

GASTONIA

GASTON COUNTY
NORTH CAROLINA

12CR.20361.16

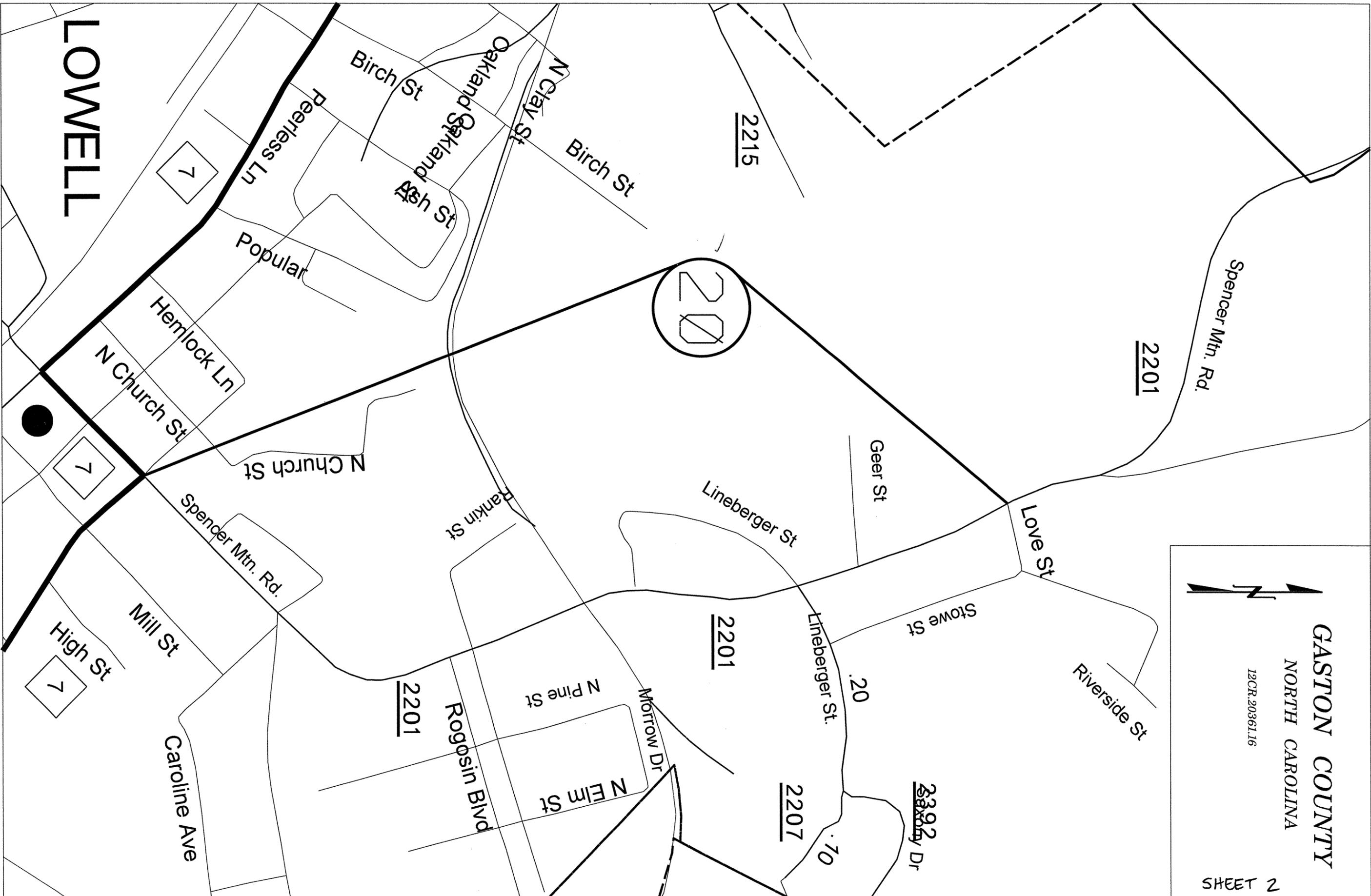
SHEET 1



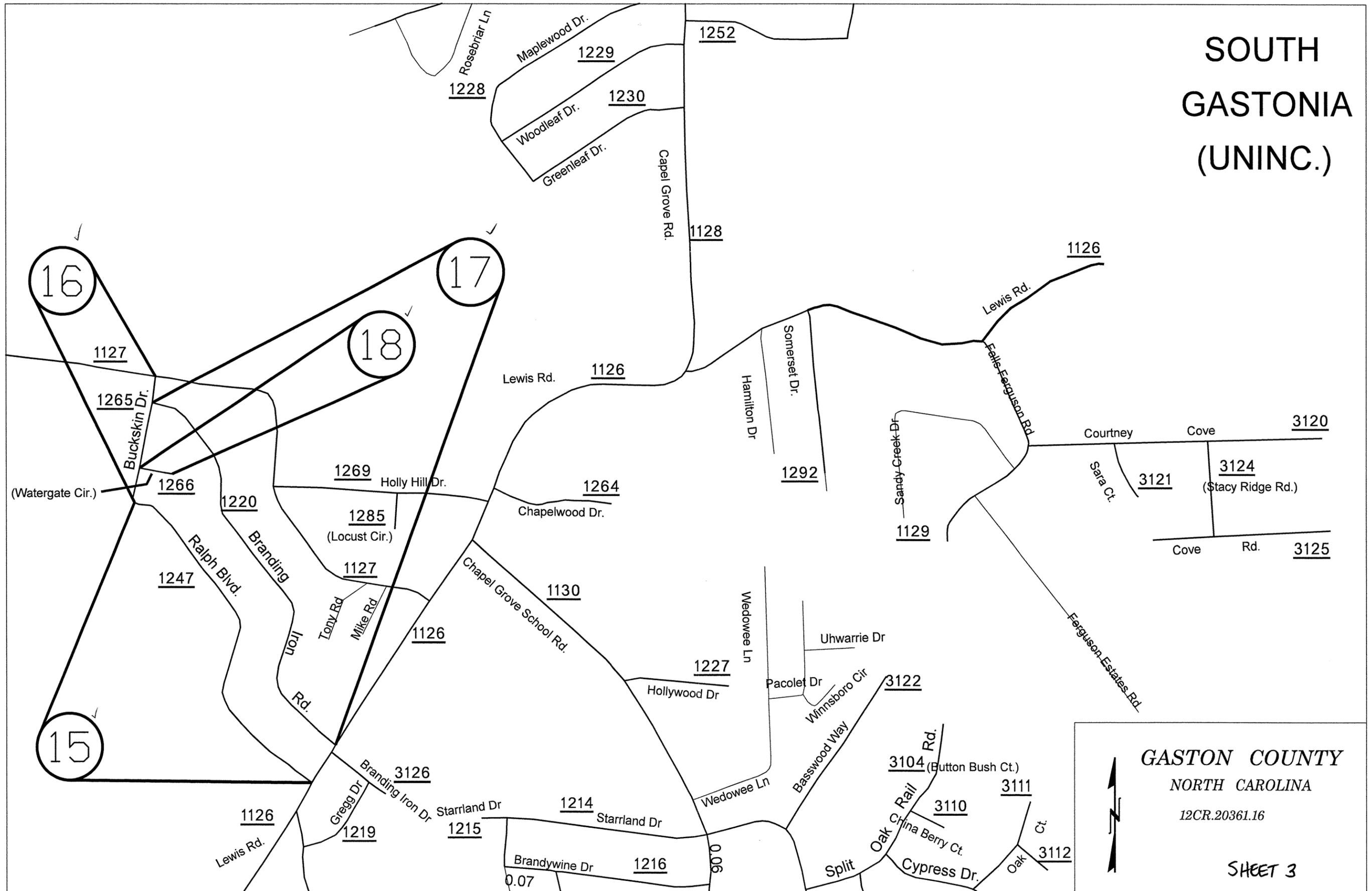
GASTON COUNTY
NORTH CAROLINA

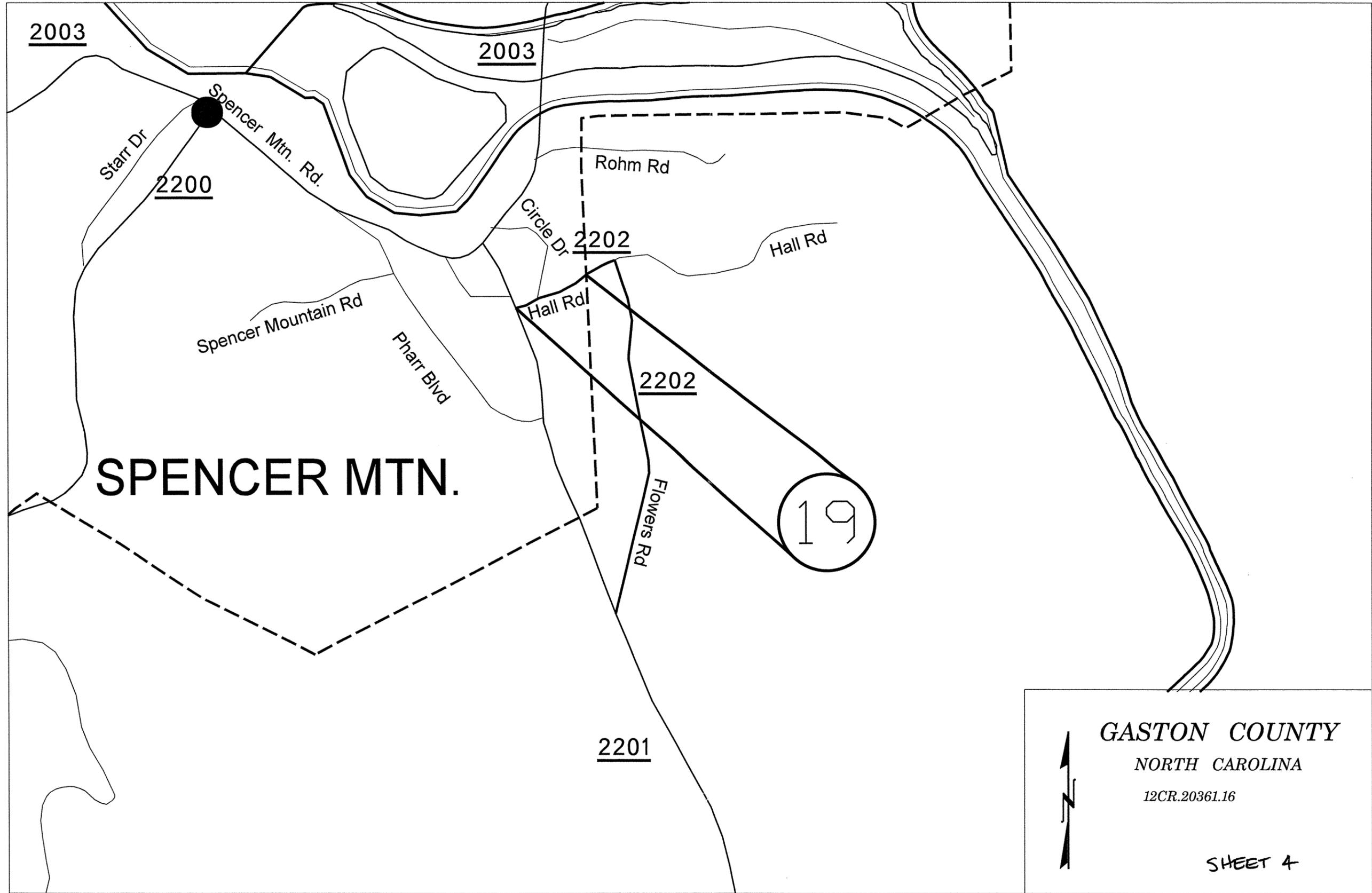
12CR.20361.16

SHEET 2



SOUTH GASTONIA (UNINC.)





SPENCER MTN.

