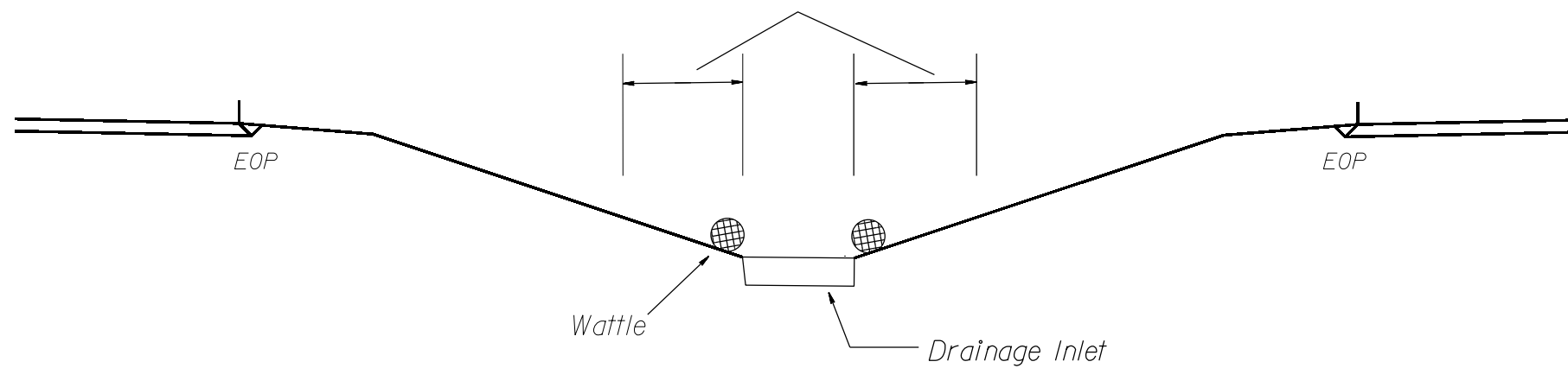
# EROSION CONTROL DETAIL



Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed

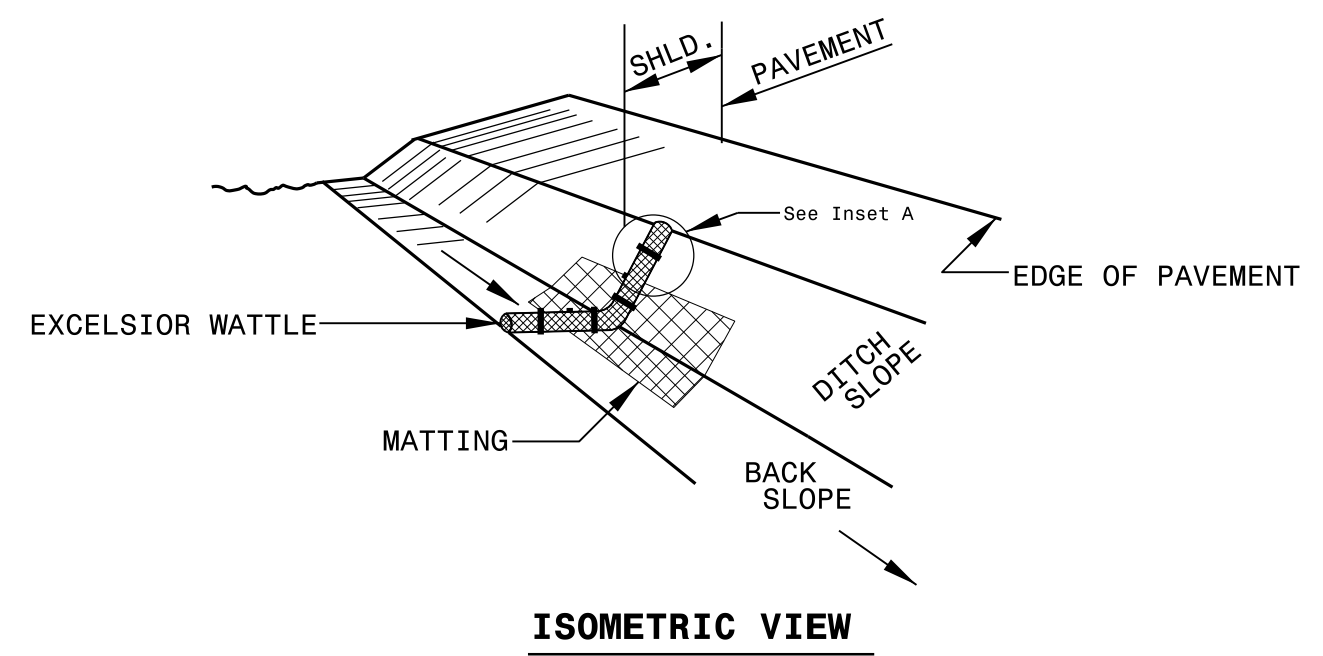


