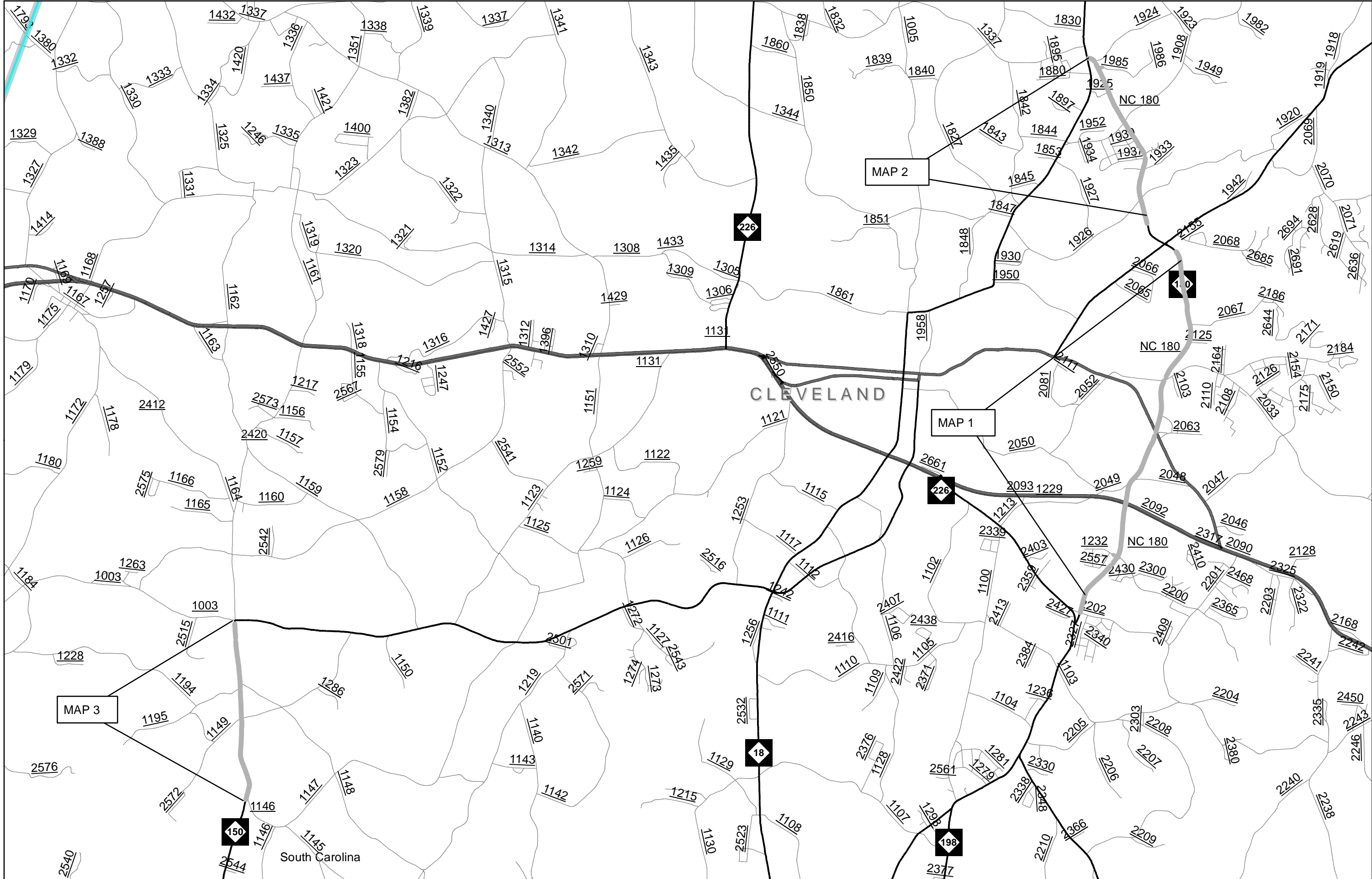


**This electronic collection of documents is provided
for the convenience of the user
and is Not a Certified Document –**

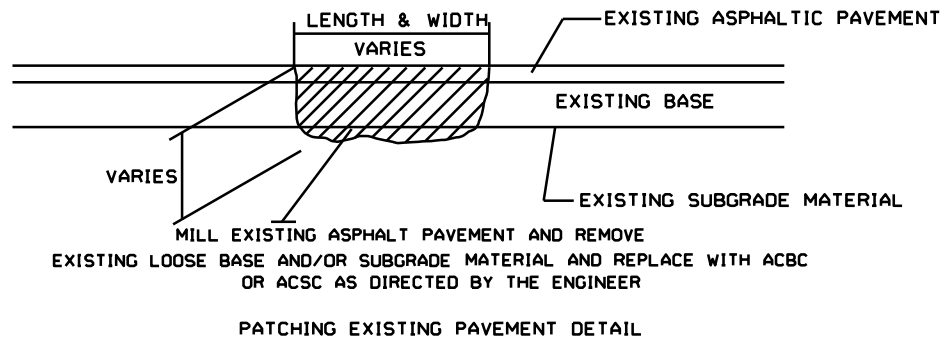
**The documents contained herein were originally issued
and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

**This file or an individual page
shall not be considered a certified document.**



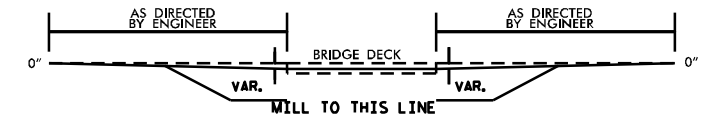
PAVEMENT SCHEDULE	
Y	SHOULDER RECONSTRUCTION
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
V1	MILL ASPHALT PAVEMENT APPROX. 1½" AS DIRECTED BY THE ENGINEER.

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

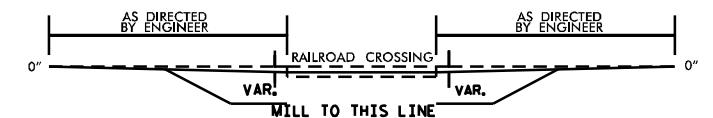


PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
CLEVELAND CO. 2017-2018	3	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
2017CPT.12.01.10231		

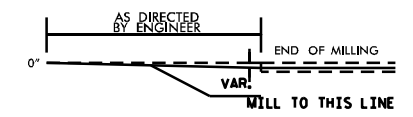
INCIDENTAL MILLING DETAILS



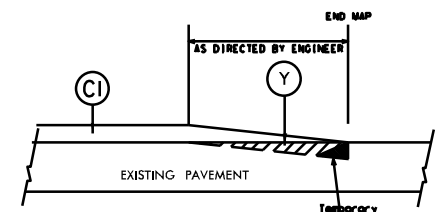
BRIDGE PROFILE



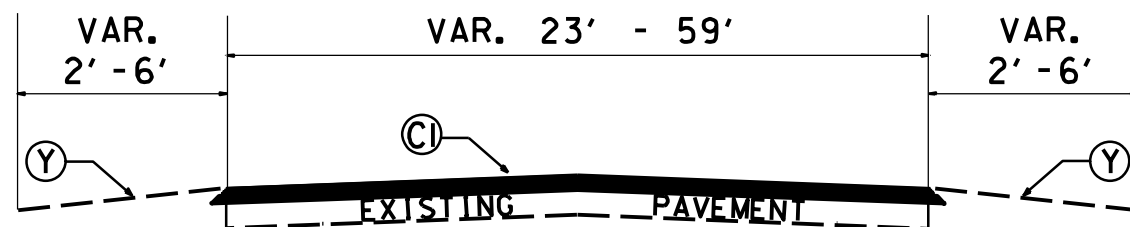
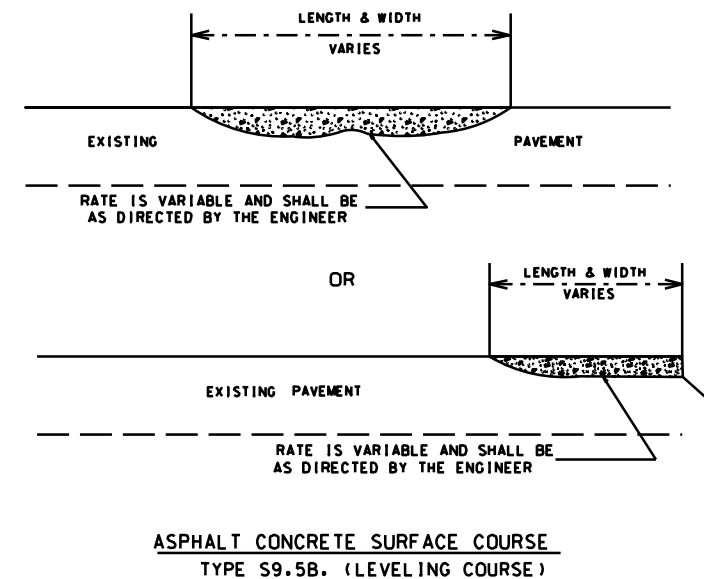
RAILROAD PROFILE



END OF MILLING PROFILE

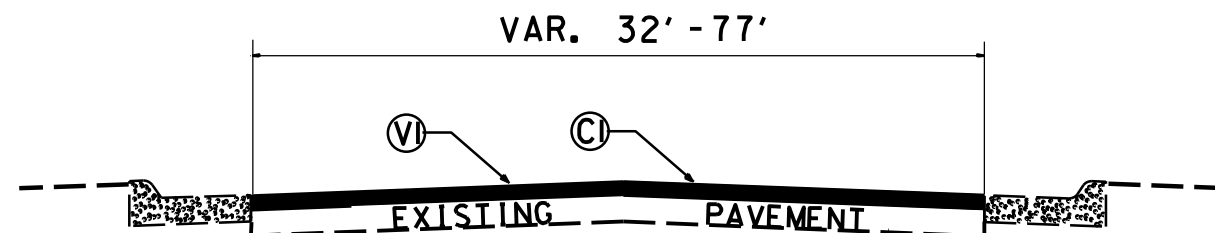


TIE-IN MILLING DETAIL



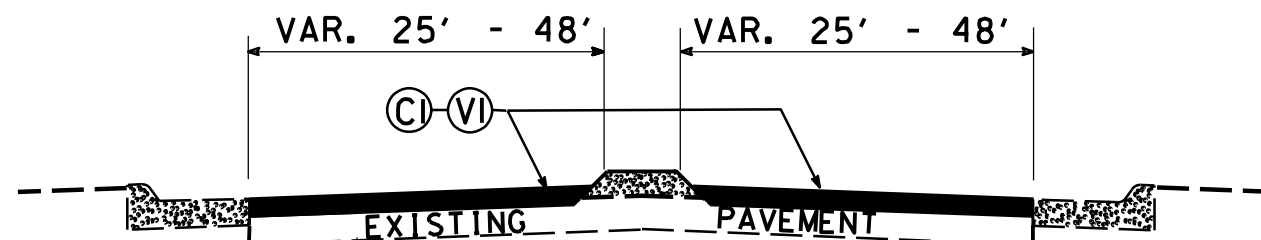
TYPICAL SECTION NO. 1

(MAP 1, 2 & 3)



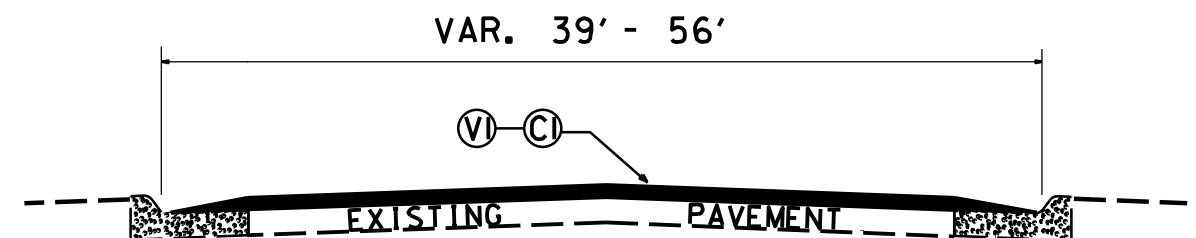
TYPICAL SECTION NO. 2

(MAP 1 & 3)



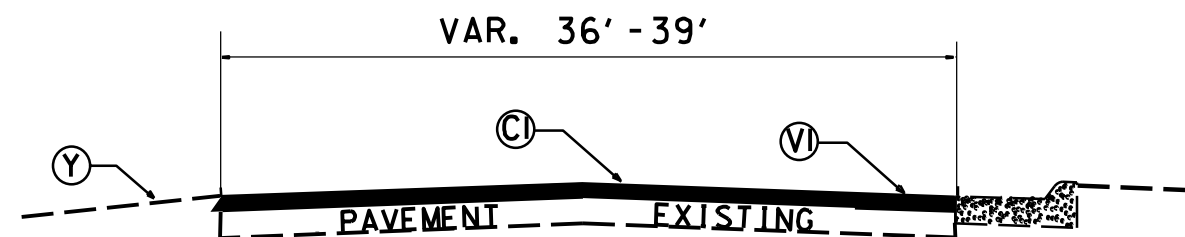
TYPICAL SECTION NO. 3

(MAP 1)



