

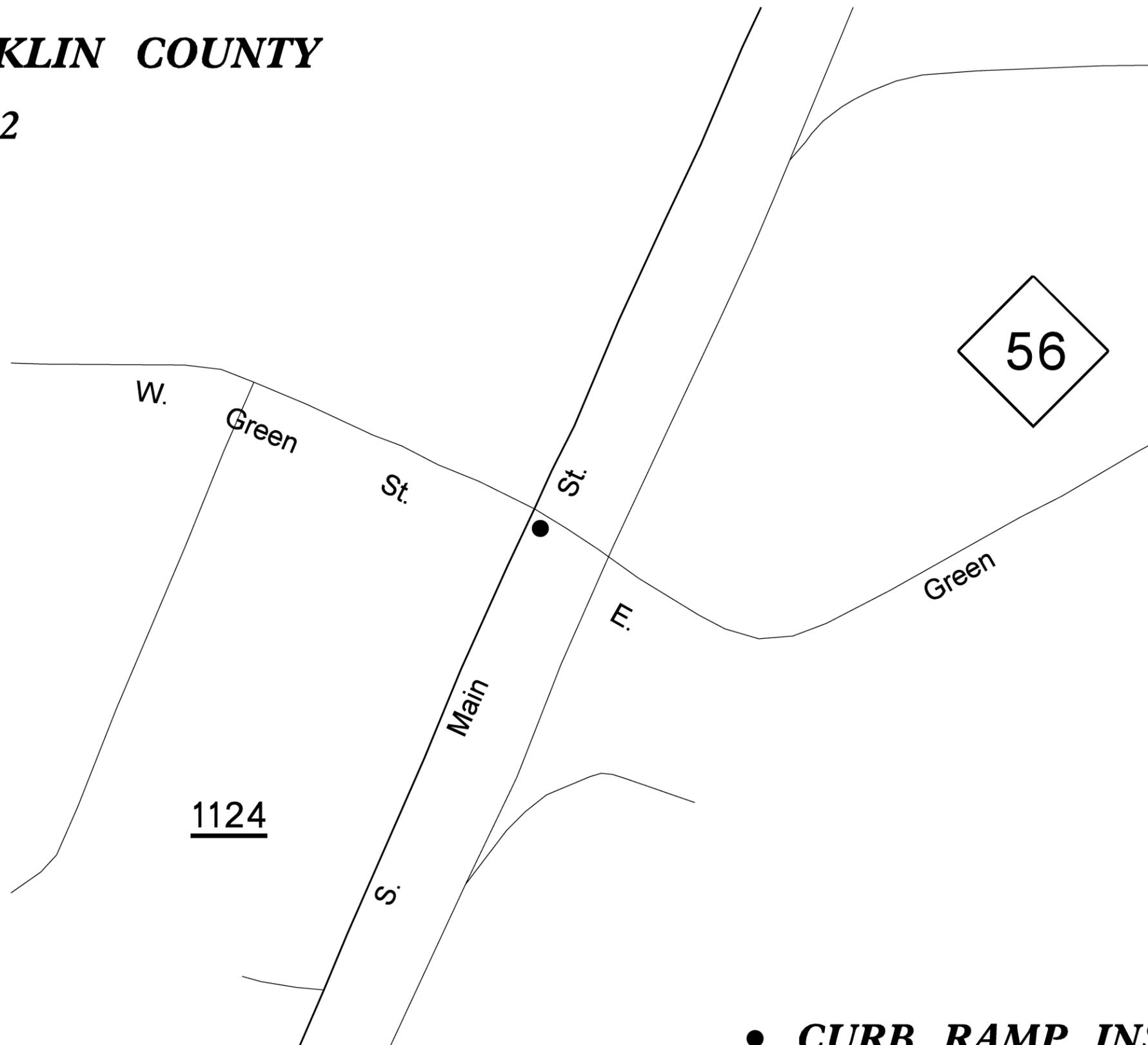
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with their signature on that page.**

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FRANKLIN COUNTY

MAP 2

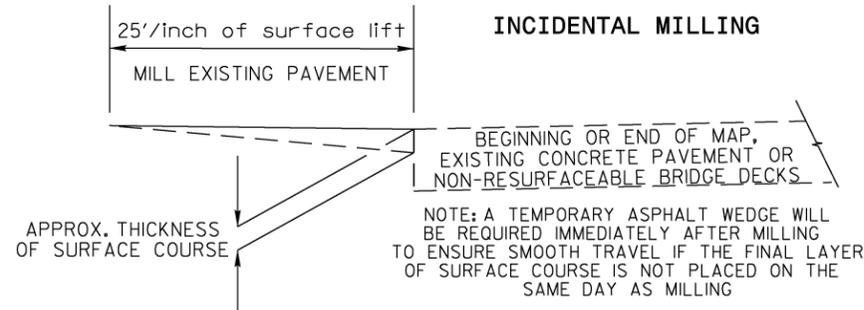


● CURB RAMP INSTALLATION

5/14/99
2: MAR-2016 4:56
I:\Facilities\GIS\Projects\5\Franklin_May_2016\Revised_Files\Franklin_map.dgn

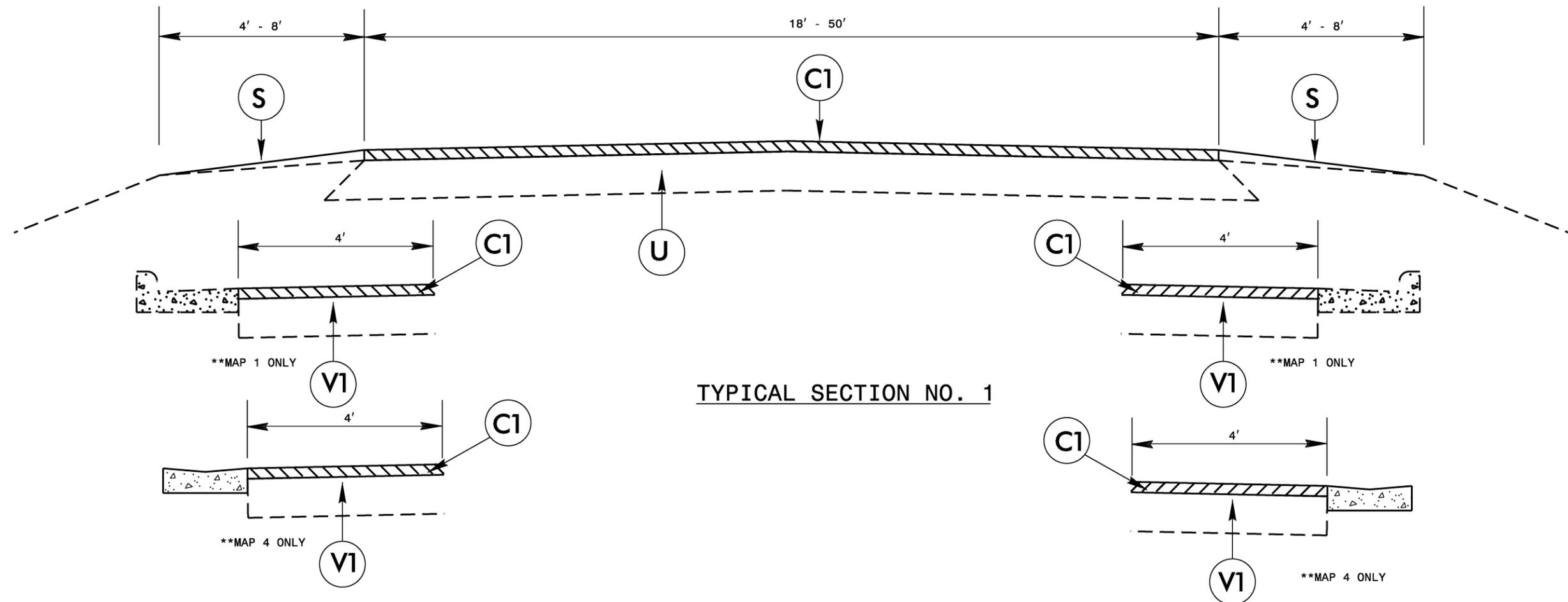
PAVEMENT SCHEDULE

C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
V1	0" - 1½" MILLING
V2	0" - 4" MILLING
S	PROP. SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT



