

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION 6

PLANS

LETTING DATE: MARCH 7, 2018

CONTRACT ID: DF00192

TIP NO.: R-5786CA & R-5786CB

FEDERAL AID NO.: TAP-0620(044) & TAP-0620(045)

WBS ELEMENT NO.: 44916.3.6 & 44916.3.7

ROUTE NO.: VARIOUS

LOCATION: VARIOUS

COUNTY: BLADEN, COLUMBUS & ROBESON

LENGTH OF PROJECT: VARIES

TYPE OF WORK: CURB RAMP INSTALLATIONS

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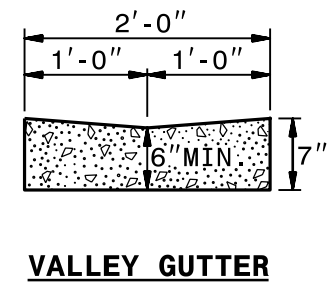
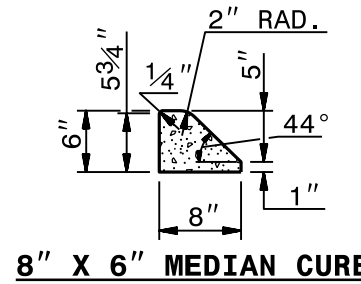
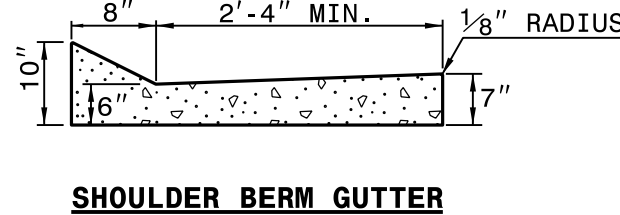
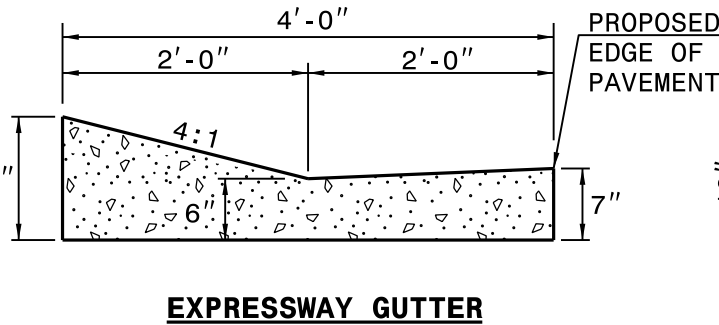
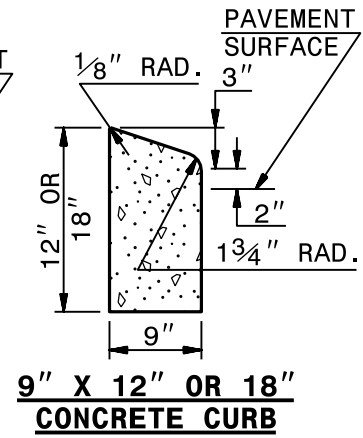
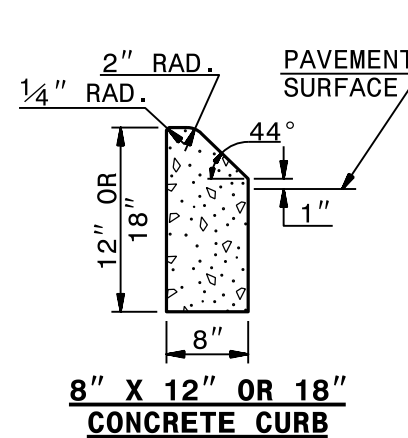
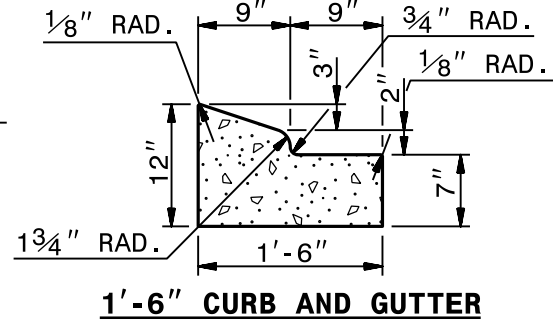
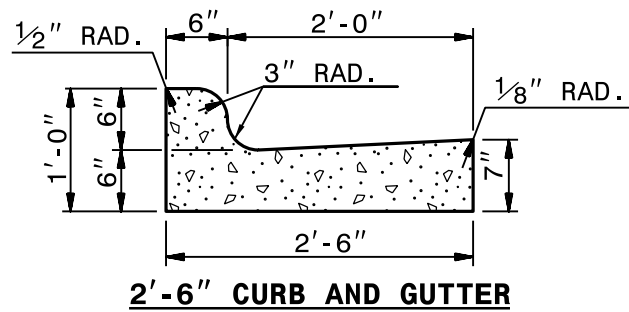
SUMMARY OF QUANTITIES - BLADEN, COLUMBUS & ROBESON CO.