TYPICAL SECTION NO. 4

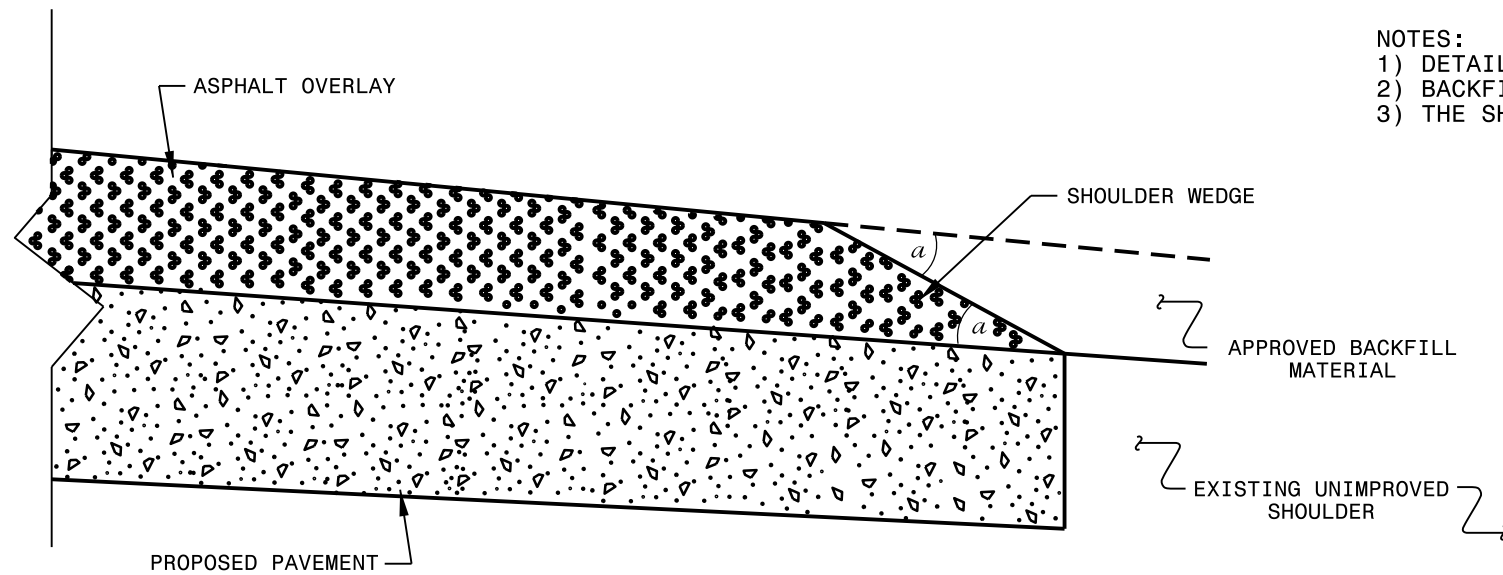
(MAP 3)



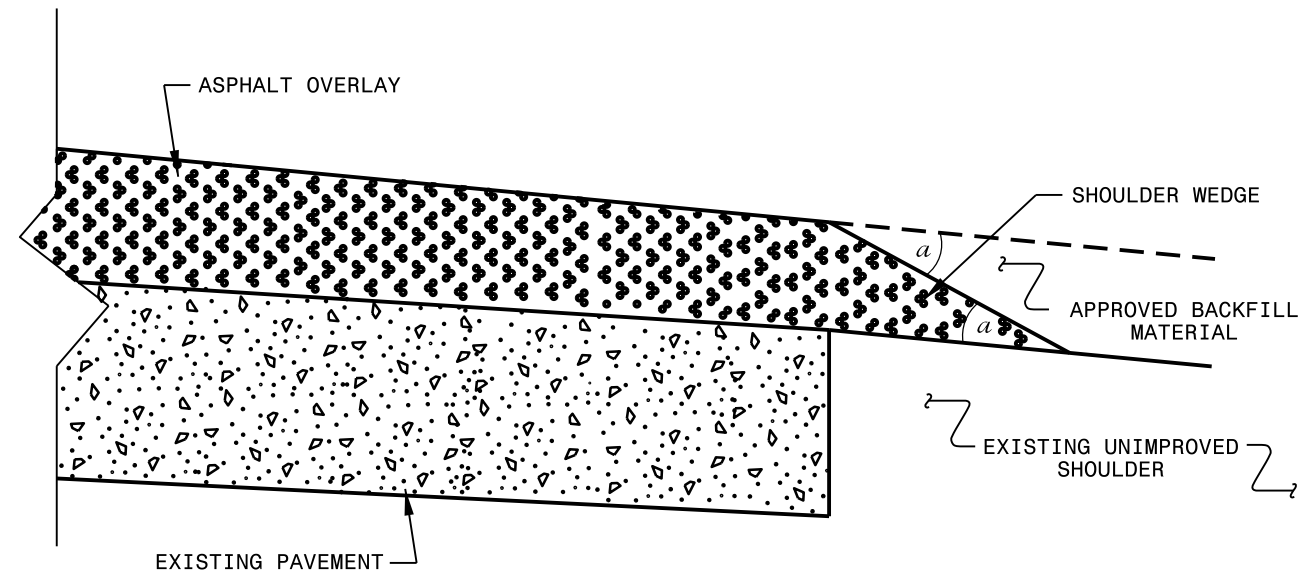
TYPICAL SECTION NO. 5

(MAP 3)

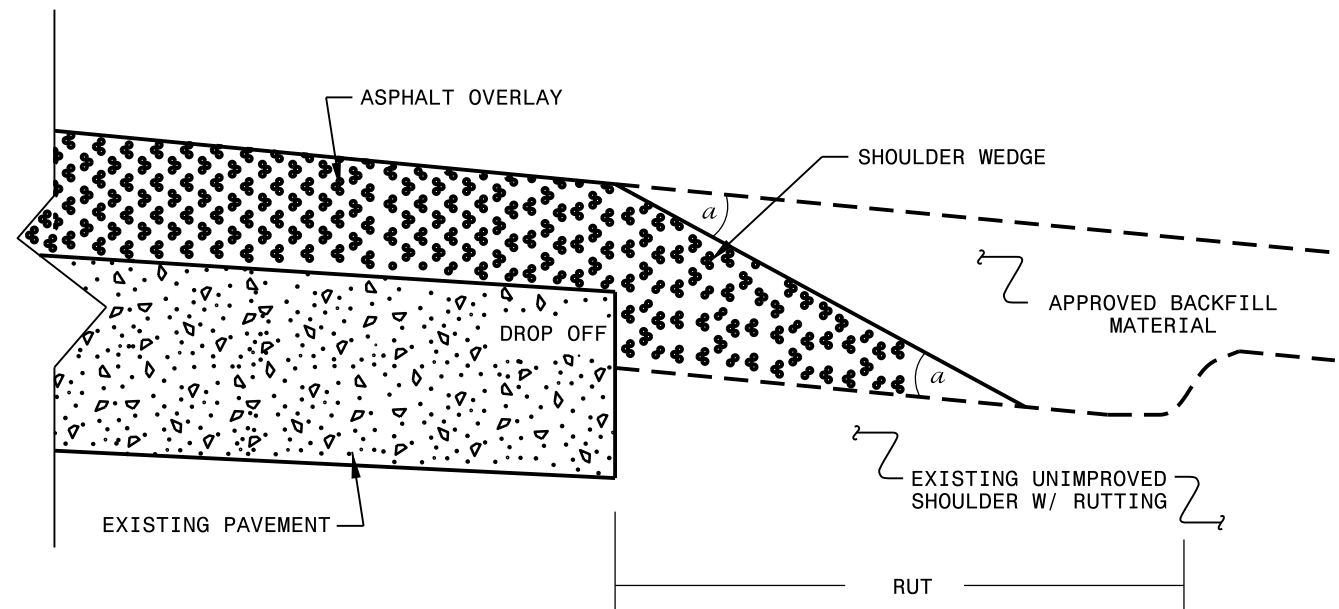
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFc AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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



SHOULDER WEDGE DETAIL
(Resurfacing Projects w/ NO Widening)



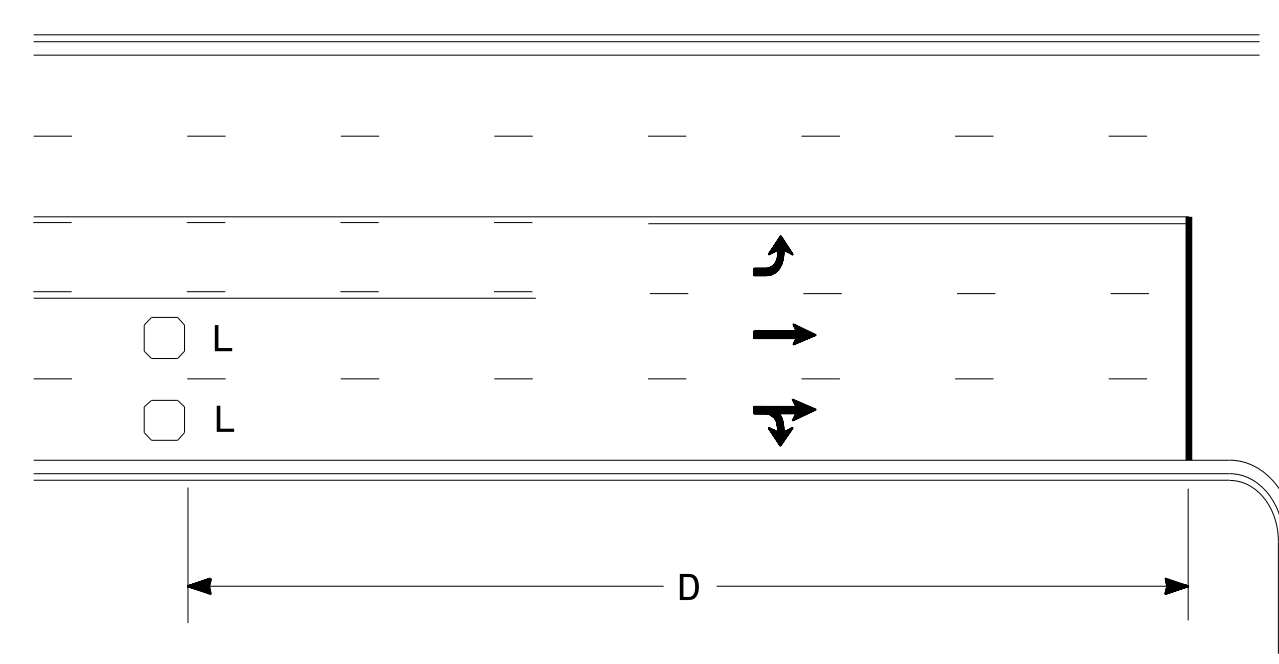
SHOULDER WEDGE DETAIL
(Resurfacing Adjacent to
Rutted Shoulder)

- 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)

