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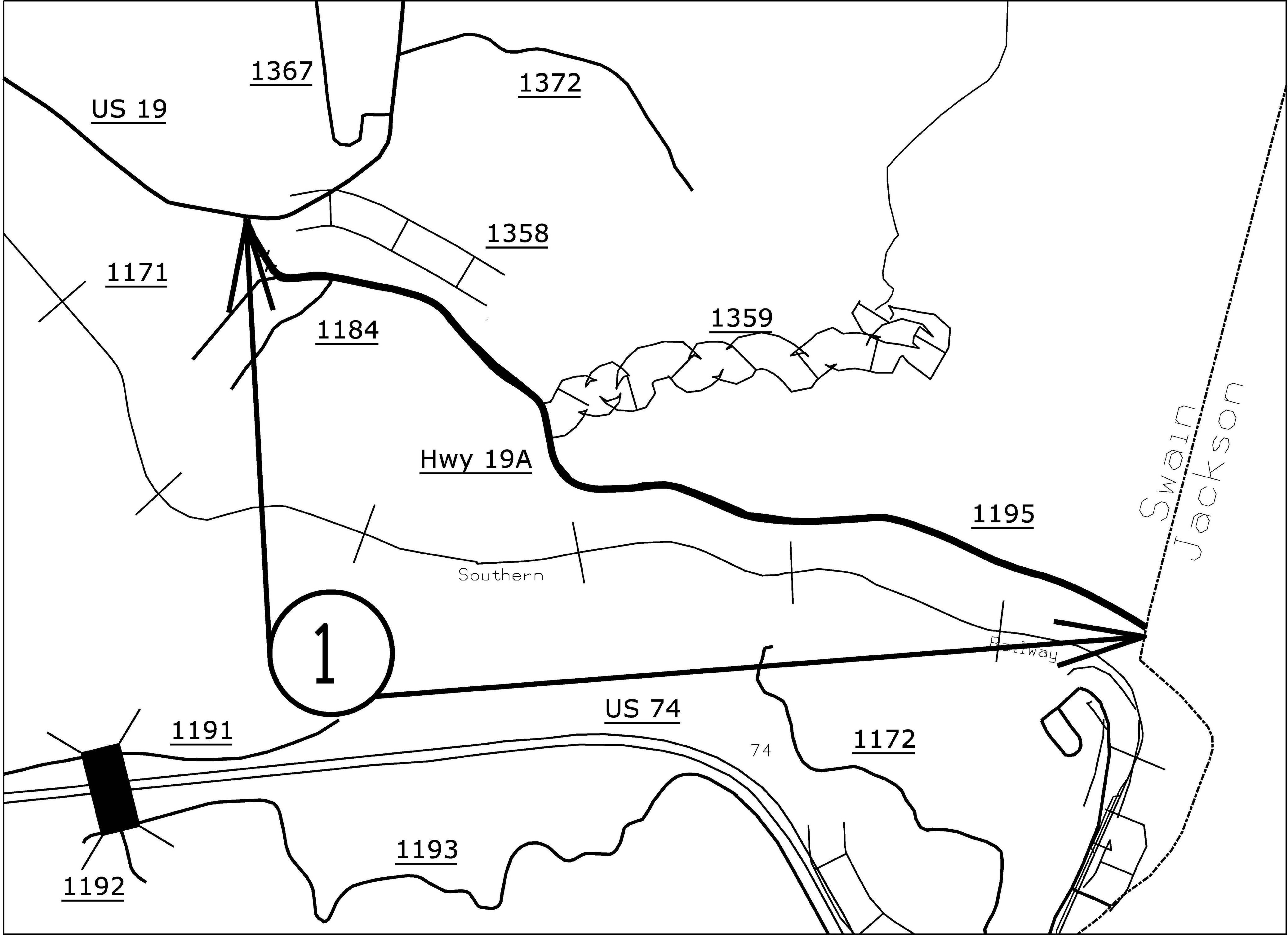
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09/09/09

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	2027CPT.14.04.10381	1	14
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
2027CPT.14.04.20871			

SWAIN COUNTY



MAP 1



BEG



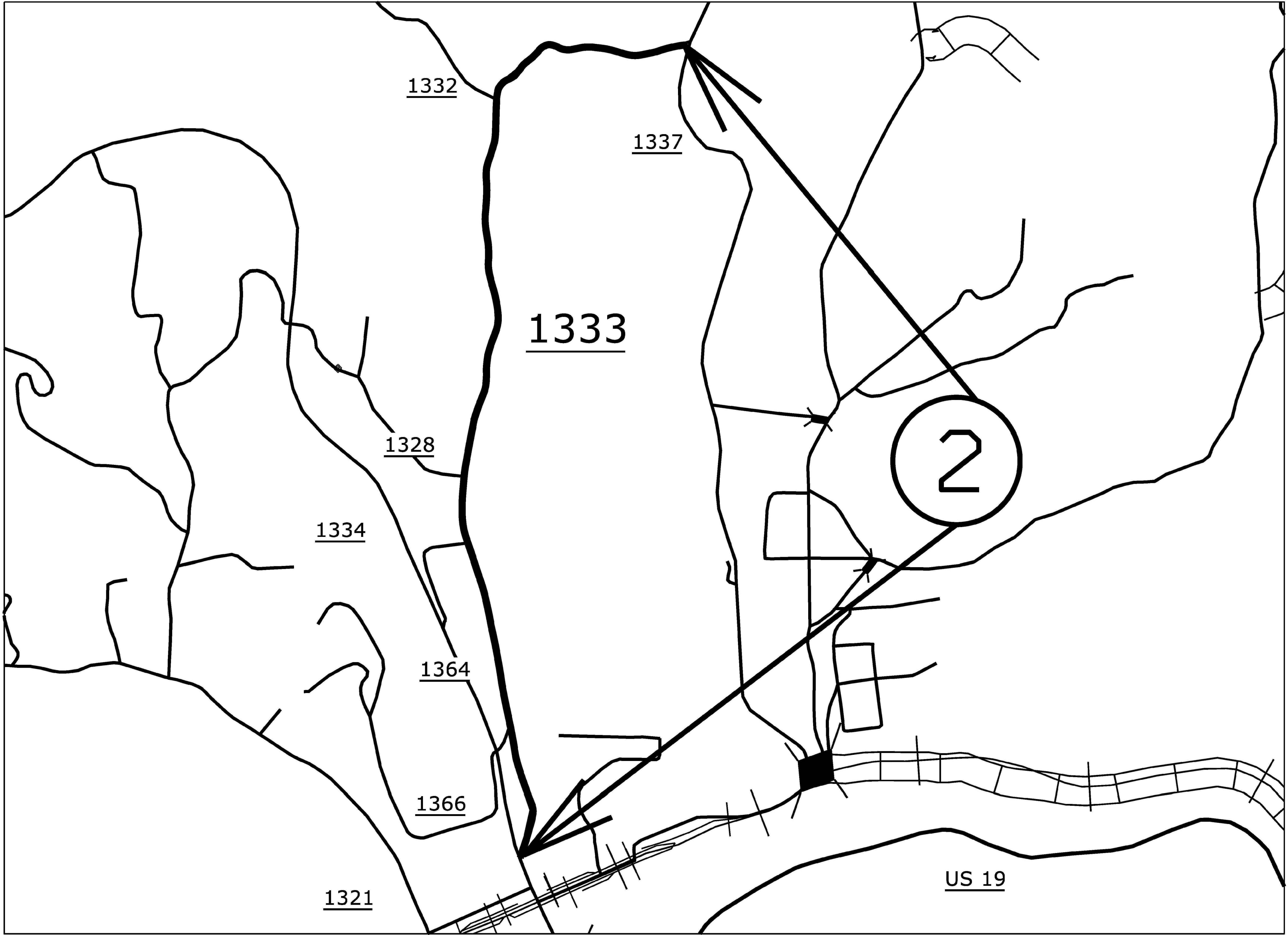
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CONTRACT: DN01169

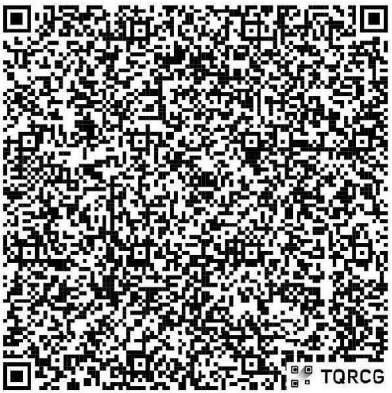
CONTRACT: DN01169

SWAIN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	2027CPT.14.04.10381	2	14
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
2027CPT.14.04.20871			



MAP 2



BEG

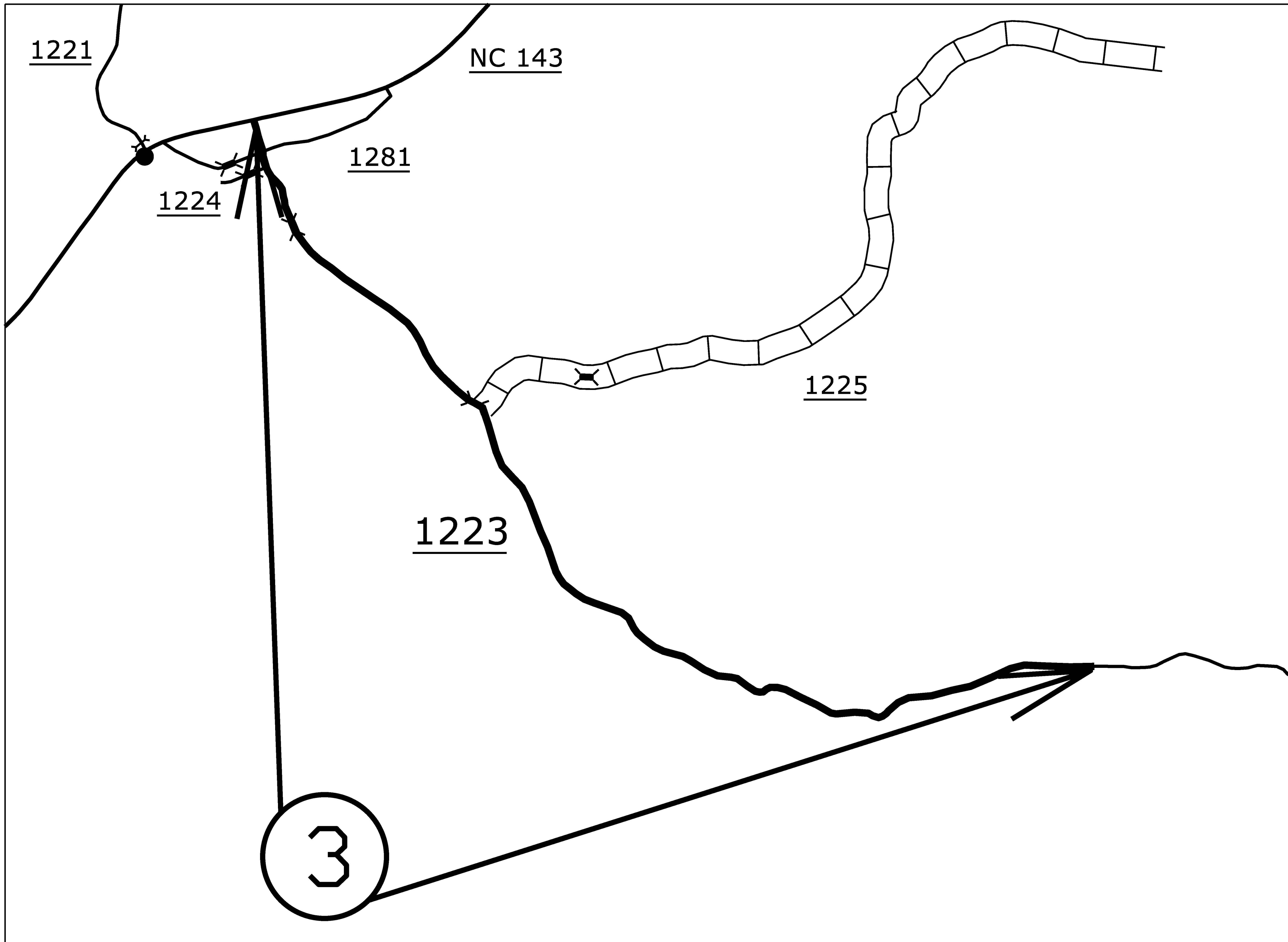


END

CONTRACT: DN01169

GRAHAM COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	2027CPT.14.04.10381	3	14
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
2027CPT.14.04.20381			