NOTES

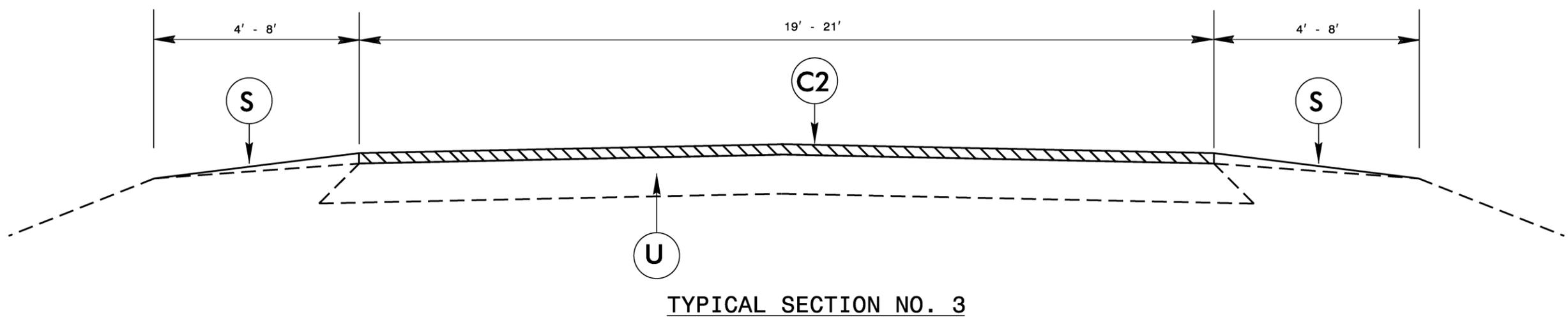
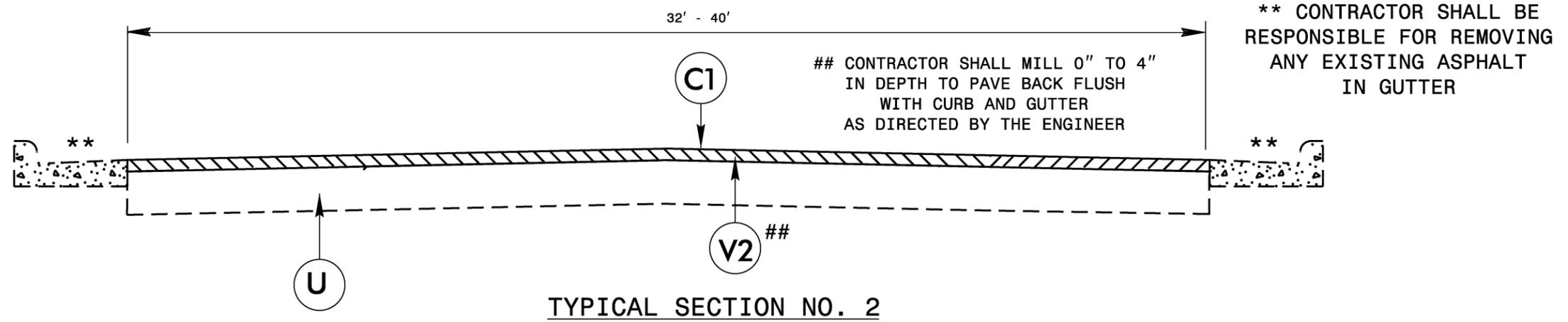
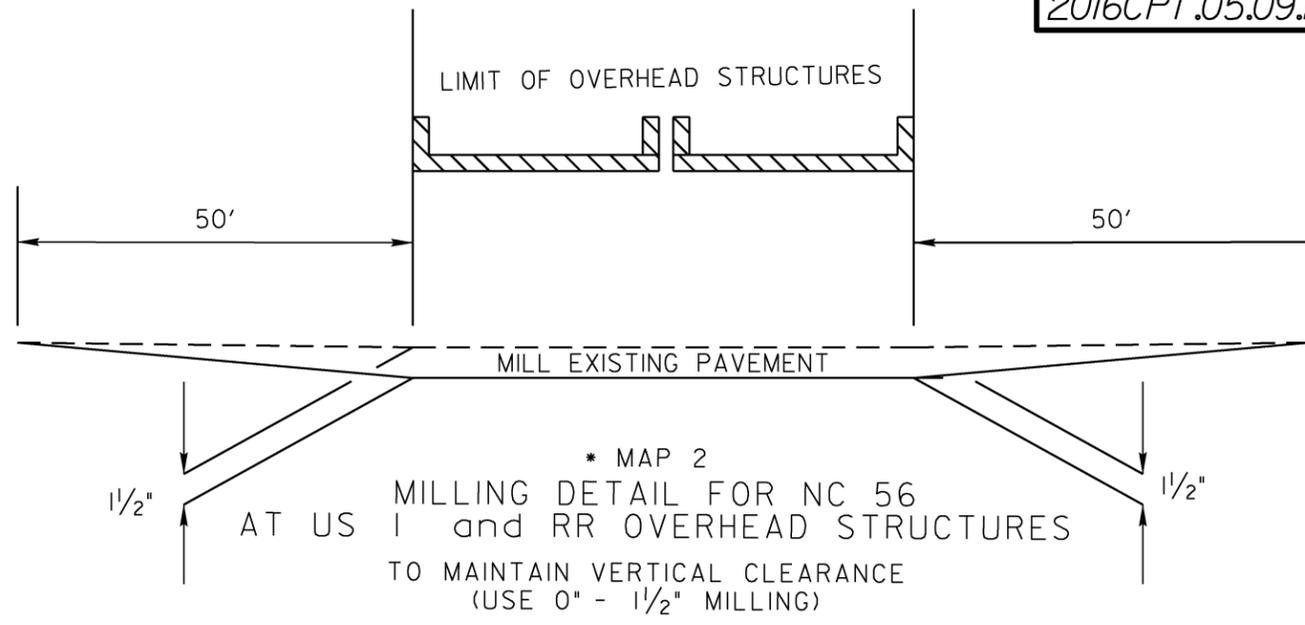
ALL UNPAVED S.R. ROADS TO BE RESURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT
 ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.
 EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.
 BRIDGES TO BE RESURFACED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



TYPICAL SECTION NO. 1

PAVEMENT SCHEDULE

C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
V1	0" - 1½" MILLING
V2	0" - 4" MILLING
S	PROP. SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT

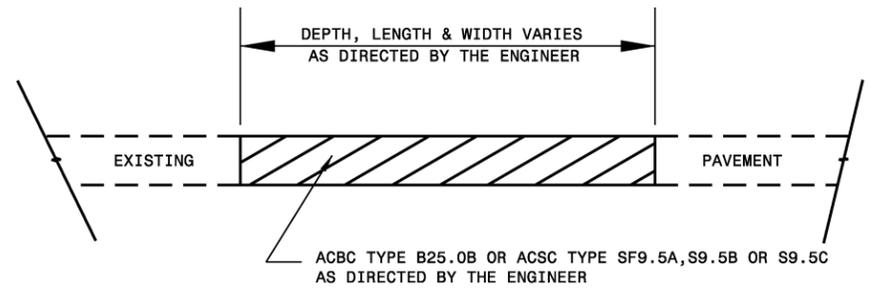


PAVEMENT SCHEDULE

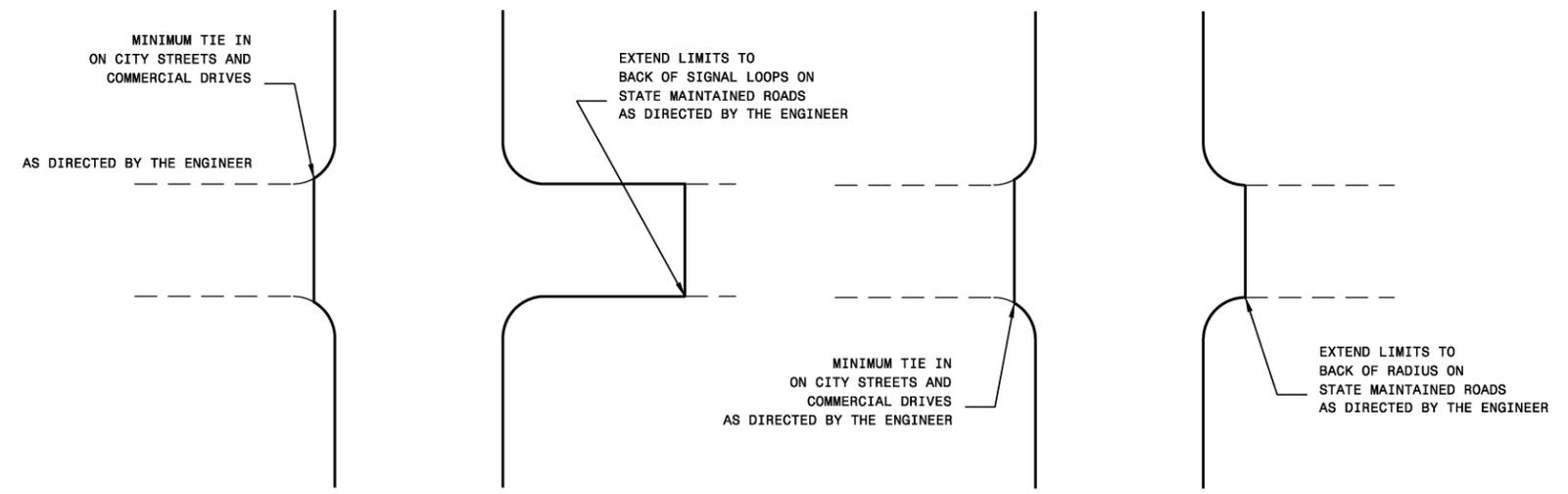
C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
V1	0" - 1½" MILLING
V2	0" - 4" MILLING
S	PROP. SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT

PROJECT REFERENCE NO.
2016CPT.05.09.10351.1, etc.

