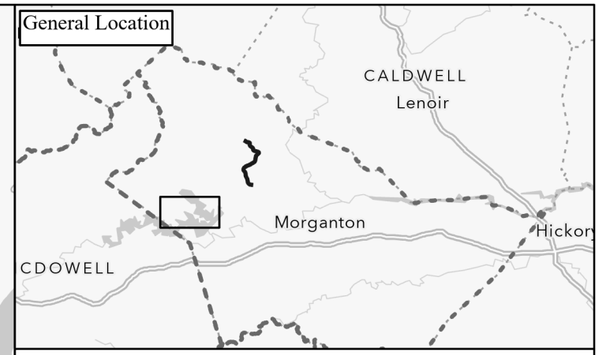
State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

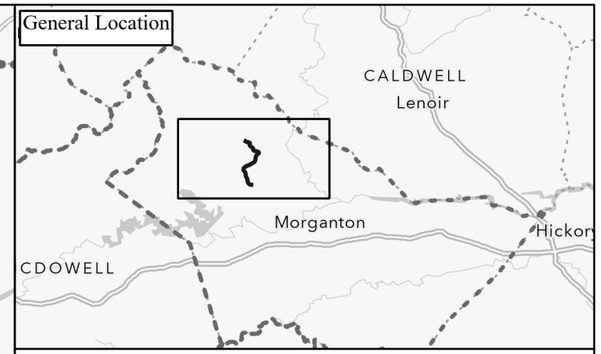


Burke Primary and Secondary Resurfacing
2023CPT.13.02.10121,
2023CPT.13.02.20121
Sheet 1

126
Longtown
SR-1238
SR-1281
Map 1
SR-1364
SR-1365
SR-1354
SR-1350
SR-1357
SR-1356
Map 15
SR-1353
SR-1351
SR-1352
SR-1331
SR-1340
SR-1233
SR-1348
SR-1298
SR-1296
0 0.13 0.25 Miles
N

MAP_NUMBER	Route Description	From Description	To Description
1			
15	SR-1356 / BRAXTON	CUL DE SAC	CUL DE SAC

State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

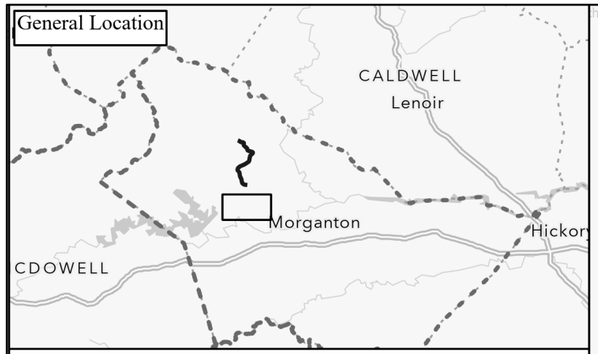


Burke Primary and Secondary Resurfacing
2023CPT.13.02.10121,
2023CPT.13.02.20121
Sheet 2

Joy
Perkinsville
Tablerock
Worry
Gold
Map 2
Map 4
0120089
0120063
181
126
64
N
0 0.125 Miles

Map Number	Route Description	From Description	To Description
2	NC-181 N	SR 1280 (BOWMAN AVE)	SR 1405 (BROWN MOUTAIN BEACH RD) + 2.021 MILES
4	SR-1440 / SPAINHOUR RD	SR 1440 (BOST RD)	SR 1470 (WARRIOR FORK TRL)
14	SR-1349 / KINGLET DR	SR 1248 (FRANK WHISNANT RD)	CUL DE SAC

General Location



Burke Primary and Secondary
Resurfacing
2023CPT.13.02.10121,
2023CPT.13.02.20121
Sheet 3

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

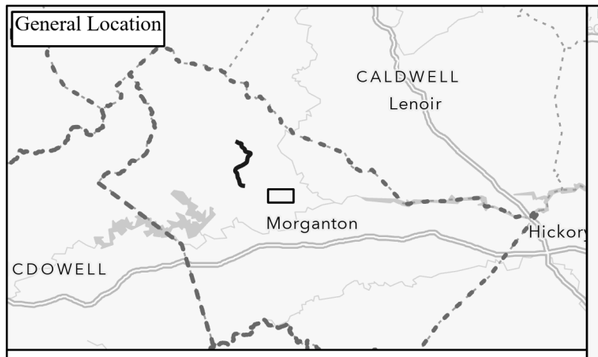
Map 14
SR-1349
SR-1248
0120274
Map 13
SR-1252
181
SR-1413
SR-1441
SR-1251
SR-1478
SR-1477
SR-1342
SR-1343
Oak Hill
SR-1440
SR-1246
126
SR-1337
Yellow Mountain Rd
SR-1359
SR-1233
SR-1249
Map 3
SR-1250
0120056
SR-1247
NC-126

Map Number	Route Description	From Description	To Description
3	SR-1250 / WATERMILL RD	NC 126	SR 1248 (FRANK WHISNANT RD)
13	SR-1248 / FRANK WHISNANT RD	NC 126	NC 181
14	SR-1349 / KINGLET DR	SR 1248 (FRANK WHISNANT RD)	CUL DE SAC

0 0.13 0.25 Miles

N

General Location



Burke Primary and Secondary
Resurfacing
2023CPT.13.02.10121,
2023CPT.13.02.20121
Sheet 4

MAP_NUMBER	Route Description	From Description	To Description
4	SR-1440 / BOST RD	SR 1419 (SPAINHOUR RD)	SR 1470 (WARRIOR FORK TRL)
18	SR-1463 / PINE DR	SR 1461 (OAK HILL DR)	SR 1467 (FALLING BROOK LN)

0 0.13 0.25 Miles

N

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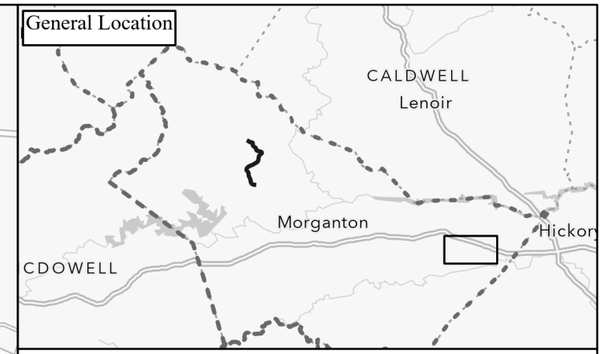

Burke Primary and Secondary Resurfacing
2023CPT.13.02.10121,
2023CPT.13.02.20121
Sheet 5

0160 0162 0163 0164 0313 0167 0168 0169 0171

Map 5 Map 21 Map 22 Map 23

MAP_NUMBER	Route Description	From Description	To Description
21	SR-1791 / HILDEBRAN MOUNTAIN AV	SR 1786 (MILER BRIDGE RD)	END MAINT
22	SR-2516 / SHAMROCK DR	SR 1761 (OLD NC 10)	SR 1765 (BERRY RD)
23	SR-2517 / BEVERLY HILLS DR	SR 1809 (S FORK AVE)	DEAD END
5	SR-1762 / EAST BURKE BLVD	SR 1760 (ICARD DAIRY BARN RD)	US 70

0 0.13 0.25 Miles

N

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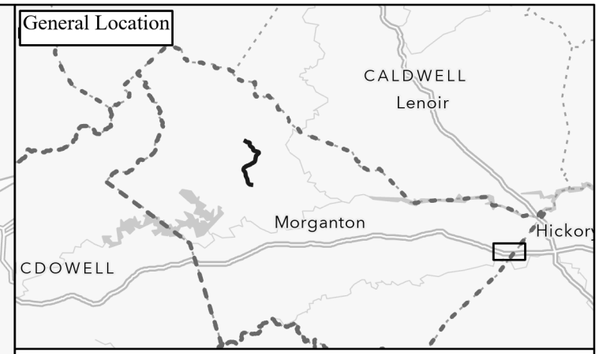

Burke Primary and Secondary
Resurfacing
2023CPT.13.02.10121,
2023CPT.13.02.20121
Sheet 6

MAP_NUMBER	Route Description	From Description	To Description
8	SR-1890 / I40 ACCESS RD SE	SR 1002 (SOUTH CENTER ST)	US 70
7	SR-1877 / GAINES ST	SR 1780 (COSTNER RD)	END OF MAINT
6	SR-1780 / COSTNER RD	SR 1002 (HENRY RIVER RD)	(CATAWABA CO LINE)
26	SR-1002 / S CENTER ST	SR 1890	US 70
25	SR-1761 / MAIN AV E	I-40 EXIT 118 W BOUND RAMPS	US 70
24	HILDEBRAN ELEMENTARY SCHOOL (BUS ROUTE)	US 70	1ST STREET

0 0.13 0.25 Miles

N

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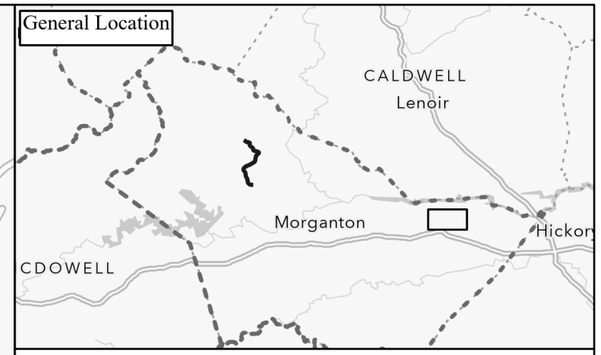

Burke Primary and Secondary Resurfacing
2023CPT.13.02.10121,
2023CPT.13.02.20121
Sheet 7

MAP_NUMBER	Route Description	From Description	To Description
9	SR-1608 / SHADY GROVE RD	US 70	SR 1613 (TOMLINSON LOOP RD)
10	SR-1613 / TOMLINSON LOOP	SR 1608	SR 1608 (SHADY GROVE RD)

0 0.13 0.25 Miles

N

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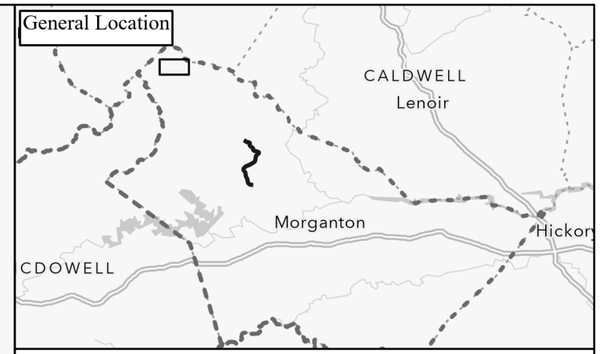

Burke Primary and Secondary Resurfacing
2023CPT.13.02.10121,
2023CPT.13.02.20121
Sheet 8

MAP_NUMBER	Route Description	From Description	To Description
17	SR-1448 / JUNE CLARK ST	SR 1401 (MORTIMER RD)	END MAINT
16	SR-1402 / JOE POORE RD	NC 181	NC 181
11	SR-1264 / GINGERCAKE RD	NC 181	SR 1265 (TABLE ROCK RD)

0 0.13 0.25 Miles

N

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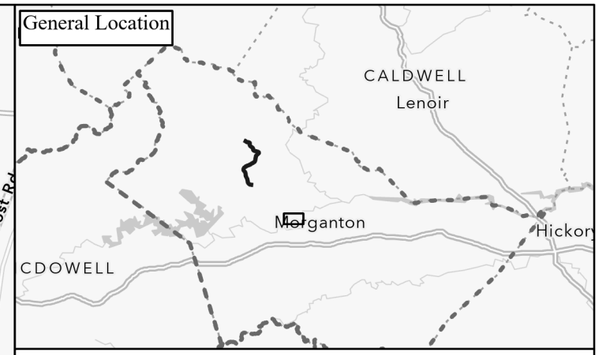


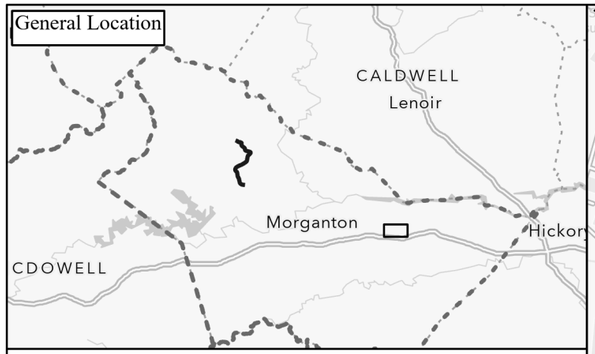
Burke Primary and Secondary Resurfacing
2023CPT.13.02.10121,
2023CPT.13.02.20121
Sheet 9

MAP_NUMBER	Route Description	From Description	To Description
19	SR-1475 / FORD RD	SR 1414 (ST MARYS CHURCH RD)	END MAINT
12	SR-1215 / SAM WALL AV	NC 126	END MAINT

0 0.13 0.25 Miles

N

General Location



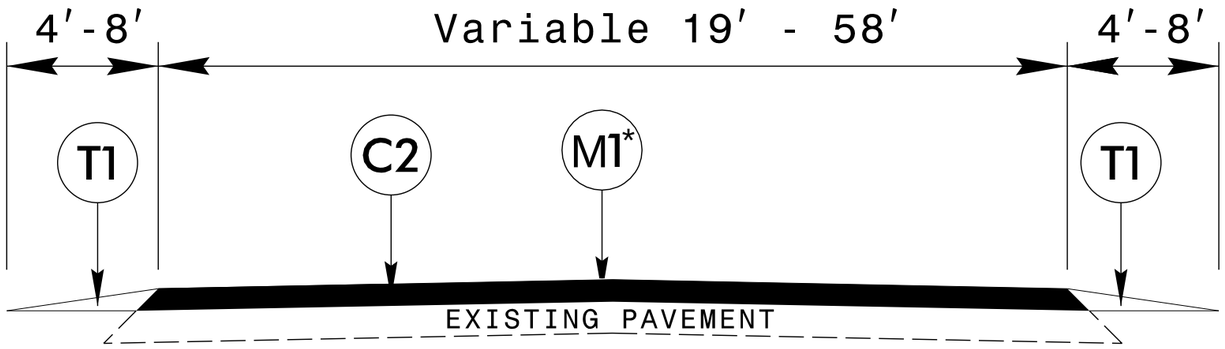
Burke Primary and Secondary
Resurfacing
2023CPT.13.02.10121,
2023CPT.13.02.20121
Sheet 10

MAP_NUMBER	Route Description	From Description	To Description
20	SR-1733 / PRALEY ST SW	US 70	SR 1734 (CAROLINA ST)

0 0.13 0.25 Miles

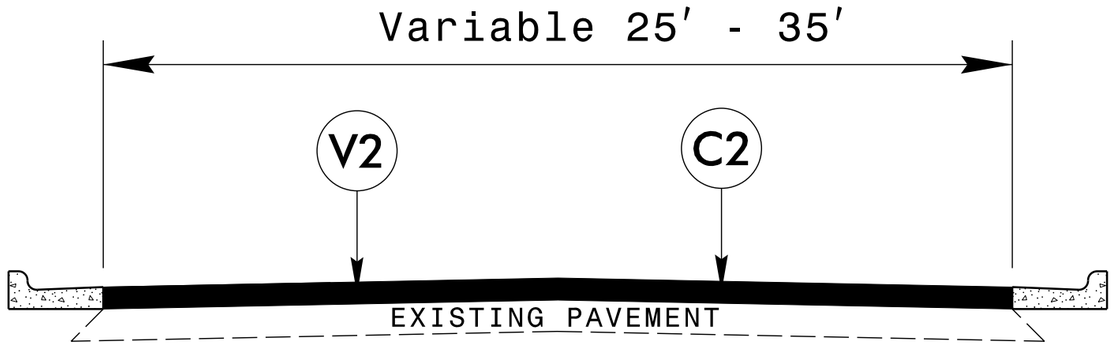
N

PROJECT NO.	SHEET NO.	TOTAL SHEETS
2023CPT.13.02.10121, 2023CPT.13.02.20121	11	



TYPICAL SECTION #1

* USE M1 ONLY ON MAP #2



TYPICAL SECTION #2

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YARD
C2	PROP. APPROX. 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD
T1	SHOULDER RECONSTRUCTION
V1	MILLING ASPHALT PAVEMENT, 1" DEPTH
V2	MILLING ASPHALT PAVEMENT 1-½" DEPTH
V3	MILLING ASPHALT PAVEMENT, 0 TO 1-½" DEPTH
V4	INCIDENTAL MILLING
M1	CENTERLINE RUMBLE STRIP