GASTON COUNTY

NORTH CAROLINA

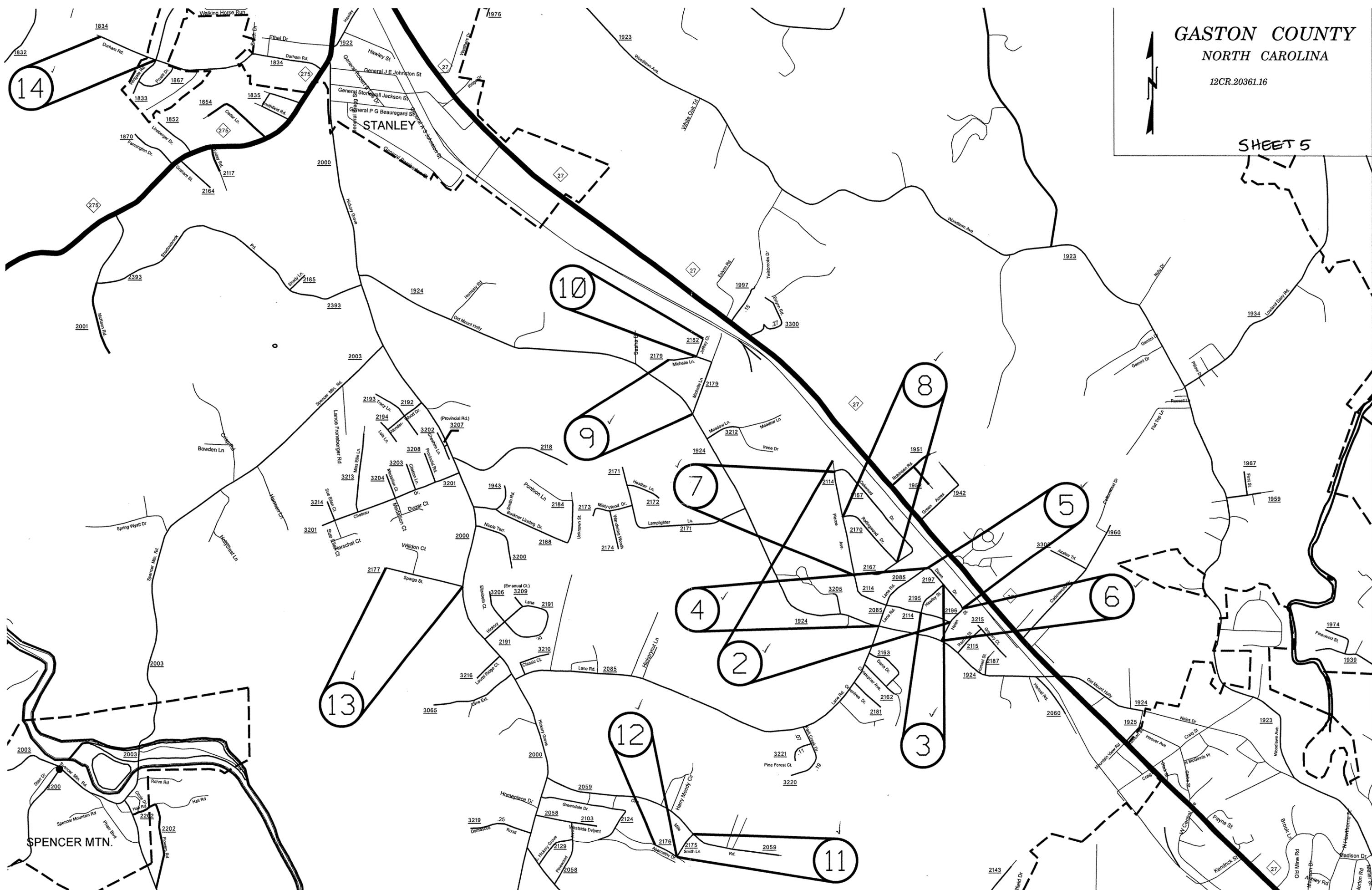
12CR.20361.16

SHEET 4

GASTON COUNTY
NORTH CAROLINA

12CR.20361.16

SHEET 5



14

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2

3

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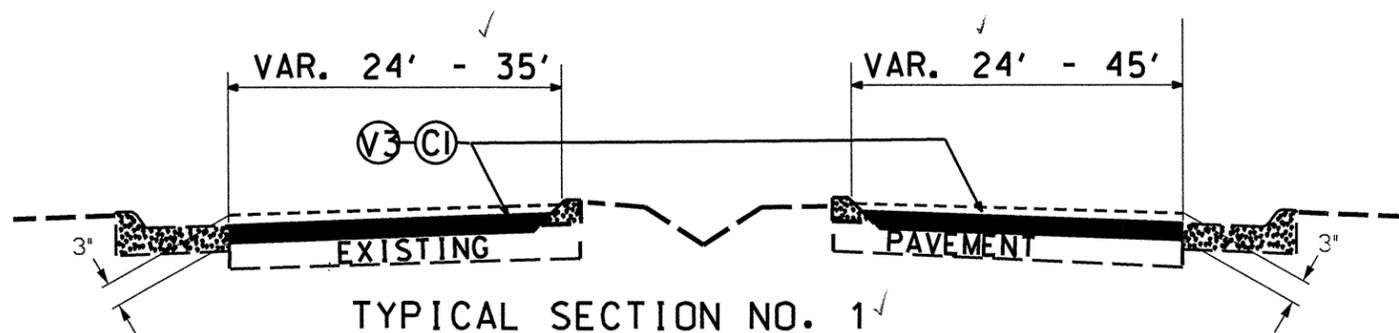
11

SPENCER MTN.

STANLEY

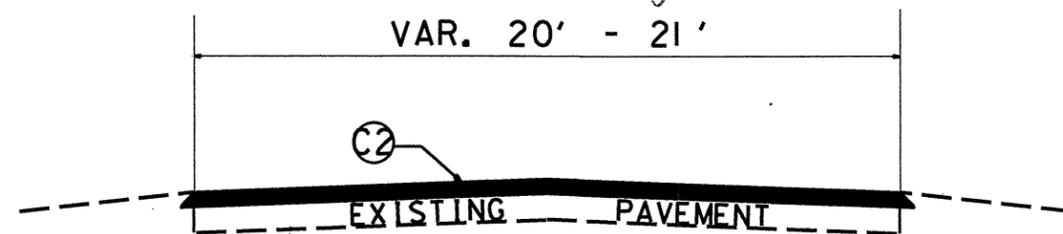
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD.
C3	PROP. APPROX. 1¾" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 196 LBS. PER SQ. YD.
Y	SHOULDER RECONSTRUCTION
V1	MILL ASPHALT PAVEMENT APPROX. 1½" AS DIRECTED BY ENGINEER
V2	MILL ASPHALT PAVEMENT APPROX. 1¾" AS DIRECTED BY ENGINEER
V3	MILL ASPHALT PAVEMENT APPROX. 3" AS DIRECTED BY ENGINEER
V4	MILL ASPHALT PAVEMENT APPROX. 1½" - 0" (HALF LANE WIDTH FROM C & G)
V5	MILL ASPHALT PAVEMENT APPROX. 3" - 0" (HALF LANE WIDTH FROM C & G)

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
MILL BRIDGE APPROACHES 100' TO PROVIDE A SMOOTH TRANSITION AS DIRECTED.
MILL INTO GUTTER LINE WHERE SHOWN AND AS DIRECTED.
MAINTAIN PROPER CROWN FOR DRAINAGE OF THE ROAD SURFACE.



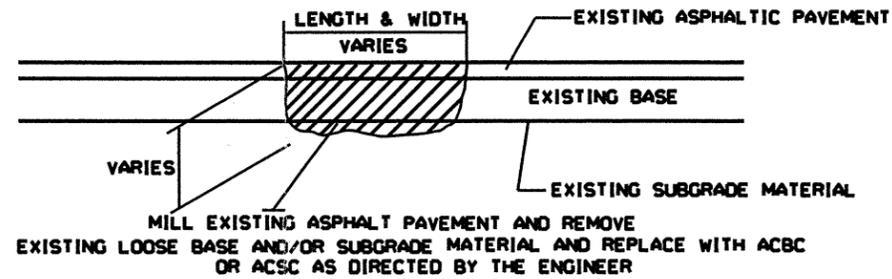
TYPICAL SECTION NO. 1 ✓

(MAP 1)

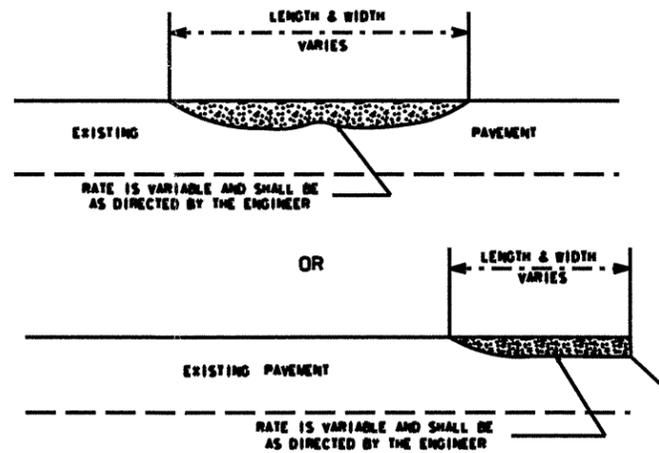


TYPICAL SECTION NO. 2 ✓

(MAPS 2 - 18)

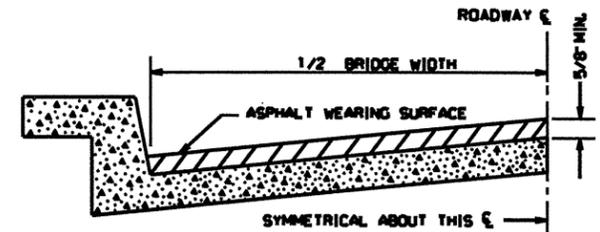


PATCHING EXISTING PAVEMENT



ASPHALT CONCRETE SURFACE COURSE
TYPE S9.5B & A (LEVELING COURSE)

PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
GASTON COUNTY 2012	6	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
12CR.20361.16		



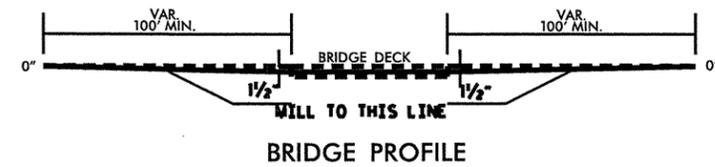
BRIDGE HALF TYPICAL SECTION

FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

NOTES

ALL UNPAVED S.R. ROADS TO BE SURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT.
ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.
EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.
SHOULDERS AND DITCHES ARE TO BE CONSTRUCTED BY OTHERS UNLESS OTHERWISE NOTED.
BRIDGES TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.



PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
GASTON COUNTY 2012	7	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
12CR.20361.16		