MAP 3



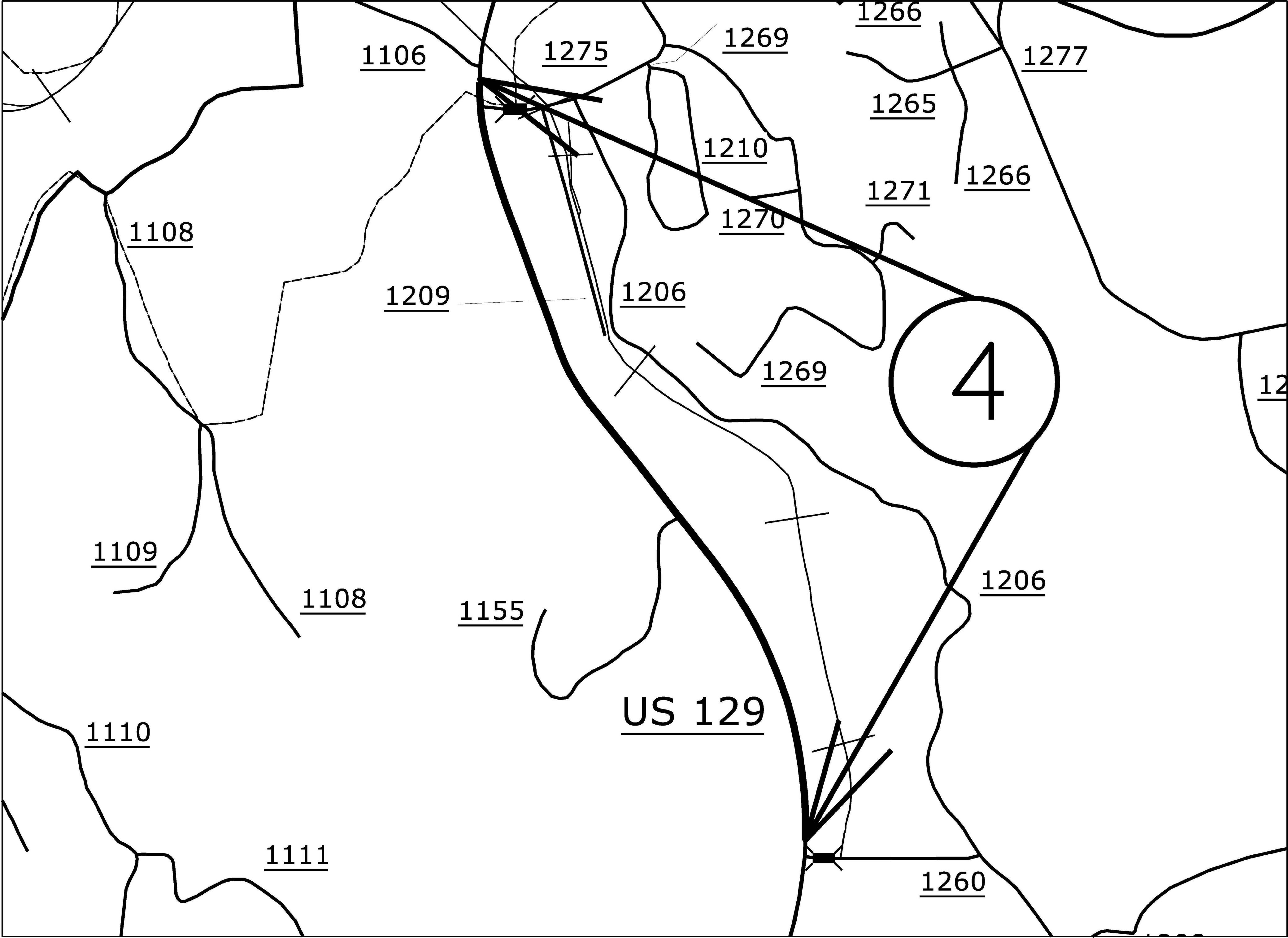
BEG



END

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	2027CPT.14.04.10381	4	14
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	

GRAHAM COUNTY



MAP 4



BEG

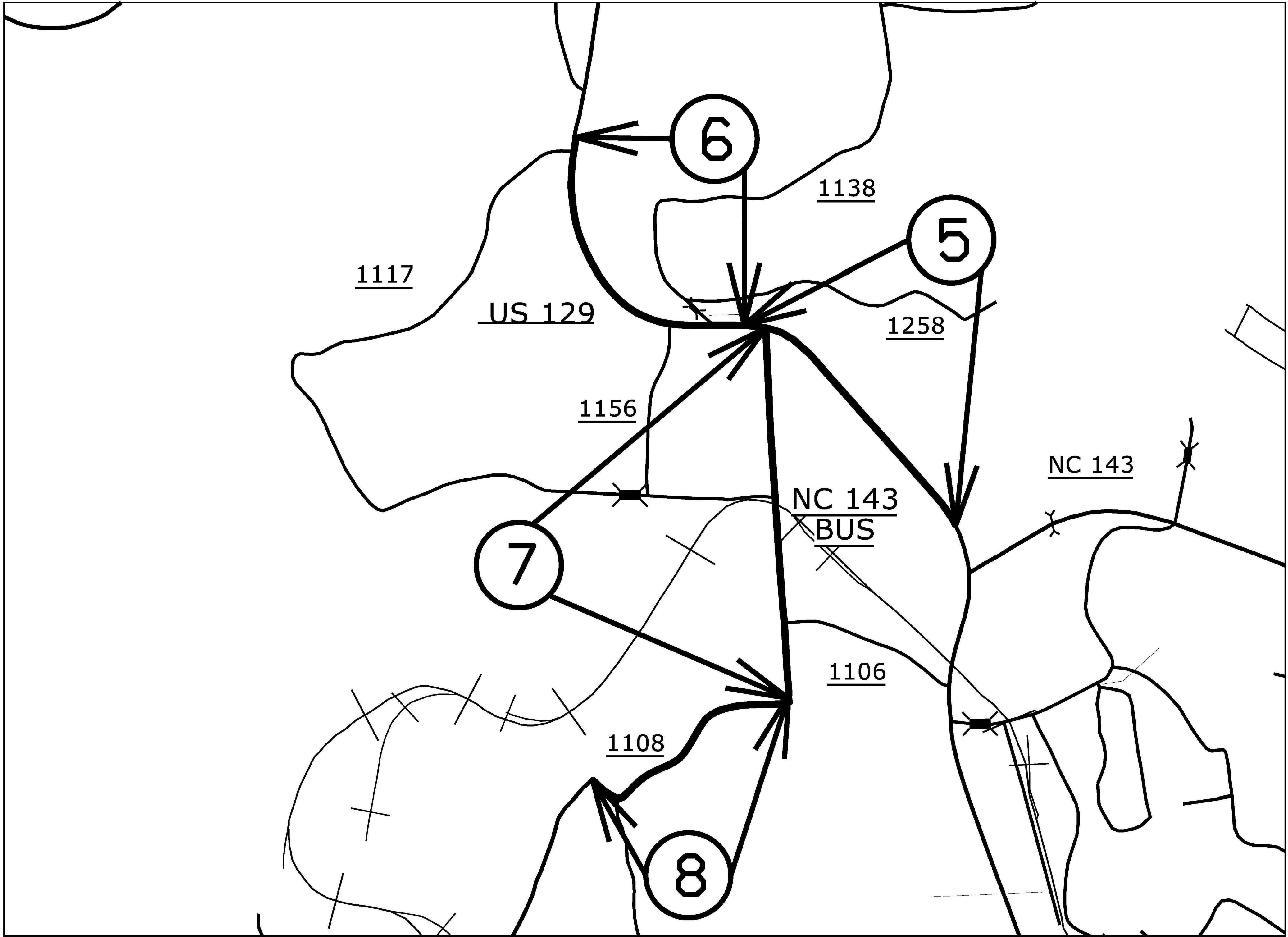


END

CONTRACT: DN01169

GRAHAM COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	2027CPT.14.04.10381	5	14
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	



MAP 5

MAP 6



BEG

END

BEG

END

MAP 7

MAP 8



BEG

END

BEG

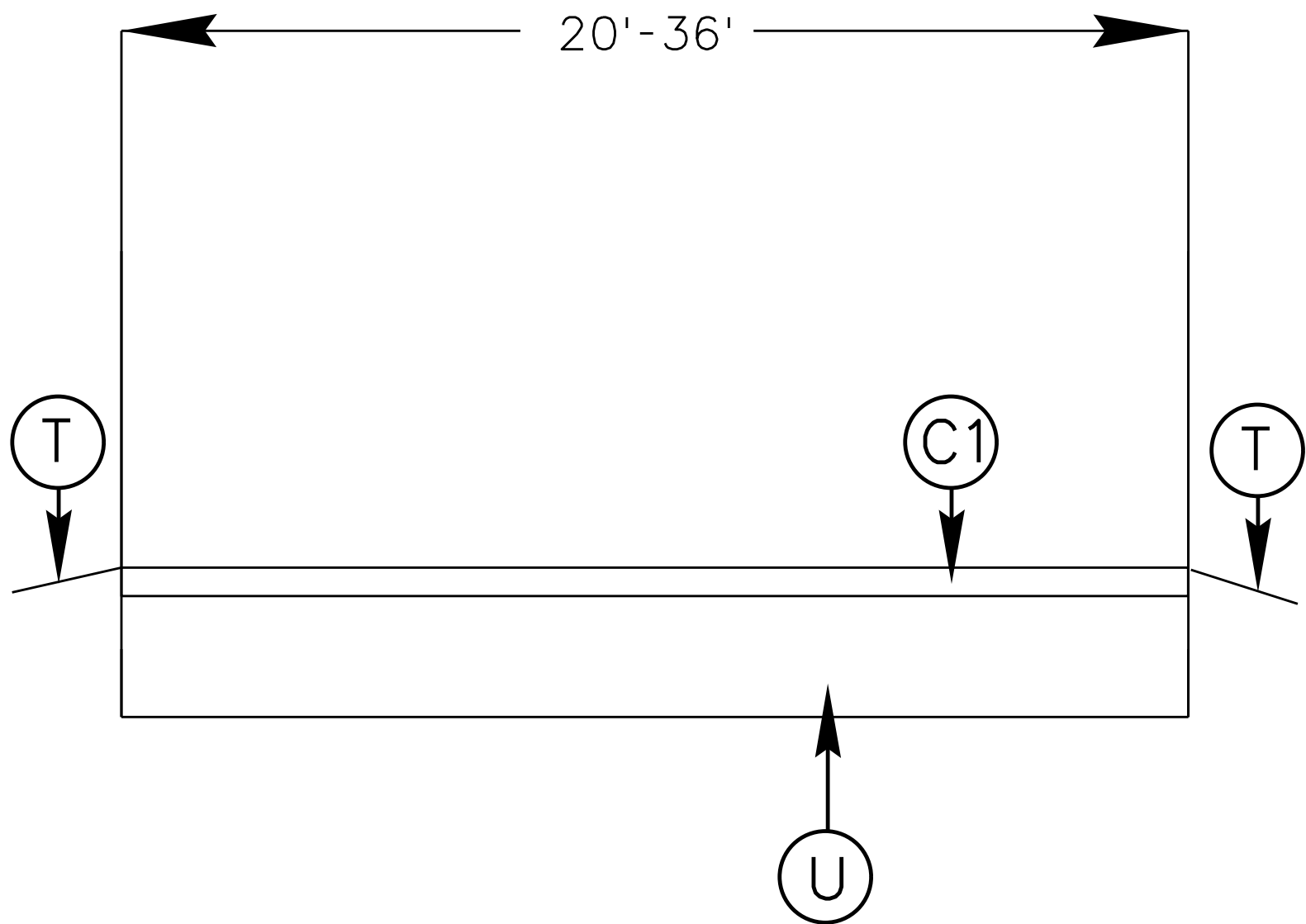
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05/08/99

