

PROJECT NO.	SHEET NO.	TOTAL NO.
2023CPT.11.01.10031	1	2

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	FROM MILEPOST	TO MILEPOST	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	0106000000-E	1220000000-E	1245000000-E	1297000000-E	1297000000-E	1330000000-E	1503000000-E	1519000000-E	1575000000-E	1704000000-E	2815000000-N	2830000000-N	2845000000-N	6084000000-E	7288000000-E	7300000000-E	7324000000-N	7444000000-E	7456000000-E		
												BORROW	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	1 1/2" MILLING	3" MILLING	INCIDENTAL MILLING	INTERMEDIATE COURSE, 119.0C	SURFACE COURSE, S9.5B	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	ADJUST DROP INLET	ADJUST MANHOLES	ADJUST METER OR VALVE BOX	SEED & MULCHING	PAVED TRENCHING (1 CONDUIT, 2")	UNPAVED TRENCHING (1 COND, 2")	JUNCTION BOX (STANDARD SIZE)	INDUCTIVE LOOP SAWCUT	LEAD-IN CABLE (14-2)		
												MI	FT	CY	TON	SMI	SY	SY	SY	TON	TON	TON	TON	EA	EA	EA	AC	LF	LF	EA	LF	LF
2023CPT.11.01.10031	Alleghany	1	NC 18	FROM SR 1151 TO SR 1173	10.75	14.39	1	2	2WU	3.64	19	728	73	7.28			211		3,875	260	979											
2023CPT.11.01.10031	Alleghany	2	NC 18	FROM US 21 TO SR 1403	16.33	16.42	3	2	2WU	0.09	28				2,178				141	9		2	1	2		20	20	1	280	20		
2023CPT.11.01.10031	Alleghany	3	NC 18	FROM SR 1403 TO MAYBERRY FARM DR (NS)	16.42	18.91	1	2	2WU	2.49	22	498	50	4.98			122		3,066	205	770		5	2	1.34							
2023CPT.11.01.10031	Alleghany	4	NC 18	FROM MAYBERRY FARM DR (NS) TO SR 1416	18.91	19.31	2	2	2WU	0.4	22		4	0.80				1,027	493	82					2.30							
2023CPT.11.01.10031	Alleghany	5	NC 18	FROM SR 1416 TO SR 1440	19.31	24.75	1	2	2WU	5.44	22	1,088	109	10.88			489		6,699	449	1,062	1			2.60							
TOTAL FOR PROJ NO. 2023CPT.11.01.10031										12.06		2,314	236	23.94	2,178	5,163	822	1,027	14,274	1,005	2,811	3	6	4	6.24	20	20	1	280	20		
GRAND TOTAL										12.06		2,314	236	23.94	2,178	5,163	822	1,027	14,274	1,005	2,811	3	6	4	6.24	20	20	1	280	20		

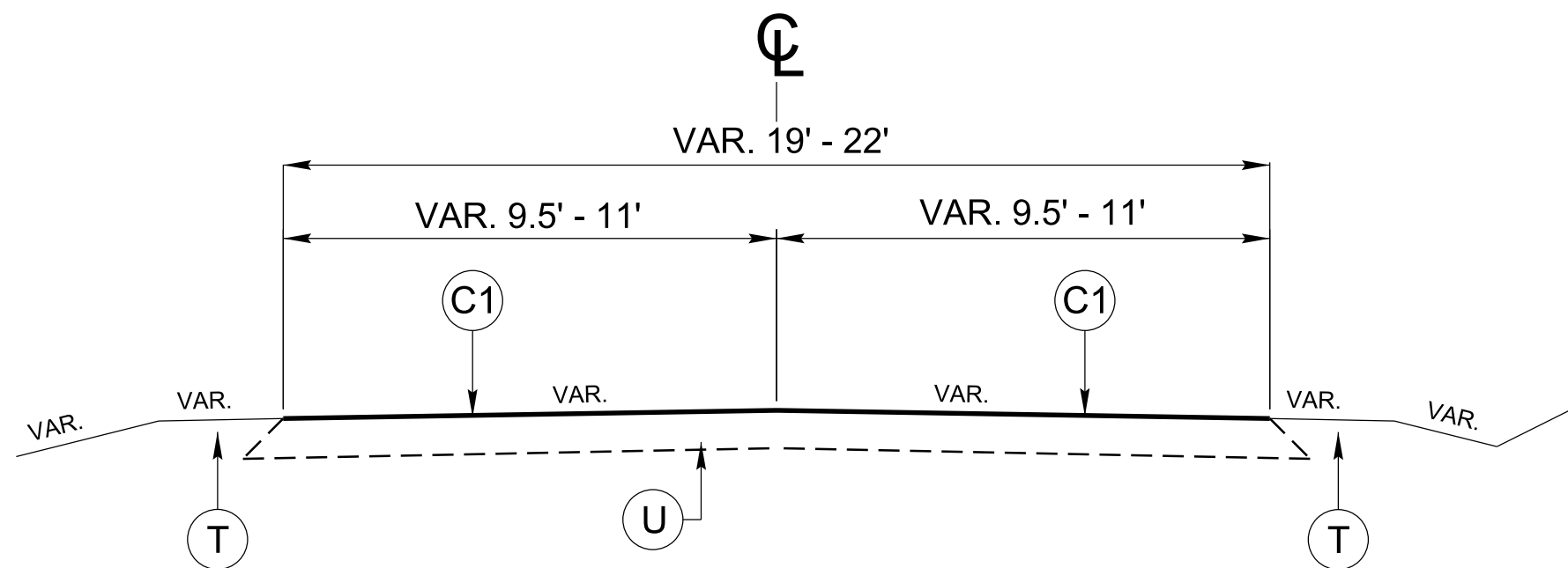
PROJECT NO.	SHEET NO.	TOTAL NO.
2023CPT.11.01.10031	2	2