SHEET NO.
5



PATCHING EXISTING PAVEMENT
PATCHING TO BE PERFORMED PRIOR TO MILL AND FILL OPERATION

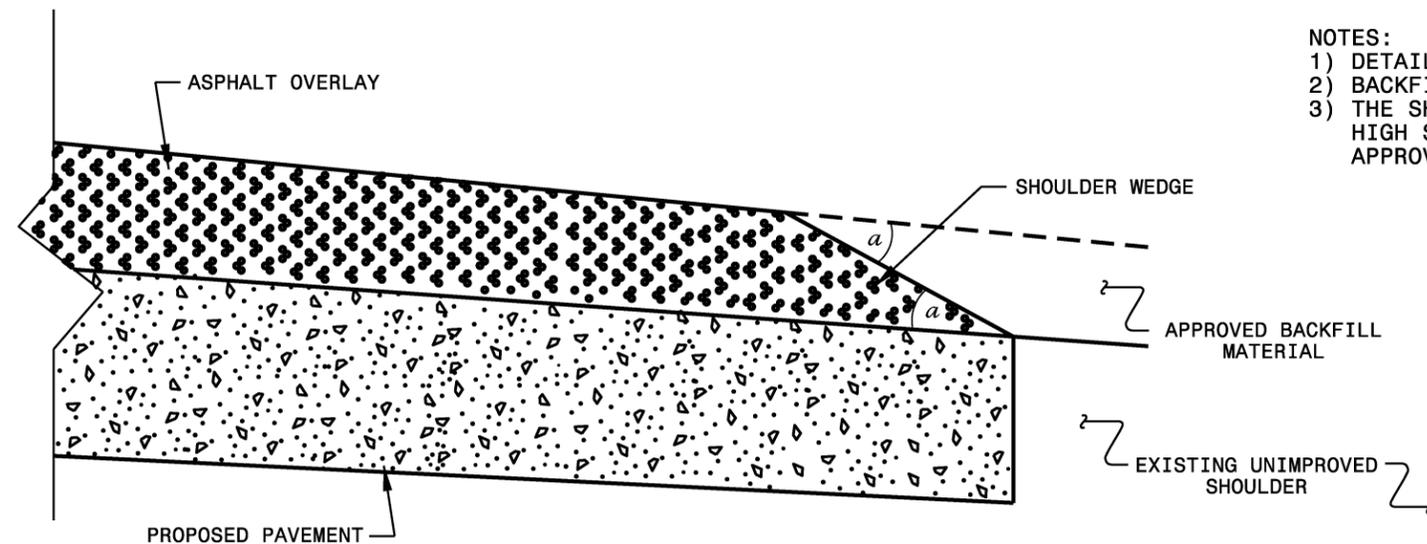


DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES

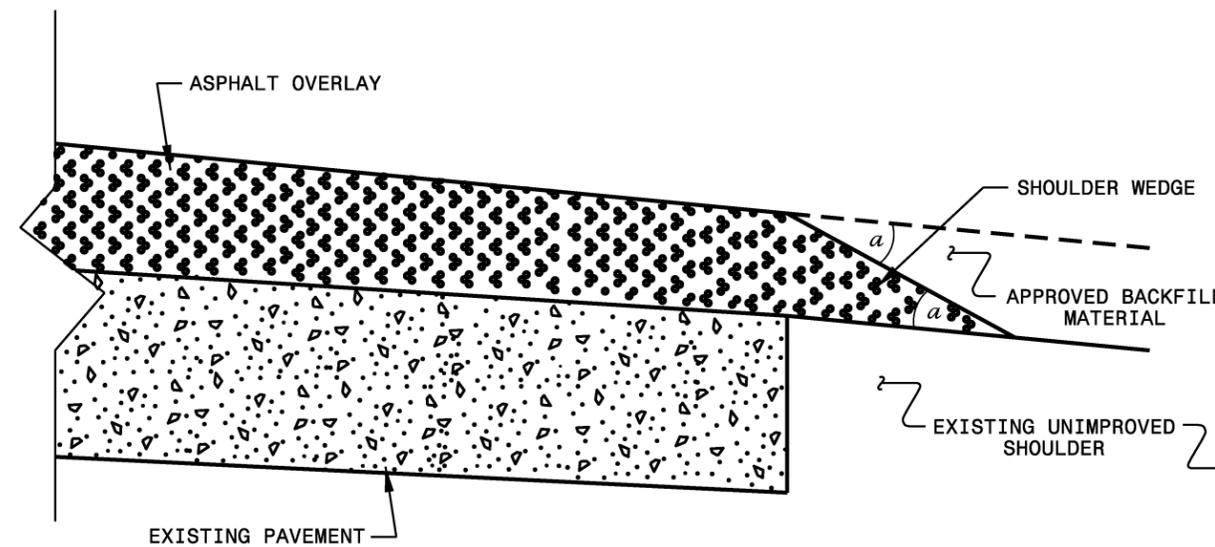
DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

NOTES:

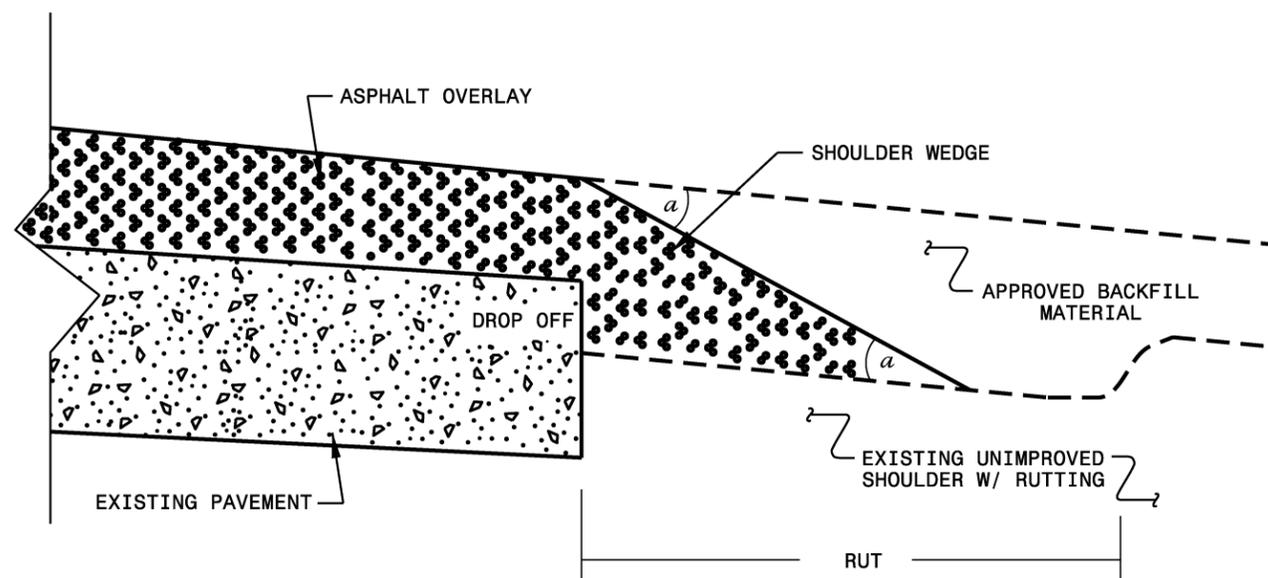
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
- 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
- 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



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: 2/2/16		
CHECKED BY:	DATE:		
FILE SPEC.: s:\usr\details\stand\shoulderwedgedetail.dgn			