< 5' - 10' Undisturbed buffer from inlet, add wattle



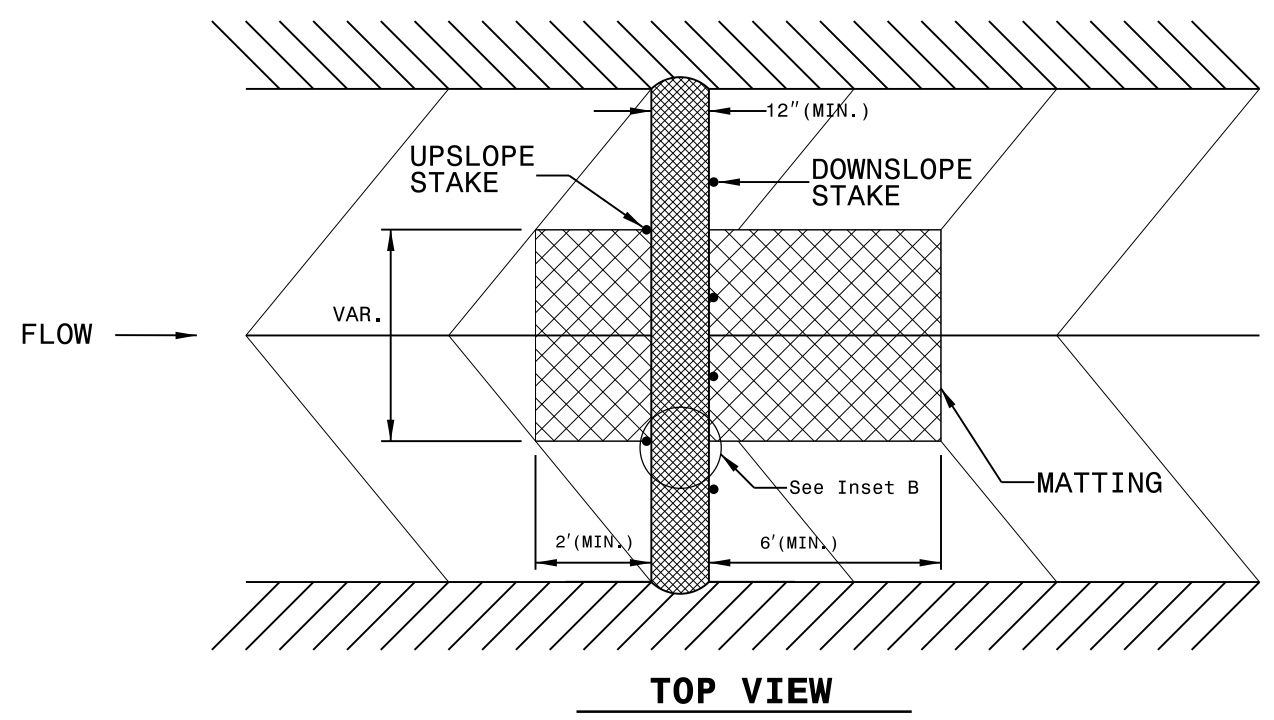
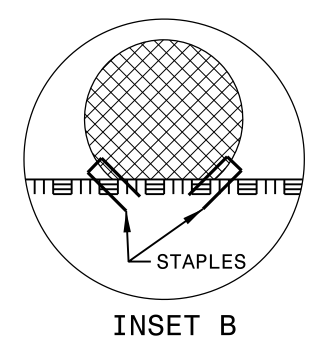