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	FROM MILEPOST	TO MILEPOST	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E	4457000000-N	4810000000-E		4820000000-E	4835000000-E	4845000000-N		4895000000-N		
												WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	4" WHITE PAINT	4" YELLOW PAINT	8" WHITE PAINT	24" WHITE PAINT	PAINT STR & RT ARROW	PAINT LT ARROW	GENERIC MARKING ITEM NON-CAST IRON SNOW PLOWABLE MARKER		
												MI	FT	SF	LS	LF	LF	LF	LF	EA	EA	EA
2023CPT.11.01.10031	Allegheny	1	NC 18	FROM SR 1151 TO SR 1173	10.75	14.39	1	2	2WU	3.64	19	473	1	21,520	21,520						240	
2023CPT.11.01.10031	Allegheny	2	NC 18	FROM US 21 TO SR 1403	16.33	16.42	3	2	2WU	0.09	28	12		500	1,200	120	32	4	4		6	
2023CPT.11.01.10031	Allegheny	3	NC 18	FROM SR 1403 TO MAYBERRY FARM DR (NS)	16.42	18.91	1	2	2WU	2.49	22	233		38,521	38,521						118	
2023CPT.11.01.10031	Allegheny	4	NC 18	FROM MAYBERRY FARM DR (NS) TO SR 1416	18.91	19.31	2	2	2WU	0.4	22	399		66,066	66,066						203	
2023CPT.11.01.10031	Allegheny	5	NC 18	FROM SR 1416 TO SR 1440	19.31	24.75	1	2	2WU	5.44	22	451		74,674	74,674						229	
TOTAL FOR PROJ NO. 2023CPT.11.01.10031											12.06		1,568	1	201,281	201,981	120	32	4	4	796	
																403,262			8			
GRAND TOTAL											12.06		1,568	1	201,281	201,981	120	32	4	4	796	
																403,262			8			

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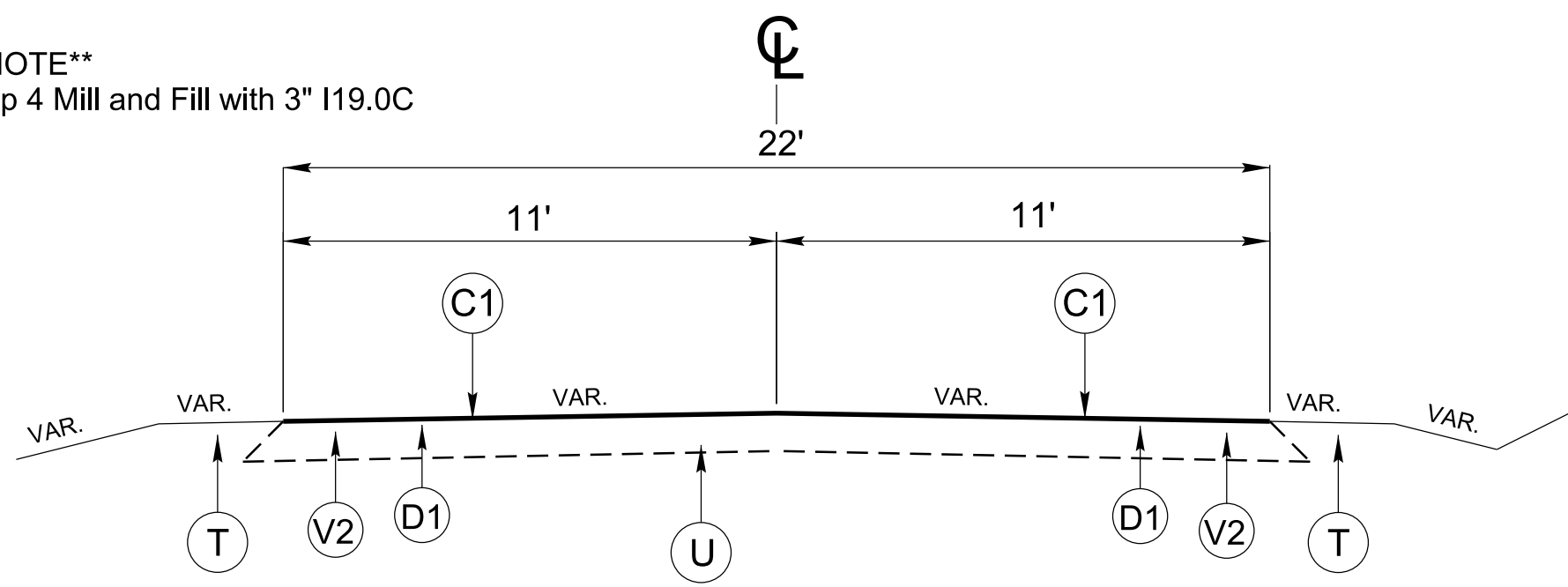
- * "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS. PATCHING MAY OR MAY NOT BE NEEDED DEPENDING ON CONDITION OF MAP SURFACE AT TIME THAT PAVING SEASON BEGINS. AREAS TO BE DELINIATED BY THE ENGINEER.
- * INCIDENTAL MILLING AT LOCATIONS AS DIRECTED BY THE ENGINEER



TYPICAL SECTION NO. 1

MAP 1 - NC 18 FROM SR 1151 TO SR 1173
 MAP 3 - NC 18 FROM SR 1403 TO MAYBERRY FARM DR (NS)
 MAP 5 - NC 18 FROM SR 1416 TO SR 1440

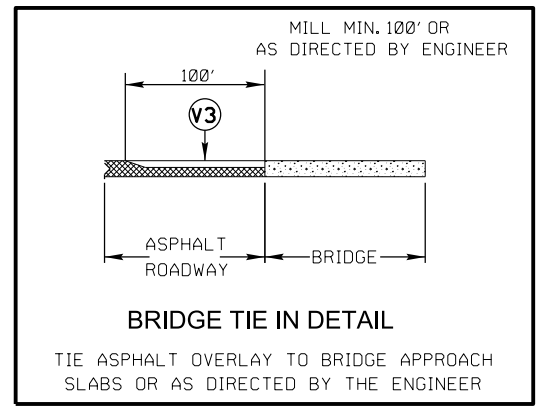
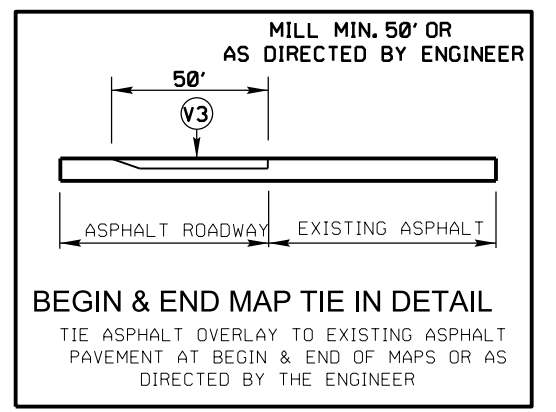
****NOTE****
 Map 4 Mill and Fill with 3" I19.0C