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20-OCT-2022 10:25
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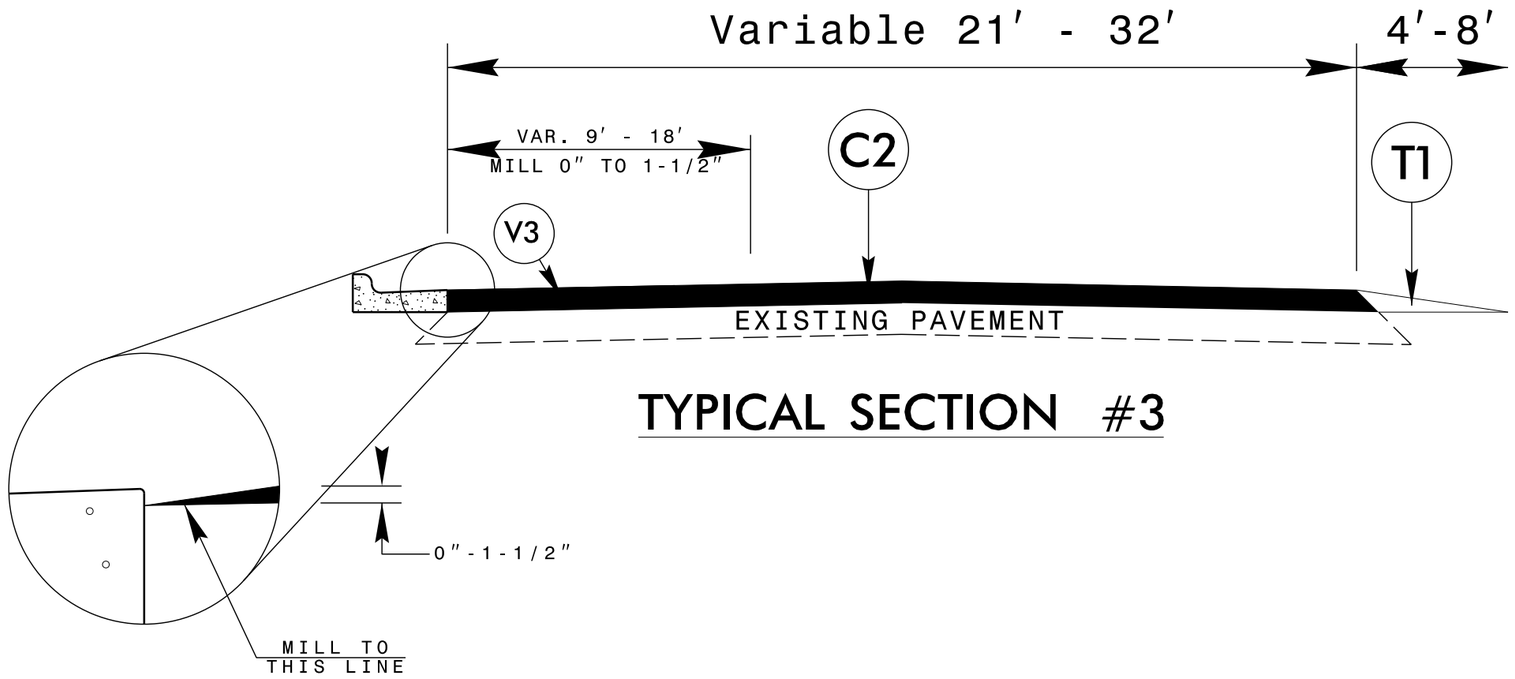
PROJECT NO.	SHEET NO.	TOTAL SHEETS
2023CPT.13.02.10121, 2023CPT.13.02.20121!	12	



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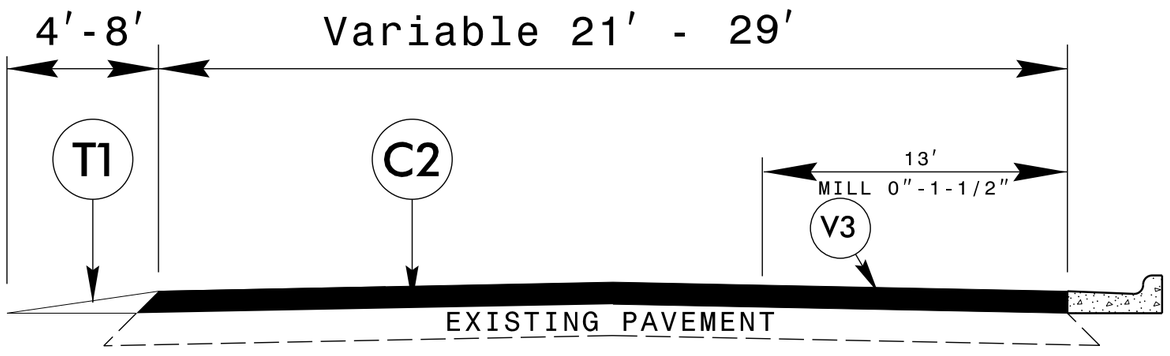

TYPICAL SECTION #4

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YARD
C2	PROP. APPROX. 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD
T1	SHOULDER RECONSTRUCTION
V1	MILLING ASPHALT PAVEMENT, 1" DEPTH
V2	MILLING ASPHALT PAVEMENT 1-½" DEPTH
V3	MILLING ASPHALT PAVEMENT, 0 TO 1-½" DEPTH
V4	INCIDENTAL MILLING
M1	CENTERLINE RUMBLE STRIP

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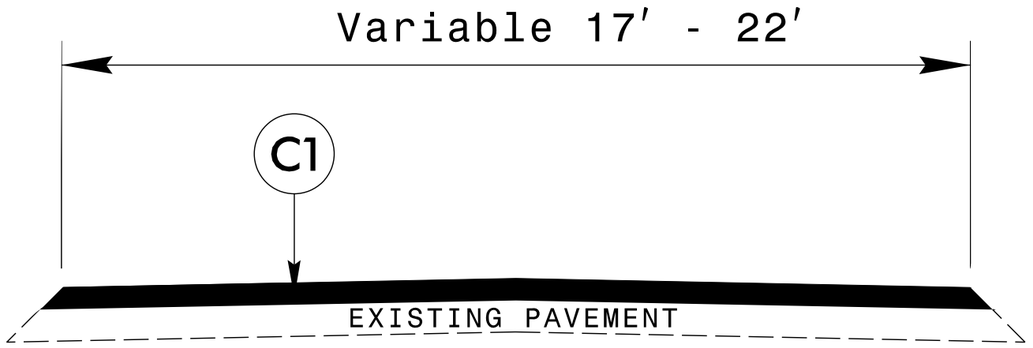
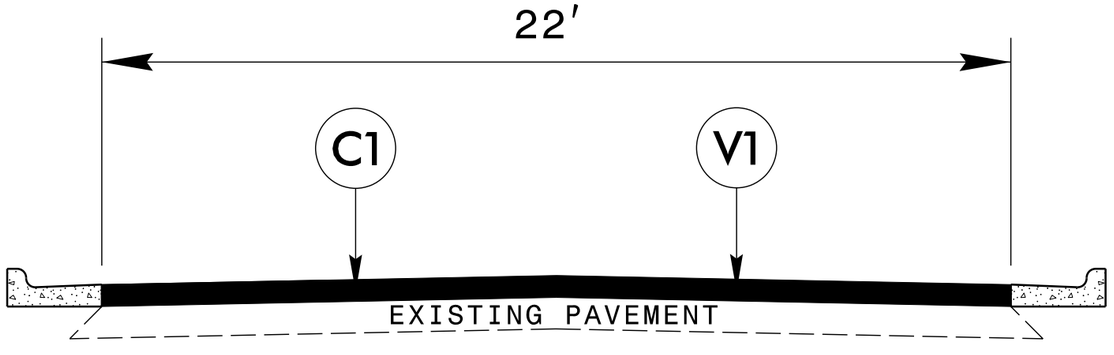
PROJECT NO.	SHEET NO.	TOTAL SHEETS
2023CPT.13.02.10121, 2023CPT.13.02.20121	13	



TYPICAL SECTION #5



TYPICAL SECTION #6

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YARD
C2	PROP. APPROX. 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD
T1	SHOULDER RECONSTRUCTION
V1	MILLING ASPHALT PAVEMENT, 1" DEPTH
V2	MILLING ASPHALT PAVEMENT 1-½" DEPTH
V3	MILLING ASPHALT PAVEMENT, 0 TO 1-½" DEPTH
V4	INCIDENTAL MILLING
M1	CENTERLINE RUMBLE STRIP

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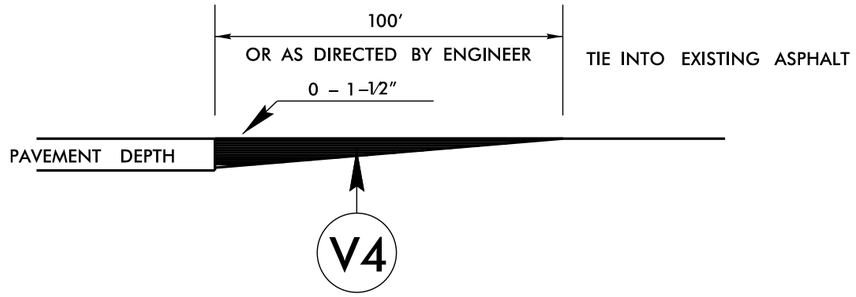
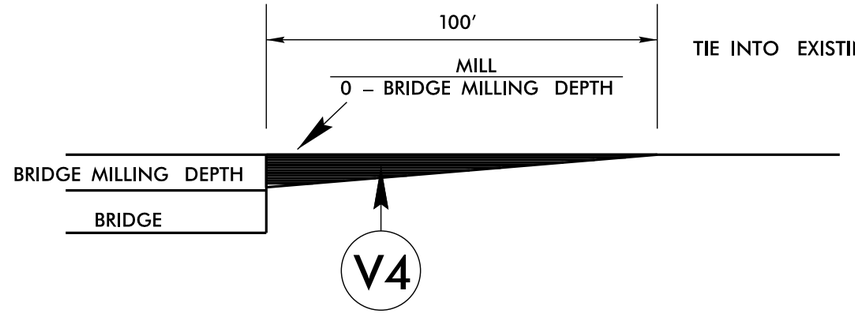
PROJECT NO.	SHEET NO.	TOTAL SHEETS
2023CPT.13.02.10121, 2023CPT.13.02.20121	14	



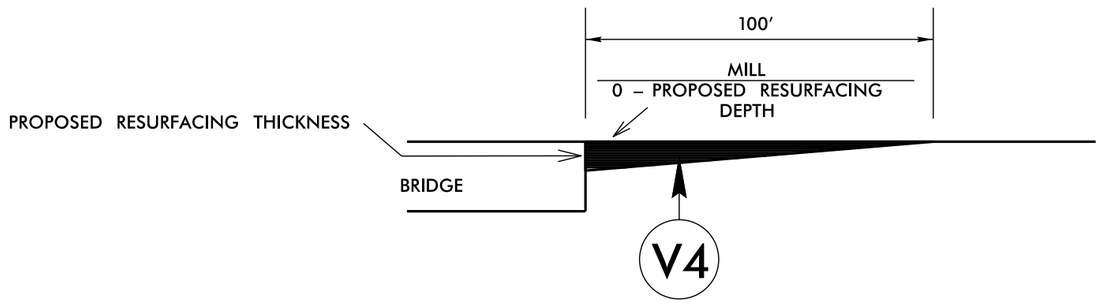
DETAIL TO TIE INTO EXIST PAVEMENT

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 TO BE RESURFACED WITH ASPHALT CONC SURFACE COURSE, TYPE S9.5C.
THIS WILL BE PAID FOR AS INCIDENTAL MILLING.



MILLING DETAIL AT BRIDGE APPROACHES

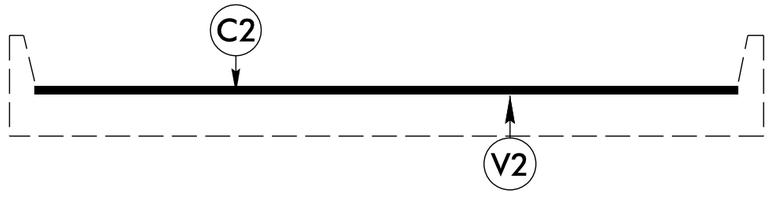
WHERE BRIDGES WILL BE MILLED THEN RESURFACED.
THIS WILL BE PAID FOR AS INCIDENTAL MILLING.
USE AT BRIDGE NUMBER: 63 AND 89 MAP 2, AND 274 MAP 13.



MILLING DETAIL AT BRIDGE APPROACHES

WHERE BRIDGES WILL NOT BE RESURFACED.
THIS WILL BE PAID FOR AS INCIDENTAL MILLING.
USE AT BRIDGE NUMBER: 56 MAP 3.

BRIDGE



BRIDGE DETAIL

BRIDGE NUMBER 63 AND 89 MAP 2, AND 274 MAP 13.
MILL 1–1/2" OFF EXISTING PAVEMENT
SEE MAP FOR BRIDGE LOCATION.

10-FEB-2023 14:39
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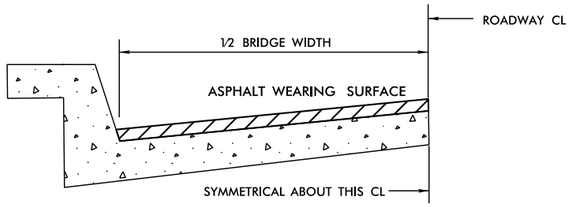
PROJECT NO.	SHEET NO.	TOTAL SHEETS
2023CPT.13.02.10121, 2023CPT.13.02.20121	15	



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. THE MINIMUM THICKNESS SHOULD DEPEND ON PAVEMENT TYPE AS FOLLOWS: S4.75A 1/2", S9.5B 1", S9.5C,D 1.5" – 2". ULTRA–THIN HOT MIX ASPHALT – TYPE A 3/4". ULTRA–THIN HOT MIX ASPHALT – TYPE B 5/8". ULTRA–THIN HOT MIX ASPHALT – TYPE C 1/2". THE MAXIMUM THICKNESS SHOULD DEPEND ON PAVEMENT TYPE AS FOLLOWS: S4.75A 1", S9.5B 1.5", S9.5C,D 2". ULTRA–THIN HOT MIX ASPHALT – TYPE A 3/4", ULTRA–THIN HOT MIX ASPHALT – TYPE B 5/8", ULTRA–THIN HOT MIX ASPHALT HOT MIX ASPHALT – TYPE C 1/2".

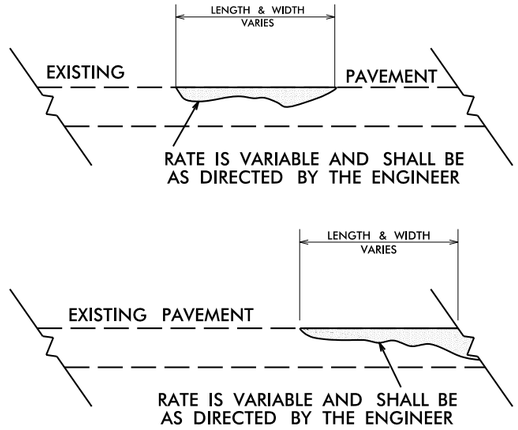
NOTES

ALL UNPAVED ROADS TO BE RESURFACED 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.

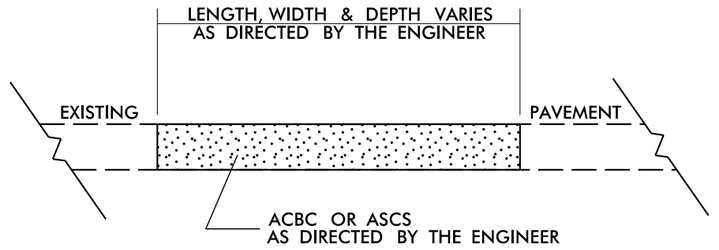
EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.

SHOULDERS AND DITCHES ARE TO BE CONSTRUCTED BY OTHERS UNLESS OTHERWISE INDICATED.

BRIDGES ARE TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.