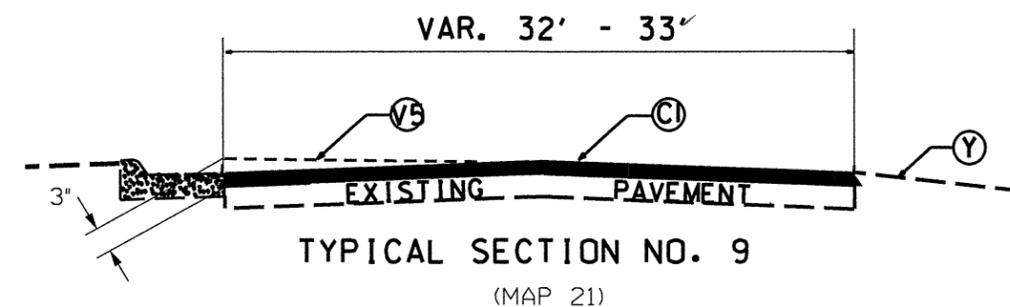
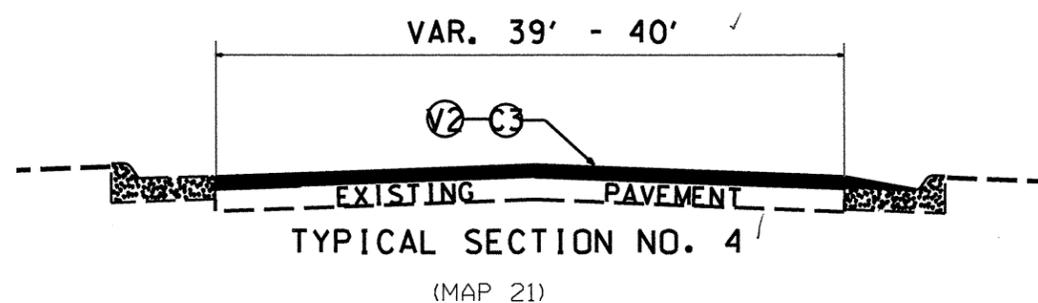
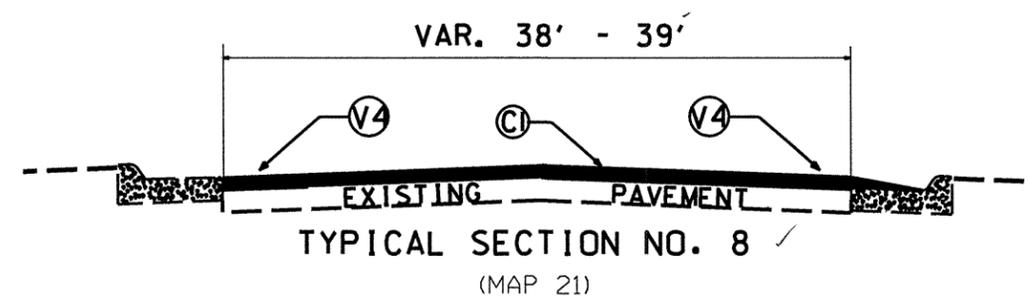
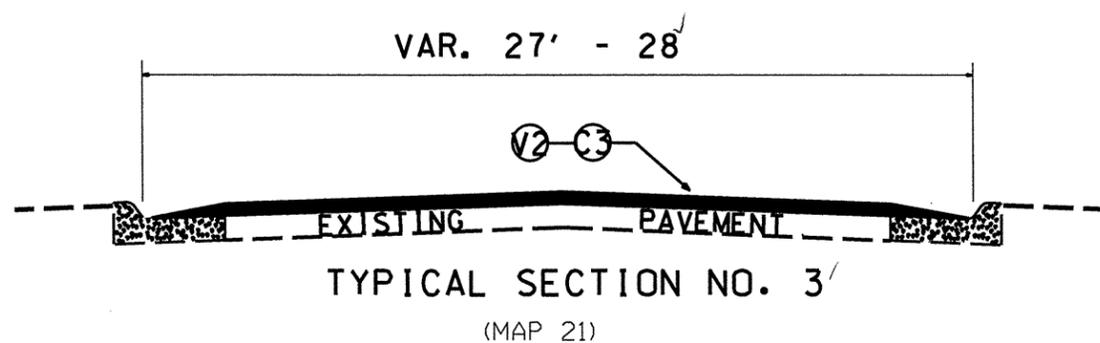
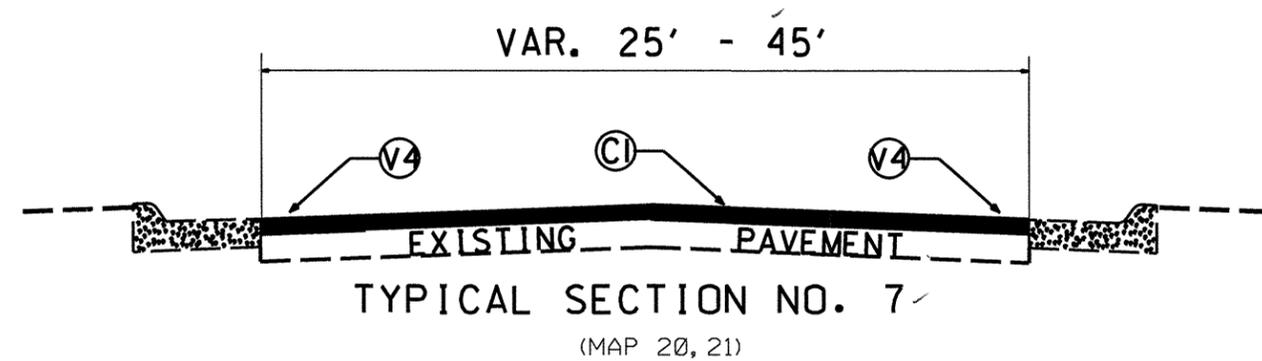
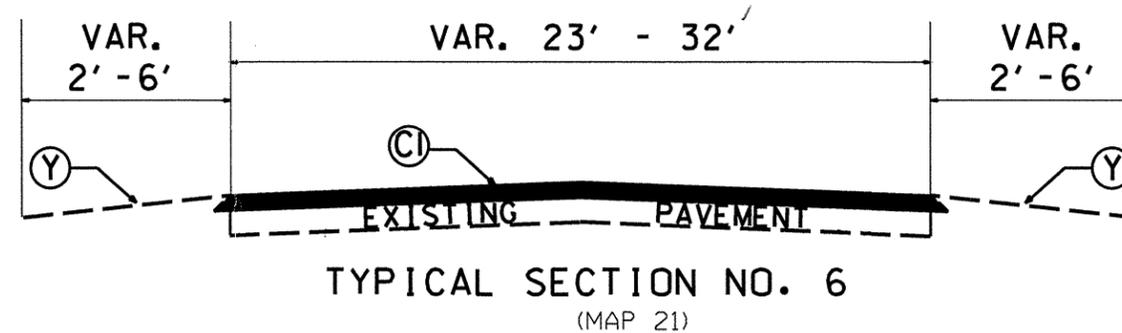
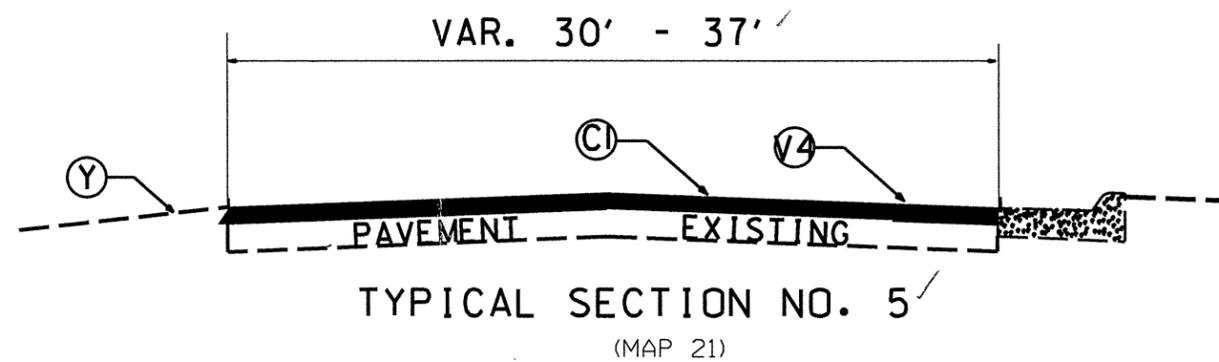
PAVEMENT SCHEDULE	
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NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

MILL BRIDGE APPROACHES 100' TO PROVIDE A SMOOTH TRANSITION AS DIRECTED.

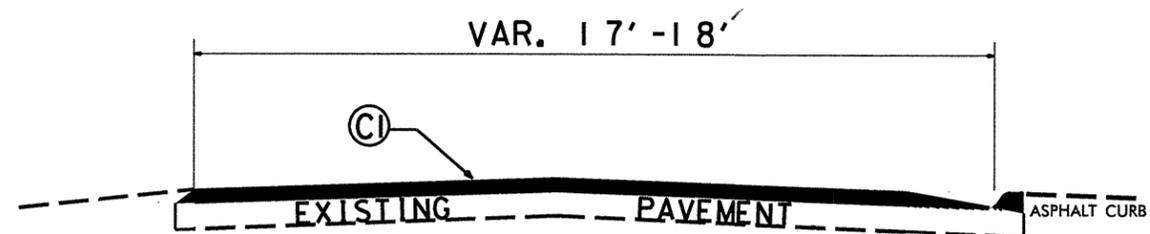
MILL INTO GUTTER LINE WHERE SHOWN AND AS DIRECTED.

MAINTAIN PROPER CROWN FOR DRAINAGE OF THE ROAD SURFACE.



PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
GASTON COUNTY 2012	8	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
12CR. 20361.16		

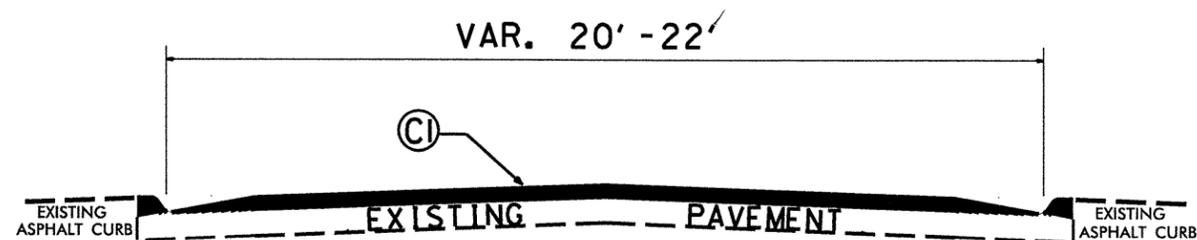
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V5	MILL ASPHALT PAVEMENT APPROX. 3" - 0" (HALF LANE WIDTH FROM C & G)



TYPICAL SECTION NO. 11

(MAP 19)

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
MILL BRIDGE APPROACHES 100' TO PROVIDE A SMOOTH TRANSITION AS DIRECTED.
MILL INTO GUTTER LINE WHERE SHOWN AND AS DIRECTED.
MAINTAIN PROPER CROWN FOR DRAINAGE OF THE ROAD SURFACE.



TYPICAL SECTION NO. 10

(MAP 19)

PROJECT NO. 12CR.20361.16	SHEET NO. 9	TOTAL NO.
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SUMMARY OF QUANTITIES

PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP NO.	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	AGGREGATE SHOULDER BORROW TON	3" MILLING SY	1.5" TO 0" MILLING SY	1.75" MILLING SY	3" TO 0" MILLING SY	SURFACE COURSE, S9.5B TONS	LEVELING COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TON	LEVELING COURSE, SF9.5A TON	PG 64-22 PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	CONCRETE CURB RAMPS EA	ADJ CATCH BASIN EA	ADJ DROP INLET EA	ADJ MANHOLES EA	ADJ METER OR VALVE BOX EA	WORK ZONE TRAFFIC CONTROL LS			
12CR.20361.16	Gaston	1	SR 1255 (HUDSON BLVD)	SR 1136 (MYRTLE SCH RD) TO US 321 (YORK RD)	1	NO	1.54	VAR. 48-80				55798				4,687	235			296	1,327	5			9	5				
TOTAL FOR MAP NO. 1							1.54					55798				4,687	235			296	1,327	5			9	5				
		2	SR 2114 (PIERCE AVE)	SR 2196 TO DE	2	NO	0.94	20	20			0						680	155	53	116									
TOTAL FOR MAP NO. 2							0.94					0						680	155	53	116									
		3	SR 2195 (HAWLEY ST)	SR 2114 (PIERCE AVE) TO SR 2197 (DAWN DR)	2	NO	0.15	21	10			0						187	41	15	30									
TOTAL FOR MAP NO. 3							0.15					0						187	41	15	30									
		4	SR 2085 (LANE RD)	SR 1924 (WESTLAND FARM RD) TO SR 2197 (DAWN DR)	2	NO	0.32	21	20			0						364	55	27	40									
TOTAL FOR MAP NO. 4							0.32					0						364	55	27	40									
		5	SR 2197 (DAWN DR)	SR 2085 (LANE RD) TO SR 2196 (HELENA DR)	2	NO	0.21	21	15			0						239	12	16	24									
TOTAL FOR MAP NO. 5							0.21					0						239	12	16	24									
		6	SR 2196 (HELENA DR)	SR 2197 (DAWN DR) TO SR 1924 (WESTLAND FARM RD)	2	NO	0.16	21	15			0						182	9	12	19									
TOTAL FOR MAP NO. 6							0.16					0						182	9	12	19									
		7	SR 2167 (OAKWOOD DR)	SR 2114 (PIERCE AVE) TO SR 2114	2	NO	0.74	20	15			0						802	40	55	97									
TOTAL FOR MAP NO. 7							0.74					0						802	40	55	97									
		8	SR 2170 (ROLLINGWOOD DR)	SR 2114 (PIERCE AVE) TO SR 2114	2	NO	0.3	20	15			0						326	17	22	36									
TOTAL FOR MAP NO. 8							0.3					0						326	17	22	36									
		9	SR 2179 (MICHELLE LN)	SR 1924 (WESTLAND FARM RD) TO CULDESAC	2	NO	0.41	21	30			0						466	24	32	66									
TOTAL FOR MAP NO. 9							0.41					0						466	24	32	66									
		10	SR 2182 (JEFFREY ST)	SR 2179 (MICHELLE LN) TO CULDESAC	2	NO	0.09	21	5			0						102	5	7	10									
TOTAL FOR MAP NO. 10							0.09					0						102	5	7	10									
		11	SR 2175 (SMITH LN)	SR 2059 (SMITH RD) TO SR 2176 (GLENDALE DR EXT)	2	NO	0.11	20	5			0						119	6	8	12									
TOTAL FOR MAP NO. 11							0.11					0							119	6	8	12								
		12	SR 2176 (GLENDALE DR EXT)	SR 2175 (SMITH LN) TO DE	2	NO	0.1	20	5			0						108	6	7	11									
TOTAL FOR MAP NO. 12							0.1					0						108	6	7	11									
		13	SR 2177 (SPARGO ST)	SR 2000 (HICKORY GRV RD) TO DE	2	NO	0.32	21	20			0						364	22	25	47									
TOTAL FOR MAP NO. 13							0.32					0						364	22	25	47									
		14	SR 1834 (DURHAM RD)	SR 1833 (WINGATE DR) TO CULDESAC	2	NO	0.2	20				0						217	33	16	35									
TOTAL FOR MAP NO. 14							0.2					0						217	33	16	35									
		15	SR 1247 (RALPH'S BLVD)	SR 1126 (LEWIS RD) TO SR 1265 (BUCKSKIN DR)	2	NO	0.53	VAR. 20-21	12			0						603	30	41	72									
TOTAL FOR MAP NO. 15							0.53					0						603	30	41	72									
		16	SR 1265 (BUCKSKIN DR)	SR 1127 (OLD CHURCH RD) TO SR 1247 (RALPH BLVD)	2	NO	0.18	VAR. 20-21	15			0						271	17	19	43									
TOTAL FOR MAP NO. 16							0.18					0						271	17	19	43									
		17	SR 1220 (BRANDING IRON DR)	SR 1265 (BUCKSKIN DR) TO SR 1126 (LEWIS RD)	2	NO	0.6	VAR. 20-21	15			0						682	171	55	109									
TOTAL FOR MAP NO. 17							0.6					0						682	171	55	109									
		18	SR 1266 (WATERGATE DR)	SR 1265 (BUCKSKIN DR) TO CULDESAC	2	NO	0.06	VAR. 20-21	5			0						68	5	5	11									
TOTAL FOR MAP NO. 18							0.06					0							68	5	5	11								
		19	SR 2202 (HALL RD)	SR 2201 (LOWELL-SPENCER MTN RD) TO END PVMT	10	NO	0.02	VAR. 20-22	10			0				65	20			5	10									
TOTAL FOR MAP NO. 19							0.04					0				65	20			5	10									
		20	SR 2201 (SPENCER MTN RD.)	NC 7 TO LOVE ST.	7	NO	0.94	VAR. 25-45				0	9272			2,198	139			141	549				7	1				
TOTAL FOR MAP NO. 20							0.94					0		9272			2,198	139			141	549					7	1		
		21	SR 1131 (LINWOOD AVE)	SR 2466 (GARRISON BLVD) TO TRINITY AVE	3 4 5 6 7 8 9	NO	0.13 0.47 0.12 0.90 0.09 0.17 0.16	VAR. 27-28 VAR. 39-40 VAR. 30-37 VAR. 23-32 VAR. 27-40 VAR. 38-39 VAR. 32-33		2.17	144	0	1828	16540	800	3,696	250			238	1,125		2	3	40	17				
TOTAL FOR MAP NO. 21							2.04			0	2.17	144	0	1828	16540	800	3,696	250			238	1,125		2	3	40	17			
TOTAL FOR PROJ NO. 12CR.20361.16							10.07			232	2.17	144	55798	11100	16540	800	10,646	644	5,780	648	1,095	3,789	5	2	3	56	23		1	
GRAND TOTAL							10.07			232	2.17	144	55798	11100	16540	800	10,646	644	5,780	648	1,095	3,789	5	2	3	56	23	1		