TYPICAL SECTION NO. 2

MAP 4 - NC 18 FROM MAYBERRY FARM DR (NS) TO SR 1416

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"
V2	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 3"
V3	INCIDENTAL MILLING (See Tie in Detail)



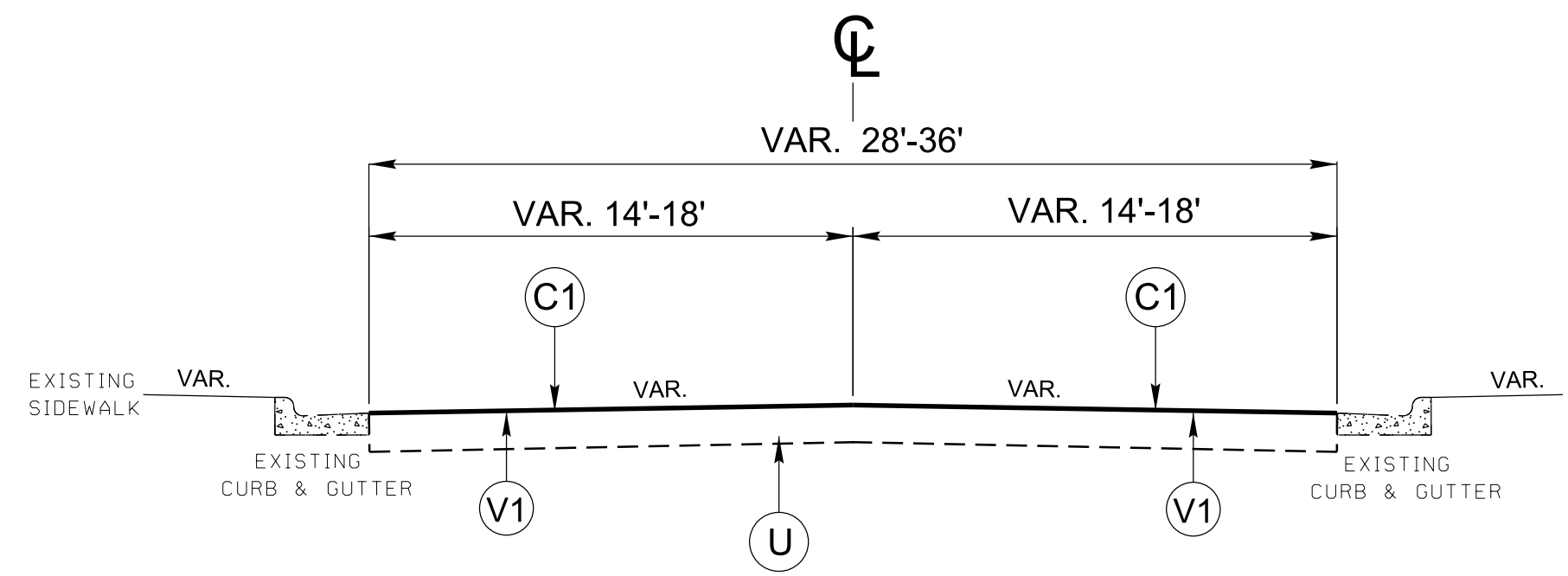
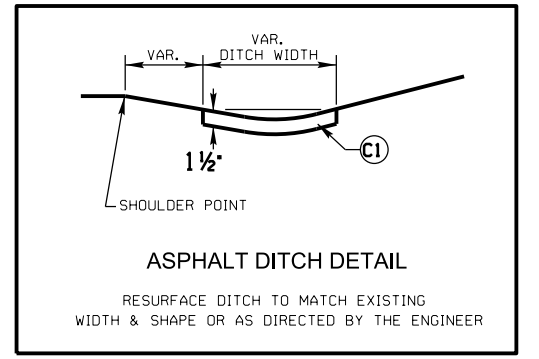
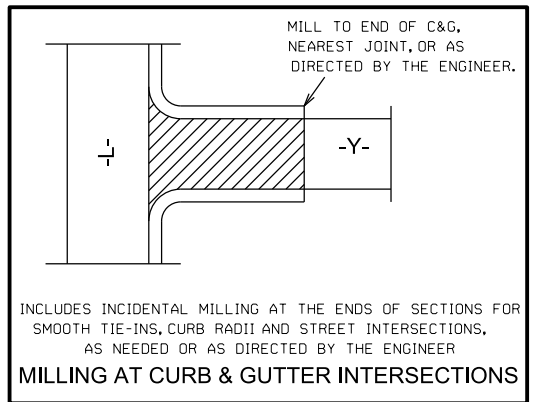
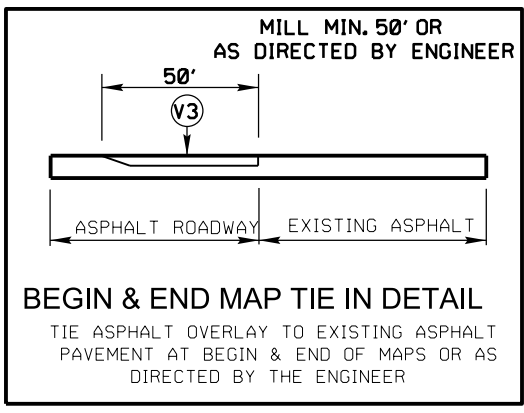
NOTE: TYPICALS ARE NOT TO SCALE

ALLEGHANY COUNTY PRIMARY ROADS 2023 ASPHALT RESURFACING														
<table border="1" style="width: 100%;"> <thead> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				REVISIONS	INIT.	DATE								
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N.C. DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DIVISION ELEVEN			<table border="1" style="width: 100%;"> <tr> <td>SCALE: N/A</td> <td>DATE: 8/18/2022</td> </tr> <tr> <td>PREPARED BY: GKirby</td> <td> </td> </tr> <tr> <td>REVIEWED BY: </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	SCALE: N/A	DATE: 8/18/2022	PREPARED BY: GKirby		REVIEWED BY:						
SCALE: N/A	DATE: 8/18/2022													
PREPARED BY: GKirby														
REVIEWED BY:														

8/17/99

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 \$\$\$\$11/18/2022\$\$\$\$

* INCIDENTAL MILLING AT LOCATIONS AS DIRECTED BY THE ENGINEER



TYPICAL SECTION NO. 3

MAP 2 - *NC 18 FROM US 21 TO SR 1403

*NOTE:
 MAP#2 BEGINS NORTH OF MAIN STREET INTERSECTION
 BEHIND EXISTING CROSSWALK.

