

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.			
WBS NO.	2025CPT.10.07.10601 2025CPT.10.07.20601		

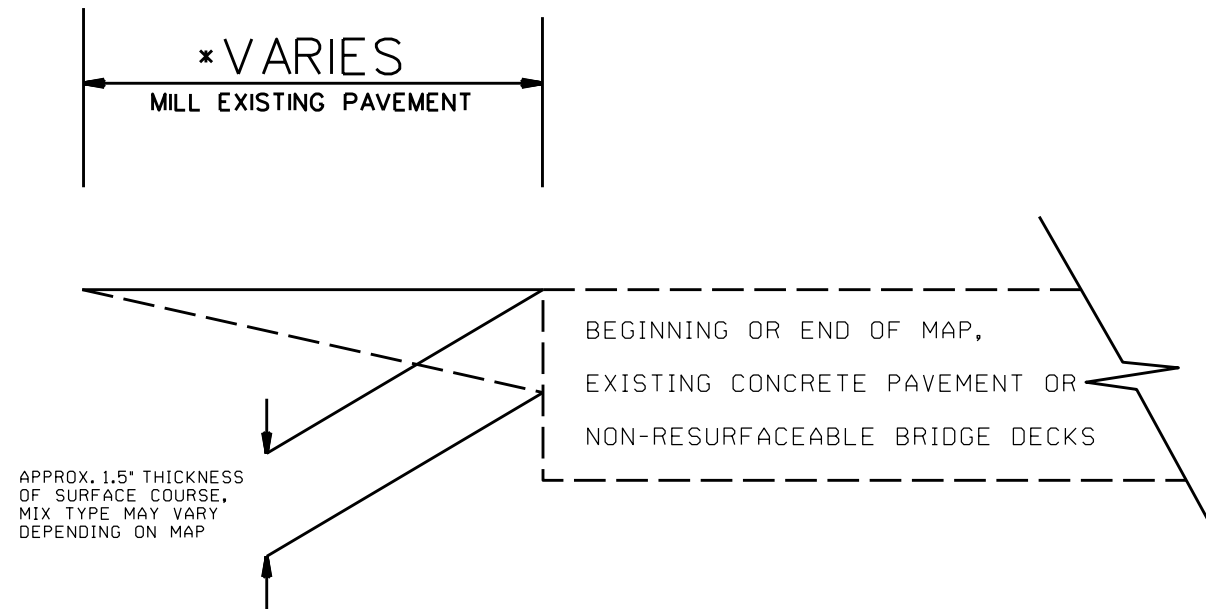
INCIDENTAL MILLING

NOTES:

FOR SURFACE MIXES OVER 1" IN THICKNESS, MILL THE EXISTING PAVEMENT IN ACCORDANCE WITH THE FOLLOWING SKETCH AS DIRECTED BY THE ENGINEER.

LOCATIONS SHALL INCLUDE TIES INTO EXISTING CONCRETE PAVEMENT AT BRIDGE APPROACHES WHERE THE BRIDGE WILL NOT BE RESURFACED, AND AT THE BEGINNING AND ENDING POINT OF EACH RESURFACING MAP.

PERFORM THE WORK IN ACCORDANCE WITH SECTION 607 OF THE JANUARY 2018 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. RESURFACING WILL BE ACCOMPLISHED AT THE SAME TIME AS THE MILLING OPERATION.

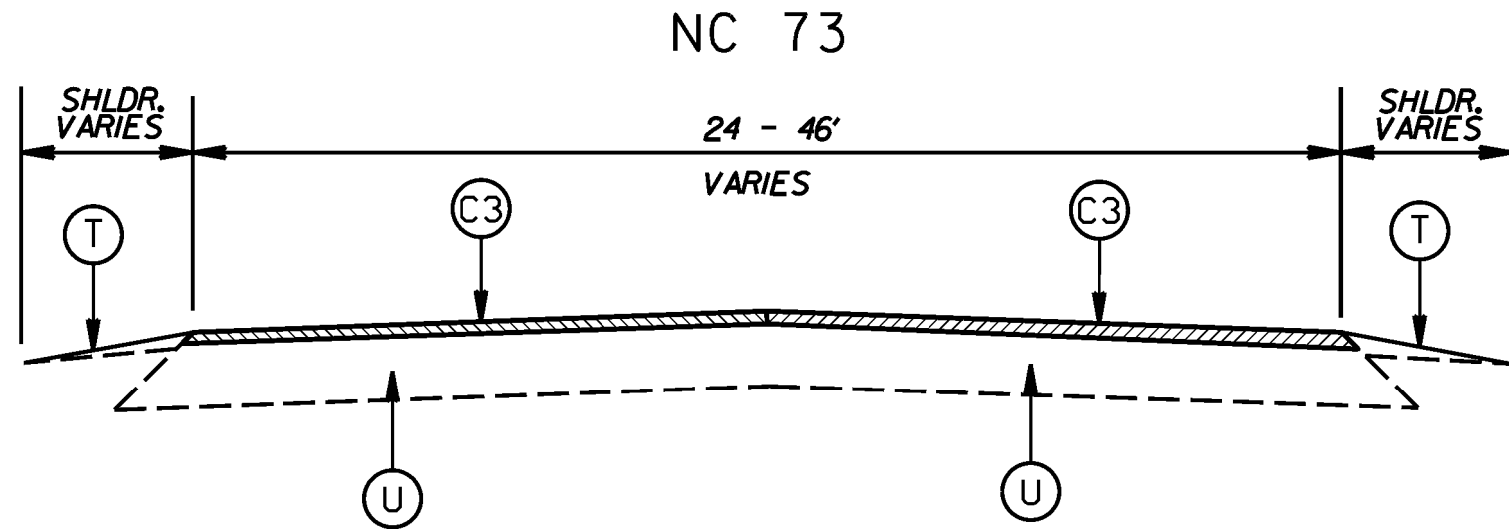


2025 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

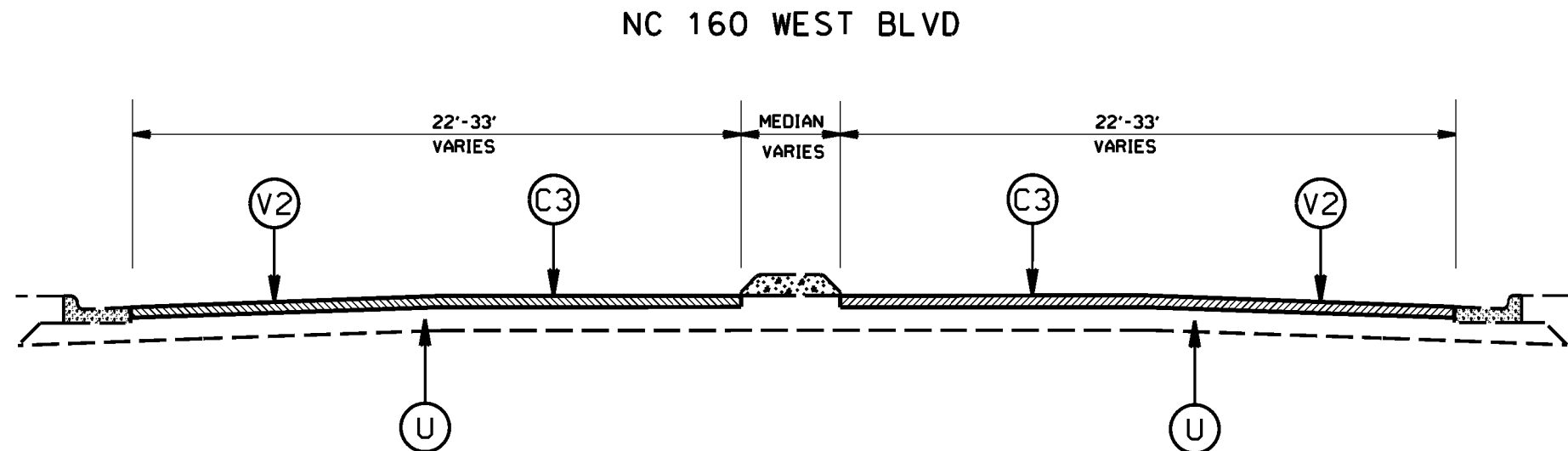
SCALE		REVISIONS
DATE		
DWG. BY JHE		
DESIGN BY		
APPROVED		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.			
WBS NO.	2025CPT.J0.07.0601 2025CPT.J0.07.20601		

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH

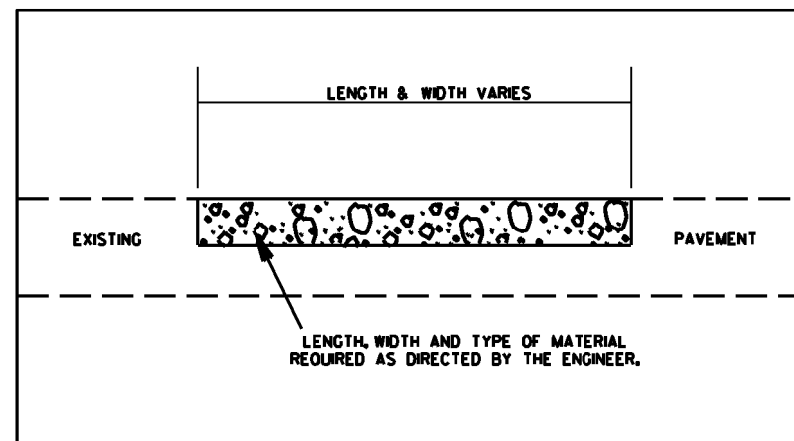


TYPICAL SECTION NO. 1



TYPICAL SECTION NO. 2

PATCHING DETAIL



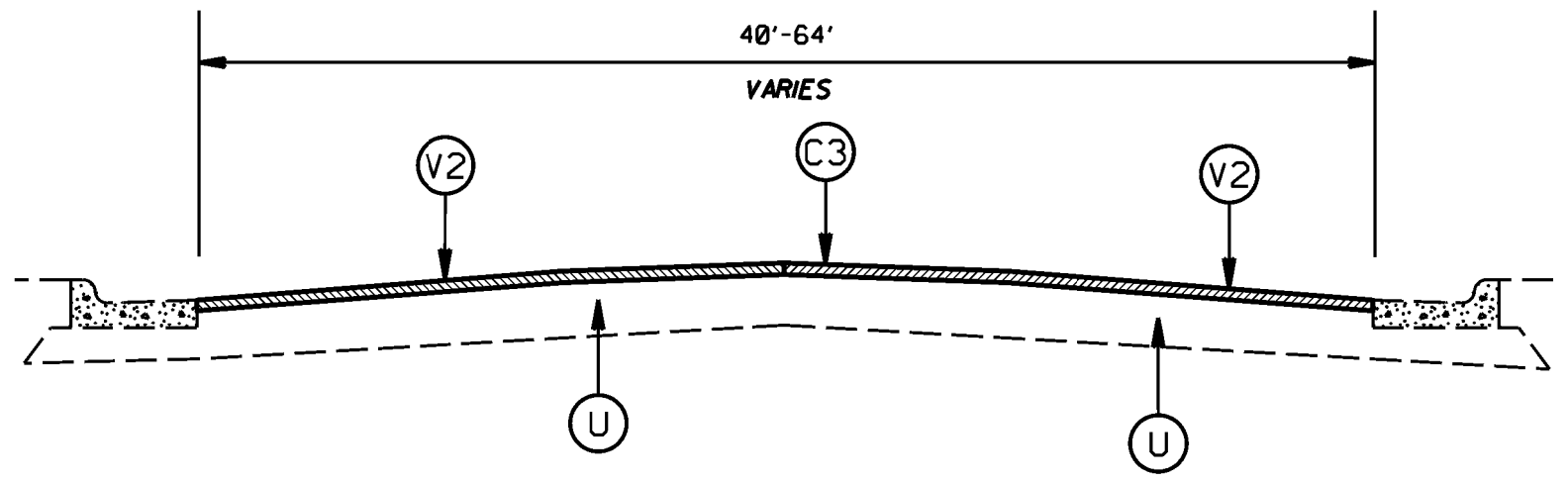
2025 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

SCALE	-NA-		REVISIONS
DATE			
DWG. BY	JME		
DESIGN BY			
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
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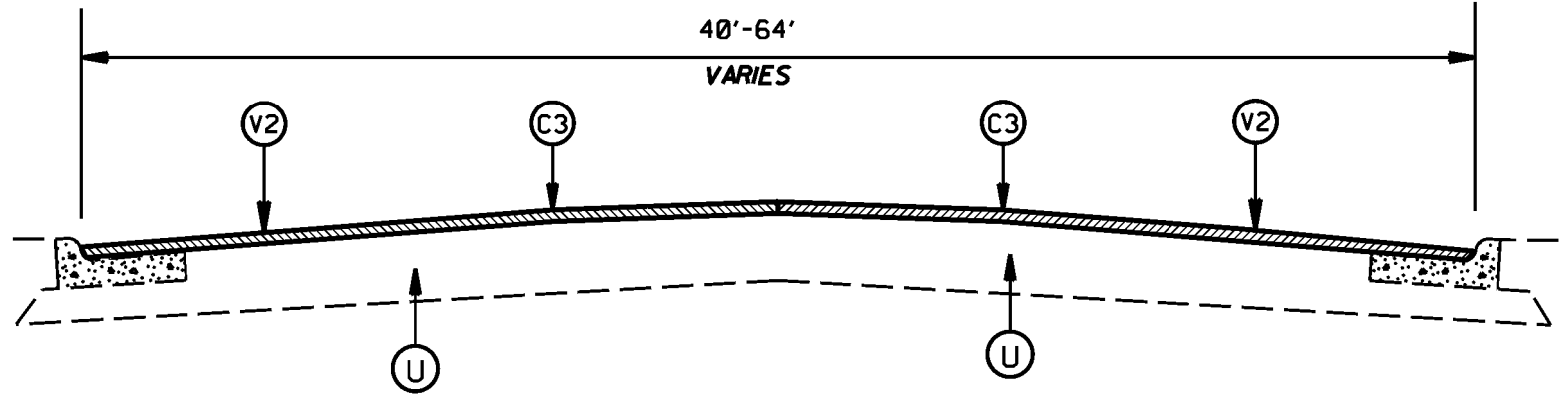
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T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH

NC 160 WEST BLVD



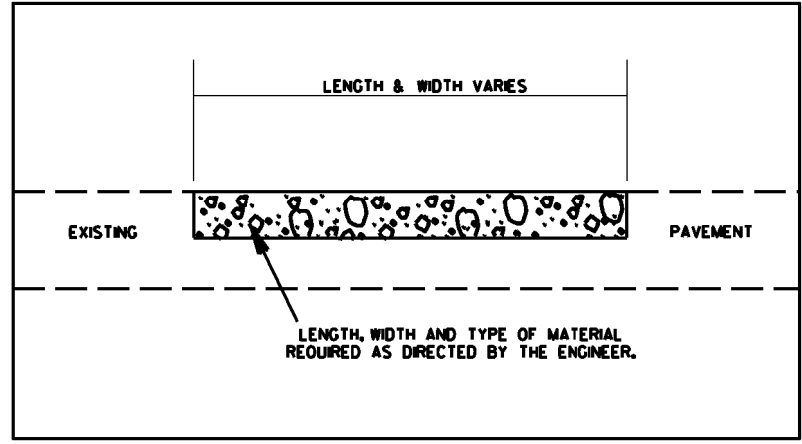
TYPICAL SECTION NO. 3

NC 160 WEST BLVD



TYPICAL SECTION NO. 4

PATCHING DETAIL



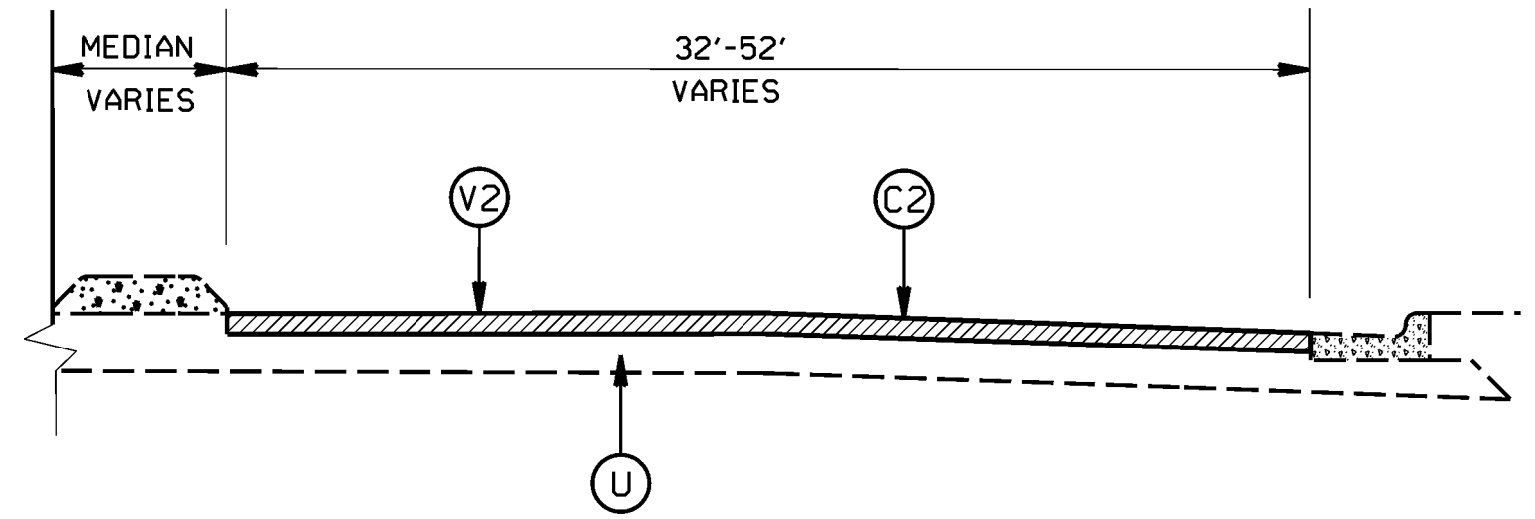
2025 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

SCALE	-NA-		REVISIONS
DATE			
DWG. BY	JHE		
DESIGN BY			
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
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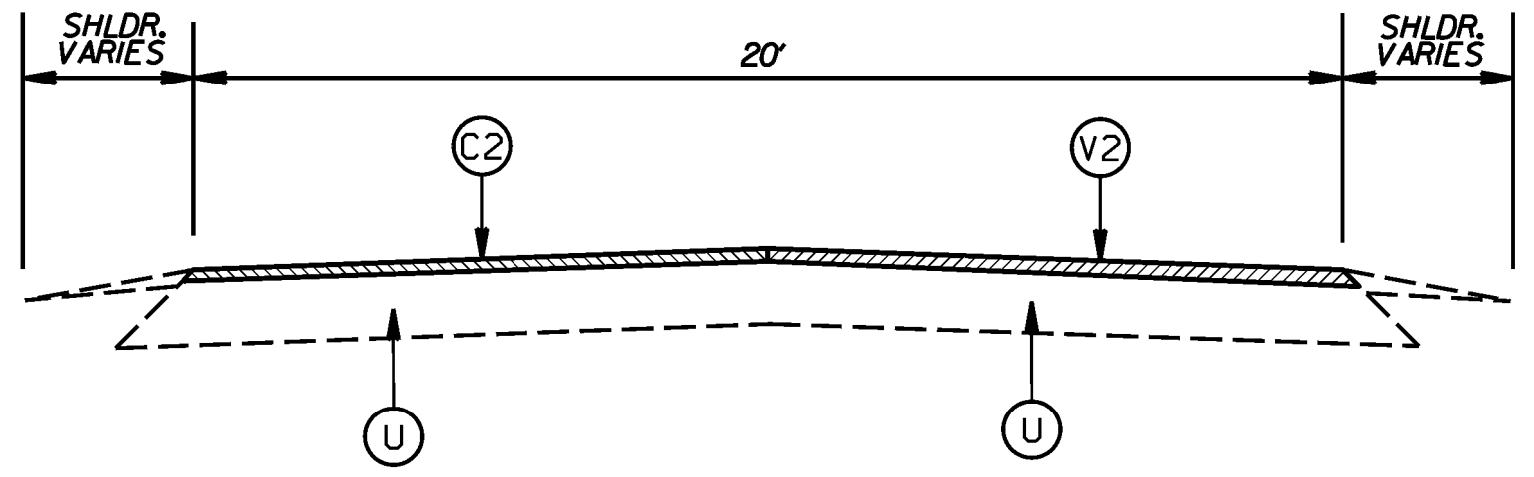
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T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH

NC 160 STEELE CREEK ROAD



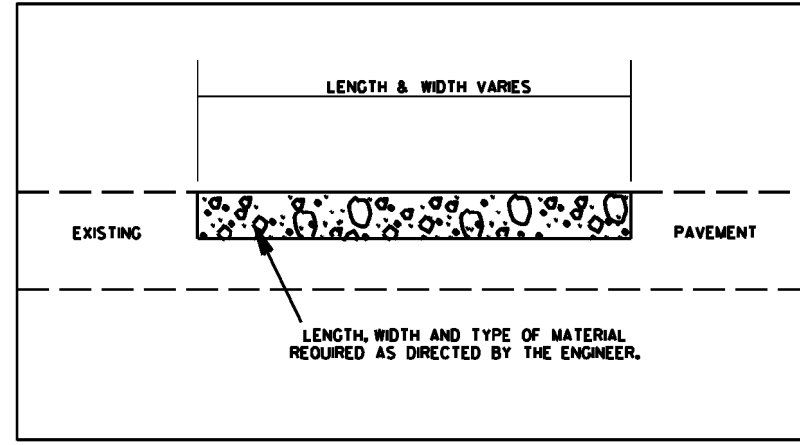
TYPICAL SECTION NO. 5

EAST ROCKY RIVER ROAD



TYPICAL SECTION NO. 6

PATCHING DETAIL



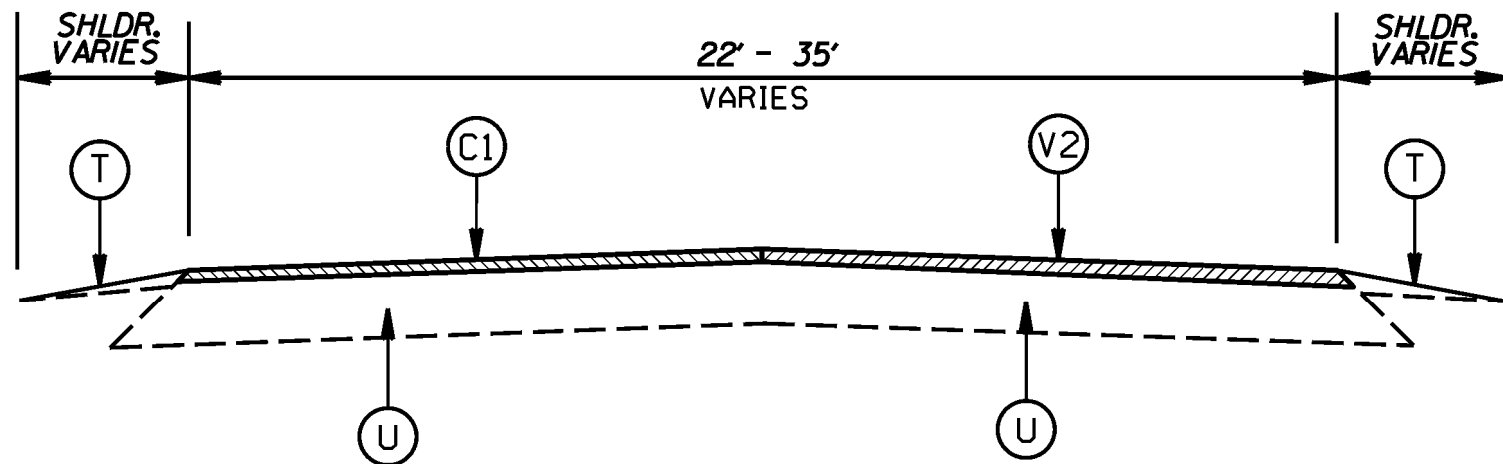
2025 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

