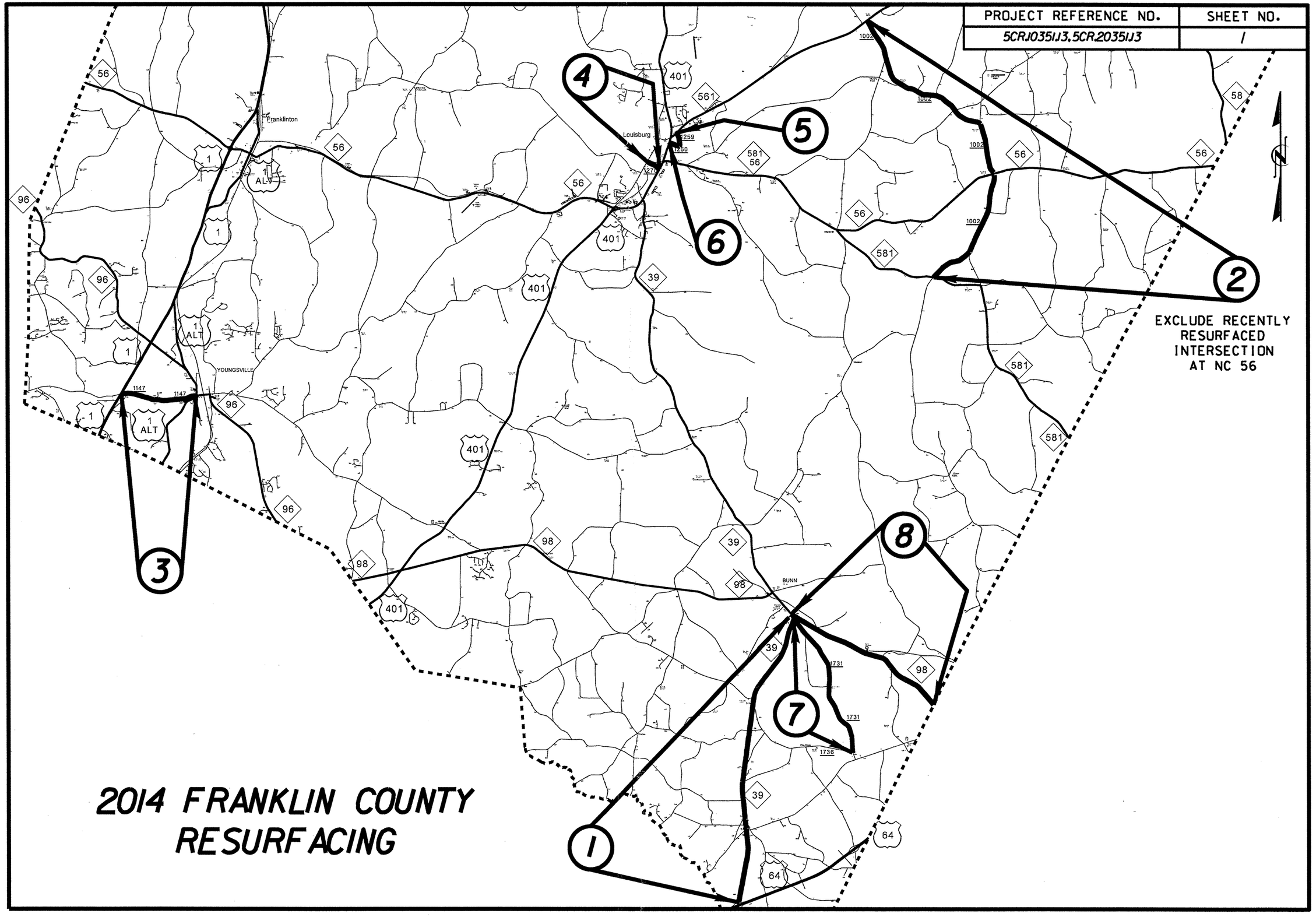
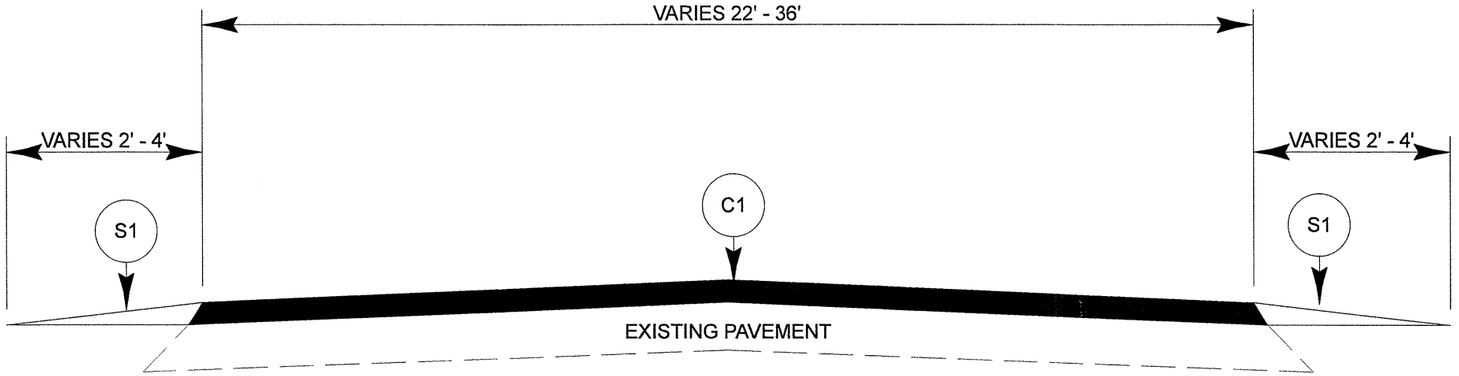
PROJECT REFERENCE NO.	SHEET NO.
5CRJ035IJ3, 5CR.2035IJ3	1

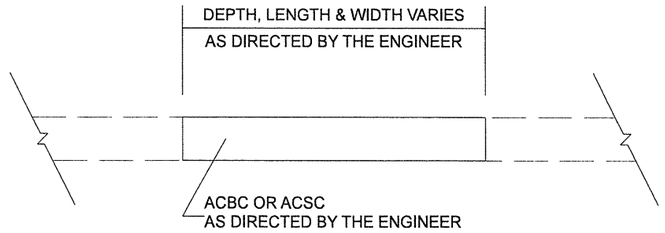


2014 FRANKLIN COUNTY RESURFACING

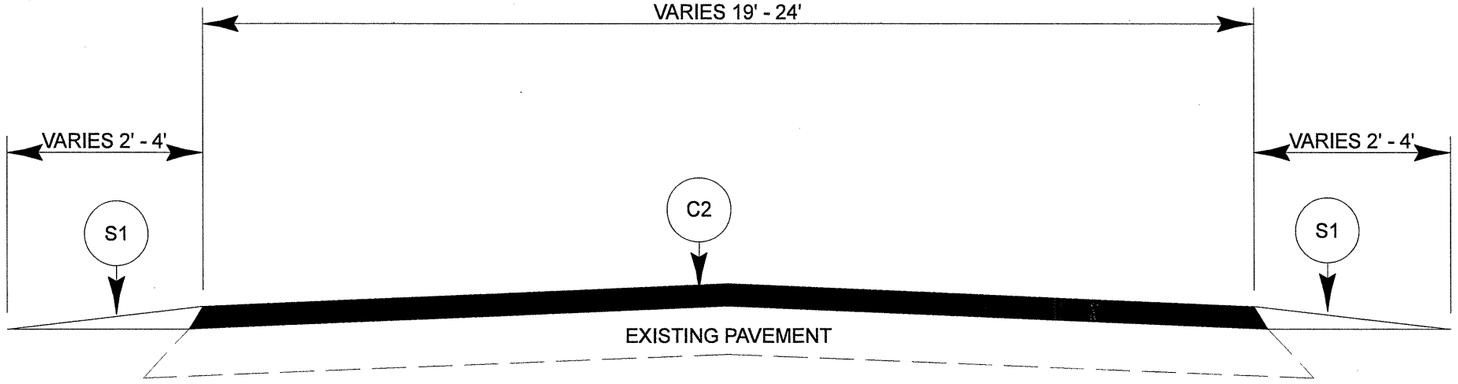
PROJECT NO.	SHEET NO.	TOTAL SHEETS
5CR.10351.13, 5CR.20351.13	2	