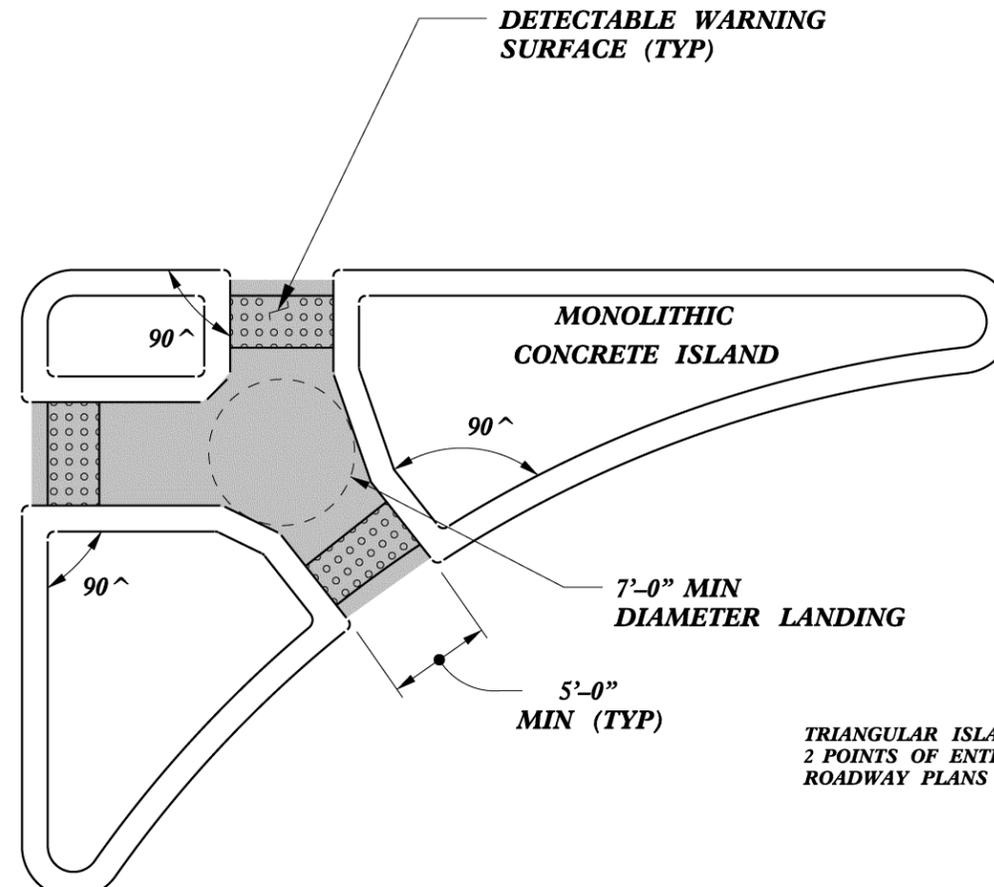
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 S:\Contracts\Resurfacing Projects\Shoulder Wedge Details\Revised Shoulder Wedge Detail.dgn
 *****USER NAME*****

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

SOIL STABILIZATION TIMEFRAMES

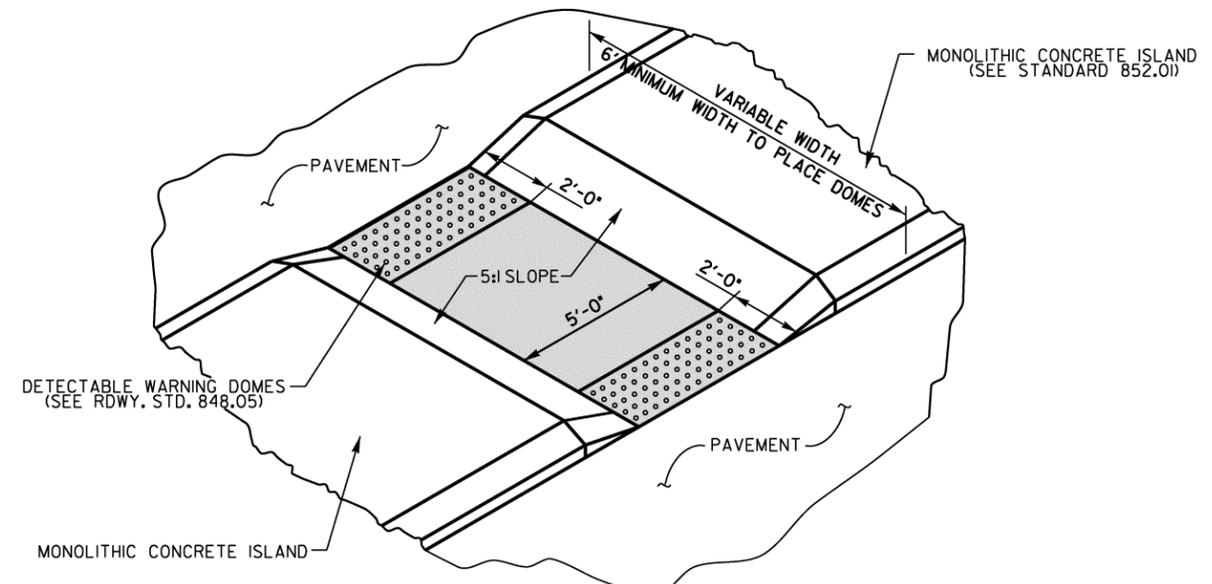
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 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 HOW ZONES.

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

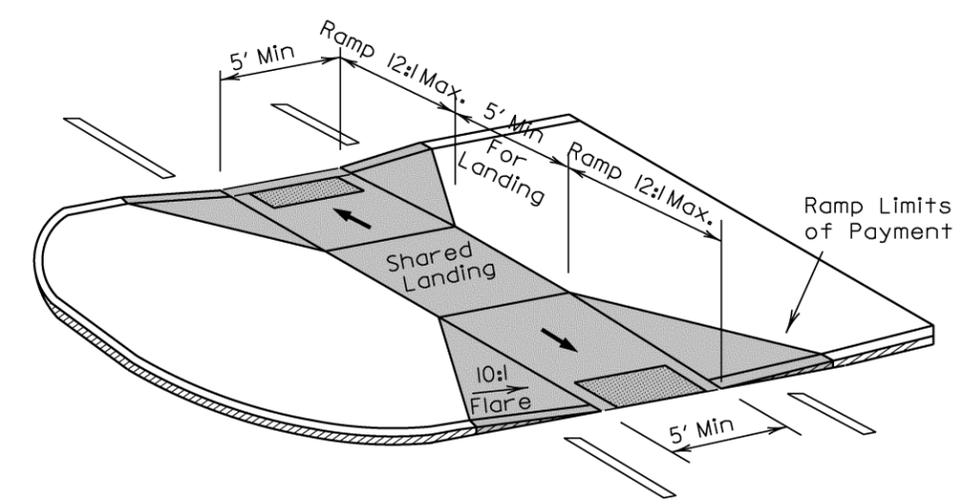


TRIANGULAR ISLAND WITH CUT THROUGH

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.



MEDIAN ISLAND WITH CUT THROUGH



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



Documented by:
 Joel S. Howerton

11/18/2015

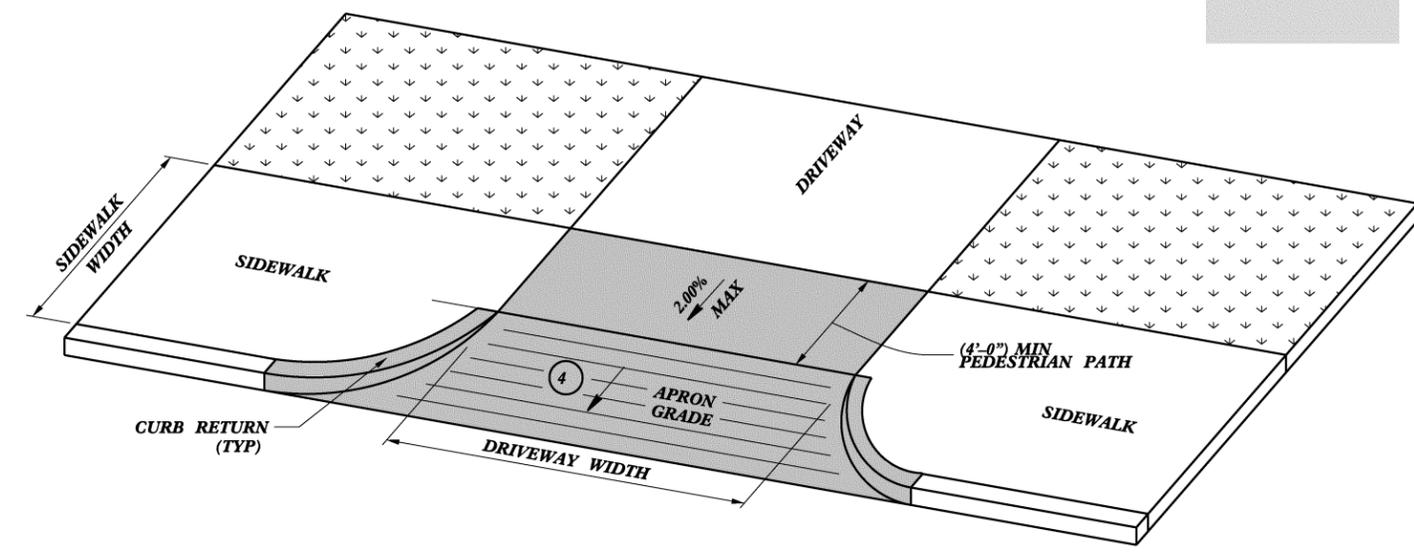
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ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
 MODIFIED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dwg