SCALE	-NA-		REVISIONS
DATE			
DWG. BY	JME		
DESIGN BY			
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.			
WBS NO.	2025CPT.J0.07.0601 2025CPT.J0.07.20601		

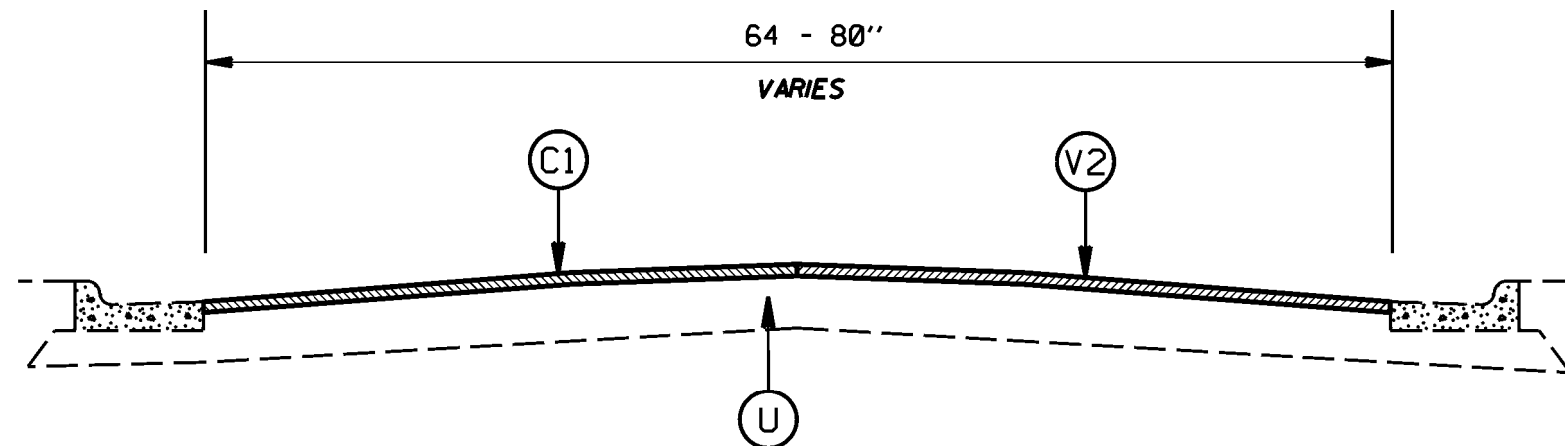
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T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH

SHOPTON ROAD WEST



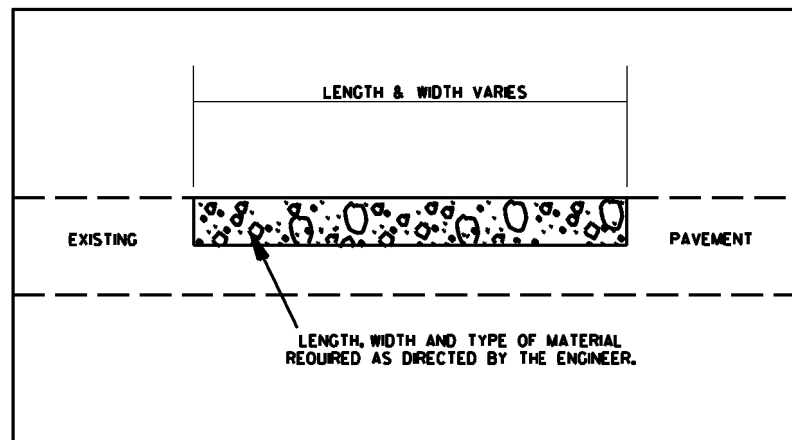
TYPICAL SECTION NO. 7

HAMBRIGHT ROAD



TYPICAL SECTION NO. 8

PATCHING DETAIL

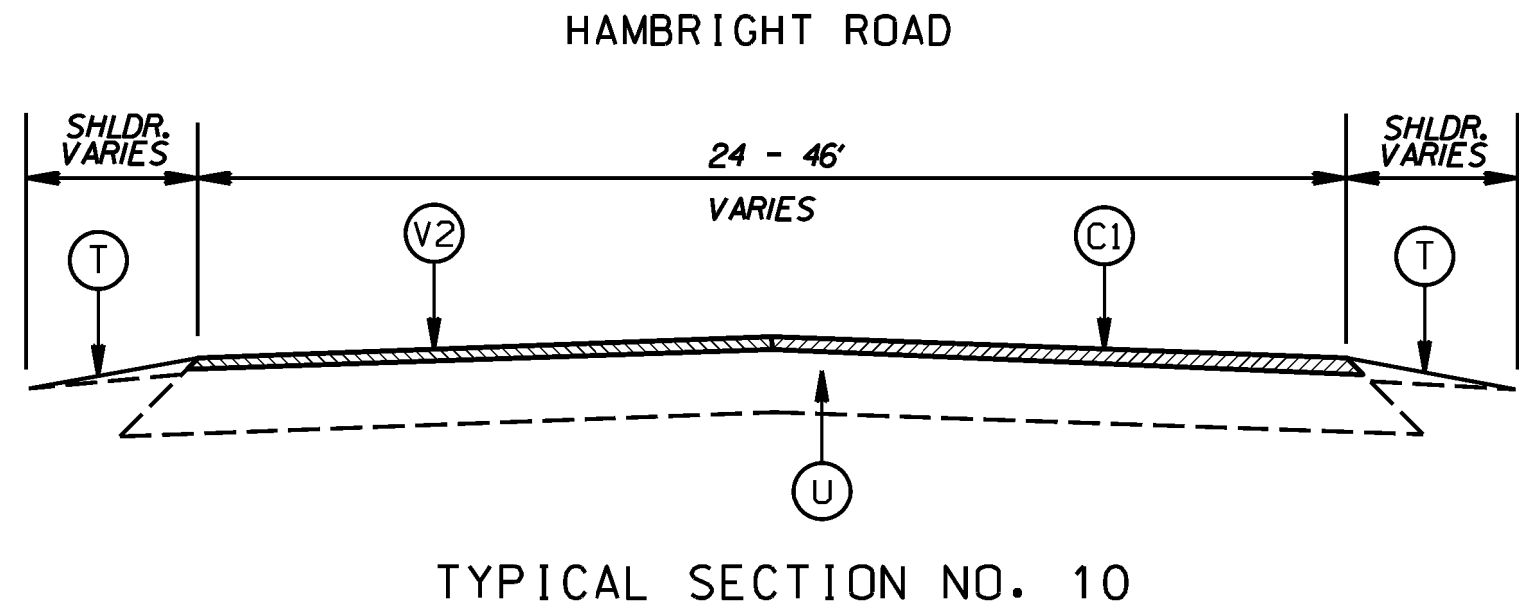
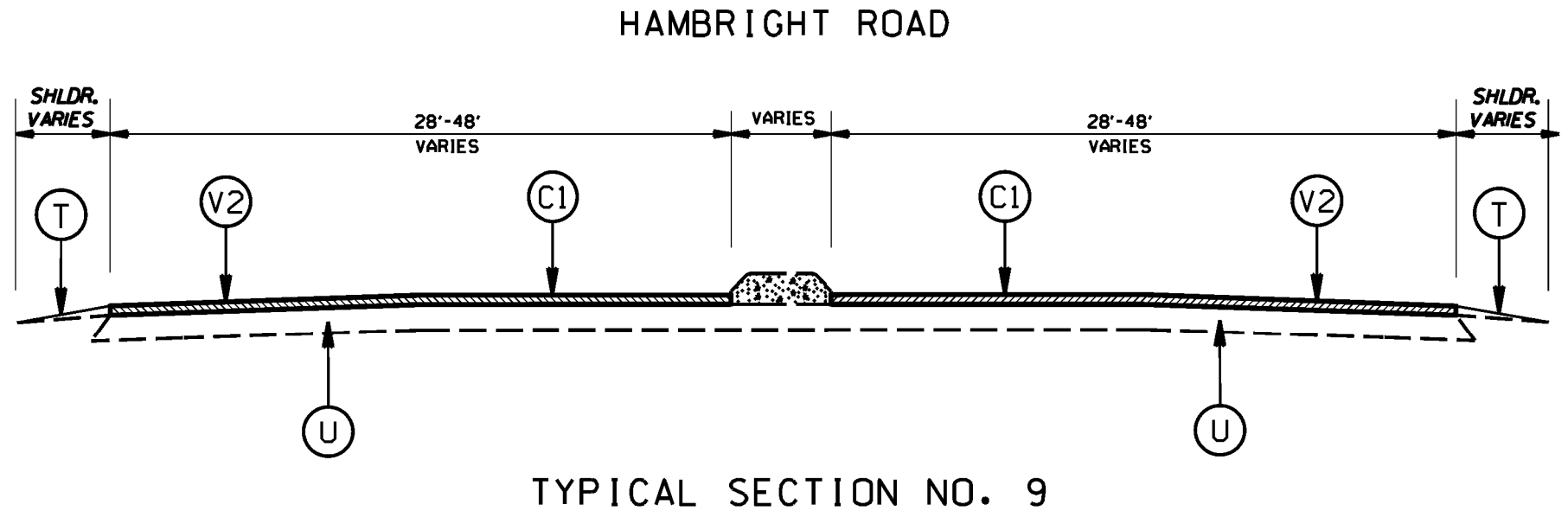


2025 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

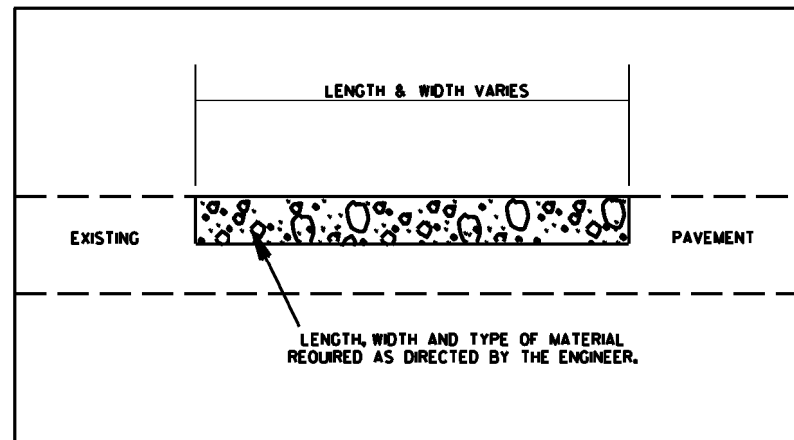
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DATE			
DWG. BY	JME		
DESIGN BY			
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
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T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH



PATCHING DETAIL



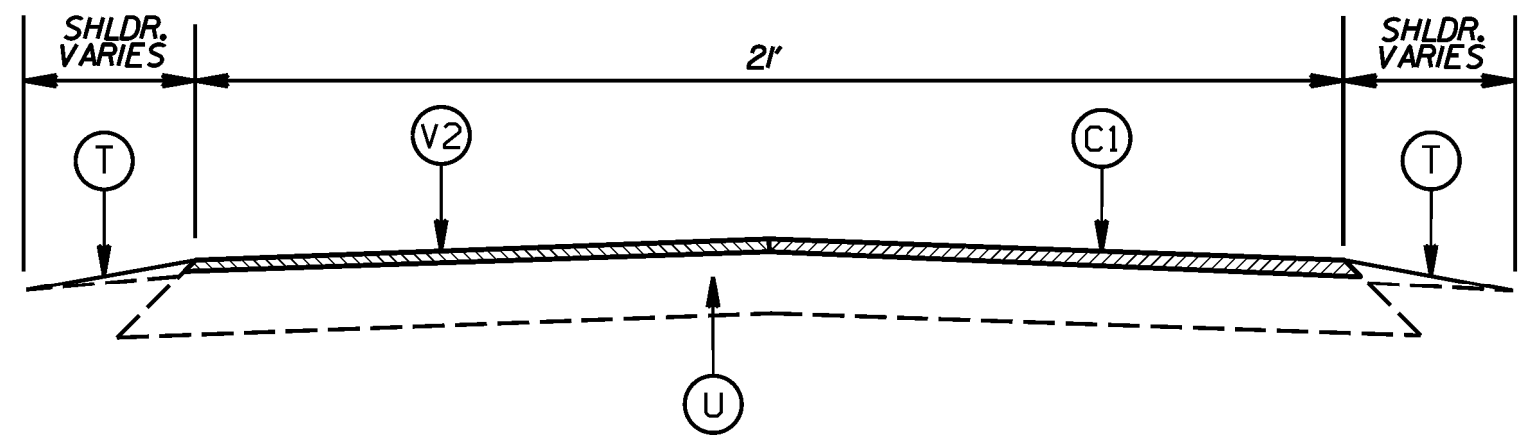
2025 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

SCALE	-NA-		REVISIONS
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DWG. BY	JME		
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APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
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WBS NO.	2025CPT.J0.07.0601 2025CPT.J0.07.20601		

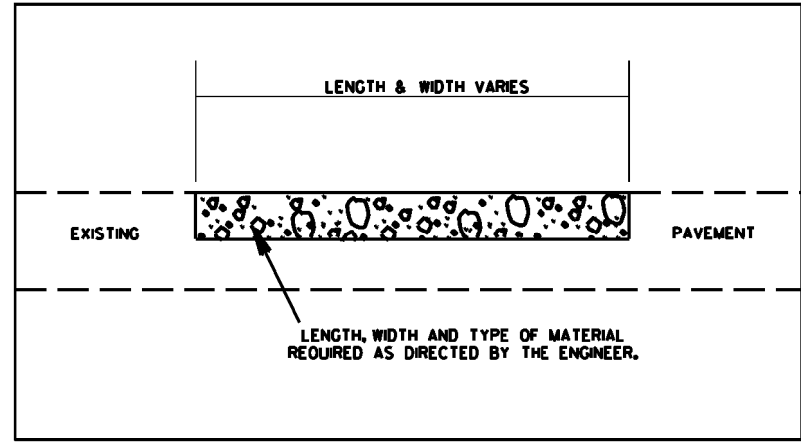
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T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH

JIM KIDD ROAD
MAYES ROAD



TYPICAL SECTION NO. 11

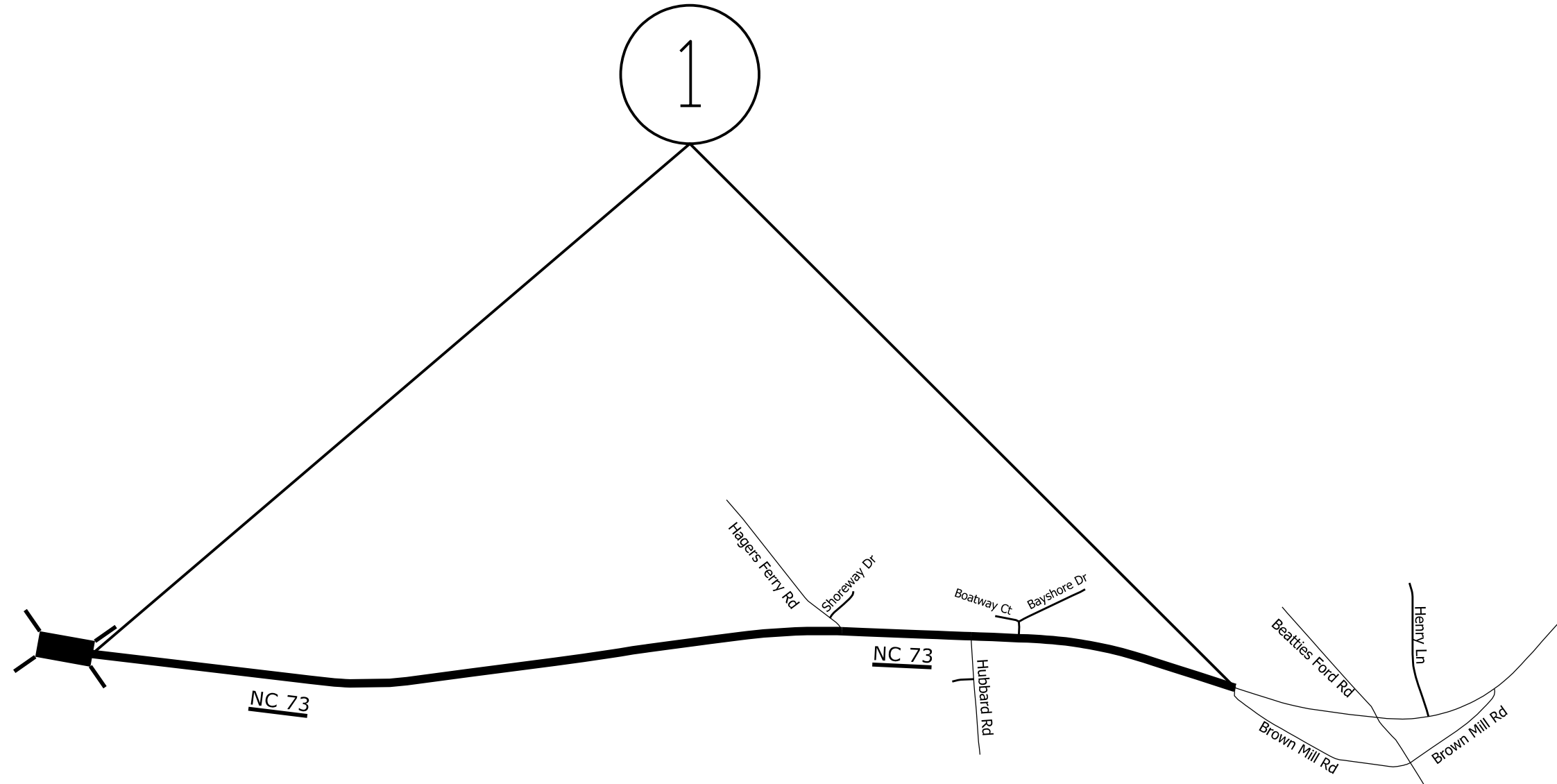
PATCHING DETAIL



2025 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

SCALE	-NA-		REVISIONS
DATE			
DWG. BY	JME		
DESIGN BY			
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
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WBS NO.	2025CPT.10.07.10601 2025CPT.10.07.20601		



MAP

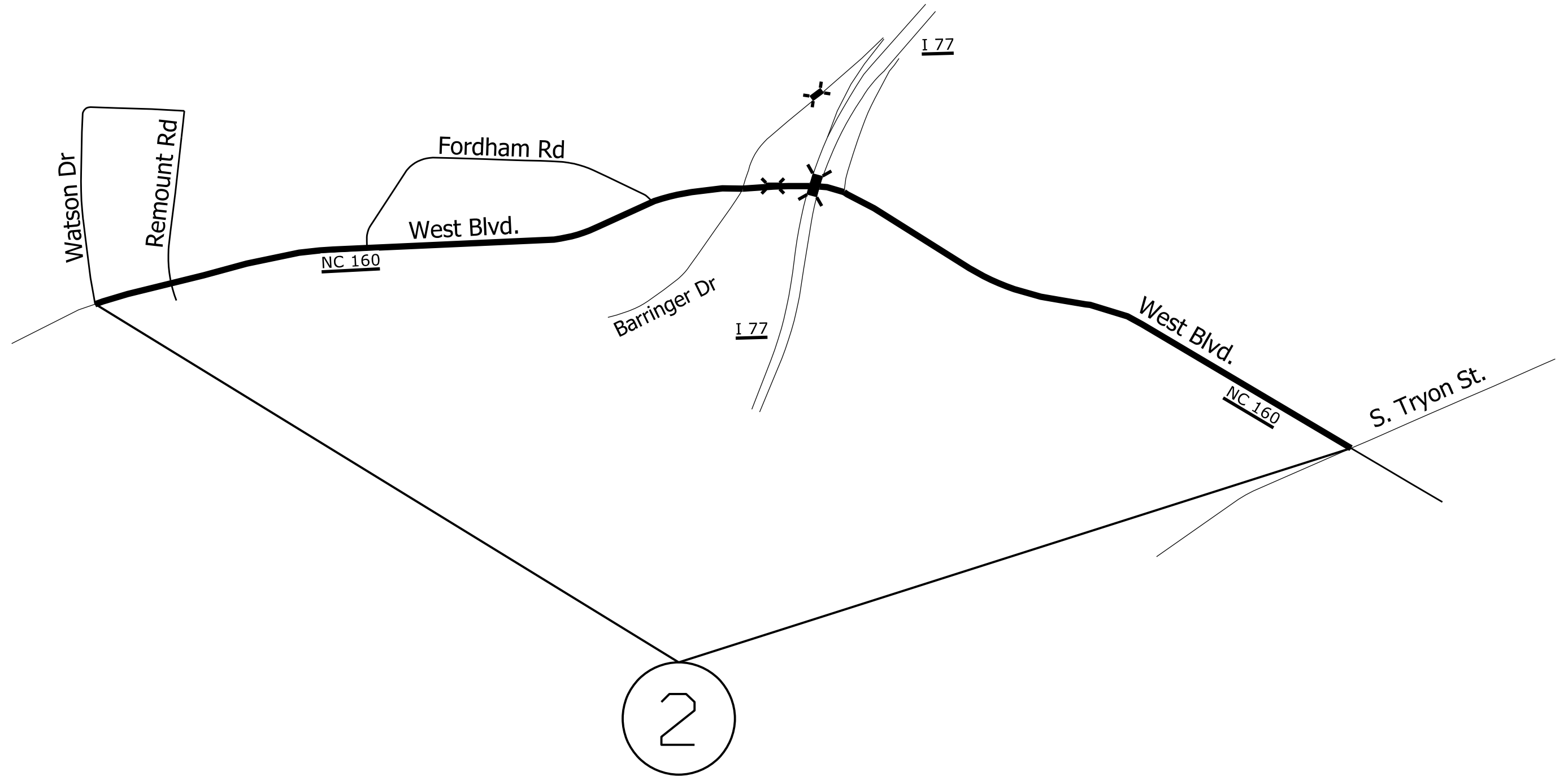
#1 NC 73

DESCRIPTION

FROM LINCOLN COUNTY LINE TO BROWN MILL ROAD

2025 MECKLENBURG COUNTY RESURFACING CONTRACT 1										
SCALE	1/4"									
DATE										
DWG. BY	JHE									
DESIGN BY										
APPROVED		<table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISIONS							
REVISIONS										

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.			
WBS NO.	2025CPT.10.07.10601 2025CPT.10.07.20601		