TYPICAL SECTION NO. 1



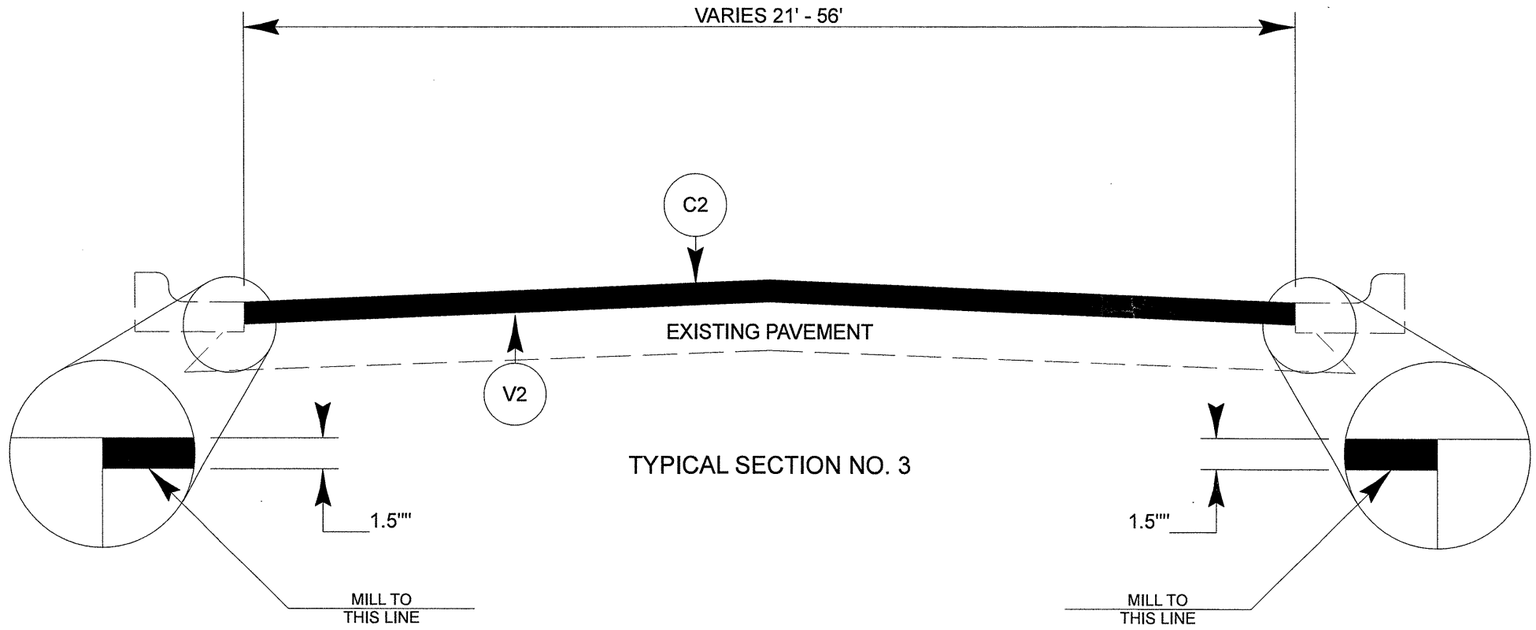
PATCHING EXISTING PAVEMENT



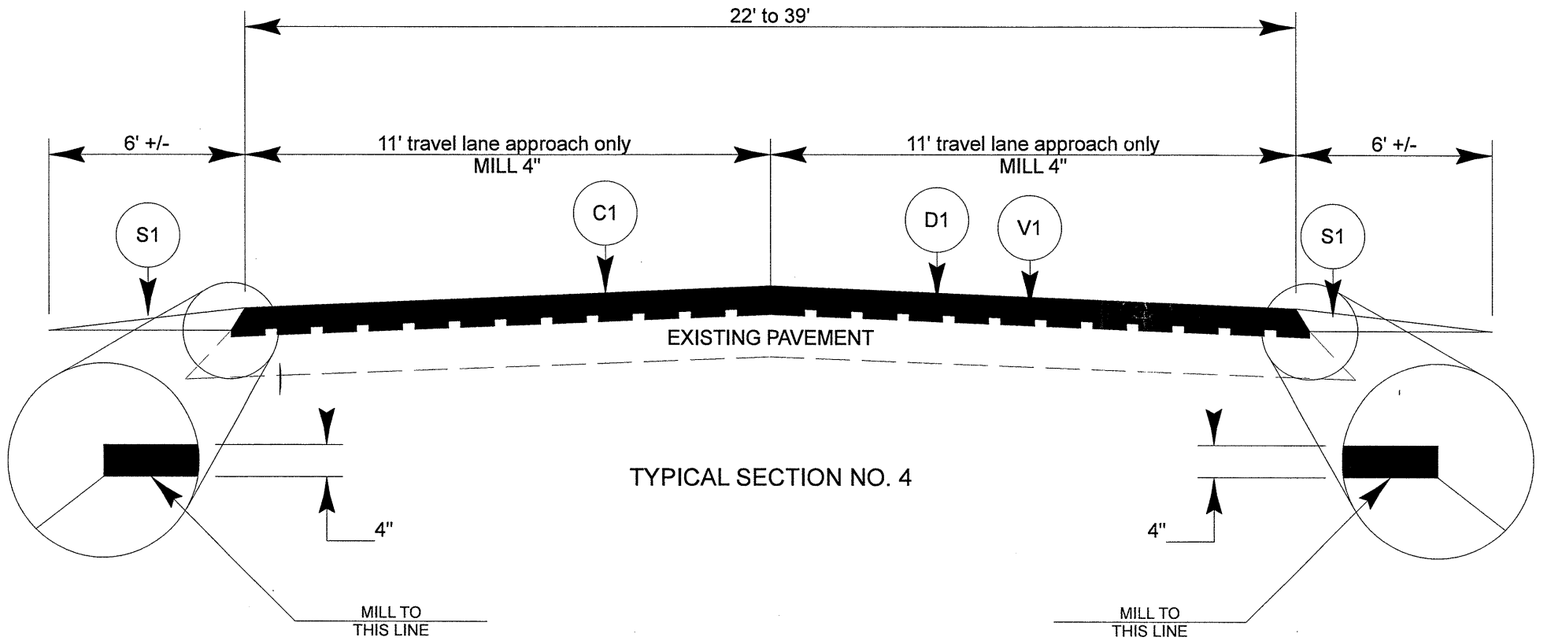
TYPICAL SECTION NO. 2

PAVEMENT SCHEDULE	
C1	PROPOSED APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SY
C2	PROPOSED APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SY
D1	PROPOSED APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I 19.0 B, AT AN AVERAGE RATE OF 456 LBS. PER SY
S1	SHOULDER RECONSTRUCTION WHERE APPLICABLE
V1	PROPOSED 250' OF 4" MILLING OF 11' APPROACH TRAVEL LANE AT INTERSECTION WITH SR 1770 (OLD US 64), AS DIRECTED BY THE ENGINEER (APPROACH ONLY IN EACH DIRECTION)
V2	PROP. 1 1/2" MILLING

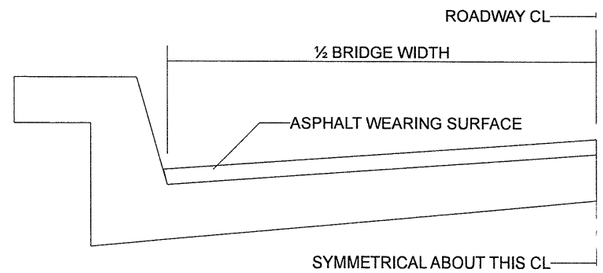
PROJECT NO.	SHEET NO.	TOTAL SHEETS
5CR.10351.13, 5CR.20351.13	3	