PROJECT NO. 12CR.20361.16	SHEET NO. 10	TOTAL NO.
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THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4685000000-E	4686000000-E				4695000000-E	4705000000-E	4710000000-E	4721000000-E	4725000000-E	4810000000-E		4905000000-N		
					4" X 90 M WHITE THERMO LF	4" X 120 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	8" X 120 M WHITE THERMO LF	8" X 90 M WHITE THERMO LF	16" X 120 M WHITE THERMO LF	24" X 120 M WHITE THERMO LF	THERMO RXR 120 M EA	THERMO LT ARROW 90 M EA	THERMO RT ARROW 90 M EA	THERMO STR & LT ARROW 90 M EA	THERMO STR ARROW 90 M EA	4" WHITE PAINT LF	4" YELLOW PAINT LF	SNOW PLOWABLE MARKERS EA
12CR.20361.16	Gaston	1	SR 1255 (HUDSON BLVD)	SR 1136 (MYRTLE SCH RD) TO US 321 (YORK RD)		5,740		520		100	295	4	27	13	2	10	4,100		500
TOTAL FOR MAP NO. 1						5,740		520		100	295	4	27	13	2	10	4,100		500
		2	SR 2114 (PIERCE AVE)	SR 2196 TO DE															
TOTAL FOR MAP NO. 2																			
		3	SR 2195 (HAWLEY ST)	SR 2114 (PIERCE AVE) TO SR 2197 (DAWN DR)															
TOTAL FOR MAP NO. 3																			
		4	SR 2085 (LANE RD)	SR 1924 (WESTLAND FARM RD) TO SR 2197 (DAWN DR)															
TOTAL FOR MAP NO. 4																			
		5	SR 2197 (DAWN DR)	SR 2085 (LANE RD) TO SR 2196 (HELENA DR)															
TOTAL FOR MAP NO. 5																			
		6	SR 2196 (HELENA DR)	SR 2197 (DAWN DR) TO SR 1924 (WESTLAND FARM RD)															
TOTAL FOR MAP NO. 6																			
		7	SR 2167 (OAKWOOD DR)	SR 2114 (PIERCE AVE) TO SR 2114															
TOTAL FOR MAP NO. 7																			
		8	SR 2170 (ROLLINGWOOD DR)	SR 2114 (PIERCE AVE) TO SR 2114															
TOTAL FOR MAP NO. 8																			
		9	SR 2179 (MICHELLE LN)	SR 1924 (WESTLAND FARM RD) TO CULDESAC															
TOTAL FOR MAP NO. 9																			
		10	SR 2182 (JEFFREY ST)	SR 2179 (MICHELLE LN) TO CULDESAC															
TOTAL FOR MAP NO. 10																			
		11	SR 2175 (SMITH LN)	SR 2059 (SMITH RD) TO SR 2176 (GLENDALE DR EXT)															
TOTAL FOR MAP NO. 11																			
		12	SR 2176 (GLENDALE DR EXT)	SR 2175 (SMITH LN) TO DE															
TOTAL FOR MAP NO. 12																			
		13	SR 2177 (SPARGO ST)	SR 2000 (HICKORY GRV RD) TO DE															
TOTAL FOR MAP NO. 13																			
		14	SR 1834 (DURHAM RD)	SR 1833 (WINGATE DR) TO CULDESAC															
TOTAL FOR MAP NO. 14																			
		15	SR 1247 (RALPH'S BLVD)	SR 1126 (LEWIS RD) TO SR 1265 (BUCKSKIN DR)															
TOTAL FOR MAP NO. 15																			
		16	SR 1265 (BUCKSKIN DR)	SR 1127 (OLD CHURCH RD) TO SR 1247 (RALPH BLVD)															
TOTAL FOR MAP NO. 16																			
		17	SR 1220 (BRANDING IRON DR)	SR 1265 (BUCKSKIN DR) TO SR 1126 (LEWIS RD)															
TOTAL FOR MAP NO. 17																			
		18	SR 1266 (WATERGATE DR)	SR 1265 (BUCKSKIN DR) TO CULDESAC															
TOTAL FOR MAP NO. 18																			
		19	SR 2202 (HALL RD)	SR 2201 (LOWELL-SPENCER MTN RD) TO END PVMT															
TOTAL FOR MAP NO. 19																			
		20	SR 2201 (SPENCER MTN RD.)	NC 7 TO LOVE ST.		1,350	9,950	90			23		2			3			
TOTAL FOR MAP NO. 20						1,350	9,950	90			23		2			3			
		21	SR 1131 (LINWOOD AVE)	SR 2466 (GARRISON BLVD) TO TRINITY AVE	13,412	1,250	22,203	230	180		158		36		1	13,000	20,000	265	
TOTAL FOR MAP NO. 21					13,412	1,250	22,203	230	180		158		36		1	13,000	20,000	265	
TOTAL FOR PROJ NO. 12CR.20361.16					13,412	8,340	32,153	840	180	100	476	4	65	13	2	14	17,100	20,000	765
GRAND TOTAL					13,412	8,340	40,493	840	180	100	476	4	65	13	2	14	17,100	20,000	765

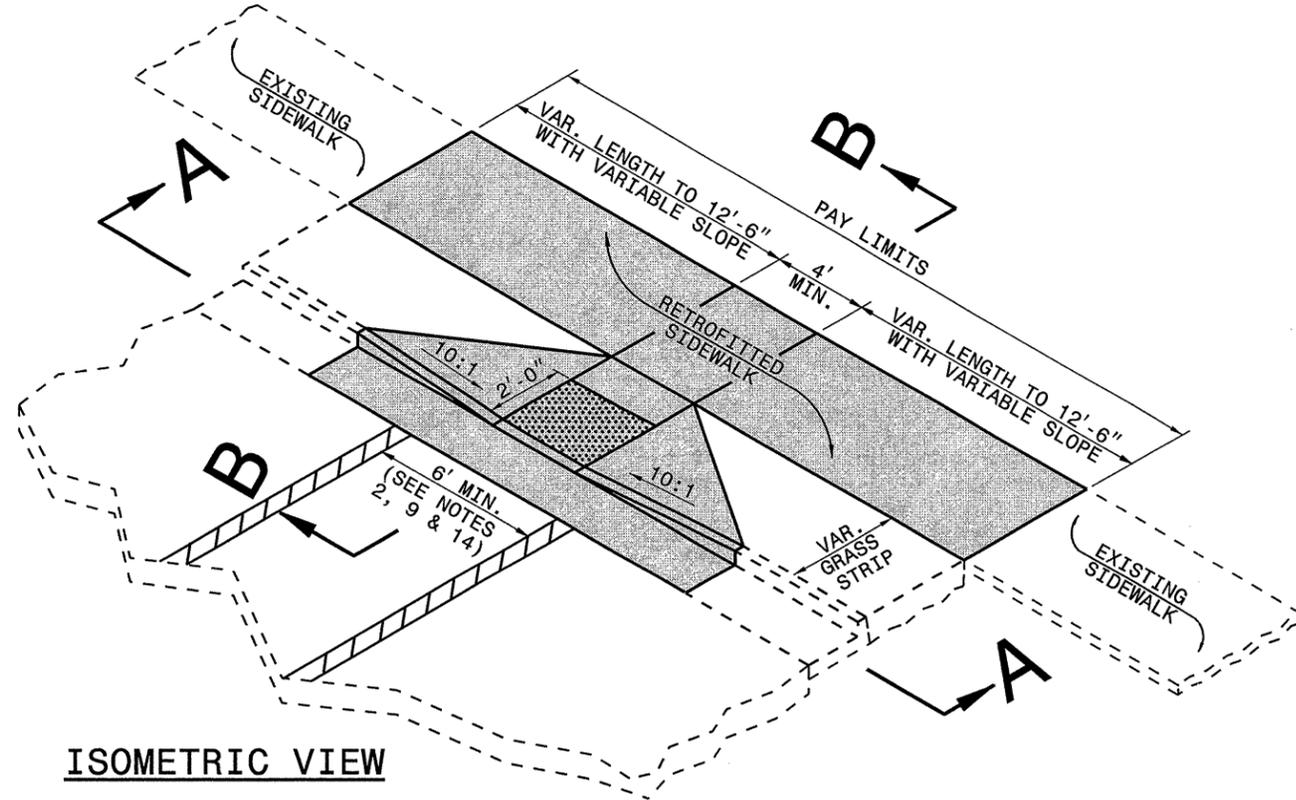
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
CURB RAMP
EXISTING CURB AND GUTTER

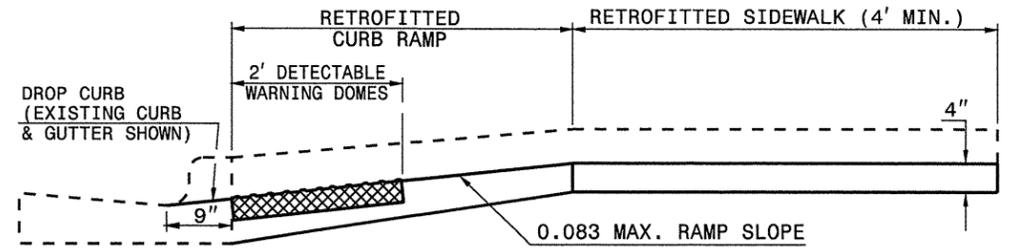
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RALEIGH, N.C.

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CURB RAMP
EXISTING CURB AND GUTTER

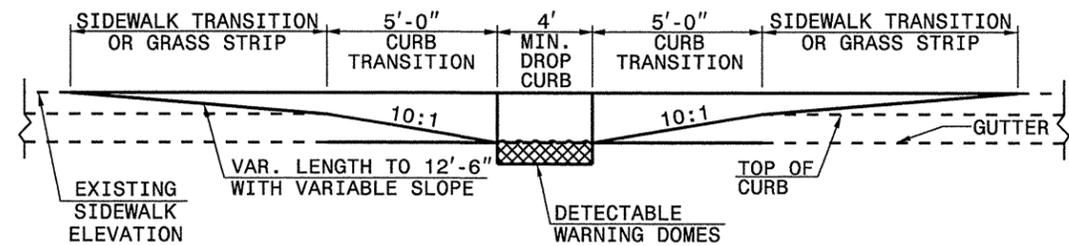
CURB RAMP AND EXISTING SIDEWALK WITH GRASS STRIP