MAP

#2 NC 160 WEST BLVD

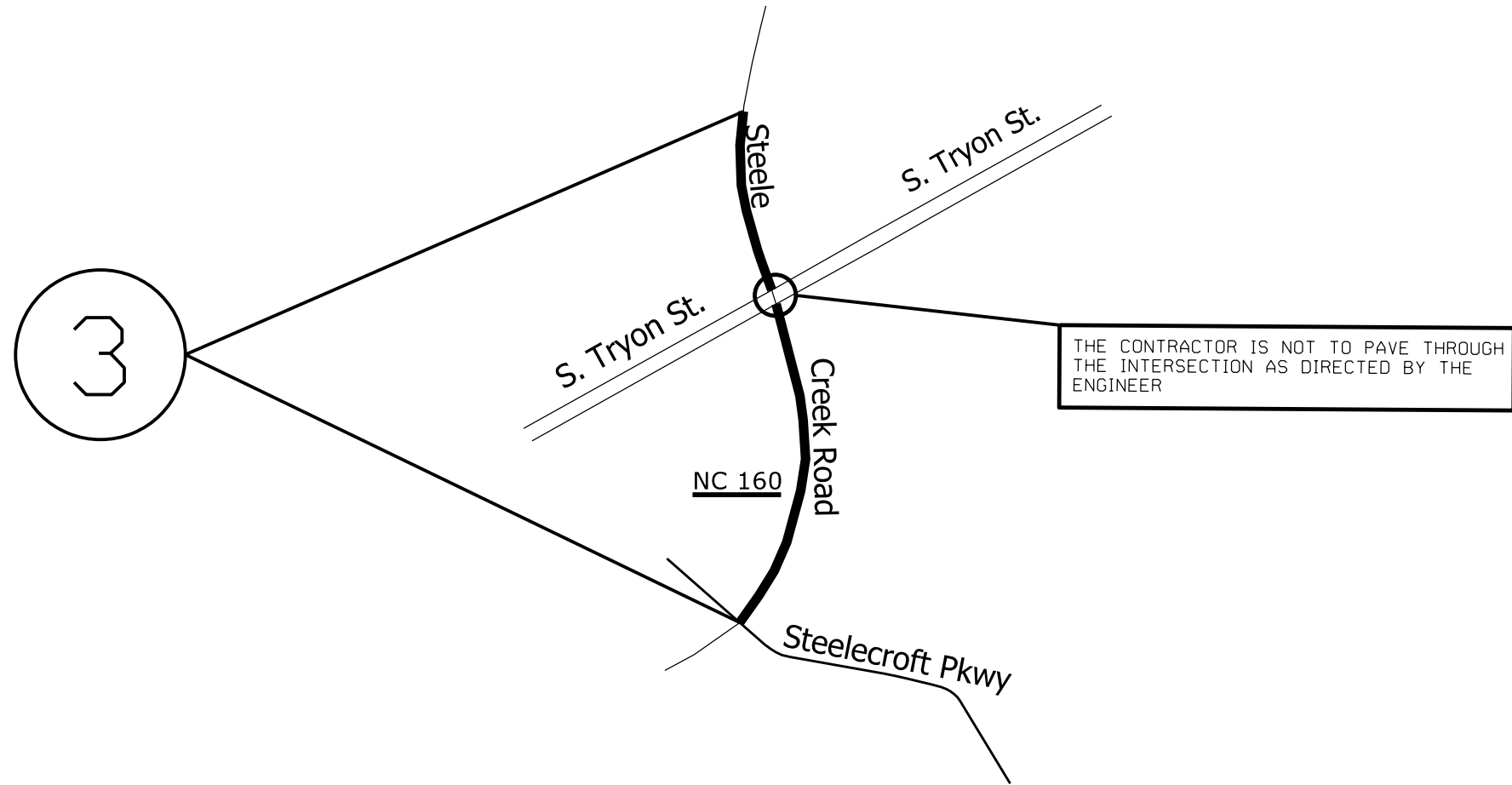
DESCRIPTION

FROM WALTON ROAD TO S. TRYON STREET

2025 MECKLENBURG COUNTY
RESURFACING CONTRACT #1

SCALE	NA		REVISIONS	
DATE				
DWG. BY	JHE			
DESIGN BY				
APPROVED				

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.			
WBS NO.	2025CPT.10.07.10601 2025CPT.10.07.20601		



MAP

#3 NC 160 STEELE CREEK ROAD

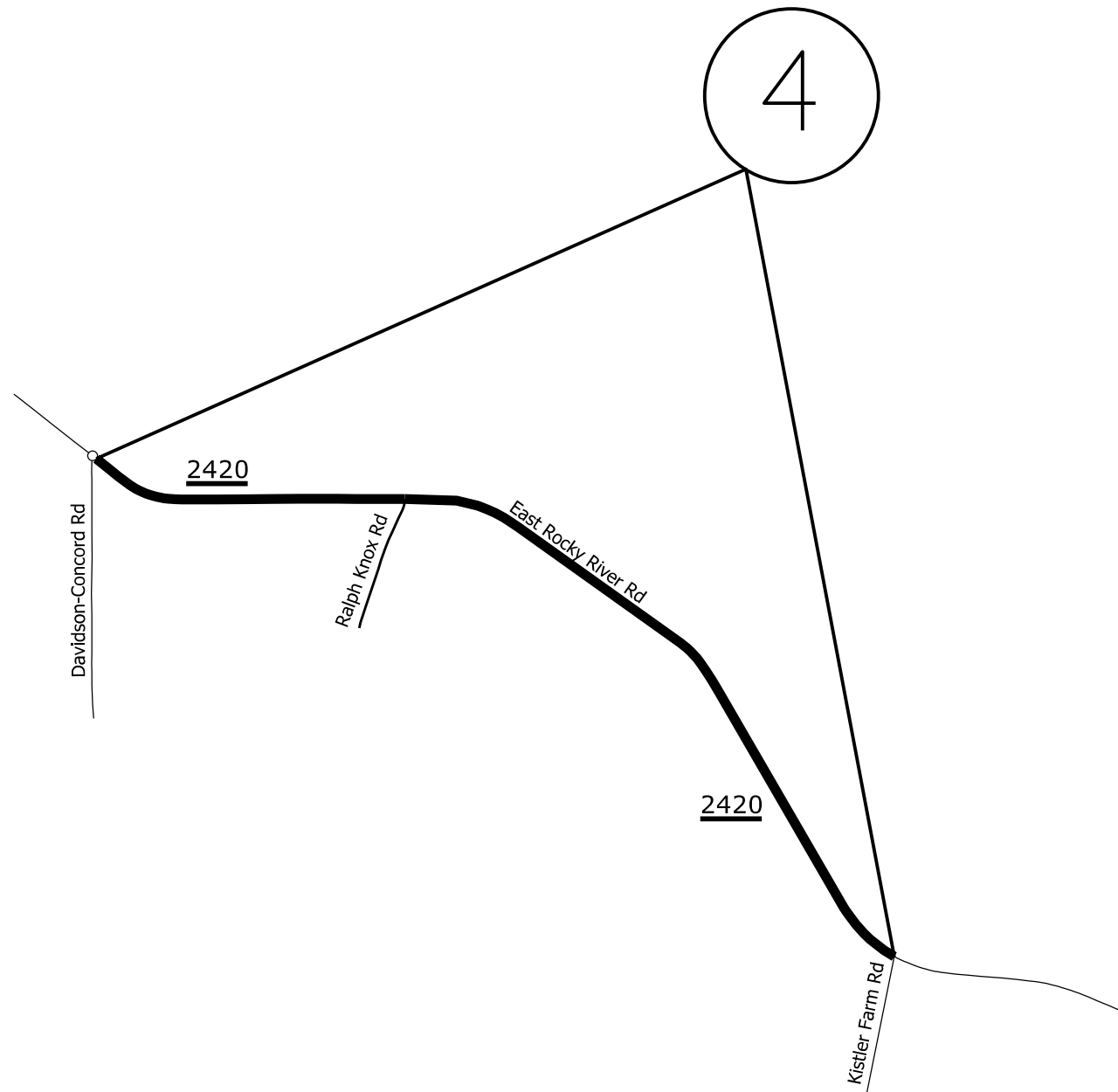
DESCRIPTION

327 FT PRIOR TO S. TRYON ST . TO STEELECROFT PKWY

2025 MECKLENBURG COUNTY
RESURFACING CONTRACT #1

SCALE	-NA-		REVISIONS	
DATE				
DWG. BY	JHE			
DESIGN BY				
APPROVED				

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.			
WBS NO.	2025CPT.10.07.10601 2025CPT.10.07.20601		



MAP

#4 SR 2420 EAST ROCKY RIVER ROAD

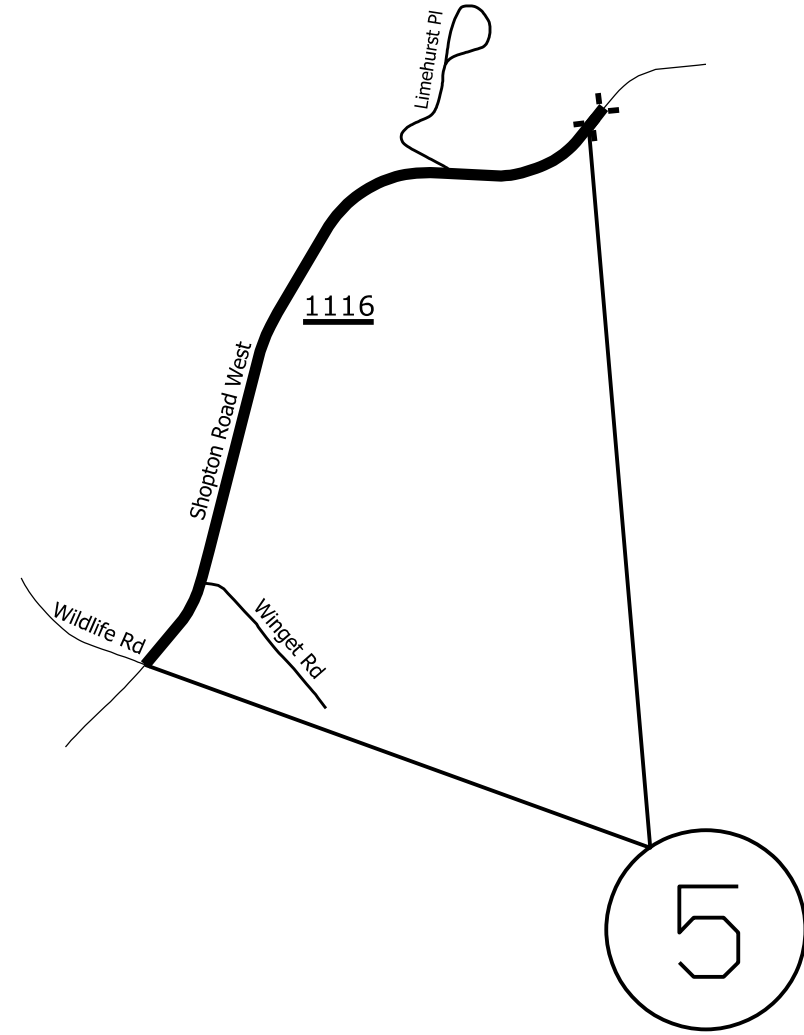
DESCRIPTION

KISTLER FARM ROAD TO DAVIDSON-CONCORD ROAD

2025 MECKLENBURG COUNTY
RESURFACING CONTRACT #1

SCALE	-NA-		REVISIONS	
DATE				
DWG. BY	JHE			
DESIGN BY				
APPROVED				

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.			
WBS NO.	2025CPT.10.07.10601 2025CPT.10.07.20601		



MAP

#5 SR 1116 SHOPTON ROAD WEST

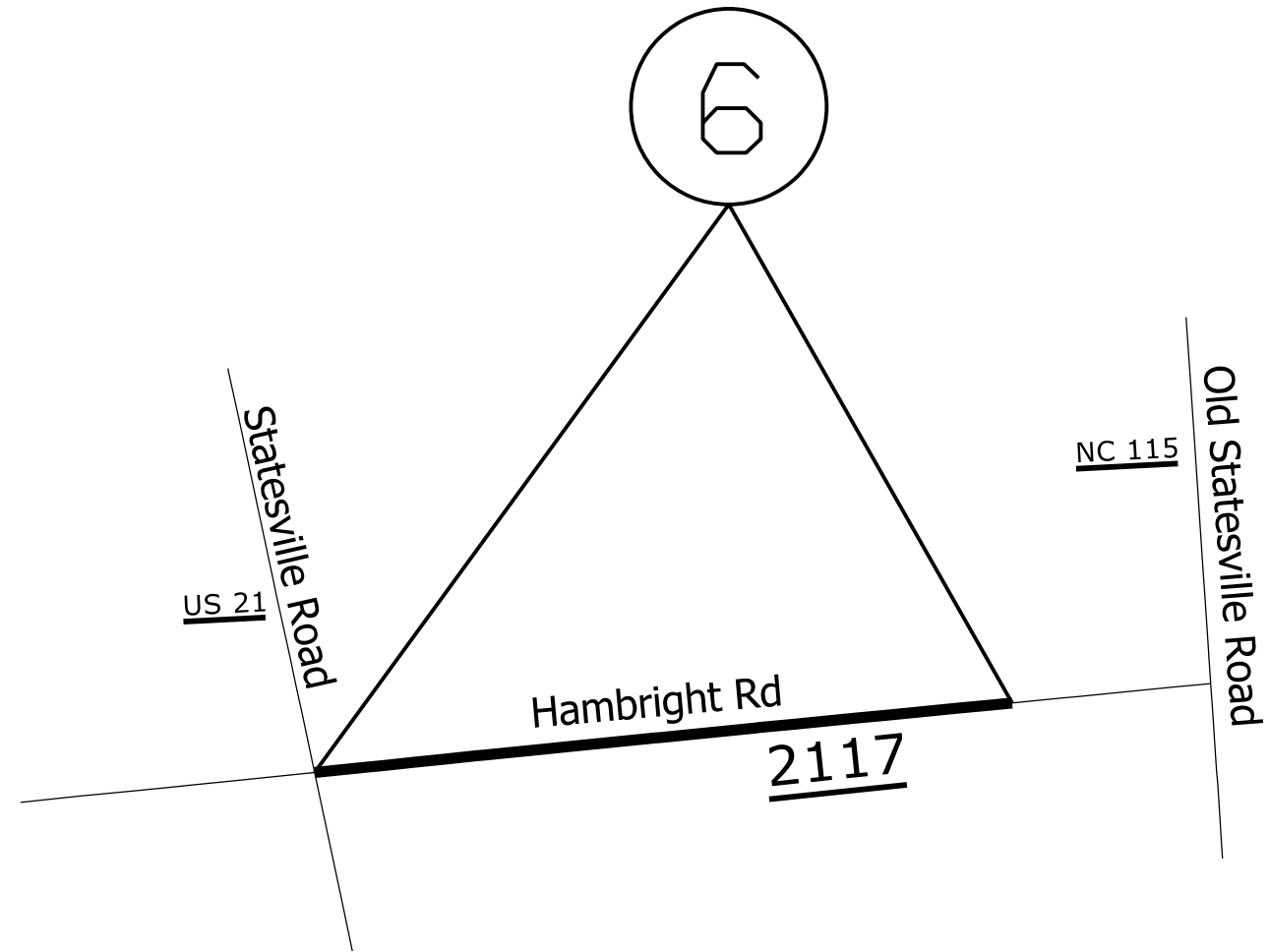
DESCRIPTION

FROM THE CATAWBA RIVER BRIDGE TO WILDLIFE ROAD

2025 MECKLENBURG COUNTY
RESURFACING CONTRACT #1

SCALE	-NA-		REVISIONS
DATE			
DWG. BY	JHE		
DESIGN BY			
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.			
WBS NO.	2025CPT.10.07.10601 2025CPT.10.07.20601		



MAP

#6 SR 2117 HAMBRIGHT ROAD

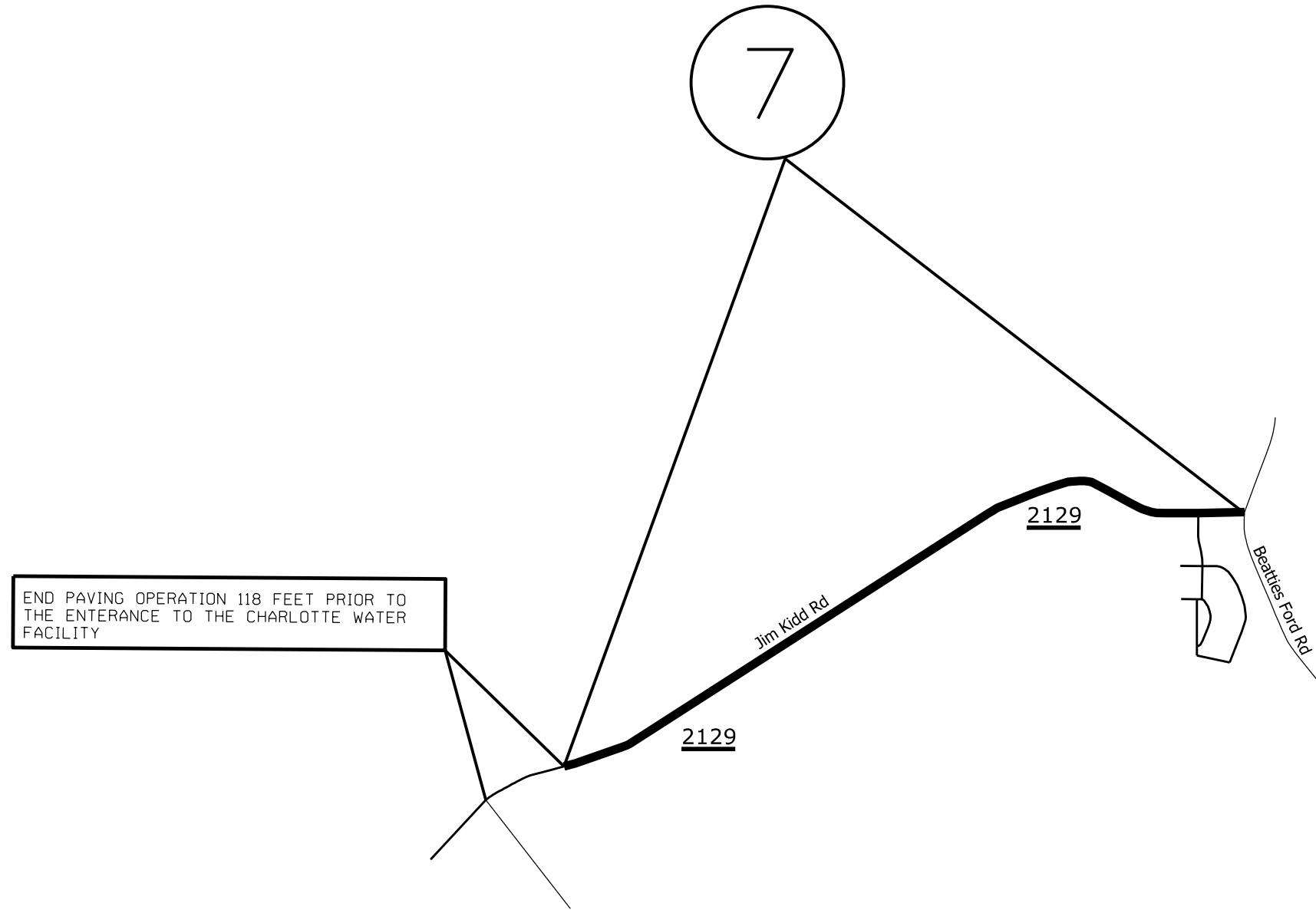
DESCRIPTION

FROM END OF ISLAND AT BLYTHE SCHOOL TO
US 21 STATESVILLE ROAD

2025 MECKLENBURG COUNTY
RESURFACING CONTRACT #1

SCALE	-NA-		REVISIONS	
DATE				
DWG. BY	JHE			
DESIGN BY				
APPROVED				

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.			
WBS NO.	2025CPT.10.07.10601 2025CPT.10.07.20601		



MAP

#7 SR 2129 JIM KIDD ROAD

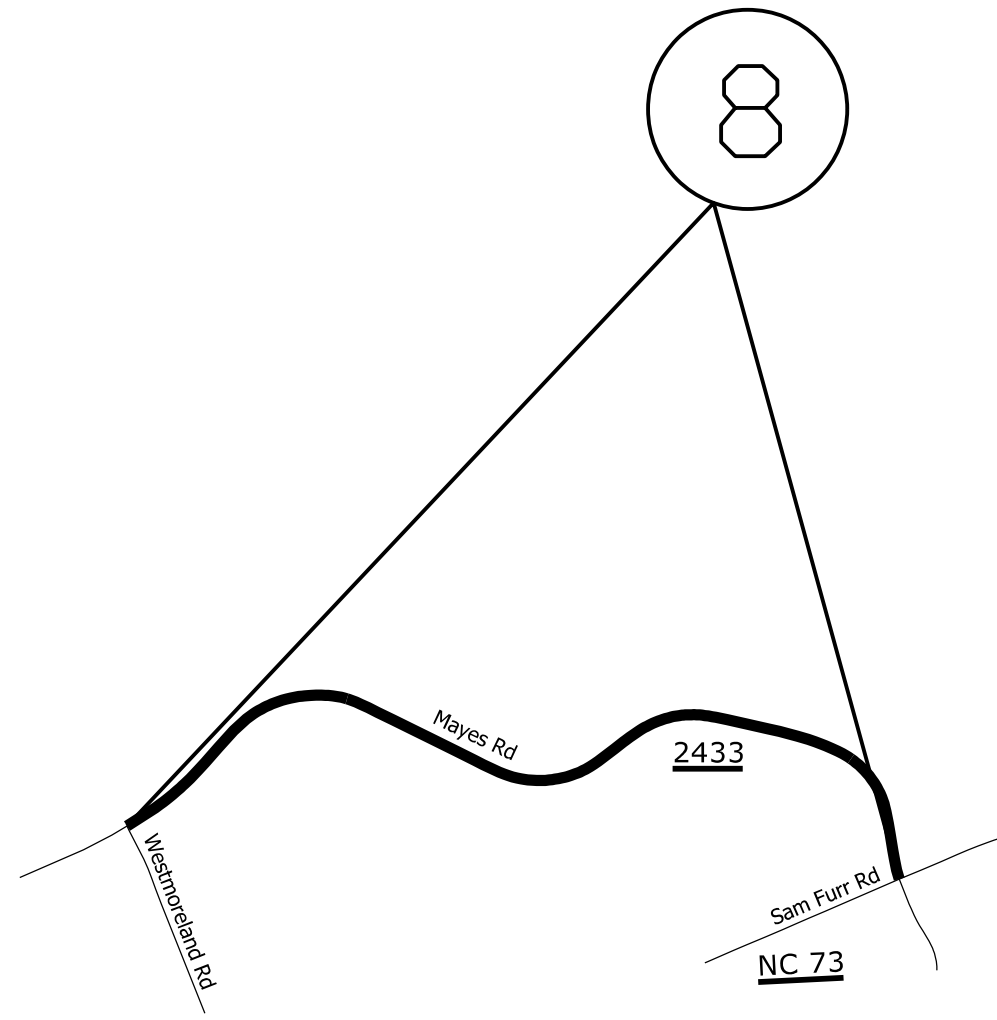
DESCRIPTION

FROM BEATTIES FORD ROAD TO
END OF MAINTENANCE

2025 MECKLENBURG COUNTY
RESURFACING CONTRACT #1

SCALE	-NA-		REVISIONS	
DATE				
DWG. BY	JHE			
DESIGN BY				
APPROVED				

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
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WBS NO.	2025CPT.10.07.10601 2025CPT.10.07.20601		