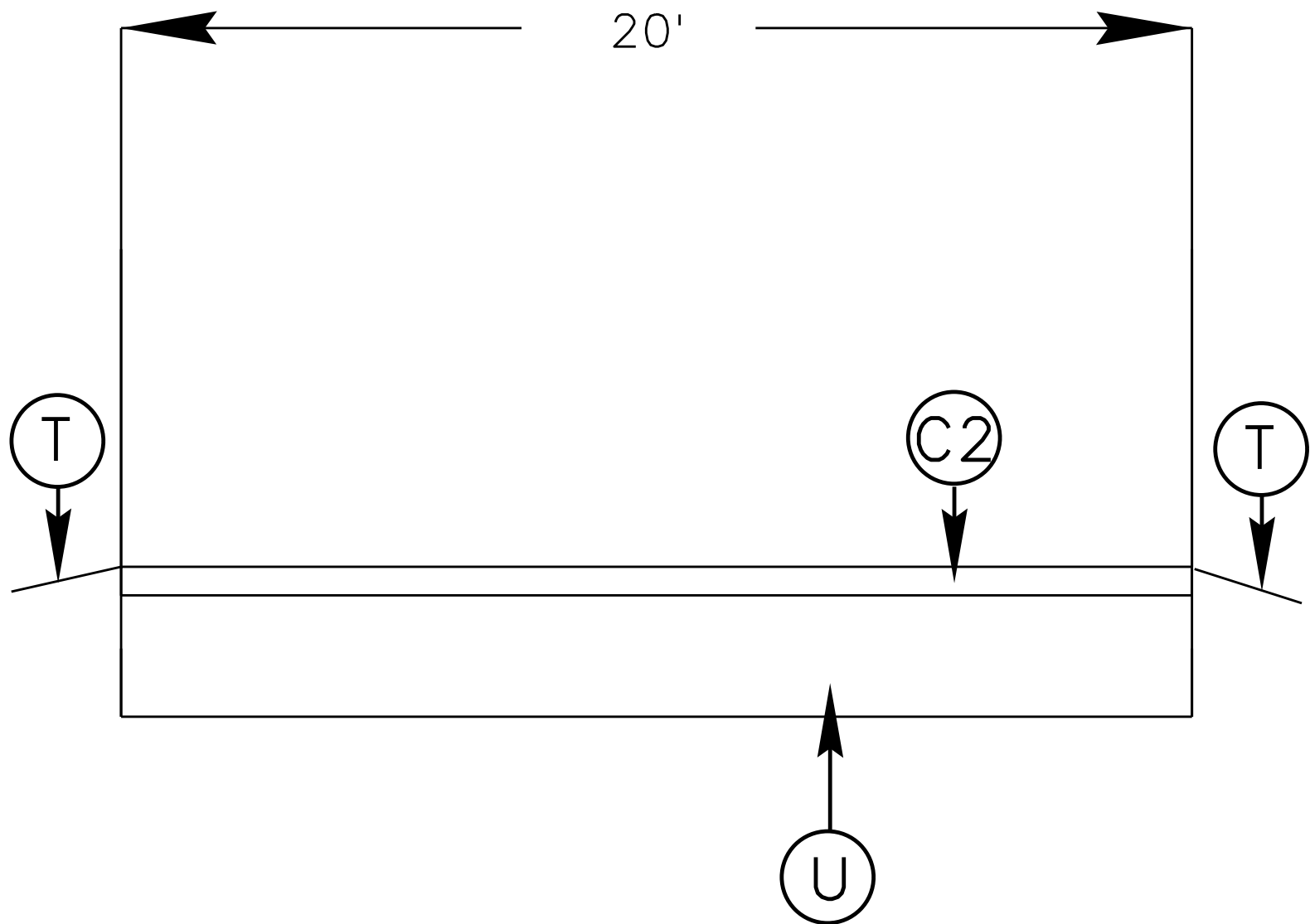
CONTRACT: DN01169

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	2027CPT.14.04.10381	6	14
STATE PROJ. NO.		F. A. PROJ. NO.	DESCRIPTION
2027CPT.14.04.20381			
2027CPT.14.04.20871			

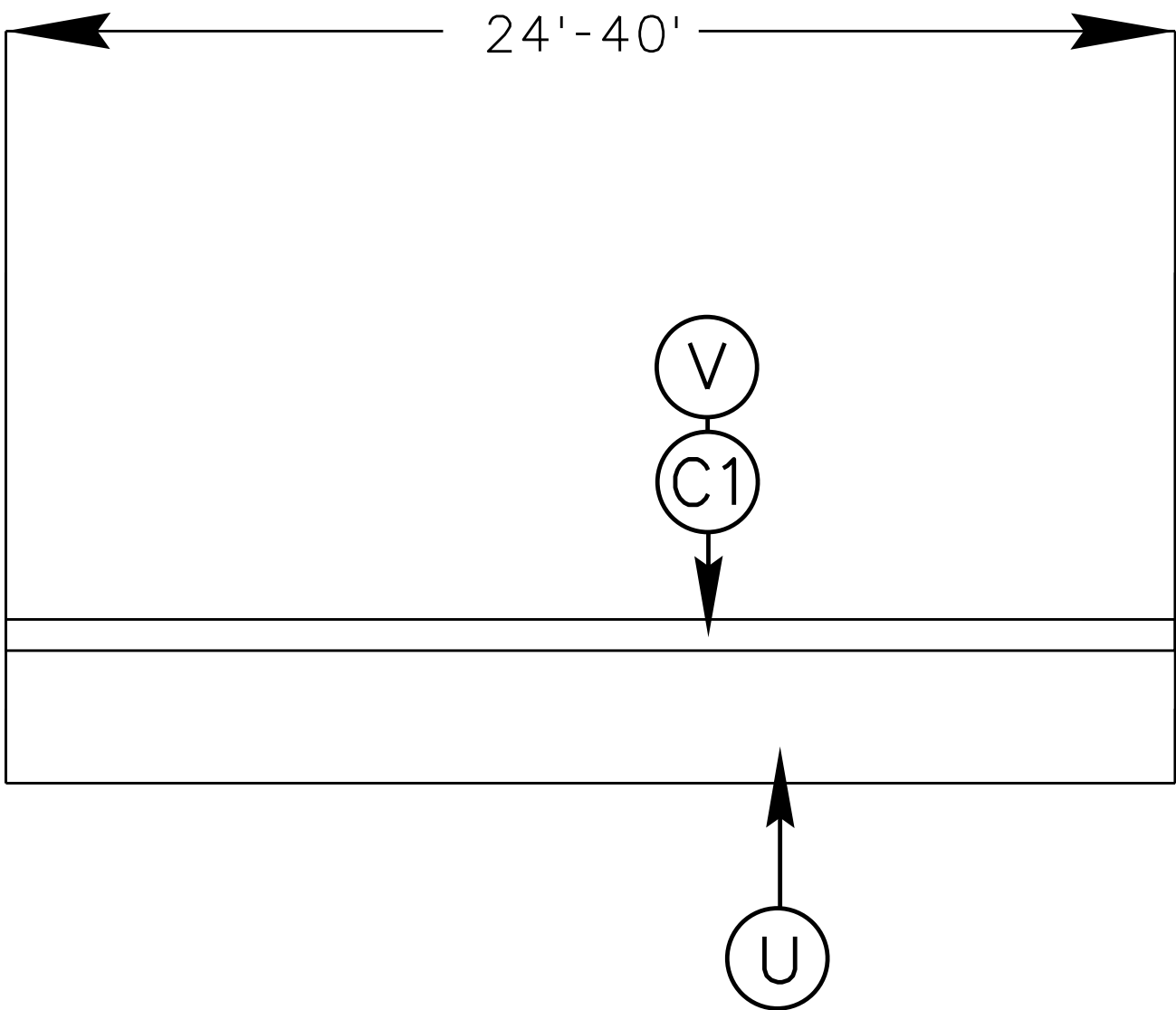
TYPICAL 1



TYPICAL 2



TYPICAL 3



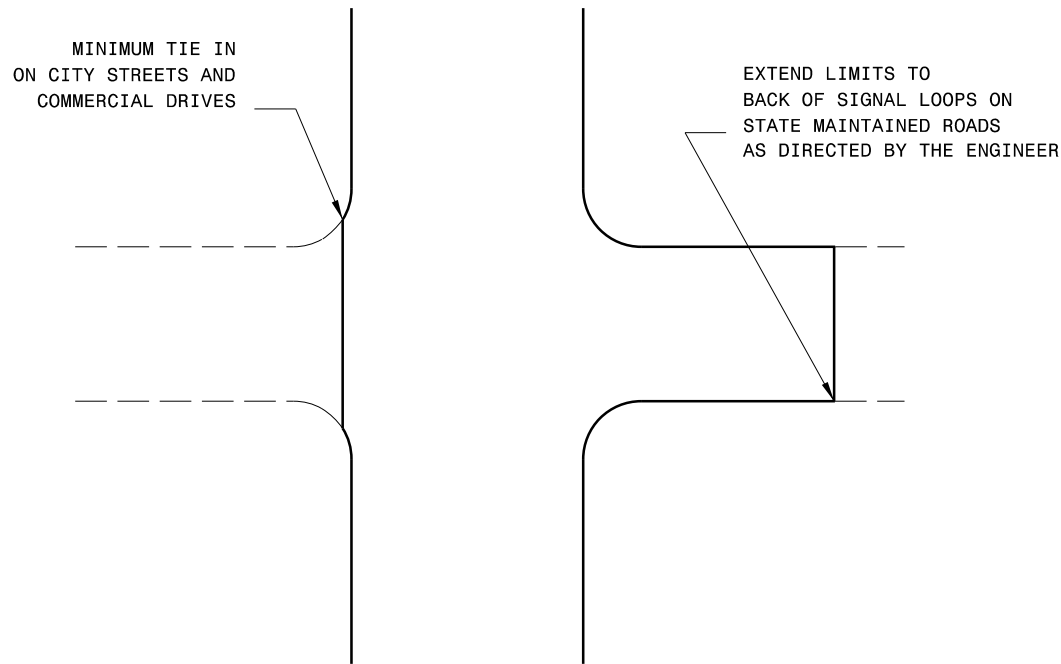
SURFACING SCHEDULE

C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168LBS. PER SQ. YD.
C2	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 138LBS. PER SQ. YD.
T	SHOULDER RECONSTRUCTION WITH ASB. 2' WIDE UNLESS DIRECTED BY PROJECT ENGINEER -SEE PROJECT SPECIAL PROVISIONS-
U	EXISTING PAVEMENT
V	MILLED ASPHALT PAVEMENT 1 1/2" IN DEPTH IN LOCATIONS AS DIRECTED BY PROJECT ENGINEER