ISOMETRIC VIEW

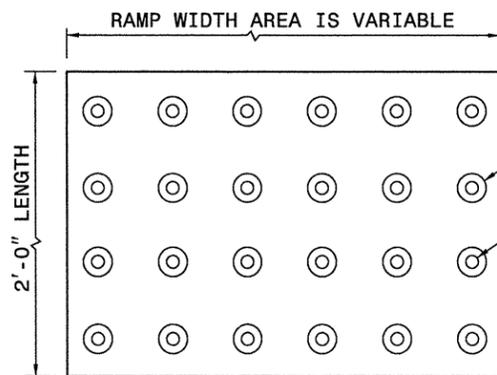


SECTION B-B

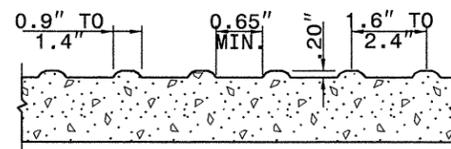


SECTION A-A

PAY LIMITS OF RETROFIT CURB RAMP

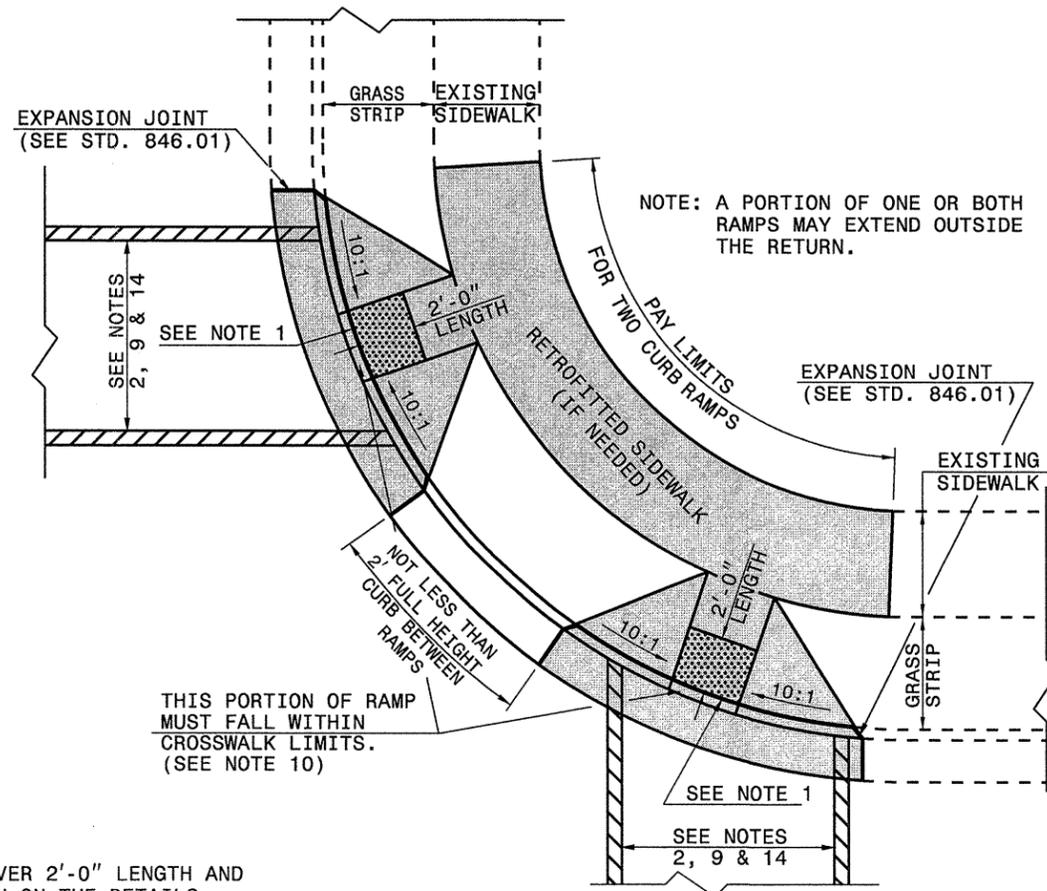


BASE DIAMETER
0.90"R TO 1.40"R
TOP DIAMETER OF NO LESS THAN 50% TO NO MORE THAN 65% OF THE BASE DIAMETER



DETECTABLE WARNING DOMES

- NOTES:
1. PLACE DETECTABLE WARNING DOMES TO COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
 2. OBTAIN VISIBLE CONTRAST WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



PLAN VIEW

DUAL RAMPS
ANY RADII
(40" MIN. FLOOR WIDTH)

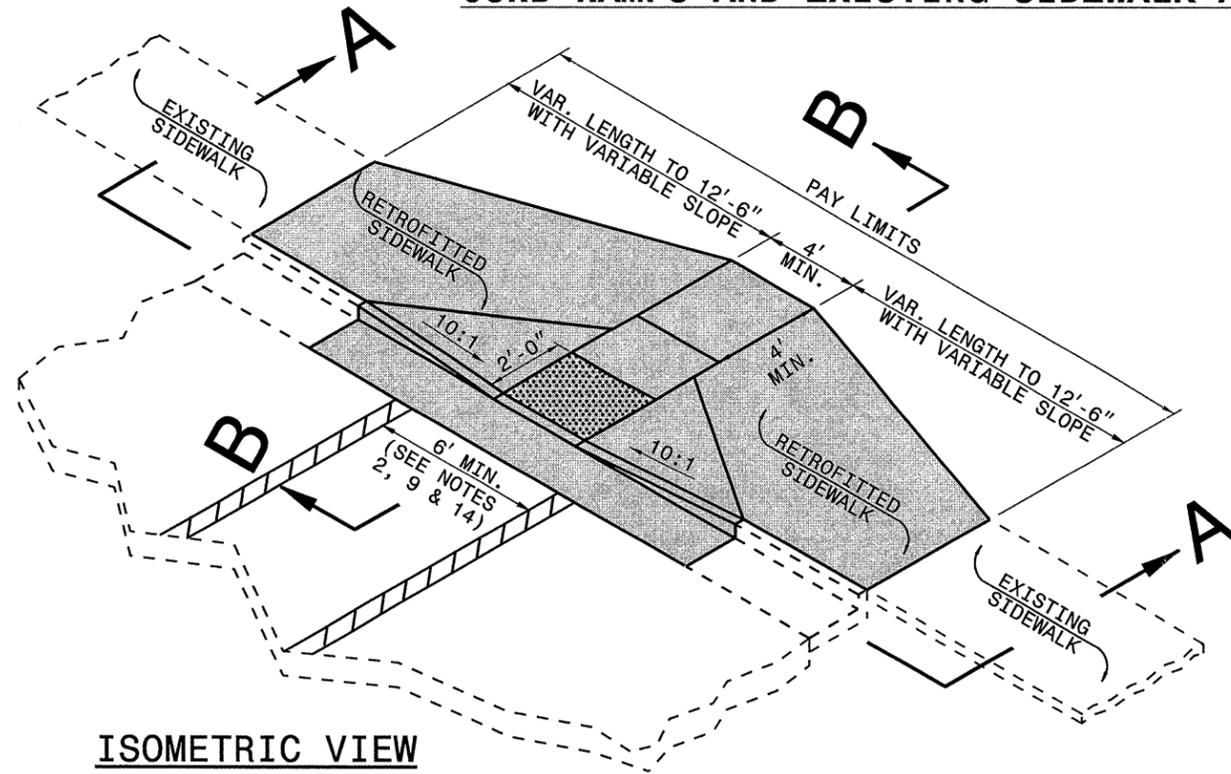
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
CURB RAMP
EXISTING CURB AND GUTTER

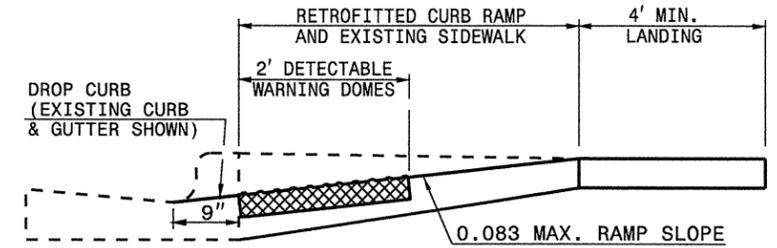
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
CURB RAMP
EXISTING CURB AND GUTTER

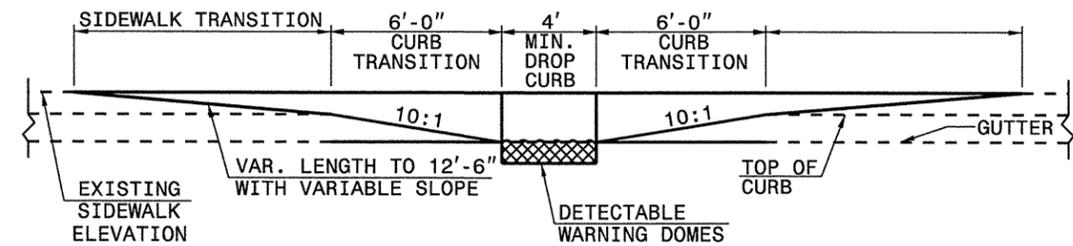
CURB RAMPS AND EXISTING SIDEWALK ADJACENT TO CURB



ISOMETRIC VIEW

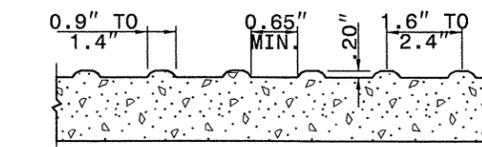
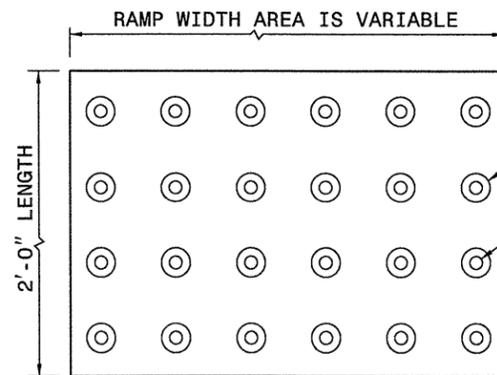


SECTION B-B

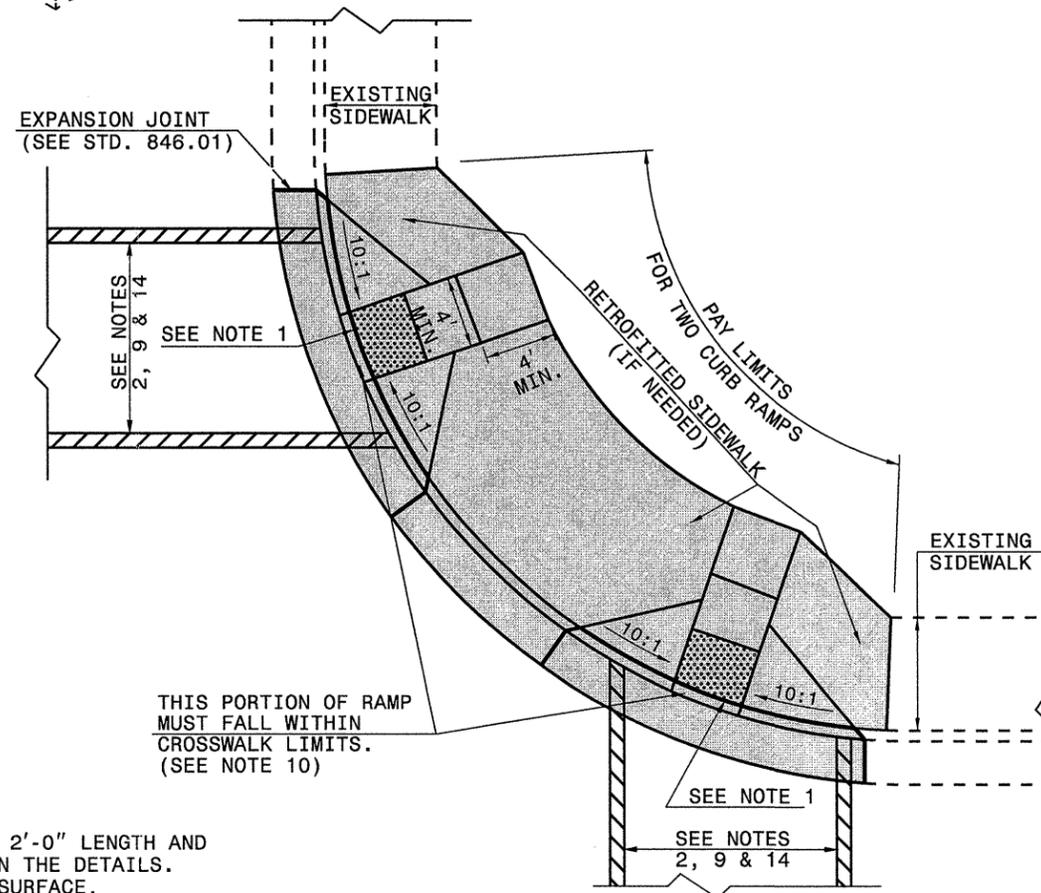


SECTION A-A

PAY LIMITS OF CURB RAMP



DETECTABLE WARNING DOMES



PLAN VIEW

DUAL RAMPS
ANY RADII
(40" MIN. FLOOR WIDTH)

- NOTES:
1. PLACE DETECTABLE WARNING DOMES TO COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
 2. OBTAIN VISIBLE CONTRAST WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.

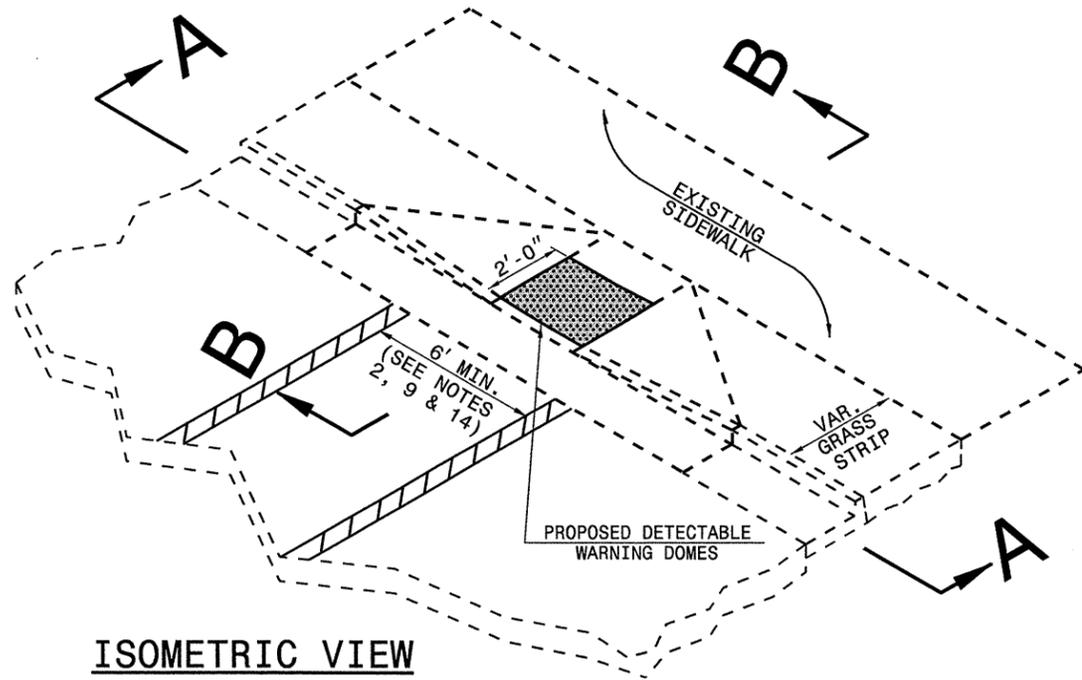
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
CURB RAMP
EXISTING CURB AND GUTTER