MAP

#8 SR 2433 MAYES ROAD

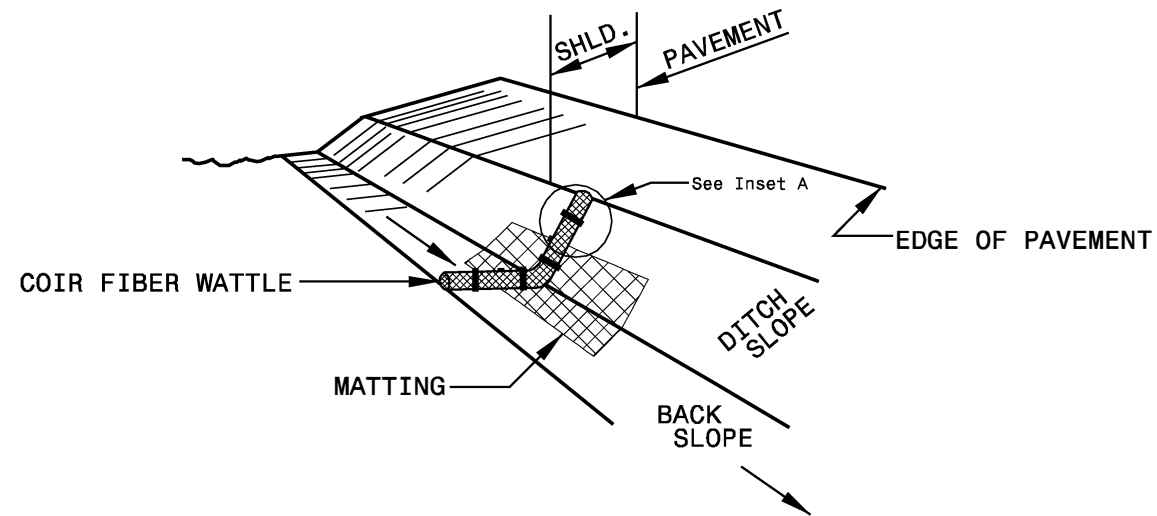
DESCRIPTION

FROM WESTMORELAND ROAD TO
SAM FURR ROAD

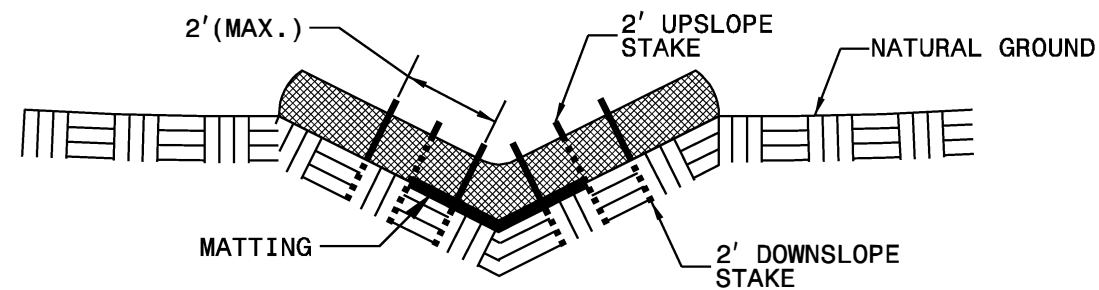
2025 MECKLENBURG COUNTY RESURFACING CONTRACT #1										
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DATE										
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REVISIONS										

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

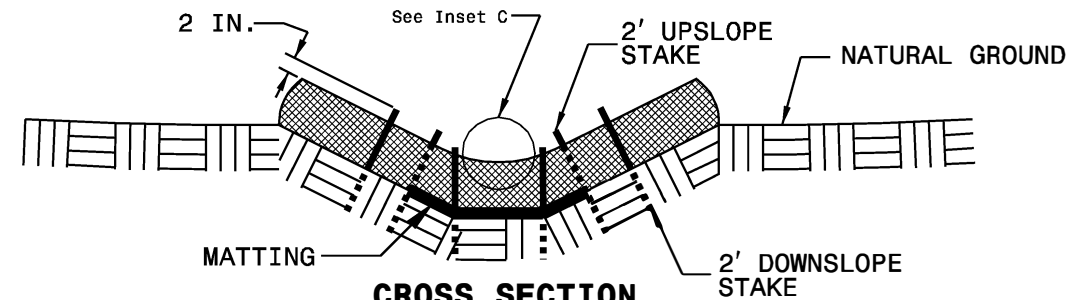
PROJECT REFERENCE NO.	SHEET NO.
RW. SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) 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.

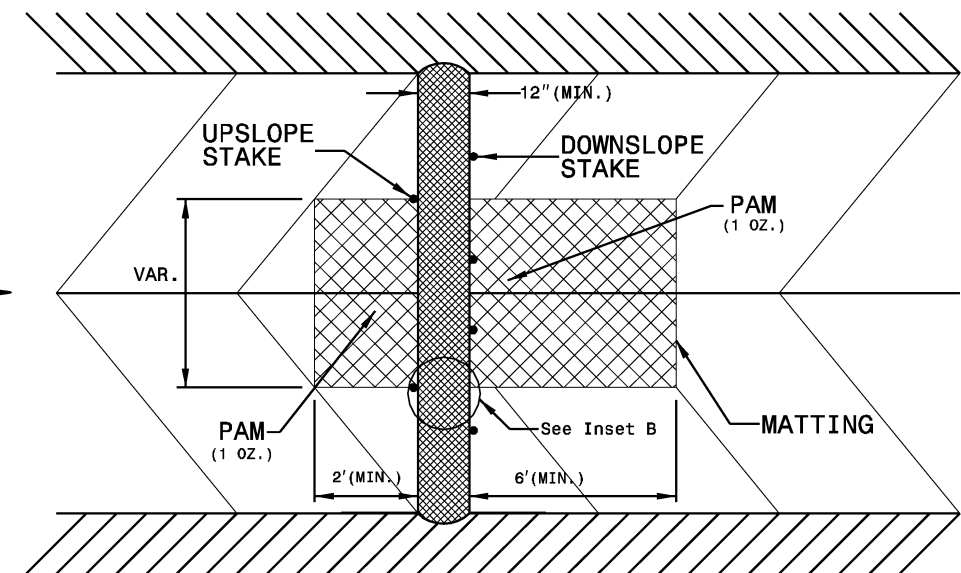
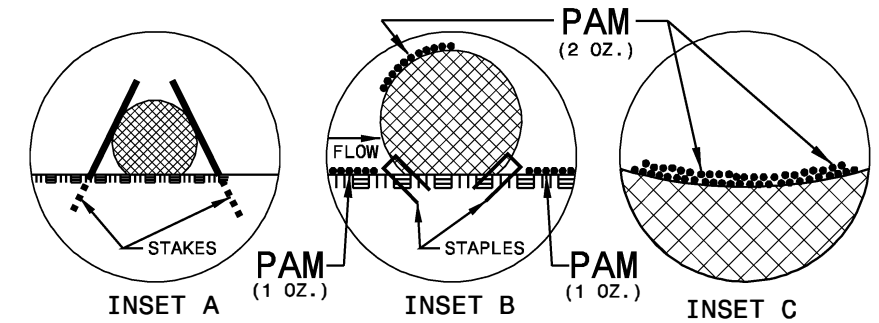
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.

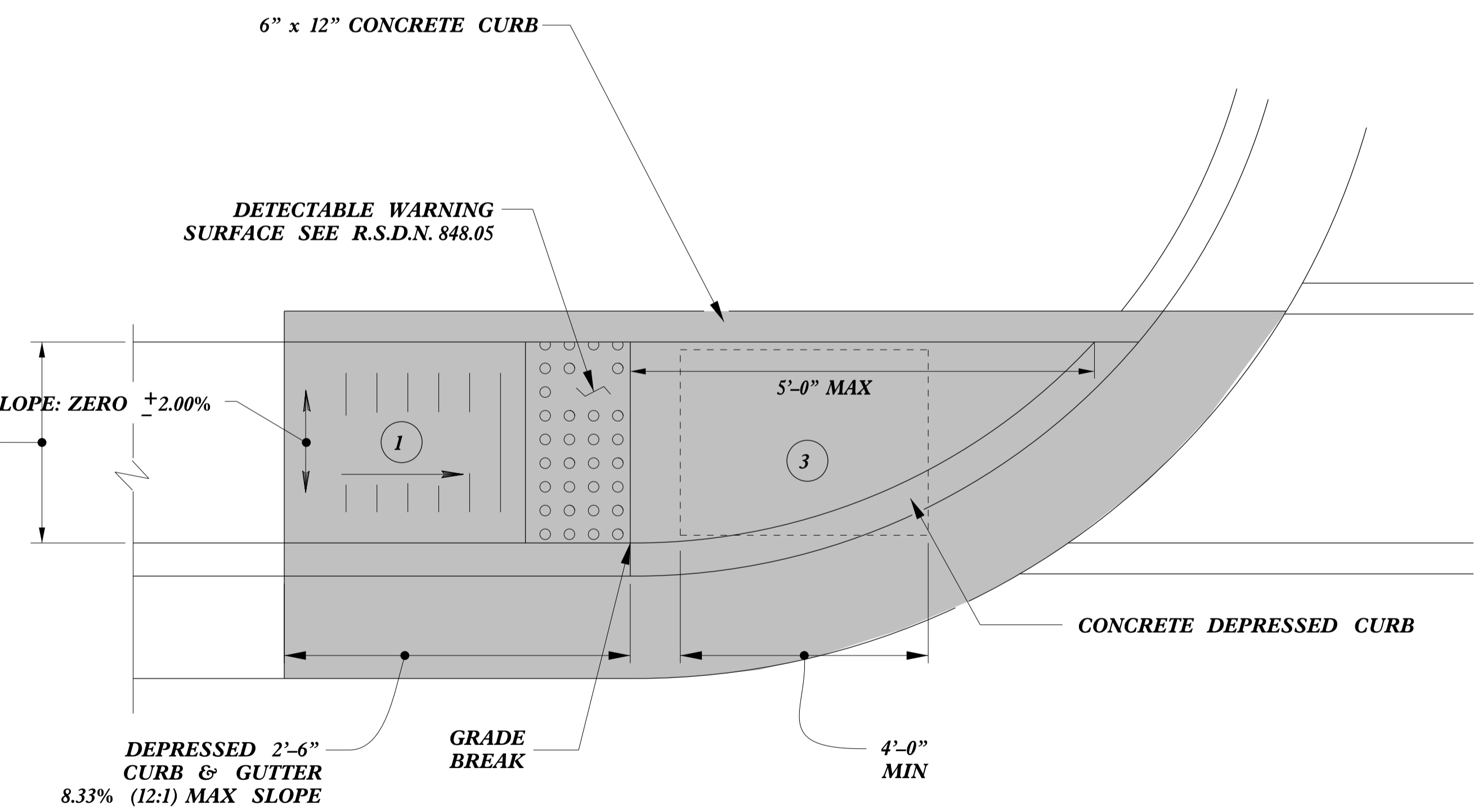
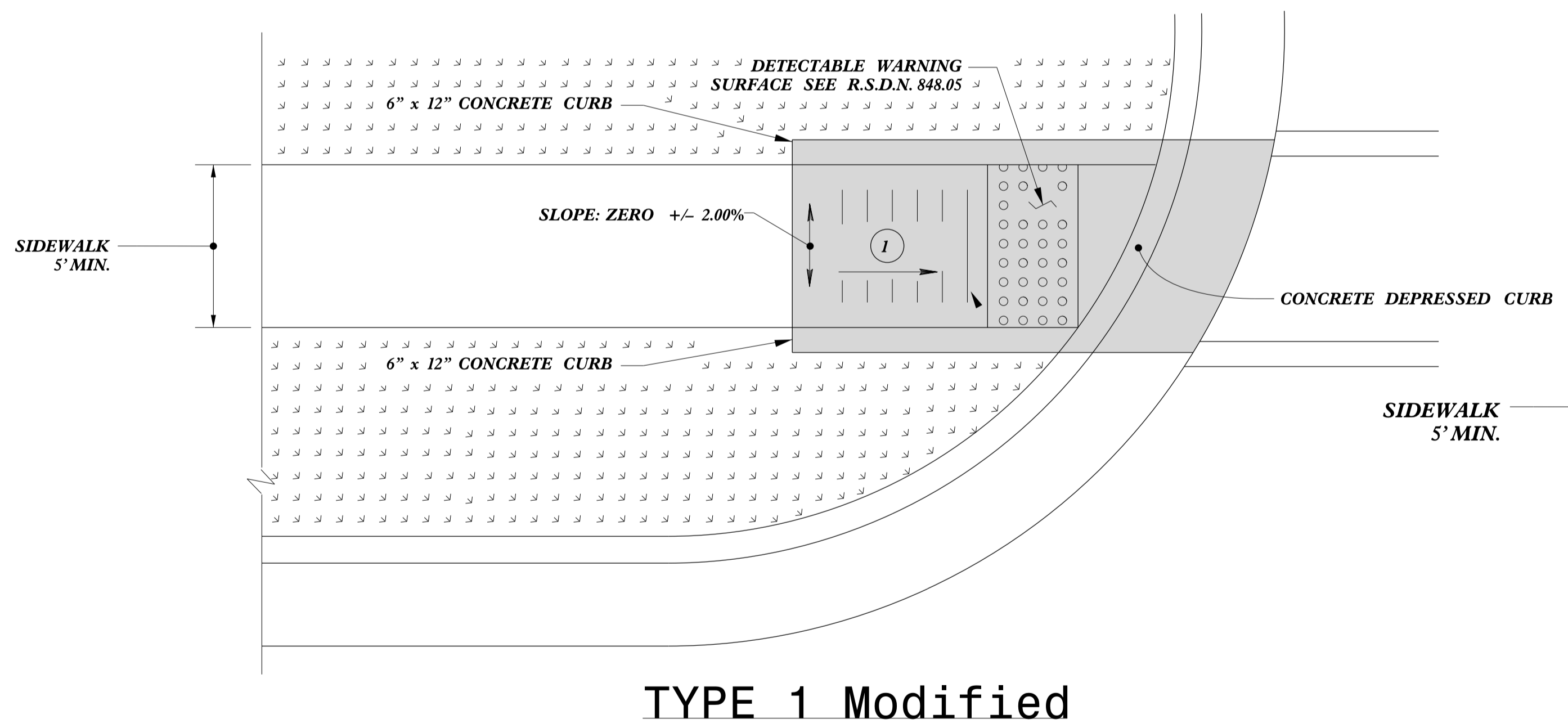
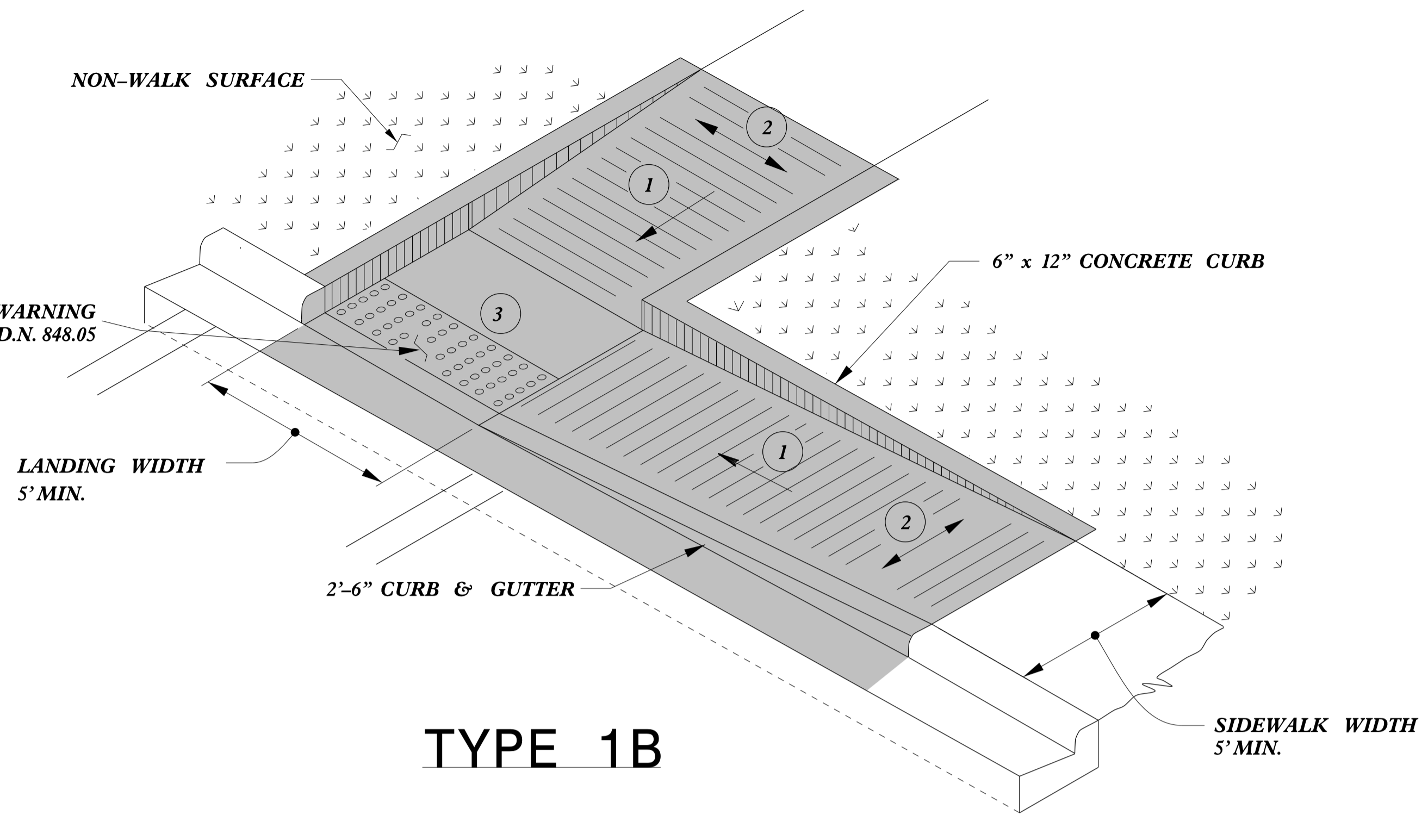
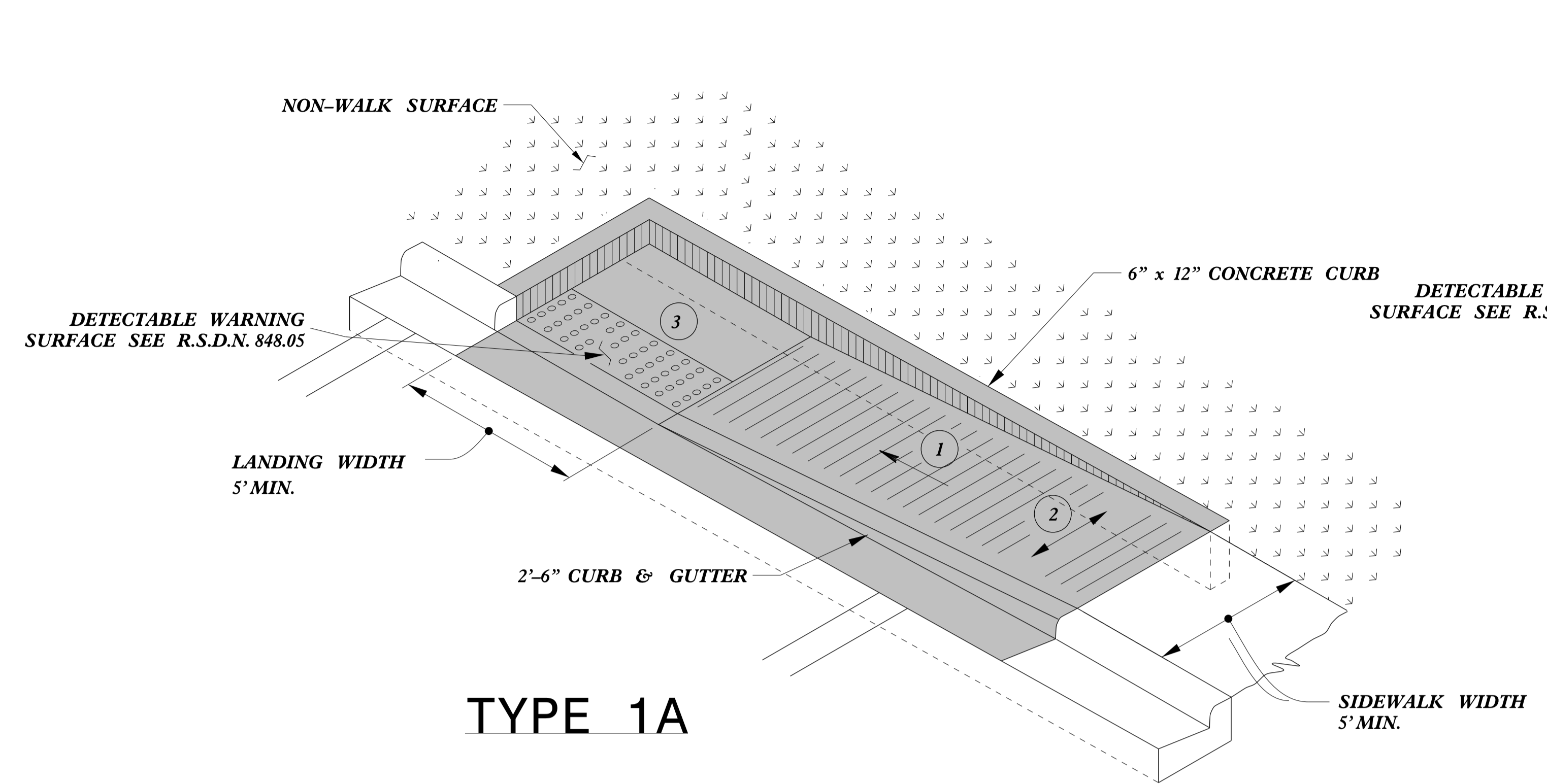
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