TYPICAL SECTION NO. 3



TYPICAL SECTION NO. 4



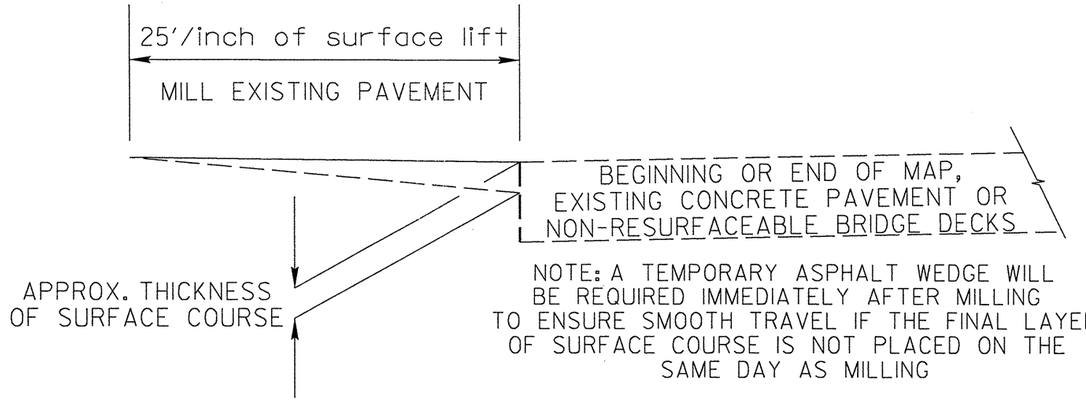
BRIDGE HALF TYPICAL SECTION

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

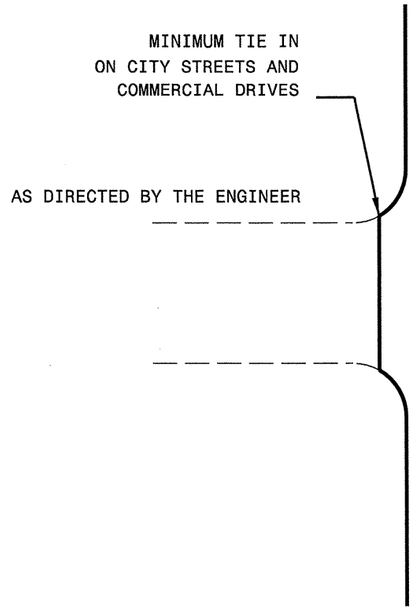
THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. THE MINIMUM THICKNESS SHOULD DEPEND ON PAVEMENT TYPE AS FOLLOWS: S4.75A ½", SF9.5A 1.0", S9.5X 1.5", S12.5X 2.0", ULTRATHIN HOT MIX ASPHALT-TYPE A ¼", ULTRATHIN HOT MIX ASPHALT-TYPE B 5/8", ULTRATHIN HOT MIX ASPHALT-TYPE C ½".THE MAXIMUM THICKNESS SHOULD DEPEND ON PAVEMENT TYPE AS FOLLOWS: S4.75A 1.0", SF9.5A 1.5",S9.5X 2.0", S12.5X 2.0", ULTRATHIN HOT MIX ASPHALT-TYPE A ¼", ULTRATHIN HOT MIX ASPHALT-TYPE B 5/8", ULTRATHIN HOT MIX ASPHALT-TYPE C ½".

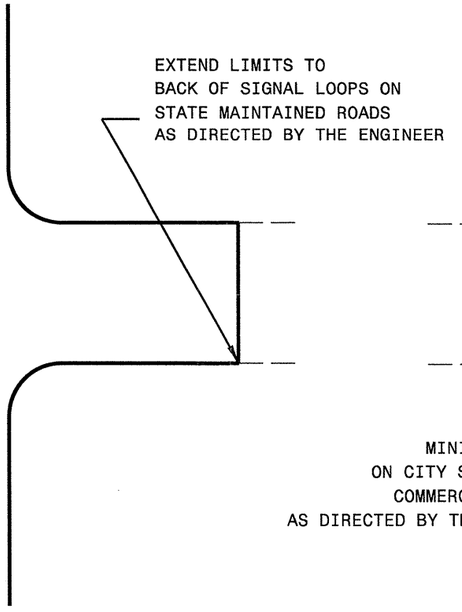
NOTES

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.

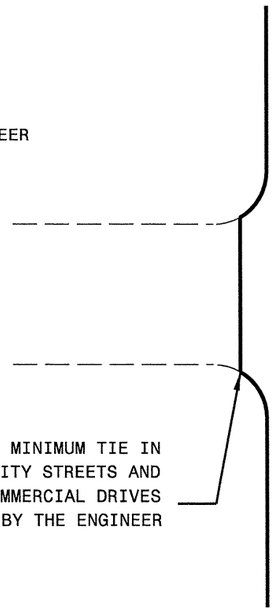


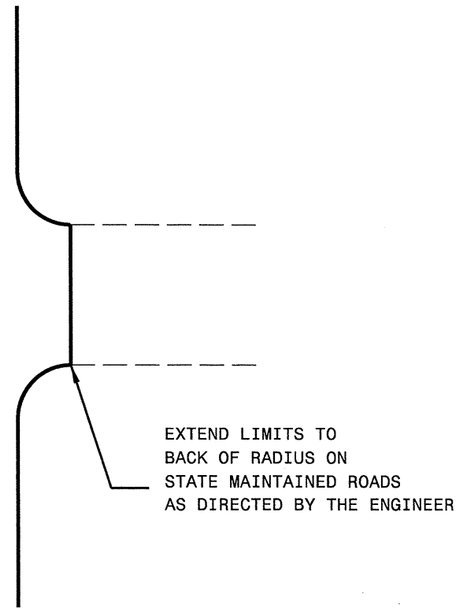
DETAIL OF INCIDENTAL MILLING





DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES

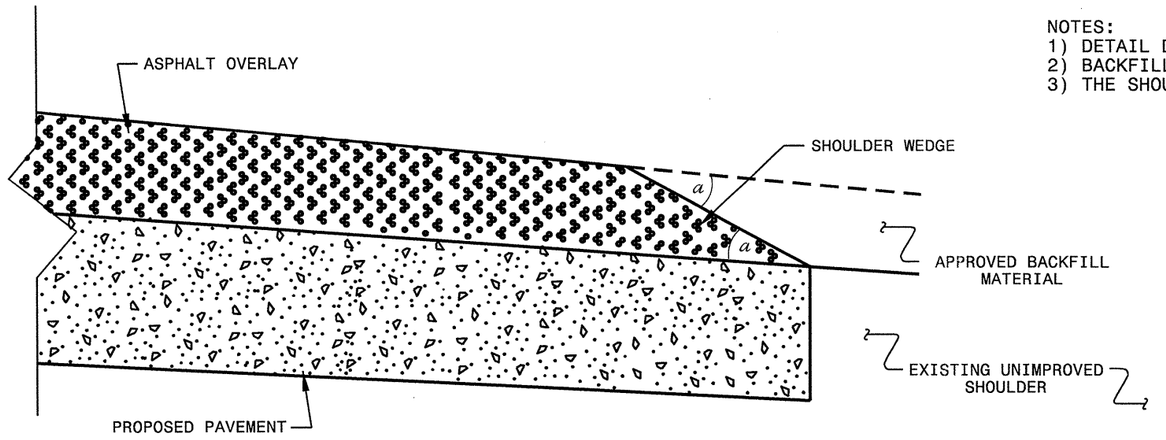




DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

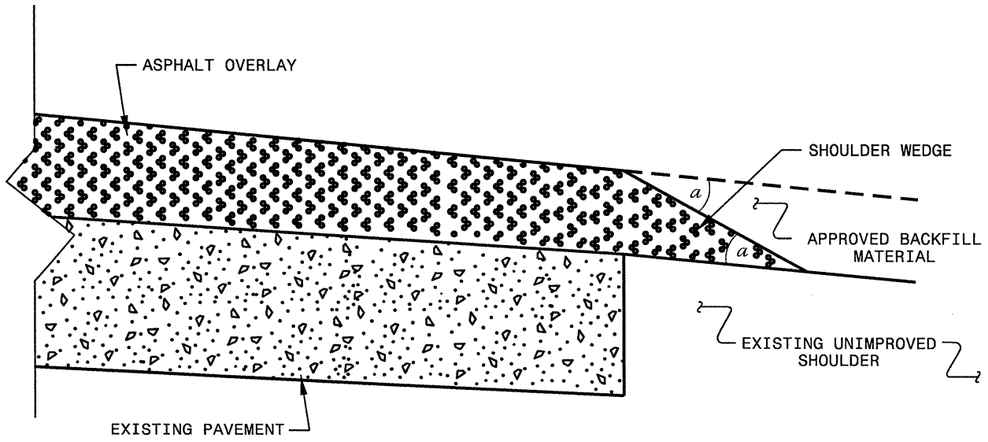
PROJECT REFERENCE NO.	SHEET NO.
5CR.10351.13, etc.	5

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 AND SIDE STREETS.



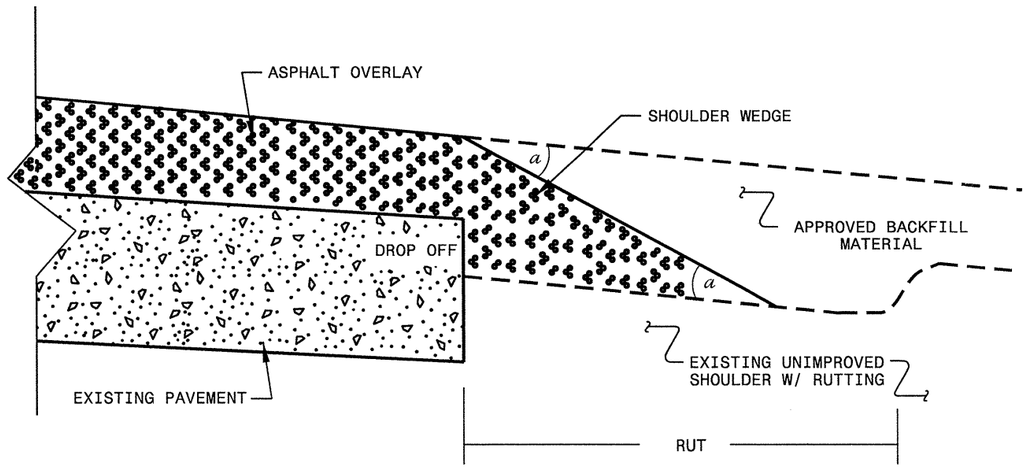
SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