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

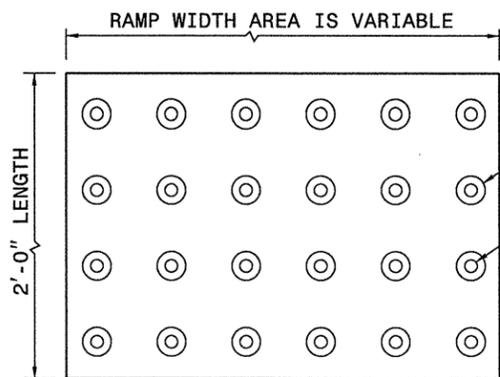
ENGLISH DETAIL DRAWING FOR
CURB RAMP
EXISTING CURB AND GUTTER

RETROFITTING DETECTABLE WARNING DOMES ONTO EXISTING CURB RAMP



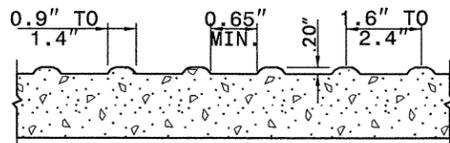
ISOMETRIC VIEW

PAY LIMITS OF RETROFIT CURB RAMP



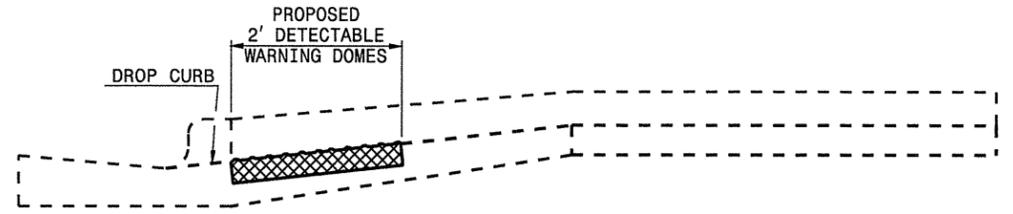
BASE DIAMETER
0.90"R TO 1.40"R

TOP DIAMETER OF NO LESS
THAN 50% TO NO MORE
THAN 65% OF THE BASE
DIAMETER

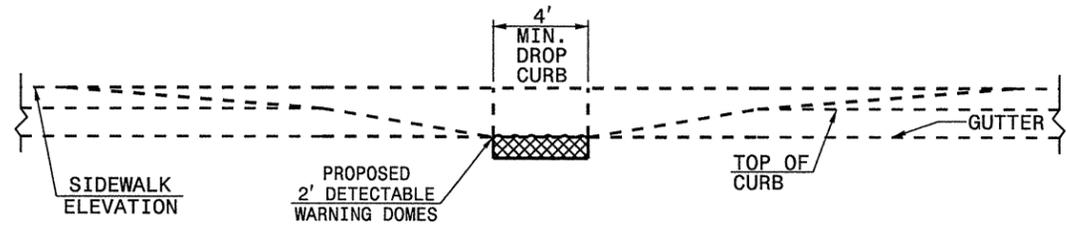


- NOTES:
1. PLACE DETECTABLE WARNING DOMES TO COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
2. OBTAIN VISIBLE CONTRAST WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.

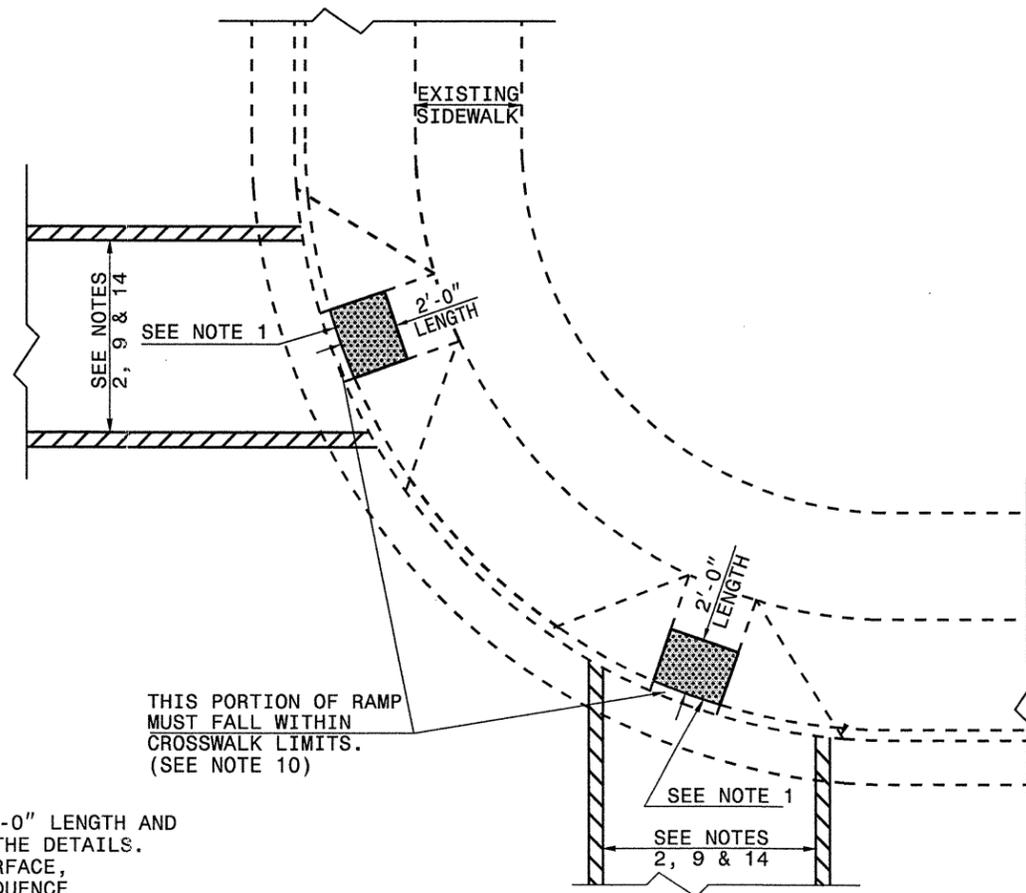
DETECTABLE WARNING DOMES



SECTION B-B



SECTION A-A



PLAN VIEW

DUAL RAMPS
ANY RADII
(40" MIN. FLOOR WIDTH)

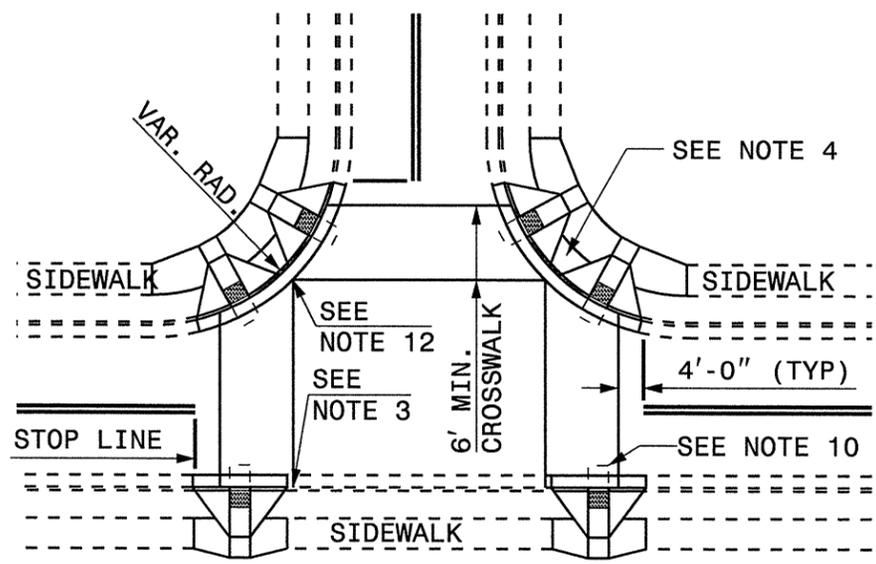
STATE OF
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

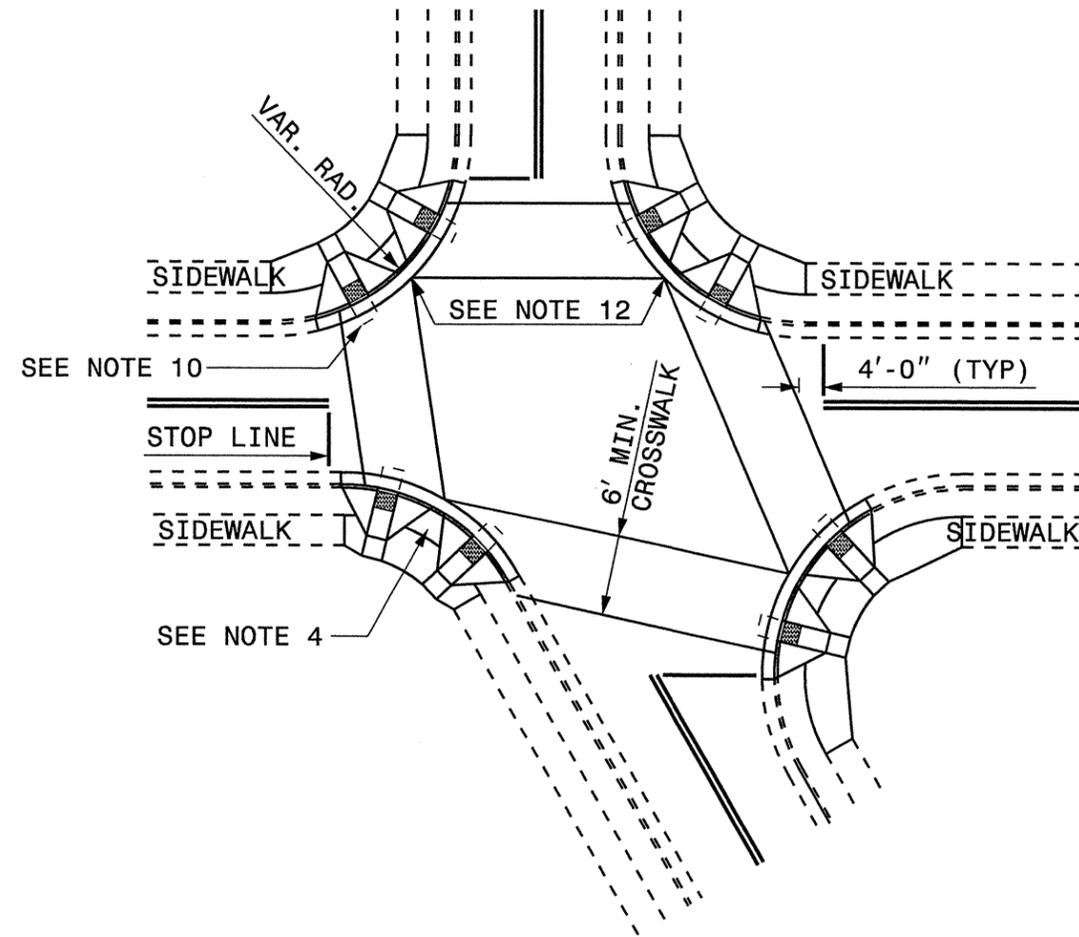
ENGLISH DETAIL DRAWING FOR
CURB RAMP
EXISTING CURB AND GUTTER

ENGLISH DETAIL DRAWING FOR
CURB RAMP
EXISTING CURB AND GUTTER

CURB RAMPS AND EXISTING SIDEWALK

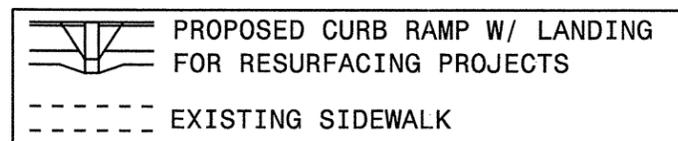


DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS,
PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS



DETAIL SHOWING TYPICAL LOCATION OF CURB
RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES

RESURFACING PROJECTS



ALLOWABLE LOCATIONS
DUAL RAMP RADII.....ANY

CURB RAMP AND EXISTING SIDEWALK

NOTES:

1. CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM, AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP TYPE AS SHOWN IN THE PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER.
2. LOCATE CURB RAMPS AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN IN THE PAVEMENT MARKING PLANS. WHEN FIELD ADJUSTMENTS REQUIRE MOVING CURB RAMPS OR MARKINGS AS SHOWN, CONTACT THE SIGNING AND DELINEATION UNIT OR LOCATE AS DIRECTED BY THE ENGINEER.
3. COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS SO A 4'x4' CLEAR SPACE AT THE BASE OF THE CURB RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES.
4. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL LANE IS 4' MINIMUM.
5. REFER TO THE PAVEMENT MARKING PLANS FOR STOP BAR LOCATIONS AT SIGNALIZED INTERSECTIONS. IF A PAVEMENT MARKING PLAN IS NOT PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR LOCATE AS DIRECTED BY THE ENGINEER.
6. TERMINATE PARKING A MINIMUM OF 20' BACK OF A PEDESTRIAN CROSSWALK.
7. CONSTRUCT CURB RAMPS A MINIMUM OF 4' WIDE.
8. CONSTRUCT THE RUNNING SLOPE OF THE RAMP 8.33% MAXIMUM.
9. ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMPS WILL BE 2% MAXIMUM.
10. CONSTRUCT THE SIDE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
11. CONSTRUCT THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE BASE OF THE CURB RAMP A MAXIMUM OF 5% AND MAINTAIN A SMOOTH TRANSITION.
12. CONSTRUCT LANDINGS FOR SIDEWALK A MINIMUM OF 4'x4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. CONSTRUCT LANDINGS FOR MEDIAN ISLANDS A MINIMUM OF 5'x5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
13. TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' WIDE. CONSTRUCT MEDIAN ISLANDS TO PROVIDE PASSAGE OVER OR THROUGH THE ISLAND.
14. SMALL CHANNELIZATION ISLANDS THAT CAN NOT PROVIDE A 5'x5' LANDING AT THE TOP OF A RAMPS, WILL BE CUT THROUGH LEVEL WITH THE SURFACE STREET.
15. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
16. PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS SHOWN IN ROADWAY STANDARD DRAWING 848.01
17. PLACE ALL PEDESTRIAN PUSH BUTTON ACTUATORS AND CROSSING SIGNALS AS SHOWN IN THE PLANS OR AS SHOWN IN THE MUTCD.
18. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR THE DETAILS OR FOR A SPECIAL DESIGN.