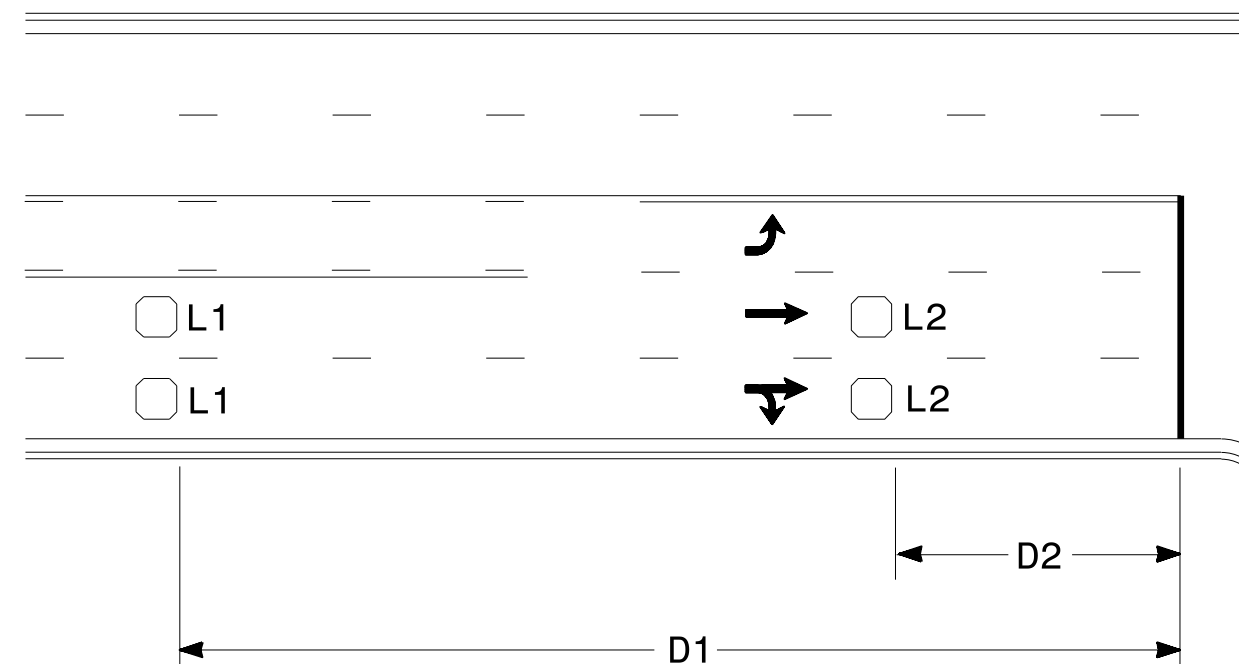


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

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

Volume Density Operation

OR

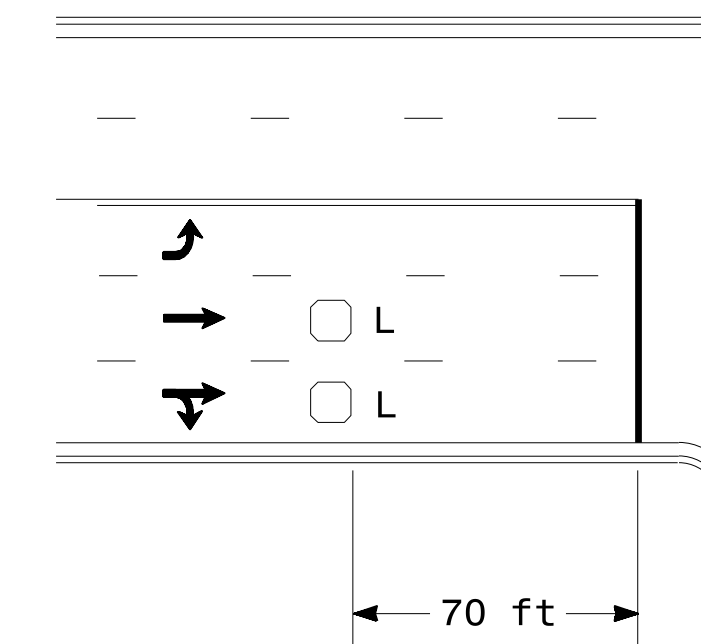


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

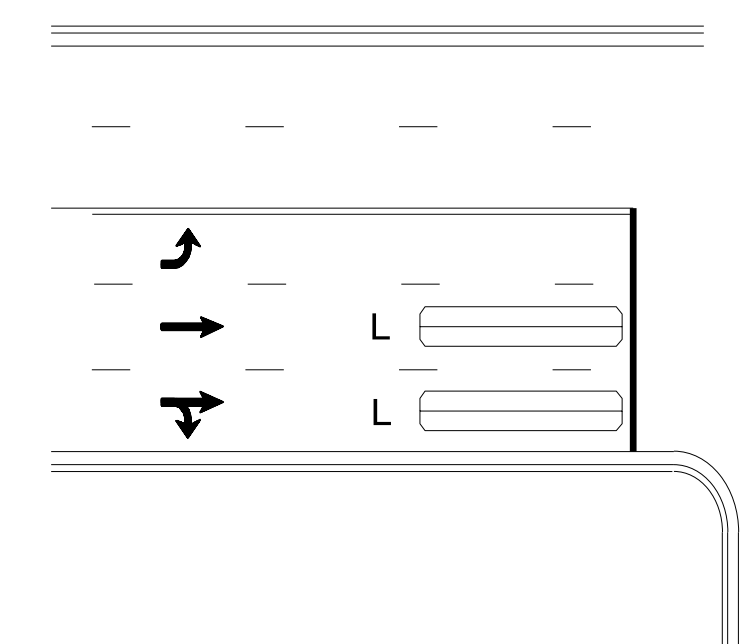
"Stretch" Operation

Low Speed Detection (≤35 mph)



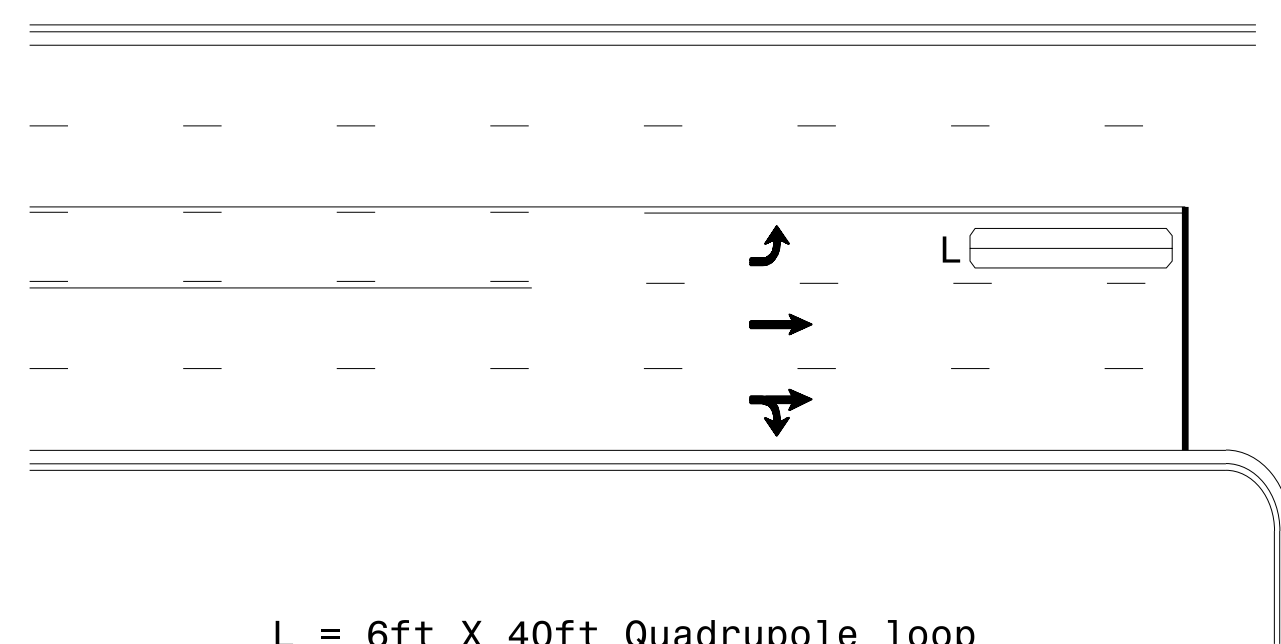
L = 6ft X 6ft
Wired in series

OR



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

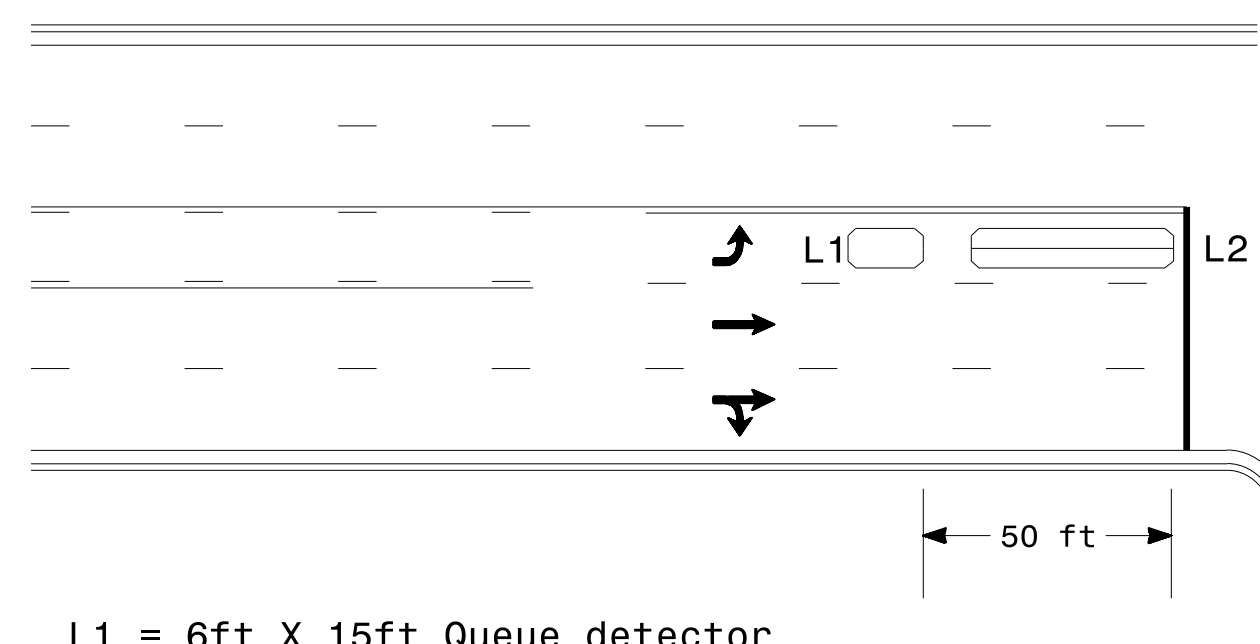
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

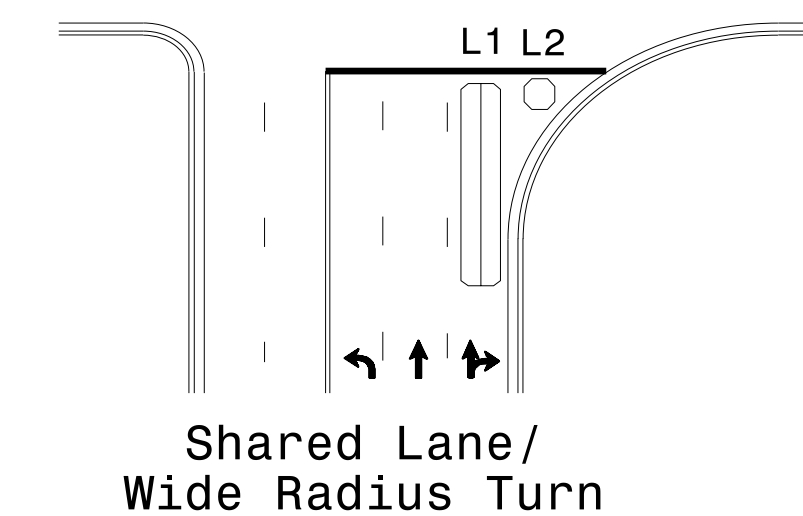
OR



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

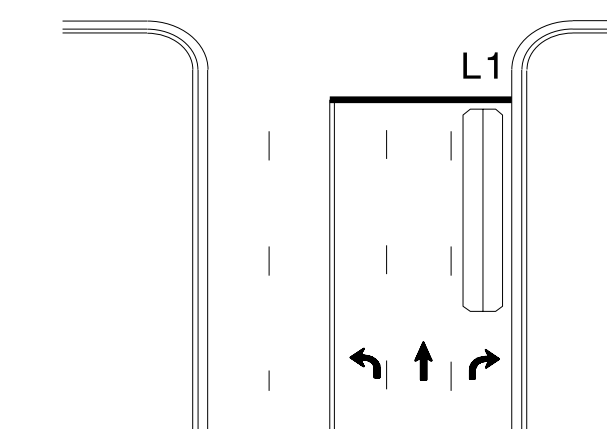
Queue Loop Detection

Right Turn Lane Detection

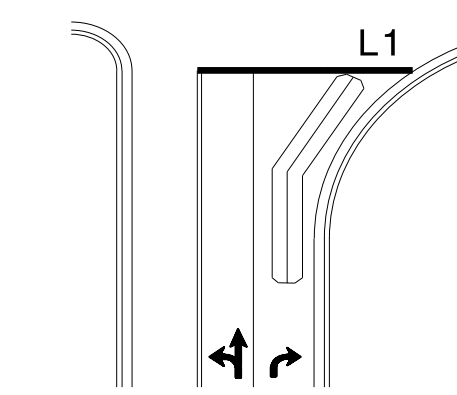


Shared Lane/
Wide Radius Turn

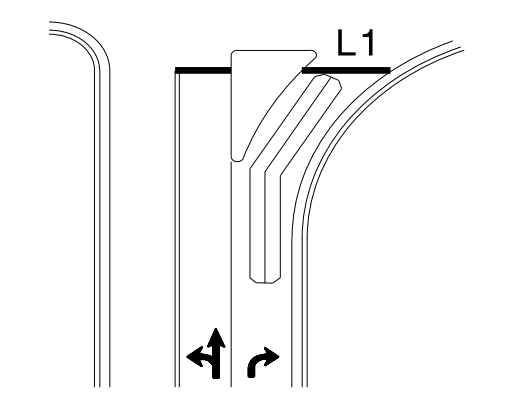
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