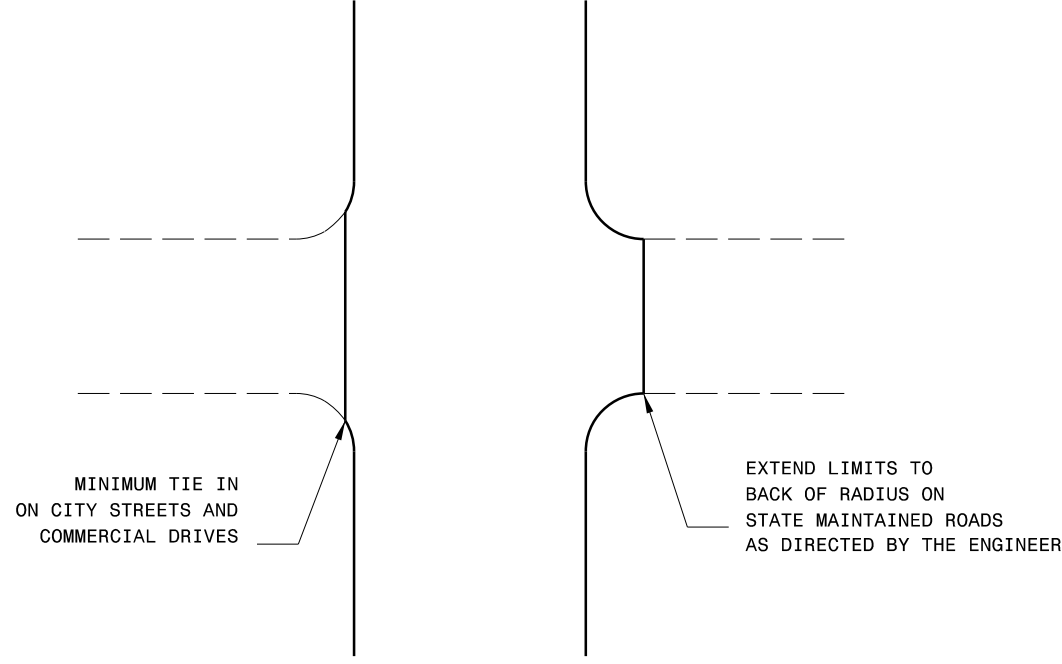
CONTRACT: DN01169

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	2027CPT.14.04.10381	7	14
STATE PROJ. NO.		F. A. PROJ. NO.	DESCRIPTION
2027CPT.14.04.20381			
2027CPT.14.04.20871			

Bridge Structure Table							
Map #	Route No.	Road Name	County	Structure No.	Posted SV (Tons)	Posted TTST (Tons)	Paving Across Bridge
1	SR-1195	Highway 19A	Swain	860161	99	99	No
3	SR-1223	Beech Creek Rd	Graham	370028	99	99	Yes
3	SR-1223	Beech Creek Rd	Graham	370049	99	99	Yes



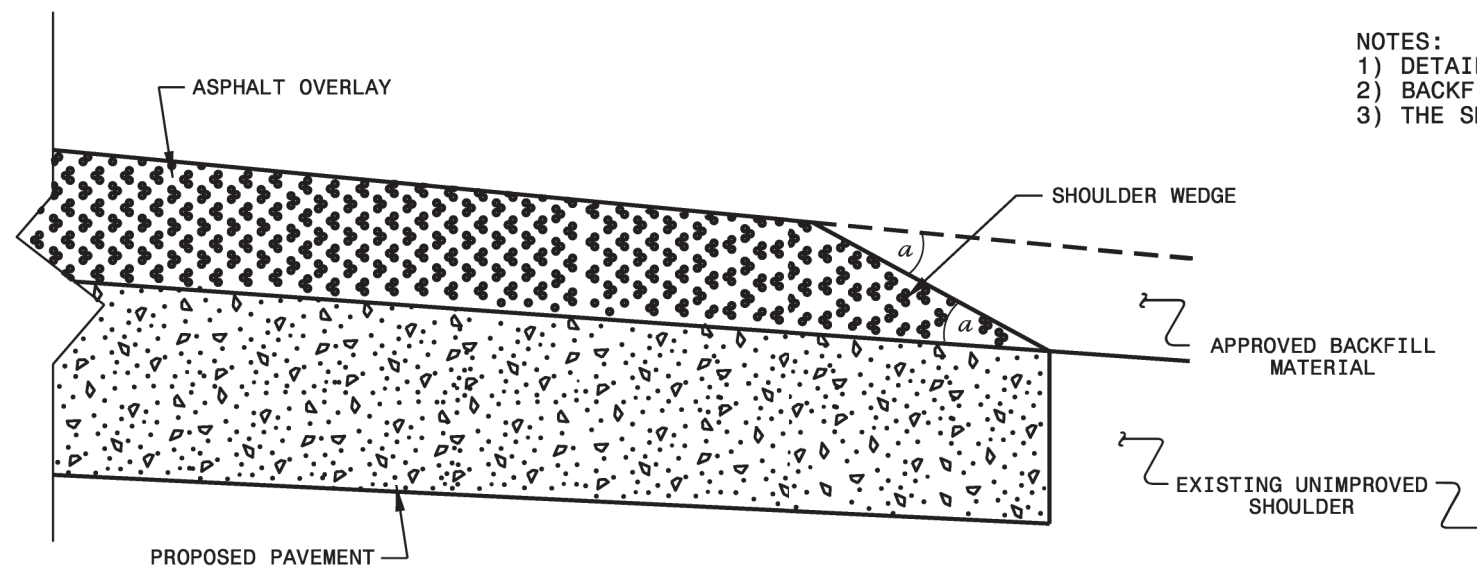
TYPICAL DETAIL OF PROJECT LIMITS AT
SIGNALIZED Y LINES



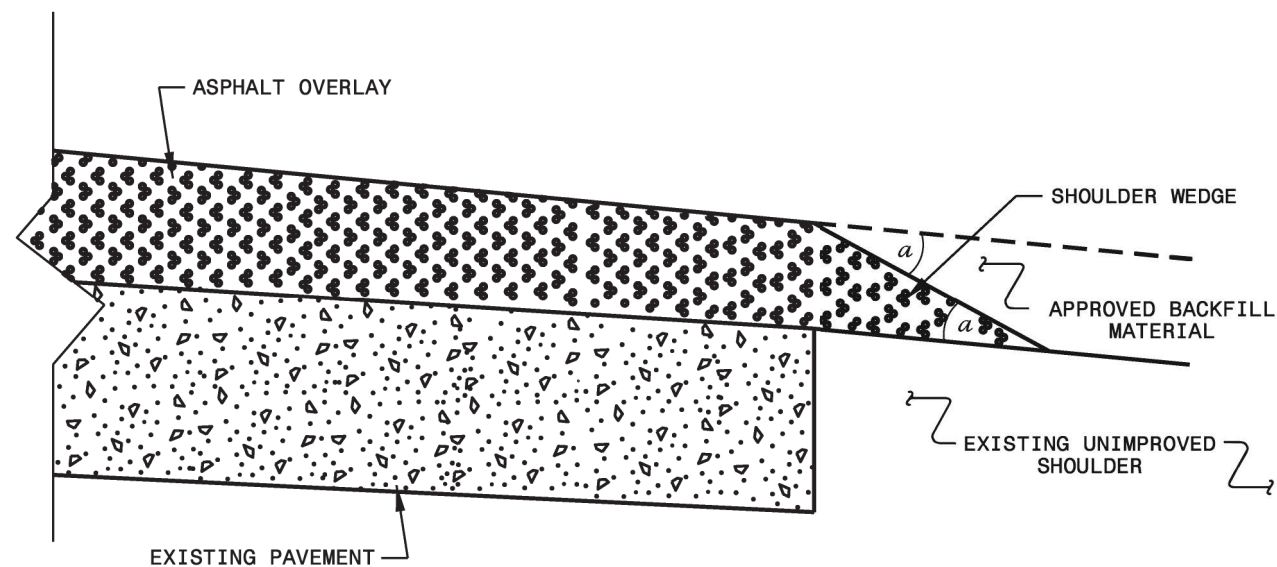
TYPICAL DETAIL OF PROJECT LIMITS AT
UNSIGNALIZED Y LINES

ADDITIONAL INTERSECTIONS (NON-TYPICAL)		
Extend paving limits to back of radius or loop on the following intersections:		
MAP#	STREET NAME	COMMENTS
4	Woodland Hights	52ft from Intersection
4	Airport Rd	55ft from Intersection
5	North Main Street	58ft from Intersection
5	Black Knight Way	65ft from Intersection
5	Laura Street	50ft from Intersection
6	Old Hwy 129	62ft from Intersection
6	Knight St	64ft from Intersection
6	Moose Branch Rd	50ft from Intersection
8	Circle Street	40ft from Intersection
8	South Main St	65ft from Intersection
8	Morphew	40ft from Intersection
8	Eller Branch Rd	100ft from Intersection

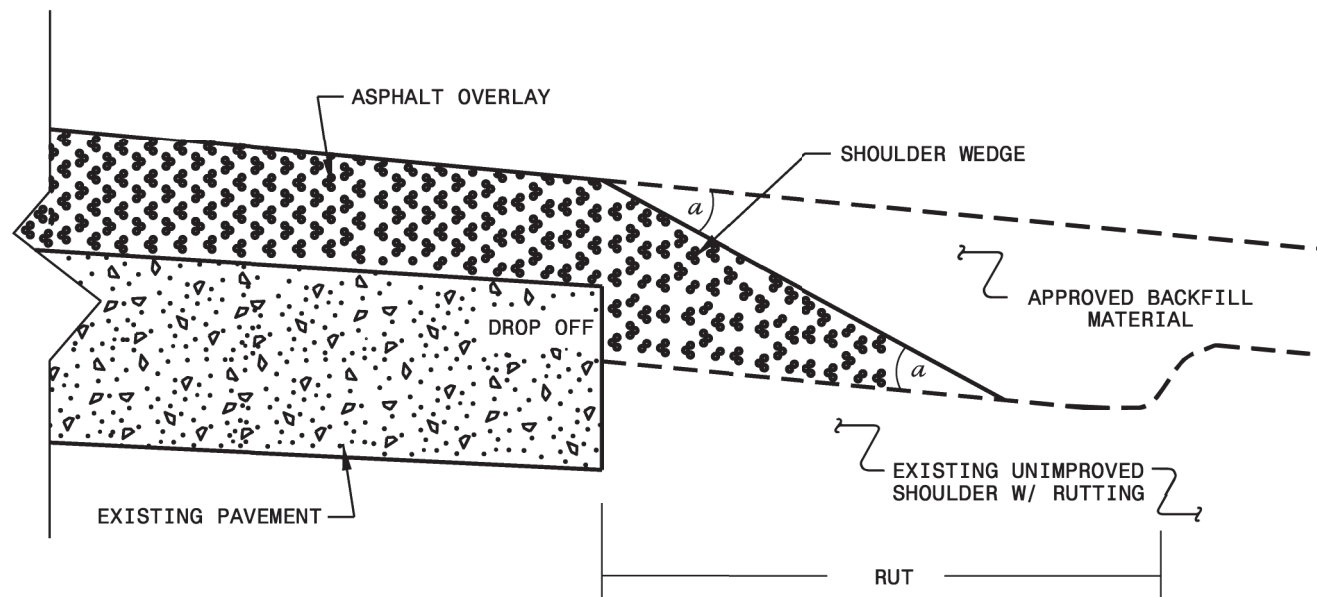
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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**