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RALEIGH, N.C.

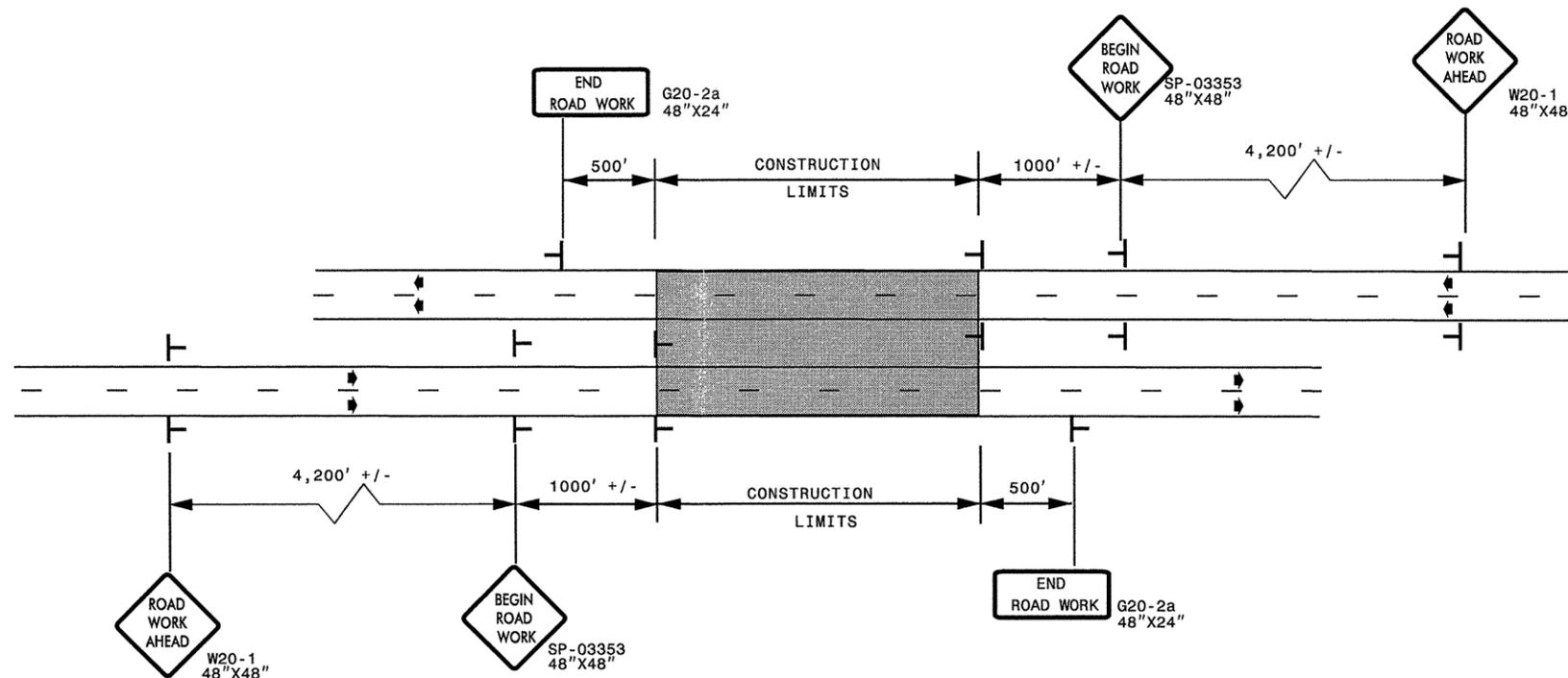
ENGLISH DETAIL DRAWING FOR
CURB RAMP
EXISTING CURB AND GUTTER

ENGLISH DETAIL DRAWING FOR
CURB RAMP
EXISTING CURB AND GUTTER

ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

PROJ. REFERENCE NO.	SHEET NO.
12CR.20361.16	TCP-2

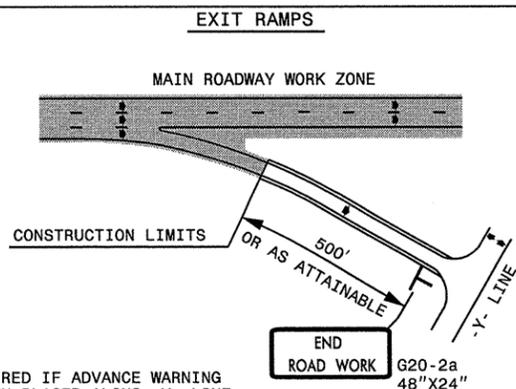
DETAIL A



LEGEND	
	STATIONARY SIGN
➔	DIRECTION OF TRAFFIC FLOW

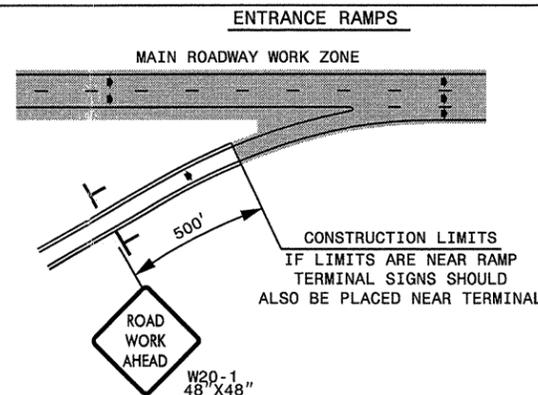
* USE THE "\$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "\$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.

DETAIL B



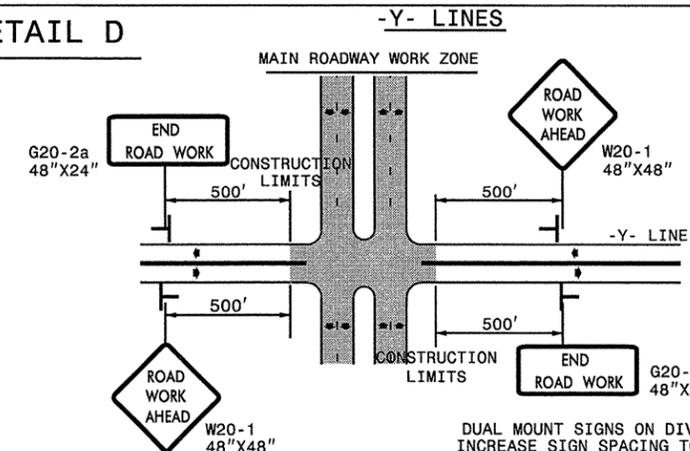
NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

DETAIL C



CONSTRUCTION LIMITS IF LIMITS ARE NEAR RAMP TERMINAL SIGNS SHOULD ALSO BE PLACED NEAR TERMINAL

DETAIL D



DUAL MOUNT SIGNS ON DIVIDED HIGHWAYS AND INCREASE SIGN SPACING TO 1000'+/-.

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

APPROVED: _____	DATE: _____	ADVANCED WORK ZONE WARNING SIGNS FOR FREEWAYS (4 LANES OR GREATER)	
SEAL	SCALE: NONE		
	DATE: 8/03		
	DWG. BY: JI		
	DESIGN BY: JI		
REVIEWED BY: _____	REVISIONS		
	03/04		

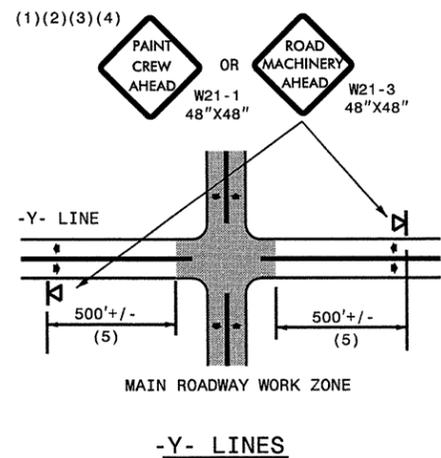
I:\SER-2011\451\TON\GROUPS-WZTC\CC-TMUN\WZTC\Resur\facimg\2011\Western\2011\DIV2\2022xxx\12CR.20361.16.Coston_freeways_4lanes_or_greater_stationary.dgn

GENERAL NOTES

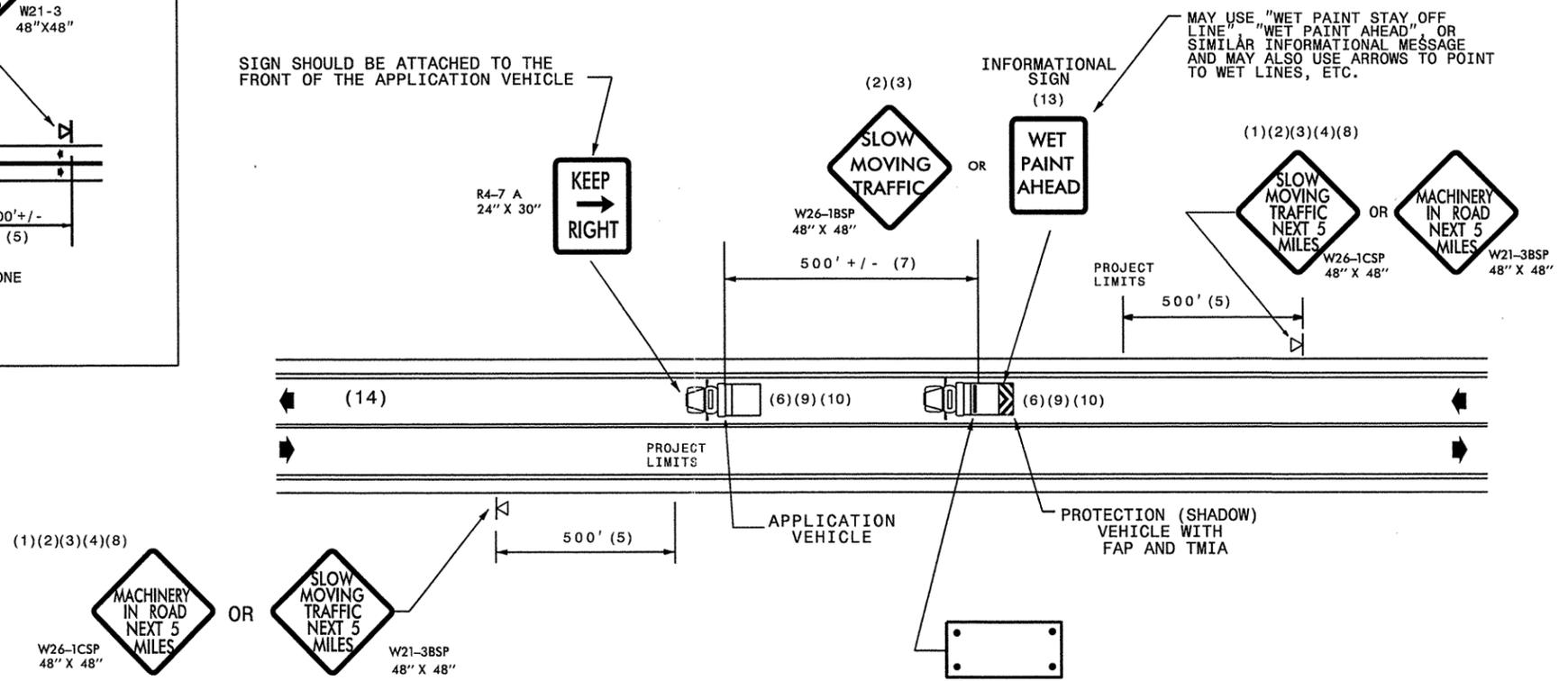
- (1) THE FOLLOWING OPTIONS MAY BE USED FOR ADVANCE WARNING SIGNS:
 - A. TRUCK MOUNTED SIGNS
 - B. TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
 - C. GROUND MOUNTED ADVANCE WARNING SIGNS (MUST CIRCLE TO PICK UP SIGNS)
 - D. GROUND MOUNTED CHANGEABLE MESSAGE SIGN (CMS) (MUST USE CIRCLE TO PICK UP SIGNS)
- (2) ALL ADVANCE WARNING SIGNS MUST BE 48" X 48" WITH FLUORESCENT ORANGE TYPE VII, VIII OR IX SHEETING. IF SPACE LIMITATIONS ON SHOULDER PROHIBIT A 48" X 48" SIGN, A SMALLER SIGN CAN BE USED WITH APPROVAL FROM ENGINEER.
- (3) SIGNS ON VEHICLES SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND AND SHOULD NOT BLOCK THE MOTORIST'S SIGHT OF THE FLASHING ARROW PANEL AND/OR LIGHTBAR.
- (4) GROUND MOUNTED ADVANCED WARNING SIGNS SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND TO BOTTOM OF SIGN.
- (5) SIGN SPACING SHOULD BE ADJUSTED FOR HORIZONTAL AND VERTICAL CURVES, ETC. TO IMPROVE SIGHT DISTANCES.
- (6) ADDITIONAL VEHICLES SHOULD BE USED IN WORK CARAVAN TO FACILITATE DRYING OF PAVEMENT MARKING MATERIAL (TMIA'S ARE OPTIONAL ON THESE ADDITIONAL VEHICLES). HOWEVER, THE FIRST VEHICLE MOTORISTS SEE IN THE TRAVEL LANE SHALL HAVE A TMIA.
- (7) ADJUST DISTANCE AS NEEDED TO PREVENT MOTORISTS FROM ENTERING SPACE BETWEEN THE APPLICATION AND PROTECTION VEHICLE. DISTANCE CAN BE LENGTHENED TO ACCOMODATE SIGHT DISTANCE NEEDS.
- (8) ROUND UP MILEAGE TO NEXT WHOLE MILE. WORK ZONE SHOULD NOT EXCEED FIVE (5) MILES IN LENGTH.
- (9) RADIO COMMUNICATION BETWEEN VEHICLES IS REQUIRED.
- (10) USE OF A LIGHT BAR ON ALL VEHICLES IS PREFERRED, BUT A ROTATING BEACON MAY BE USED INSTEAD.
- (11) IF WORK IS PERFORMED AT NIGHT, THE WORK AREA MUST BE ILLUMINATED WITH MACHINE AND/OR TOWER LIGHTS AS APPROVED BY THE ENGINEER.
- (12) ALL TRAFFIC CONTROL DEVICES WILL BE CONSIDERED INCIDENTAL TO THE PAY ITEMS FOR PAVEMENT MARKING AND MARKERS.
- (13) INFORMATIONAL SIGNS SHOULD BE ACTIVITY SPECIFIC, i.e. "PAINT CREW IN ROAD". SIGNS MAY BE RECTANGULAR OR DIAMOND SHAPE. SIGN SIZE SHOULD BE BASED ON THE MOTORIST ABILITY TO RECOGNIZE SIGN WHEN TRAVELING FIVE (5) MILES ABOVE POSTED SPEED LIMIT.
- (14) IF A LEAD VEHICLE IS ADDED TO OPERATION, IT SHOULD HAVE THE SAME ADVANCE WARNING SIGNS AS THE APPLICATION VEHICLE SHOWN BELOW.