DETAIL SHOWING METHOD OF WEDGING



PATCHING EXISTING PAVEMENT

6/2/99
02-FEB-2023 11:00
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$$$$ICENAME$$$$

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

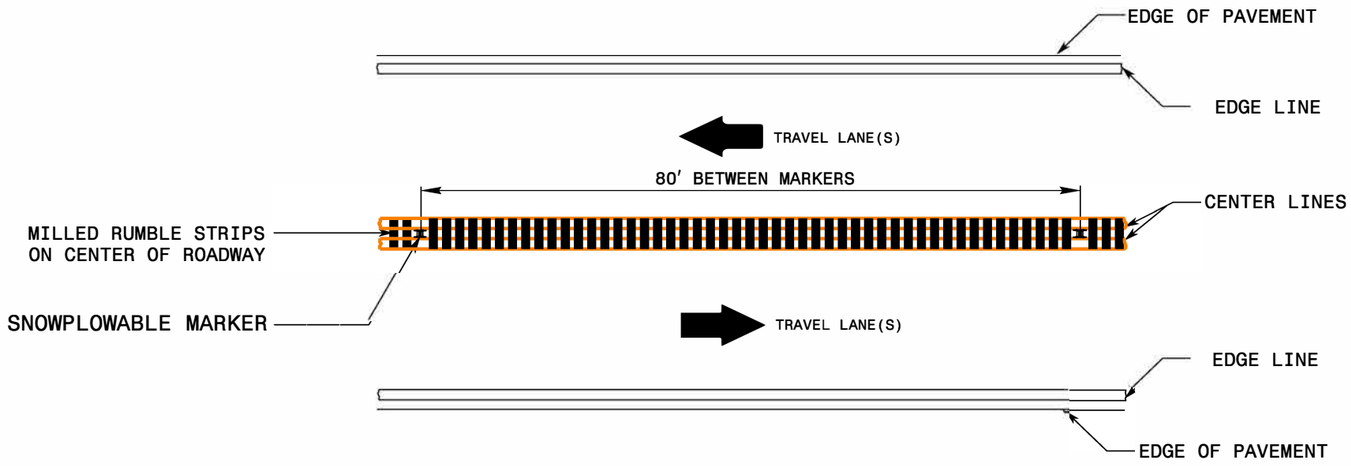
2-23

ENGLISH DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES
TRADITIONAL CENTERLINE RUMBLE STRIP WITH SNOWPLOWABLE MARKERS

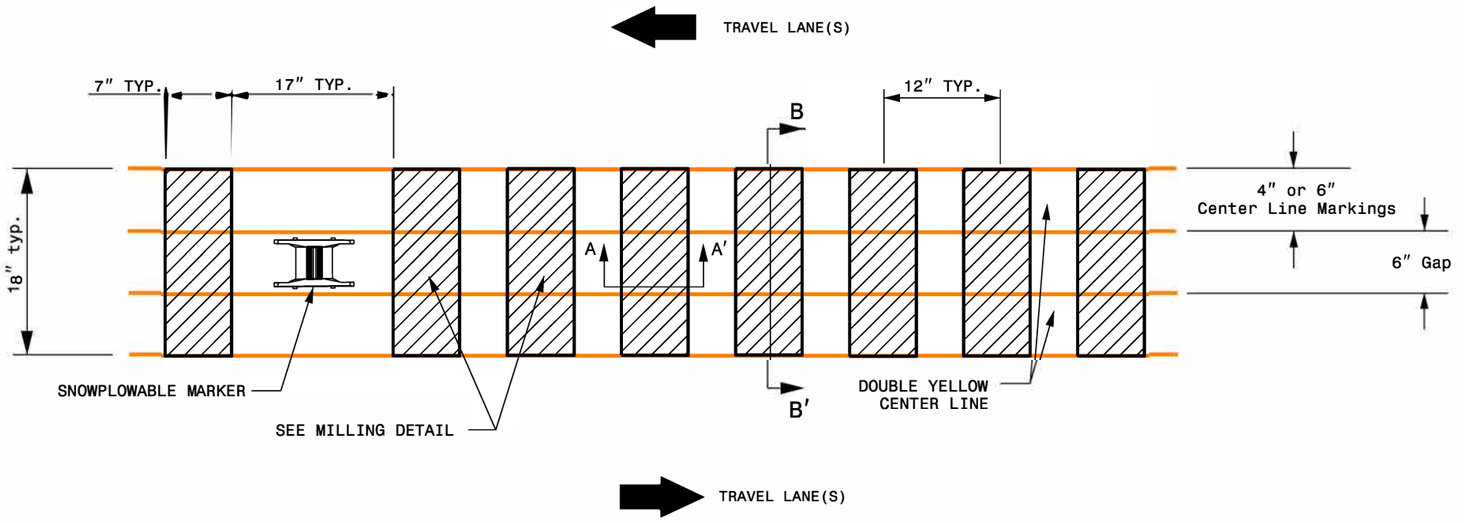
SHEET 7 OF 7

PROJECT NO.	SHEET NO.	TOTAL SHEETS
2023CPT.13.02.10121, 2023CPT.13.02.20121	16	

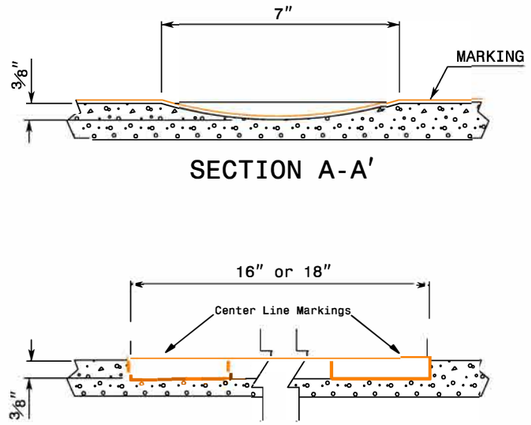
LANE TREATMENT



CENTER LINE



MILLING DETAIL



NOTES:

1) REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.
2) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF THE PAVEMENT MARKING MATERIAL.
3) INSTALL SNOWPLOWABLE MARKERS AT APPROXIMATELY 80′ INCREMENTS. DO NOT MILL RUMBLE STRIPS IN SECTION WHERE SNOWPLOWABLE MARKERS ARE INSTALLED.

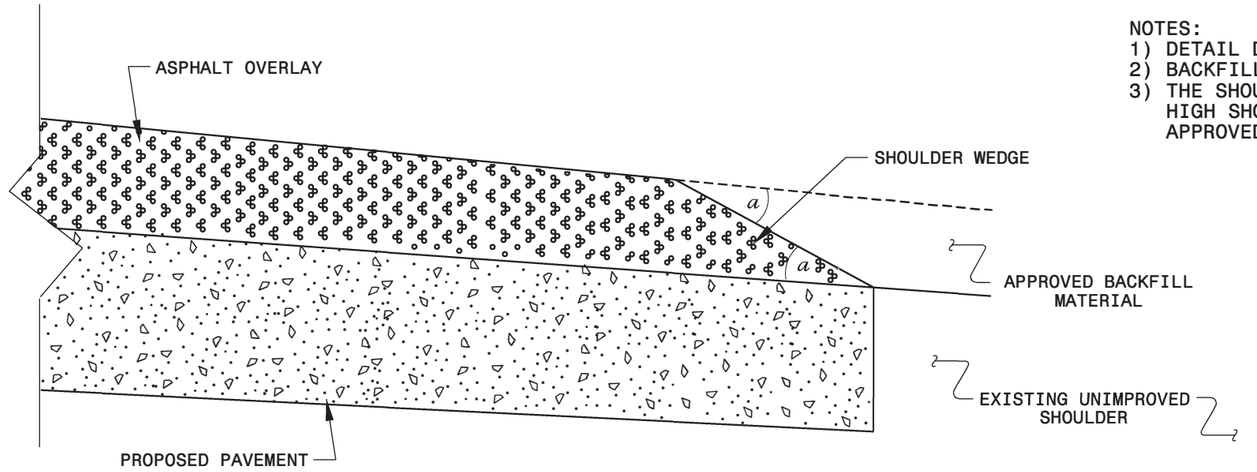
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

2-23

ENGLISH DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES
TRADITIONAL CENTERLINE RUMBLE STRIP WITH SNOWPLOWABLE MARKERS

SHEET 7 OF 7

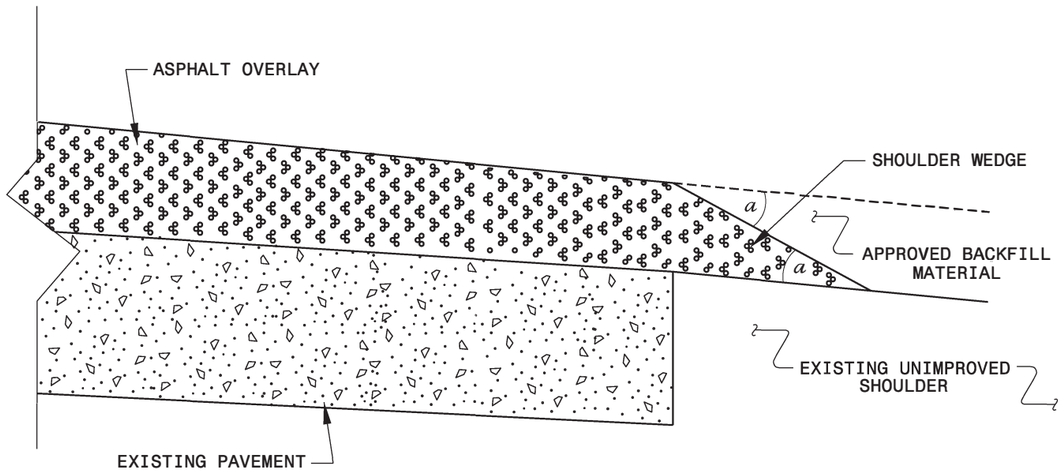
PROJECT REFERENCE NO.	SHEET NO.
2023CPT.13.02.10121 ETC.	17



NOTES:
1) DETAIL DOES NOT APPLY TO OGAFC 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.

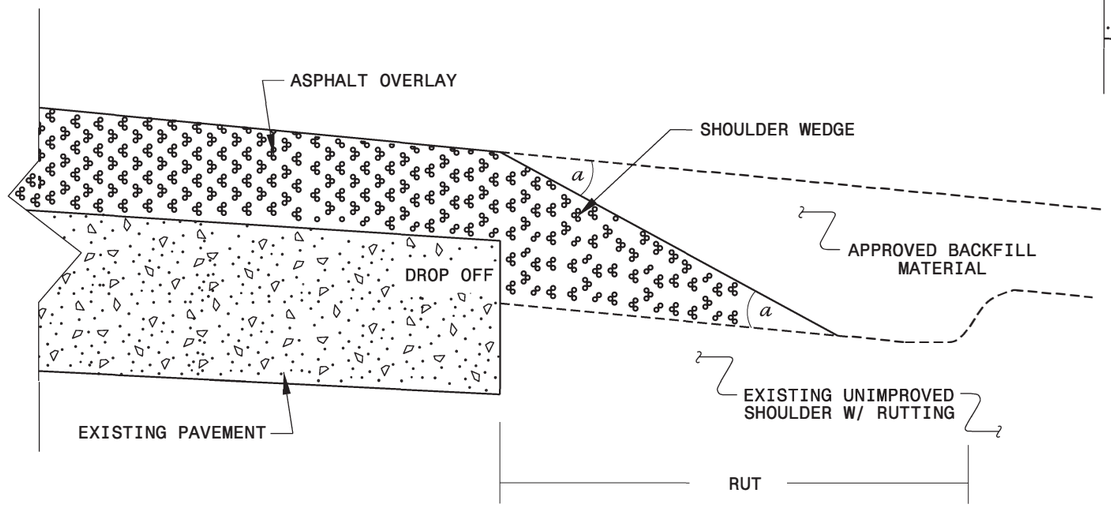
SHOULDER WEDGE DETAIL

(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°

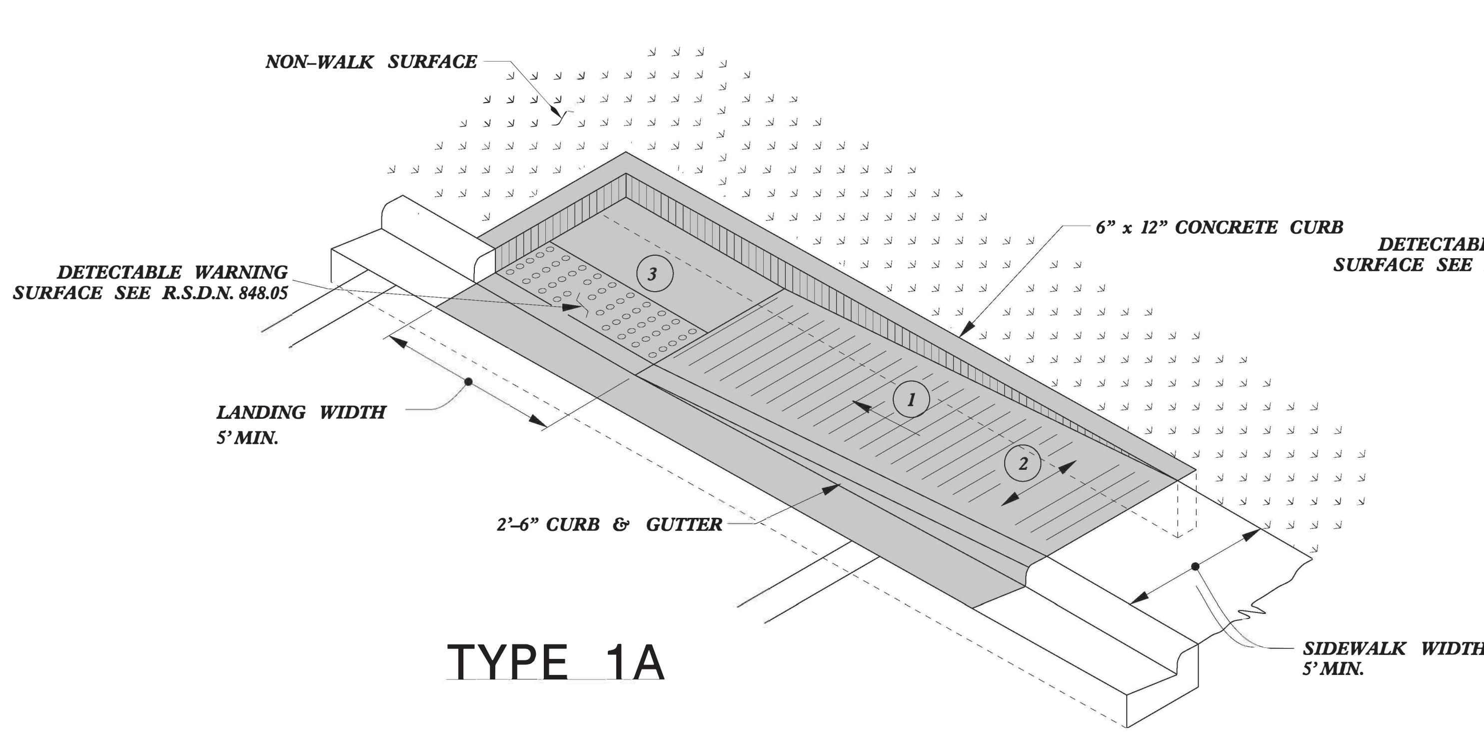
CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SHOULDER WEDGE DETAILS

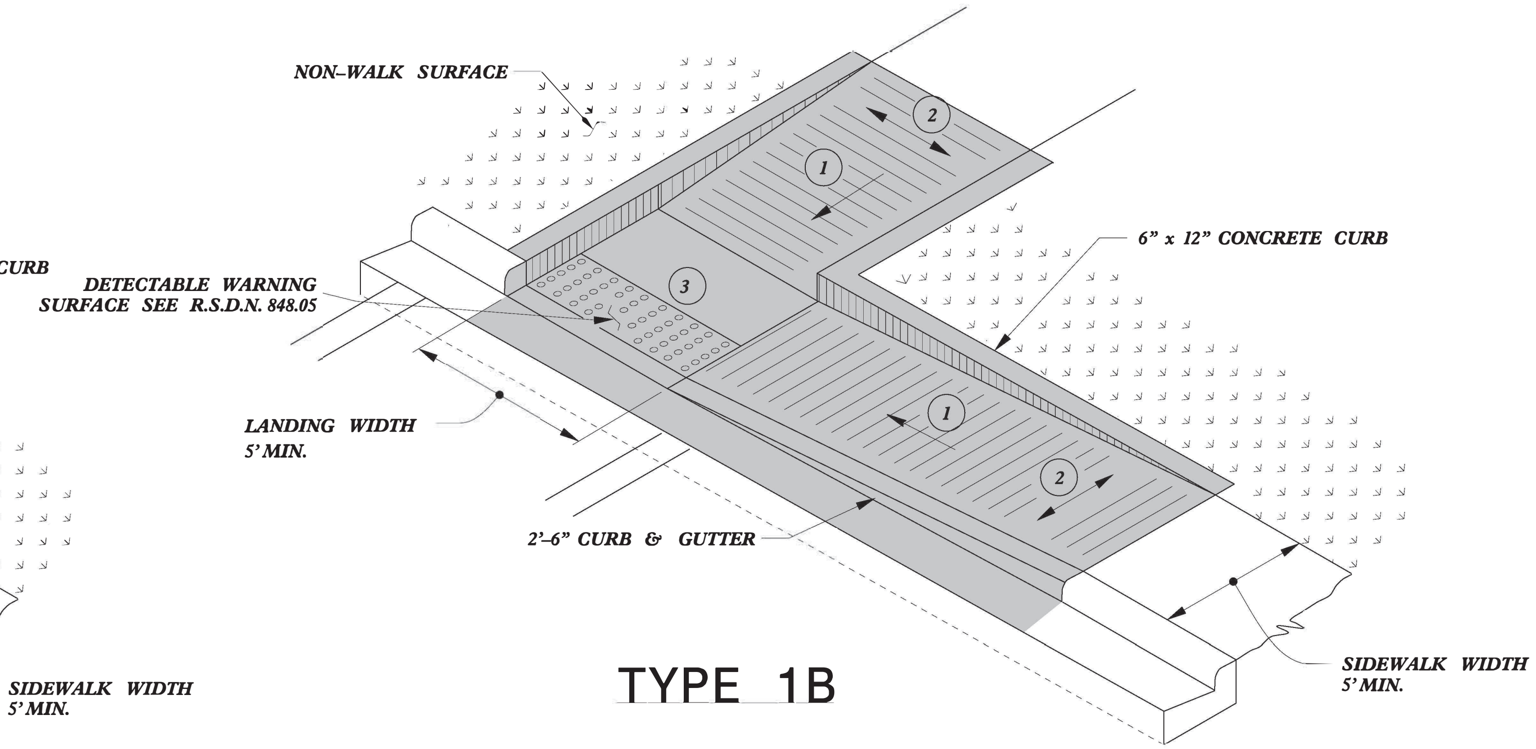
ORIGINAL BY: T.SPELL DATE: 7-19-11
MODIFIED BY: _____ DATE: 2/2/18
CHECKED BY: _____ DATE: _____
FILE SPEC.: s:usr/details/stand/shoulderwedgedetail.dgn