PROJECT NO	COUNTY	MUNICIPALITY	MAJOR ROUTE	MINOR ROUTE	0000100000-N	1220000000-E	2549000000-E	2591000000-E	2600000000-N	2605000000-N	2612000000-E	2800000000-N	2815000000-N	4697000000-E
					Mobilization	Incidental Stone Base	2'-6" Concrete Curb & Gutter	4" Concrete Sidewalk	Retrofit Existing Curb Ramp	Concrete Curb Ramp	6" Concrete Driveway	Adjustments of Catch Basins	Adjustments of Drop Inlets	Thermoplastic Pavement Marking Lines (8", 120 mils)
					LS	TON	LF	SY	EA	EA	SY	EA	EA	LF
44916.3.6	Columbus	Whiteville	US 701B (Pinckney)	Nance St.	0.5	5	20	20		4	5			
44916.3.6	Columbus	Whiteville	US 701B (Pinckney)	Frink St.			20	20		4				
44916.3.6	Columbus	Whiteville	US 701B (Pinckney)	Oliver St.			20	20		4				
44916.3.6	Columbus	Whiteville	US 701B (Pinckney)	Pine St.			10	10		2				
44916.3.6	Columbus	Whiteville	US 701B (Pinckney)	Fuller St.			10	10		2				
44916.3.6	Columbus	Whiteville	US 701B (Pinckney)	Tucker St.				10	2					
44916.3.6	Columbus	Whiteville	US 701B (Pinckney)	Liberty St.				10	2					
44916.3.6	Columbus	Whiteville	US 701B (Pinckney)	Richardson St.				10	2					
44916.3.6	Columbus	Whiteville	US 701B (Pinckney)	Liberty Commons Dwy				10	2					
44916.3.6	Columbus	Whiteville	US 701B (Pinckney)	Warrior Trail				10	2					
44916.3.6	Columbus	Whiteville	US 74B (Jefferson)	Franklin St.				5		1				
44916.3.6	Columbus	Whiteville	US 74B (Jefferson)	Thompson St.			5	6		1				
44916.3.6	Columbus	Whiteville	US 74B (Jefferson)	Health Dept. Dwy.			10	12		2				
SUBTOTAL					0.5	5	95	153	10	20	5	0	0	0
44916.3.6	Robeson	Lumberton	NC 72 / NC 41	Seneca Ave.	0.0	5								
44916.3.6	Robeson	Lumberton	SR 1997 (Fay Rd.)	SR 1948 (Linkhaw Rd.)				420						
44916.3.6	Robeson	Lumberton	SR 1997 (Fay Rd.)	LHS Driveway			10	150		2				80
44916.3.6	Robeson	Lumberton	2nd St. NC 72	Rozier			10	90		1		1		
44916.3.6	Robeson	Lumberton	2nd St. NC 72	Chippewa			30	18		3				
44916.3.6	Robeson	Lumberton	2nd St. NC 72	Cedar			40	30		4		2	1	
44916.3.6	Robeson	Lumberton	2nd St. NC 72	Walnut			40	24		4				1
44916.3.6	Robeson	Lumberton	2nd St. NC 72	Chesnut			15	15	2	1				1
44916.3.6	Robeson	Lumberton	2nd St. NC 72	Elm			20	20	4					
44916.3.6	Robeson	Lumberton	HWY 211/Roberts	N. Elm (Shoneys, Bojangles)			100	172		9				
44916.3.6	Robeson	Lumberton	HWY 211/Roberts	Hardees, Sonic			25	25	5					
44916.3.6	Robeson	Lumberton	HWY 211/Roberts	Floyd			5	5		1				
44916.3.6	Robeson	Lumberton	Pine St.	13th St.			30	30		6		1	1	
44916.3.6	Robeson	Lumberton	Pine St.	14th St.			30	30		6		2		
44916.3.6	Robeson	Lumberton	Pine St.	15th St.			20	20	3	1				
44916.3.6	Robeson	Lumberton	Pine St.	16th St.			20	20	2	2				
44916.3.6	Robeson	Lumberton	Pine St.	17th St.			40	40		8		2	1	
44916.3.6	Robeson	Lumberton	Pine St.	18th St.			40	40		8		2		
44916.3.6	Robeson	Lumberton	Pine St.	19th St.			20	20		4		2		
SUBTOTAL					0.0	5	495	1169	16	60	0	12	4	80
TOTAL FOR R-5786CA / 44916.3.6 - Pop. > 5000					0.5	10	590	1322	26	80	5	12	4	80
44916.3.7	Bladen	Clarkton	US 701 Bus	At Middle School	0.5		40	10		2				
44916.3.7	Bladen	Clarkton	US 701 Bus	Beside Taste of Country			25	14						
44916.3.7	Bladen	Clarkton	US 701 Bus	Downtown				67						
44916.3.7	Bladen	Clarkton	US 701 Bus	NC 211			70	39						
44916.3.7	Bladen	Clarkton	NC 211	Dwy. Near Elm St.				14						
44916.3.7	Bladen	Clarkton	NC 211	At Hydrant Near Elm St.				6						
44916.3.7	Bladen	Clarkton	NC 211	US 701-Bus (SE Quadrant)			10	50		2				
44916.3.7	Bladen	Clarkton	NC 211	At Post Office				67						
SUBTOTAL					0.5	0	145	266	0	4	0	0	0	0
44916.3.7	Bladen	Bladenboro	NC 242 (Main St)	Forest Drive				5	1	2				
44916.3.7	Bladen	Bladenboro	NC 242 (Main St)	Cemetery Street				5	1					
44916.3.7	Bladen	Bladenboro	NC 211-BUS	Grief St. to Cane St.				152						
SUBTOTAL					0.0	0	0	162	2	2	0	0	0	0