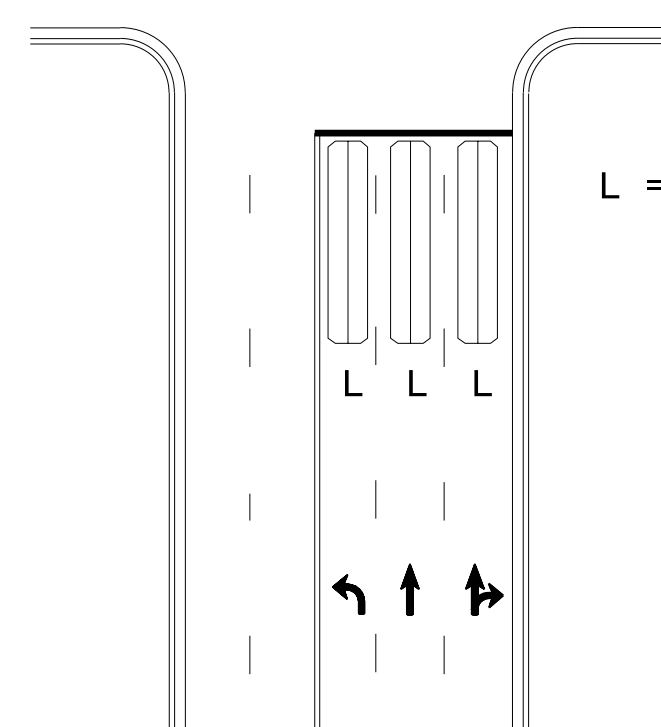


Wide Radius Turn



Channelized Turn

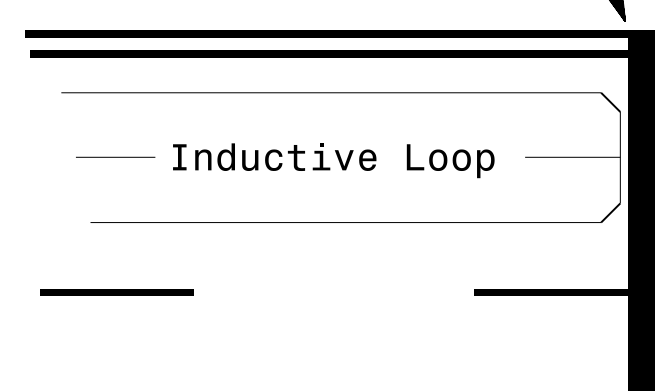
Side Street Detection



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

Presence Loop Placement at Stop Lines

Locate loop slightly
behind leading
edge of stop line



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

Recommended Number of Turns

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

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

Quadrupole loops: Use 2-4-2 turns

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

Prepared In the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

Typical Signal Loop Locations

PLAN DATE: January 2015	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
REVISIONS	INIT. DATE

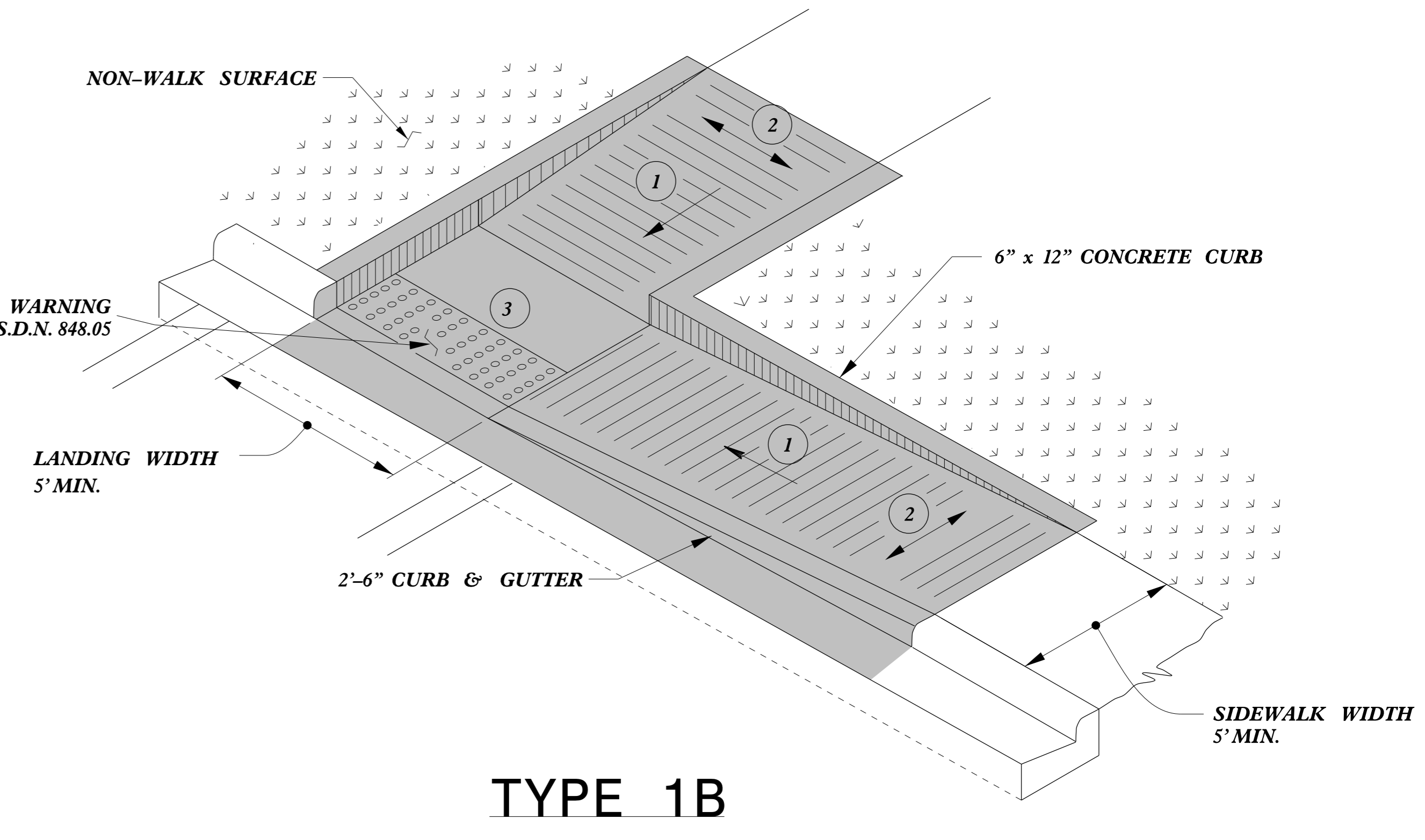
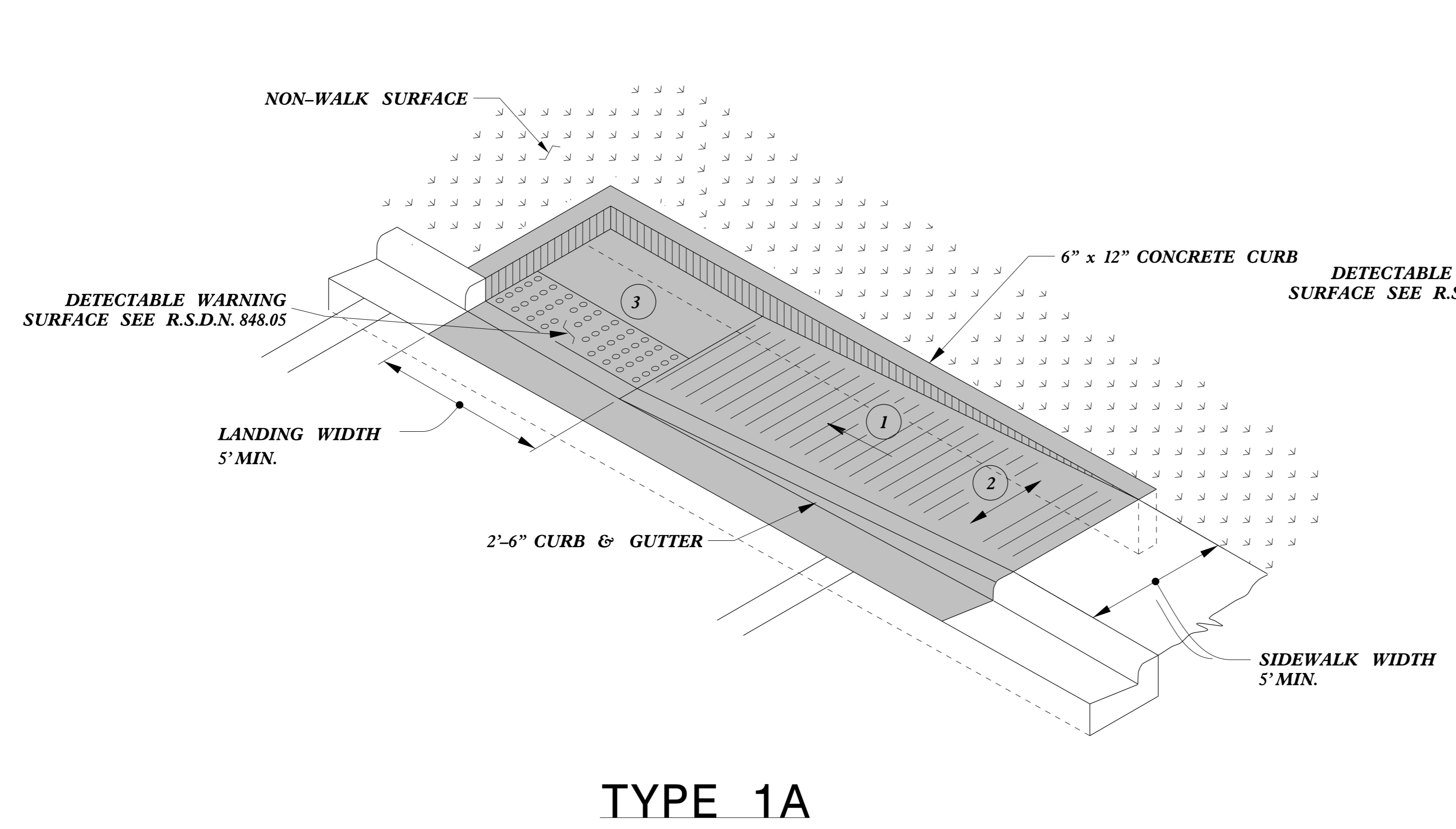
SCALE: N/A

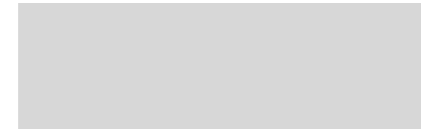
SEAL
NORTH CAROLINA
PROFESSIONAL ENGINEER
SEAL
23489
PAMELA L. ALEXANDER

DocuSigned by:
P. Alexander
1/30/2015

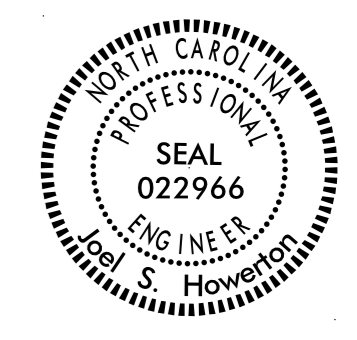
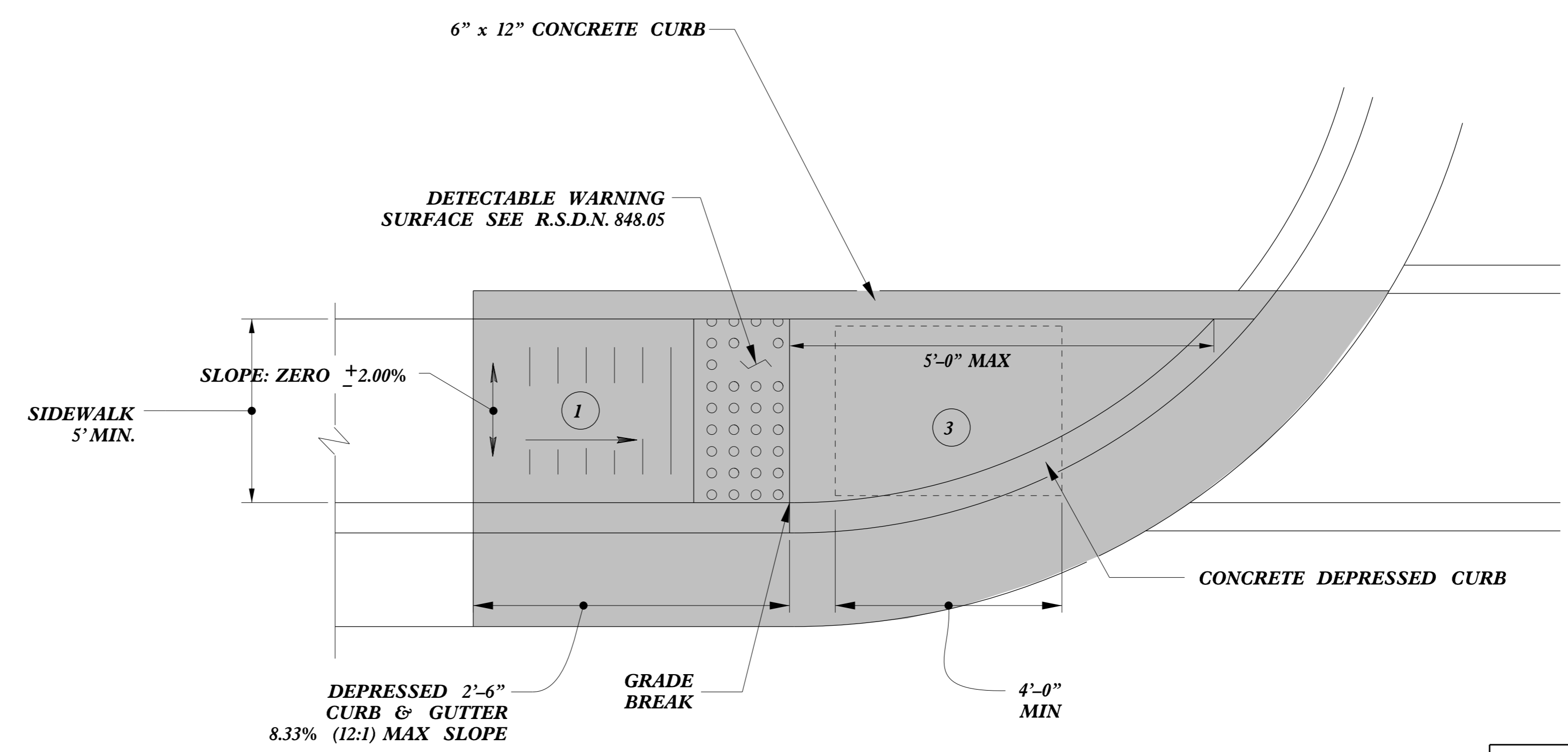
SIG. INVENTORY NO. _____ DATE _____

5/14/99



 PAY LIMITS FOR 1 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.