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

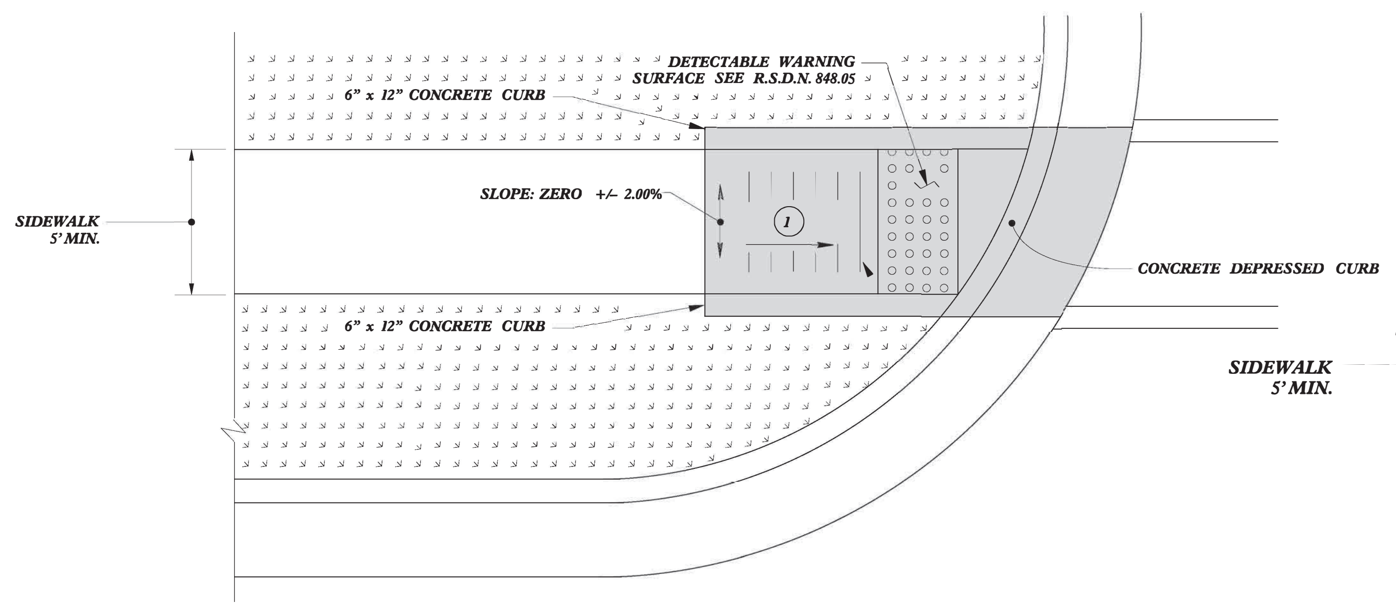
12-SEP-2018 10:0
S:\Contracts\Resurfacing Projects\Shoulder Wedge Details\Revised Shoulder Wedge Detail.dgn
jhowerton
AT CSD-2929995



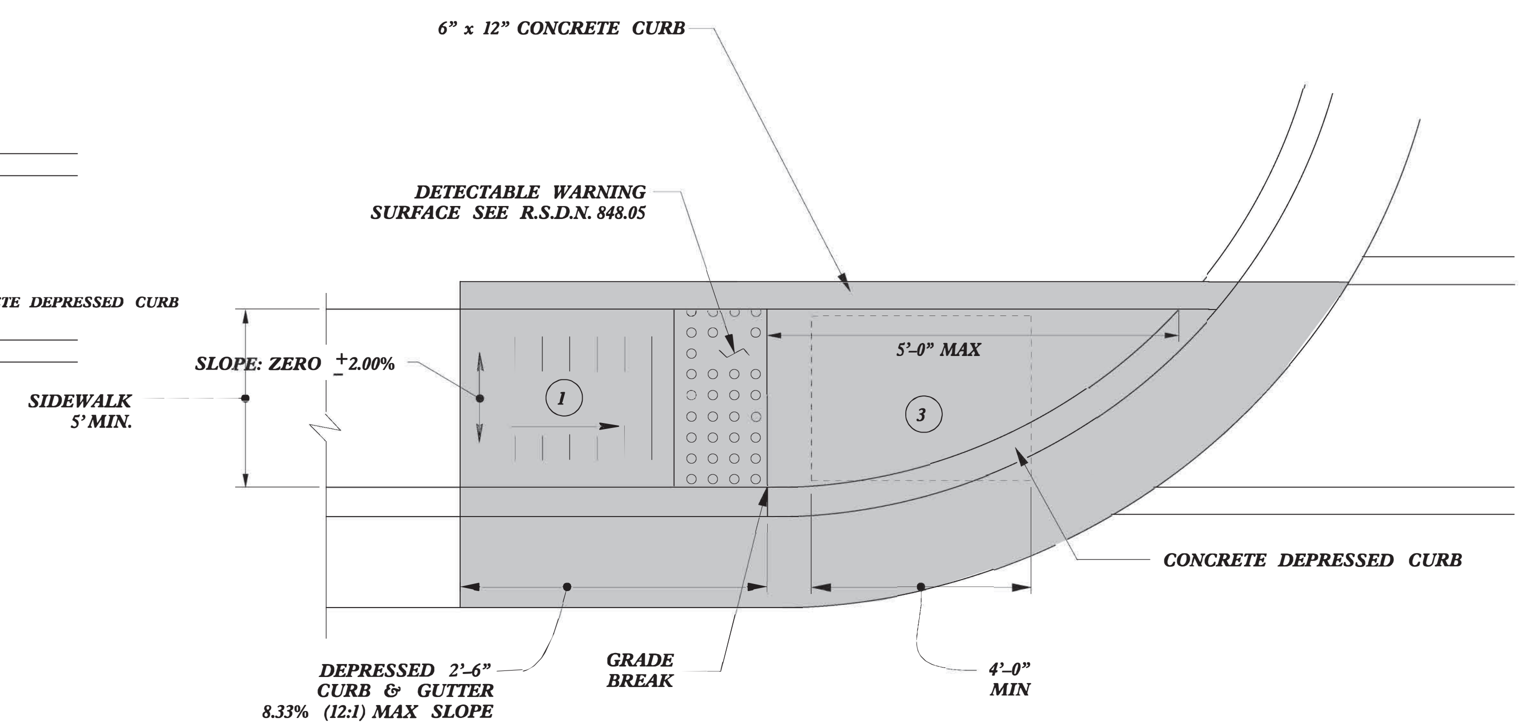
TYPE 1A



TYPE 1B



TYPE 1 Modified



TYPE 1

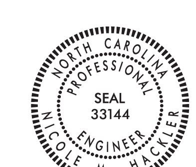
(1) 8.33% (12:1) MAX RAMP SLOPE

(2) CROSS SLOPE: 2.00%

(3) CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

PAY LIMITS FOR 1 CURB RAMP

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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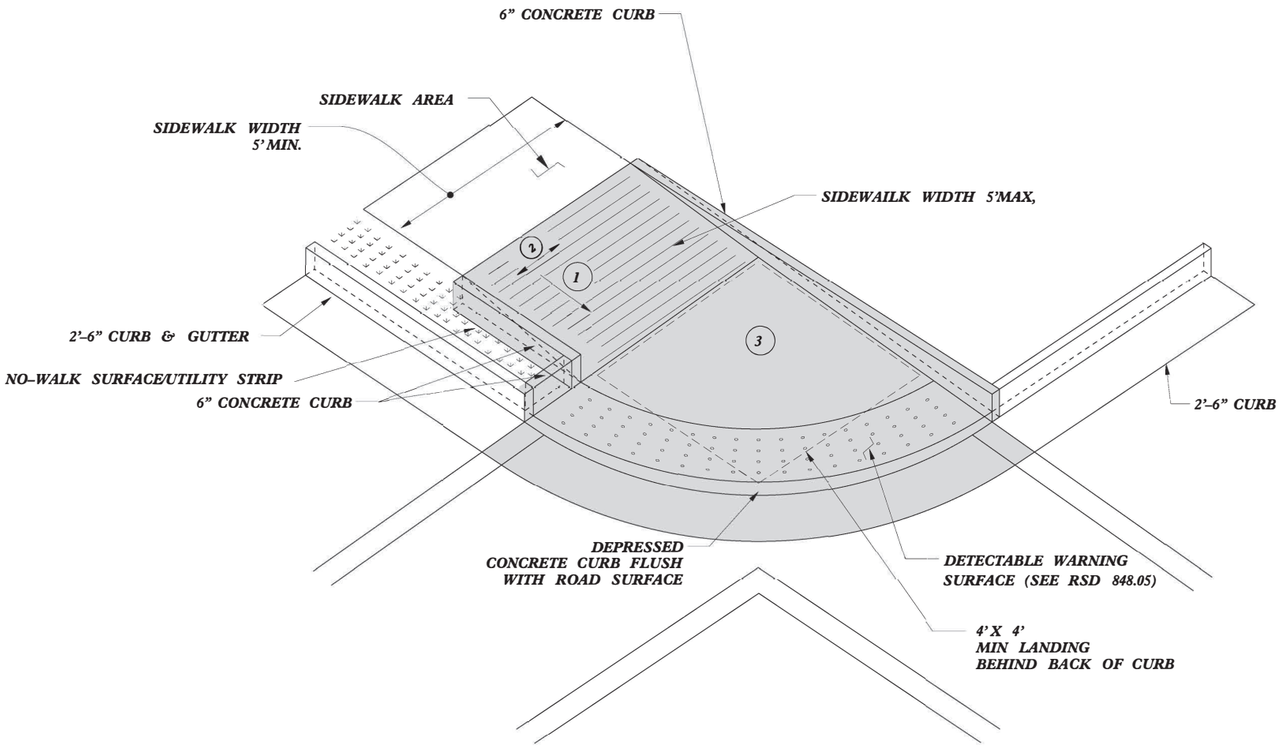
CURB RAMPS

Directional Ramps

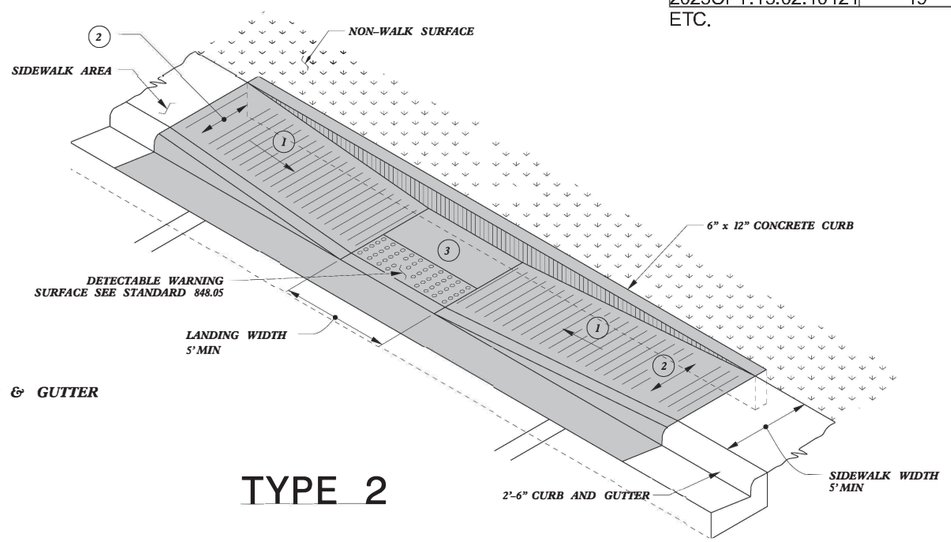
ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC. stds/2012CurbRamp/CurbRampDetails.dgn

PROJECT REFERENCE NO.	SHEET NO.
2023CPT.13.02.10121	19

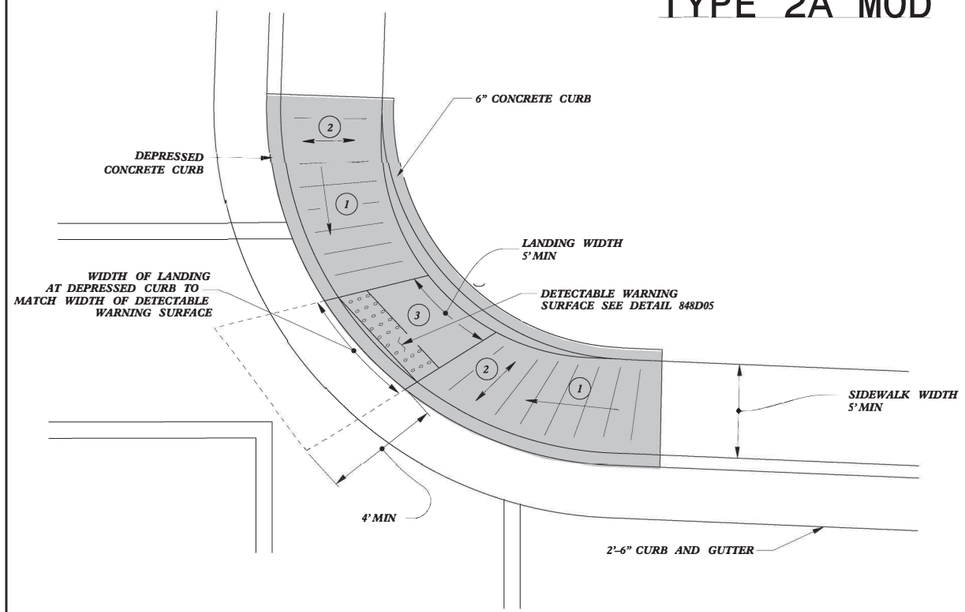
ETC.