PROJECT	COUNTY	MUNICIPALITY	MAJOR ROUTE	MINOR ROUTE	0000100000-N Mobilization	1220000000-E Incidental Stone Base	2549000000-E 2'-6" Concrete Curb & Gutter	2591000000-E 4" Concrete Sidewalk	2600000000-N Retrofit Existing Curb Ramp	2605000000-N Concrete Curb Ramp	2612000000-E 6" Concrete Driveway	2800000000-N Adjustments of Catch Basins	2815000000-N Adjustments of Drop Inlets	4697000000-E Thermoplastic Pavement Marking Lines (8", 120 mils)
44916.3.7	Bladen	Tar Heel	NC 87	Tar Heel Road			10	10	4	2				
44916.3.7	Bladen	Tar Heel	NC 87	Meyers St				10	2					
44916.3.7	Bladen	Tar Heel	NC 87	Holly St				10	2					
44916.3.7	Bladen	Tar Heel	NC 87	Love St				10	2					
44916.3.7	Bladen	Tar Heel	NC 87	Pine St				10	2					
44916.3.7	Bladen	Tar Heel	NC 87	Main St				10	2					
44916.3.7	Bladen	Tar Heel	NC 87	2nd St				10	2					
44916.3.7	Bladen	Tar Heel	NC 87	NC 131				10	2					
44916.3.7	Bladen	Tar Heel	NC 87	House 14927				6						
44916.3.7	Bladen	Tar Heel	NC 87	Tar Heel Middle School				6						
44916.3.7	Bladen	Tar Heel	NC 87	Tar Heel Seafood & Produce				6						
SUBTOTAL					0.0	0	10	98	18	2	0	0	0	0
44916.3.7	Bladen	Dublin	NC 87	Dublin Cabinet Shop				6						
SUBTOTAL					0.0	0	0	6	0	0	0	0	0	0
44916.3.7	Bladen	White Lake	NC 53	Camp Clearwater Service Dwy				10	2					
44916.3.7	Bladen	White Lake	SR 1515	Ice House Dwy				10	1					
SUBTOTAL					0.0	0	0	20	3	0	0	0	0	0
44916.3.7	Bladen	Elizabethtown	NC 87 Bus (E. Broad St)	Courthouse St		5		5	1		5			
44916.3.7	Bladen	Elizabethtown	NC 87 Bus (E. Broad St)	Cypress St				15	3					
44916.3.7	Bladen	Elizabethtown	NC 87 Bus (E. Broad St)	Epley St			10	10		2				
44916.3.7	Bladen	Elizabethtown	NC 87 Bus (E. Broad St)	Willis St			10	10		2				
44916.3.7	Bladen	Elizabethtown	NC 87 Bus (E. Broad St)	Allen St			10	10		2				
44916.3.7	Bladen	Elizabethtown	NC 87 Bus (E. Broad St)	Byrd St			10	10		2				
44916.3.7	Bladen	Elizabethtown	NC 87 Bus (W. Broad St)	Peanut Rd			10	10		2				
44916.3.7	Bladen	Elizabethtown	NC 87 Bus (W. Broad St)	Minuteman Convenience Store				33						
44916.3.7	Bladen	Elizabethtown	US 701 (Poplar St)	Dunham St				10	2					
44916.3.7	Bladen	Elizabethtown	US 701 (Poplar St)	McDonalds Dwy			10	10		2				
44916.3.7	Bladen	Elizabethtown	US 701 (Poplar St)	Mill St				20	4					
44916.3.7	Bladen	Elizabethtown	US 701 (Poplar St)	Swanzy St				15	3					
44916.3.7	Bladen	Elizabethtown	US 701 (Poplar St)	King St				20	4					
44916.3.7	Bladen	Elizabethtown	US 701 (Poplar St)	Parking Lot Dwy			10	10		2				
44916.3.7	Bladen	Elizabethtown	US 701 (Poplar St)	Parking Lot Dwy			10	10		2				
44916.3.7	Bladen	Elizabethtown	US 701 (Poplar St)	Tory Hole Park			5	5		1				
44916.3.7	Bladen	Elizabethtown	SR 1806 (Mercer Mill Rd)	CVS Dwy				10	2					
44916.3.7	Bladen	Elizabethtown	SR 1806 (Mercer Mill Rd)	Cypress St			10	10		2				
44916.3.7	Bladen	Elizabethtown	SR 1806 (Mercer Mill Rd)	Etown Primary School			40	50	2	8				
44916.3.7	Bladen	Elizabethtown	SR 1806 (Mercer Mill Rd)	Benjamin Manor			10	10		2				
44916.3.7	Bladen	Elizabethtown	SR 1806 (Mercer Mill Rd)	McLeod St				10	2					
44916.3.7	Bladen	Elizabethtown	SR 1806 (Mercer Mill Rd)	Health Dept			20	20		4				
44916.3.7	Bladen	Elizabethtown	SR 1806 (Mercer Mill Rd)	Elizabeth St			5	5		1				
44916.3.7	Bladen	Elizabethtown	SR 1806 (Mercer Mill Rd)	Assisted Care Dwy			10	10		2				
44916.3.7	Bladen	Elizabethtown	SR 1806 (Mercer Mill Rd)	Dialysis Dr			10	10		2				
44916.3.7	Bladen	Elizabethtown	SR 1806 (Mercer Mill Rd)	Smith Circle			5	5		1				
44916.3.7	Bladen	Elizabethtown	SR 1358 (Swanzy St)	US 701 to SR 1145				292						
SUBTOTAL					0.0	5	195	635	23	39	5	0	0	0