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

SHOULDER WEDGE DETAILS

ORIGINAL BY:	T.SPELL	DATE:	7-19-11
MODIFIED BY:		DATE:	10/16/12
CHECKED BY:		DATE:	
FILE SPEC.:	s:usr/details/stand/shoulderwedgedetail.dgn		

$$$$SYSTIME$$$$
$$$$DGNS$$$$
$$$$USERNAME$$$$

PROJECT NO.	SHEET NO.	TOTAL NO.
5CR.10351.13, 5CR.20351.13	6	

SUMMARY OF QUANTITIES

stds. 848.05/848.06

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	BORROW CY	INCIDENTAL STONE BASE TONS	SHOULDER RECON-STRUCTION SMI	4" MILLING SY	1½" MILLING SY	INCIDENTAL MILLING SY	INTERMEDIATE COURSE, I19.0B TONS	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TON	ASPHALT BINDER FOR PLANT MIX TON	PATCHING EXISTING PAVEMENT TONS	REMOVE AND REPLACE CURB RAMPS EA	RETROFIT EXISTING CURB RAMP EA	ADJ. OF DROP INLET EA	WATTLE LF	TEMPORARY SILT FENCE LF	SEED & MULCHING AC	INDUCTIVE LOOP LF
5CR.10351.13	Franklin	1	NC 39	NC 98 TO US 64 WB ON-RAMP	1,4	NO	YES	6.5	24-39	325		13.0	1,000		1,250	230	8,140		499	1,200			1	20	800	7.87	132
5CR.10351.13	Franklin	8	NC 98	JOINT WEST OF NC 39 TO NASH CO LINE	1	NO	YES	3.8	22-32	190		7.6			400		4,400		264	400				10	200	4.60	444
TOTAL FOR PROJ NO. 5CR.10351.13								**10.3**		**515**		**20.6**	**1,000**		**1,650**	**230**	**12,540**		**763**	**1,600**			**1**	**30**	**1,000**	**12.47**	**576**
5CR.20351.13	Franklin	2	SR 1002 (FIRE TOWER RD)	NC 561 TO NC 581	2	NO	YES	7.6	19	380	182	15.20						7,246	485	100				40	4,560	9.20	
5CR.20351.13	Franklin	3	SR 1147 (HOLDEN RD)	US 1 TO US 1A	1	NO	NO	1.7	24-36	85	30	3.40			1,250		2,199		132	150				10	300	2.06	264
5CR.20351.13	Franklin	4	SR 1270 (JOHNSON ST/WADE AVE)	NC 39/US 401 (BICKETT BLVD) TO SR 1229 (MAIN ST)	3	NO	NO	0.32	21-56					5,163				449	30		2	2					132
5CR.20351.13	Franklin	5	SR 1259 (INDUSTRY DRIVE)	FROM NC 561 TO SR 1260 (INDUSTRY DR)	2	NO	NO	0.3	21	8		0.60			200			316	21	20				10	30	0.36	
5CR.20351.13	Franklin	6	SR 1260 (INDUSTRY DRIVE)	FROM US 401/NC39 TO SR 1259 (INDUSTRY DR)	2	NO	NO	0.23	21	6		0.46			200			242	16	20				10	23	0.56	
5CR.20351.13	Franklin	7	SR 1731 (CHEVES ROAD)	FROM NC 39 TO PINE RIDGE RD (SR 1736)	2	NO	NO	3.3	21	165	79	6.60			250			3,475	233	1,000				10	660	3.99	
TOTAL FOR PROJ NO. 5CR.20351.13								**13.45**		**644**	**291**	**26.26**		**5,163**	**1,900**		**2,199**	**11,728**	**917**	**1,290**	**2**	**2**		**80**	**5,573**	**16.17**	**396**
GRAND TOTAL								**23.75**		**1,159**	**291**	**46.86**	**1,000**	**5,163**	**3,550**	**230**	**14,739**	**11,728**	**1,680**	**2,890**	**2**	**2**	**1**	**110**	**6,573**	**28.64**	**972**

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-N WORK ZONE ADVANCE/ GENERAL WARNING SIGNING SF	4457000000-N TEMPORARY TRAFFIC CONTROL LS	4685000000-E 4" X 90 M WHITE THERMO LF	4685000000-E 4" X 90 M YELLOW THERMO LF	4686000000-E 4" X 120 M YELLOW THERMO LF	4686000000-E 4" X 120 M WHITE THERMO LF	4695000000-E 8" X 90 M WHITE THERMO LF	4695000000-E 8" X 90 M YELLOW THERMO LF	4697000000 8" X 120 M WHITE THERMO LF	4710000000 24" X 120 M WHITE THERMO LF	4721000000- THERMO MSG SCHOOL 120 M EA	4725000000-E THERMO LT ARROW 90 M EA	THERMO STR ARROW 90 M EA	THERMO YIELD TRIANGLE 90M EA	THERMO RT ARROW 90 M EA	THERMO STR & LT ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	4810000000-E 4" WHITE PAINT LF	4" YELLOW PAINT LF	4820000 8" WHITE PAINT LF	4835000 24" WHITE PAINT LF	4905000000-N SNOW PLOWABLE MARKERS EA
5CR.10351.13	Franklin	1	NC 39	NC 98 TO US 64 WB ON-RAMP	1,4	2	2WU	6.5	24-39	650	*	69,940		42,900	250				60		2	2	15	2							429
5CR.10351.13	Franklin	8	NC 98	JOINT WEST OF NC 39 TO NASH CO LINE	1	2	2WU	3.8	22-32	432		40,888		25,080	150				100	6	4					3						251
TOTAL FOR PROJ NO. 5CR.10351.13								**10.3**		**1,082**	**1**	**110,828**		**68,380**					**160**	**6**	**28**										**680**
5CR.20351.13	Franklin	2	SR 1002 (FIRE TOWER RD)	NC 561 TO NC 581	2	2	2WU	7.6	19	820		81,776	150	50,160	70				86	6												
5CR.20351.13	Franklin	3	SR 1147 (HOLDEN RD)	US 1 TO US 1A	1	2	2WU	1.7	24-36	315		18,292		11,220		100	75		80												
5CR.20351.13	Franklin	4	SR 1270 (JOHNSON ST/WADE AVE)	NC 39/US 401 (BICKETT BLVD) TO SR 1229 (MAIN ST)	3	2	2WU	0.32	21-56	45	*	800	2,112		500			75	48		5			1	2	1						
5CR.20351.13	Franklin	5	SR 1259 (INDUSTRY DRIVE)	FROM NC 561 TO SR 1260 (INDUSTRY DR)	2	2	2WU	0.3	21	45		3,228		1,980							4					2	1,300	2,112	75	48	
5CR.20351.13	Franklin	6	SR 1260 (INDUSTRY DRIVE)	FROM US 401/NC39 TO SR 1259 (INDUSTRY DR)	2	2	2WU	0.23	21	45		2,475		1,518																	
5CR.20351.13	Franklin	7	SR 1731 (CHEVES ROAD)	FROM NC 39 TO PINE RIDGE RD (SR 1736)	2	2	2WU	3.3	21	315		35,508		21,780	50				79												
TOTAL FOR PROJ NO. 5CR.20351.13								**13.45**		**1,585**	**1**	**142,079**	**2,262**	**86,658**	**620**	**100**	**75**	**75**	**293**	**6**	**9**			**1**	**2**	**3**	**1,300**	**2,112**	**75**	**48**	
												144,341		**87,278**		**175**					**15**						**3,412**				
GRAND TOTAL								**23.75**		**2,667**	**1**	**252,907**	**2,262**	**154,638**	**1,020**	**100**	**75**	**75**	**453**	**12**	**15**	**2**	**15**	**3**	**2**	**6**	**1,300**	**2,112**	**75**	**48**	**680**
												255,169		**155,658**		**175**					**43**						**3,412**				

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	*STABILIZATION TIME*	*TIMEFRAME EXCEPTIONS*
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

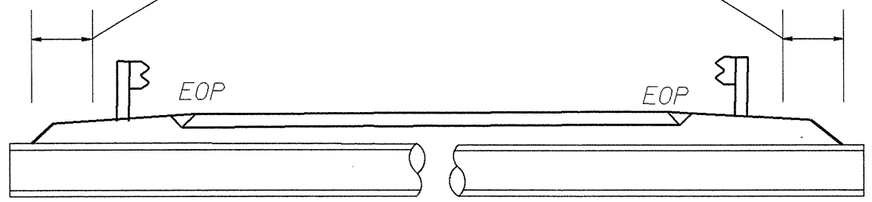
PROJECT REFERENCE NO.	SHEET NO.
5CR.10351.13, ETC	8

EROSION CONTROL DETAIL

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

BMP Options: Wattle, Silt Fence, or Hardened Aggregate.