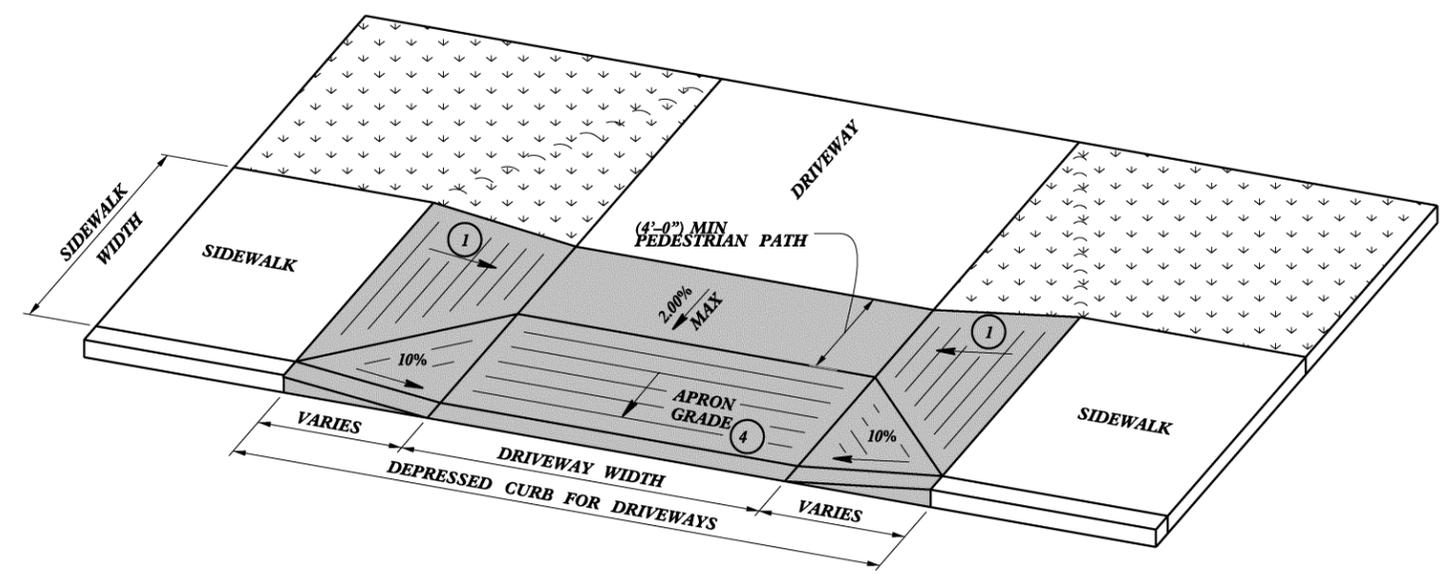
5/14/99
 SYSTEMS ENGINEERING
 USER NAME

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 4 8.00% MAX CHANGE IN GRADE BETWEEN ROAD SURFACE AND DRIVEWAY

 PAY LIMITS FOR 1 CURB RAMP



**DRIVEWAY APRON
OPTION 1**



**DRIVEWAY APRON
OPTION 2**

-SEE ROADWAY DETAIL DRAWING 848.05 FOR DETECTABLE WARNING SURFACE AND FOR RAMP NOTES.
-SEE ROADWAY STANDARD DRAWING 848.02 FOR CONCRETE DRIVEWAYS.

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
@ DRIVEWAY OPENINGS	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetail.dwg	

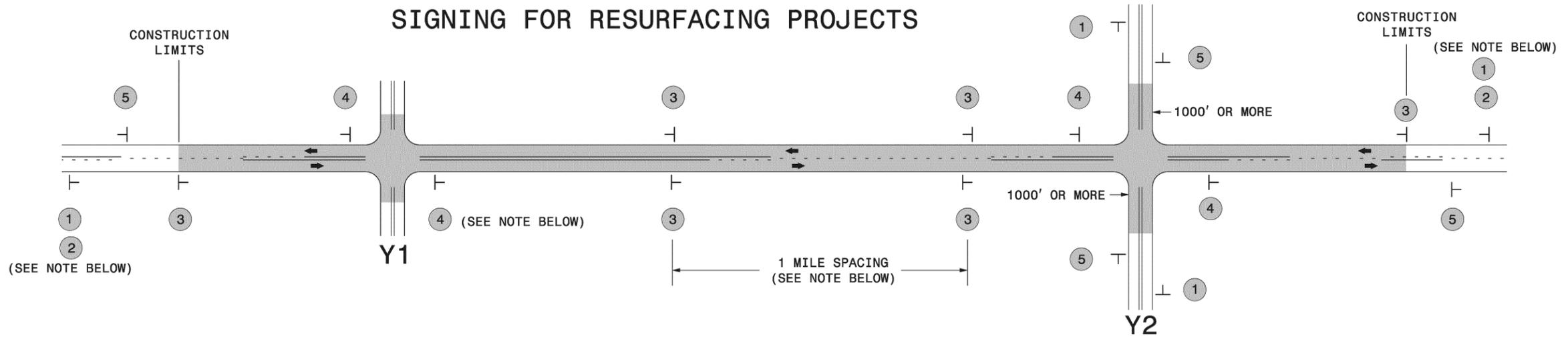
5/14/99
DATE PLOTTED: 11/14/11 10:58:58 AM
PLOTTER: HP DesignJet 2450
SCALE: 1/8"=1'-0"
SHEET: 12 OF 12
DRAWING: 2012CurbRamp/CurbRampDetail.dwg

PROJECT NO.	SHEET NO.	TOTAL NO.
2016CPT.05.09.10351.1, 2016CPT.05.09.20351.1	13	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	BORROW CY	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	1 1/2" MILLING SY	0" TO 1.5" MILLING SY	0" TO 4" MILLING SY	INCIDENTAL MILLING SY	SURFACE COURSE, S9.5B TONS	ASPHALT BINDER FOR PLANT MIX TON	PATCHING EXISTING PAVEMENT TONS	CONCRETE CURB RAMP (Std. 848.05) EA	ADJUST DROP INLET EA	ADJUST MANHOLES EA	ADJUST METER OR VALVE BOX EA	TEMPORARY SILT FENCE LF	WATTLE LF	SEED & MULCHING AC	INDUCTIVE LOOP LF		
2016CPT.05.09.10351.1	Franklin	1	NC 39	JT WEST OF SR 1731 - CHEVES RD TO US 401	1	2	NO	YES	10.22	25-44	1,989	497	19.89		2,262		1,160	14,212	853	250		1	12	7	1,447	3,620	14.47			
TOTAL FOR MAP NO. 1									10.22		1,989	497	19.89		2,262		1,160	14,212	853	250		1	12	7	1,447	3,620	14.47			
2016CPT.05.09.10351.1	Franklin	2	NC 56	JT WEST OF US 1 TO SR 1222 - WILL MITCHINER RD	1,2	2	NO	YES	4.46	26-50	741	185	7.41		1,800	16,413	3,195	7,072	424	20	1		10	18	539	1,350	5.39	1,850		
TOTAL FOR MAP NO. 2									4.46		741	185	7.41		1,800	16,413	3,195	7,072	424	20	1		10	18	539	1,350	5.39	1,850		
TOTAL FOR PROJ NO. 2016CPT.05.09.10351.1									14.68		2,730	682	27.30		4,062	16,413	4,355	21,284	1,277	270	1	1	22	25	1,986	4,970	19.86	1,850		
2016CPT.05.09.20351.1	Franklin	3	SR 1002 - SEVEN PATHS RD	NC 581 TO NASH CO	1	2	NO	NO	7.765	19-20	1,553	388	15.53	640			420	7,589	455	300					1,126	2,820	11.26			
TOTAL FOR MAP NO. 3									7.765		1,553	388	15.53	640			420	7,589	455	300						1,126	2,820	11.26		
2016CPT.05.09.20351.1	Franklin	4	SR 1127 - POCOMOKE RD	NC 56 TO SR 1141 - GORDON MOORE RD	1	2	NO	YES	4.88	20-21	972	244	9.72		90		566	5,206	312			2			707	1,770	7.07	220		
TOTAL FOR MAP NO. 4									4.88		972	244	9.72		90		566	5,206	312			2				707	1,770	7.07	220	
2016CPT.05.09.20351.1	Franklin	5	SR 1141 - POCOMOKE RD	SR 1127 - POCOMOKE RD TO GRANVILLE CO	1	2	NO	YES	0.531	20-21	106	27	1.06				325	577	35	10					77	200	0.77			
TOTAL FOR MAP NO. 5									0.531		106	27	1.06				325	577	35	10					77	200	0.77			
2016CPT.05.09.20351.1	Franklin	6	SR 1235 - DYKING RD	SR 1003 - SIMS BRIDGE RD TO NC 39	1	2	NO	NO	5.326	20-32	1,080	266	10.65	2,500			746	5,929	356	300					783	1,960	7.72			
TOTAL FOR MAP NO. 6									5.326		1,080	266	10.65	2,500			746	5,929	356	300							783	1,960	7.72	
2016CPT.05.09.20351.1	Franklin	7	SR 1418 - T K ALLEN RD	SR 1002 - DUKE VALENTINE WYNNE RD TO NC 561	1	2	NO	NO	3	19	600	150	6.00				156	2,969	178	5					435	1,090	4.35			
TOTAL FOR MAP NO. 7									3		600	150	6.00				156	2,969	178	5						435	1,090	4.35		
2016CPT.05.09.20351.1	Franklin	8	SR 1436 - LAUREL MILL CENTERVILLE RD	NC 561 TO NC 561	1	2	NO	NO	7.42	19-20	1,484	371	14.84				330	7,533	452	10					1,076	2,690	10.76			
TOTAL FOR MAP NO. 8									7.42		1,484	371	14.84				330	7,533	452	10						1,076	2,690	10.76		
2016CPT.05.09.20351.1	Franklin	9	SR 1438 - RAYMOND THARRINGTON RD	SR 1436 - LAUREL MILL RD TO NC 561	1	2	NO	NO	2.1	19	420	105	4.20				156	2,078	125	350					304	760	3.05			
TOTAL FOR MAP NO. 9									2.1		420	105	4.20				156	2,078	125	350						304	760	3.05		
2016CPT.05.09.20351.1	Franklin	10	SR 1457 - DOUGLAS WILLIAMS RD	SR 1456 - BALDY MURPHY RD TO SR 1451 - LEONARD RD	3	2	NO	NO	1.948	20-21	488	97	3.90				913	2,912	175						195	490	2.82			
TOTAL FOR MAP NO. 10									1.948		488	97	3.90				913	2,912	175								195	490	2.82	
2016CPT.05.09.20351.1	Franklin	11	SR 1602 - LEONARD FARM RD	SR 1601 - GEORGE LEONARD RD TO NC 56	1	2	NO	NO	1.43	18	286	72	2.86				164	1,341	80	400					207	520	2.07			
TOTAL FOR MAP NO. 11									1.43		286	72	2.86				164	1,341	80	400						207	520	2.07		
2016CPT.05.09.20351.1	Franklin	12	SR 1611 - SLEDGE RD	SR 1609 - BAPTIST CHURCH RD TO SR 1636 - SYKES RD	1	2	NO	NO	2.33	19-20	466	117	4.66				183	2,365	142	300					338	850	3.38			
TOTAL FOR MAP NO. 12									2.33		466	117	4.66				183	2,365	142	300						338	850	3.38		
2016CPT.05.09.20351.1	Franklin	13	SR 1203 - GREEN HILL RD	VANCE COUNTY TO NC 56	3	2	NO	NO	5.025	19-20	1,257	503	10.05				867	6,697	402	100					729	1,830	7.29			
TOTAL FOR MAP NO. 13									5.025		1,257	503	10.05				867	6,697	402	100						729	1,830	7.29		
TOTAL FOR PROJ NO. 2016CPT.05.09.20351.1									41.755		8,712	2,340	83.47	3,140	90		4,826	45,196	2,712	1,775		2					5,977	14,980	60.54	220
GRAND TOTAL											56,435	11,442	3,022	110.77	3,140	4,152	16,413	9,181	66,480	3,989	2,045	1	3	22	25	7,963	19,950	80.40	2,070	