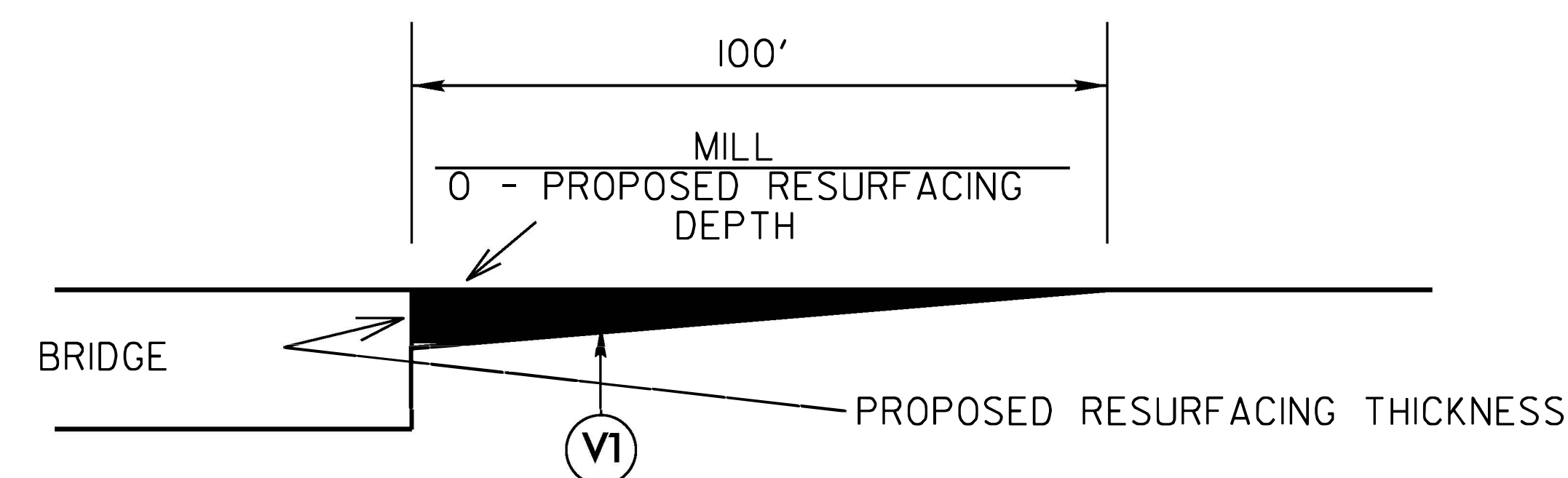
ORIGINAL BY: T. SPELL DATE: 7-19-11
MODIFIED BY: DATE: 10/16/12
CHECKED BY: DATE:
FILE SPEC.: s:\usr\det-alls\stand\shoulderwed_detail.dgn

SYSTEMS
DESIGN
CONSULTANTS
INC.

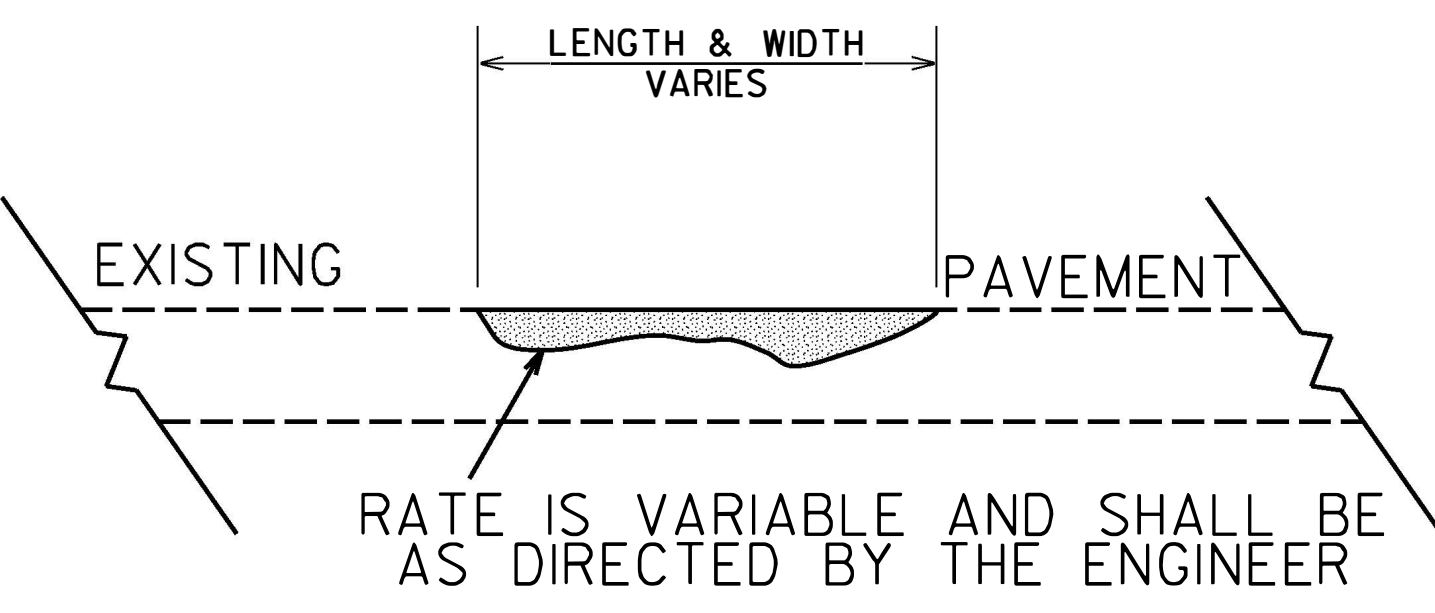
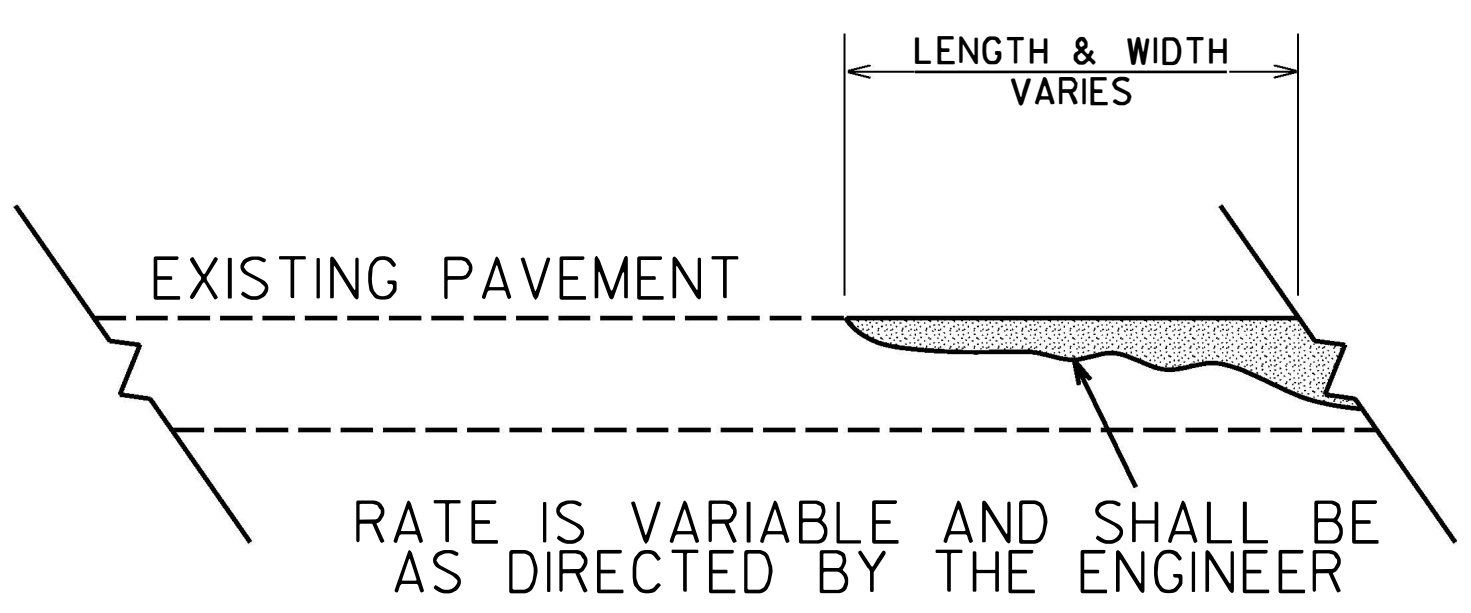
CONTRACT: DN01169

09/08/09

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	2027CPT.14.04.10381	10	14
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
2027CPT.14.04.20381			
2027CPT.14.04.20871			

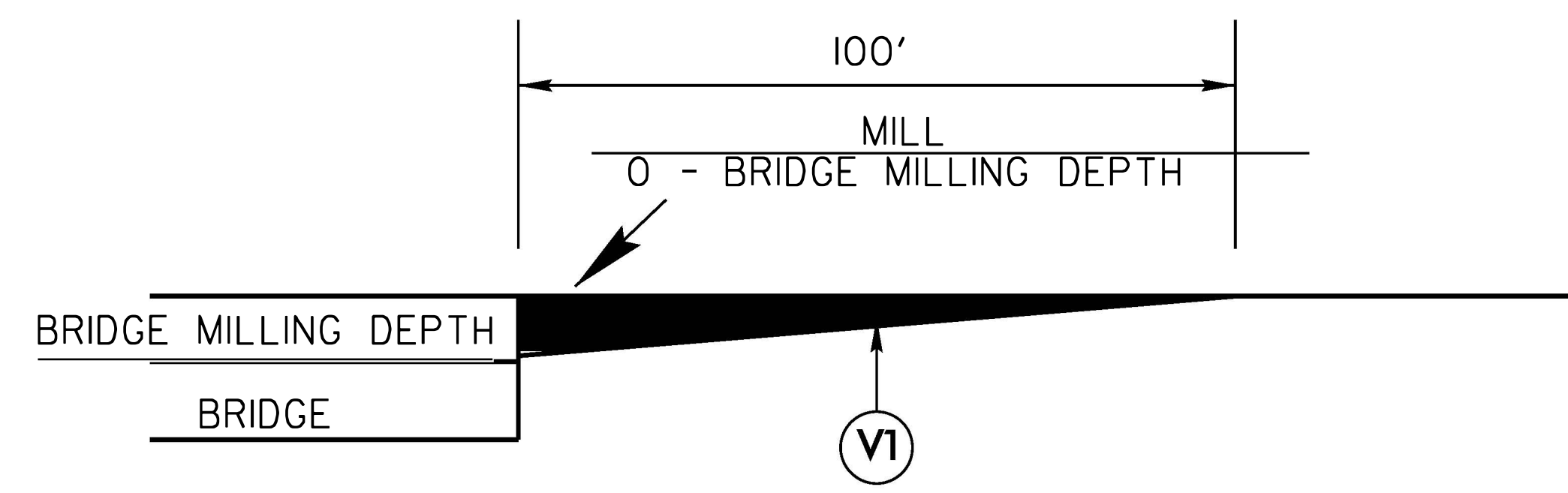


MILLING DETAIL AT BRIDGE APPROACHES
WHERE BRIDGES WILL NOT BE RESURFACED.
THIS WILL BE PAID FOR AS INCIDENTAL
MILLING.