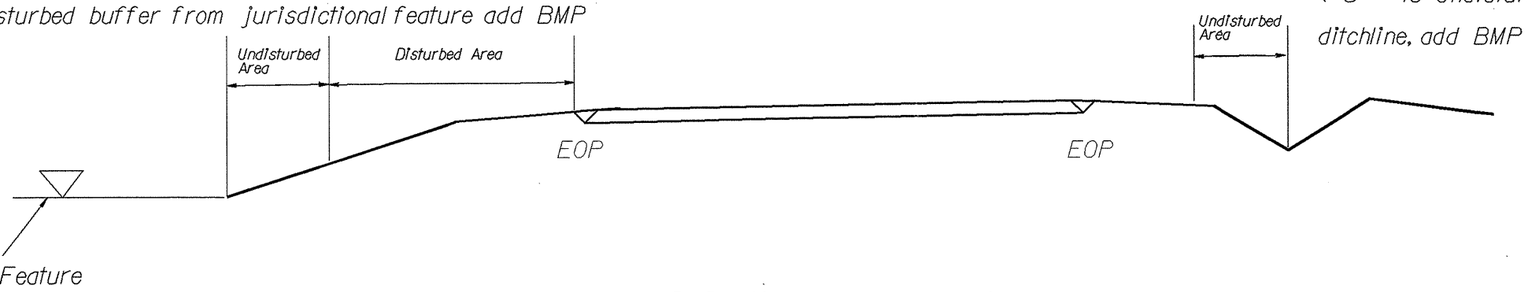
< 5' – 10' Undisturbed buffer add BMP



Pipe/Culvert

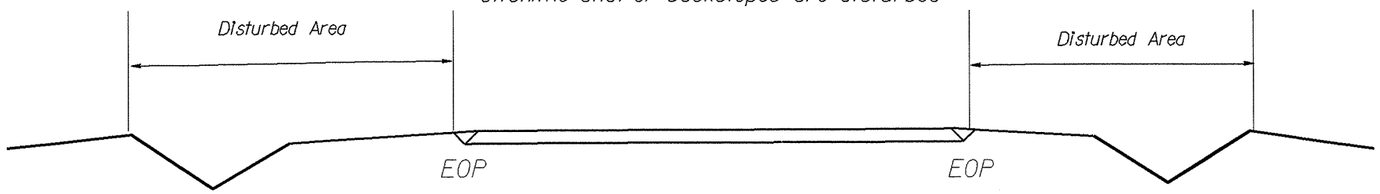
< 5' – 10' Undisturbed buffer from jurisdictional feature add BMP

< 5' – 10' Undisturbed buffer from ditchline, add BMP

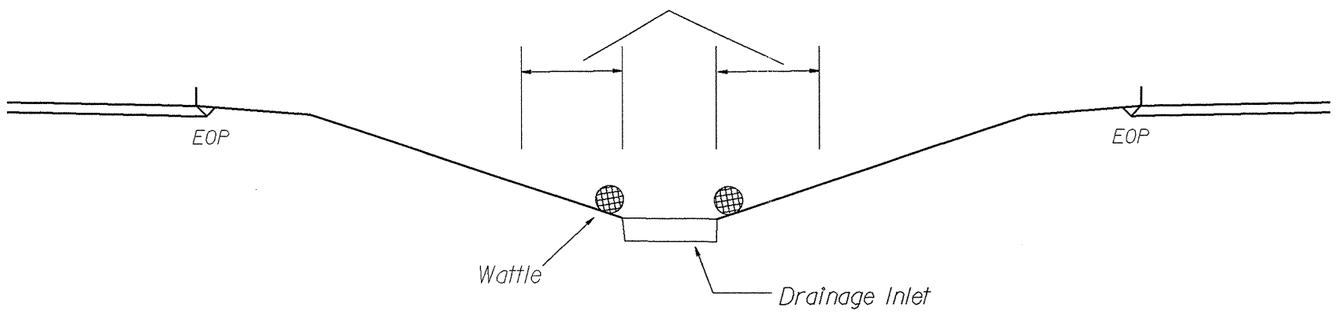


Jurisdictional Feature

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



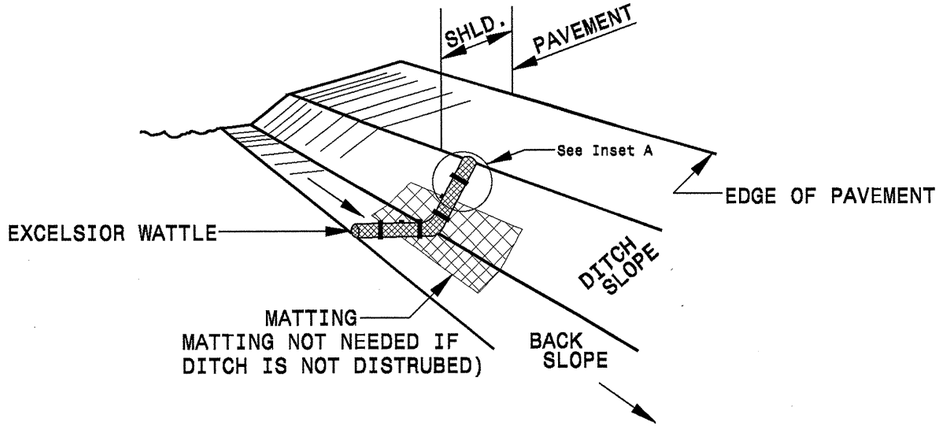
< 5' – 10' Undisturbed buffer from inlet, add wattle



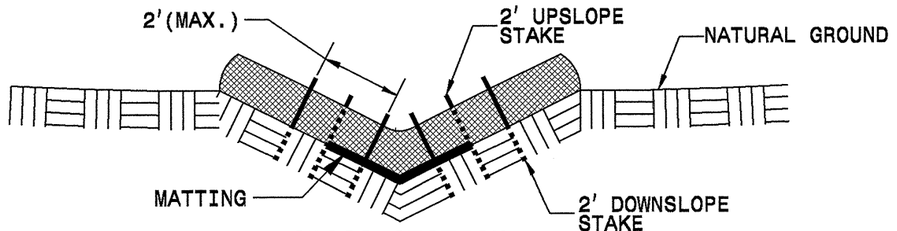
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
5CR.10351.13, ETC	9

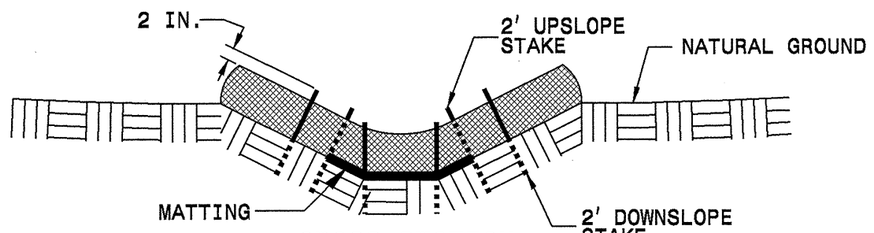
WATTLE DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

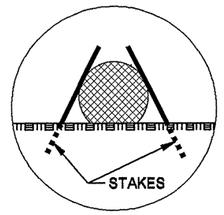
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

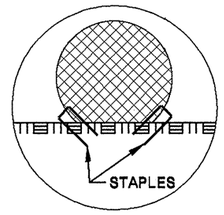
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

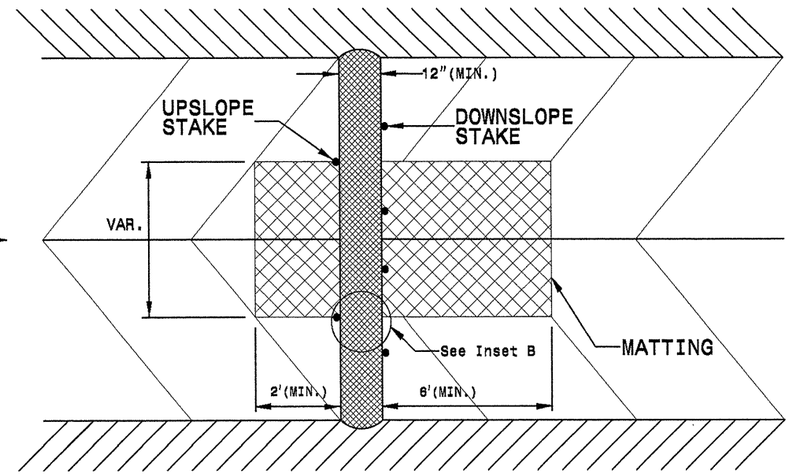
IF DITCH WILL BE DISTURBED, INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