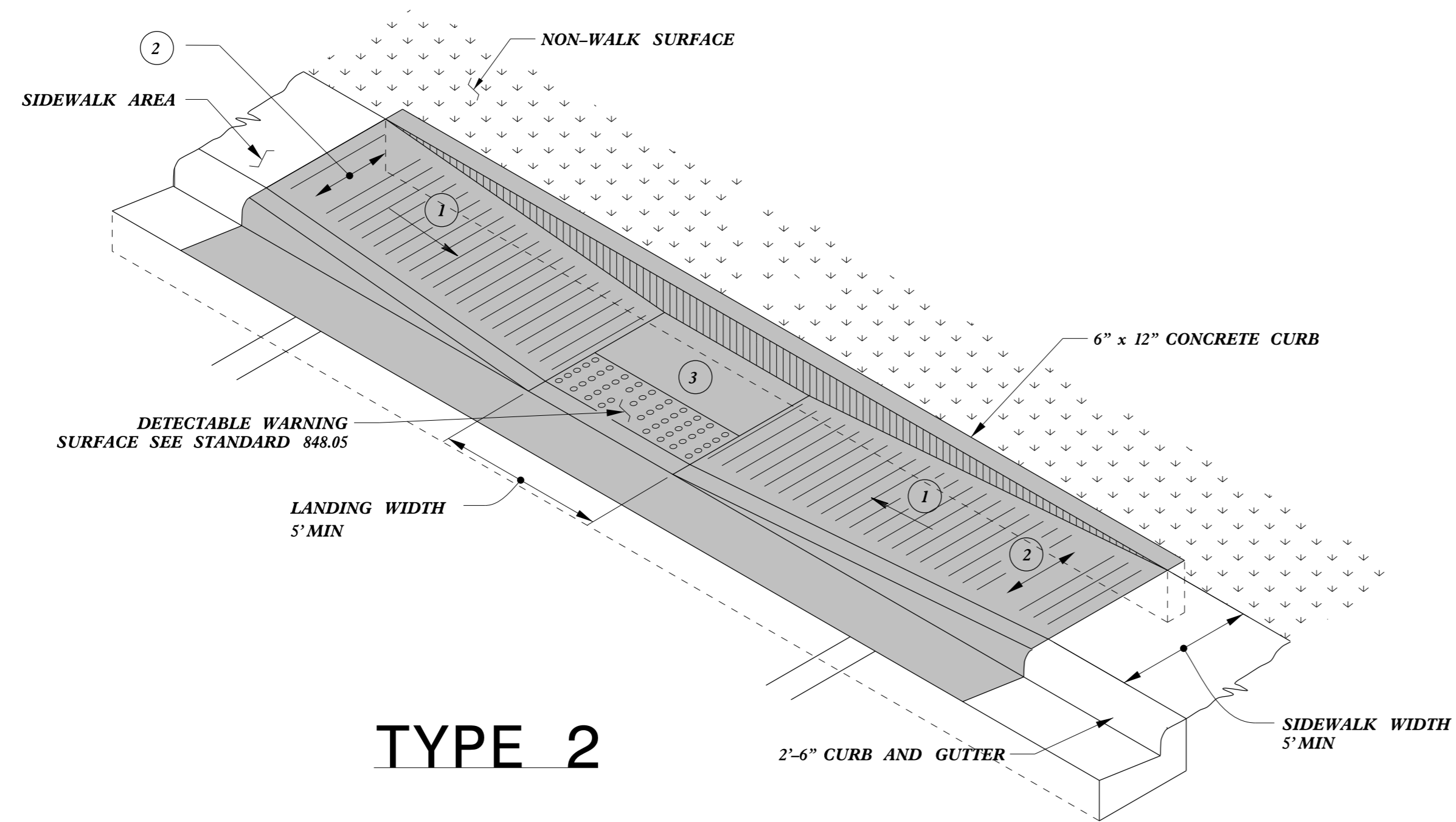


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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	

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

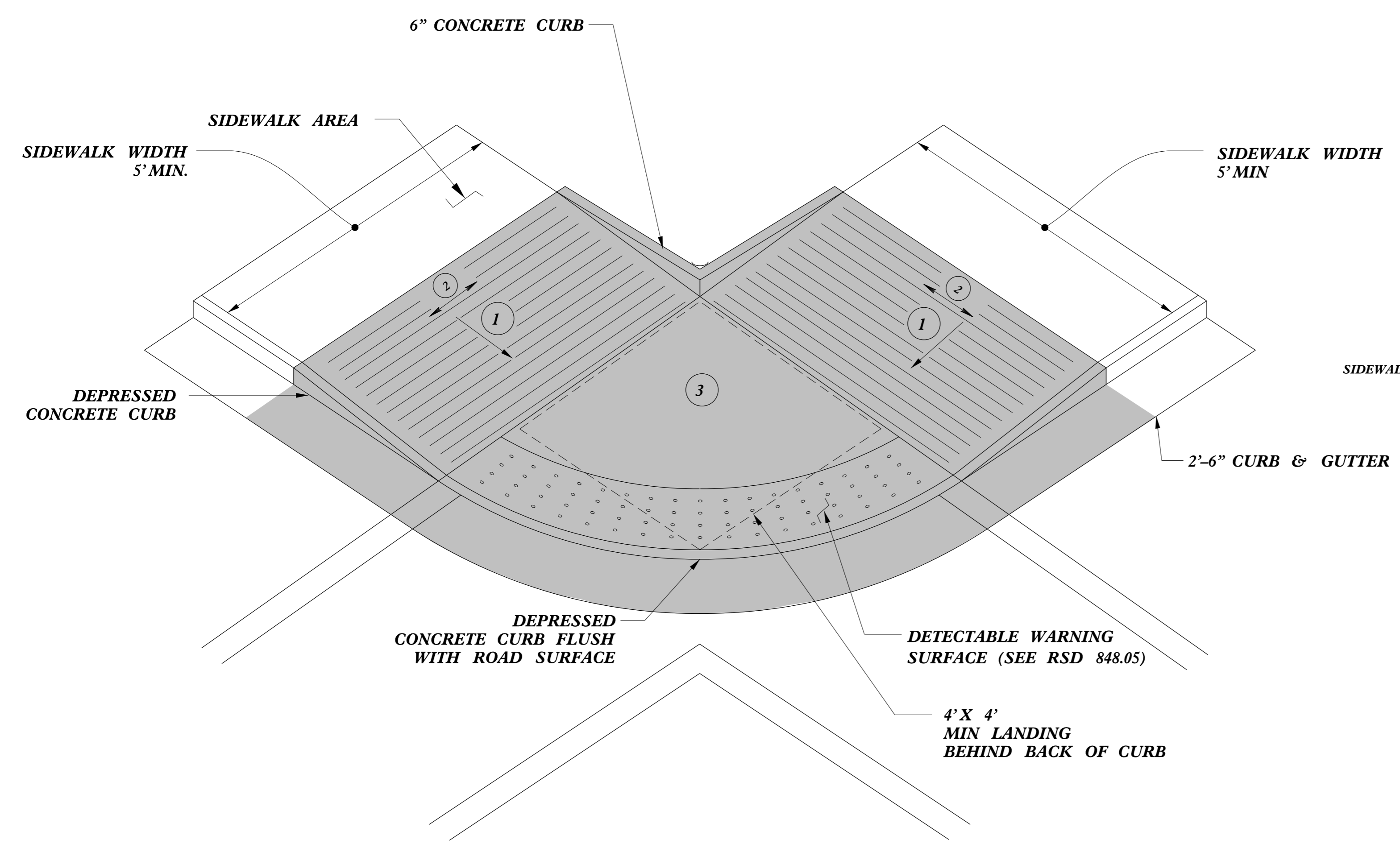
C:\P\2018\2018CPT\2018CPT.12.01.10231\DWG\2018CPT.12.01.10231.06.dwg
 USER: JSH
 DATE: 7/7/11 10:58:11 AM