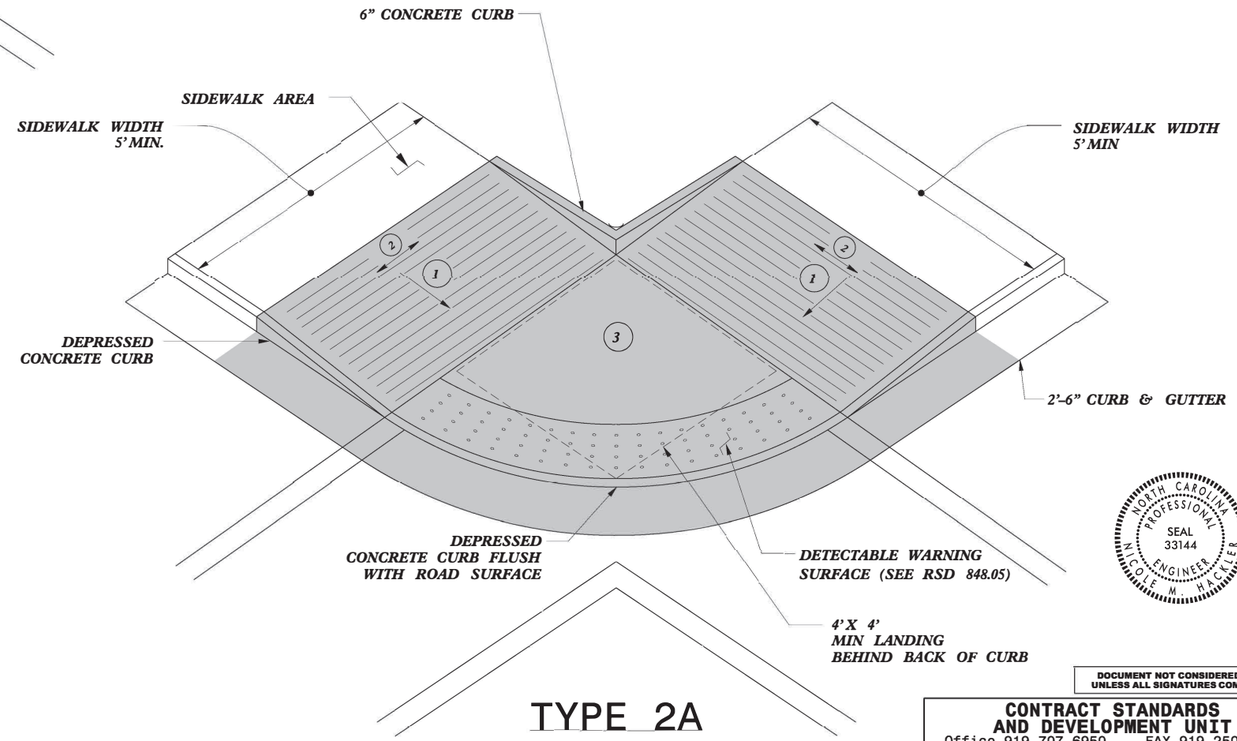
TYPE 2A MOD



TYPE 2



TYPE 2B



TYPE 2A

(1) 8.33% (12:1) MAX RAMP SLOPE

(2) CROSS SLOPE: 2.00%

(3) CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

PAY LIMITS FOR 1 CURB RAMP

NORTH CAROLINA PROFESSIONAL SEAL 33144 ENGINEER NICOLE M. HACKLER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

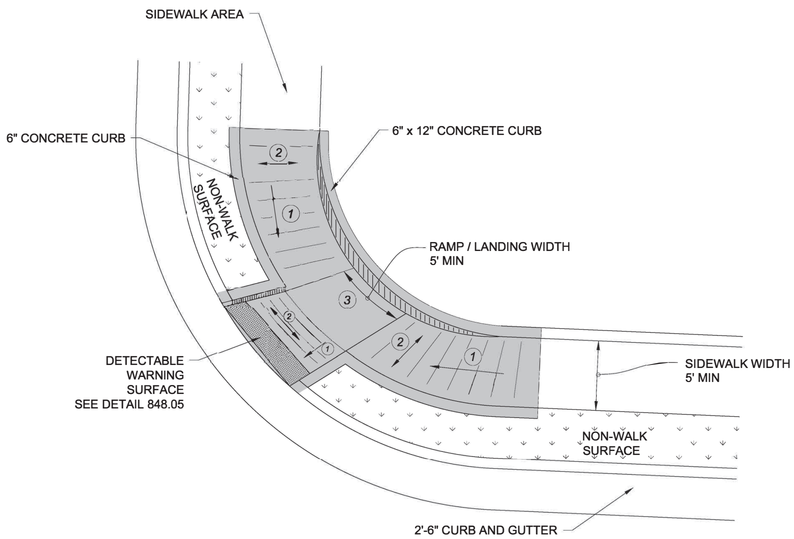
ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$USERNAME$$$$

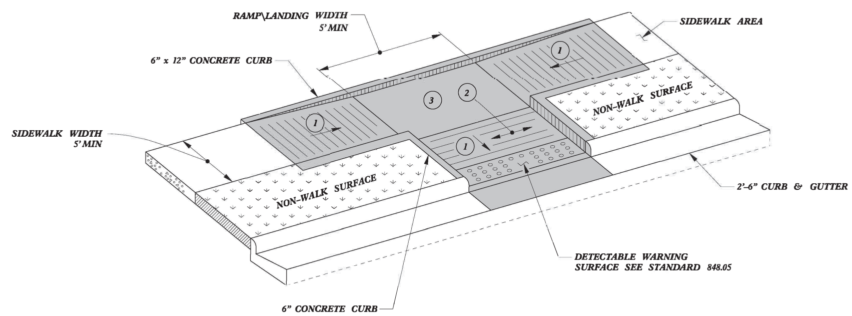
5/14/99

PROJECT REFERENCE NO.	SHEET NO.
2023CPT.13.02.10121 ETC.	20

PAY LIMITS FOR 1 CURB RAMP



TYPE 3 MODIFIED
INSTALLATION IN A RADIUS



TYPE 3

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 33144 NICOLE M. HACKLER

(1) *8.33% (12:1) MAX RAMP SLOPE*

(2) *CROSS SLOPE: 2.00%*

(3) *CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.*

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

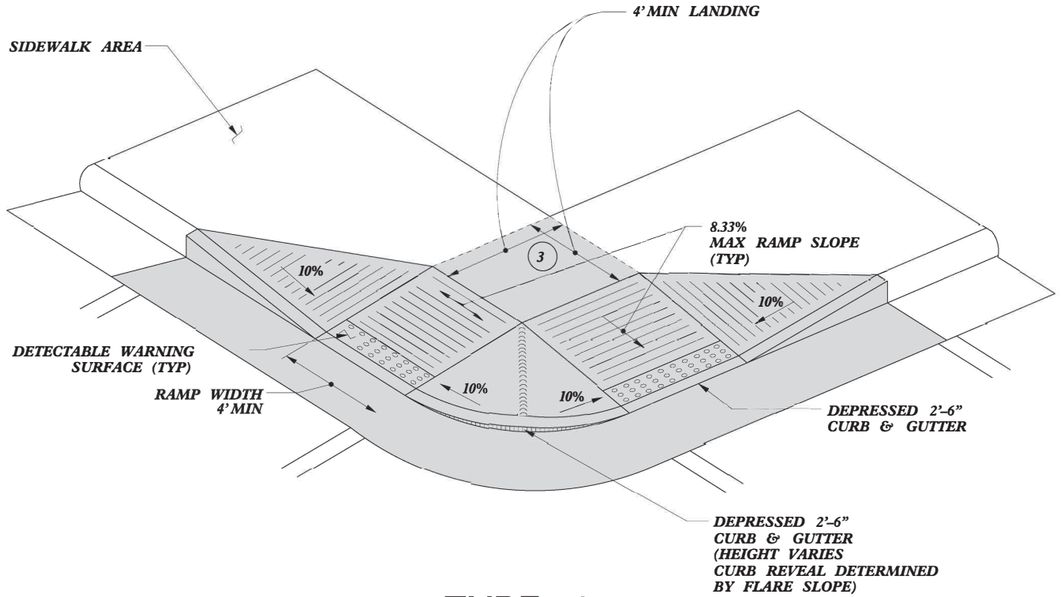
CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

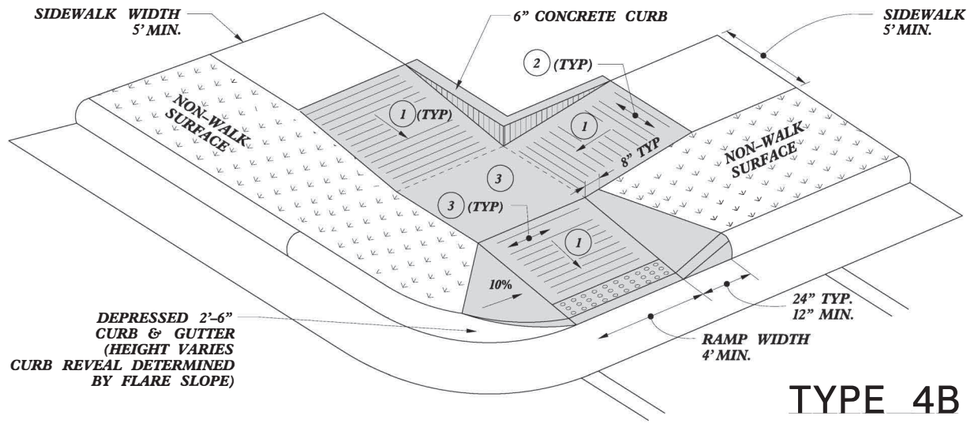
ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

PROJECT REFERENCE NO.	SHEET NO.
2023CPT.13.02.10121 ETC.	21

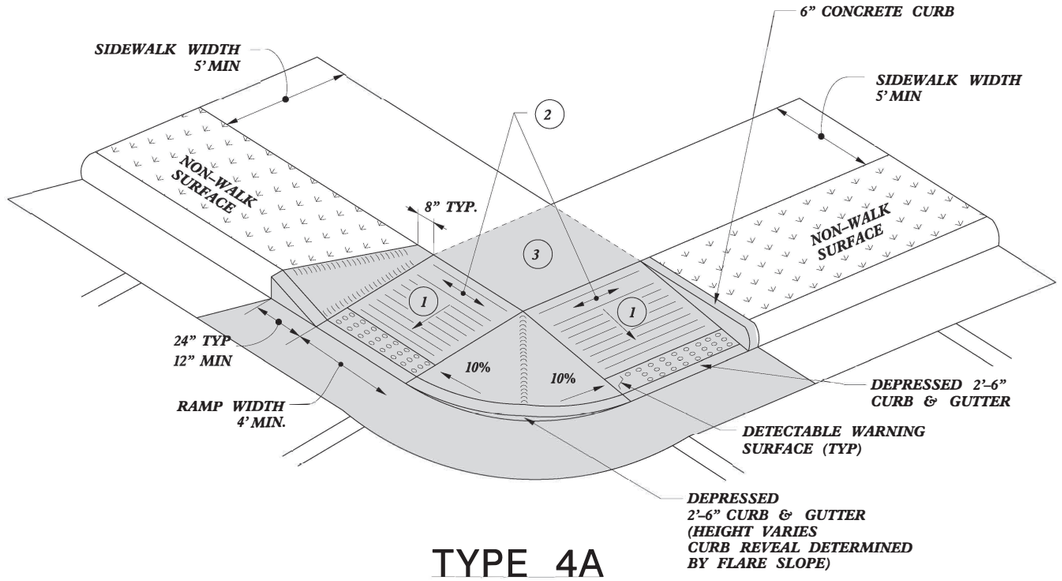
PAY LIMITS FOR 1 OR 2 CURB RAMPS (CALCULATE BASED ON NUMBER OF SETS OF TRUNCATED DOMES)



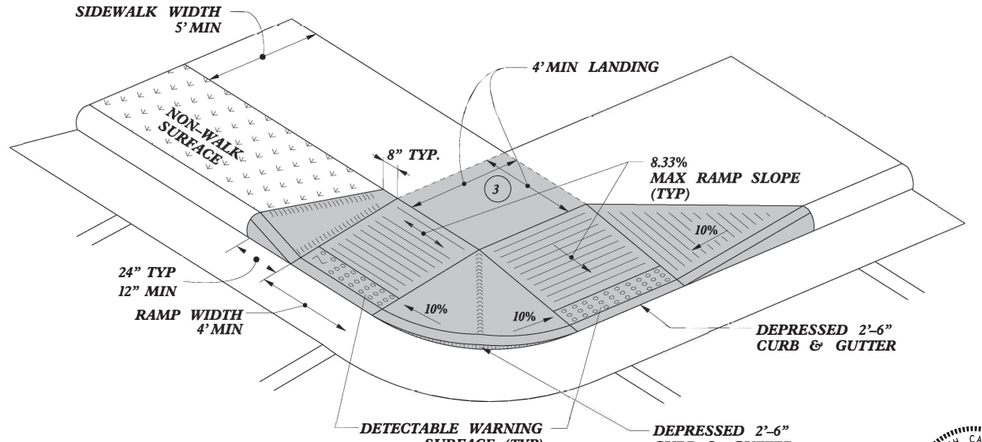
TYPE 4



TYPE 4B



TYPE 4A



TYPE 4C

(1) 8.33% (12:1) MAX RAMP SLOPE

(2) CROSS SLOPE: 2.00%

(3) CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

NORTH CAROLINA PROFESSIONAL SEAL 33144 ENGINEER NICOLE M. HACKLER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

5/14/99

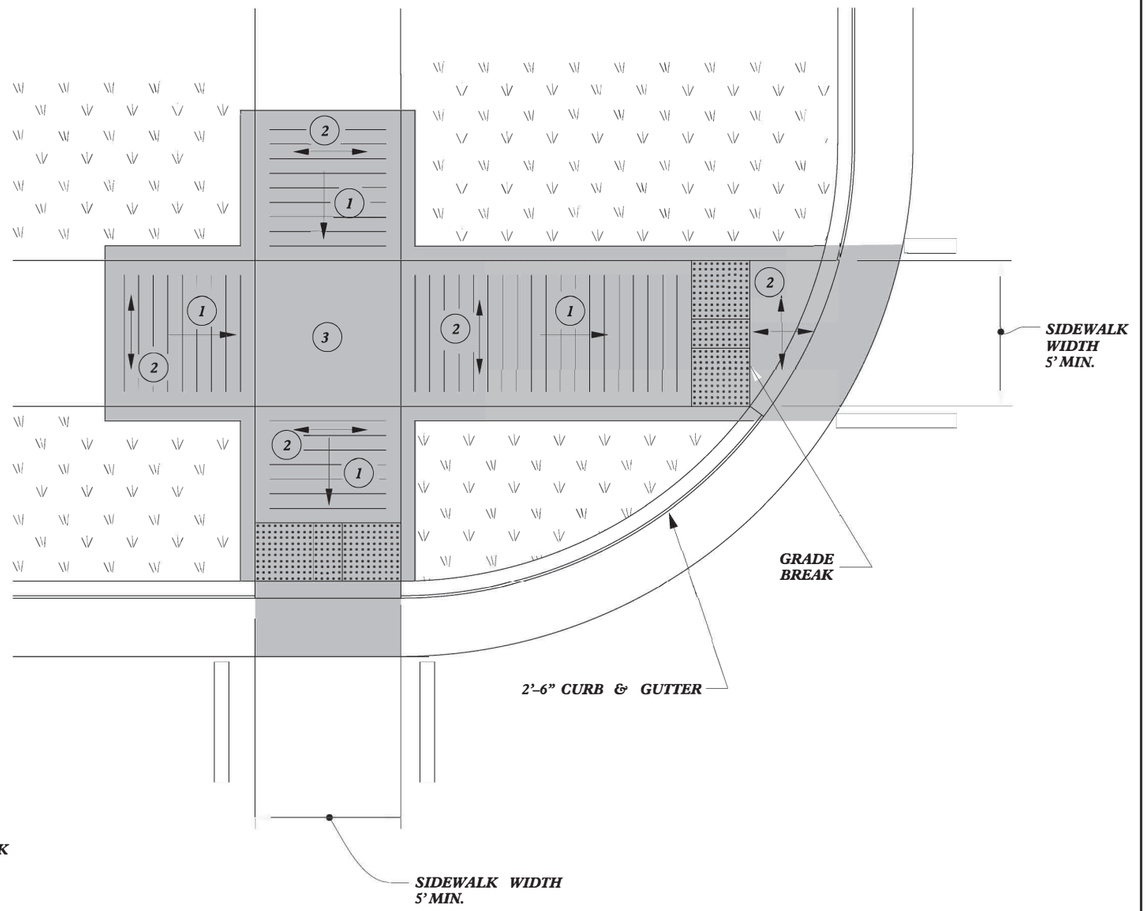
$$$$SYSTIME$$$$
$$$$DGNFILE$$$$
$$$$USERNAME$$$$

5/14/99

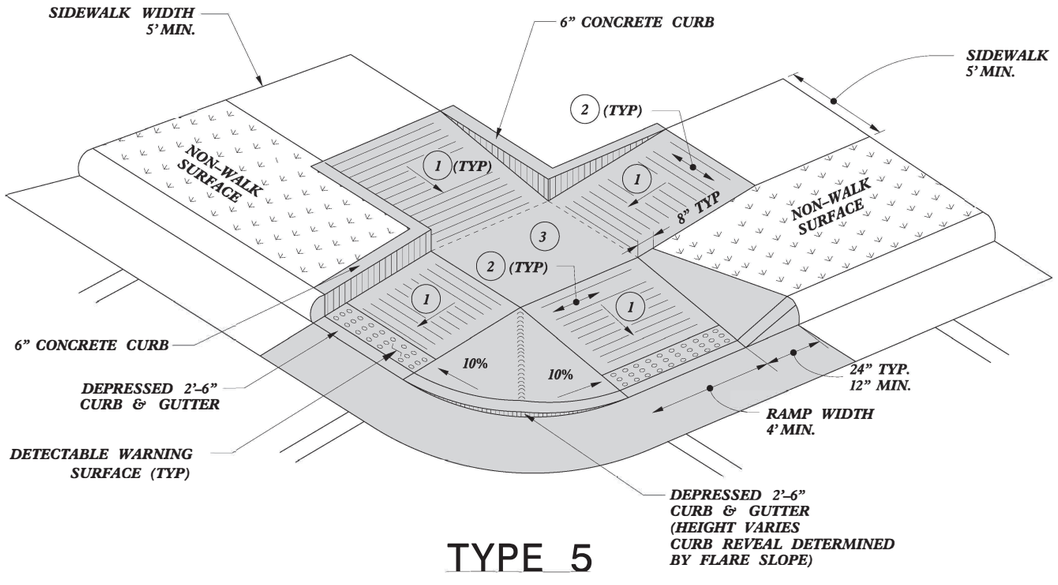
PROJECT REFERENCE NO.	SHEET NO.
2023CPT.13.02.10121	22

ETC.