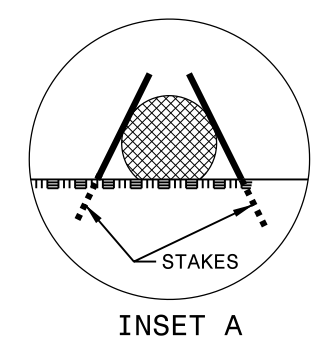
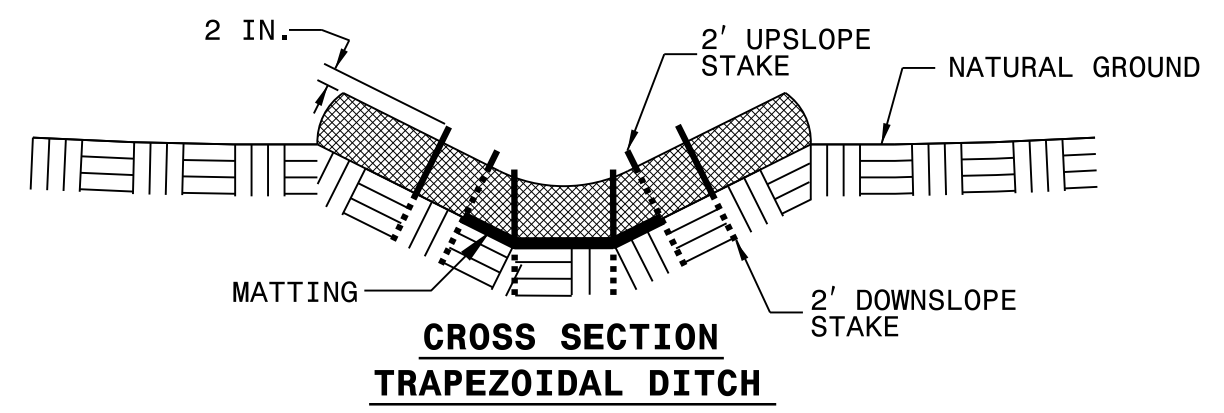
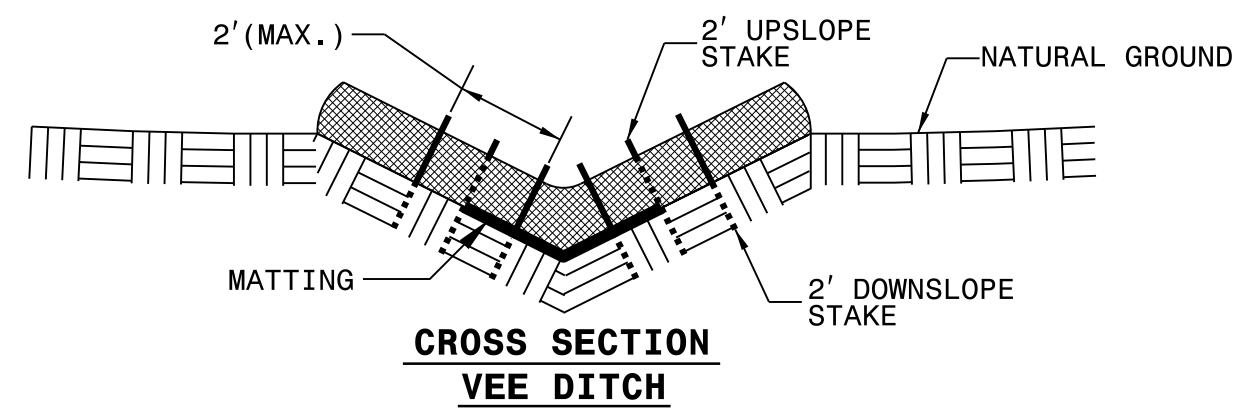
NOT TO SCALE