NOTE: TYPICALS ARE NOT TO SCALE

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"
V3	INCIDENTAL MILLING (See Tie in Detail)

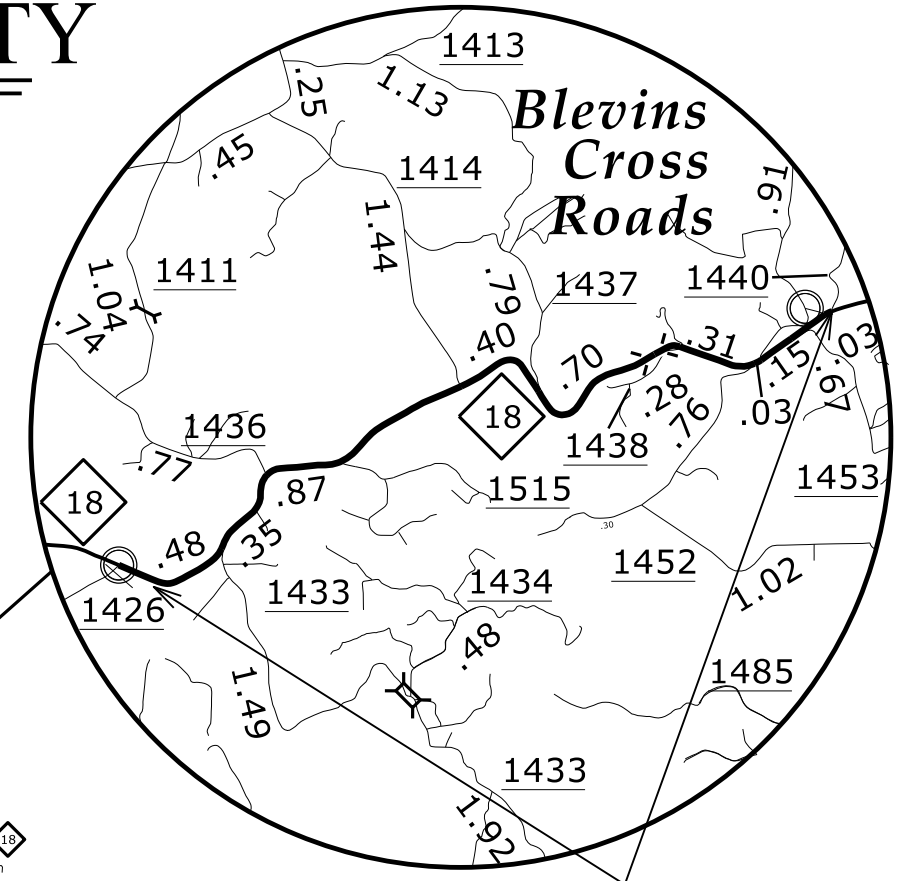
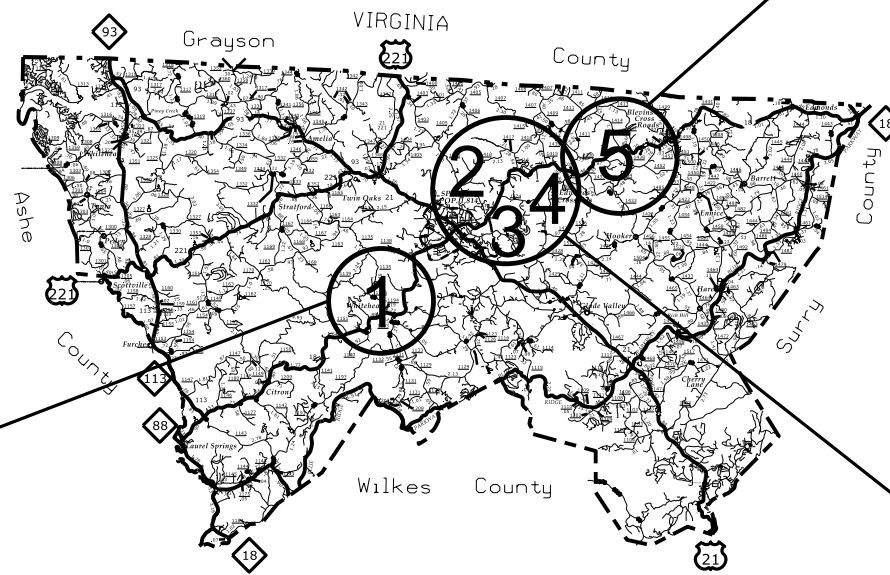
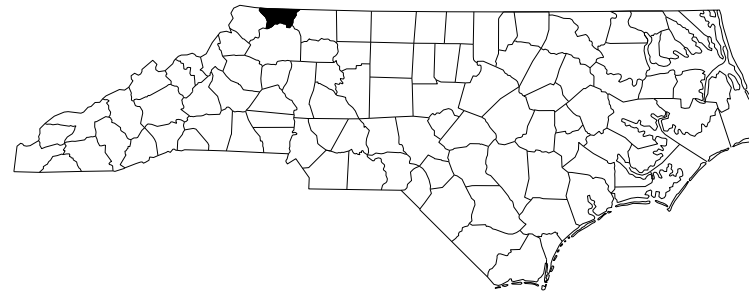
** (Note: Asphalt Ditches may be present on any map. In such cases, the contractor is to clean ditches and refer to the corresponding detail for construction guidance as directed by the engineer.)