PAY LIMITS FOR 1 OR 2 CURB RAMPS
(CALCULATE BASED ON NUMBER OF SETS
OF TRUNCATED DOMES)



TYPE 5A



TYPE 5

(1) 8.33% (12:1) MAX RAMP SLOPE

(2) CROSS SLOPE: 2.00%

(3) CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 33144 NICOLE M. MCCALLER

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

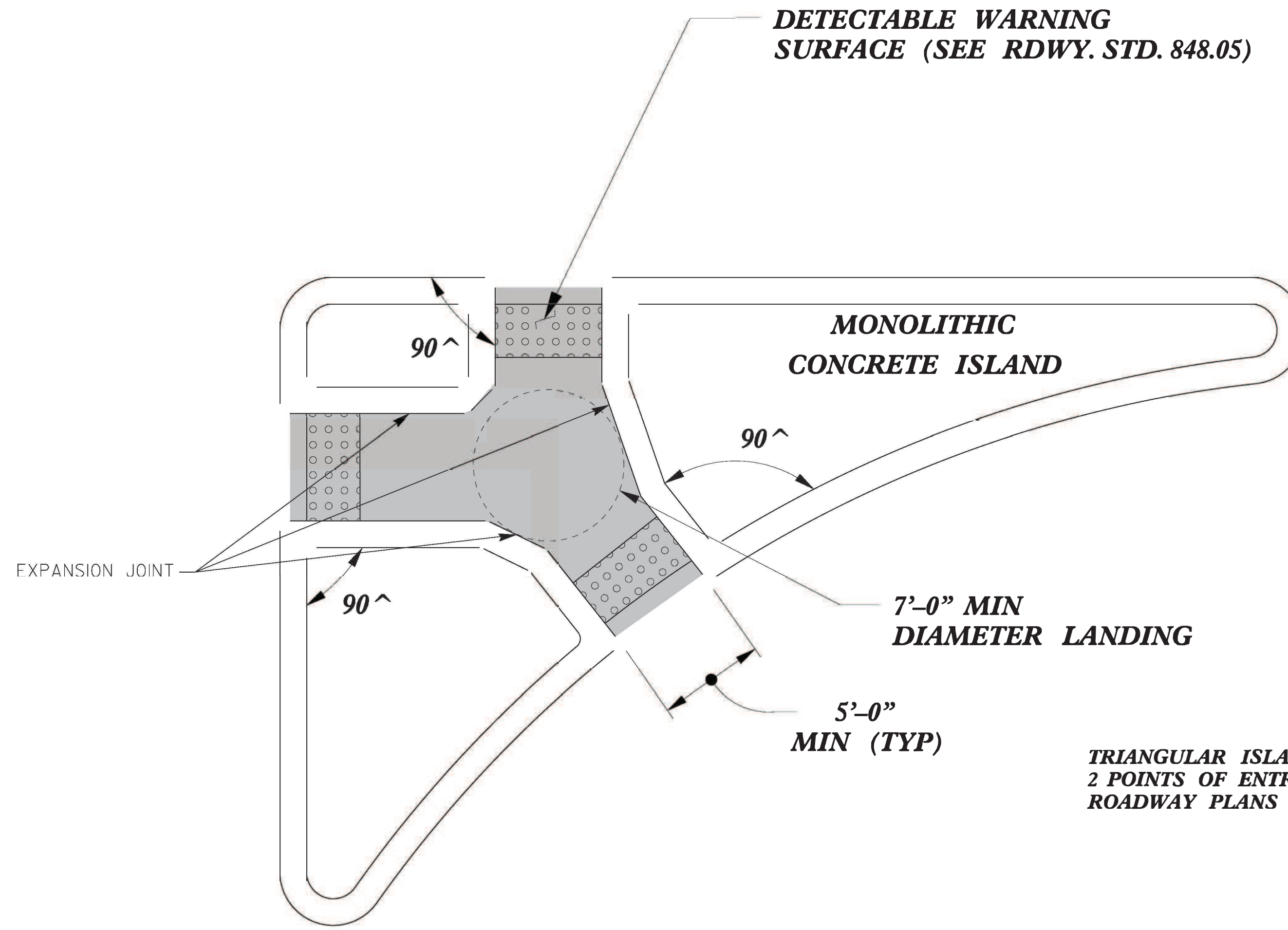
$$$$SYSTEM$$$$
$$$$DGN$$$$
$$$$USERNAME$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
2023CPT.13.02.10121	23

ETC.

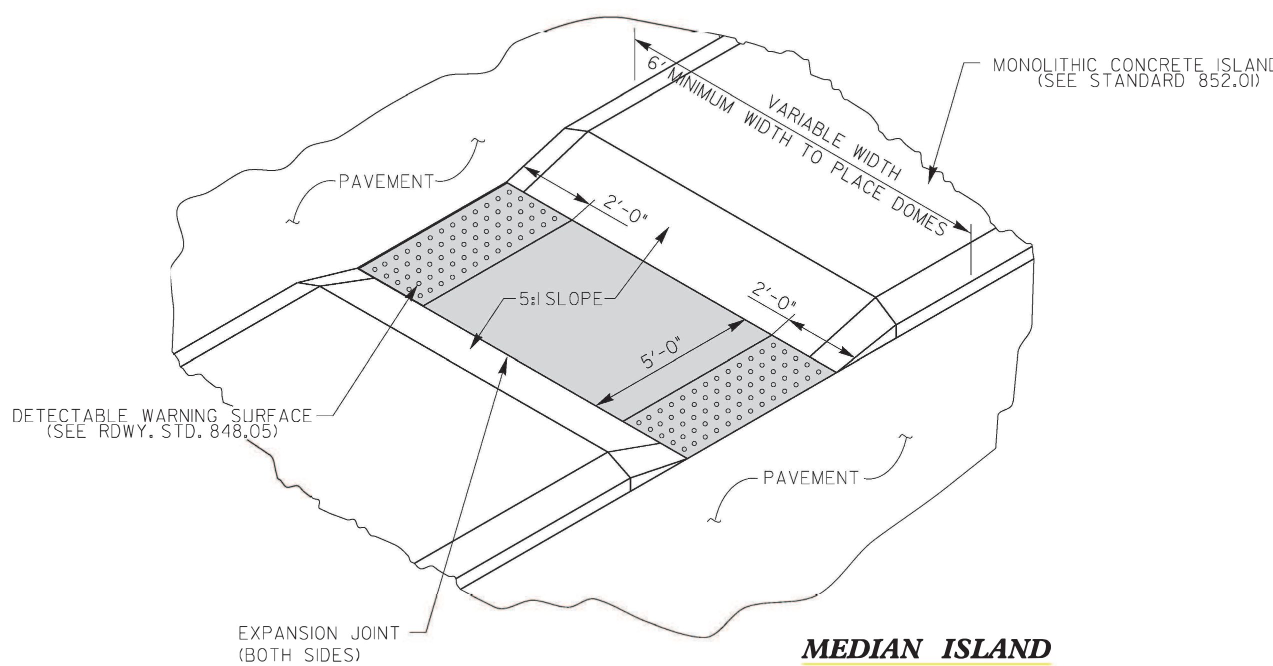
PAY LIMITS FOR 2 OR 3 CURB RAMPS
(CALCULATE BASED ON NUMBER OF
SETS OF TRUNCATED DOMES)



TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY 2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

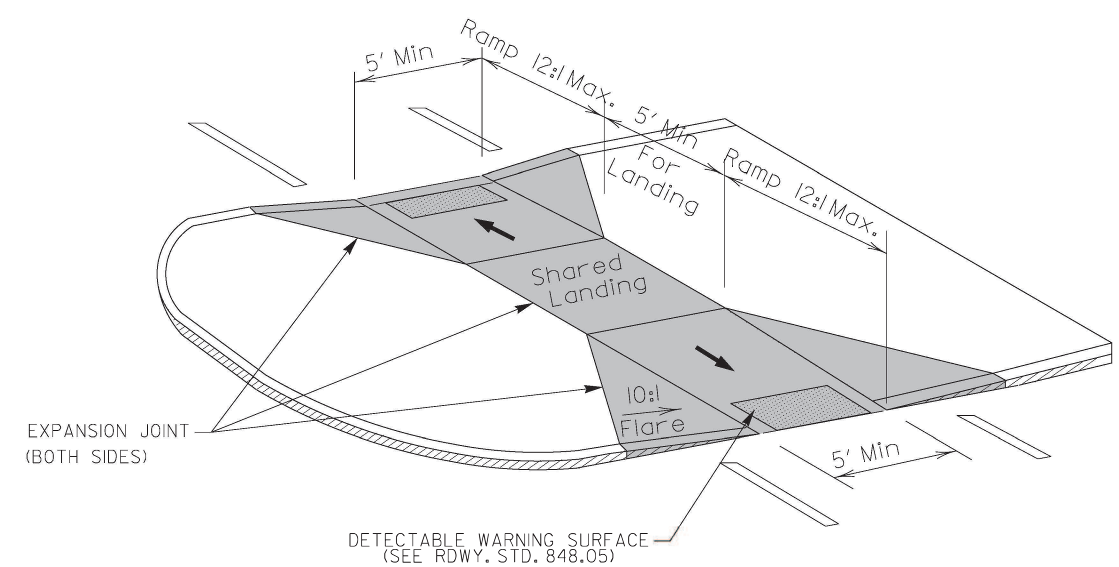
TRIANGULAR ISLAND
WITH CUT THROUGH

TYPE 6



MEDIAN ISLAND
WITH CUT THROUGH

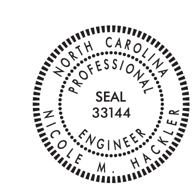
TYPE 7



TYPE 8

MEDIAN ISLAND
CURB RAMPS

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



CONTRACT STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

Median or Turn Lane Islands

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

$$$$SYSTIME$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJECT NO.	SHEET NO.	TOTAL NO.
2023CPT.13.02.10121, 2023CPT.13.02.20121	24	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	1220000000-E INCIDENTAL STONE BASE	1245000000-E SHOULDER RECONSTRUCTION	1260000000-E AGGREGATE SHOULDER BORROW	1297000000-E MILLING ASPHALT PAVEMENT, 1-1/2" DEPTH	1297000000-E MILLING ASPHALT PAVEMENT, 1" DEPTH	1308000000-E MILLING ASPHALT PAVEMENT, 0" TO 11/2" DEPTH	1330000000-E INCIDENTAL MILLING	1519000000-E ASPHALT CONC SURFACE COURSE, TYPE S9.5B	1523000000-E ASPHALT CONC SURFACE COURSE, TYPE S9.5C	1575000000-E ASPHALT BINDER FOR PLANT MIX	1704000000-E PATCHING EXISTING PAVEMENT	1840000000-E MILLED RUMBLE STRIPS	2591000000-E 4" CONCRETE SIDEWALK	2605000000-N CONCRETE CURB RAMP	2613000000-N REMOVE AND REPLACE CURB RAMPS	2738000000-E GENERIC PAVING ITEM REMOVE CONCRETE SIDEWALK	2752000000-E GENERIC PAVING ITEM REMOVE EXISTING CURB AND GUTTER	2815000000-N ADJUSTMENT OF DROP INLET	2830000000-N ADJUSTMENT OF MANHOLES	2845000000-N ADJUSTMENT OF METER BOXES OR VALVE BOXES	7444000000-E INDUCTIVE LOOP SAWCUT	7456000000-E LEAD-IN CABLE (14-2)
										MI	FT	TON	SMI	TON	SY	SY	SY	SY	TON	TON	TON	TON	LF	SY	EA	EA	SY	LF	EA	EA	EA	LF	LF
2023CPT.13.02.10121	Burke	1	NC-126	FROM SR 1236 (SOUTH MTN INSTITUTE RD) + 0.90 MILES TO SR 1238 (OLD HWY. 105) (MP - 2.05 - MP 3.74)	1	2	2WU	NO	NO	1.69	21	85	3.49	440				1,354		1,951	120	110											
		2	NC-181 N	FROM SR 1280 (BOWMAN AVE) TO SR 1405 (BROWN MOUTAIN BEACH RD) + 2.021 MILES (MP 5.50 - MP 14.67)	1	2	2WU	NO	NO	9.17	33	459	18.34	2,384	1,265			5,914		14,664	871	130	19,536								1		
TOTAL FOR PROJ NO.										**10.86**		**544**	**21.83**	**2,824**	**1,265**			**7,268**		**16,615**	**991**	**240**	**19,536**								**1**		
2023CPT.13.02.10121															**1,265**																	
2023CPT.13.02.20121	Burke	3	SR-1250 / WATERMILL RD	FROM NC 126 TO SR 1248 (FRANK WHISNANT RD) (MP 0.00 - MP 1.74)	1, 3	2	2WU	NO	YES	1.74	22	86	3.27	445			731	970		1,893	118	131											
		4	SR-1440 / SPAINHOUR RD	FROM SR 1419 (BOST RD) TO SR 1470 (WARRIOR FORK TRL) (MP 0.91 - MP 1.37)	1	2	2WU	NO	NO	0.46	19	23	0.92	120				764		480	32	84											
		5	SR-1762 / EAST BURKE BLVD	FROM SR 1760 (ICARD DAIRY BARN RD) TO US 70 (MP 0.00 - MP 1.61)	1, 4	2	2WU	NO	NO	1.61	20	81	3.22	419			256	1,019		1,947	121	137											
		6	SR-1780 / COSTNER RD	FROM SR 1002 (HENRY RIVER RD) TO (CATAWABA CO LINE) (MP 0.00 - MP 0.71)	1	2	2WU	NO	YES	0.71	21	36	1.42	185				817		814	53	99											
		7	SR-1877 / GAINES ST	FROM SR 1780 (COSTNER RD) TO END OF MAINT (MP 0.00 - MP 0.15)	5	2	2WU	NO	NO	0.15	18	8	0.30	39					105		8	30											
		8	SR-1890 / I40 ACCESS RD SE	FROM SR 1002 (SOUTH CENTER ST) TO US 70 (MP 0.00 - MP 1.24)	1	2	2WU	NO	NO	1.24	30	62	2.48	322				1,638		1,956	124	175											
		9	SR-1608 / SHADY GROVE RD	FROM US 70 TO SR 1613 (TOMLINSON LOOP RD) (MP 0.00 - MP 1.19)	1	2	2WU	NO	YES	1.19	19	60	2.38	309				935		1,229	84	236											
		10	SR-1613 / TOMLINSON LOOP	FROM SR 1608 TO SR 1608 (SHADY GROVE RD) (MP 0.00 - MP 2.51)	1	2	2WU	NO	NO	2.51	20	126	5.02	653				454		2,447	157	266											
		11	SR-1264 / GINGERCAKE RD	FROM NC 181 TO SR 1265 (TABLE ROCK RD) (MP 0.00 - MP 0.13)	1	2	2WU	NO	NO	0.13	20		0.26	34						144	10	30											
		12	SR-1215 / SAM WALL AV	FROM NC 126 TO END MAINT (MP 0.00 - MP 0.15)	5	2	2WU	NO	NO	0.15	18	8						213	125		9	10											
		13	SR-1248 / FRANK WHISNANT RD	FROM NC 126 TO NC 181 (MP 0.00 - MP 2.54)	1	2	2WU	NO	YES	2.54	22	127	5.08	660	268			1,618		2,846	178	217									1		
		14	SR-1349 / KINGLET DR	FROM SR 1248 (FRANK WHISNANT RD) TO CULD DE SAC (MP 0.00 - MP 0.80)	5	2	2WU	NO	NO	0.8	22	80							730		57	200											
		15	SR-1356 / BRAXTON GATE DR	FROM CUL DE SAC TO CUL DE SAC (MP 0.00 - MP 0.28)	6	2	2WU	NO	NO	0.28	22					3,614			199		18	113											
		16	SR-1402 / JOE POORE RD	FROM NC 181 TO NC 181 (MP 0.00 - MP 1.50)	1	2	2WU	NO	NO	1.5	19	75	3.00	390	80			875		1,539	99	162											
		17	SR-1448 / JUNE CLARK ST	FROM SR 1401 (MORTIMER RD) TO END MAINT (MP 0.00 - MP 0.29)	5	2	2WU	NO	NO	0.29	19	14							223		17	44											
		18	SR-1463 / PINE DR	FROM SR 1461 (OAK HILL DR) TO SR 1467 (FALLING BROOK LN) (MP 0.00 - MP 0.11)	5	2	2WU	NO	NO	0.11	20	6							89		6												
		19	SR-1475 / FORD RD	FROM SR 1414 (ST MARYS CHURCH RD) TO END MAINT (MP 0.00 - MP 0.13)	5	2	2WU	NO	NO	0.13	17	7							87		6	15											
		20	SR-1733 / PRALEY ST SW	FROM US 70 TO SR 1734 (CAROLINA ST) (MP 0.00 - MP 1.00)	1, 2, 3	2	2WU	NO	YES	1	32	50	2.00	260	5,915		3,110	120		1,685	103	75								3	32	32		
		21	SR-1791 / HILDEBRAN MOUNTAIN AV	FROM SR 1786 (MILER BRIDGE RD) TO END MAINT (MP 0.00 - MP 0.81)	5	2	2WU	NO	NO	0.81	18	86							606		43	84											
		22	SR-2516 / SHAMROCK DR	FROM SR 1761 (OLD NC 10) TO SR 1765 (BERRY RD) (MP 0.00 - MP 0.47)	5	2	2WU	NO	NO	0.47	19	24							380		29	84											
		23	SR-2517 / BEVERLY HILLS DR	FROM SR 1809 (S FORK AVE) TO DEAD END (MP 0.00 - MP 0.17)	5	2	2WU	NO	NO	0.17	18.5	9							130		9	15											
		24	HILDEBRAN ELEMENTARY SCHOOL (BUS ROUTE)	FROM US 70 TO 1ST STREET (MP 0.00 - MP 0.33)	1, 2	2	2WD	NO	NO	0.33	25		0.44	104	2,050			110		348	22	31				2								
		25	SR-1761 / MAIN AV E	FROM I-40 EXIT 118 W BOUND RAMPS TO US 70 (MP 2.57- MP 4.22)	4	2	2WU	NO	NO	1.66	24		3.06	86			2,167	1,132		2,020	122	60		4	4		33				364	10	
		26	SR-1002 / S CENTER ST	FROM SR 1890 TO US 70 (MP 1.75- MP 2.35)	4	2	2WU	NO	NO	0.63	29		0.63	32			1,294	1,288		925	59	100		3	2			20		2			
TOTAL FOR PROJ NO.										**20.61**		**968**	**33.48**	**4,058**	**8,313**	**3,614**	**7,558**	**11,953**	**2,674**	**20,273**	**1,484**	**2,398**		**7**	**6**	**2**	**33**	**20**	**3**	**34**	**33**	**364**	**10**
2023CPT.13.02.20121																																	
GRAND TOTAL										**31.47**		**1,512**	**55.31**	**6,882**	**9,578**	**3,614**	**7,558**	**19,221**	**2,674**	**36,888**	**2,475**	**2,638**	**19,536**	**7**	**6**	**2**	**33**	**20**	**3**	**34**	**34**	**364**	**10**