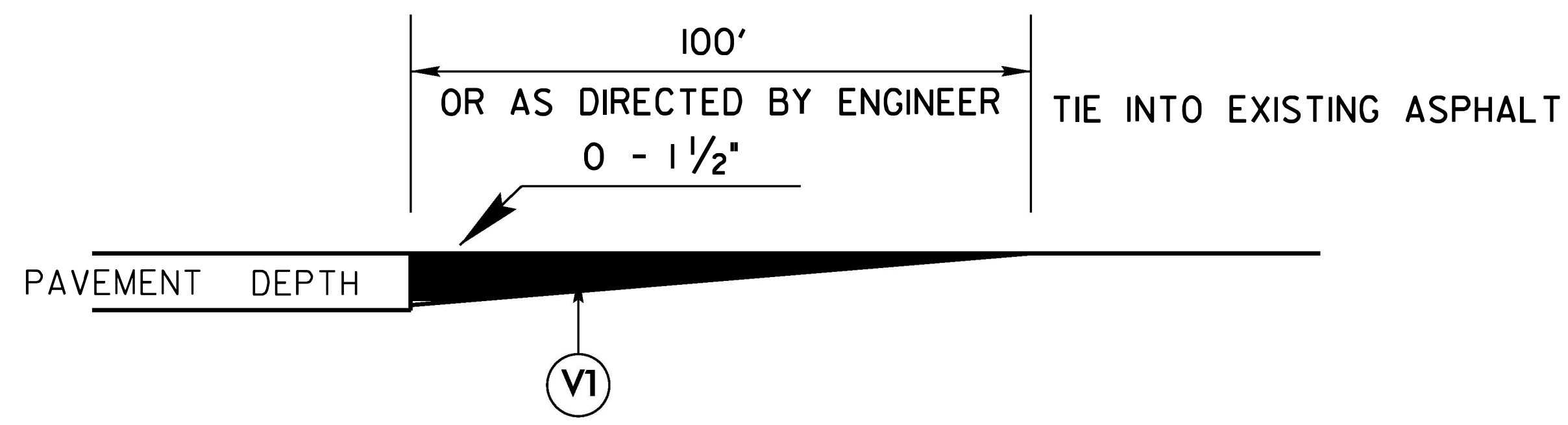


DETAIL SHOWING METHOD OF WEDGING

***PROPOSED WEDGE COURSE* (114 LBS PER SQ YARD PER 1" DEPTH)**



MILLING DETAIL AT BRIDGE APPROACHES
WHERE BRIDGES WILL BE MILLED THEN RESURFACED.
THIS WILL BE PAID FOR AS INCIDENTAL MILLING.



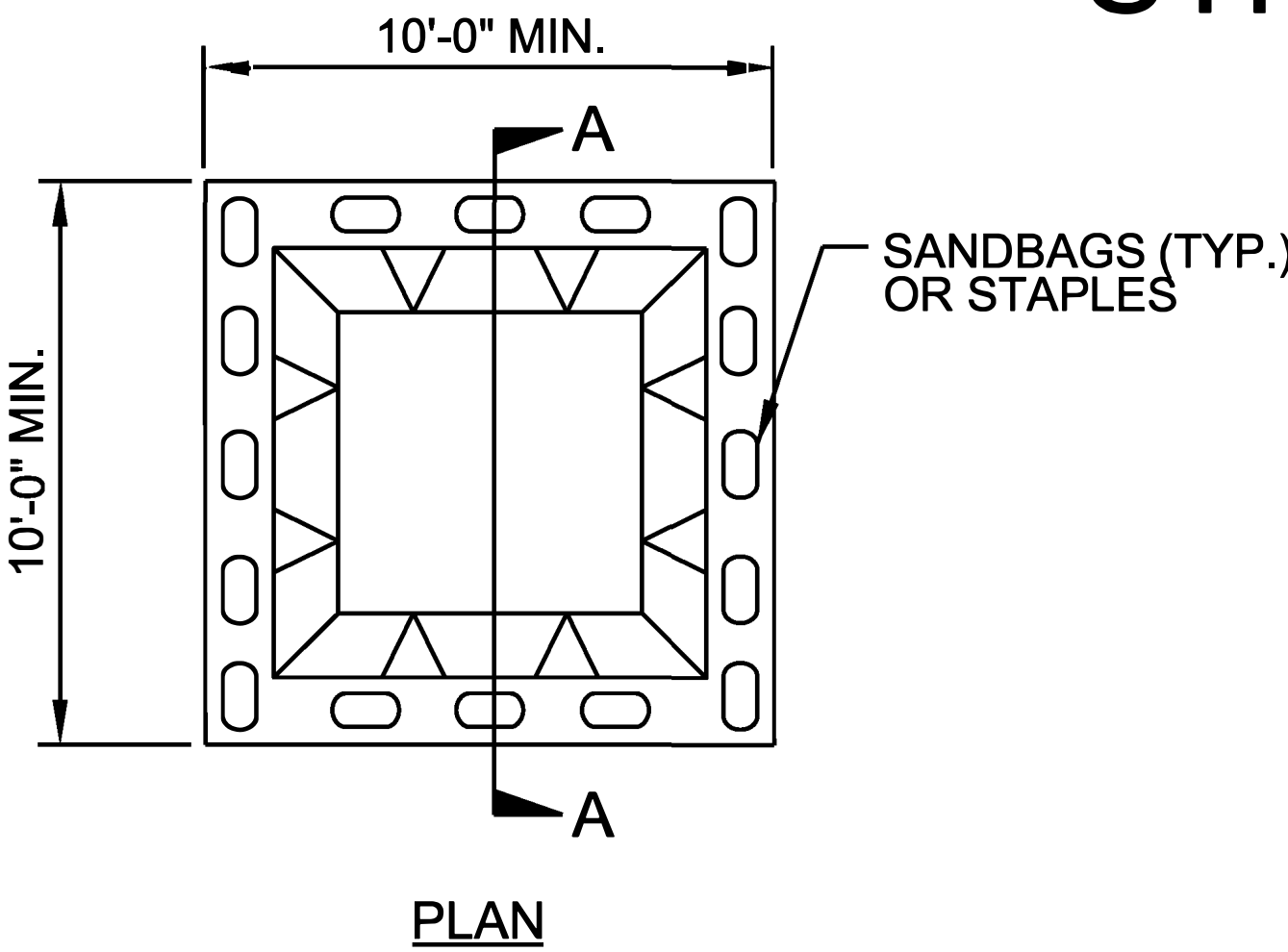
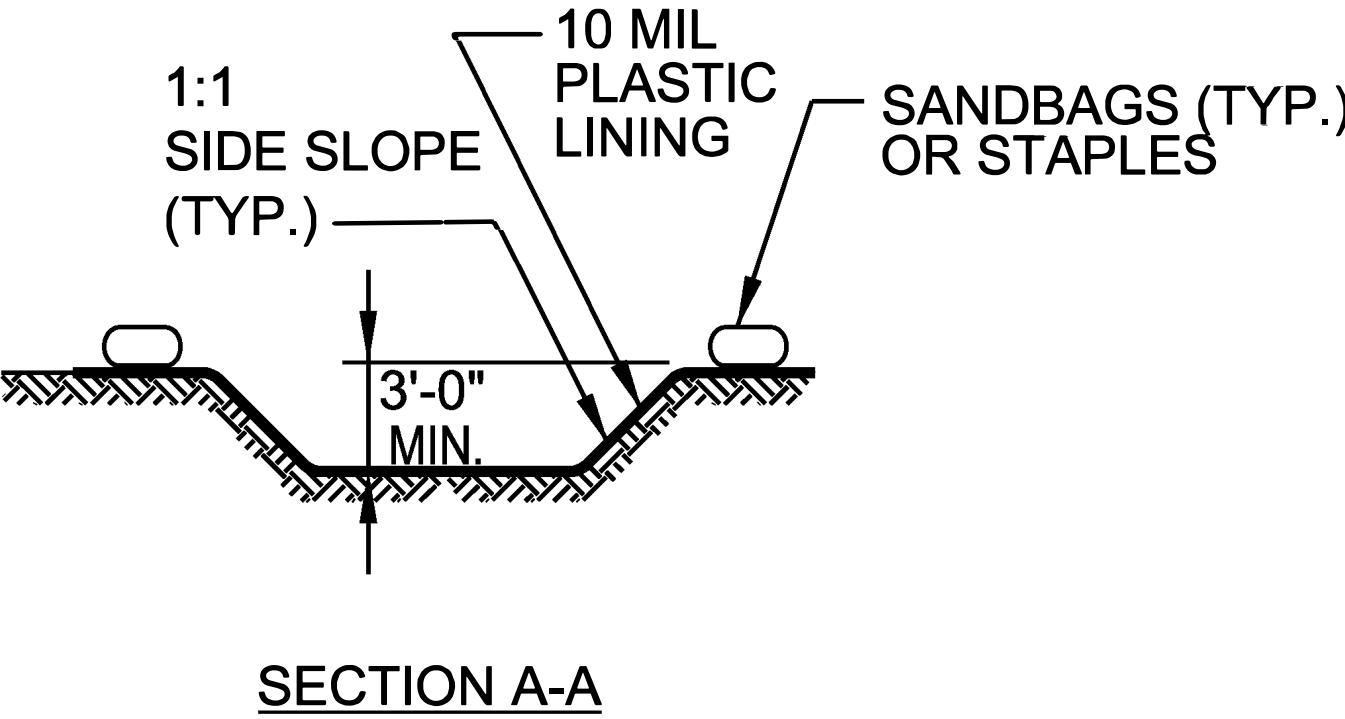
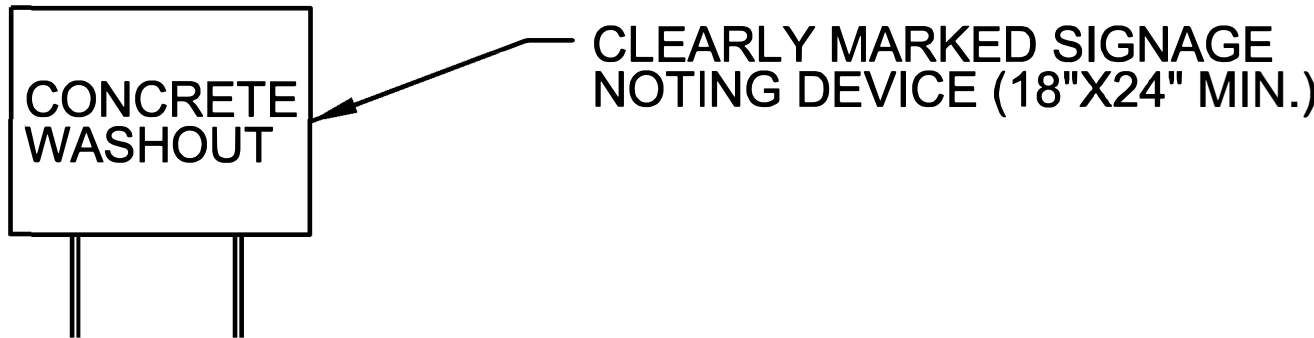
DETAIL TO TIE INTO EXIST PAVEMENT

THE CONTRACTOR'S ATTENTION IS DIRECTED TO
THE FACT THAT HE WILL BE REQUIRED TO MILL
THE EXISTING ASPHALT PAVEMENT TO ENSURE A PROPER
TIE-IN WITH THE EXISTING SURFACE AT THE BEGINNING, END
AND Y LINES OF EACH MAP.
THIS WILL BE PAID FOR AS 1 1/2" MILLING.