SIGNING FOR RESURFACING PROJECTS



LEGEND

┆ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 <small>W20-1 48" X 48"</small>	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.		
	2	 <small>W7-3aP 24" X 18"</small>	#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	 <small>SP 13107 48" X 48"</small>	PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET 1/2 MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.		
	4	 <small>SP 13106 48" X 48"</small>	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	 <small>G20-2 A 48" X 24"</small>	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.		

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.

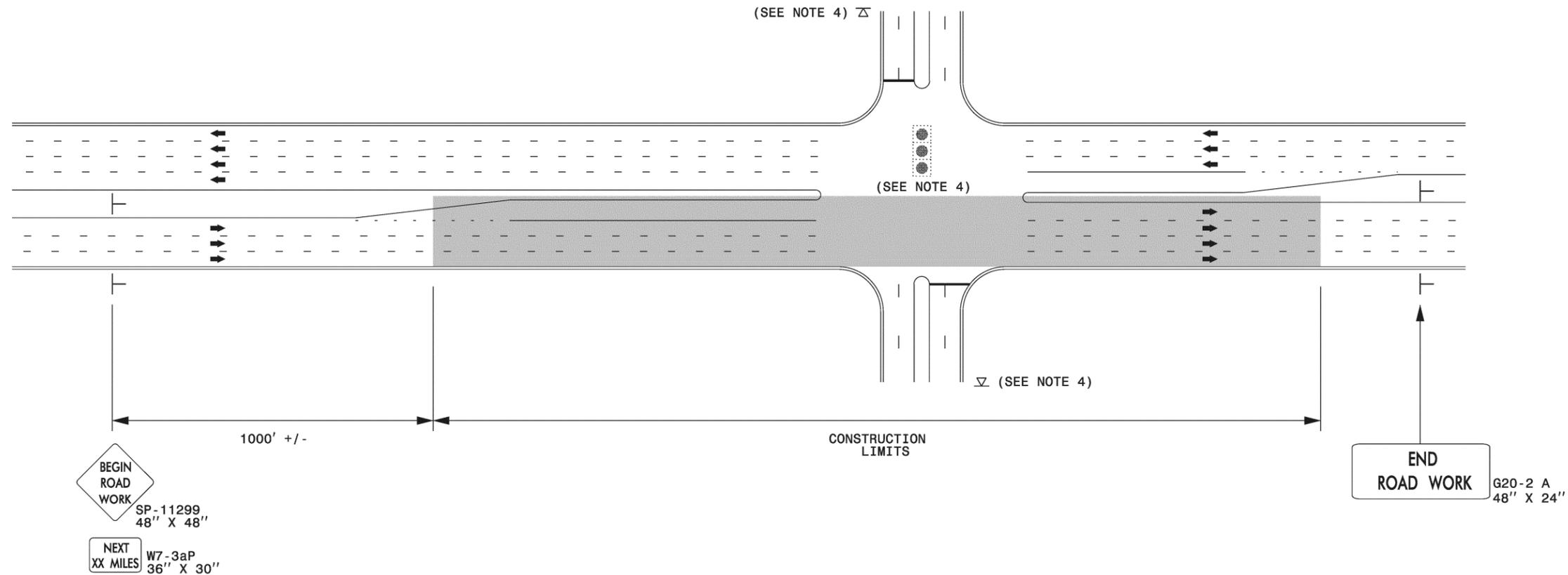


PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.

3/19/2015 C:\Users\rmgarrrett\Downloads\Resurfacing_AdvWarn_2Ln (2).dgn User:rmgarrrett

**RESURFACING
ADVANCE WARNING SIGNS
FOR
RURAL AND SUBURBAN
2 LANE ROADWAYS**

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

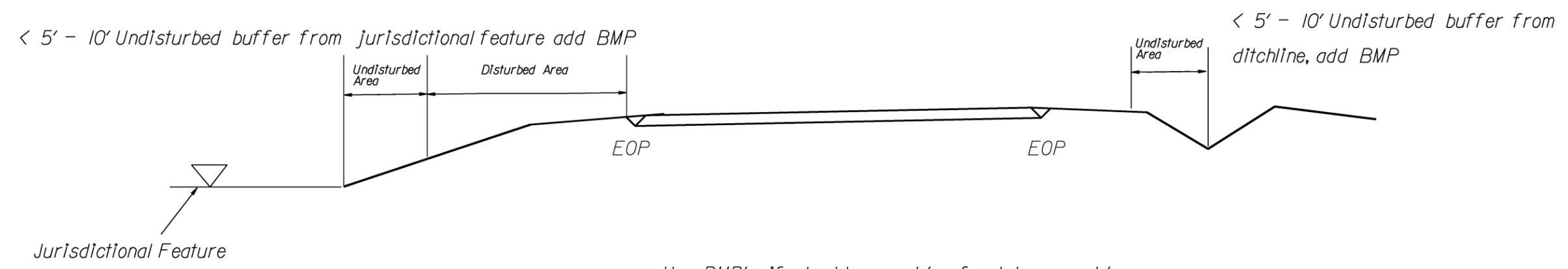
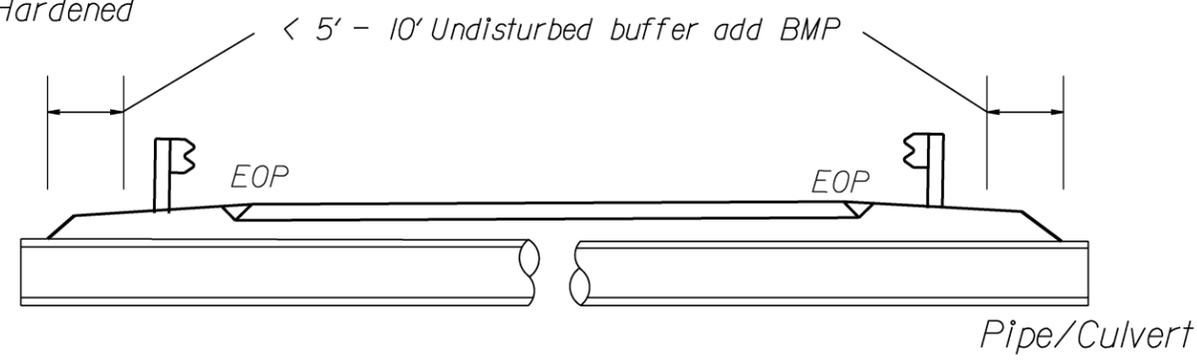