TOP VIEW

5/14/99



- 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

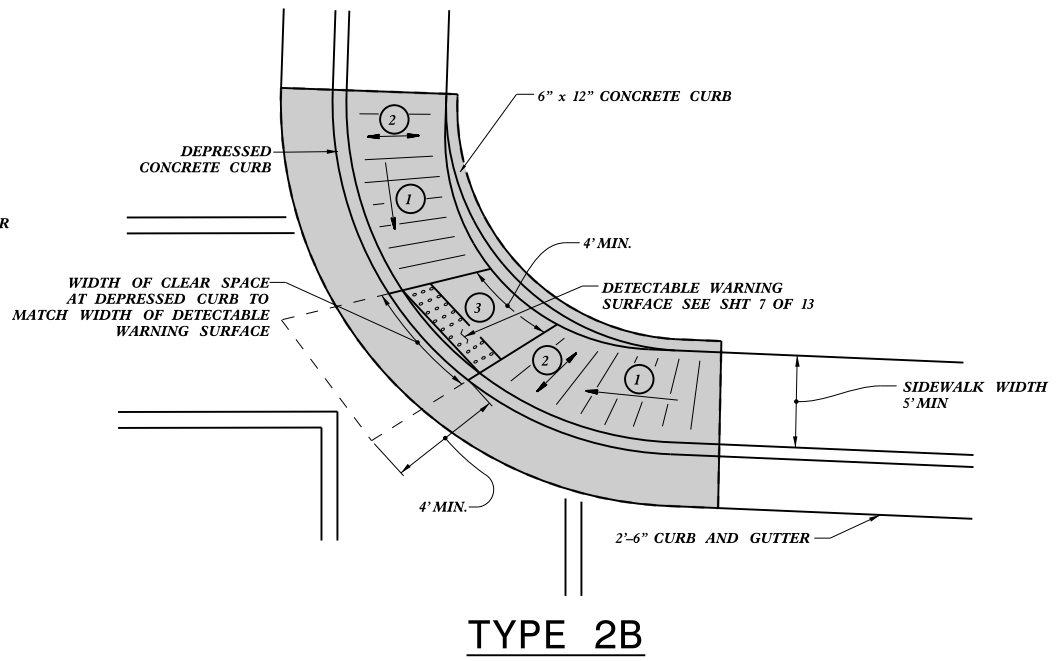
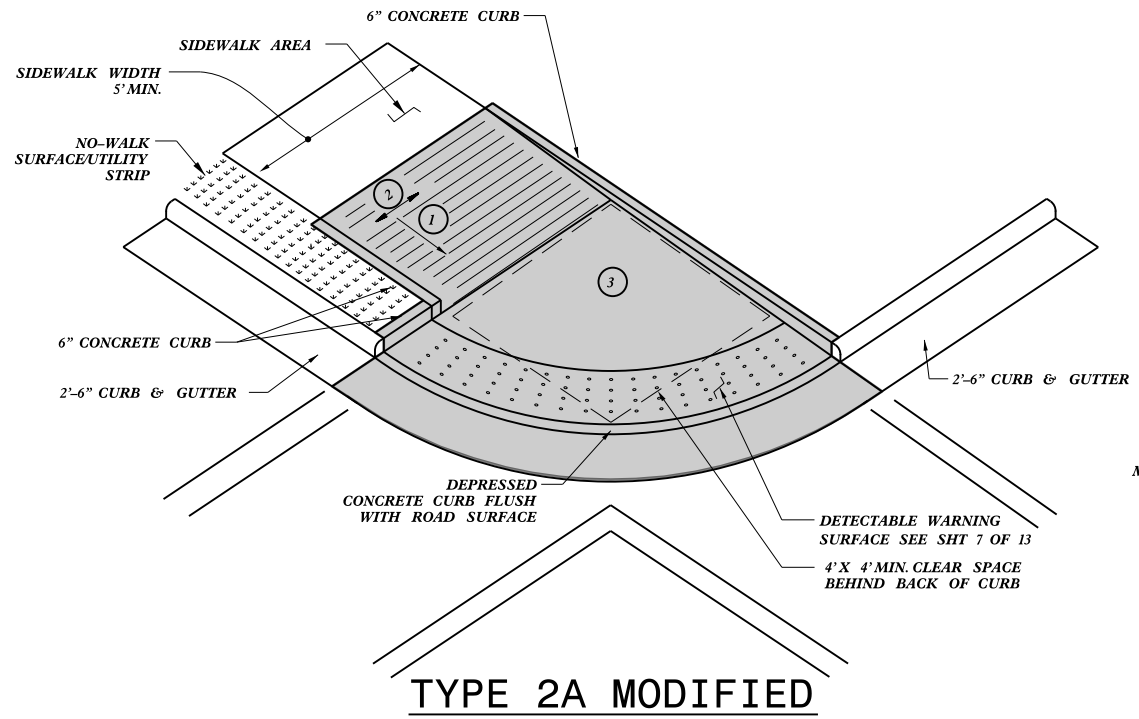
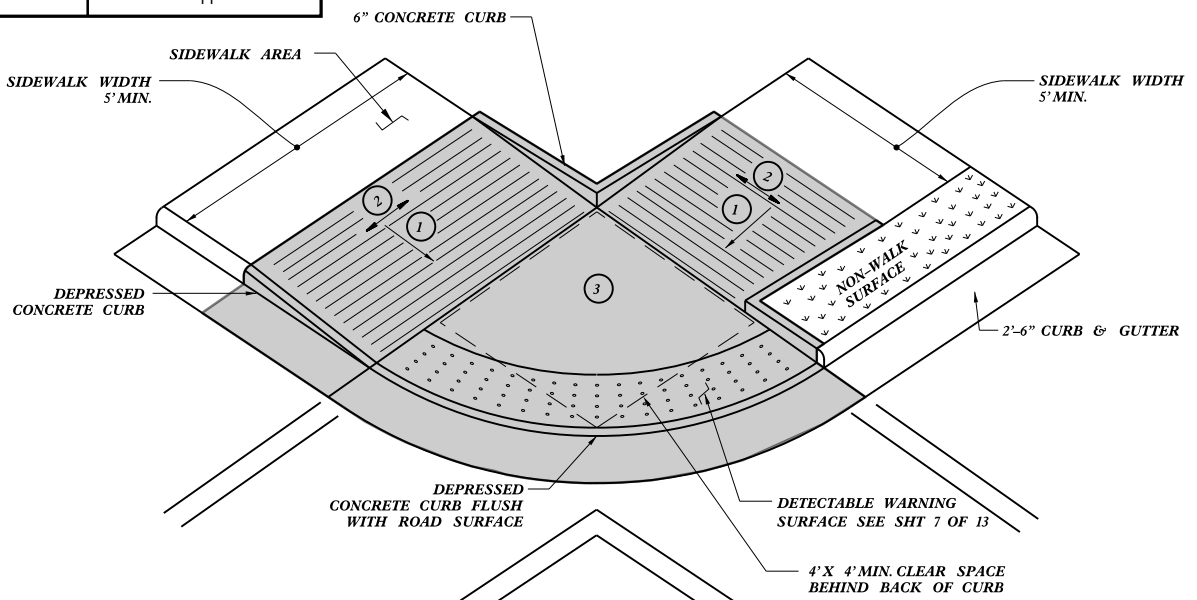
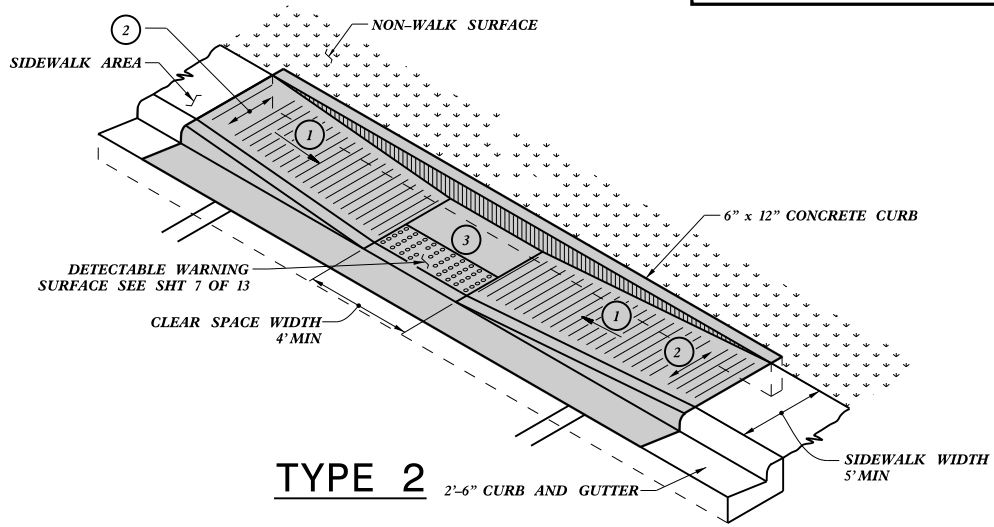
**CONTRACT STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

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

C:\P\2012\STDS\2012CurbRamp\CURBRAMPDETAILS.DGN
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 J.S. HOWERTON
 87350170C0045F

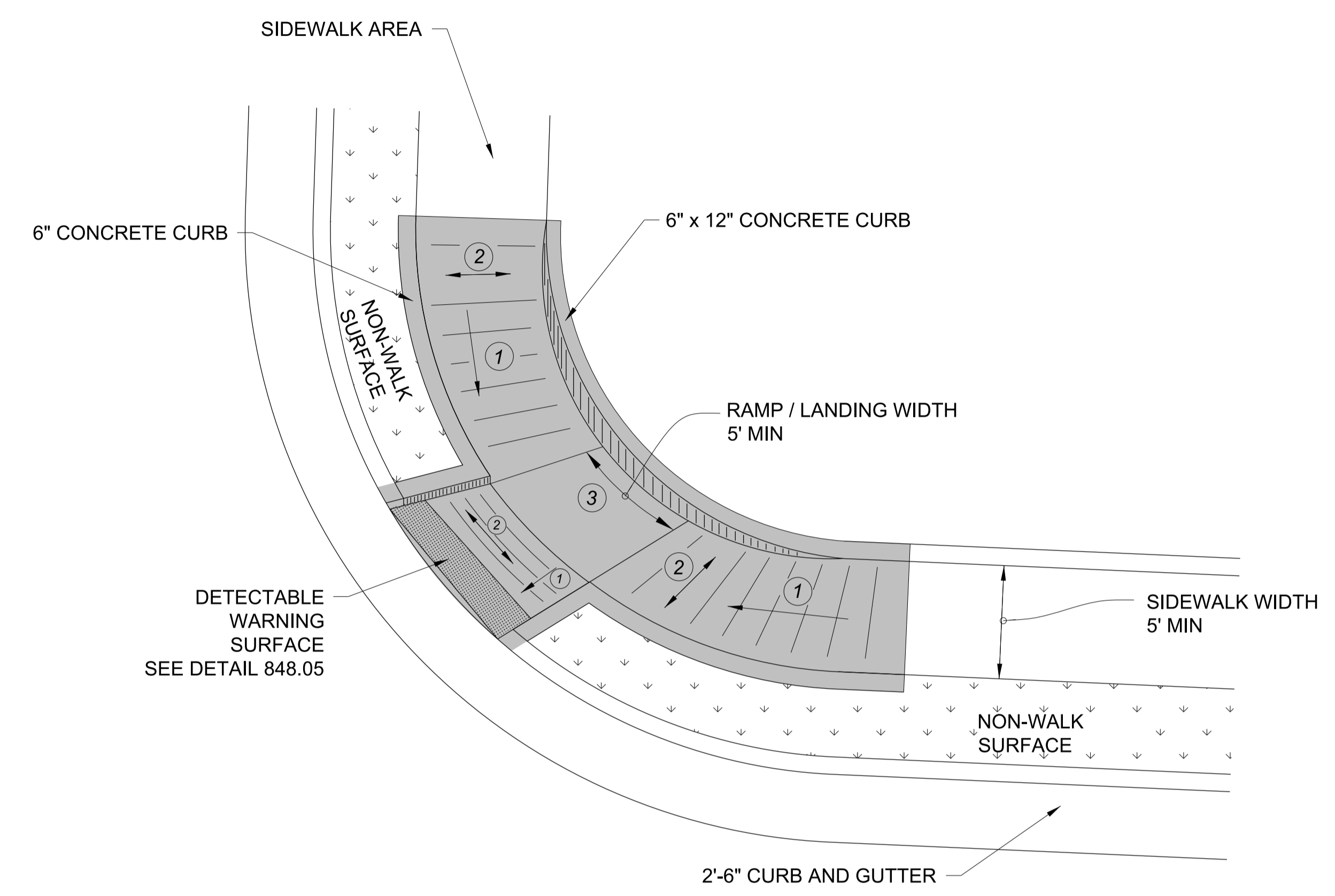
PROJECT REFERENCE NO.	SHEET NO.
WBS: 50939.3.3	11



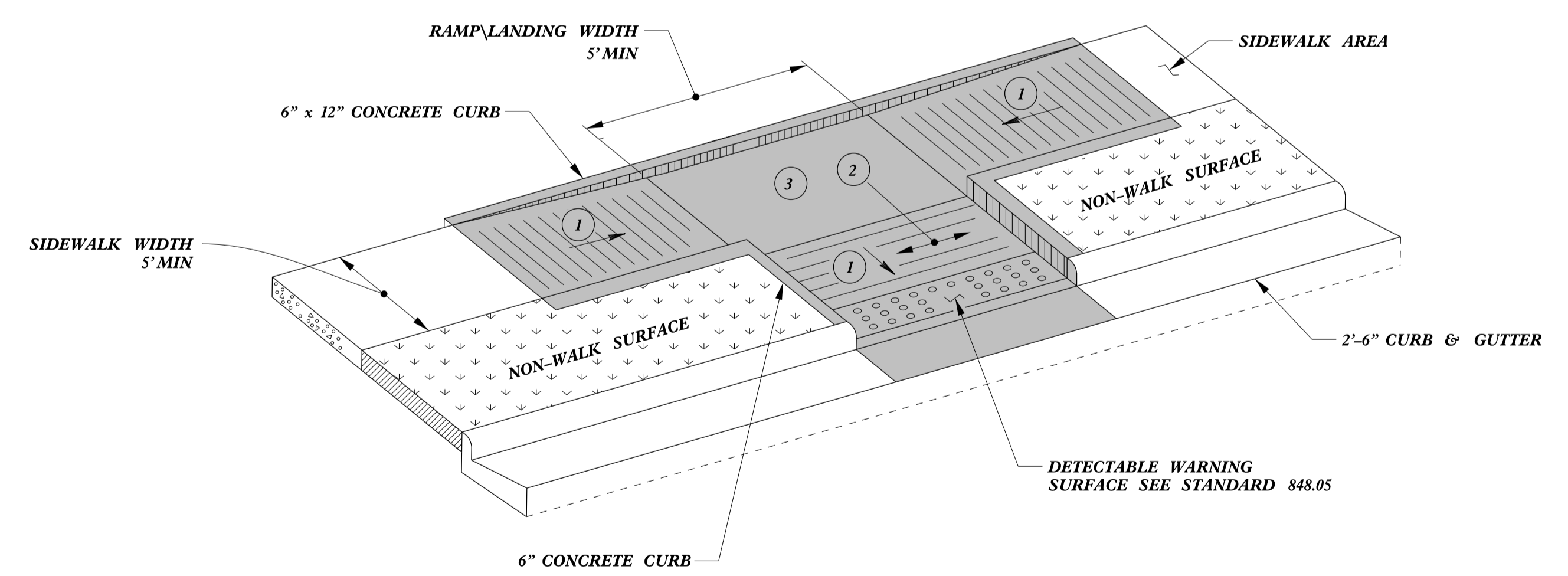
- ① 8.33% (12:1) MAX RAMP SLOPE
- ② CROSS SLOPE: 2.00%
- ③ MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.

PAY LIMITS FOR 1 CURB RAMP

PAY LIMITS FOR 1 CURB RAMP

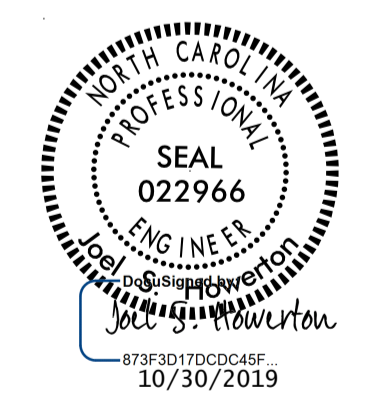


**TYPE 3 MODIFIED
INSTALLATION IN A RADIUS**



TYPE 3

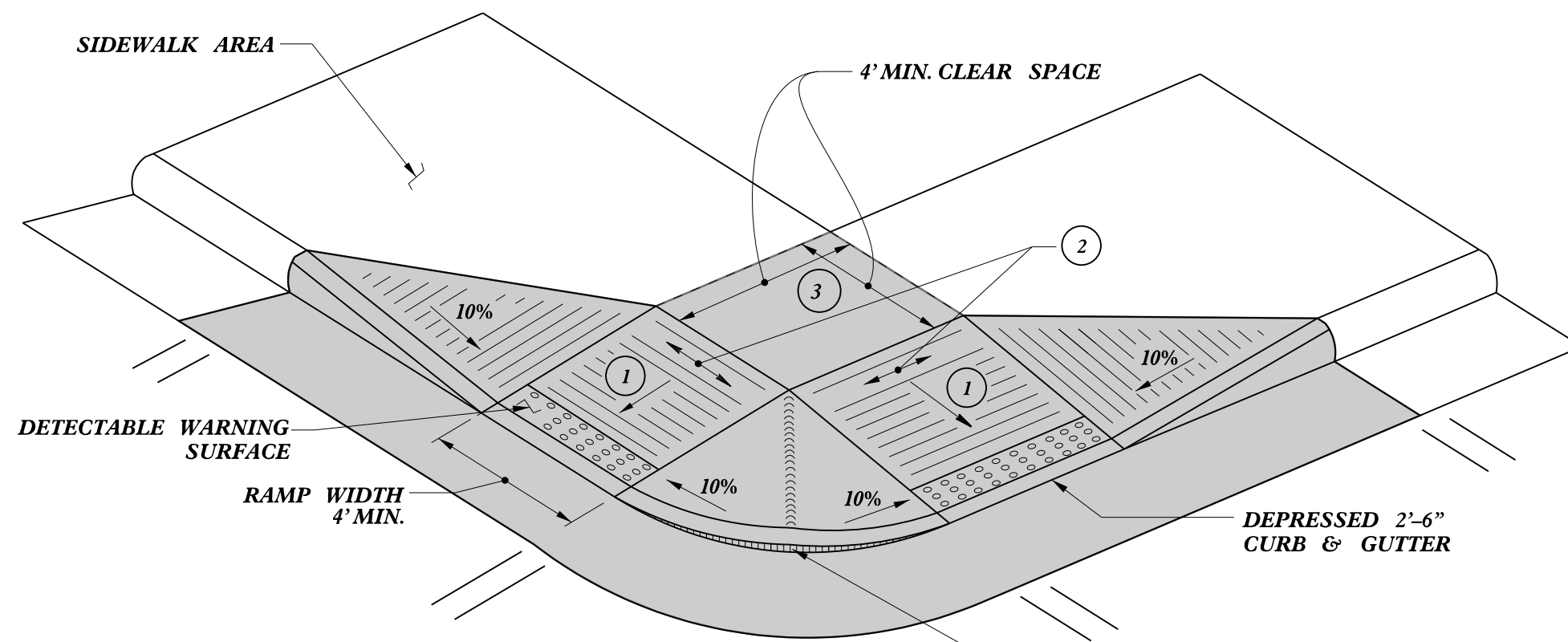
- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

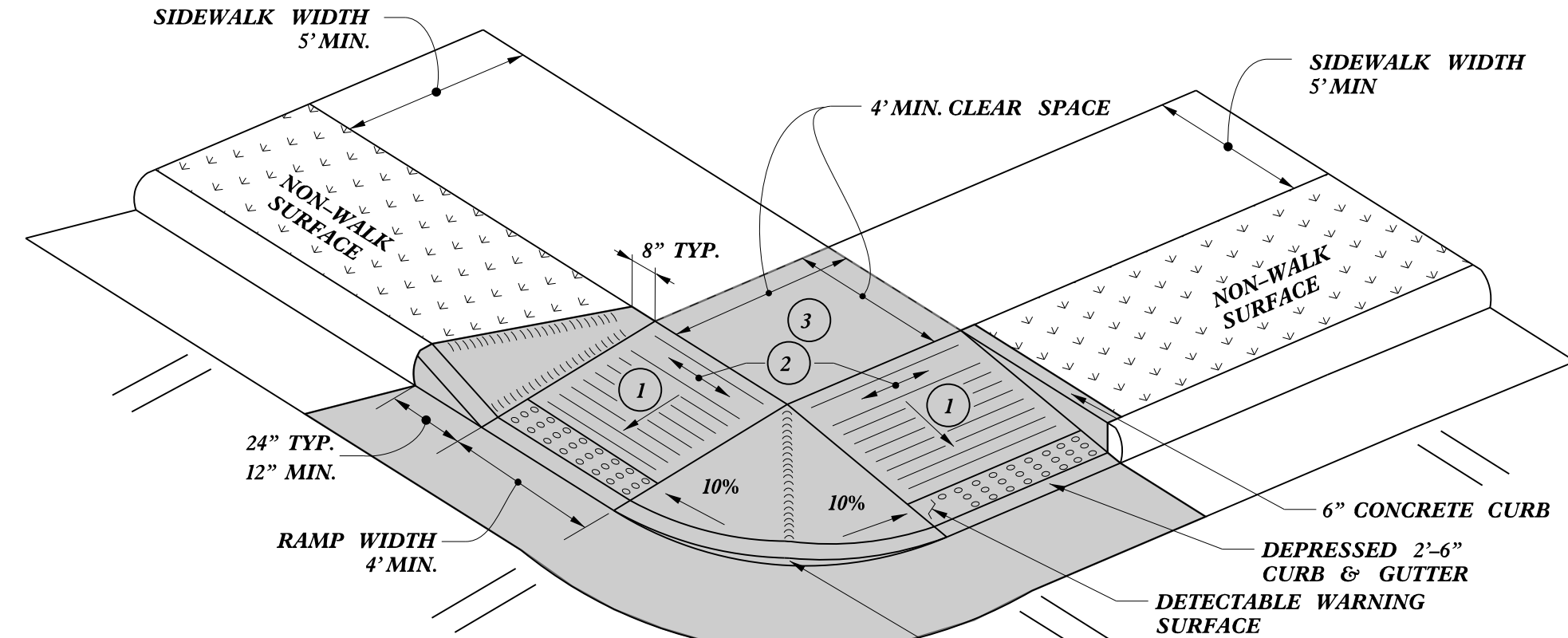
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.:stds/2012CurbRamp/CurbRampDetails.dgn	

5/14/99
C:\P\2012\STDS\2012CurbRamp\CurbRampDetails.dgn



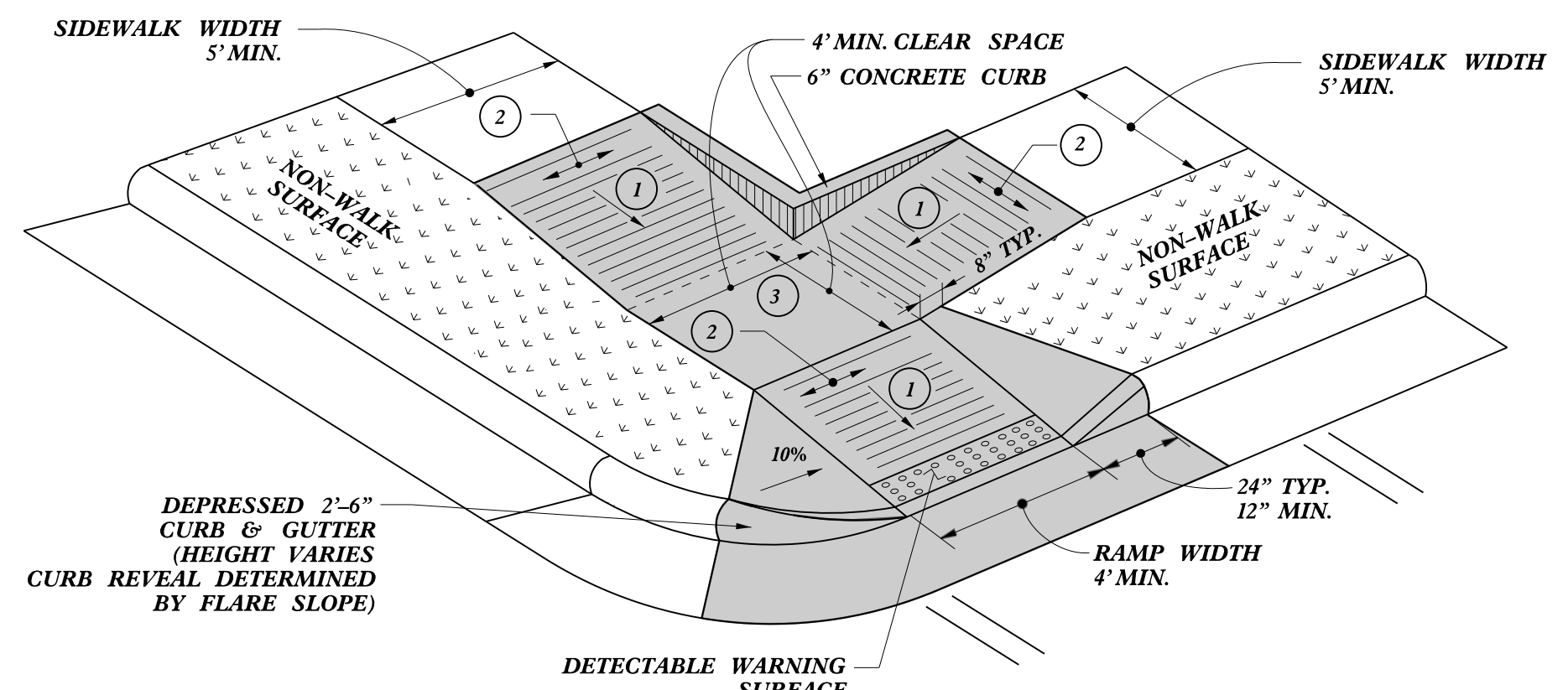
TYPE 4

DEPRESSED 2'-6" CURB & GUTTER (HEIGHT VARIES CURB REVEAL DETERMINED BY FLARE SLOPE)