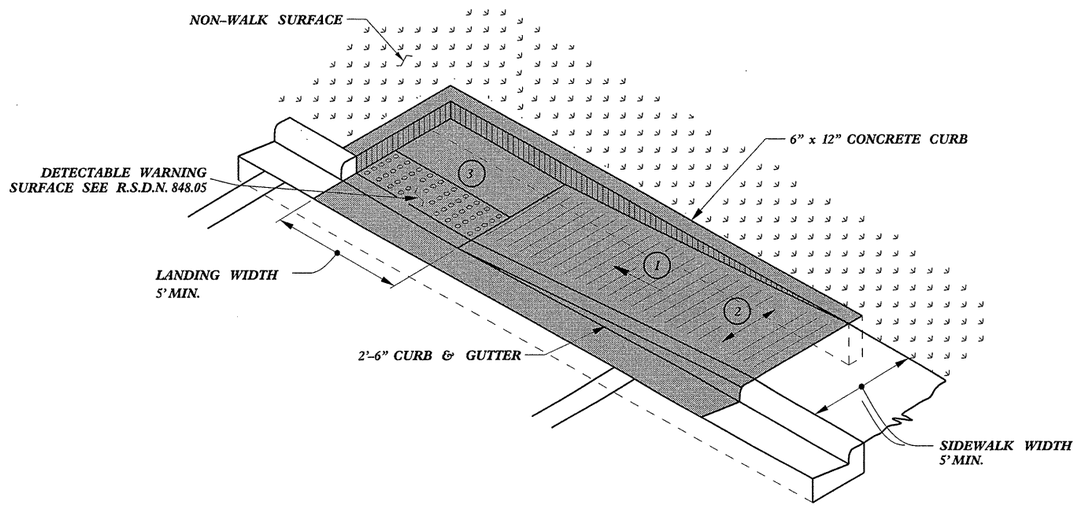
INSET B



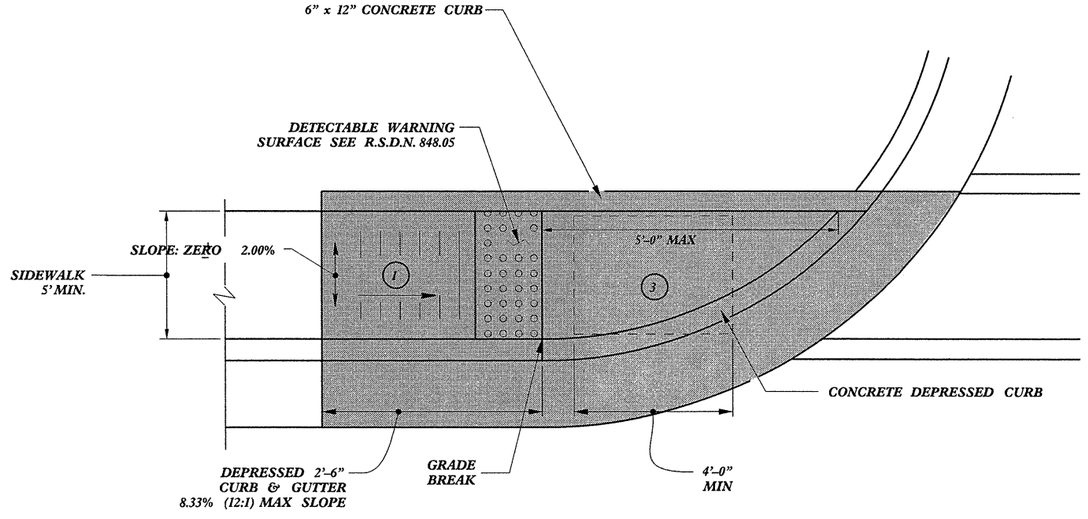
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
5CR.10351.13, ETC	10

PAY LIMITS FOR CURB RAMP



TYPE 1A



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.

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

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

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

5/14/99

22-MAR-2012 15:06
User:jshowerton
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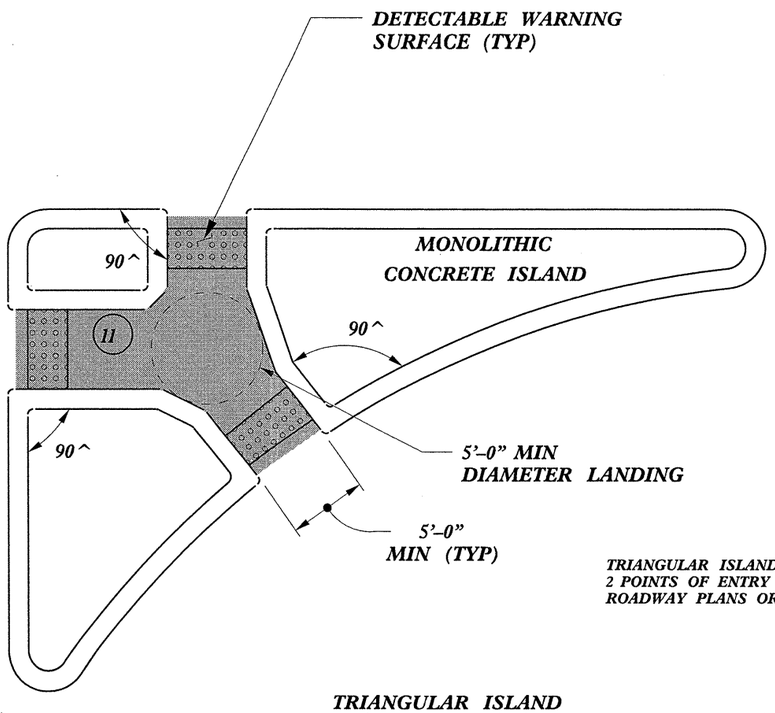
5/14/99

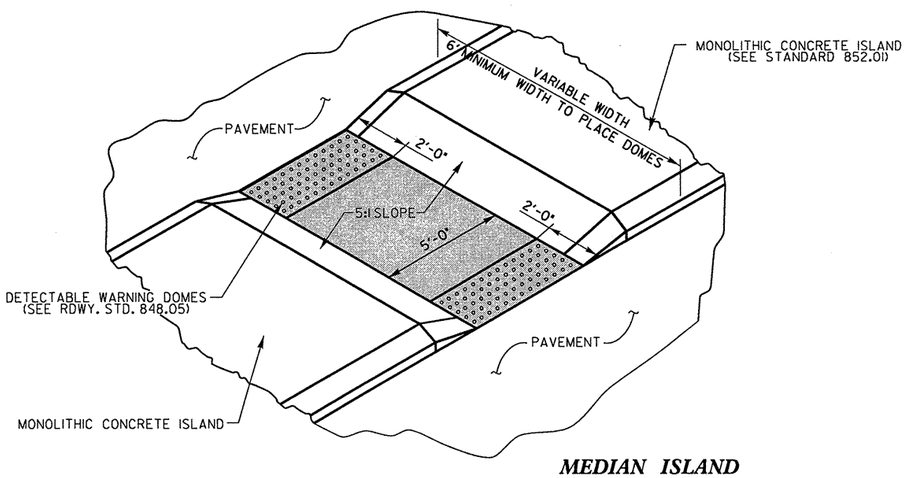
PROJECT REFERENCE NO.	SHEET NO.
5CR.10351.13, ETC	11

PAY LIMITS FOR 1 CURB RAMP

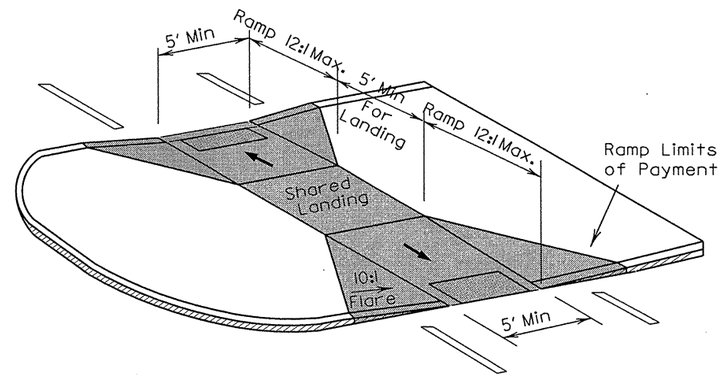


TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY 2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

TRIANGULAR ISLAND WITH CUT THROUGH



MEDIAN ISLAND WITH CUT THROUGH



MEDIAN ISLAND CURB RAMPS

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

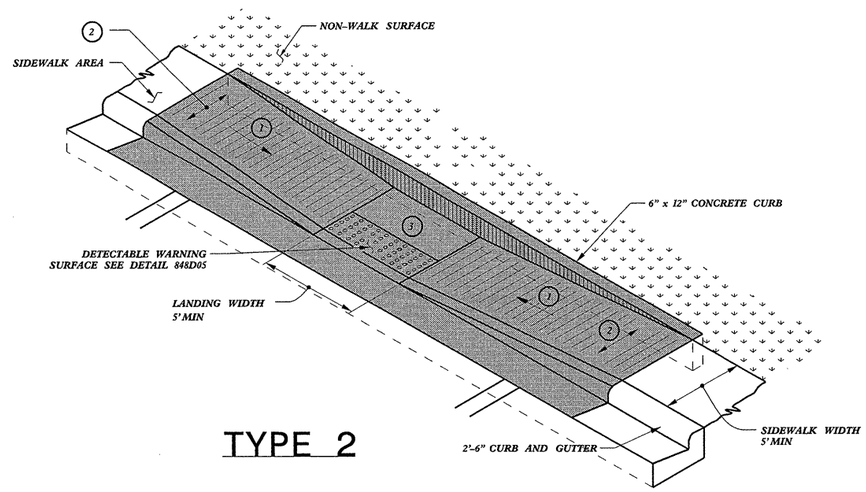
CURB RAMPS

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

$$$$SYSTIME$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
5CR.10351.13, ETC	12