**RESURFACING ADVANCE
WARNING SIGNS FOR
URBAN / SUBURBAN
FACILITIES**

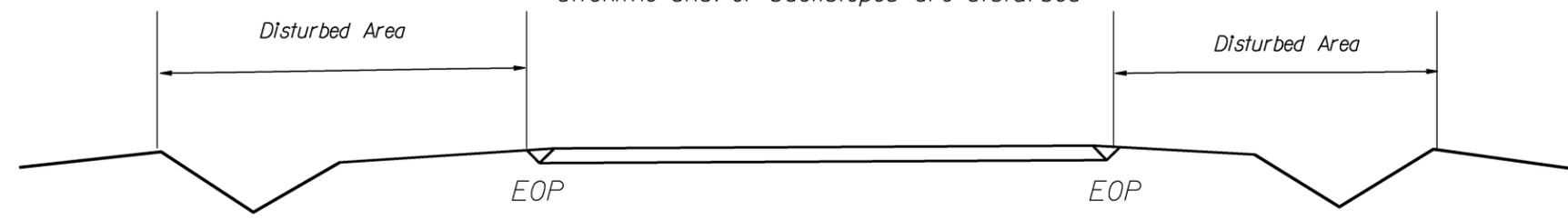
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

EROSION CONTROL DETAIL

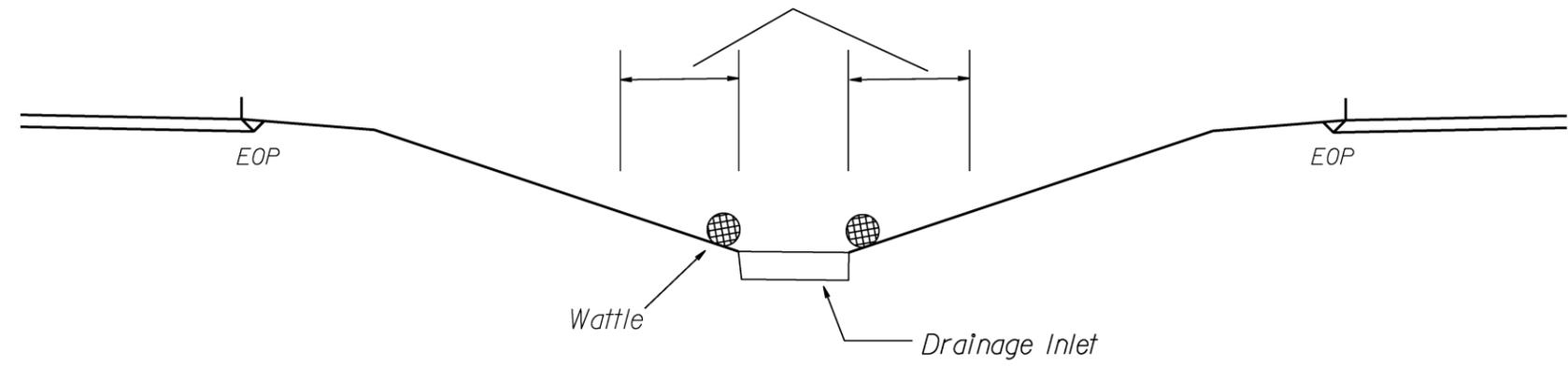
BMP Options: Wattle, Silt Fence or Hardened Aggregate.