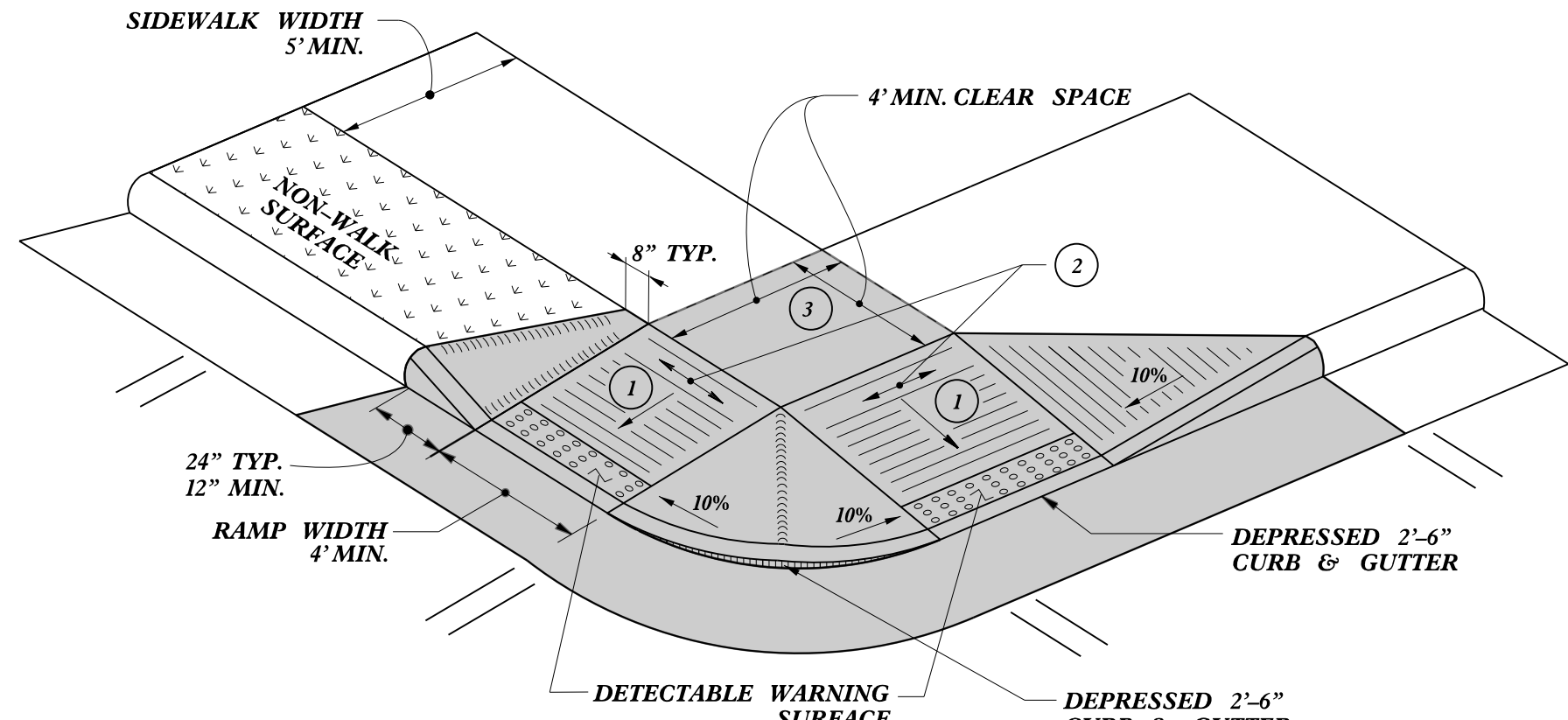
TYPE 4A

DEPRESSED 2'-6" CURB & GUTTER (HEIGHT VARIES CURB REVEAL DETERMINED BY FLARE SLOPE)



TYPE 4B

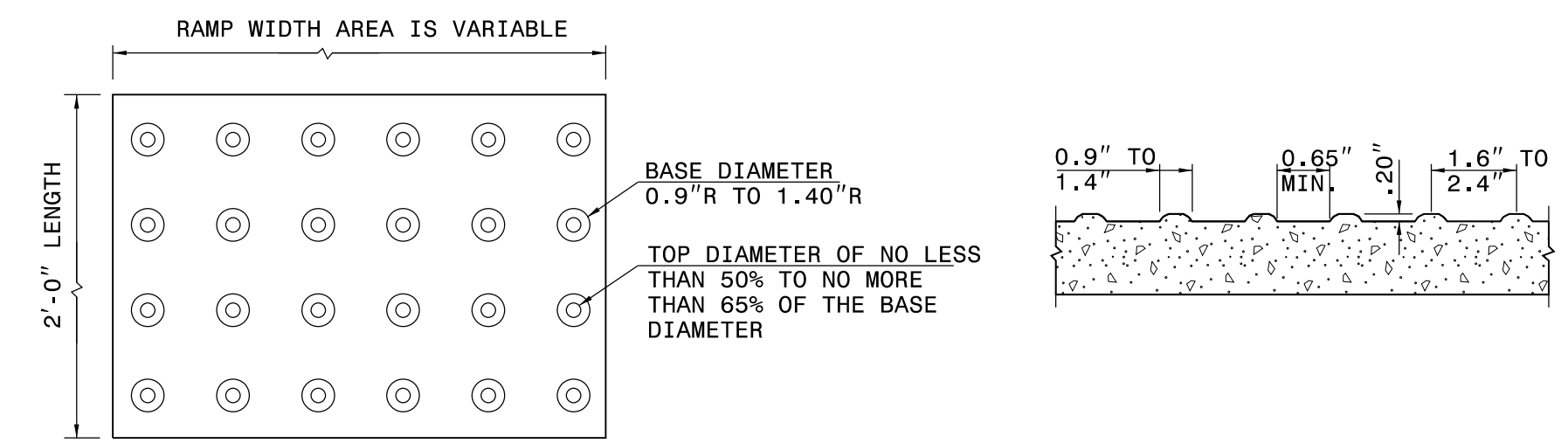
DEPRESSED 2'-6" CURB & GUTTER (HEIGHT VARIES CURB REVEAL DETERMINED BY FLARE SLOPE)



TYPE 4C

DEPRESSED 2'-6" CURB & GUTTER (HEIGHT VARIES CURB REVEAL DETERMINED BY FLARE SLOPE)

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



DETECTABLE WARNING SURFACE

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.

PAY LIMITS FOR 1 OR 2 CURB RAMPS (CALCULATE BASED ON NUMBER OF SETS OF DETECTABLE WARNING SURFACES)

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

ROADWAY STANDARD DRAWING FOR
CURB RAMP
 SHARED LANDING



SHEET 10 OF 13
848D06

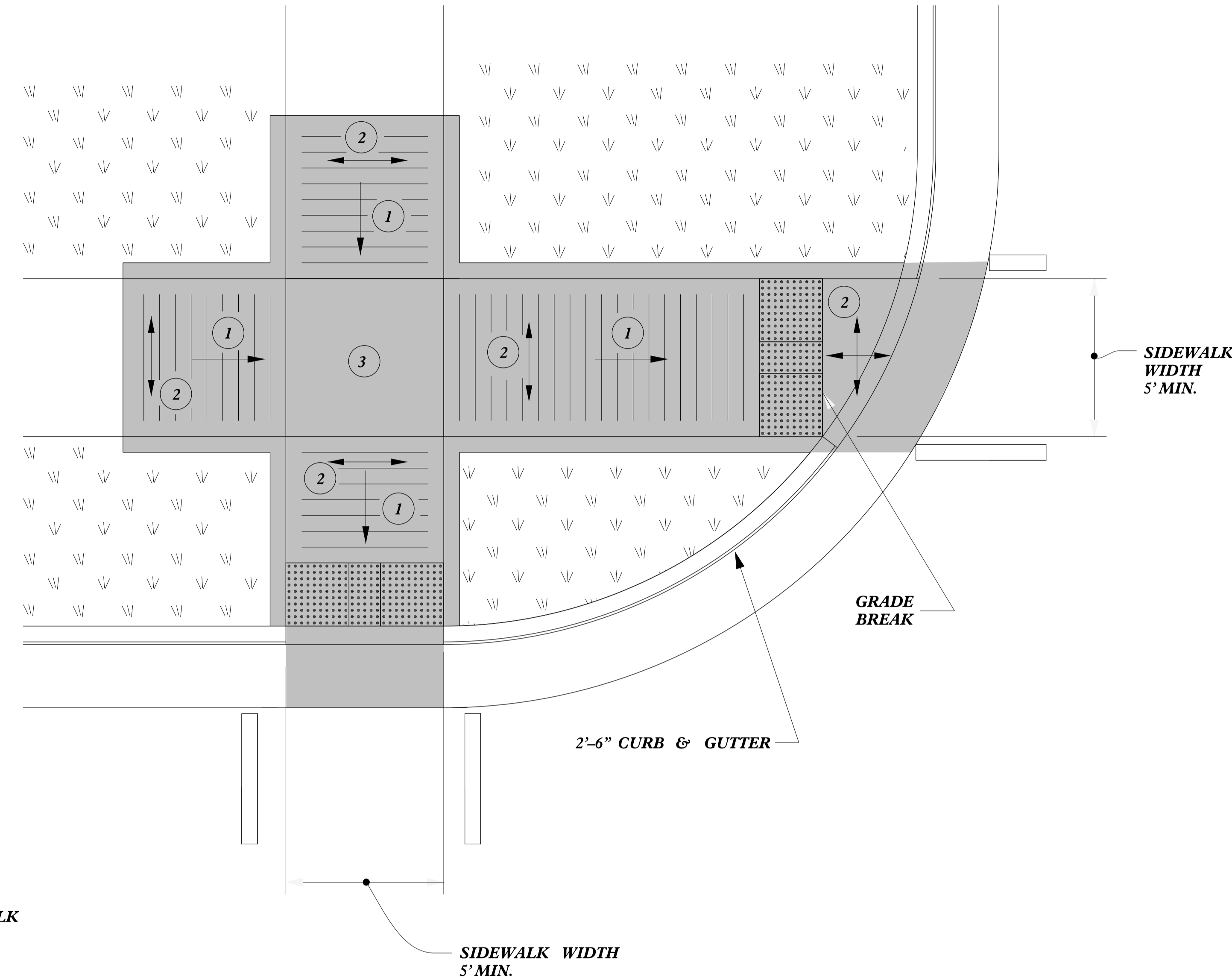
DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

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

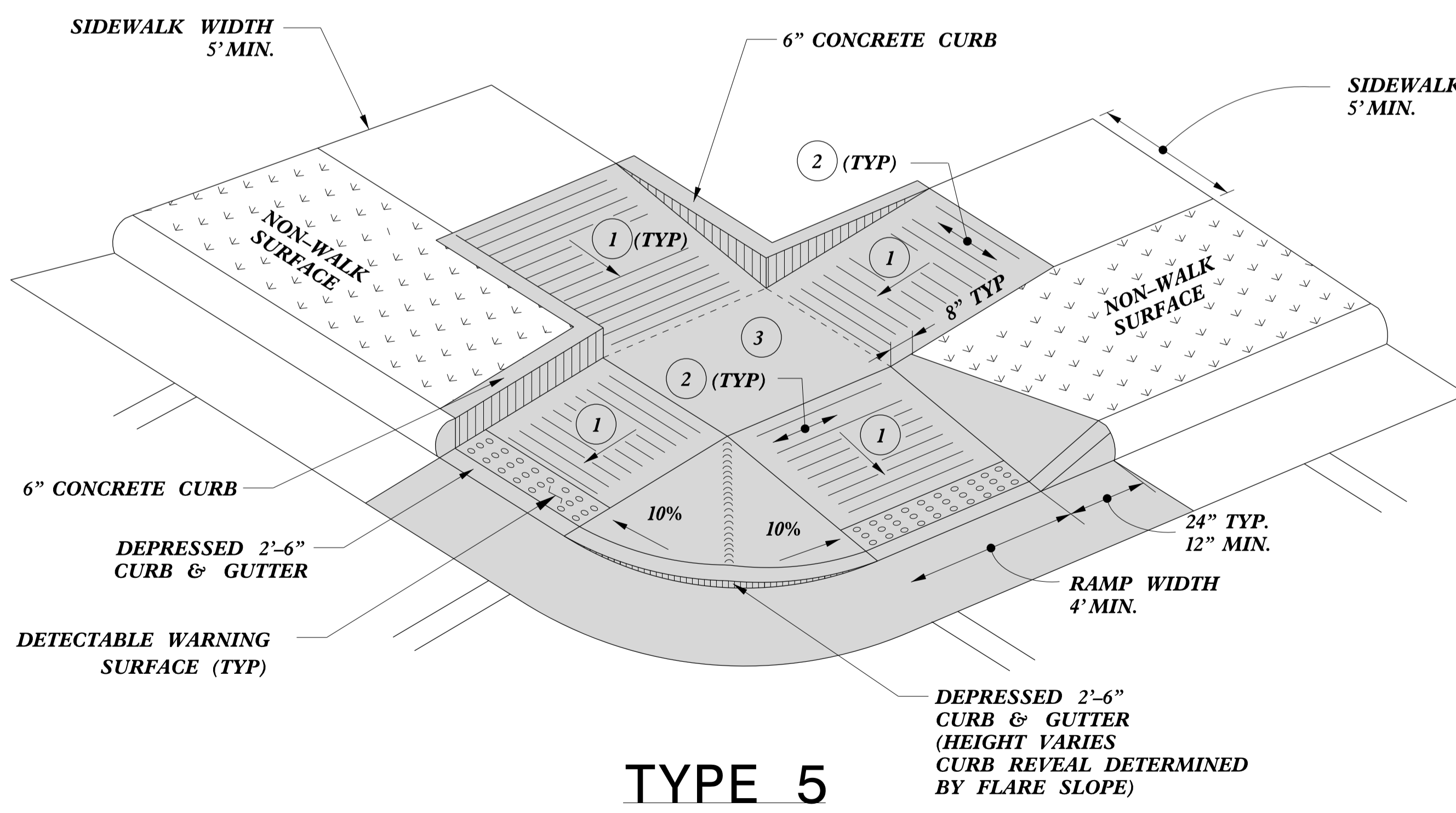
SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 12-22-2023
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC.: special_details\nmhackler\848D0610.dgn

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

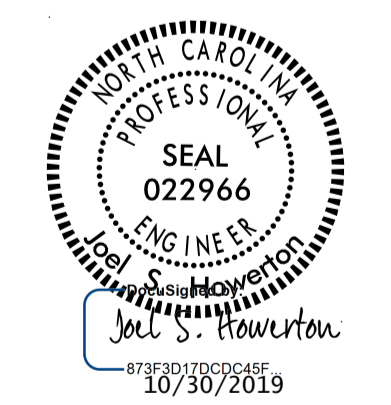


TYPE 5A



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.



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

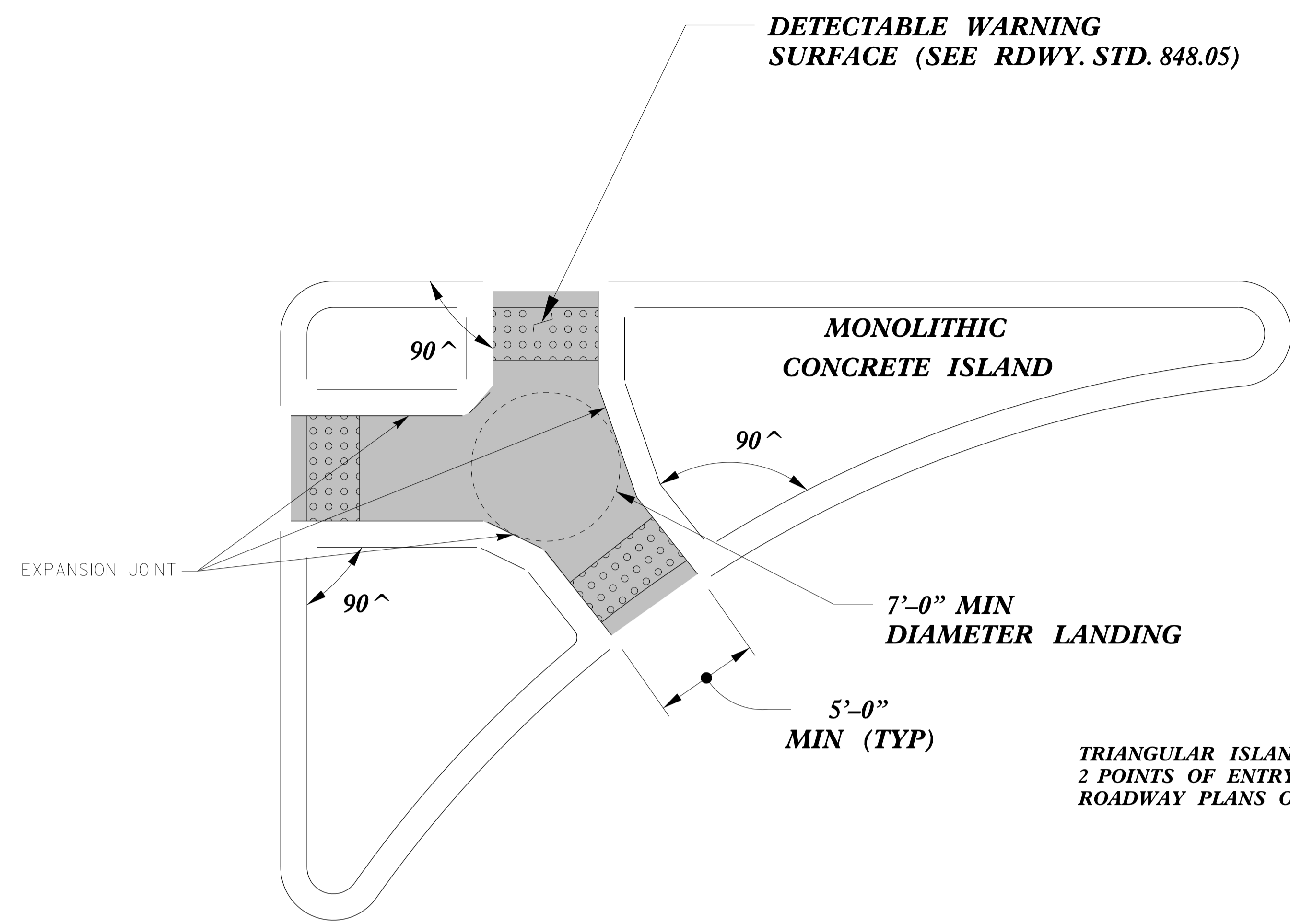
CURB RAMPS

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

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

5/14/99
 TIME\$\$\$\$
 C:\P\PROJECTS\2012\848.05\848.05.dwg
 USER: JSHWERTON
 PLOT DATE: 7/7/11 10:30:21
 PLOT BY: JSHWERTON