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44916.3.7	Columbus	Tabor City	NC 904	Garrell St.			5	5		1				
44916.3.7	Columbus	Tabor City	NC 904	Stevens St.			10	10		2				
44916.3.7	Columbus	Tabor City	NC 904	Cross St.			10	10		2				
44916.3.7	Columbus	Tabor City	NC 904	Fowler St. to Garrell St.				156						
44916.3.7	Columbus	Tabor City	NC 904	US 701-Bus				11						
44916.3.7	Columbus	Tabor City	NC 904	5th St.			10	10		2				
44916.3.7	Columbus	Tabor City	NC 904	6th St.			10	10		2				
44916.3.7	Columbus	Tabor City	NC 904	7th St.			5	5		1				
44916.3.7	Columbus	Tabor City	US 701-BUS	ShCtr Near Stake Rd				22						
44916.3.7	Columbus	Tabor City	US 701-Bus	Stake Road			5	22		1				400
44916.3.7	Columbus	Tabor City	SR 1301	3rd St.			5	5		1				
44916.3.7	Columbus	Tabor City	SR 1301	At Middle School			10	22		2			1	50
44916.3.7	Columbus	Tabor City	SR 1301	N. of Chestnut St.				17						
SUBTOTAL					0.0	0	70	305	0	14	0	0	1	450
44916.3.7	Columbus	Fair Bluff	US 76	Riverside St.					4					
44916.3.7	Columbus	Fair Bluff	US 76	At Post Office			10	10		2				
44916.3.7	Columbus	Fair Bluff	US 76	Bardin St.					4					
44916.3.7	Columbus	Fair Bluff	US 76	NC 904 to Johnnie's			5	53		1				
SUBTOTAL					0.0	0	15	63	8	3	0	0	0	0
44916.3.7	Columbus	Chadbourn	SR 1423	At Middle School		5		139						
44916.3.7	Columbus	Chadbourn	NC 410	Smith St.			5	5		1				
44916.3.7	Columbus	Chadbourn	NC 410	Princess St.			10	10		2				
44916.3.7	Columbus	Chadbourn	NC 410	Institute St.			10	10		2				
44916.3.7	Columbus	Chadbourn	NC 410	Holland St.			10	10		2				
44916.3.7	Columbus	Chadbourn	NC 410	Thompson St.			10	10		2				
44916.3.7	Columbus	Chadbourn	NC 410	2nd St.				20	4					
44916.3.7	Columbus	Chadbourn	NC 410	C&L Used Car Dwy.			10	10		2				
44916.3.7	Columbus	Chadbourn	NC 410	3rd St.				20	4					
44916.3.7	Columbus	Chadbourn	NC 410	4th St.				10	2					
44916.3.7	Columbus	Chadbourn	NC 410	5th St.				10	2					
SUBTOTAL					0.0	5	55	254	12	11	0	0	0	0
44916.3.7	Columbus	Evergreen	SR 1574	At Post Office			5	5		1				
SUBTOTAL					0.0	0	5	5	0	1	0	0	0	0
44916.3.7	Columbus	Lake Waccamaw	SR 1957	Lake Shore Dr.			5	5		1				
44916.3.7	Columbus	Lake Waccamaw	SR 1957	Church St.			10	16		2				
SUBTOTAL					0.0	0	15	21	0	3	0	0	0	0
44916.3.7	Robeson	Maxton	Bus 74	Middle St.				10	2					
44916.3.7	Robeson	Maxton	Bus 74	1st. St			15	15	1	3				
44916.3.7	Robeson	Maxton	Bus 74	*driveway*			10	10		2				
44916.3.7	Robeson	Maxton	Bus 74	3rd. St			20	60		4				40
44916.3.7	Robeson	Maxton	Bus 74	Maxton Medical			15	15		2				
44916.3.7	Robeson	Maxton	HWY 130	W. carloline St.			10	420		2				
44916.3.7	Robeson	Maxton	HWY 130	W. Baldwin St.			10	140		2				
44916.3.7	Robeson	Maxton	HWY 130	Walgreens			10	10	2					
44916.3.7	Robeson	Maxton	NC 71/NC 130 N. Patterson	E. Cottingham Ln.			5	5		1				
44916.3.7	Robeson	Maxton	SR 1303	E. Cottingham Ln.				5	1					
44916.3.7	Robeson	Maxton	SR 1303	SR1302 Academy				15	3					
44916.3.7	Robeson	Maxton	SR 1303	Courtland St.			10	10		2				
SUBTOTAL					0.0	0	105	715	9	18	0	0	0	40

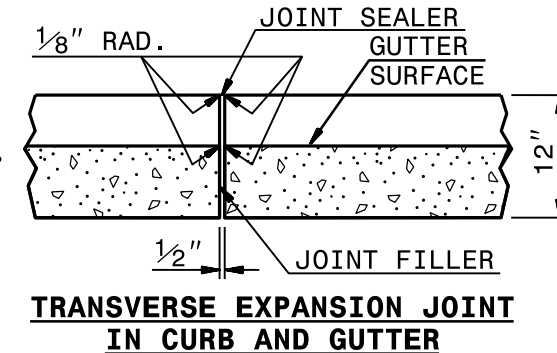
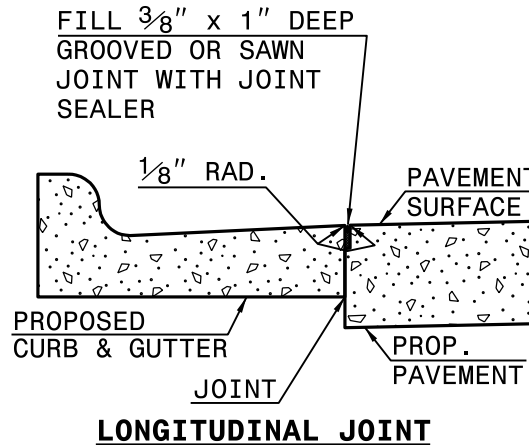
PROJECT	COUNTY	MUNICIPALITY	MAJOR ROUTE	MINOR ROUTE	0000100000-N Mobilization	1220000000-E Incidental Stone Base	2549000000-E 2'-6" Concrete Curb & Gutter	2591000000-E 4" Concrete Sidewalk	2600000000-N Retrofit Existing Curb Ramp	2605000000-N Concrete Curb Ramp	2612000000-E 6" Concrete Driveway	2800000000-N Adjustments of Catch Basins	2815000000-N Adjustments of Drop Inlets	4697000000-E Thermoplastic Pavement Marking Lines (8", 120 mils)
44916.3.7	Robeson	Fairmont	HWY 41	NC 130/Cottage St.			5	5		1				
44916.3.7	Robeson	Fairmont	HWY 41	Church			15	15	1	2				130
44916.3.7	Robeson	Fairmont	HWY 41	McDaniel			10	10	2					
44916.3.7	Robeson	Fairmont	HWY 41	Sandy St.			15	15		3				
44916.3.7	Robeson	Fairmont	HWY 41	Stevens Ave.			10	10		2				
44916.3.7	Robeson	Fairmont	HWY 41	Maple										
44916.3.7	Robeson	Fairmont	HWY 41	Jenkins			10	10		1				
44916.3.7	Robeson	Fairmont	SR 2442 Pittman St.	Church St.			20	20		4				
SUBTOTAL					0.0	0	85	85	3	13	0	0	0	130
44916.3.7	Robeson	Red Springs	HWY 72	8 th Ave.			10	10		2				
44916.3.7	Robeson	Red Springs	HWY 72	4th Ave.			10	10	2					
44916.3.7	Robeson	Red Springs	HWY 72	W 2nd. Ave.			10	10		2				
44916.3.7	Robeson	Red Springs	HWY 72	E 2nd Ave.			10	10		2				
SUBTOTAL					0.0	0	40	40	2	6	0	0	0	0
44916.3.7	Robeson	Parkton	David Parnell	N Fayetteville			20	20		2		1		220
SUBTOTAL					0.0	0	20	20	0	2	0	1	0	220
44916.3.7	Robeson	St. Pauls	NC 20	Elizebeth St.			10	10						
SUBTOTAL					0.0	0	10	10	0	0	0	0	0	0
TOTAL FOR R-5786CB / 44916.3.7 - Pop. < 5000					0.5	10	770	2705	80	118	5	1	1	840
GRAND TOTAL					1.0	20	1360	4027	106	198	10	13	5	920