ALLEGHANY COUNTY PRIMARY ROADS 2023 ASPHALT RESURFACING													
<table border="1"> <thead> <tr> <th>REVISIONS</th> <th>INT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISIONS	INT.		DATE									
REVISIONS	INT.	DATE											
N.C. DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DIVISION ELEVEN			PREPARED BY: GKirby REVIEWED BY: REVIEWED BY:										

ALLEGHANY COUNTY

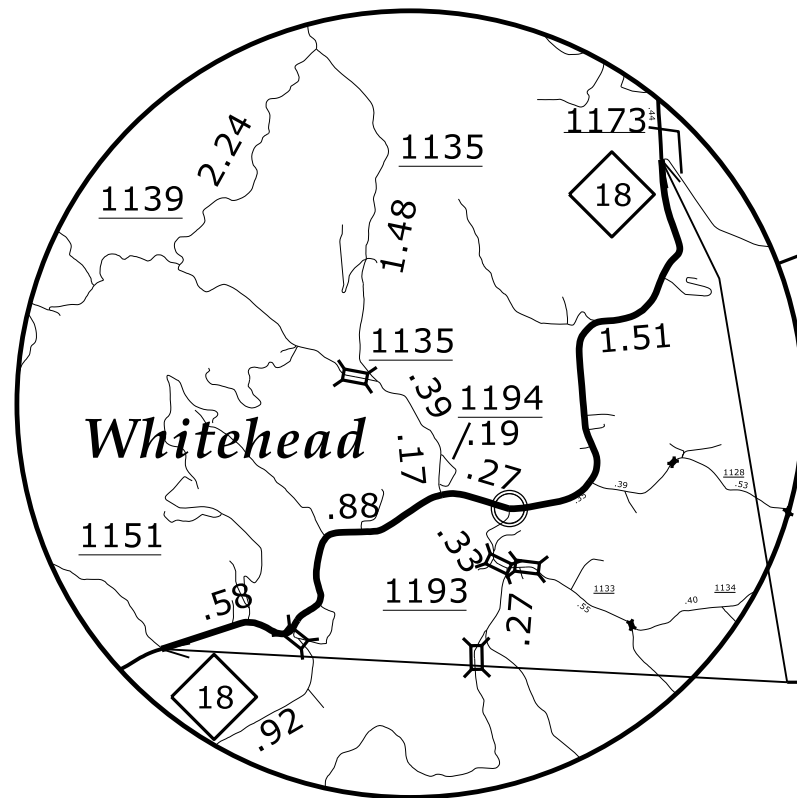
TYPE OF WORK: ASPHALT RESURFACING
MAPS # 1 THROUGH # 5

2023



MAP #5

* NC 18 - (5.44mi.)
(FROM SR 1416 TO SR 1440)

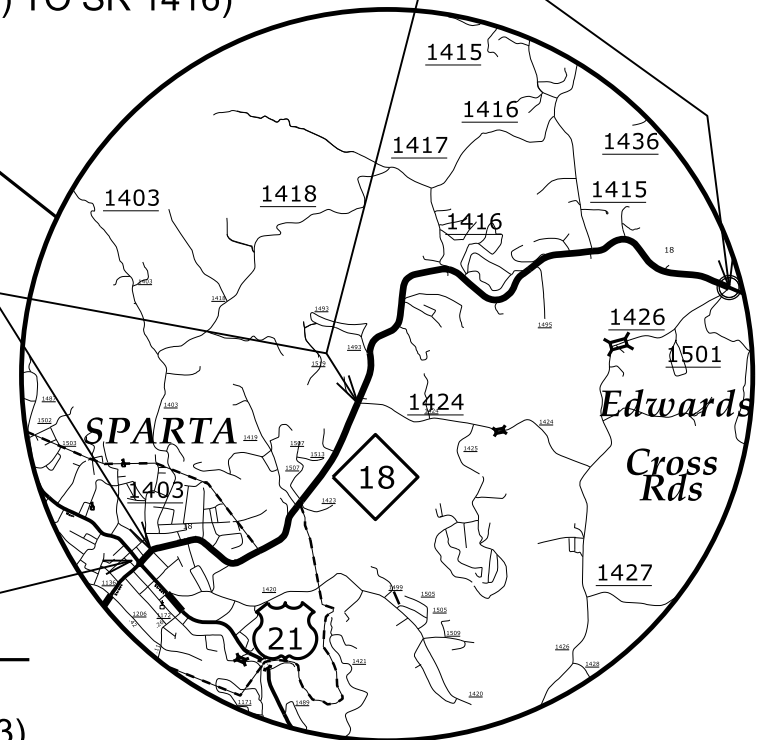


MAP #1

* NC 18 - (3.64mi.)
(FROM SR 1151 TO SR 1173)

MAP #4

* NC 18 - (0.4mi.)
(FROM MAYBERRY FARM
DR (NS) TO SR 1416)



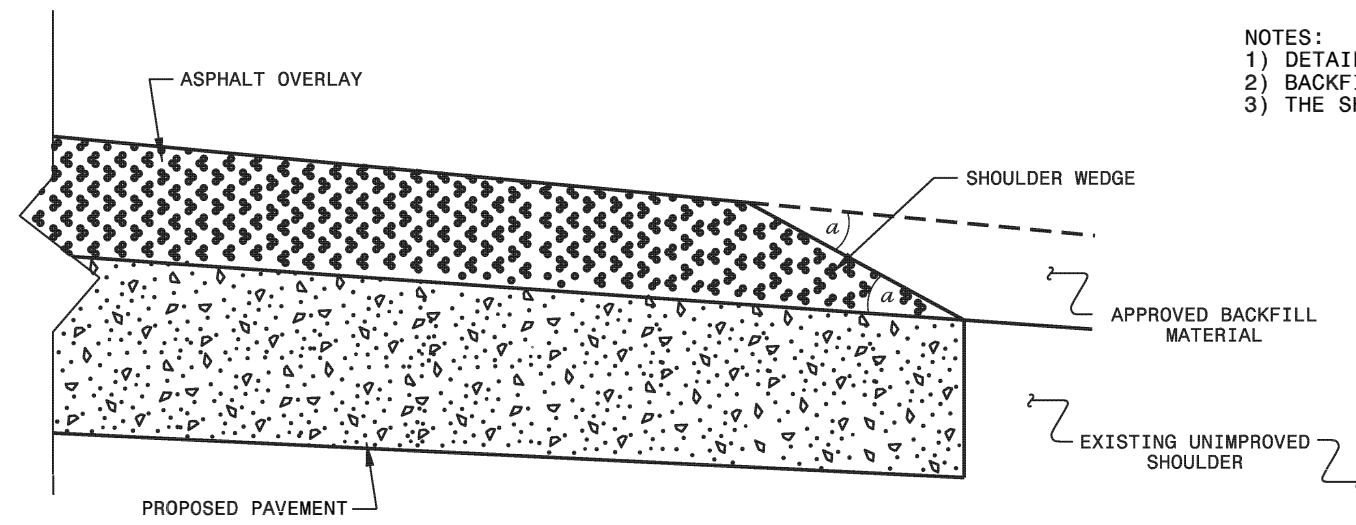
MAP #2

* NC 18 - (0.09mi.)
(FROM US 21 TO SR 1403)