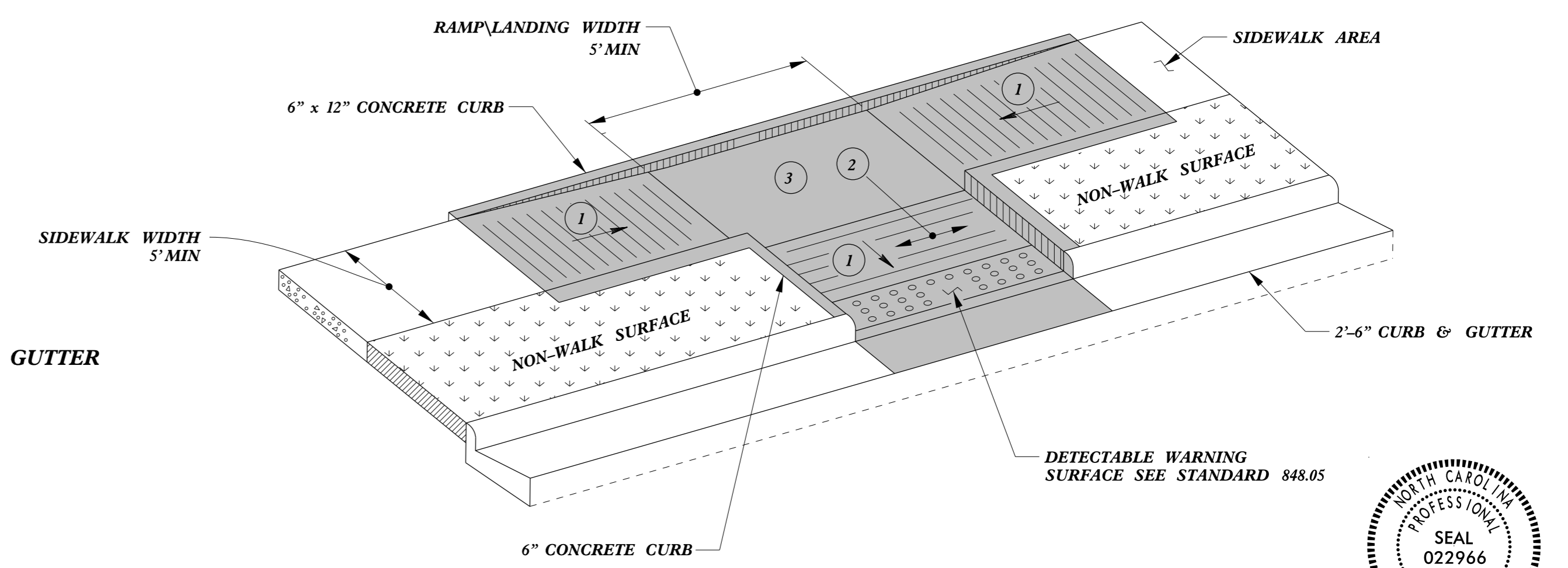
TYPE 2

PAY LIMITS FOR 1 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



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED


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

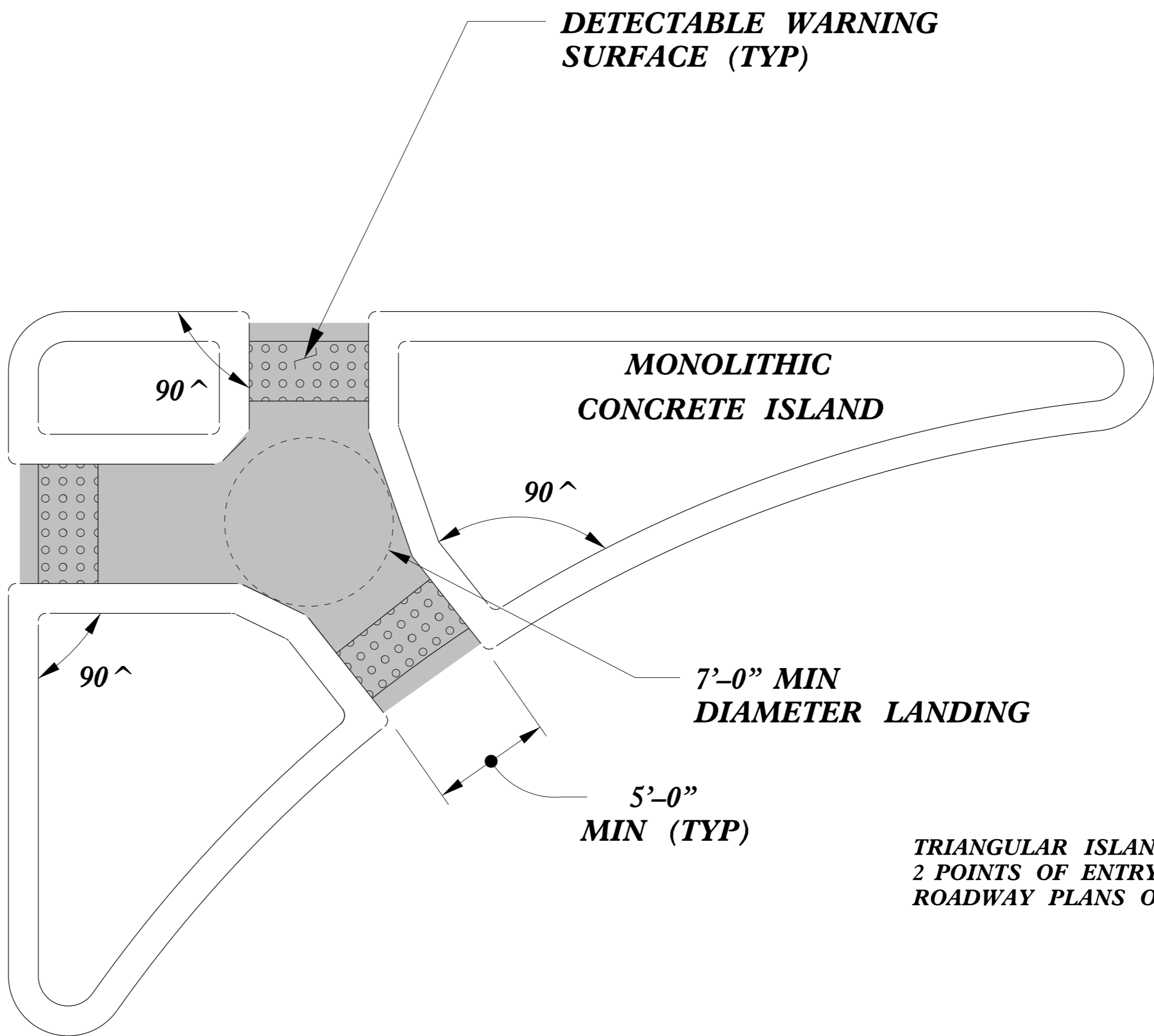
CURB RAMPS
Parallel Ramps

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

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

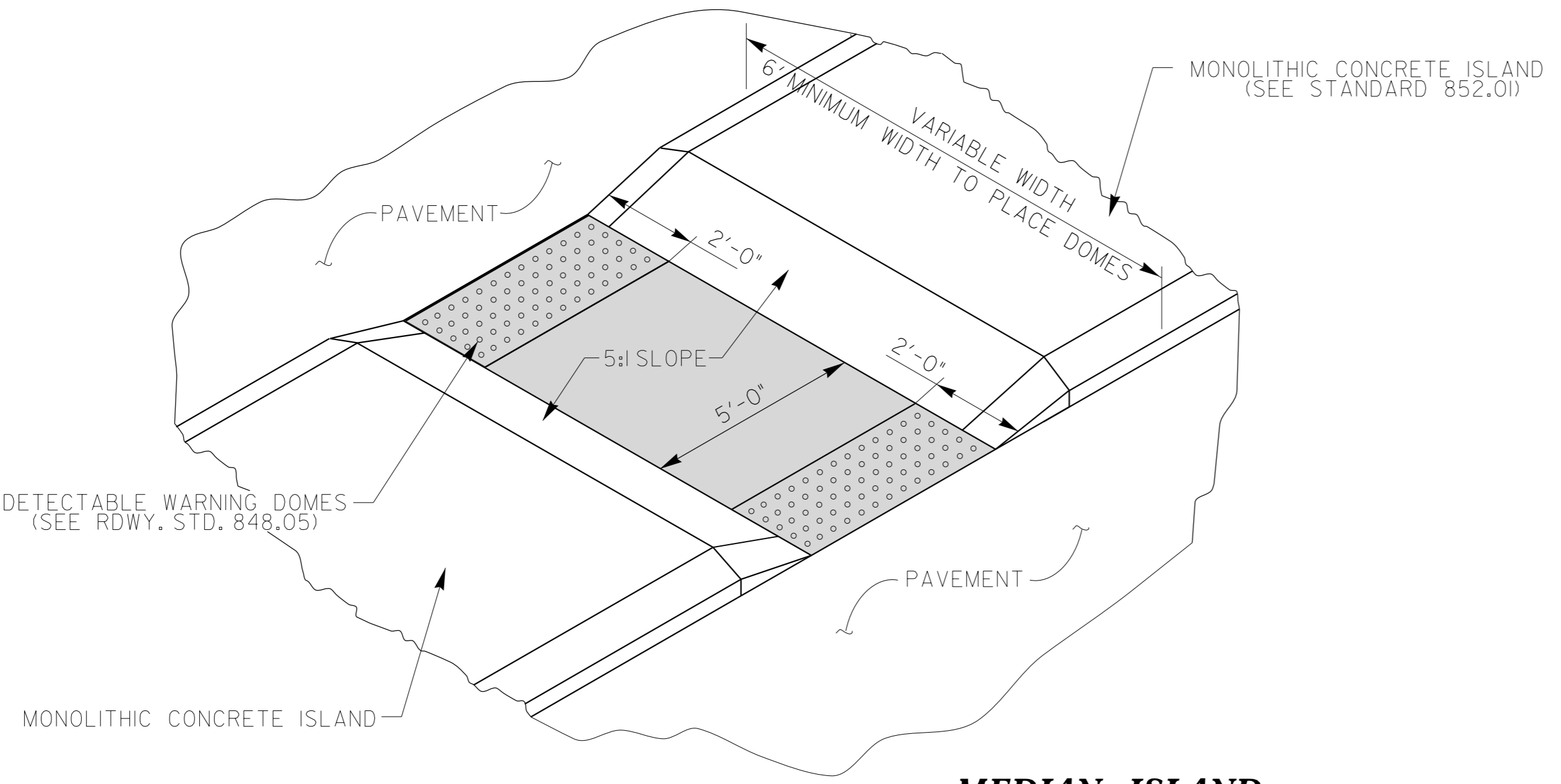
5/14/99
 C:\P\2018\2018CPT\2018CPT.dwg
 USER: JSH
 TIME: 10:00 AM
 PLOT: 7/7/11 10:00 AM
 PLOTTER: HP DesignJet 5000PS
 PLOTTING: SUCCESSFUL
 PLOTTED BY: JSH

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

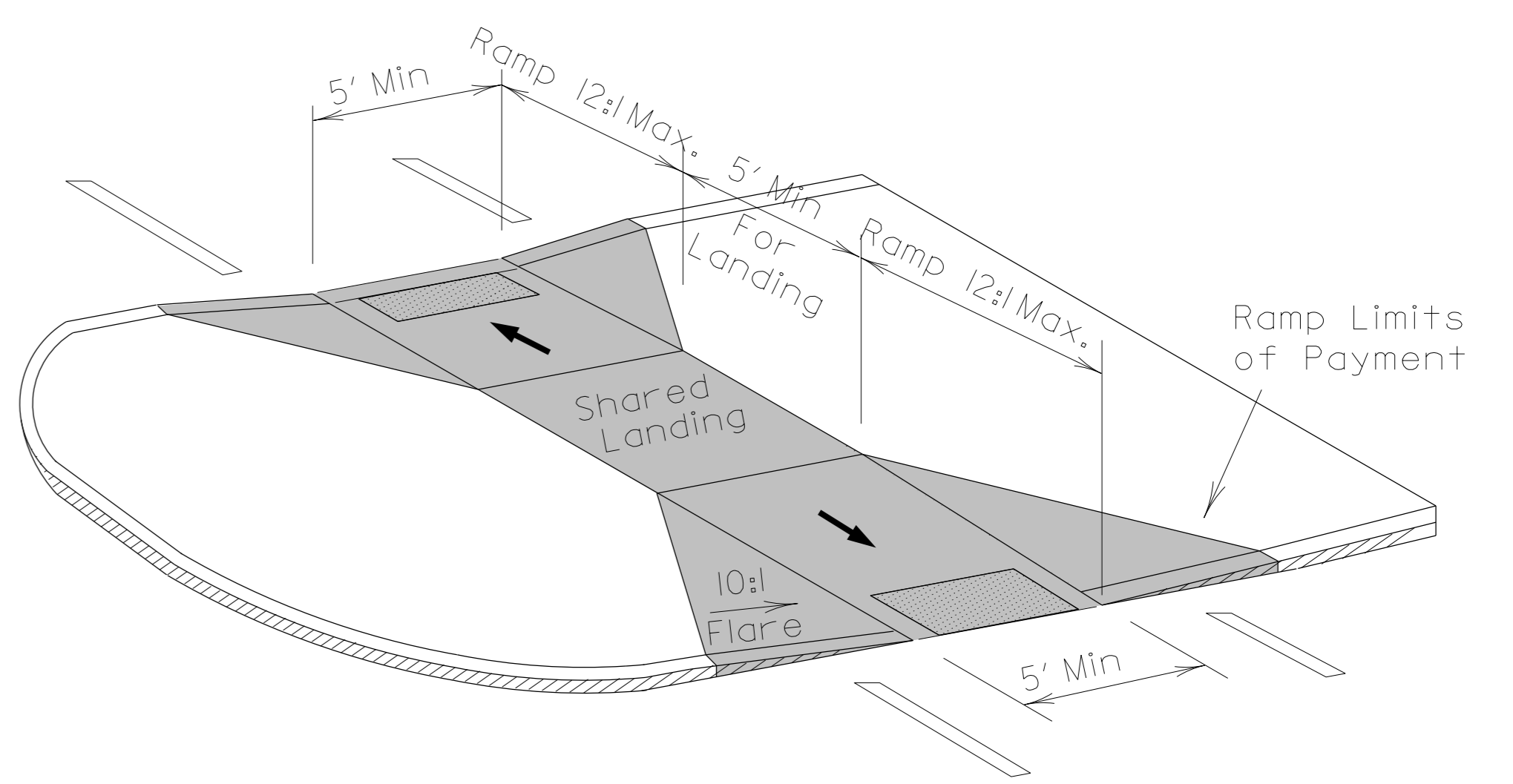


TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY
2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE
ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