CONTRACT: DN01169

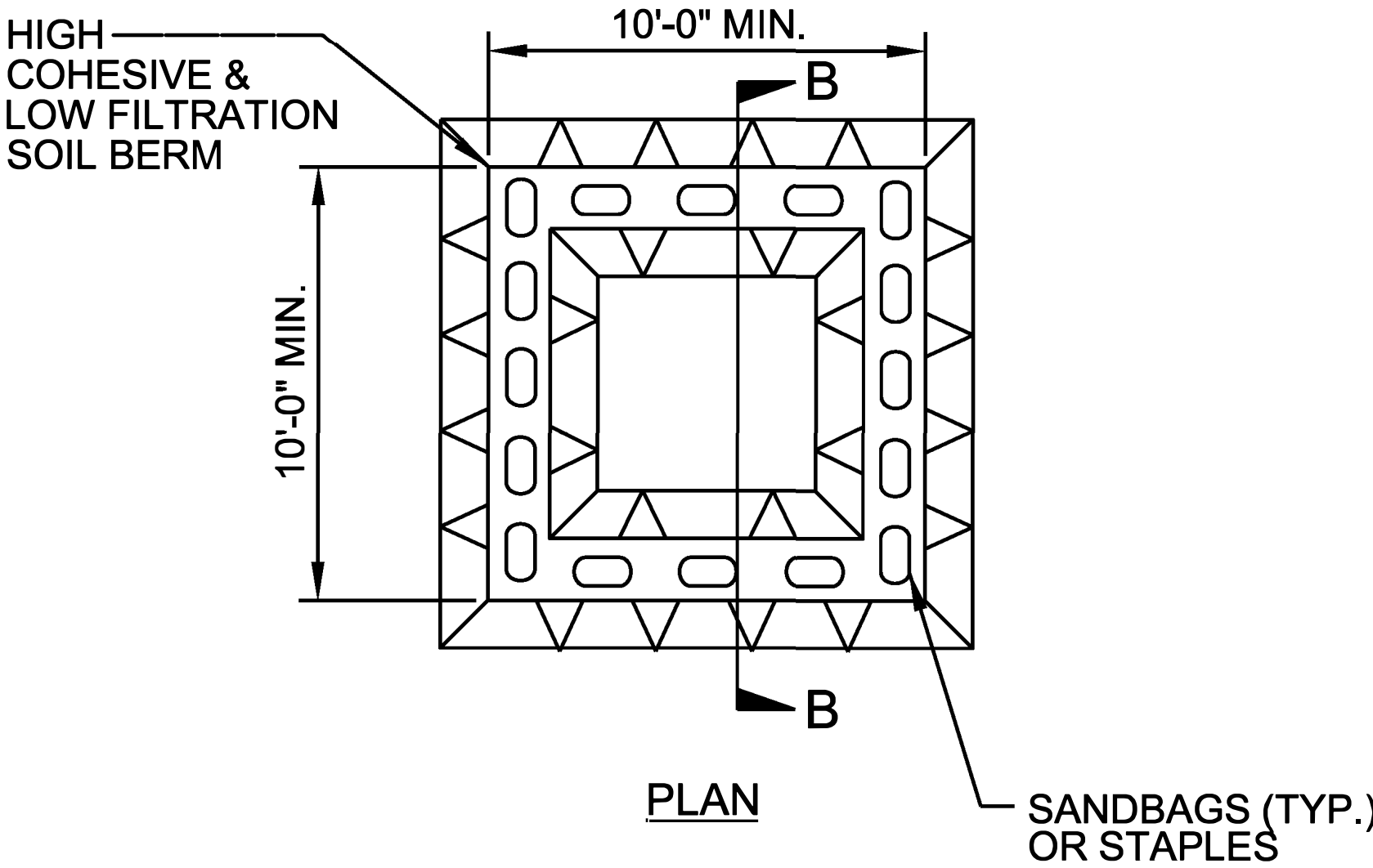
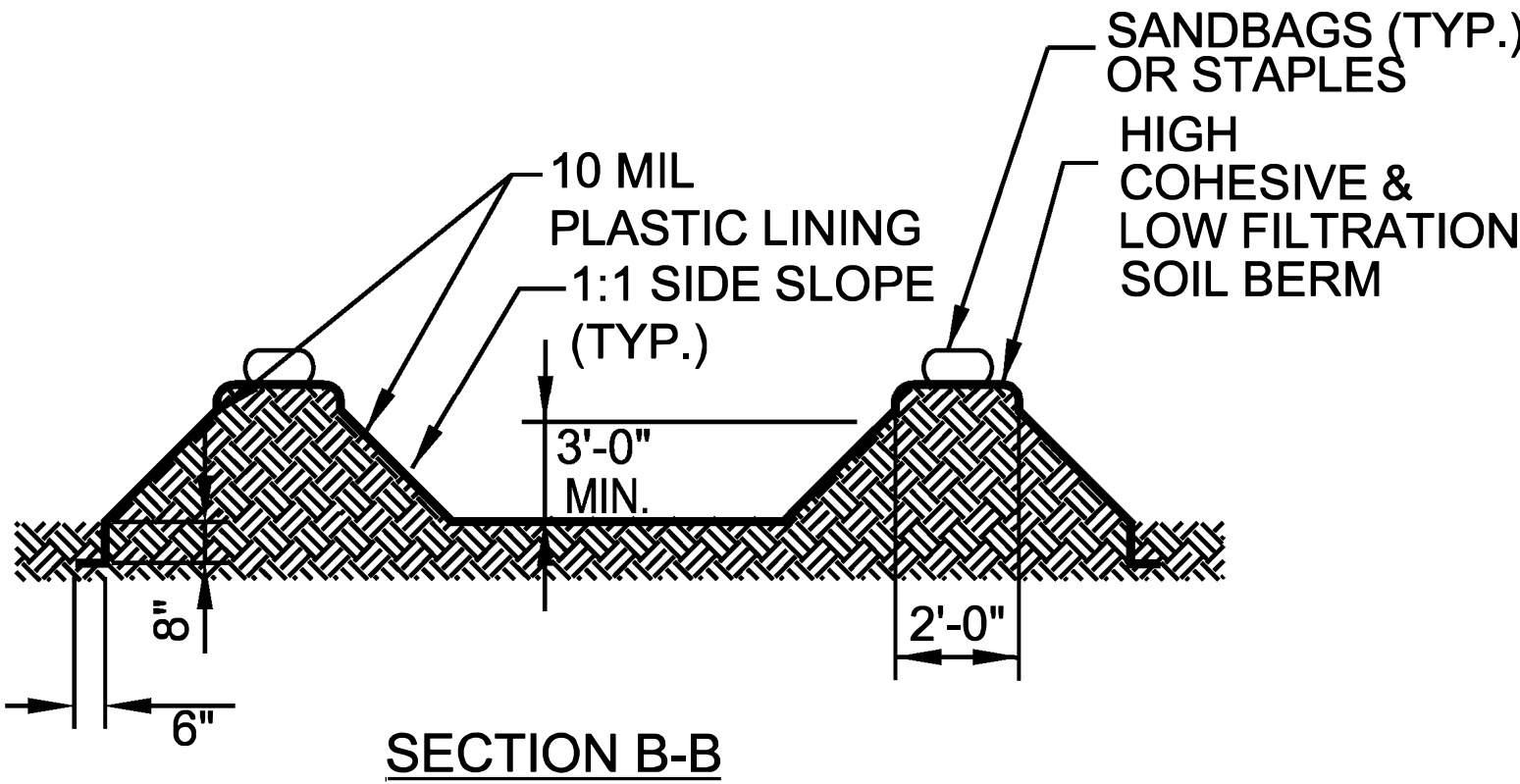
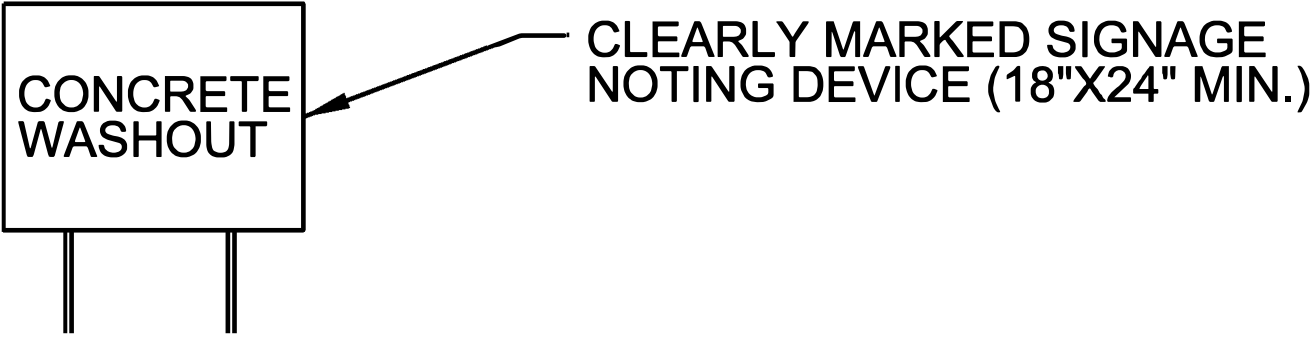
ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.14.04.10381	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.14.04.20871, 2027CPT.14.04.20381 2027CPT.14.04.10381,	12	14