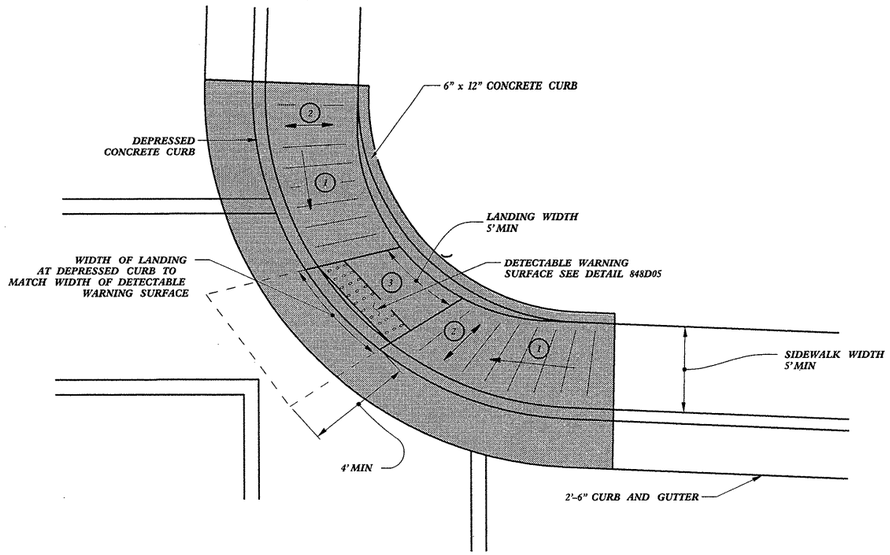
TYPE 2

PAY LIMITS FOR CURB RAMP

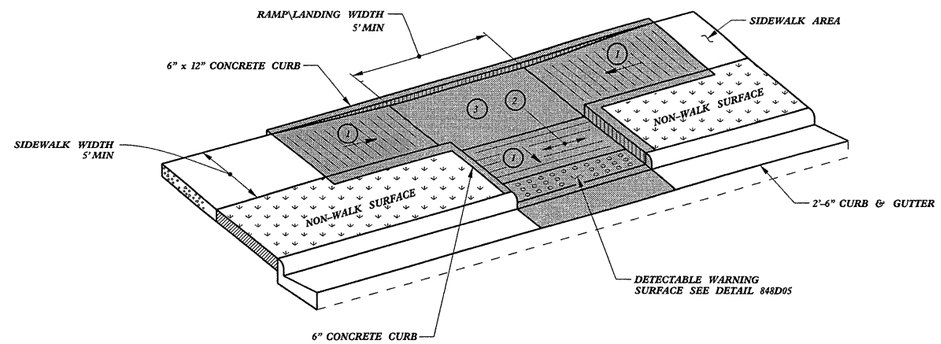
(1) *8.33% (12:1) MAX RAMP SLOPE*

(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.*



TYPE 2A



TYPE 3

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

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

CURB RAMPS

Parallel 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

22-MAR-2012 15:07
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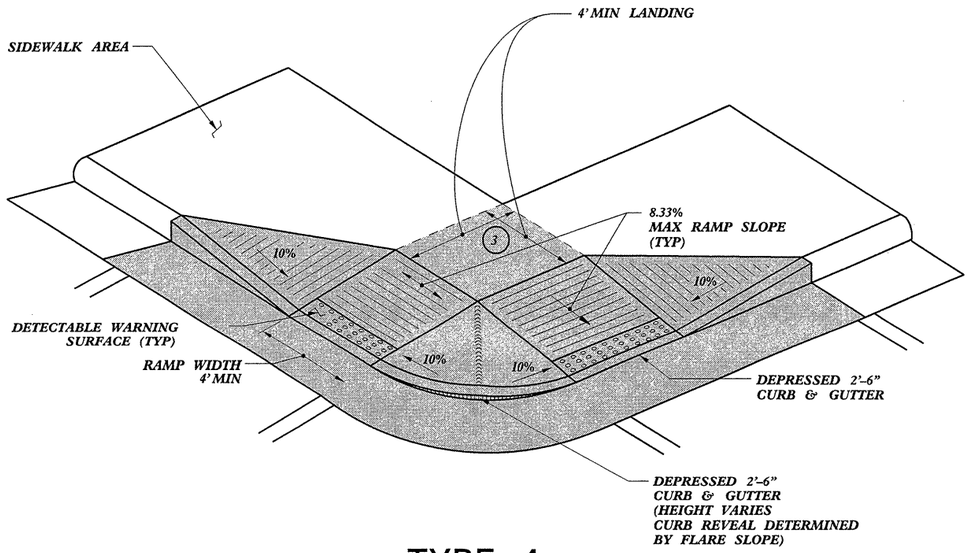
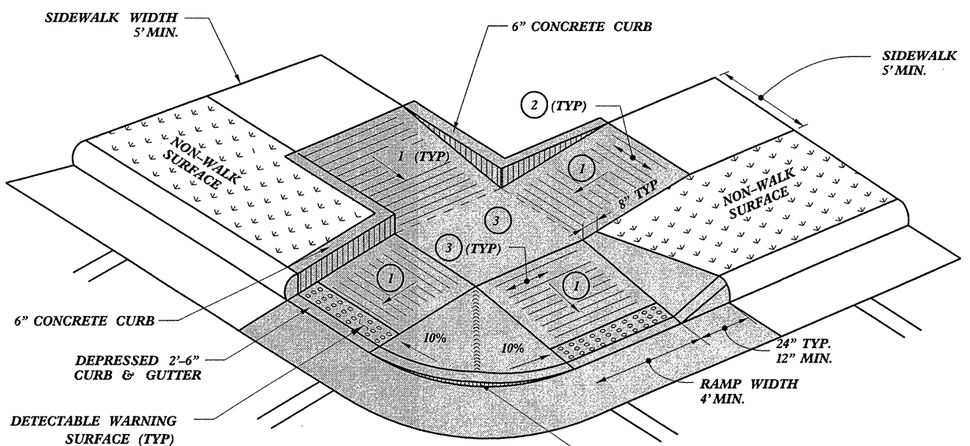
jhowerton
At "C50023750"