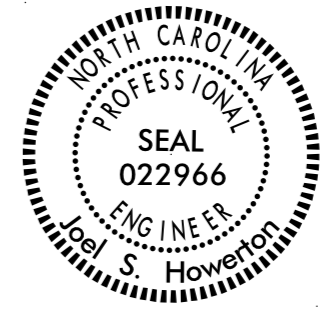
**TRIANGULAR ISLAND
WITH CUT THROUGH**



**MEDIAN ISLAND
WITH CUT THROUGH**



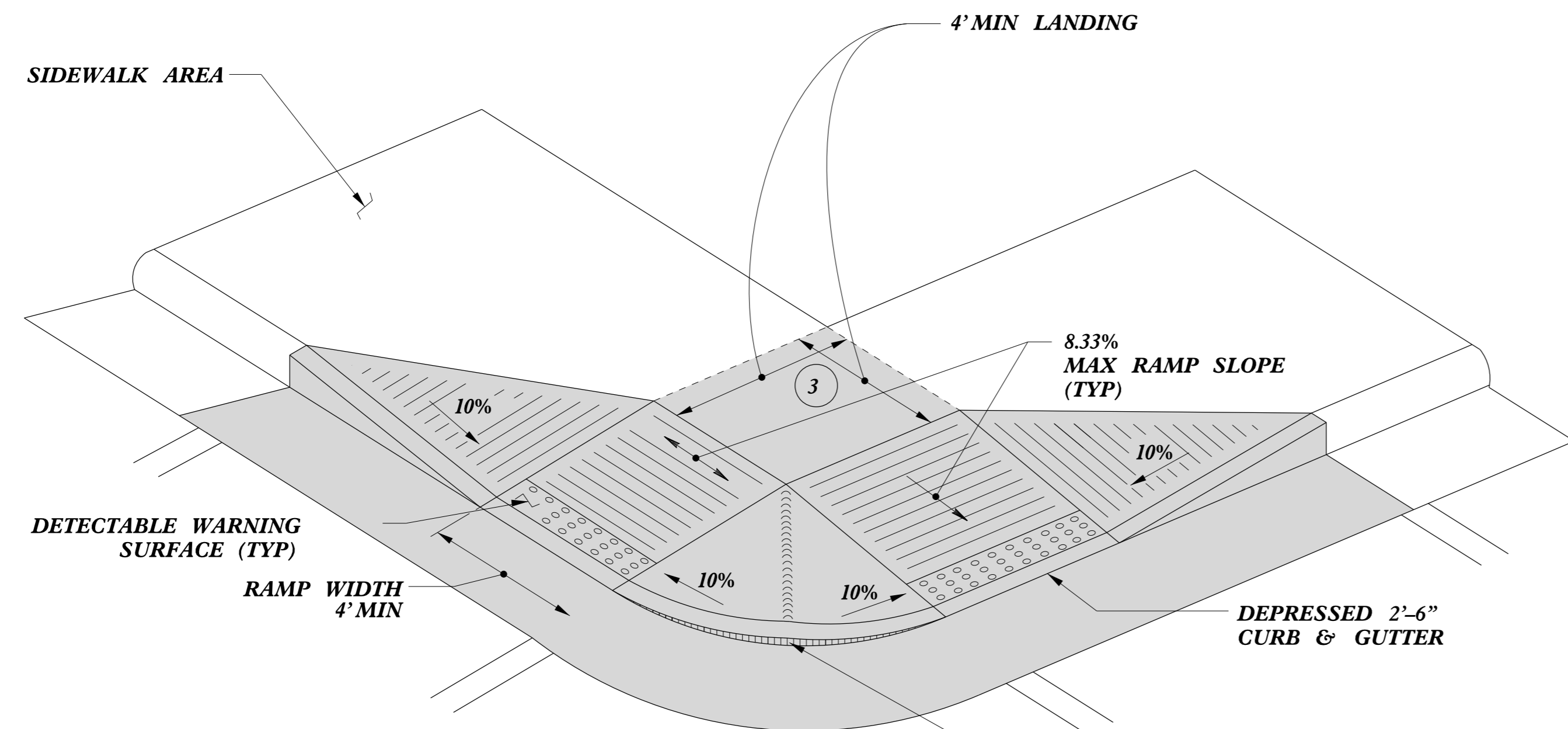
**MEDIAN ISLAND
CURB RAMPS**



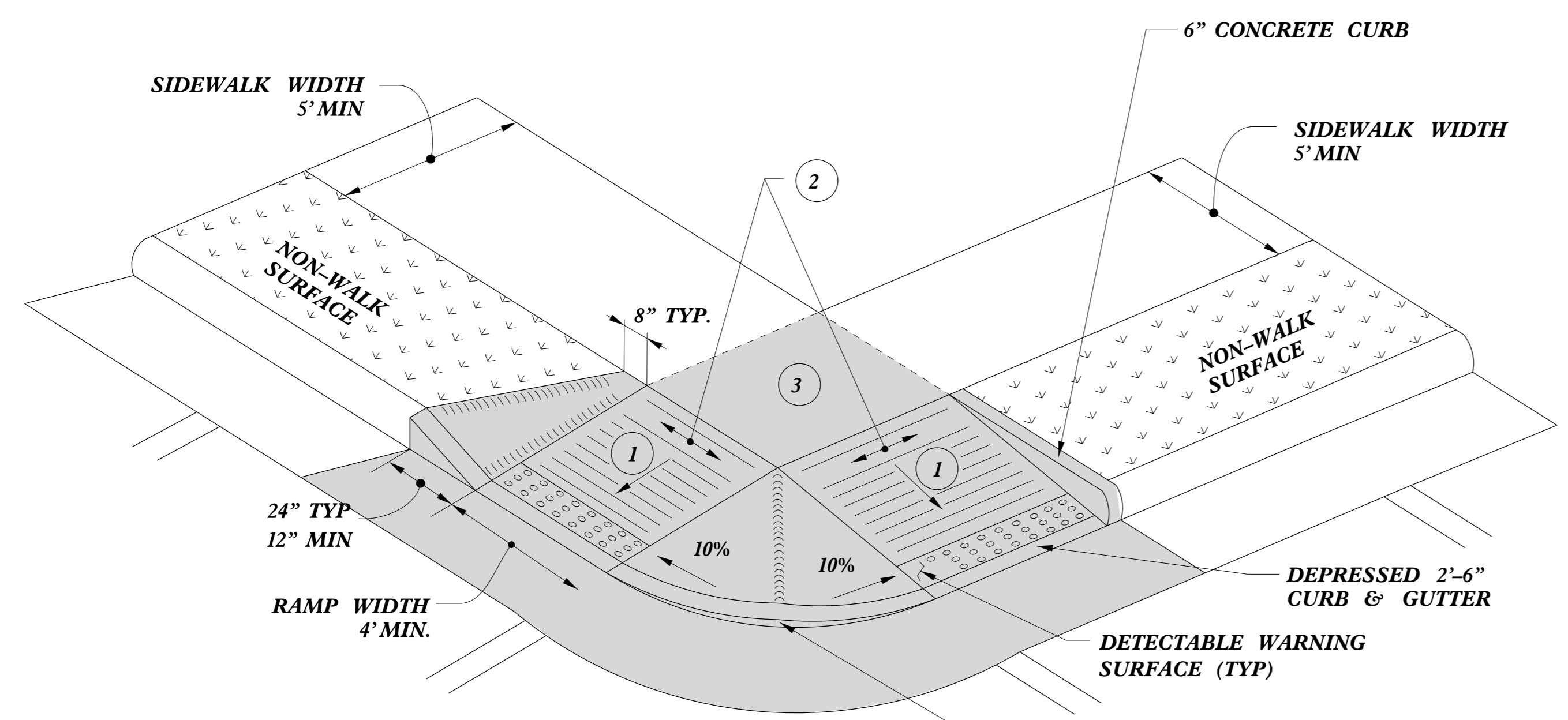
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
Median or Turn Lane Islands	
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:\TIME\PROJECTS\2018CPT\12.01.10231\DWG\CURB RAMPS\CURB RAMPS.dwg
USER: JSH

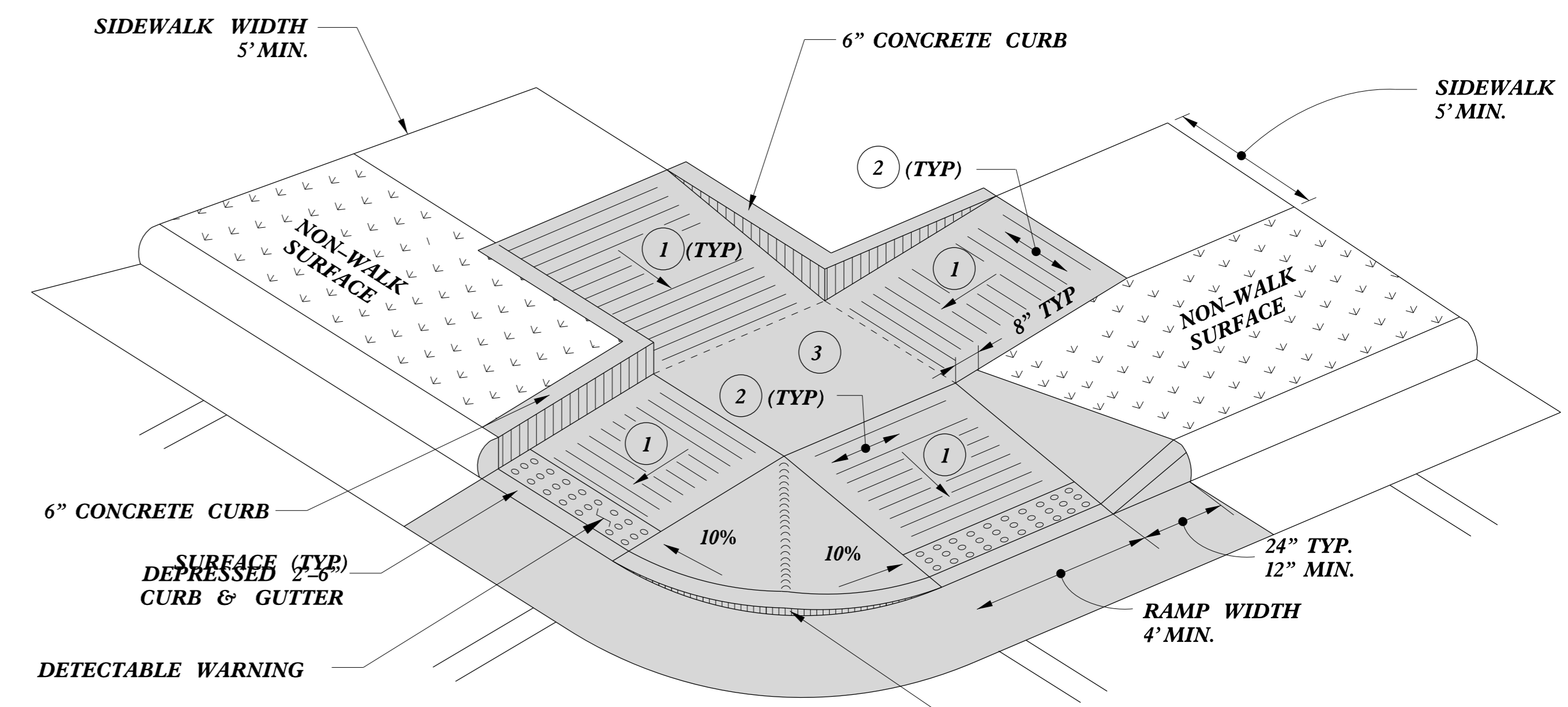


TYPE 4



TYPE 4A

PAY LIMITS FOR 2 CURB RAMPS



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.



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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	

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

5/14/99
C:\TIME\CON\CON\USER\NAME

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH	WIDTH	0255000000-E	1220000000-E	1245000000-E	1297000000-E	1330000000-E	1519000000-E	1520000000-E	1575000000-E	1704000000-E	2605000000-N	2815000000-N	2830000000-N	2845000000-N	2850000000-N	2920000000-N	5255000000-N	7324000000-N	7444000000-E	7456000000-E	
								AGGREGATE SHOULDER BORROW	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	1 1/2" MILLING	INCIDENTAL MILLING	SURFACE COURSE, 59.58	LEVELING COURSE, 59.58	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	CONCRETE CURB RAMPS	ADJ. OF DROP INLET	ADJ. OF MANHOLES	ADJ. OF METER OR VALVE BOX	FRAME W/ GRATE & HOOD STD 840.03 TYPE 'E'	CONVERT EXISTING DROP INLET TO CATCH BASIN	PORTABLE LIGHTING	JUNCTION BOX (STANDARD SIZE)	INDUCTIVE LOOP SAWCUT	LEAD-IN CABLE (14-2)	
						MI	FT	TON	TONS	SMI	SY	SY	TONS	TONS	TONS	TONS	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
2018CPT.12.01.10231	Cleveland	1	NC 180 (N. POST RD)	FROM 540 FT N OF SR 2202 (JOE'S LAKE RD) (W-5712A PROJ. LIMITS) TO 2225 FT S OF NC 150 (R-2707C PROJ. LIMITS)	1 2 3	1.71 2.06 0.10	VAR. 23-59 VAR. 59-77 VAR. 61-80	600		3.42	84,733	2,738	9,076	810	597	2,632		1	20	27			1	2	4,900	300	
2018CPT.12.01.10231	Cleveland	2	NC 180 (N & S. POST RD)	FROM SR 1926 (AIRPORT RD) TO NC 18	1	1.72	VAR. 24-50	650	111	3.44		370	2,424	120	153	703		1		1						300	100
2018CPT.12.01.10231	Cleveland	3	NC 150 (S MAIN ST.)	FROM SR 1146 (MAPLE SPGS CH RD) TO SR 1003 (W. COLLEGE AVE.)	1 2 4 5	1.06 0.32 0.24 0.34	VAR. 30-37 32 VAR. 39-56 VAR. 36-39	368	75	2.46	22,523	670	3,845	535	265	1,150	4		16	8	1	1		1	250	120	
TOTAL FOR PROJ NO. 2018CPT.12.01.10231						7.55		1,618	186	9.32	107,256	3,778	15,345	1,465	1,015	4,485	4	2	36	36	1	1	1	3	5,450	520	
GRAND TOTAL						7.55		1,618	186	9.32	107,256	3,778	15,345	1,465	1,015	4,485	4	2	36	36	1	1	1	3	5,450	520	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH	WIDTH	4413000000-E	4457000000-N	4510000000-N	4686000000-E		4685000000-E	4690000000-E	4695000000-E		4697000000-E	4700000000-E	4702000000-E	4710000000-E	4710000000-E	4721000000-E	4725000000-E				
								WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	LAW ENFORCEMENT	4" X 120 M WHITE THERMO	4" X 120 M YELLOW THERMO	4" X 90 M WHITE THERMO	6" X 120 M WHITE THERMO	8" X 90 M WHITE THERMO	8" X 90 M YELLOW THERMO	8" X 120 M WHITE THERMO	12" X 90 M WHITE THERMO	12" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MSG SCHOOL 120 M	THERMO MSG ONLY 120M	THERMO RT ARROW 90 M	THERMO MERGE ARROW 90 M	THERMO LT ARROW 90 M	THERMO STR ARROW 90 M	THERMO STR & RT ARROW 90 M
						MI	FT	SF	LS	HR	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	
2018CPT.12.01.10231	Cleveland	1	NC 180 (N.POST RD)	FROM 540 FT N OF SR 2202 (JOE'S LAKE RD) (W-5712A PROJ. LIMITS) TO 2225 FT S OF NC 150 (R-2707C PROJ. LIMITS)	1 2 3	1.71 2.06 0.10	VAR. 23-59 VAR. 59-77 VAR. 61-80	420	1	95	500	480	500	100	650	380	150	300	200	1,020	24	4	12	3	77	83	34
2018CPT.12.01.10231	Cleveland	2	NC 180 (N & S. POST RD)	FROM SR 1926 (AIRPORT RD) TO NC 18	1	1.72	VAR. 24-50	212		10					105					80						4	
2018CPT.12.01.10231	Cleveland	3	NC 150 (S MAIN ST.)	FROM SR 1146 (MAPLE SPGS CH RD) TO SR 1003 (W. COLLEGE AVE.)	1 2 4 5	1.06 0.32 0.24 0.34	VAR. 30-37 32 VAR. 39-56 VAR. 36-39	208		74					60	140				390	24	4	12	3	84	83	2
TOTAL FOR PROJ NO. 2018CPT.12.01.10231						7.55		840	1	179	500	480	500	100	650	545	290	300	200	1,490	24	4	12	3	84	83	36
GRAND TOTAL						7.55		840	1	179	500	480	500	100	650	545	290	300	200	1,490	24	4	12	3	84	83	36