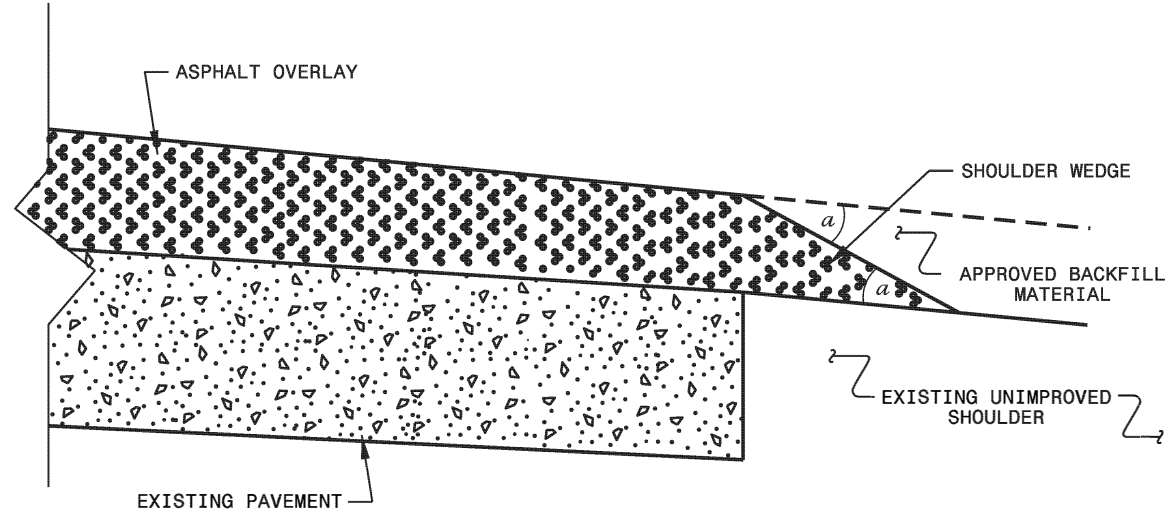
MAP #3

* NC 18 - (2.49mi.)
(FROM SR 1403 TO MAYBERRY
FARM DR (NS))

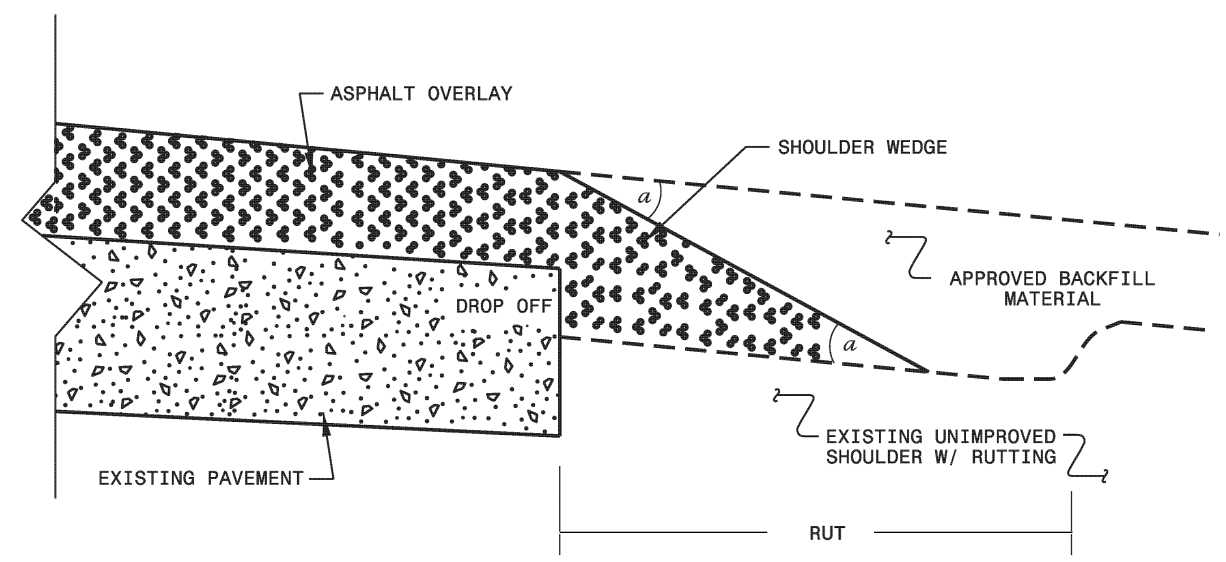
- NOTES:
 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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)

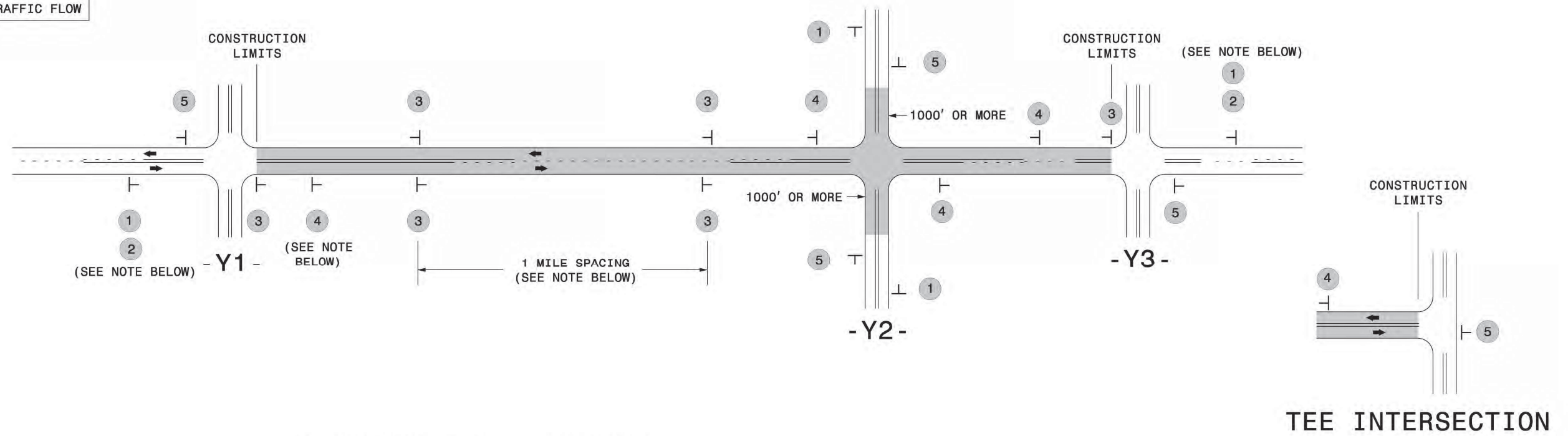
- SHOULDER WEDGE ANGLE = 30°

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: 10/18/12
CHECKED BY:	DATE:
FILE SPEC.: s:\usr\details\stand\shoulderwedgedetail.dgn	