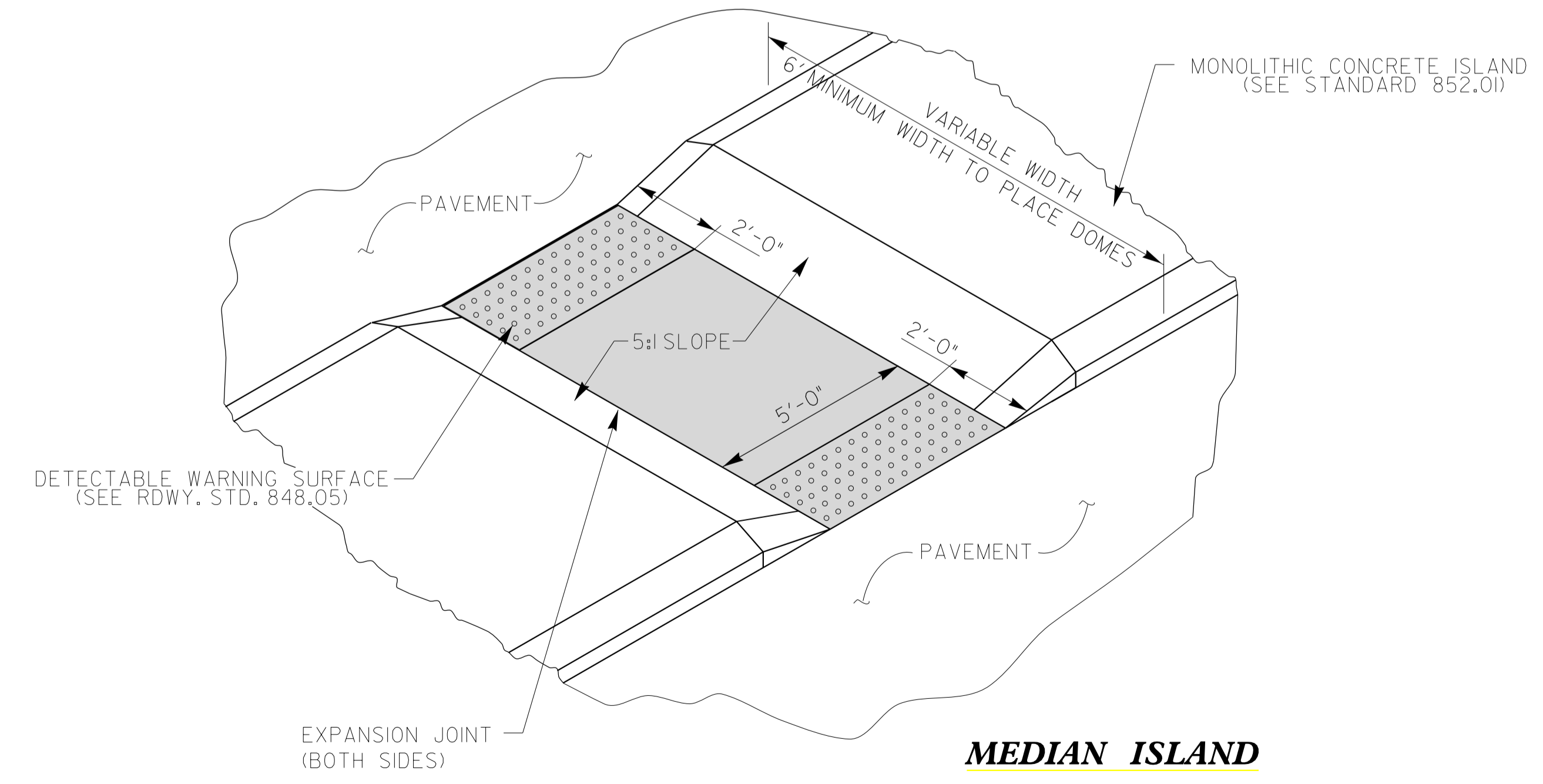
5/14/99



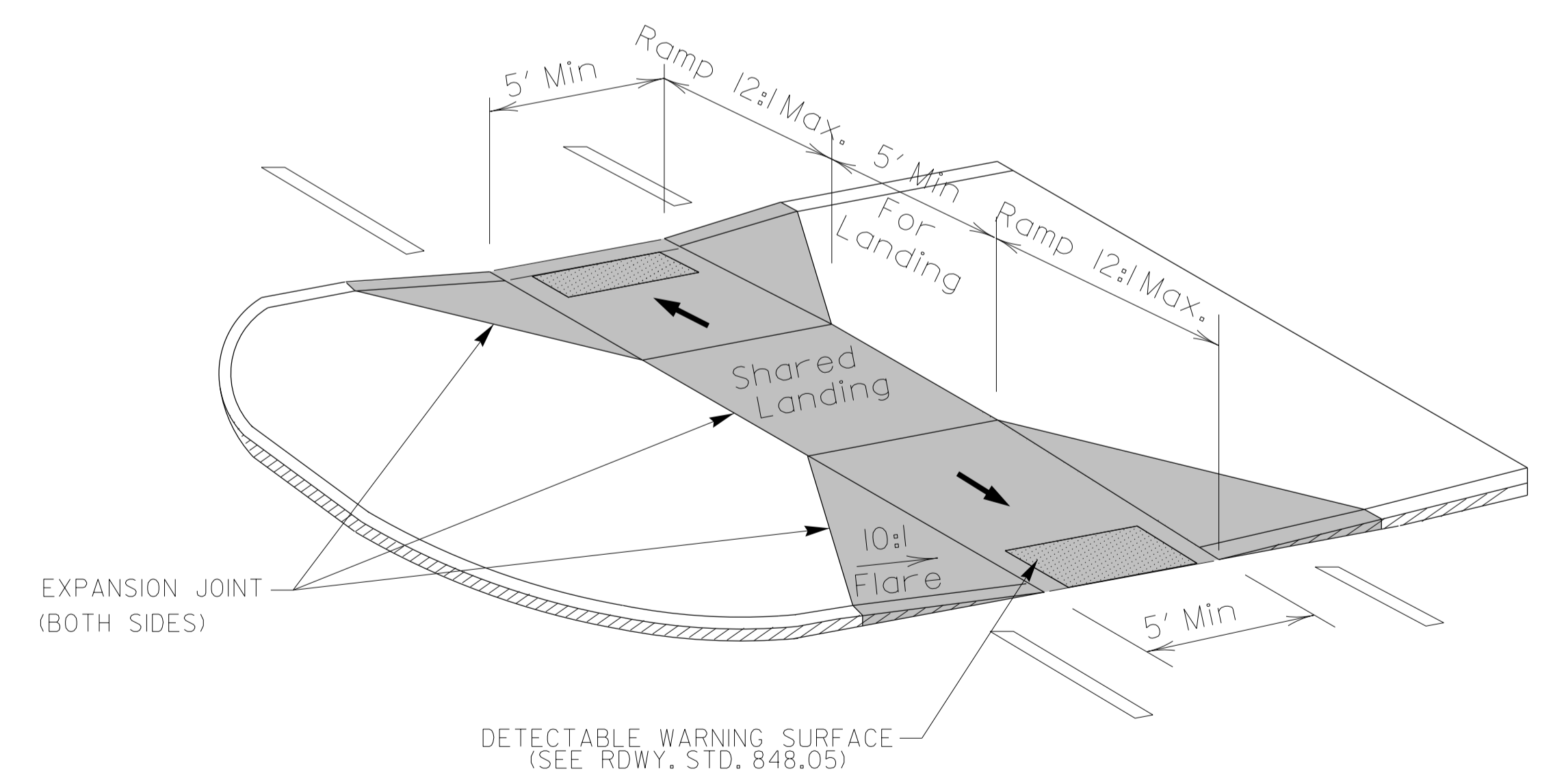
PAY LIMITS FOR 2 OR 3 CURB RAMPS
(CALCULATE BASED ON NUMBER OF
SETS OF TRUNCATED DOMES)

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**



**MEDIAN ISLAND
CURB RAMPS
TYPE 8**

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

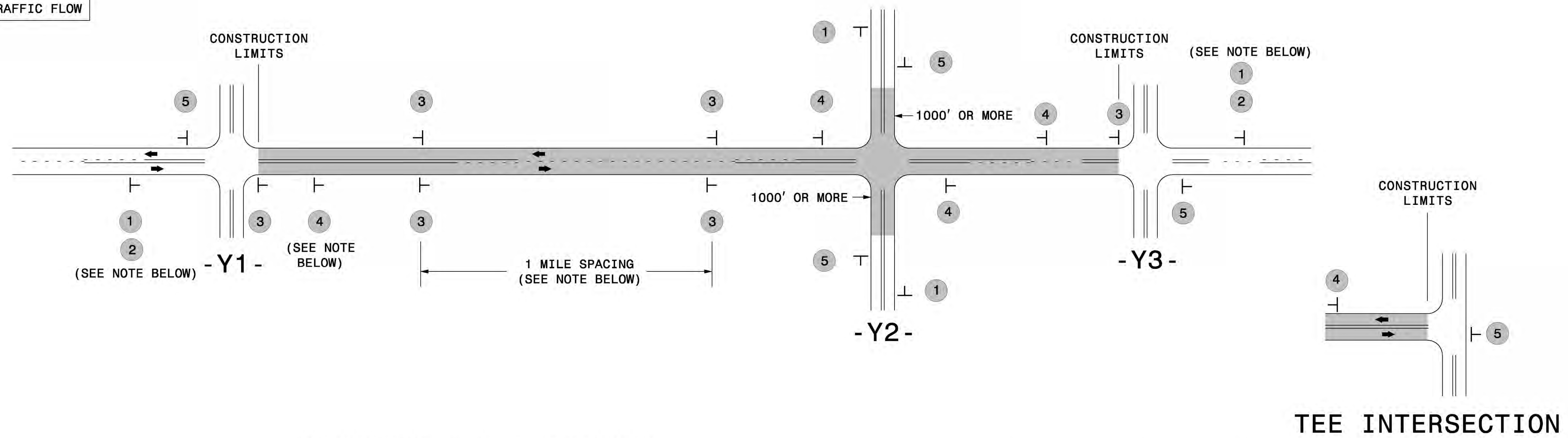
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
Median or Turn Lane Islands	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC. :stds/2012CurbRamp/CurbRampDetails.dgn	



C:\TIME\99\CON\CON\USER\NAME\$\$\$\$

SIGNING FOR RESURFACING PROJECTS

LEGEND
 ┆ STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

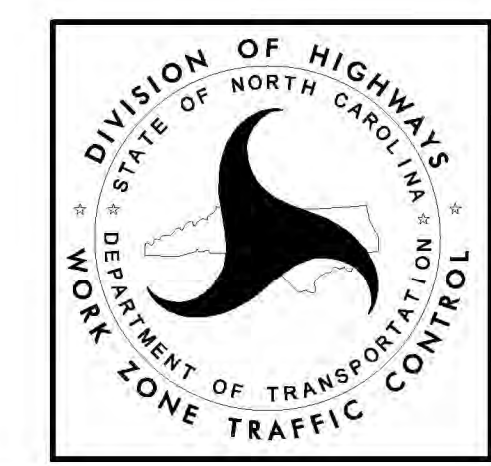
-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1		PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> LESS THAN 1000' OF RESURFACING ALONG -Y- LINE SUBDIVISION ROADS DEAD END ROADS <p>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.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> W20-1 48" X 48" PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> W20-7 A 48" X 48" PLACED 250' IN ADVANCE OF FLAGGER. </div> </div>
	2		#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		<ul style="list-style-type: none"> PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER. 	
	4		<ul style="list-style-type: none"> THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN. FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE. 	
	5		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

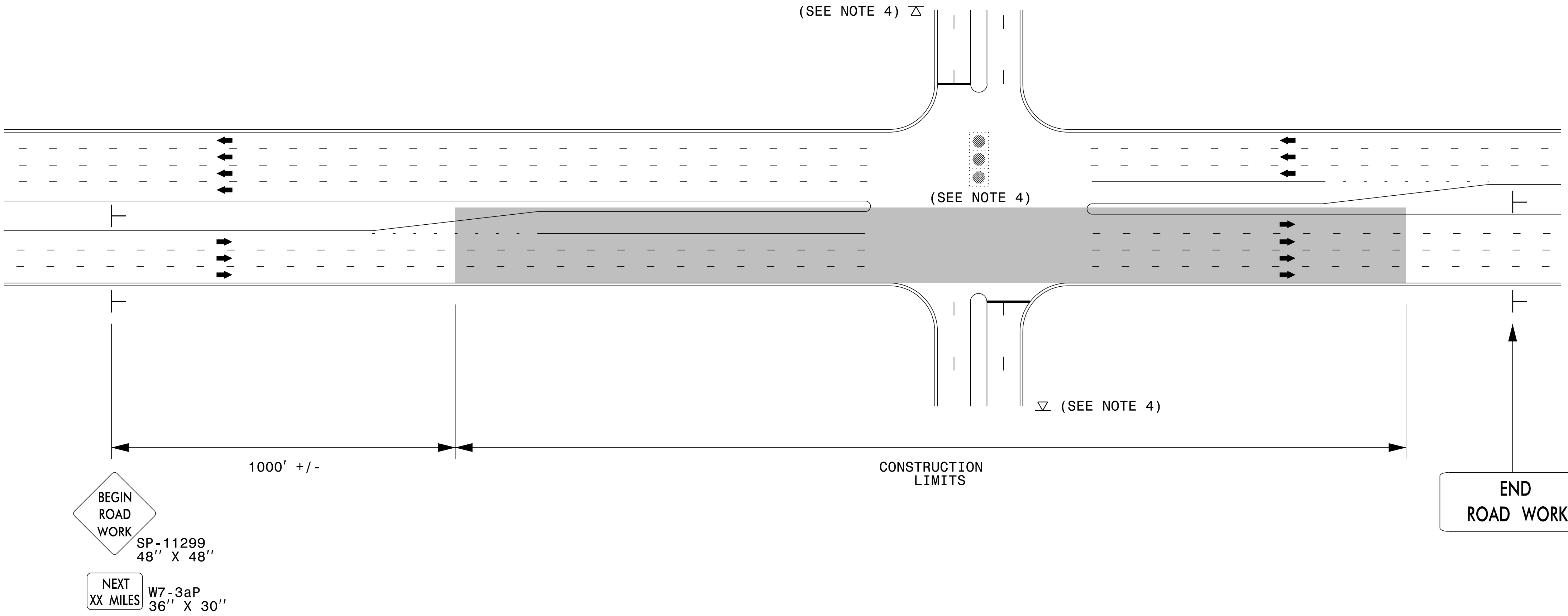
FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.



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

5/15/2017 5:11:10 PM \\NCTC\Resurfacing\2L2W & AST Resurfacing Details\Resurfacing_AdvWarn_2Ln.dgn User:keads

URBAN / SUBURBAN WORKZONES



NOTES:

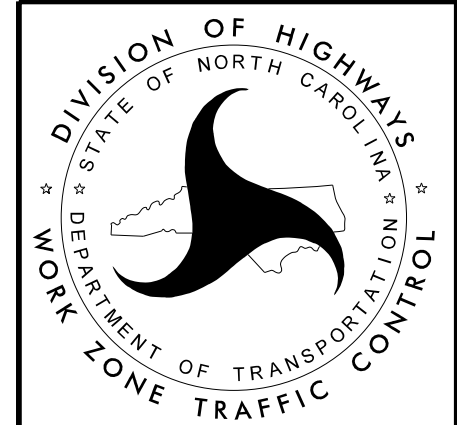
- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. 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

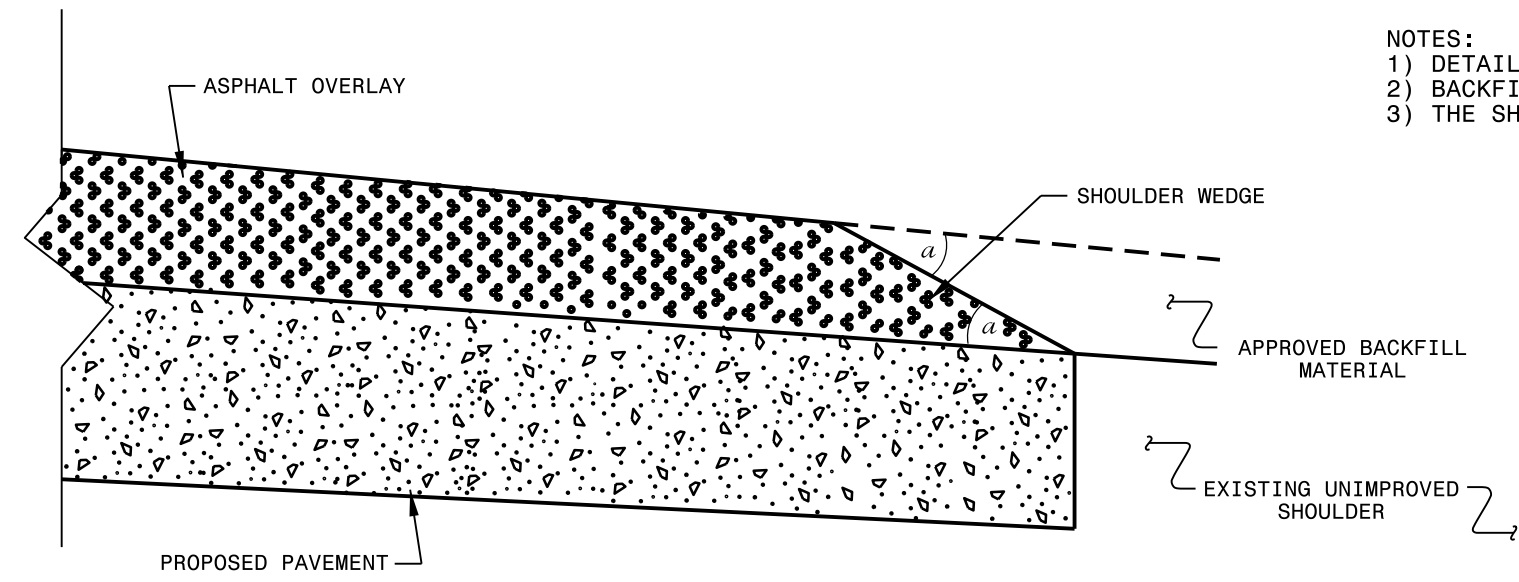
➔ DIRECTION OF TRAFFIC FLOW

END ROAD WORK
G20-2 A
48" X 24"

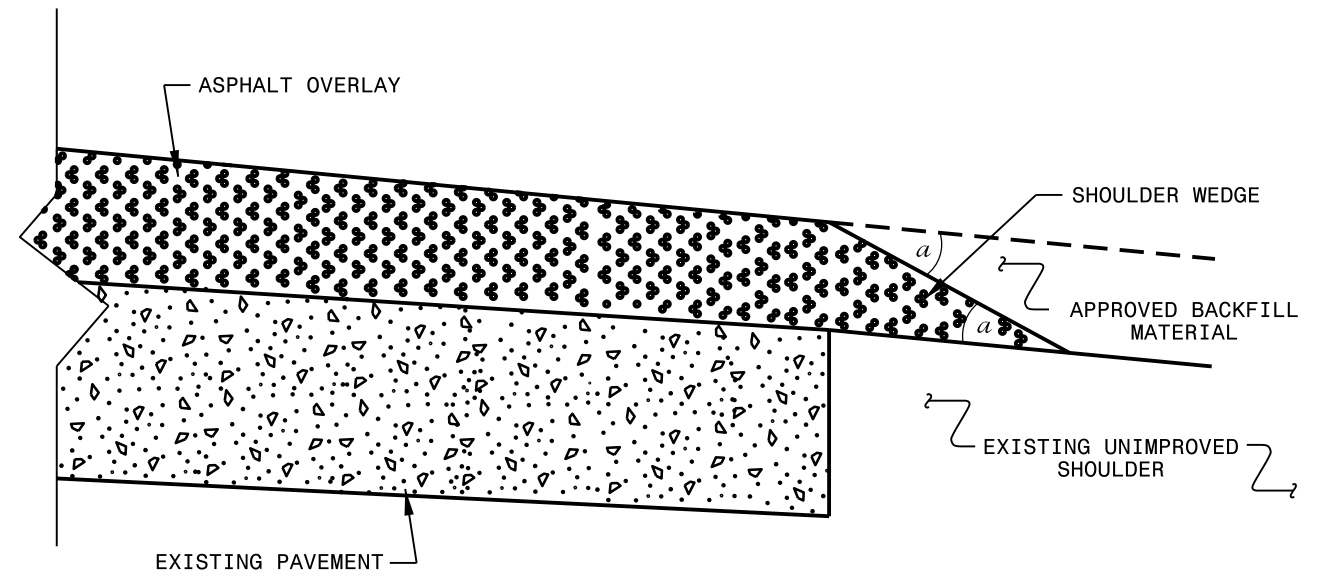


RESURFACING ADVANCE WARNING SIGNS FOR URBAN / SUBURBAN FACILITIES

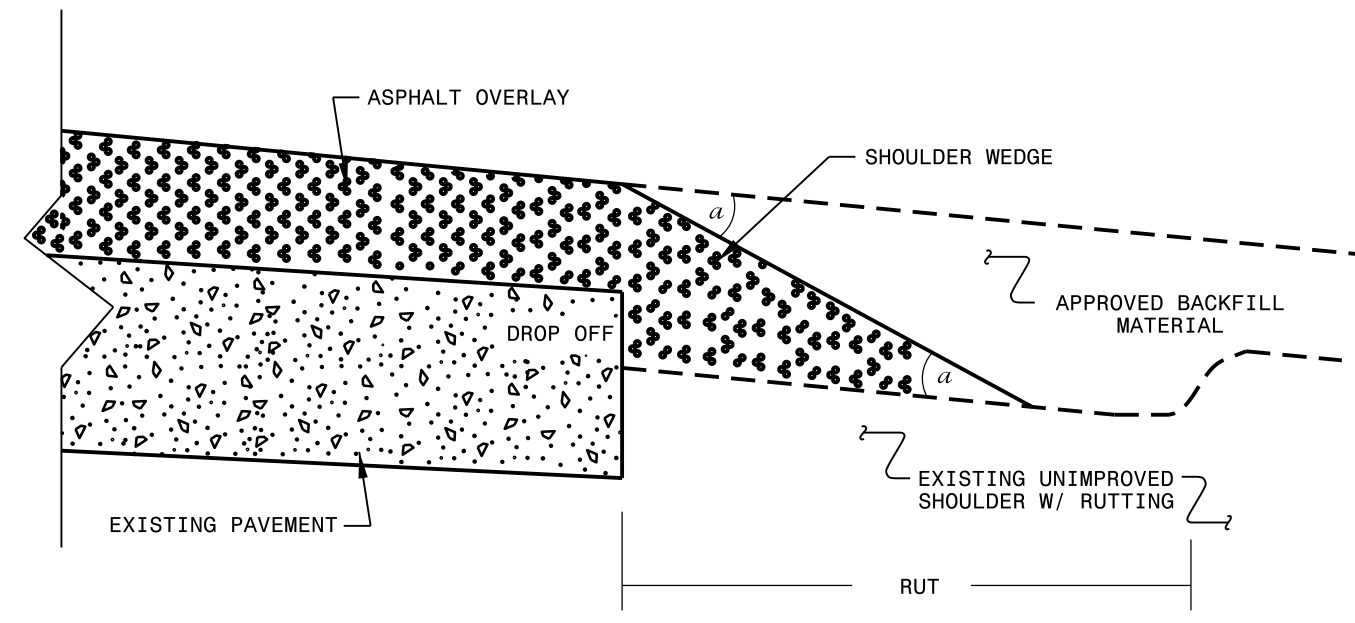
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFc AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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°

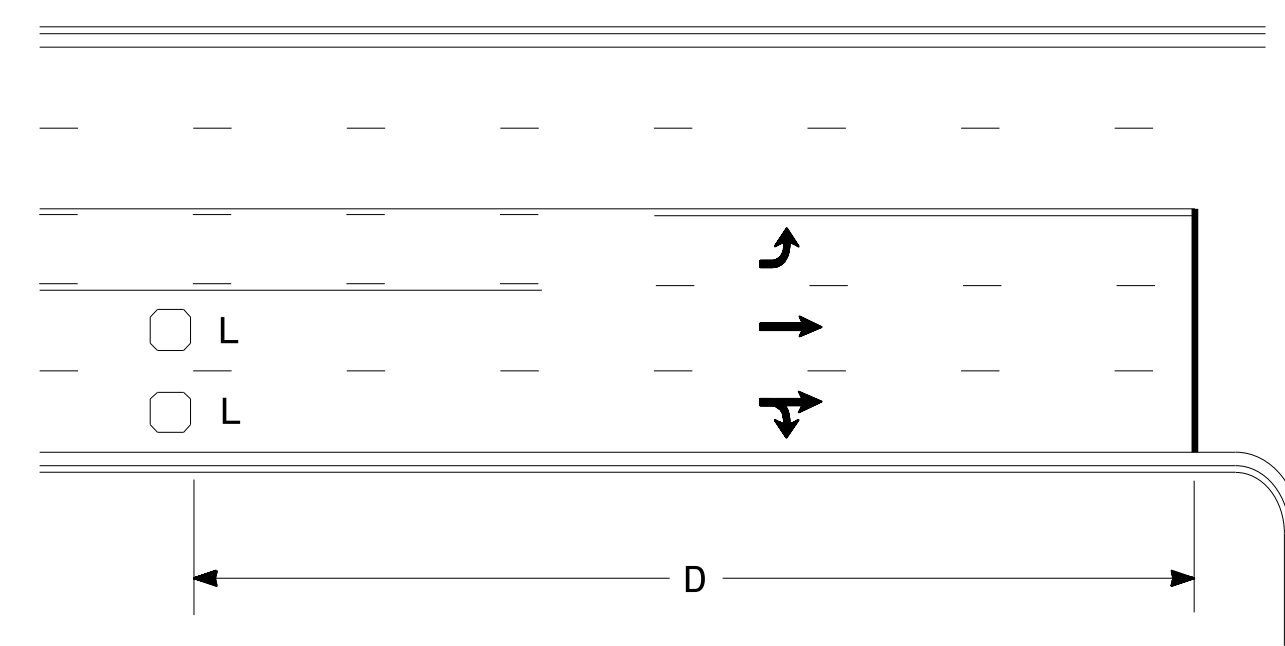
CONTRACT STANDARDS
 AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

**SHOULDER WEDGE
 DETAILS**

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

SYSTEMS DESIGN
 USER NAME

High Speed Detection (≥40 mph)