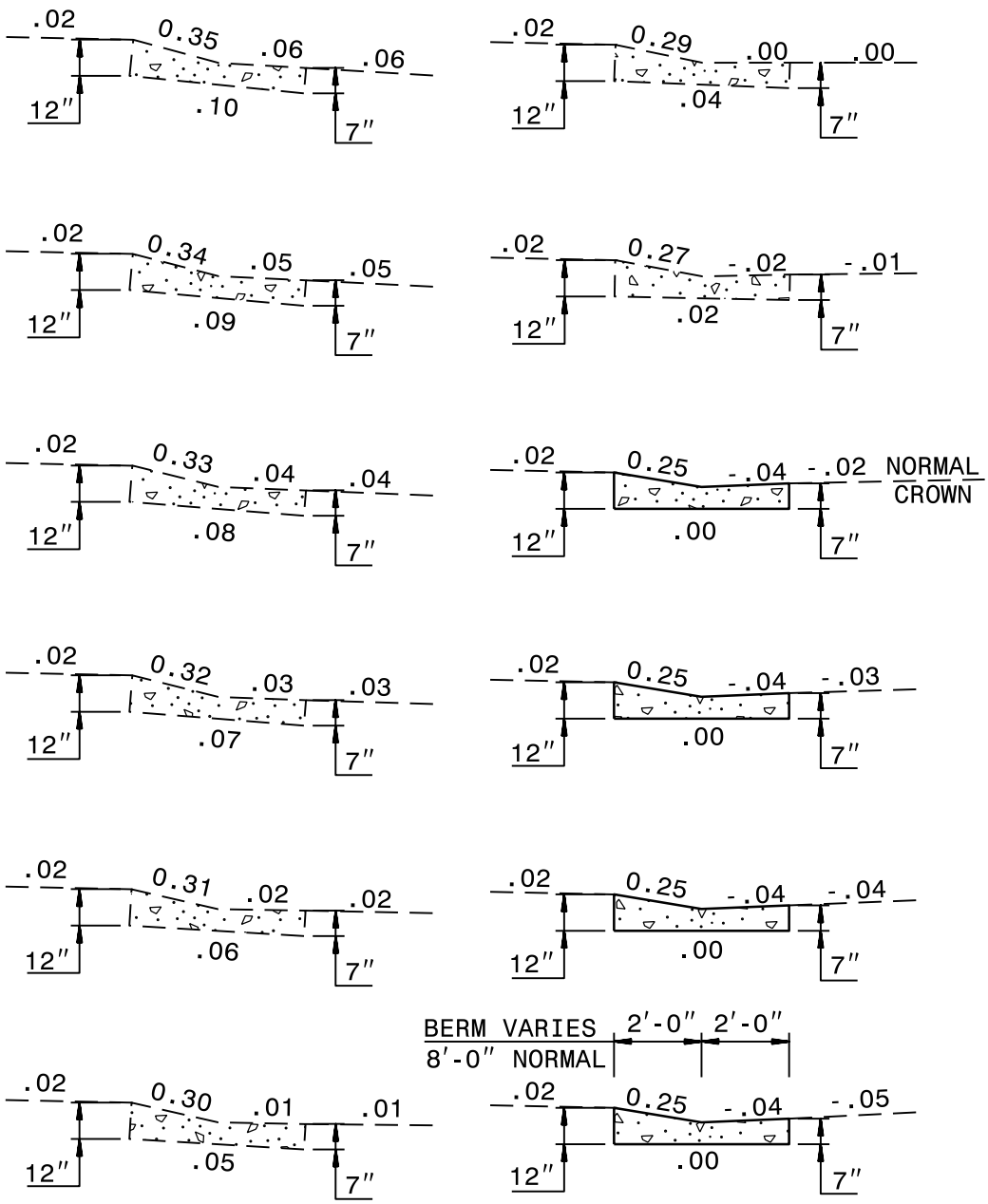
SECTION VIEW OF CURBS OR CURBS AND GUTTERS

GENERAL NOTES:

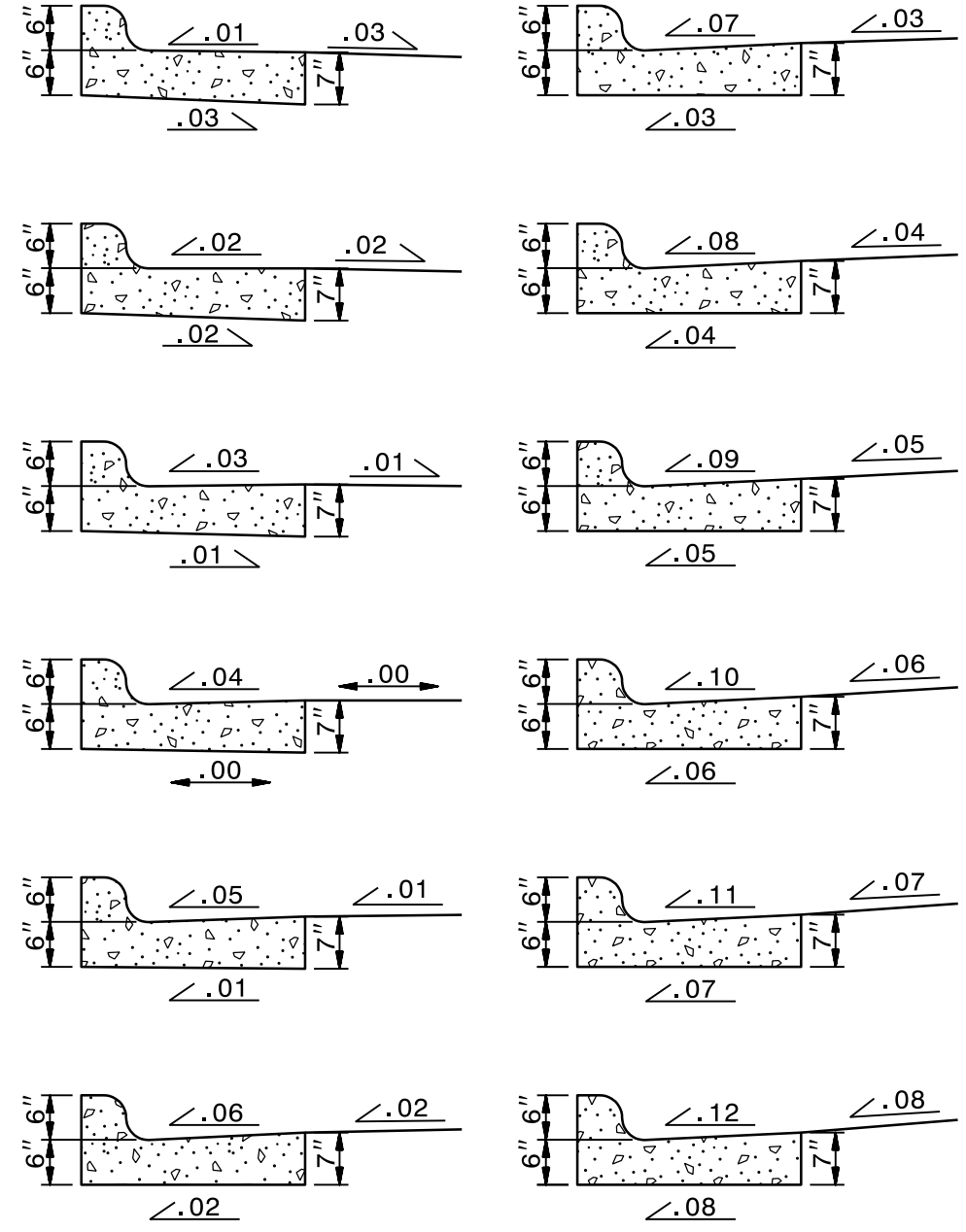
- PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
- JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
- CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.
- CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1 1/2" DEEP.
- FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"x6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.
- SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



SECTION VIEW OF JOINTS



SECTION VIEWS OF EXPRESSWAY GUTTER IN SUPER ELEVATION



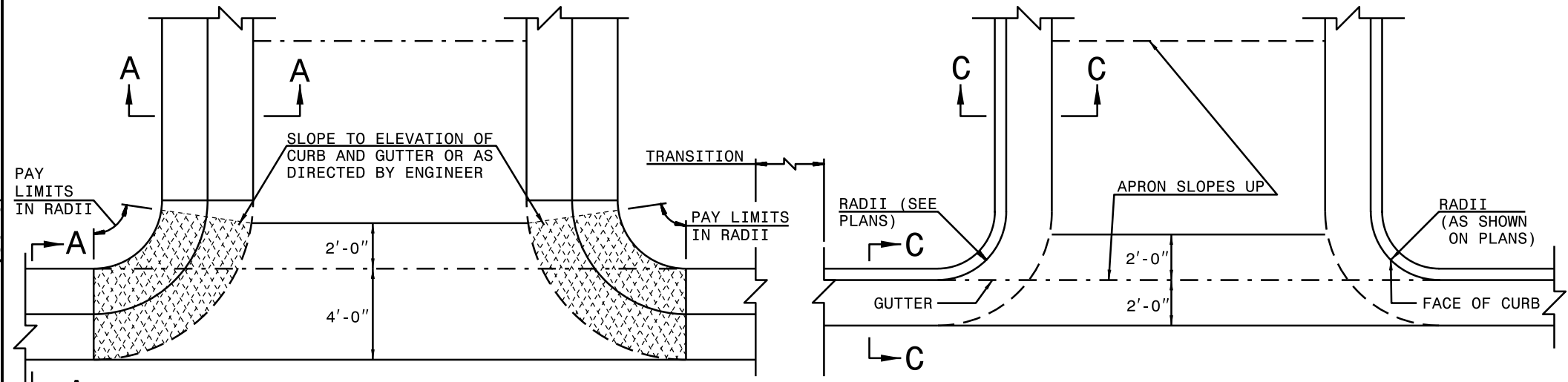
SECTION VIEWS OF 2'-6" CURB AND GUTTER SUPERELEVATION RATES