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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.	<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, PORTABLE ADVANCE WARNING 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;"> PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> PLACED 250' IN ADVANCE OF FLAGGER. </div> </div>
	2		#2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)	
	3		- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.	
	4		- 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.	
	5		PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.	

THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

MAPS LESS THAN 2 MILES

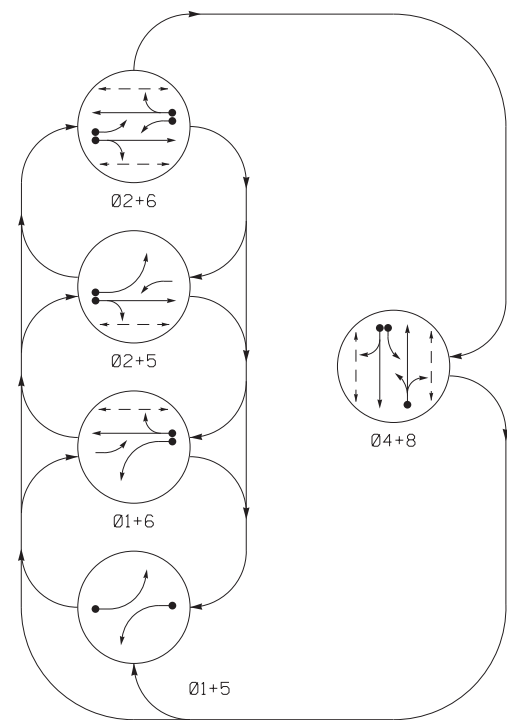
FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.



ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING

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PHASING DIAGRAM

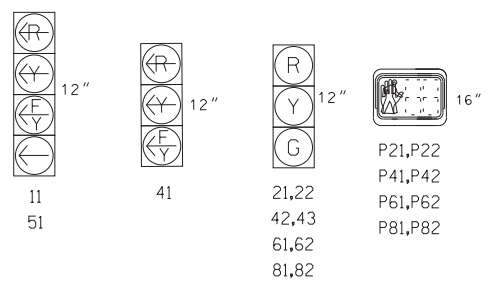


PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- ↔ UNSIGNALIZED MOVEMENT
- ↔ PEDESTRIAN MOVEMENT

SIGNAL FACE I.D.

All Heads L.E.D.



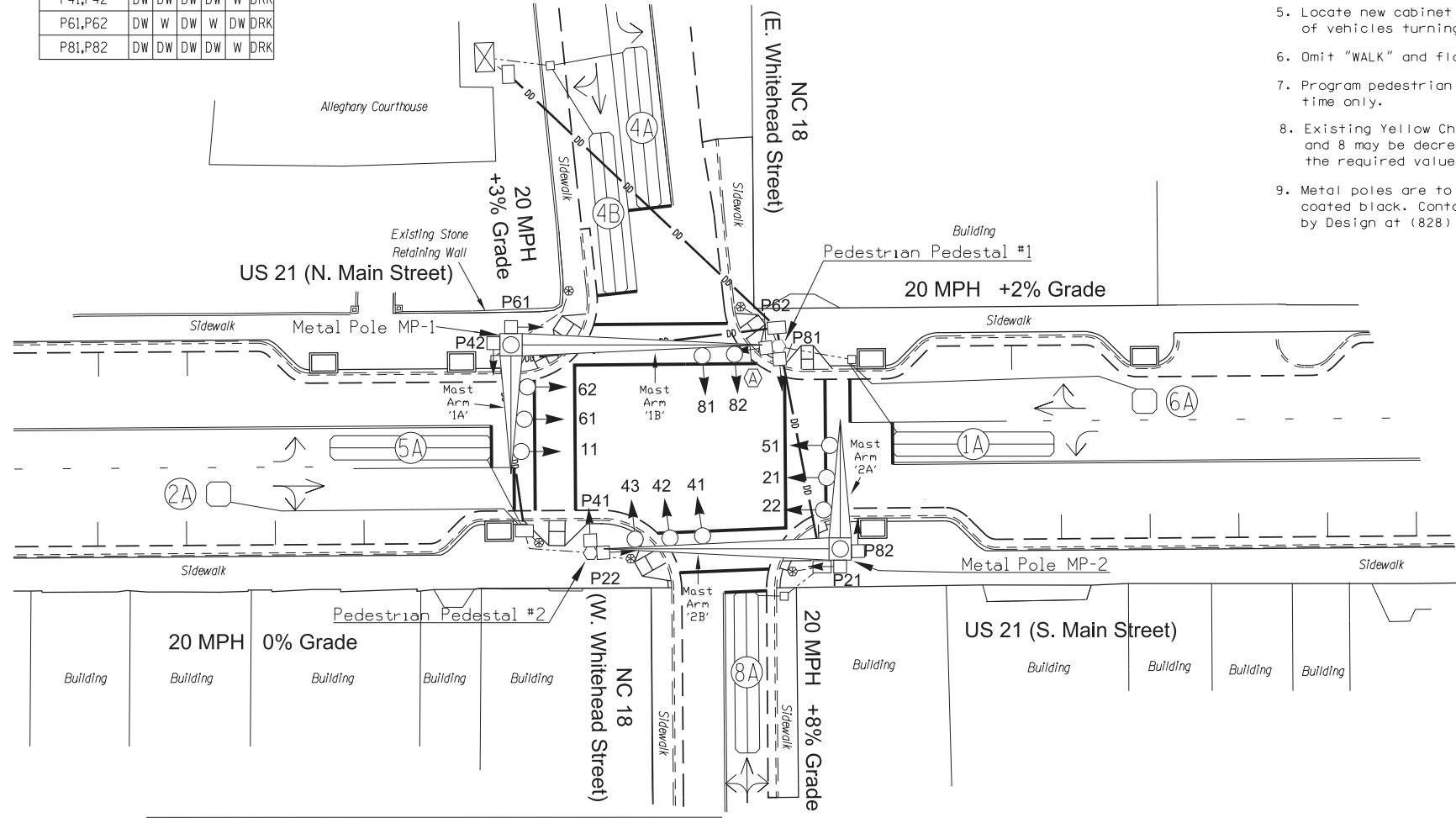
SIGNAL FACE	PHASE					
	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø4+8	Ø1+5
11	←	←	←	←	←	←
21,22	R	R	G	G	R	Y
41	←	←	←	←	←	←
42,43	R	R	R	R	G	R
51	←	←	←	←	←	←
61,62	R	G	R	G	R	Y
81,82	R	R	R	R	G	R
P21,P22	DW	DW	W	W	DW	DRK
P41,P42	DW	DW	DW	DW	W	DRK
P61,P62	DW	W	DW	W	DW	DRK
P81,P82	DW	DW	DW	DW	W	DRK