PROJECT REFERENCE NO.	SHEET NO.
5CR.10351.13, ETC	13

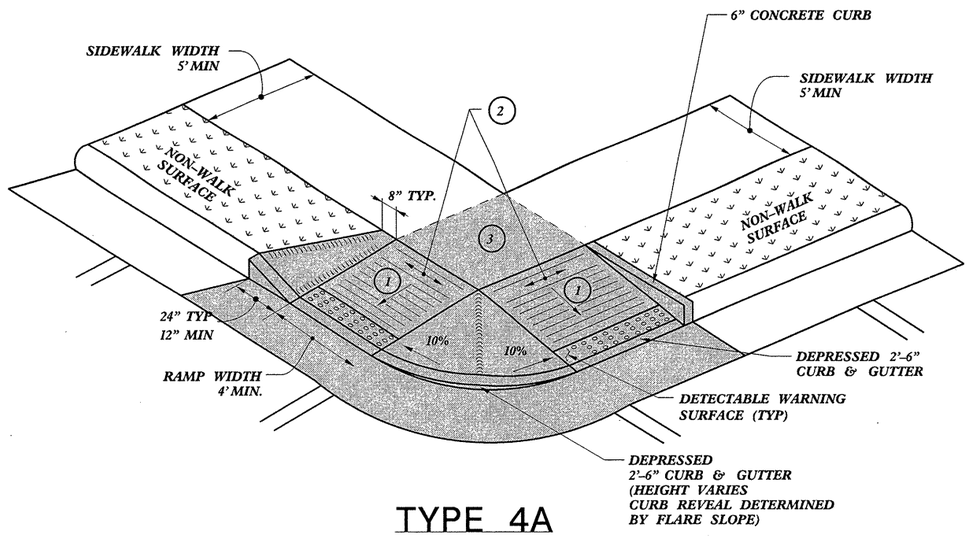
PAY LIMITS FOR CURB RAMP



TYPE 4



TYPE 5



TYPE 4A

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

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

CURB RAMPS

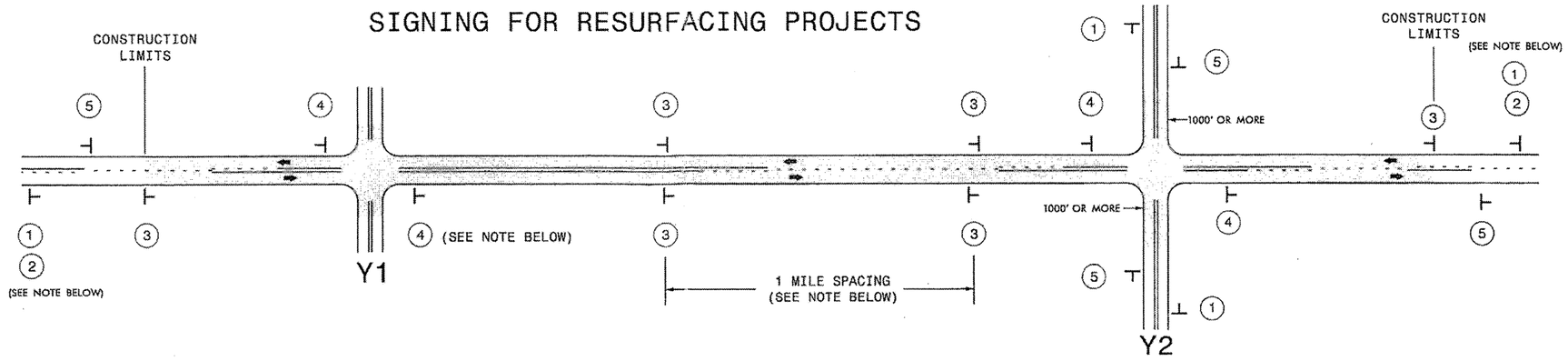
Shared Landing

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

5/14/99
22-MAR-2012 15:08
jhowerton
M:\Contracts (Highways)\Special Details\jhowerton\Standard Drawings\2012 Standard Drawings\2012 Curb Ramp Special Details\Curb Ramp Details.dgn

PROJ. REFERENCE NO.	SHEET NO.
C203452A-RW C203452B-RW	SIGN-1

SIGNING FOR RESURFACING PROJECTS



LEGEND
- ⊢ STATIONARY SIGN
- ⬅ DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1	ROAD WORK AHEAD W20-1 48" X 48"	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.
2	NEXT XX MILES W7-3aP 24" X 18"	#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)
3	LOW/SOFT SHOULDER SP 13107 48" X 48"	PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET ½ MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE 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.
5	END ROAD WORK G20-2 A 48" X 24"	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.

-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, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.

PLACED 500' IN ADVANCE OF FLAGGER.

PLACED 250' IN ADVANCE OF FLAGGER.

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

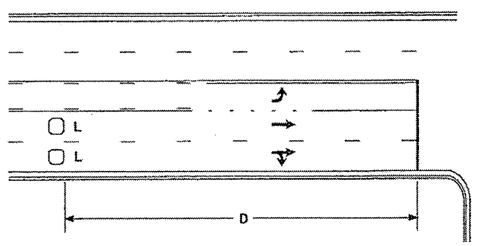
RESURFACING
ADVANCE WARNING SIGNS
FOR
RURAL AND SUBURBAN
2 LANE ROADWAYS

10/4/2013
S:\TMU\WZTC\Resurfacing\2013Resurfacing\2013Documents\New_Procedures_05_09_2013\Resurfacing_Adv_Warn_2Ln.dgn
User:gnoze

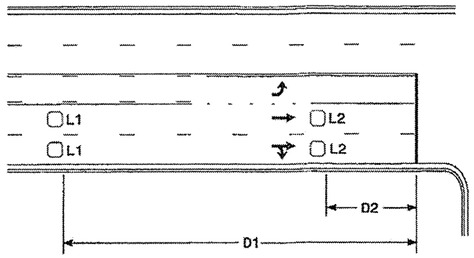
PROJECT REFERENCE NO.	SHEET NO.
	SIG 1

C203452A-RW
C203452B-RW

High Speed Detection
[≥40 mph (64 km/hr)]



OR



Speed Limit mph	(km/hr)	D ft	(m)
40	(64)	250	(75)
45	(72)	300	(90)
50	(80)	355	(110)
55	(88)	420	(130)

L = 6ft X 6ft (1.8m X 1.8m)
Wired in series for TS1 Controllers
Wired separately for TS2, 170, and 2070L Controllers

Volume Density Operation

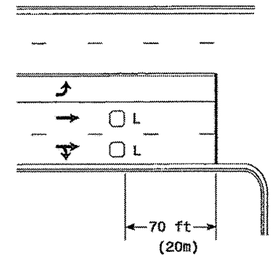
Speed Limit mph	(km/hr)	D1 ft	(m)	D2 ft	(m)
40	(64)	250	(75)	80	(25)
45	(72)	300	(90)	90	(27)
50	(80)	355	(110)	100	(30)
55	(88)	420	(130)	110	(35)

L1 = 6ft X 6ft (1.8m X 1.8m) Wired in series

L2 = 6ft X 6ft (1.8m X 1.8m) Wired in series

"Stretch" Operation

Low Speed Detection
[≤35 mph (56 km/hr)]



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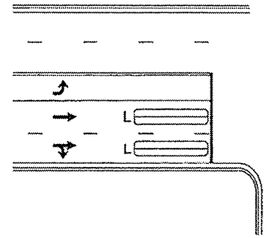
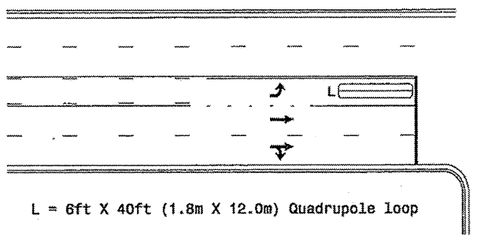


L = 6ft X 6ft (1.8m X 1.8m)
Wired in series

L = 6ft X 40ft (1.8m X 12.0m)
Quadrupole loop, wired separately

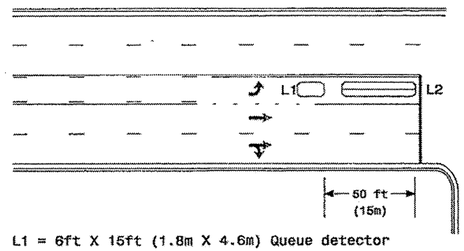
Left Turn Lane Detection



L = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

Presence Loop Detection

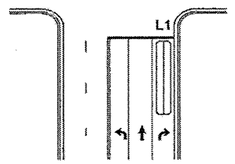
OR



L1 = 6ft X 15ft (1.8m X 4.6m) Queue detector
L2 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

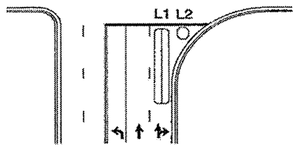
Queue Loop Detection

Right Turn Lane Detection

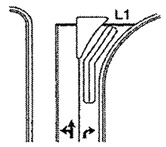


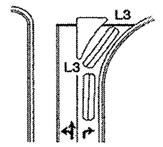
Standard Turn

L1 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop
L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop
Wired separately
L3 = 6ft X 20ft (1.8m X 6.0m) Quadrupole loop
Wired in series



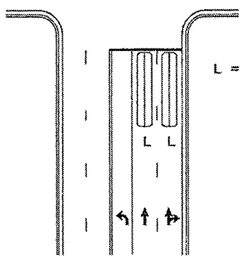
Wide Radius Turn





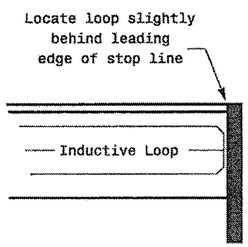
Channelized Turn

Side Street Detection



L = 6ft X 40ft (1.8m X 12.0m)
Quadrupole loop
Wired to separate detectors/channels

Presence Loop Placement at Stop Lines



Note:
Loop may be located in advance of stop line when stop line is greater than 15' (4.5m) from edge of intersecting roadway; or, when loop detects a permissive or protected/permissive left turn.

Recommended Number of Turns

Single 6' X 6' (1.8m X 1.8m) loop (wired separately):

Length of Lead-in ft	(m)	Number of Turns
< 250	(75)	3
250-375	(75-115)	4
375-525	(115-160)	5
> 525	(160)	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' (1.8m X 4.6m) Loops:
Lead-in < 150' (45 m), use 2 turns
Lead-in > 150' (45 m), use 3 turns

Prepared in the Office of:
Traffic Engineering Branch
NCDOT Division of Highways
Traffic Engineering and Safety Systems
1722 N. McDonald St., Raleigh, NC 27603

Typical Loop Locations

PLAN DATE: June 2006 | REVIEWED BY:
PREPARED BY: P L Alexander | REVIEWED BY:

REVISIONS	INIT.	DATE
Revise pavement markings	PLA	12/11/06

SCALE: N/A

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23486 PAMELA L. ALEXANDER
SIGNATURE
6/6/06
DATE
SIG. INVENTORY NO.

19-DEC-2006 14:23
s:\traffic_eng\details turn lanes\sheets\typicalloc2006.dgn
plalexander