1-18

ROADWAY STANDARD DRAWING FOR

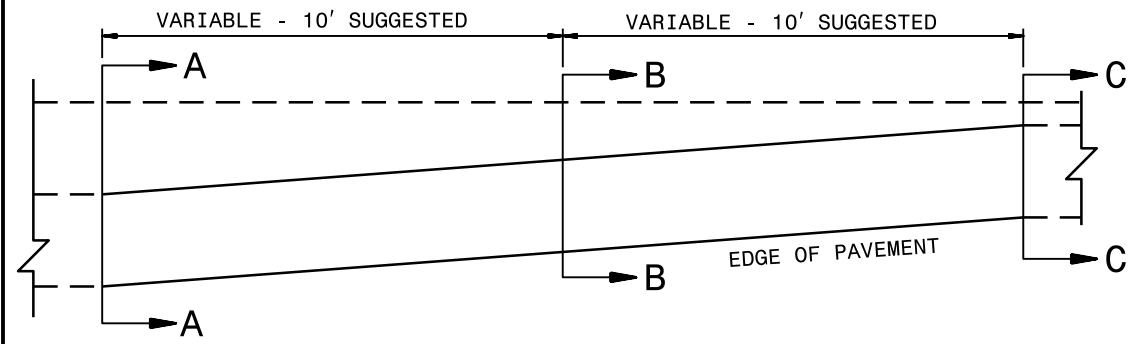
CONCRETE CURB, GUTTER AND CURB & GUTTER

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

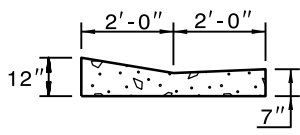


DRIVEWAY WITH EXPRESSWAY GUTTER TRANSITION DRIVEWAY WITH 2'-6" CURB AND GUTTER

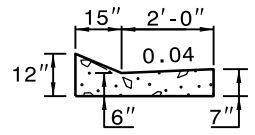
PLAN VIEW OF TYPICAL CURB AND GUTTER OCCURENCES



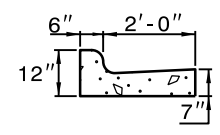
**PLAN VIEW OF TRANSITION
EXPRESSWAY GUTTER TO 2'-6" CURB AND GUTTER**



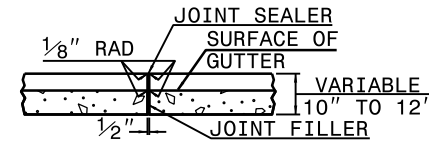
**SECTION A-A
EXPRESSWAY GUTTER**



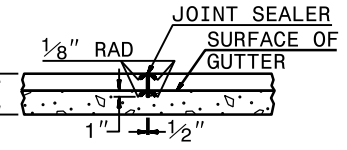
**SECTION B-B
TRANSITION GUTTER**



**SECTION C-C
2'-6" CURB & GUTTER**



EXPANSION JOINT



CONTRACTION JOINT

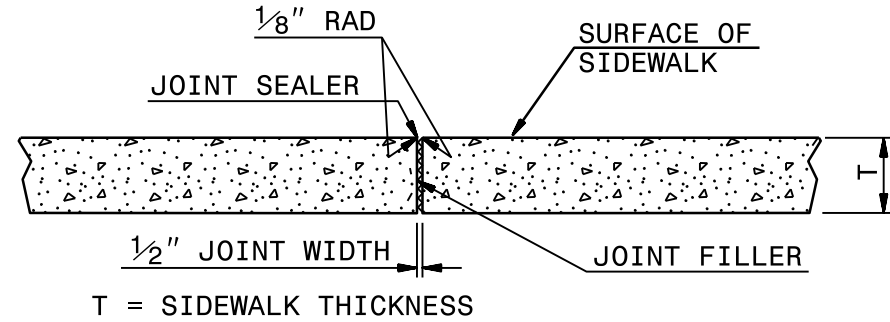
- NOTES:
- IN THE TRANSITION FROM 4'-0" CONCRETE EXPRESSWAY GUTTER TO 2'-6" CONCRETE CURB AND GUTTER, PLACE 1/2" EXPANSION JOINTS AT 25' INTERVALS.
 - PLACE GROOVE JOINTS 1" DEEP AT 12'-6" INTERVALS BETWEEN EXPANSION JOINTS.
 - FILL AND SEAL THE TOP 1/2" OF THE EXPANSION JOINTS AND 1" OF CONTRACTION JOINTS WITH APPROVED JOINT SEALING COMPOUND.

NOTES:

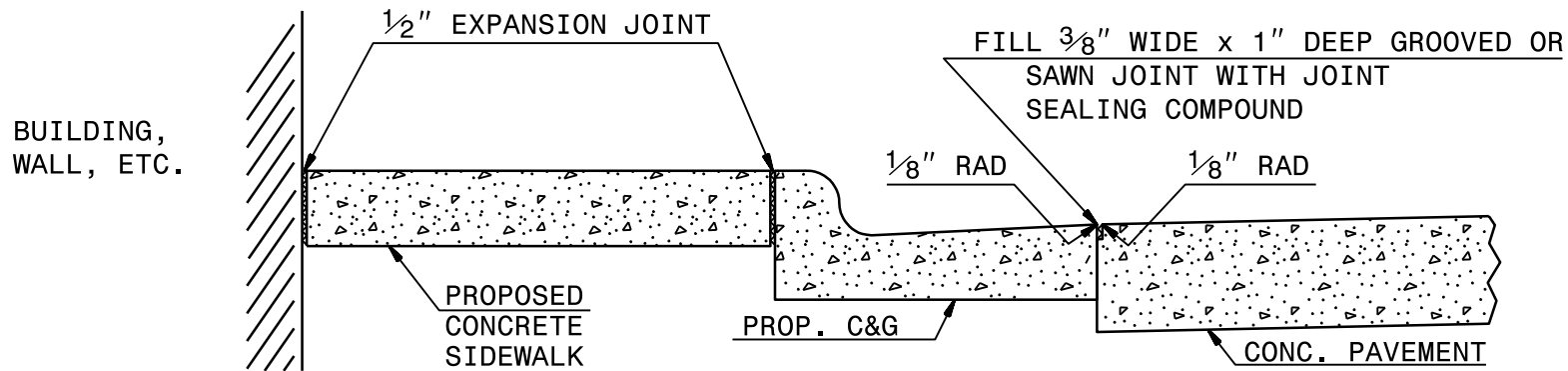
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH $\frac{1}{8}$ " RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE $\frac{1}{2}$ " EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A $\frac{1}{2}$ " EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.05 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.