# WATTLE DETAIL

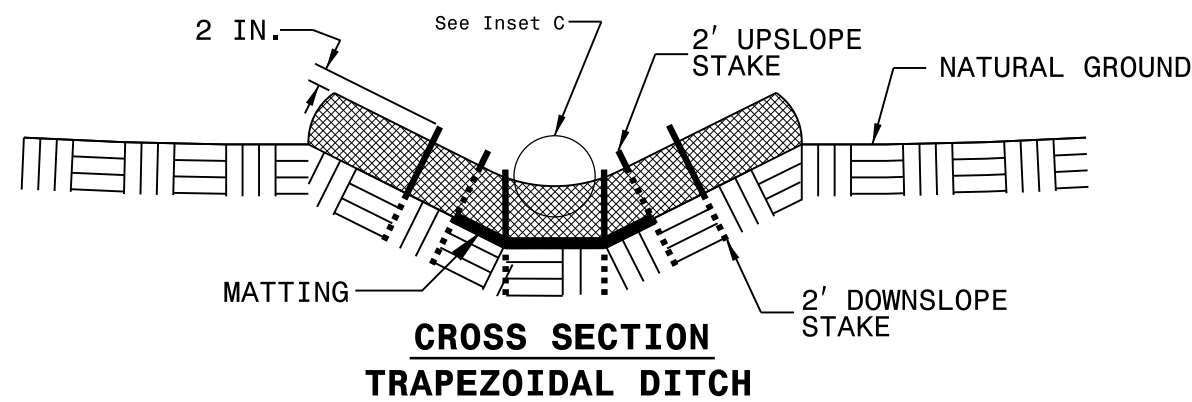
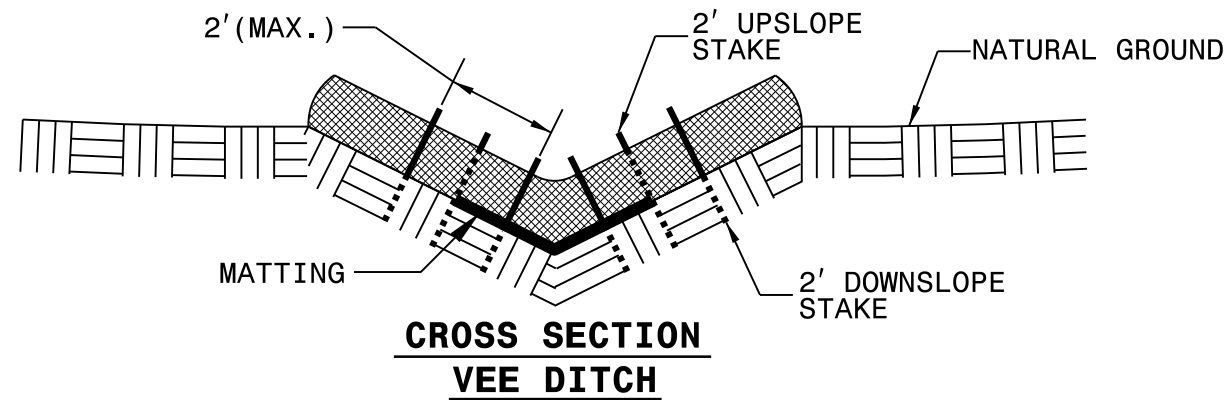
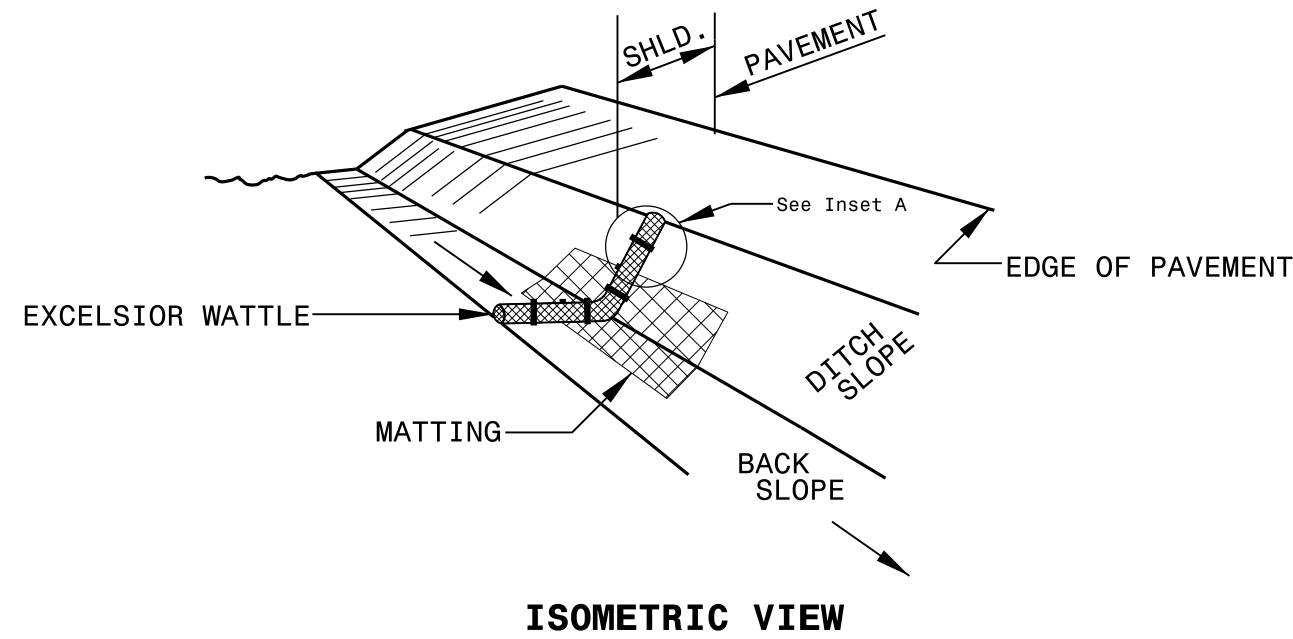


**NOTES:**

- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



# WATTLE WITH POLYACRYLAMIDE DETAIL



**NOTES:**

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 3.5 OUNCES OF ANIONIC OR NEUTRALLY CHARGED POLYACRYLAMIDE (PAM) OVER WATTLE WHERE WATER WILL FLOW AND AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