OASIS 2070 LOOP & DETECTOR INSTALLATION CHART												
INDUCTIVE LOOPS				DETECTOR PROGRAMMING								
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	Y	1	Y	Y	-	-	15	-	Y
2A	6X6	70	3	Y	2	Y	Y	-	-	-	-	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	3	-	Y
4B	6X40	0	2-4-2	Y	4	Y	Y	-	-	10	-	Y
5A	6X40	0	2-4-2	Y	5	Y	Y	-	-	15	-	Y
6A	6X6	70	3	Y	2	Y	Y	-	-	-	-	Y
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	5	-	Y

5 Phase Fully Actuated (Isolated)

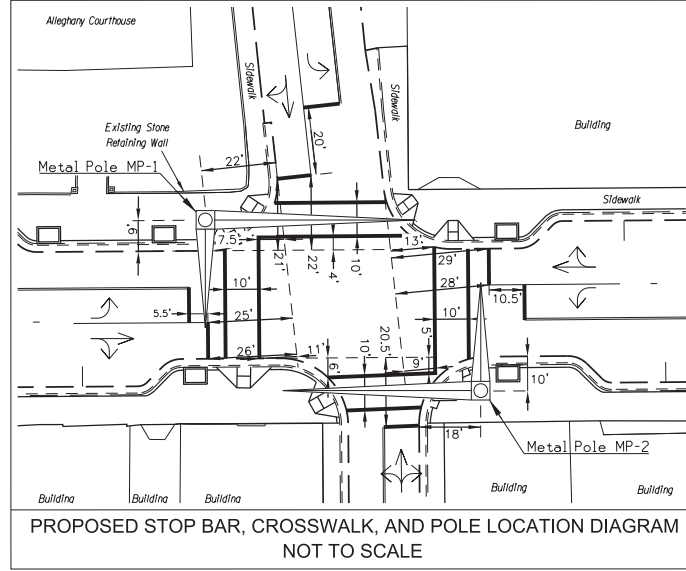
NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018, "Standard Specifications for Roads and Structures" dated January 2018, and all applicable sections of the latest version of the generic Project Special Provisions. The PSP can be accessed at the following website: "http://connect.ncdot.gov/resources/safety/pages/its-and-signals.aspx"
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or 5 may be lagged.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Existing Yellow Change Interval for phases 1, 2, 4, 5, 6, and 8 may be decreased by 0.2 seconds per week until the required value is reached.
- Metal poles are to be of a decorative style and powder coated black. Contact Teresa Buckwalter of Destination by Design at (828) 719-0177 prior to ordering poles.



OASIS 2070 TIMING CHART							
FEATURE	PHASE						
	1	2	4	5	6	8	
Min Green 1*	7	10	7	7	10	7	
Extension 1*	2.0	3.0	2.0	2.0	3.0	2.0	
Max Green 1*	15	45	25	15	45	25	
Yellow Clearance	3.0	3.0	3.0	3.0	3.0	3.0	
Red Clearance	2.3	2.8	3.3	2.8	2.8	3.3	
Walk 1*	-	4	4	-	4	4	
Don't Walk 1	-	5	7	-	9	7	
Seconds Per Actuation*	-	-	-	-	-	-	
Max Variable Initial*	-	-	-	-	-	-	
Time Before Reduction*	-	-	-	-	-	-	
Time To Reduce*	-	-	-	-	-	-	
Minimum Gap	-	-	-	-	-	-	
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-	
Vehicle Call Memory	-	YELLOW	-	-	YELLOW	-	
Dual Entry	-	-	ON	-	-	ON	
Simultaneous Gap	ON	ON	ON	ON	ON	ON	

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.



NC Dept of Transportation
Division of Highways
Final Drawing Date: 09/07/2018
ITS & Signals Unit

DAVENPORT
HOME OFFICE:
119 BROOKSTOWN AVENUE, SUITE PH1
WINSTON-SALEM, NC 27101
336.744.1636 www.davenportworld.com
NCBELS FIRM LICENSE NO. C-2522

Project #: 13-045

Signal Upgrade

Prepared For:
US 21 (Main Street) at NC 18 (Whitehead Street)
Division 11 Allegheny County Sparta
PLAN DATE: August 2018 REVIEWED BY: L. Boyer
PREPARED BY: K. Morse REVIEWED BY:
REVISIONS: INIT. DATE
08/28/2018
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
L. BOYER
030912
SIG. INVENTORY NO. 11-0926

LEGEND	
PROPOSED	EXISTING
○ → Traffic Signal Head	● → Traffic Signal Head
○ → Modified Signal Head	N/A
○ → Sign	N/A
○ → Pedestrian Signal Head With Push Button & Sign	N/A
○ → Metal Pole with Mastarm	N/A
○ → Type I Signal Pedestal	N/A
○ → Type II Signal Pedestal	N/A
○ → Inductive Loop Detector	N/A
○ → Controller & Cabinet	N/A
○ → Junction Box	N/A
○ → Oversize Junction Box	N/A
○ → 2-in Underground Conduit	N/A
○ → Directional Drill	N/A
○ → Directional Arrow	N/A
○ → "NO TURN ON RED" Sign (R10-11)	N/A
N/A	○ → Curb Ramp