PROJECT NO.	SHEET NO.
2023CPT.13.02.10121, 2023CPT.13.02.20121	25

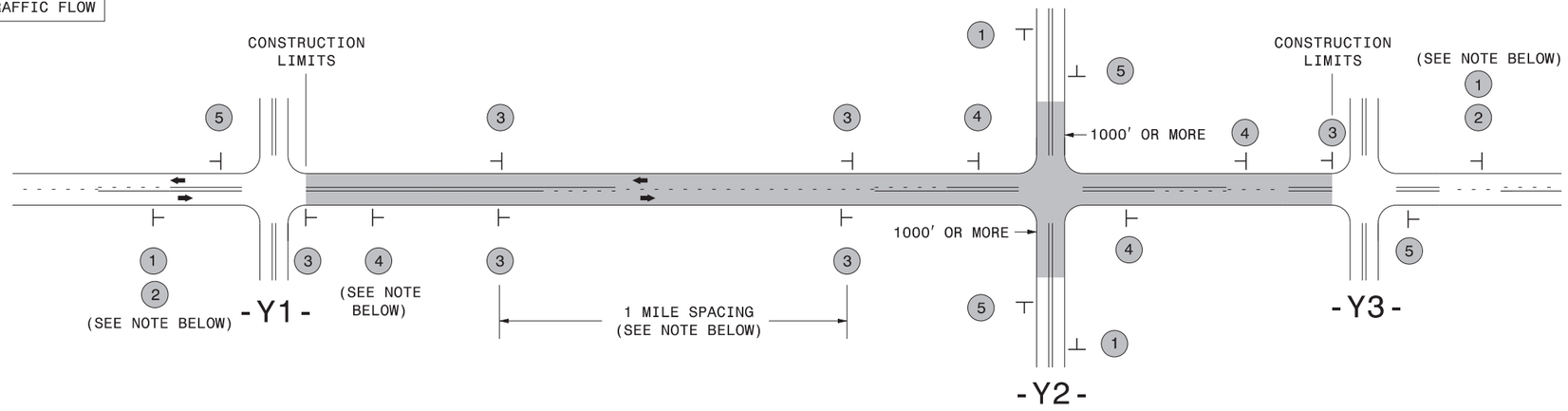
THERMOPLASTIC AND PAINT QUANTITIES

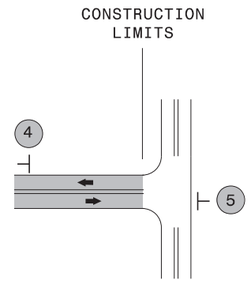
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E WORK ZONE ADVANCE /GENERAL WARNING SIGNING	4447000000-E PEDESTRIAN CHANNELIZING DEVICES	4457000000-N TEMPORARY TRAFFIC CONTROL	4685000000-E THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS) WHITE	4685000000-E THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS) YELLOW	4695000000-E THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS) WHITE	4704000000-E THERMOPLASTIC PAVEMENT MARKING LINES (16", 90 MILS)	4709000000-E THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS) WHITE STOP BAR	4709000000-E THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS) WHITE HI-VISIBILTY CROSSWALK	4720000000-E THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS) RXR	4720000000-E THERMOPLASTIC PAVEMENT MARKINGCHARACTER (90 MILS) (SCHOOL)	4725000000-E THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) LT ARROW	4725000000-E THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) STR ARROW	4725000000-E THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) RT ARROW	4725000000-E THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) STR & LT ARROW	4725000000-E THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) MERGE ARROW	4810000000-E PAINT PAVEMENT MARKING LINES (4") WHITE	4810000000-E PAINT PAVEMENT MARKING LINES (4") YELLOW	4820000000-E PAINT PAVEMENT MARKING LINES (8") WHITE	4830000000-E PAINT PAVEMENT MARKING LINES (16")	4835000000-E PAINT PAVEMENT MARKING LINES (24") WHITE	4840000000-N PAINT PAVEMENT MARKING CHARACTER (RXR)	4890000000-E HOT SPRAY THERMOPLASTIC PAVEMENT MARKING LINES (WHITE) (4", 55 MILS)	4890000000-E HOT SPRAY THERMOPLASTIC PAVEMENT MARKING LINES (YELLOW) (4", 55 MILS)	4905100000-N NON-CAST IRON SNOWPLOWABLE PAVMENT MARKERS
								MI	FT	SF	LF	LS	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	LF	LF	EA
2023CPT.13.02.10121	Burke	1	NC-126	FROM SR 1236 (SOUTH MTN INSTITUTE RD) + 0.90 MILES TO SR 1238 (OLD HWY. 105) (MP - 2.05 - MP 3.74)	1	2	2WU	1.69	21	190		*									2	1	1								18,805	19,761	120
		2	NC-181 N	FROM SR 1280 (BOWMAN AVE) TO SR 1405 (BROWN MOUTAIN BEACH RD) + 2.021 MILES (MP 5.50 - MP 14.67)	1	2	2WU	9.17	33	1,028			94,955	94,195																		615
TOTAL FOR PROJ NO. 2023CPT.13.02.10121								**10.86**		**1,218**		*	**94,955**	**94,195**							**2**	**1**	**1**							**18,805**	**19,761**	**735**
													189,150										**4**								**38,566**		
2023CPT.13.02.20121	Burke	3	SR-1250 / WATERMILL RD	FROM NC 126 TO SR 1248 (FRANK WHISNANT RD) (MP 0.00 - MP 1.74)	1, 3	2	2WU	1.74	22	196																				18,140	18,140	
		4	SR-1440 / SPAINHOUR RD	FROM SR 1440 (BOST RD) TO SR 1470 (WARRIOR FORK TRL) (MP 0.91 - MP 1.37)	1	2	2WU	0.46	19	54																				4,913	3,003	
		5	SR-1762 / EAST BURKE BLVD	FROM SR 1760 (ICARD DAIRY BARN RD) TO US 70 (MP 0.00 - MP 1.61)	1, 4	2	2WU	1.61	20	180							80			12										17,001	17,001	
		6	SR-1780 / COSTNER RD	FROM SR 1002 (HENRY RIVER RD) TO (CATAWABA CO LINE) (MP 0.00 - MP 0.71)	1	2	2WU	0.71	21	80																				7,498	7,495	
		7	SR-1877 / GAINES ST	FROM SR 1780 (COSTNER RD) TO END OF MAINT (MP 0.00 - MP 0.15)	5	2	2WU	0.15	18	16																						
		8	SR-1890 / I40 ACCESS RD SE	FROM SR 1002 (SOUTH CENTER ST) TO US 70 (MP 0.00 - MP 1.24)	1	2	2WU	1.24	30	140			13,860	13,095									3	3	3							
		9	SR-1608 / SHADY GROVE RD	FROM US 70 TO SR 1613 (TOMLINSON LOOP RD) (MP 0.00 - MP 1.19)	1	2	2WU	1.19	19	134																				12,994	12,494	
		10	SR-1613 / TOMLINSON LOOP	FROM SR 1608 TO SR 1608 (SHADY GROVE RD) (MP 0.00 - MP 2.51)	1	2	2WU	2.51	20	284											2		1							27,468	26,361	
		11	SR-1264 / GINGERCAKE RD	FROM NC 181 TO SR 1265 (TABLE ROCK RD) (MP 0.00 - MP 0.13)	1	2	2WU	0.13	20	40																				1,482	1,372	
		12	SR-1215 / SAM WALL AV	FROM NC 126 TO END MAINT (MP 0.00 - MP 0.15)	5	2	2WU	0.15	18	16																						
		13	SR-1248 / FRANK WHISNANT RD	FROM NC 126 TO NC 181 (MP 0.00 - MP 2.54)	1	2	2WU	2.54	22	284							20			6										26,822	26,722	
		14	SR-1349 / KINGLET DR	FROM SR 1248 (FRANK WHISNANT RD) TO CULD DE SAC (MP 0.00 - MP 0.80)	5	2	2WU	0.8	22	90		*																				
		15	SR-1356 / BRAXTON GATE DR	FROM CUL DE SAC TO CUL DE SAC (MP 0.00 - MP 0.28)	6	2	2WU	0.28	22	32																						
		16	SR-1402 / JOE POORE RD	FROM NC 181 TO NC 181 (MP 0.00 - MP 1.50)	1	2	2WU	1.5	19	168																				15,734	15,634	
		17	SR-1448 / JUNE CLARK ST	FROM SR 1401 (MORTIMER RD) TO END MAINT (MP 0.00 - MP 0.29)	5	2	2WU	0.29	19	32																						
		18	SR-1463 / PINE DR	FROM SR 1461 (OAK HILL DR) TO SR 1467 (FALLING BROOK LN) (MP 0.00 - MP 0.11)	5	2	2WU	0.11	20	32																						
		19	SR-1475 / FORD RD	FROM SR 1414 (ST MARYS CHURCH RD) TO END MAINT (MP 0.00 - MP 0.13)	5	2	2WU	0.13	17	16																						
		20	SR-1733 / PRALEY ST SW	FROM US 70 TO SR 1734 (CAROLINA ST) (MP 0.00 - MP 1.00)	1, 2, 3	2	2WU	1	32	116			9,505	9,400	360	80	72		4							9,505	9,400	360	80	72	4			
		21	SR-1791 / HILDEBRAN MOUNTAIN AV	FROM SR 1786 (MILER BRIDGE RD) TO END MAINT (MP 0.00 - MP 0.81)	5	2	2WU	0.81	18	92																						
		22	SR-2516 / SHAMROCK DR	FROM SR 1761 (OLD NC 10) TO SR 1765 (BERRY RD) (MP 0.00 - MP 0.47)	5	2	2WU	0.47	19	54																						
		23	SR-2517 / BEVERLY HILLS DR	FROM SR 1809 (S FORK AVE) TO DEAD END (MP 0.00 - MP 0.17)	5	2	2WU	0.17	18.5	24																						
		24	HILDEBRAN ELEMENTARY SCHOOL (BUS ROUTE)	FROM US 70 TO 1ST STREET (MP 0.00 - MP 0.33)	1, 2	2	2WD	0.33	25	48				480	103		54															
		25	SR-1761 / MAIN AV E	FROM I-40 EXIT 118 W BOUND RAMPS TO US 70 (MP 2.57- MP 4.22)	4	2	2WU	1.66	24	192	32		18,026	17,564	215		64	256														
		26	SR-1002 / S CENTER ST	FROM SR 1890 TO US 70 (MP 1.75- MP 2.35)	4	2	2WU	0.63	29	72			6,476	6,030			10	196														80
TOTAL FOR PROJ NO. 2023CPT.13.02.20121								**20.61**		**2,392**	**32**	*	**47,867**	**46,569**	**678**	**80**	**300**	**452**	**4**	**18**	**2**		**4**	**3**	**3**	**9,505**	**9,400**	**360**	**80**	**72**	**4**	**132,052**	**128,222**	**80**
													94,436				**752**		**22**				**12**			**18,905**						**260,274**		
GRAND TOTAL								**31.47**		**3,610**	**32**	**1**	**142,822**	**140,764**	**678**	**80**	**300**	**452**	**4**	**18**	**4**	**1**	**5**	**3**	**3**	**9,505**	**9,400**	**360**	**80**	**72**	**4**	**150,857**	**147,983**	**815**
													283,586				**752**		**22**				**16**			**18,905**						**298,840**		

PROJ. REFERENCE NO.	SHEET NO.
2023CPT.13.02.10121, 2023CPT.13.02.20121	TMP-1

SIGNING FOR RESURFACING PROJECTS

LEGEND
- ⊢ STATIONARY SIGN
- ⬅ DIRECTION OF TRAFFIC FLOW





TEE INTERSECTION

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1 & 2 — ROAD WORK AHEAD W20-1 48″ X 48″ / NEXT XX MILES W7-3aP 24″ X 18″
- 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)

3 — LOW SOFT SHOULDER SP 13107 48″ X 48″
- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER.
- AT TEE INTERSECTIONS INSTALL INITIALLY ½ MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.

4 — ROAD UNDER CONST 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.
- FOR TEE INTERSECTIONS, INSTALL WITHIN 500′ +/- OF THE INTERSECTION ALONG -L- LINE.

5 — END ROAD WORK G20-2 A 48″ X 24″
- 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.

-Y- LINE SIGNING

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.

ROAD WORK AHEAD W20-1 48″ X 48″
PLACED 500′ IN ADVANCE OF FLAGGER.

W20-7 A 48″ X 48″
PLACED 250′ IN ADVANCE OF FLAGGER.