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	1245000000-E SHOULDER RECONSTRUCTION	1260000000-E AGGREGATE SHOULDER BORROW	1297000000-E 1½" MILLING	1330000000-E INCIDENTAL MILLING	1519000000-E SURFACE COURSE, S9.5B	1523000000-E SURFACE COURSE, S9.5C	1575000000-E ASPHALT BINDER FOR PLANT MIX	1704000000-E PATCHING EXISTING PAVEMENT	2549000000-E 2'-6" CURB & GUTTER	2612500000-N REMOVE AND REPLACE CONCRETE CURB RAMPS	2815000000-N ADJ. OF DROP INLET	2830000000-N ADJ. OF MANHOLES	2845000000-N ADJ. OF METER OR VALVE BOX	6000000000-E TEMPORARY SILT FENCE	6029000000-E SAFETY FENCE	6117500000-N CONCRETE WASHOUT STRUCTURE	7444000000-E INDUCTIVE LOOP SAWCUT	7456100000-E LEAD-IN CABLE (14-2)	
								MI	FT			SMI	TON	SY	SY	TONS	TONS	TONS	TONS	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
2027CPT.14.04.20871	Swain	1	SR-1195 / HWY 19A	FROM US 19 TO JCL	1	2	2WU	1.420	20	0.000	1.420	2.84	426				1,591	108	292											
TOTAL FOR MAP NO. 1								1.420				2.84	426				1,591	108	292											
2027CPT.14.04.20871	Swain	2	SR-1333 / TOOT HOLLOW RD/WATER ST	FROM SR 1364 TO SR 1337	1	2	2WU	1.670	20	0.000	1.670	3.34	501				1,736	126	500				2	3						
TOTAL FOR MAP NO. 2								1.670				3.34	501				1,736	126	500				2	3						
TOTAL FOR PROJ NO. 2027CPT.14.04.20871								3.090				6.18	927				3,327	234	792				2	3						
2027CPT.14.04.20381	Graham	3	SR-1223 / BEECH CREEK RD	FROM NC 143 TO EOM	2	2		2.310	20	0.000	2.310	4.62	693			1,964		137	192											
TOTAL FOR MAP NO. 3								2.310				4.62	693			1,964		137	192											
TOTAL FOR PROJ NO. 2027CPT.14.04.20381								2.310				4.62	693			1,964		137	192											
2027CPT.14.04.10381	Graham	4	US-129	FROM AIRPORT RD TO FIVE POINT RD	1	2	2WD	1.070	36	10.210	11.280	2.08	321		420		2,044	131	221											
TOTAL FOR MAP NO. 4								1.070				2.08	321		420		2,044	131	221											
2027CPT.14.04.10381	Graham	5	US-129	FROM JORDAN ST TO NC 143B	3	2	2WD	0.430	33	11.540	11.970			8,740	1,546		858	51	12	60	1	2		22	50	50	1	678.00	100.00	
TOTAL FOR MAP NO. 5								0.430						8,740	1,546		858	51	12	60	1	2		22	50	50	1	678.00	100.00	
2027CPT.14.04.10381	Graham	6	US-129	FROM NC 143B TO MOOSE BRANCH RD	3	2	2WU	0.450	24	11.970	12.420			6,653	1,316		664	39												
TOTAL FOR MAP NO. 6								0.450						6,653	1,316		664	39												
2027CPT.14.04.10381	Graham	7	NC-143 BUS	FROM US 129 TO JUNLUSKA RD	3	2	2WU	0.540	40	3.430	2.890			13,305			1,158	69	19				16	20						
TOTAL FOR MAP NO. 7								0.540						13,305			1,158	69	19				16	20						
2027CPT.14.04.10381	Graham	8	NC-143 BUS	FROM JUNLUSKA RD TO SNOWBIRD	1	2	2WU	0.340	27	2.890	2.550	0.64	102				558	34	24			2								
TOTAL FOR MAP NO. 8								0.340				0.64	102				558	34	24			2								
TOTAL FOR PROJ NO. 2027CPT.14.04.10381								2.830				2.72	423	28,698	3,282		5,282	324	276	60	1	4		42	50	50	1	678.00	100.00	
GRAND TOTAL								8.230				13.52	2,043	28,698	3,282	1,964	8,609	695	1,260	60	1	4		45	50	50	1	678.00	100.00	

PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.14.04.20871, 2027CPT.14.04.20381 2027CPT.14.04.10381.	13	14

THERMOPLASTIC AND PAINT QUANTITIES

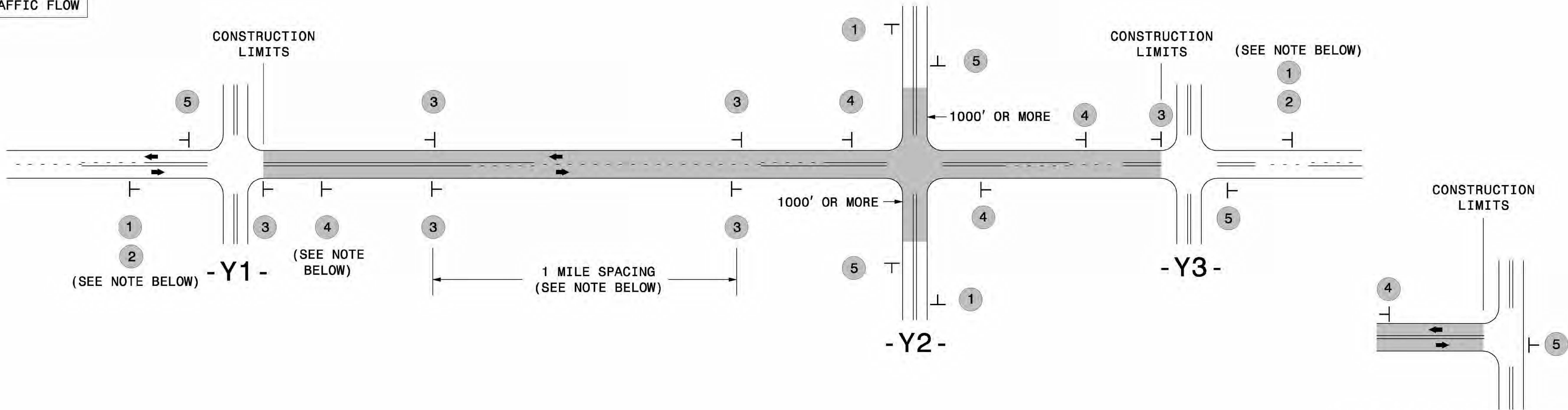
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	4413000000-E WORK ZONE ADVANCE/GENERAL WARNING SIGNING	4457000000-N TEMPORARY TRAFFIC CONTROL	4688000000-E THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS)(WHITE)	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS)(YELLOW)	4700000000-E THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)(WHITE)	4709000000-E THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)(WHITE)	4720000000-E THERMO MSG SCHOOL 90 M	THERMO STR ARROW 90 MILS	THERMO RT ARROW 90 MILS	THERMO LT ARROW 90 MILS	4890000000-E WHITE HOT SPRAY THERMOPLASTIC PAVEMENT MARKING LINES (4", 60 MILS)	4890000000-E YELLOW HOT SPRAY THERMOPLASTIC PAVEMENT MARKING LINES (4", 60 MILS)	WHITE HOT SPRAY THERMO (24", 60 MILS)	4893000000-E DECORATIVE CROSSWALK	4895000000-N GENERIC PAVEMENT MARKING ITEM - POLYCARBONAT E H-SHAPED MARKERS
								MI	FT			SF	LS	LF	LF	LF	LF	EA	EA	EA	EA	LF	LF	LF	SF	EA
2027CPT.14.04.20871	Swain	1	SR-1195 / HWY 19A	FROM US 19 TO JCL	1	2	2WU	1.42	20	0	1.42		0.16									14,221	14,290	34		100.00
TOTAL FOR MAP NO. 1								1.42					0.16									14,221	14,290	34		100.00
2027CPT.14.04.20871	Swain	2	SR-1333 / TOOT HOLLOW RD/WATER ST	FROM SR 1364 TO SR 1337	1	2	2WU	1.67	20	0	1.67	188	0.18									17,850	17,550	50		
TOTAL FOR MAP NO. 2								1.67				188	0.18									17,850	17,550	50		
TOTAL FOR PROJ NO. 2027CPT.14.04.20871								3.09				188	0.34									32,071	31,840	84		100.00
																								63,995		
2027CPT.14.04.20381	Graham	3	SR-1223 / BEECH CREEK RD	FROM NC 143 TO EOM	2	2		2.31	20	0	2.31	259	0.20									24,394	24,394	23		
TOTAL FOR MAP NO. 3								2.31				259	0.20									24,394	24,394	23		
TOTAL FOR PROJ NO. 2027CPT.14.04.20381								2.31				259	0.20									24,394	24,394	23		
																								48,811		
2027CPT.14.04.10381	Graham	4	US-129	FROM AIRPORT RD TO FIVE POINT RD	1	2	2WD	1.07	36	10.21	11.28	233	0.19	10,984	10,984											140.00
TOTAL FOR MAP NO. 4								1.07				233	0.19	10,984	10,984											140.00
2027CPT.14.04.10381	Graham	5	US-129	FROM JORDAN ST TO NC 143B	3	2	2WD	0.43	33	11.54	11.97	49	0.07		4,500	90	750		3	7	8					50.00
TOTAL FOR MAP NO. 5								0.43				49	0.07		4,500	90	750		3	7	8					50.00
2027CPT.14.04.10381	Graham	6	US-129	FROM NC 143B TO MOOSE BRANCH RD	3	2	2WU	0.45	24	11.97	12.42	51	0.06	2,370	4,740											35.00
TOTAL FOR MAP NO. 6								0.45				51	0.06	2,370	4,740											35.00
2027CPT.14.04.10381	Graham	7	NC-143 BUS	FROM US 129 TO JUNLUSKA RD	3	2	2WU	0.54	40	3.43	2.89	126	0.10	5,700	5,700	240	190	12							304	30.00
TOTAL FOR MAP NO. 7								0.54				126	0.10	5,700	5,700	240	190	12							304	30.00
2027CPT.14.04.10381	Graham	8	NC-143 BUS	FROM JUNLUSKA RD TO SNOWBIRD	1	2	2WU	0.34	27	2.89	2.55	34	0.05	3,600	3,600											60.00
TOTAL FOR MAP NO. 8								0.34				34	0.049	3,600	3,600											60.00
TOTAL FOR PROJ NO. 2027CPT.14.04.10381								2.83				493	0.466	22,654	29,524	330	940	12	3.00		8				304.00	315.00
GRAND TOTAL								8.23				940	1.000	22,654	29,524	330	940	12	3.00	7	8	56,465	56,234	107.00	304.00	415.00

SIGNING FOR RESURFACING PROJECTS

LEGEND

STATIONARY SIGN

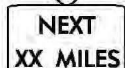
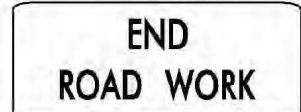
DIRECTION OF TRAFFIC FLOW



TEE INTERSECTION

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	<div><div>1</div><div><div>W20-1 48" X 48"</div></div></div> <div><div>2</div><div><div>W7-3aP 24" X 18"</div></div></div>	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. #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)	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, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK. <div><div><div>W20-1 48" X 48"</div></div><div>PLACED 500' IN ADVANCE OF FLAGGER.</div></div> <div><div><div>W20-7 A 48" X 48"</div></div><div>PLACED 250' IN ADVANCE OF FLAGGER.</div></div>
	<div><div>3</div><div><div>SP 13107 48" X 48"</div></div></div>	<ul style="list-style-type: none">- 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.	
	<div><div>4</div><div><div>SP 13106 48" X 48"</div></div></div>	<ul style="list-style-type: none">- 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.	
	<div><div>5</div><div><div>G20-2 A 48" X 24"</div></div></div>	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.		
LESS 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.		<div></div> <div>AD</div>



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