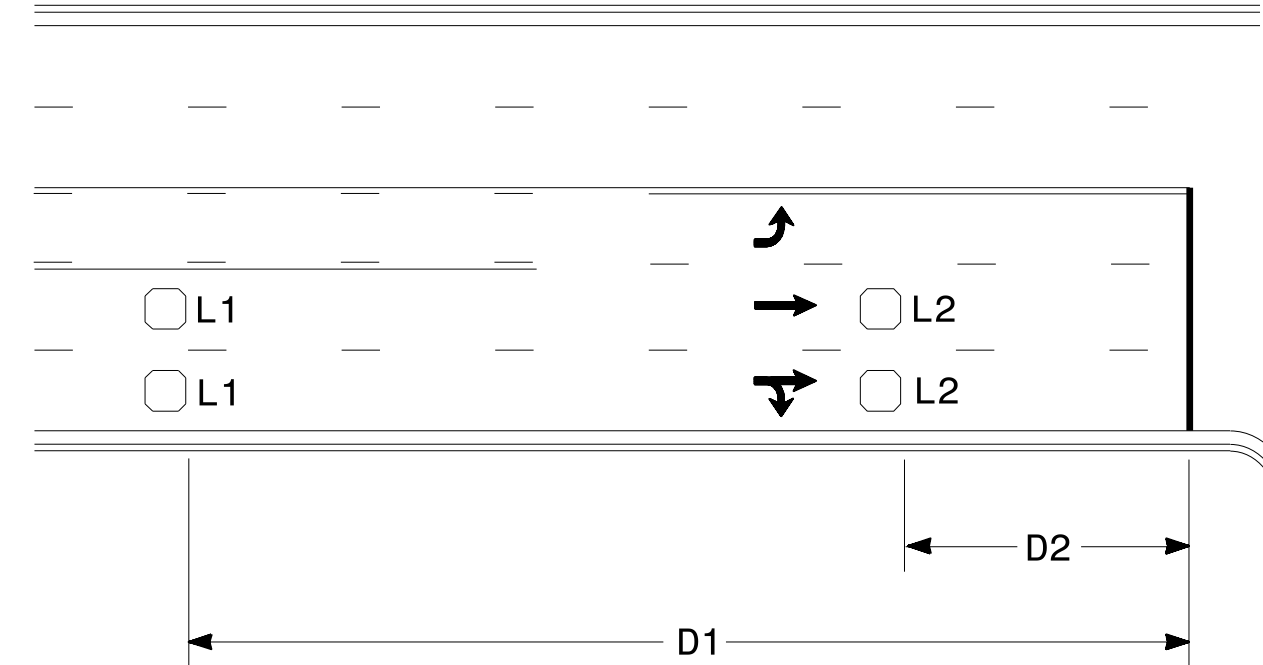


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

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

Volume Density Operation

OR

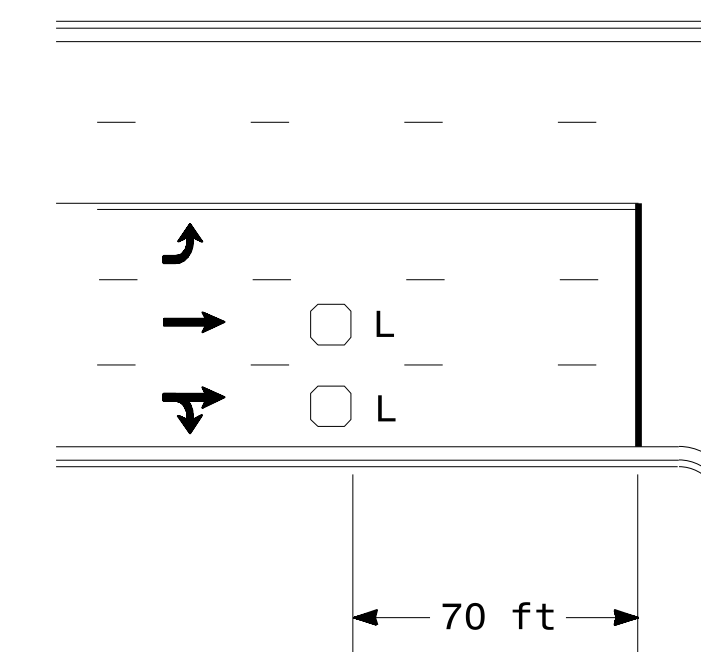


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

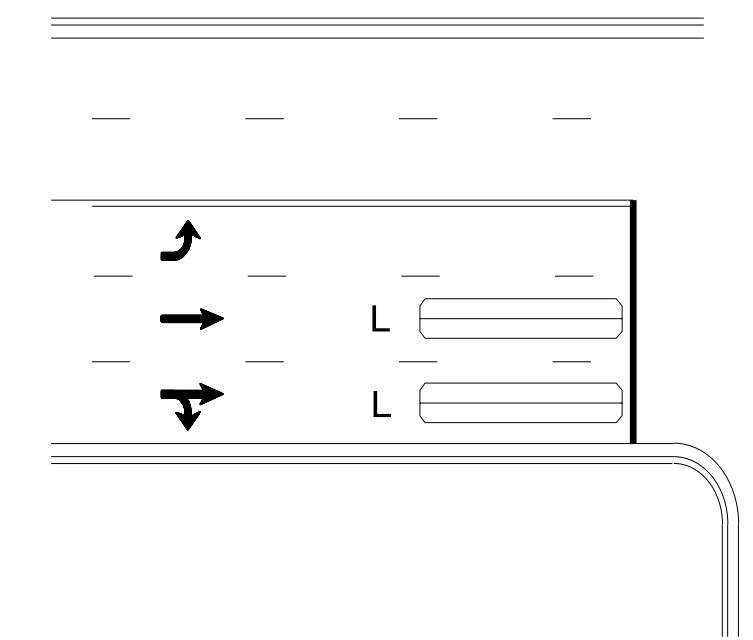
"Stretch" Operation

Low Speed Detection (≤35 mph)



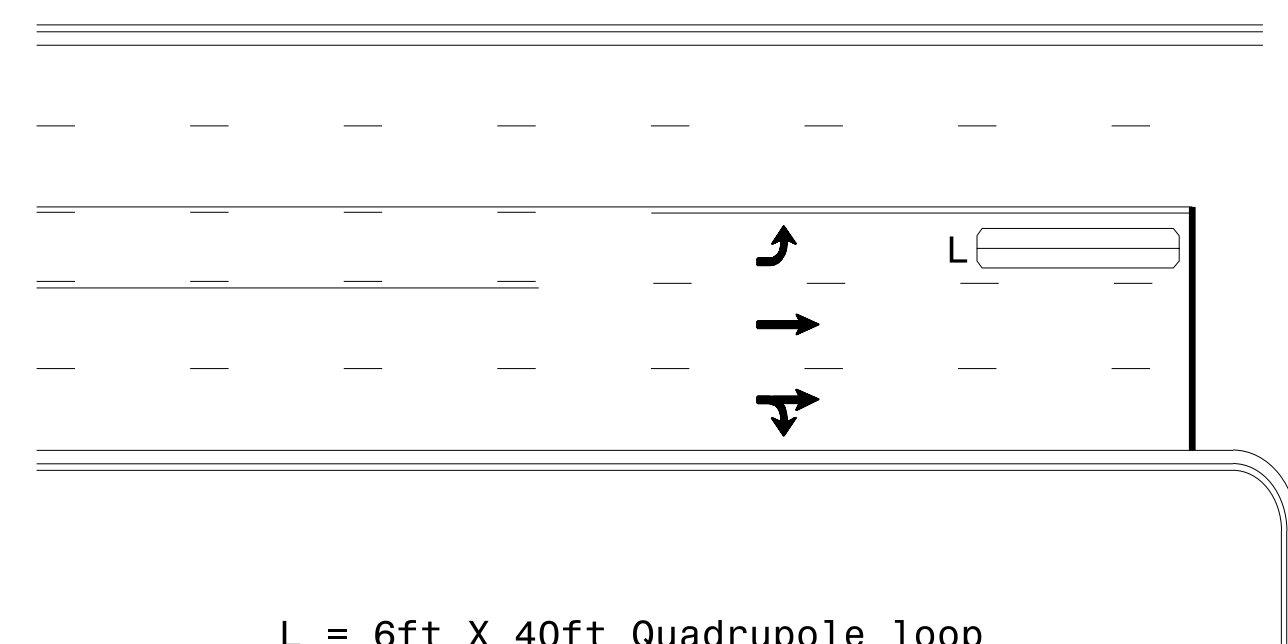
L = 6ft X 6ft
Wired in series

OR



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

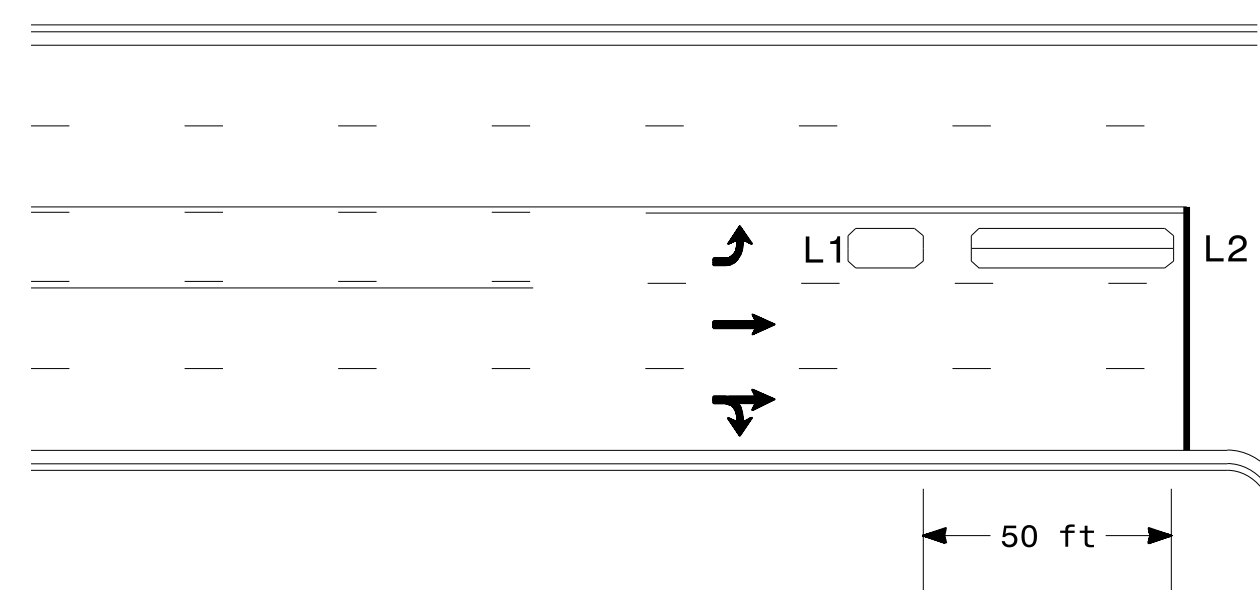
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

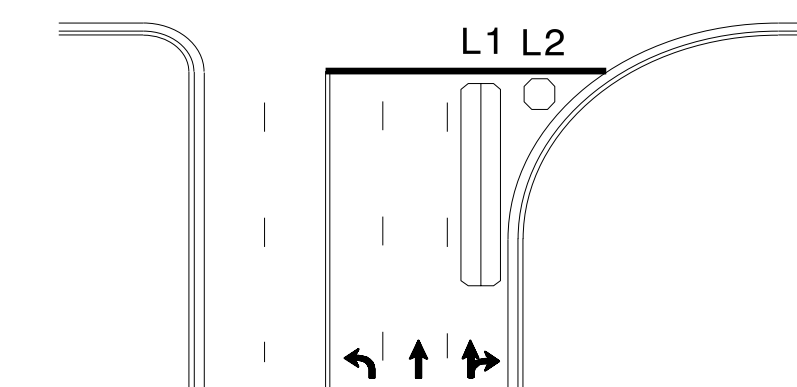
OR



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

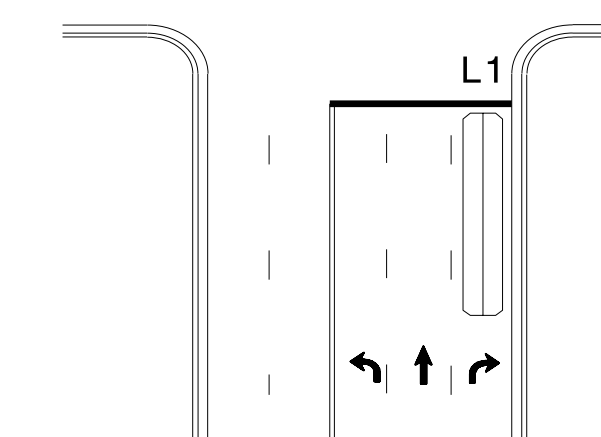
Queue Loop Detection

Right Turn Lane Detection

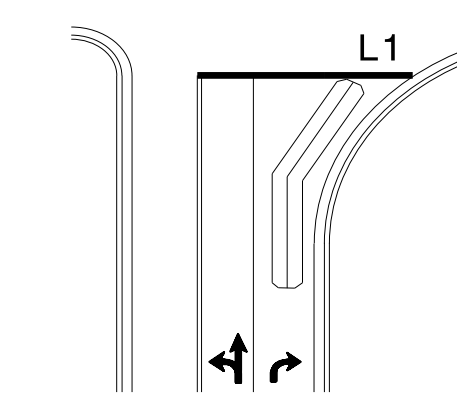


Shared Lane/
Wide Radius Turn

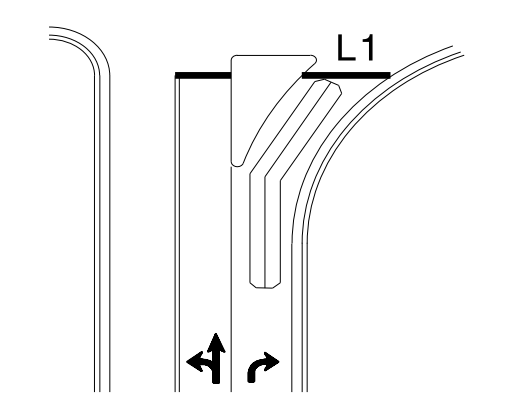
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

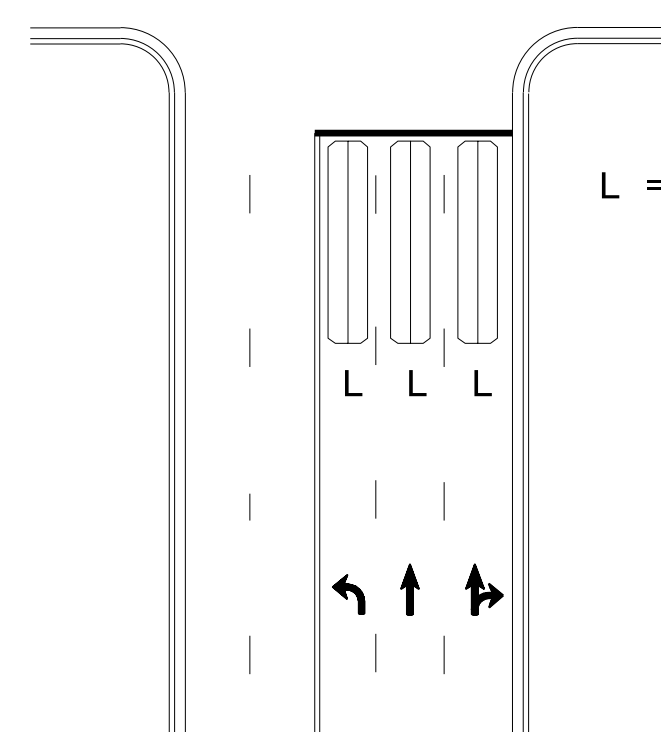


Wide Radius Turn



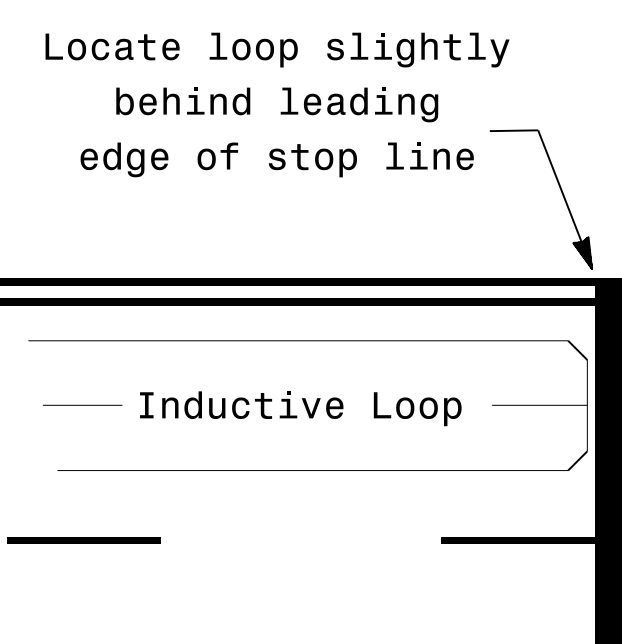
Channelized Turn

Side Street Detection



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

Presence Loop Placement at Stop Lines



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

SEAL
NORTH CAROLINA
PROFESSIONAL ENGINEER
PAMELA L. ALEXANDER
23489

Typical Signal Loop Locations	
PLAN DATE: January 2015	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
SCALE: N/A	REVISIONS
	INIT. DATE
	DATE
	SIG. INVENTORY NO.

PROJECT NO.	SHEET NO.	TOTAL NO.
2025CPT.10.07.10601		
2025CPT.10.07.20601		

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	BEGIN MP	END MP	1220000000-E	1245000000-E	1260000000-E	1297000000-E	1330000000-E	1519000000-E	1523000000-E	1524200000-E	1575000000-E	1704000000-E	2605000000-N	2612000000-E	2612300000-N	2830000000-N	2845000000-N	5255000000-N	6000000000-E	6009000000-E	6012000000-E	6071002000-E	6071010000-E	6084000000-E	7444000000-E							
														INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	1 1/2" MILLING	INCIDENTAL MILLING	SURFACE COURSE, \$9.58	SURFACE COURSE, \$9.58	SURFACE COURSE, \$9.50	ASPHALT BINDER FOR PLANT MIX	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	CONCRETE CURB RAMPS	6" DRIVEWAYS	RETROFIT EXISTING CONCRETE CURB RAMPS	ADI. OF MANHOLES	ADI. OF METER OR VALVE BOX	PORTABLE LIGHTING	TEMPORARY SILT FENCE	STONE FOR EROSION CONTROL, CLASS B	SEDIMENT CONTROL STONE	FLOCCULANT	WATTLE	SEED & MULCHING	INDUCTIVE LOOP SAWCUT						
										MI	FT			TONS	SMI	TON	SY	SY	TONS	TONS	TON	TONS	TONS	EA	SY	EA	EA	EA	LS	LF	TN	TN	LB	LF	AC	LF							
2025CPT.10.07.10601	Mecklenburg	1	NC-73 / (30000073)	FROM LINCOLN COUNTY LINE TO BROWN MILL ROAD	1	2	ZWU	NO	NO	1.96	24-46	0	1.96	25	3.92	604		769			3,008	19	174	400					0.20	294	39	20	1	60	1.2	942							
TOTAL FOR MAP NO. 1										1.96	24-46			25	3.92	604		769			3,008	19	174	400					0.20	294	39	20	1	60	1.2	942							
2025CPT.10.07.10601	Mecklenburg	2	NC-160 / WEST BLVD (30000160)	FROM WALTON ROAD TO S. TRYON ST.	2,3,4	4	MU	NO	NO	1.77	40-64	13.02	14.79					47,770	3,141			4,705	29	273	600	4			5	10	13	0.20						3,300					
TOTAL FOR MAP NO. 2										1.77	40-64							47,770	3,141			4,705	29	273	600	4			5	10	13	0.20									3,300		
2025CPT.10.07.10601	Mecklenburg	3	NC-160 / STEELE CREEK ROAD (30600160)	FROM 327 FT PRIOR TO S. TRYON ST. TO STEELCROFT PKWY	5	4	MD	NO	NO	0.32	32-52	12.67	12.99					6,197		573			41		150		1	3	2	0.20							1,074						
TOTAL FOR MAP NO. 3										0.32	32-52							6,197		573		41		150		1	3	2	0.20											1,074			
TOTAL FOR PROJ NO. 2025CPT.10.07.10601										4.05				25	3.92	604		53,967	3,910			573	7,713	89	447	1,150	4	50	6	13	15	0.60	294	39	20	1	60	1.2	5,316				
2025CPT.10.07.20601	Mecklenburg	4	SR-2420 / EAST ROCKY RIVER RD (40002420)	FROM KISTLER FARM ROAD TO DAVIDSON-CONCORD ROAD	6	2	ZWU	NO	NO	1.36	20	1.28	2.64					17,192		1,589			106		250																		
TOTAL FOR MAP NO. 4										1.36	20			85				17,192		1,589		106		250						40													
2025CPT.10.07.20601	Mecklenburg	5	SR-1116 / SHOPTON RD WEST (40001116)	FROM CATAWBA RIVER BRIDGE TO WILDLIFE ROAD	7	2	ZWD	NO	NO	0.93	22-35	1.72	2.65					18,421	847	1,672			109		150				0.20	140	18	9	1	30	0.6								
TOTAL FOR MAP NO. 5										0.93	22-35							18,421	847	1,672		109		150				0.20	140	18	9	1	30	0.6									
2025CPT.10.07.20601	Mecklenburg	6	SR-2117 / HAMBRIGHT RD (40002117)	FROM END OF ISLAND AT BLYTHE SCHOOL TO NC 21 STATESVILLE ROAD	8,9,10	2	ZWU	NO	NO	0.45	24-80	0.8	1.25					12,740	1,188	1,157			75		150			0.20									0.2	340					
TOTAL FOR MAP NO. 6										0.45	24-80							12,740	1,188	1,157		75		150			0.20												0.2	340			
2025CPT.10.07.20601	Mecklenburg	7	SR-2129 / JIM KIDD RD (40002129)	FROM BEATTIES FORD ROAD TO END OF MAINTENANCE	11	2	ZWU	NO	NO	1.18	21	0	1.18	90	2.36	454	16,517	940	1,499				97		150	30					2			170	24	12	1	30	0.7				
TOTAL FOR MAP NO. 7										1.18	21			90	2.36	454	16,517	940	1,499			97		150	30			2			170	24	12	1	30	0.7							
2025CPT.10.07.20601	Mecklenburg	8	SR-2433 / MAYES RD (40002433)	FROM WESTMORELAND RD TO SAM FURR RD	11	2	ZWU	NO	NO	1.12	21	1.01	2.13	100	2.24	345	15,018	940	1,363				89		150	90							170	22	11	1	40	0.7					
TOTAL FOR MAP NO. 8										1.12	21			100	2.24	345	15,018	940	1,363			89		150	90									170	22	11	1	40	0.7				
TOTAL FOR PROJ NO. 2025CPT.10.07.20601										5.04				275	7.16	1,194	79,887	3,915	5,691	1,589		476		850		160			1	3	0.40	480	64	32	3	100	2.2	340					
GRAND TOTAL										9.09				300	11.08	1,798	133,854	7,825	5,691	2,162		7,713		565		447		2,000	4	210		6	14	18	1.00	774	103	52	4	160	3.4	5,656	