LEGEND

-  PORTABLE SIGN. SIGNS MUST BE NCHRP-350 AND NCDOT APPROVED.
-  DIRECTION OF TRAFFIC FLOW
-  APPLICATION VEHICLE WITH LIGHT BAR
-  PROTECTION VEHICLE WITH TRUCK MOUNTED IMPACT ATTENUATOR (TMIA) AND LIGHT BAR (SEE ROADWAY STANDARD NO. 1165.01). TMIA MUST BE NCHRP-350 TEST LEVEL 3 (60+MPH) APPROVED.
-  FLASHING ARROW PANEL, TYPE "B" (60"X30" MIN.), "CAUTION MODE"



SIGN SHOULD BE ATTACHED TO THE FRONT OF THE APPLICATION VEHICLE



MOVING OPERATION CARAVAN

(OPERATIONS TRAVELING 3 MPH OR FASTER)
PLACING PAVEMENT MARKING OR MARKERS
ON TWO-LANE TWO-WAY ROADWAYS

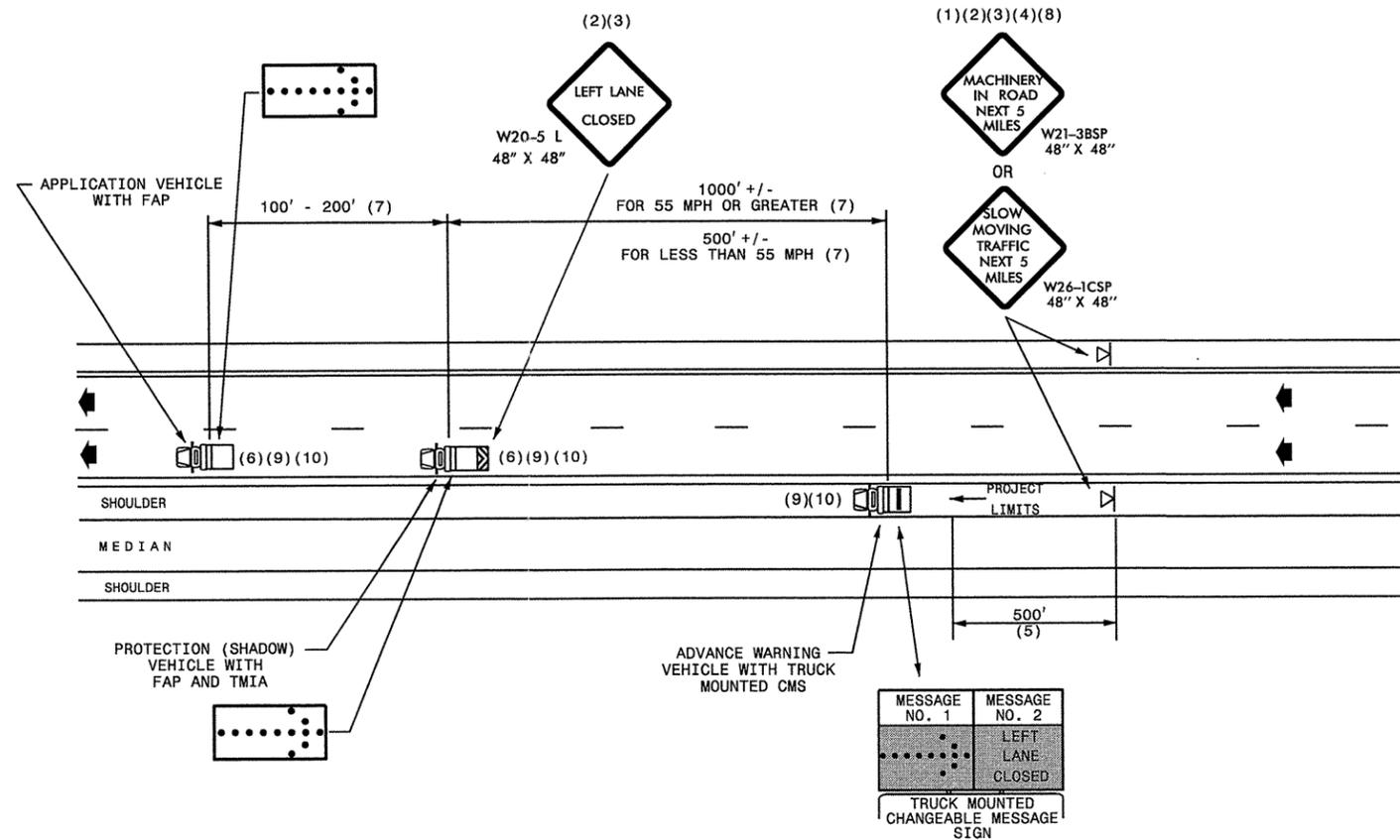
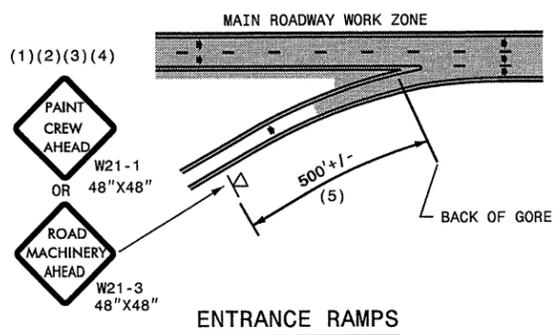
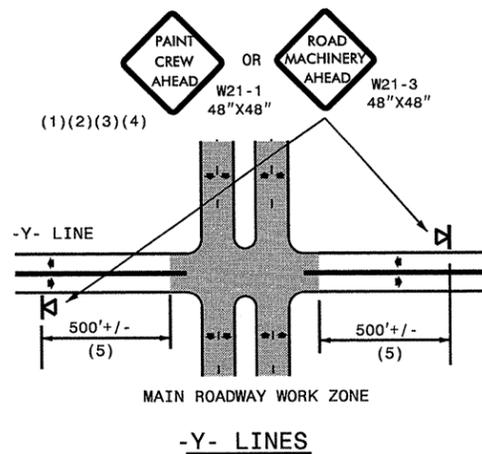
DRAWING NUMBER 6
IMPLEMENTATION DATE: 07/01/97
REVISED: 11/03/04

GENERAL NOTES

- (1) THE FOLLOWING OPTIONS MAY BE USED FOR ADVANCE WARNING SIGNS:
 - A. TRUCK MOUNTED SIGNS
 - B. TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
 - C. GROUND MOUNTED ADVANCE WARNING SIGNS (MUST CIRCLE TO PICK UP SIGNS)
 - D. GROUND MOUNTED CHANGEABLE MESSAGE SIGN (CMS) (MUST USE CIRCLE TO PICK UP SIGNS)
- (2) ALL ADVANCE WARNING SIGNS MUST BE 48" X 48" WITH FLUORESCENT ORANGE TYPE VII, VIII OR IX SHEETING. IF SPACE LIMITATIONS ON SHOULDER PROHIBIT A 48" X 48" SIGN, A SMALLER SIGN CAN BE USED WITH APPROVAL FROM ENGINEER.
- (3) SIGNS ON VEHICLES SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND AND SHOULD NOT BLOCK THE MOTORIST'S SIGHT OF THE FLASHING ARROW PANEL AND/OR LIGHTBAR.
- (4) GROUND MOUNTED ADVANCED WARNING SIGNS SHOULD BE MOUNTED A MINIMUM OF FIVE (5) FEET FROM THE GROUND TO BOTTOM OF SIGN.
- (5) SIGN SPACING SHOULD BE ADJUSTED FOR HORIZONTAL AND VERTICAL CURVES, ETC. TO IMPROVE SIGHT DISTANCES.
- (6) ADDITIONAL VEHICLES SHOULD BE USED IN WORK CARAVAN TO FACILITATE DRYING OF PAVEMENT MARKING MATERIAL (TMIA'S ARE OPTIONAL ON THESE ADDITIONAL VEHICLES). HOWEVER, THE FIRST VEHICLE MOTORISTS SEE IN THE TRAVEL LANE SHALL HAVE A TMIA.
- (7) ADJUST DISTANCE AS NEEDED TO PREVENT MOTORISTS FROM ENTERING SPACE BETWEEN THE APPLICATION AND PROTECTION VEHICLE. DISTANCE CAN BE LENGTHENED TO ACCOMMODATE SIGHT DISTANCE NEEDS.
- (8) ROUND UP MILEAGE TO NEXT WHOLE MILE. WORK ZONE SHOULD NOT EXCEED FIVE (5) MILES IN LENGTH.
- (9) RADIO COMMUNICATION BETWEEN VEHICLES IS REQUIRED.
- (10) USE OF A LIGHT BAR ON ALL VEHICLES IS PREFERRED, BUT A ROTATING BEACON MAY BE USED INSTEAD.
- (11) IF WORK IS PERFORMED AT NIGHT, THE WORK AREA MUST BE ILLUMINATED WITH MACHINE AND/OR TOWER LIGHTS AS APPROVED BY THE ENGINEER.
- (12) ALL TRAFFIC CONTROL DEVICES WILL BE CONSIDERED INCIDENTAL TO THE PAY ITEMS FOR PAVEMENT MARKING AND MARKERS.

LEGEND

-  PORTABLE SIGN. SIGNS MUST BE NCHRP-350 AND NCDOT APPROVED.
-  DIRECTION OF TRAFFIC FLOW
-  APPLICATION VEHICLE WITH LIGHT BAR
-  PROTECTION VEHICLE WITH TRUCK MOUNTED IMPACT ATTENUATOR (TMIA) AND LIGHT BAR (SEE ROADWAY STANDARD NO. 1165.01). TMIA MUST BE NCHRP-350 TEST LEVEL 3 (60+MPH) APPROVED.
-  ADVANCE WARNING VEHICLE WITH TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS) AND LIGHT BAR. MESSAGE SIGN LETTER HEIGHT SHOULD BE A MINIMUM OF 10 INCHES.
-  FLASHING ARROW PANEL, TYPE "B" (60"X30" MIN.), APPROPRIATE DIRECTION INDICATED
-  CHANGEABLE MESSAGE SIGN



MOVING OPERATION CARAVAN
 (OPERATIONS TRAVELING 3 MPH OR FASTER)
 PLACING PAVEMENT MARKING OR MARKERS
 ON NON-INTERSTATE MULTILANE DIVIDED ROADWAYS

DRAWING NUMBER 7
 IMPLEMENTATION DATE: 07/01/97
 REVISED: 11/03/04