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

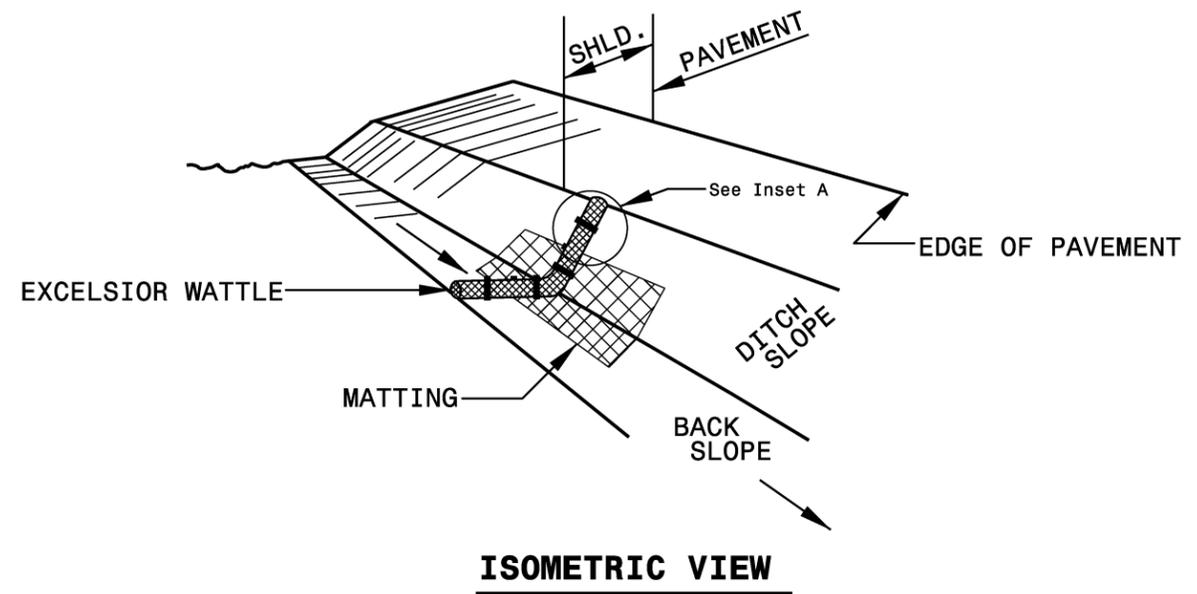


< 5' - 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE

WATTLE DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

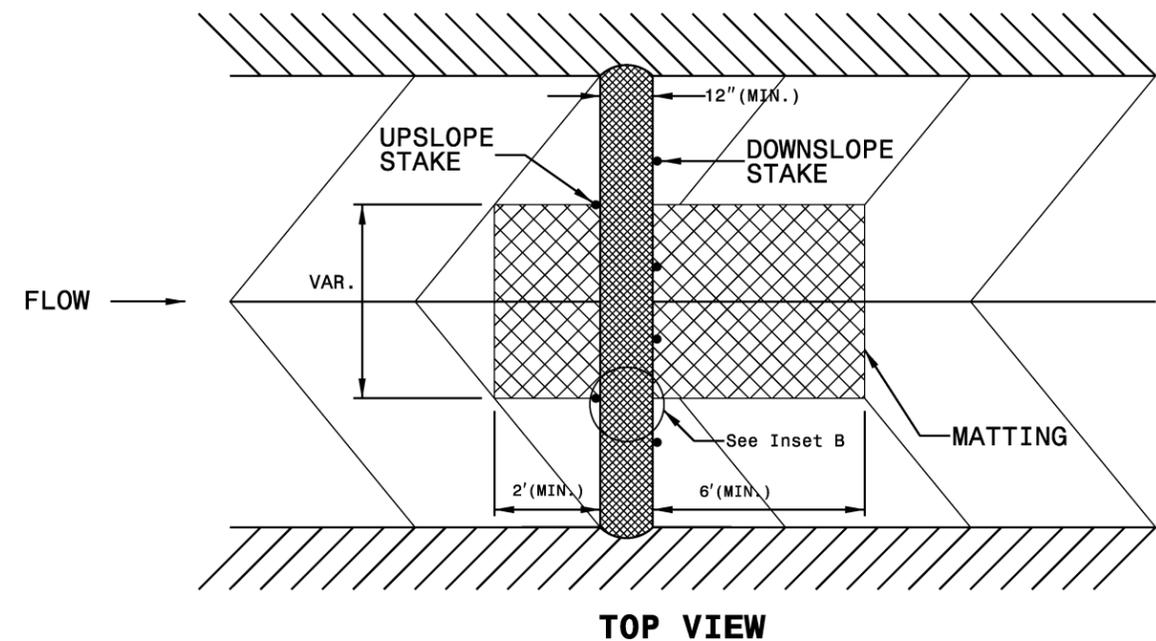
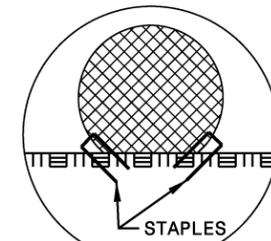
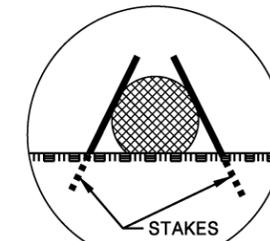
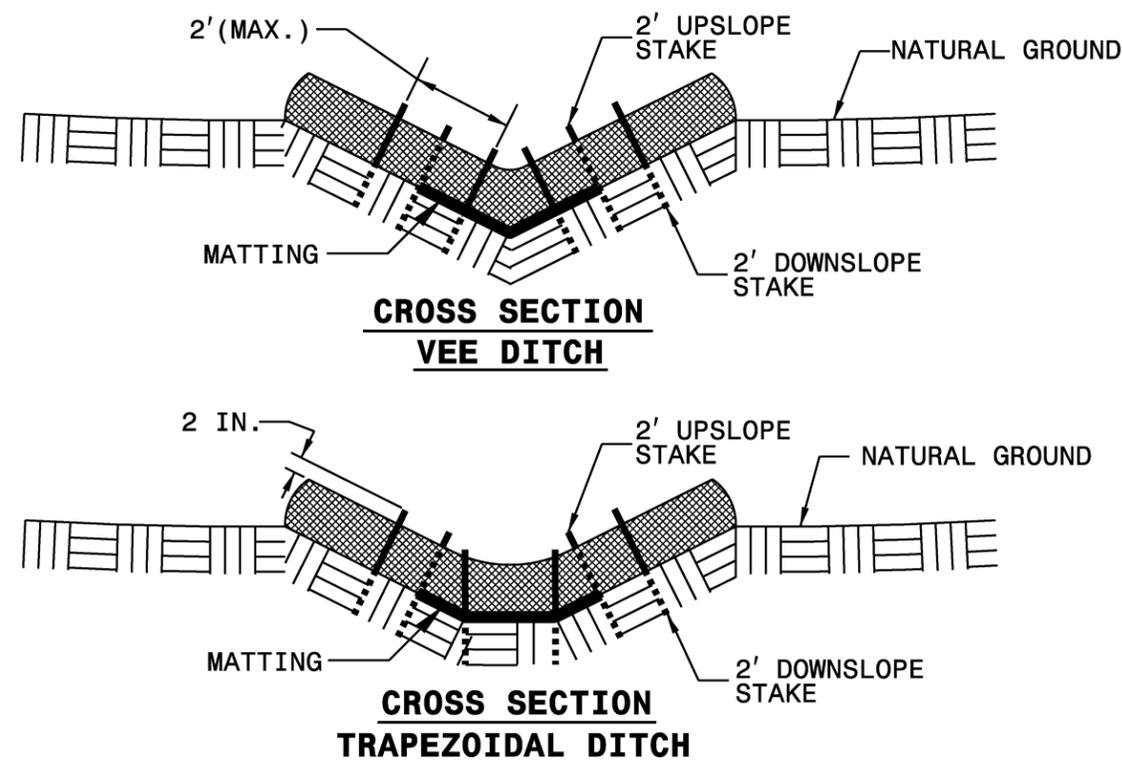
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

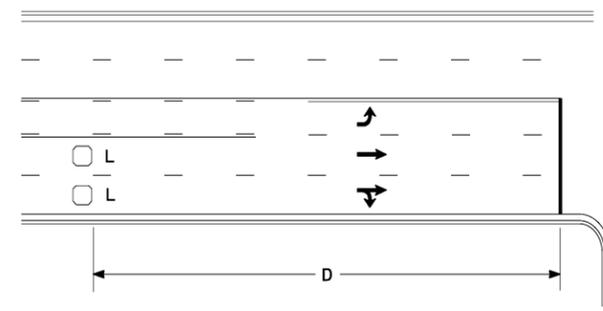
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



High Speed Detection (≥40 mph)

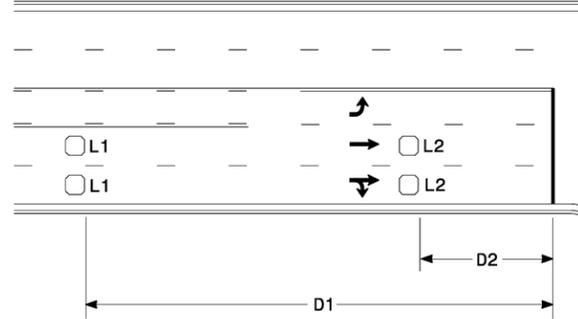


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

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

Volume Density Operation

OR

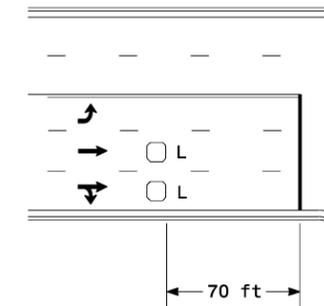


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series
L2 = 6ft X 6ft
Wired in series

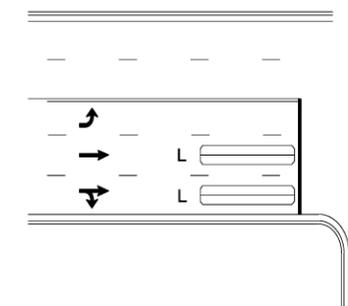
"Stretch" Operation

Low Speed Detection (≤35 mph)



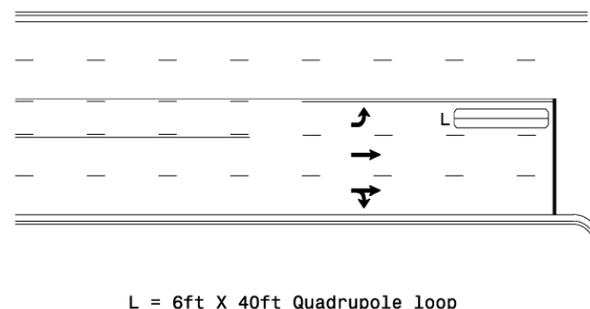
L = 6ft X 6ft
Wired in series

OR



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

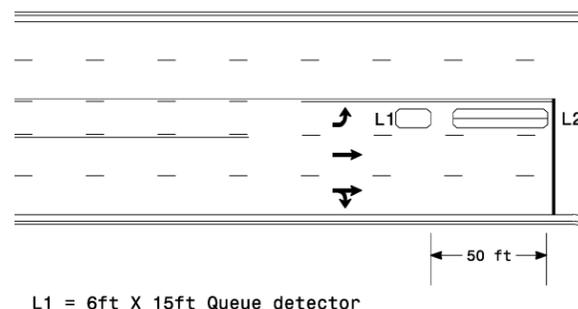
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

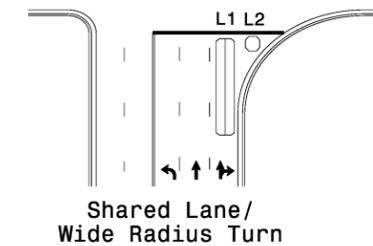
OR



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

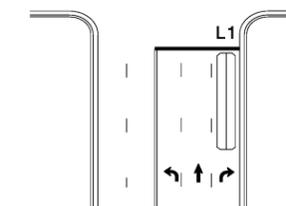
Queue Loop Detection

Right Turn Lane Detection

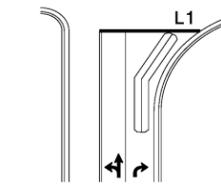


Shared Lane/
Wide Radius Turn

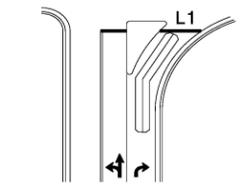
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

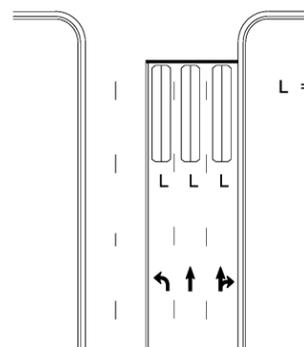


Wide Radius Turn



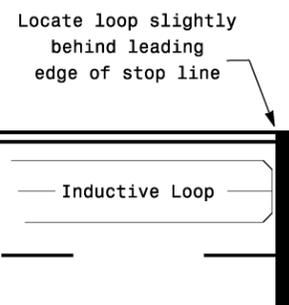
Channelized Turn

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

Inductive Loop

- 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



Typical Signal Loop Locations

PLAN DATE: January 2015
REVIEWED BY: JPG

PREPARED BY: PLA
REVIEWED BY:

SCALE
N/A

REVISIONS
INIT. DATE