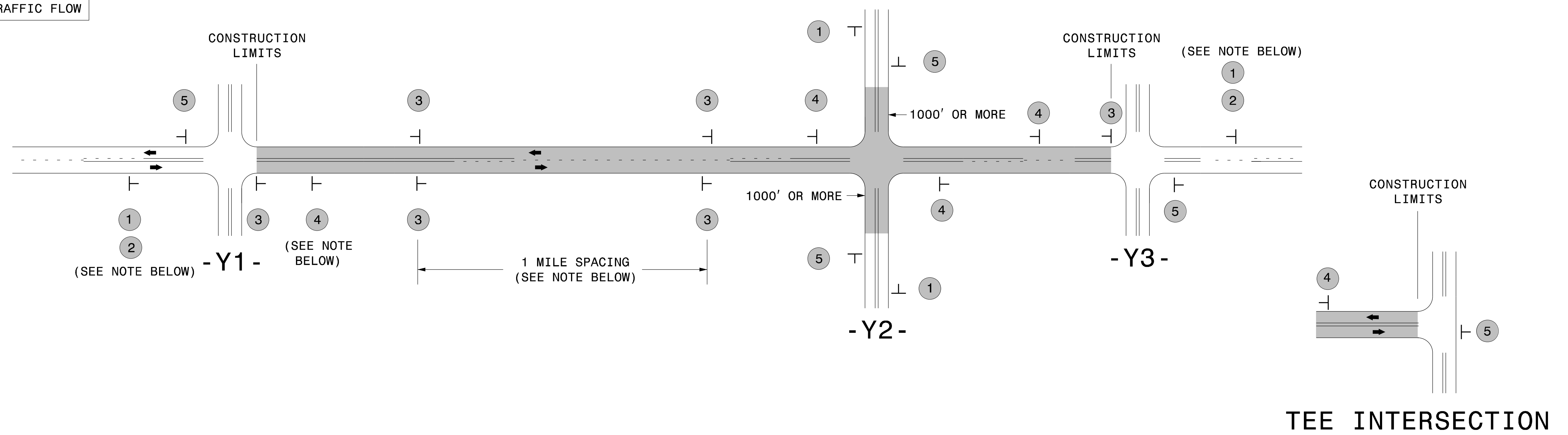
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH	WIDTH	4725000000-E		4810000000-E		4820000000-E	4835000000-E	4845000000-N			4847000000-E		4905000000-N
								THERMO SYMBOL BIKE ONLY	THERMO SYMBOL BIKE & ARROW	4" WHITE PAINT	4" YELLOW PAINT	8" YELLOW PAINT	24" WHITE PAINT	PAINT LT ARROW	PAINT STR & RT ARROW	PAINT H/C ACCESS SYMBOL	4" YELLOW POLYUREA (HIGHLY REFLECTIVE ELEMENTS)	4" WHITE POLYUREA (HIGHLY REFLECTIVE ELEMENTS)	SNOW PLOWABLE MARKERS
						MI	FT	EA	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA
2018CPT.12.01.10231	Cleveland	1	NC 180 (N.POST RD)	FROM 540 FT N OF SR 2202 (JOE'S LAKE RD) (W-5712A PROJ. LIMITS) TO 2225 FT S OF NC 150 (R-2707C PROJ. LIMITS)	1 2 3	1.71 2.06 0.10	VAR. 23-59 VAR. 59-77 VAR. 61-80			8,000	30,200		750	77			49,071	26,058	790
2018CPT.12.01.10231	Cleveland	2	NC 180 (N & S. POST RD)	FROM SR 1926 (AIRPORT RD) TO NC 18	1	1.72	VAR. 24-50							4			21,506	20,306	140
2018CPT.12.01.10231	Cleveland	3	NC 150 (S MAIN ST.)	FROM SR 1146 (MAPLE SPGS CH RD) TO SR 1003 (W. COLLEGE AVE.)	1 2 4 5	1.06 0.32 0.24 0.34	VAR. 30-37 32 VAR. 39-56 VAR. 36-39	2	20	1,000	15,610	60	50	3	2	2	21,055	20,755	170
TOTAL FOR PROJ NO. 2018CPT.12.01.10231						7.55		2	20	9,000	45,810	60	800	84	2	2	91,632	67,119	1,100
GRAND TOTAL						7.55		2	20	9,000	45,810	60	800	84	2	2	91,632	67,119	1,100

SIGNING FOR RESURFACING PROJECTS

LEGEND

┆ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

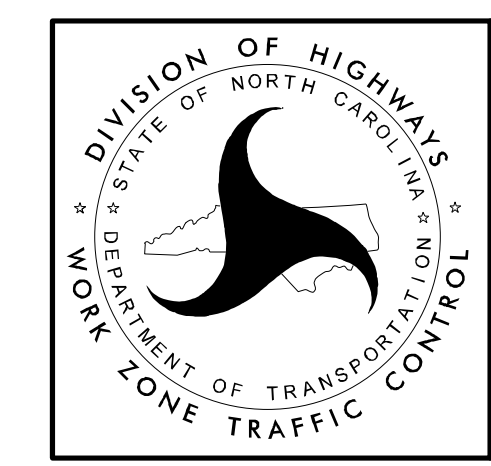
-Y- LINE SIGNING

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;"> PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> 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		- 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		- 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

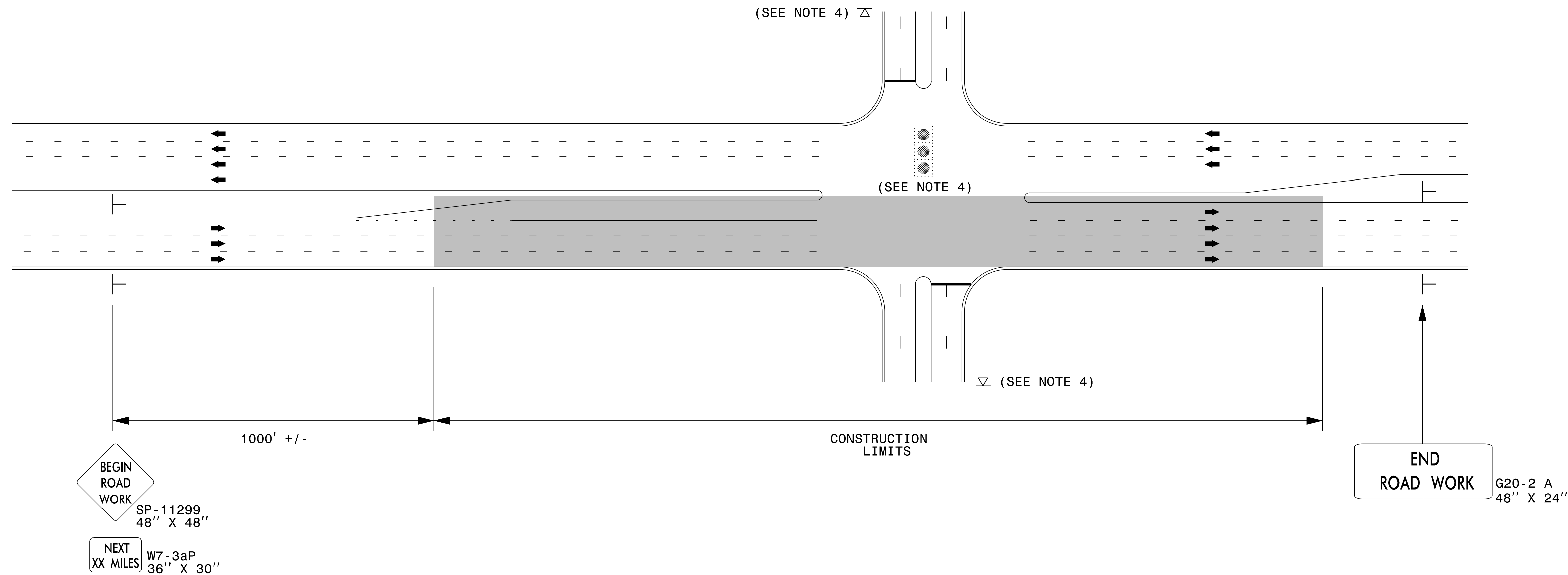
FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.



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

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URBAN / SUBURBAN WORKZONES

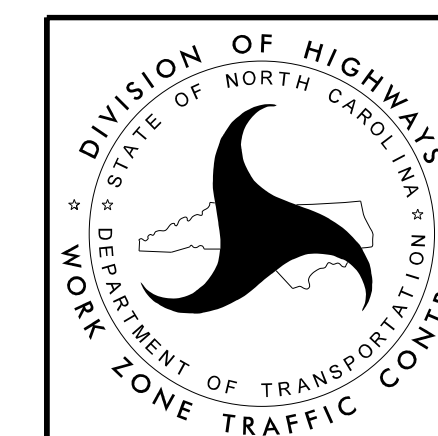


NOTES:

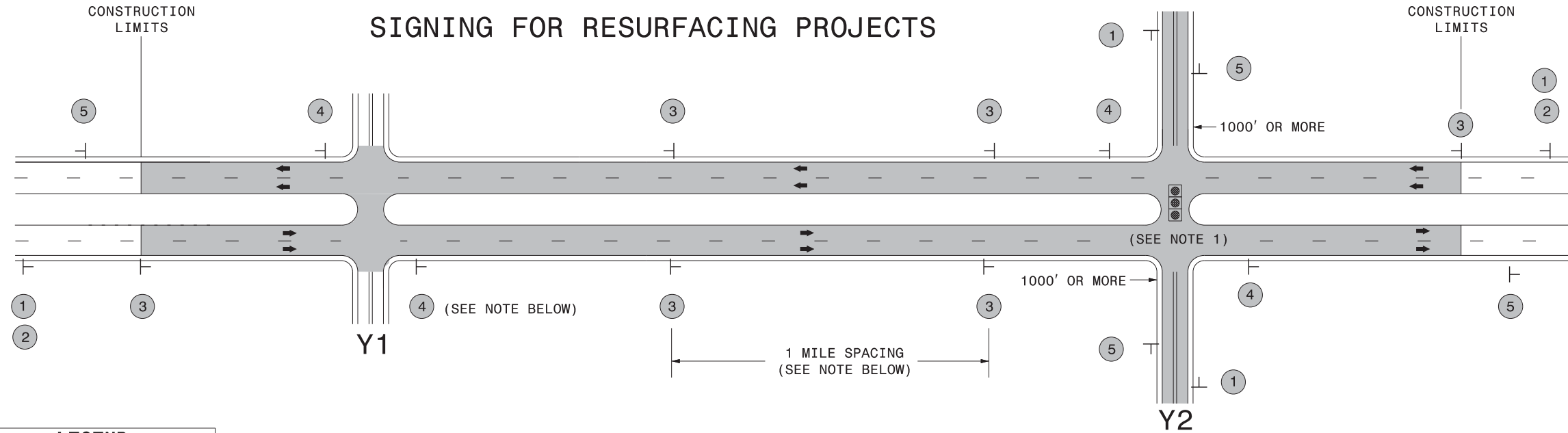
- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT.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



LEGEND
 ┆ STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	①	 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.	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS <p>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.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> W20-1 48" X 48" </div> <div style="text-align: center;"> W20-7 A 48" X 48" </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p> <p>NOTES:</p> <ol style="list-style-type: none"> 1) 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.
	②	 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	 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 1/2 MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.	
	④	 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	 G20-2 A 48" X 24"	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.		

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**RESURFACING
 ADVANCE WARNING SIGNS
 FOR RURAL AND SUBURBAN
 MULTI-LANE ROADWAYS
 W/ SHOULDER SECTIONS**