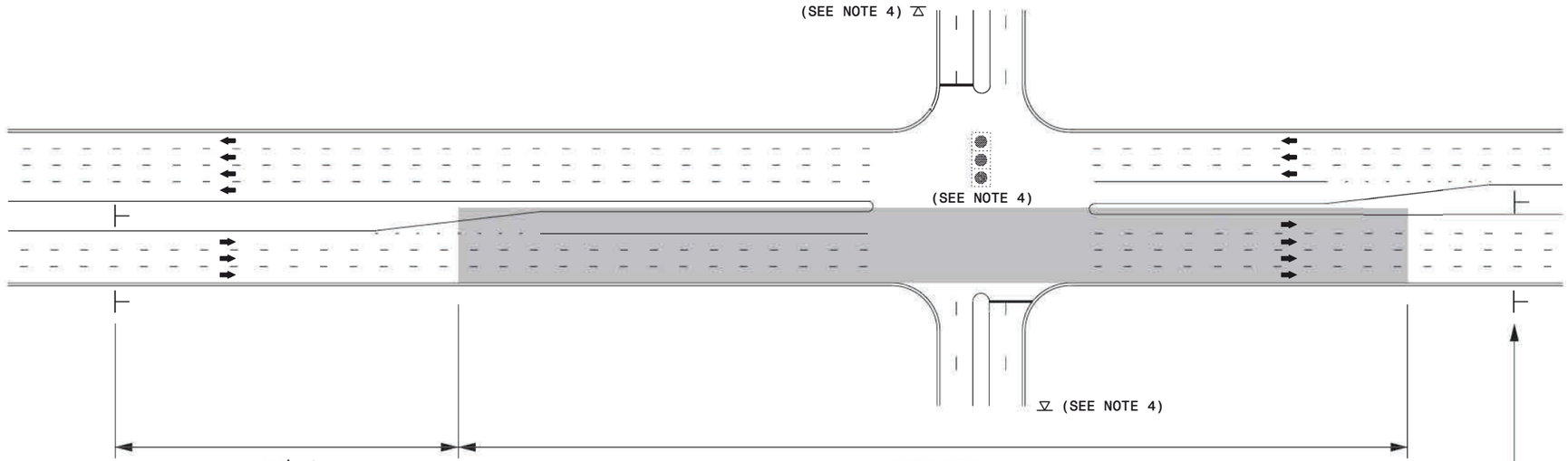
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

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

5/15/2017
SATMU\WZTC\Resurfacing\2L2W & AST Resurfacing Details\Resurfacing_AdvWarn_2Ln.dgn
User:kedgis

PROJ. REFERENCE NO.	SHEET NO.
2023CPT.13.02.10121, 2023CPT.13.02.20121	TMP-2

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

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

RESURFACING ADVANCE WARNING SIGNS FOR URBAN / SUBURBAN FACILITIES

4/8/2015
C:\Users\rmgarrett\Downloads\Resurfacing_AdvWarn_UrSu (2).dgn
User:rmgarrett

SIGN NUMBER: 11299
TYPE: B
QUANTITY: SEE PLANS

SIGN WIDTH: 5′-6″
HEIGHT: 5′-6″
TOTAL AREA: 30.5 Sq.Ft.

BORDER TYPE: INSET
RECESS: 0.59″
WIDTH: 0.75″
RADII: 1.38″

NO. Z BARS: N/A
LENGTH: N/A

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT′L: 0.125″ (3.2 mm) ALUMINUM

USE NOTES: 1,2

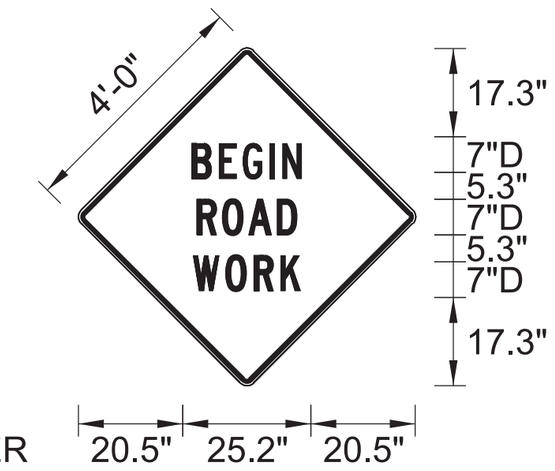
1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Type VII, VIII, or IX (prismatic) fluorescent orange retroreflective sheeting.

DESIGN BY: WJ
PROJECT ID: ALL
CHECKED BY:
DIV: ALL
DATE: Jun 22, 2011

SP 11299

2023CPT.13.02.10121,
2023CPT.13.02.20121

TMP-3



BORDER
R=1.38"
TH=0.75"
IN=0.59"

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter																										Series/Size Text Length
		B	E	G	I	N																					D 2000
	20.5	6	5.4	6.3	2.8	4.8	20.5																			25.2
		R	O	A	D																					D 2000
	21.4	5.8	5.9	7	4.8	21.4																				23.5
		W	O	R	K																					D 2000
	20.9	7.1	6.5	5.9	4.9	20.9																				24.5

FILENAME: SP11299.PDF

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SP13106
TYPE: STATIONARY
QUANTITY: SEE PLANS

SIGN WIDTH: 4′-0″
HEIGHT: 4′-0″
TOTAL AREA: 16.00 Sq.Ft.

BORDER TYPE: INSET
RECESS: 0.75″
WIDTH: 1.25″
RADII: 3″

NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT′L: 0.080″ (2.0 mm) ALUMINUM

USE NOTES: 1,2

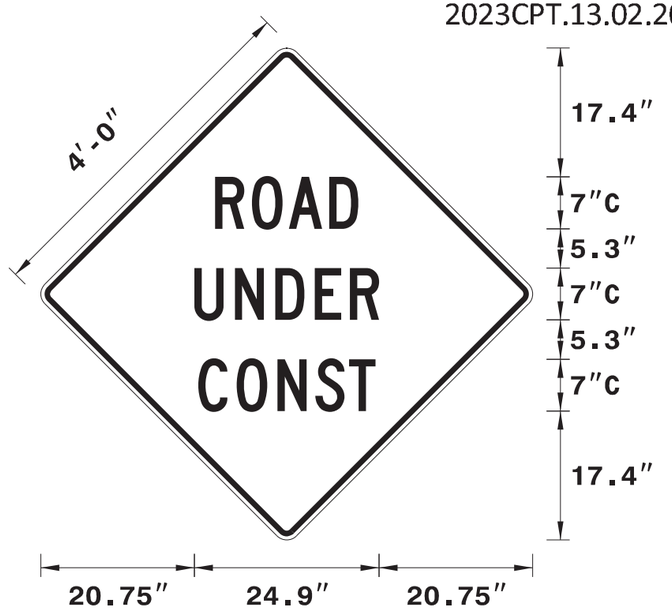
1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluoresent orange retroreflective sheeting.

DESIGN BY: B. RASHID
PROJECT ID:

CHECKED BY: AIA
DIV:

DATE: Apr 26, 2013

2023CPT.13.02.10121, TMP-4
2023CPT.13.02.20121



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																										Series/Size Text Length
		R	O	A	D																					C 2000
	23.5	5	5	5.5	3.9	23.5																				19.3
		U	N	D	E	R																				C 2000
	20.7	5.5	5.5	5.3	4.8	3.9	20.7																			24.9
		C	O	N	S	T																				C 2000
	21.2	5.2	5.5	5.1	4.6	3.6	21.2																			23.9

FILENAME: SP13OXX_Sgn_SGN_special

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SP13107
TYPE: STATIONARY
QUANTITY: SEE PLANS

SIGN WIDTH: 4′-0″
HEIGHT: 4′-0″
TOTAL AREA: 16.00 Sq.Ft.

BORDER TYPE: INSET
RECESS: 0.75″
WIDTH: 1.25″
RADII: 3″

NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT′L: 0.080″ (2.0 mm) ALUMINUM

USE NOTES: 1,2

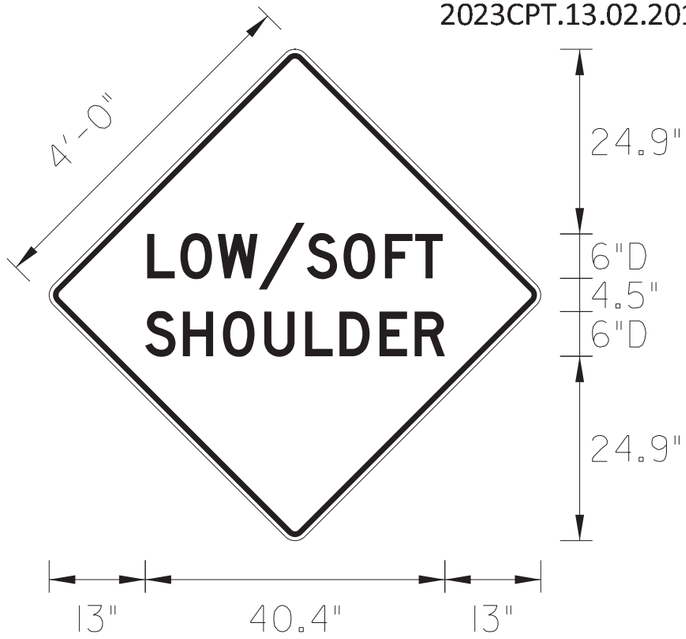
1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluoresent orange retroreflective sheeting.

DESIGN BY: B. RASHID
PROJECT ID:

CHECKED BY: AIA
DIV:

DATE: Apr 26, 2013

2023CPT.13.02.10121, TMP-5
2023CPT.13.02.20121



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

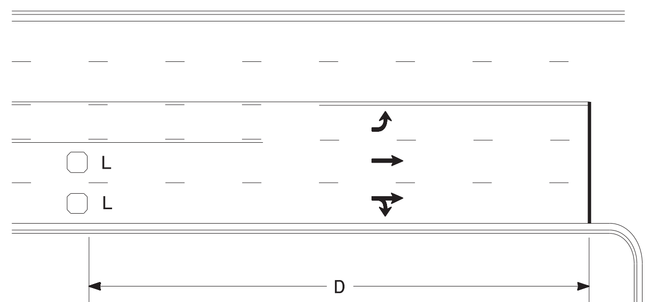
Letter spacings are to start of next letter

																									Series/Size Text Length
		L	O	W	/	S	O	F	T																D 2000
	13.2	4.5	5	5.5	6.5	5	5.6	4.1	3.7	13.2															39.9
		S	H	O	U	L	D	E	R																D 2000
	13	5.1	5.4	5.6	5.5	4.6	5.4	4.7	4.1	13															40.4

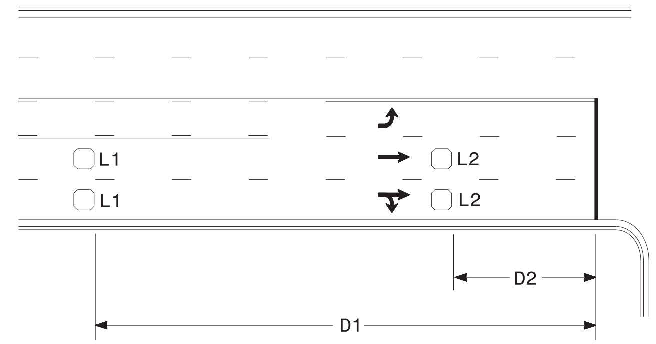
FILENAME: SP130XX_Sgn_SGN_special

NORTH CAROLINA D.O.T. SIGN DETAIL

High Speed Detection
(≥40 mph)



OR



Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired separately

Volume Density Operation

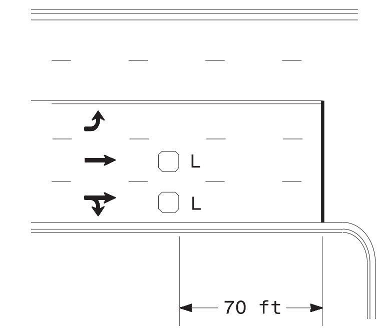
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

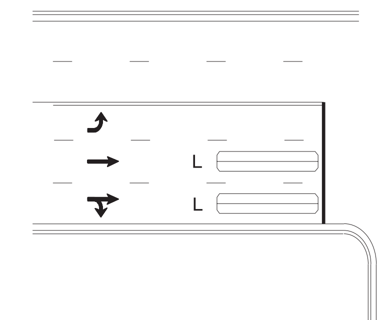
"Stretch" Operation

Low Speed Detection
(≤35 mph)



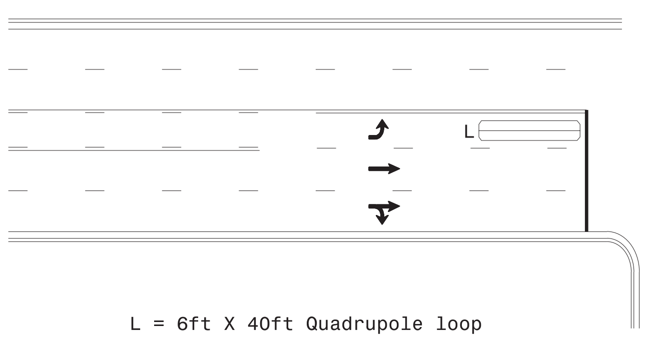
L = 6ft X 6ft
Wired in series

OR



L = 6ft X 40ft
Quadrupole loop, wired separately

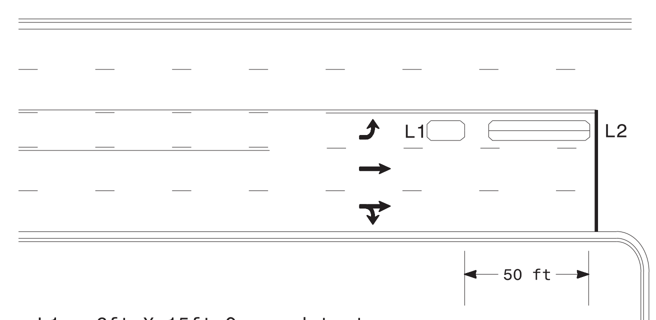
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

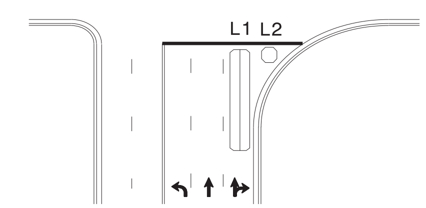
OR



L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

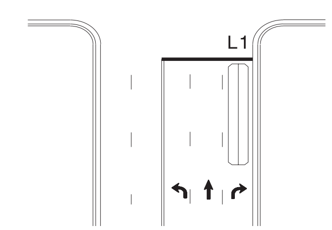
Queue Loop Detection

Right Turn Lane Detection

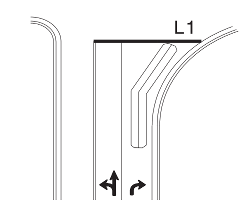


Shared Lane/
Wide Radius Turn

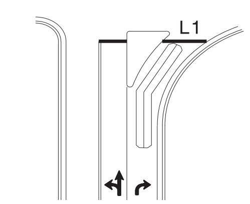
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

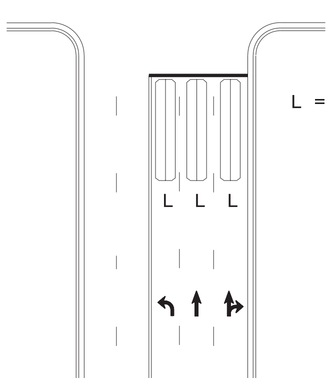


Wide Radius Turn



Channelized Turn

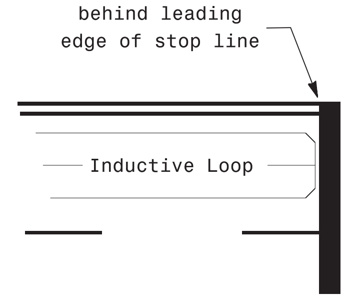
Side Street Detection



L = 6ft X 40ft
Quadrupole loop
Wired to separate
detectors/channels

Presence Loop Placement at Stop Lines

Locate loop slightly behind leading edge of stop line



Note:
Loop may be located in advance of stop line under any of the following conditions:
1) stop line is greater than 15′ from edge of intersecting roadway
2) loop detects a permissive or protected/permissive left turn
3) for an exclusive right turn lane

Recommended Number of Turns

Single 6′ X 6′ loop
(when wired separately):

Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns

6′ X 15′ Loops:
Lead-in < 150′, use 2 turns
Lead-in > 150′, use 3 turns

Prepared in the Offices of:
Transportation Mobility and Safety Division
State of North Carolina Department of Transportation
Signal Design Section
750 N.Greenfield Pkwy.Garner.NC 27529

Typical Signal Loop Locations

PLAN DATE:	September 2020	REVIEWED BY:	JPG
PREPARED BY:	PLA	REVIEWED BY:	

SCALE
N/A

REVISIONS	INIT.	DATE

SEAL
North Carolina Professional Engineer Seal 029904 Jason P. Galloway

DocuSigned by:
Jason P. Galloway
E700EA70481841D...
9/8/2020
DATE

SIG. INVENTORY NO.

08-SEP-2020 11:54
S:*ITS&SU*ITS Signals*Signal Design Section*Eastern Region*Loop Typical*looptypical2015.dgn
jgalloway