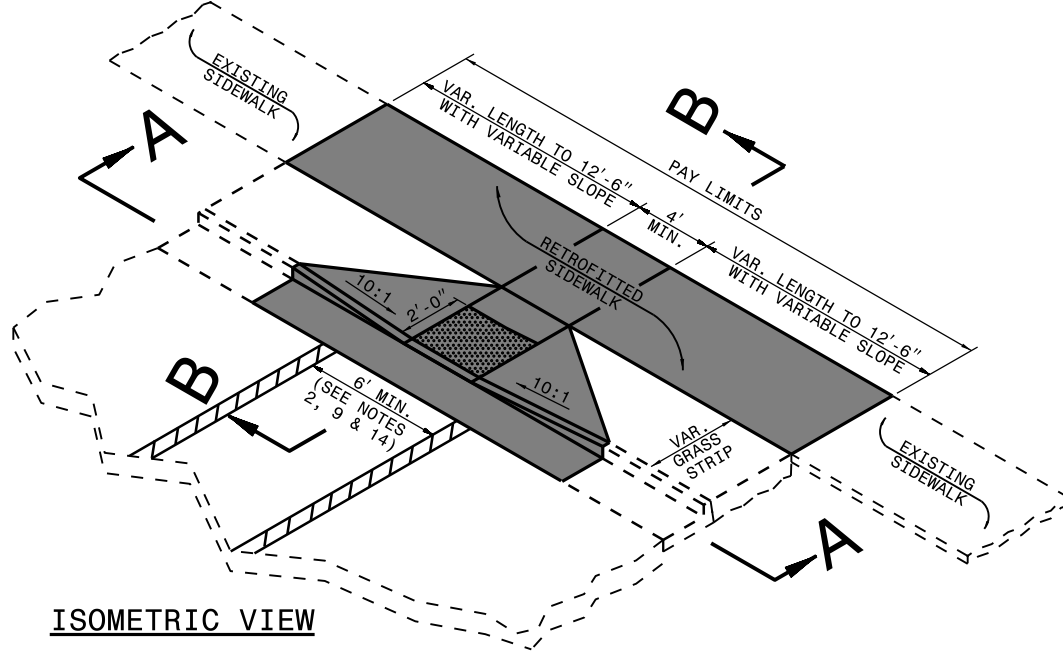


TRANSVERSE EXPANSION JOINT
IN SIDEWALK



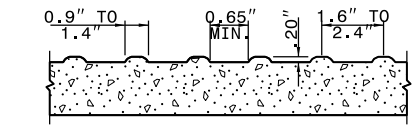
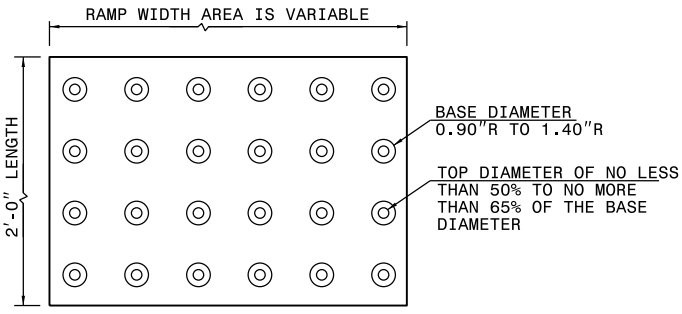
DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

CURB RAMP AND EXISTING SIDEWALK WITH GRASS STRIP



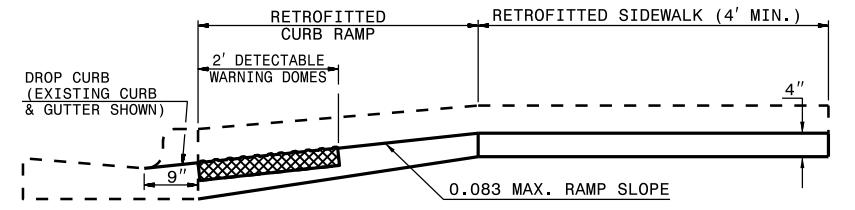
ISOMETRIC VIEW

PAY LIMITS OF CURB RAMP

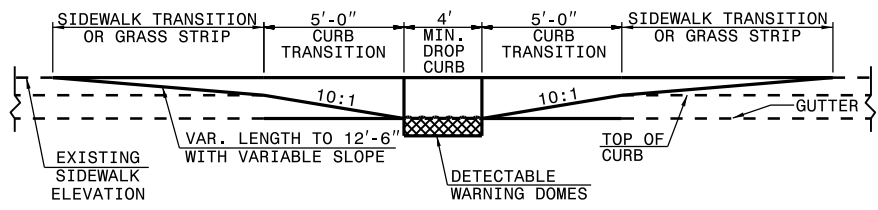


DETECTABLE WARNING DOMES

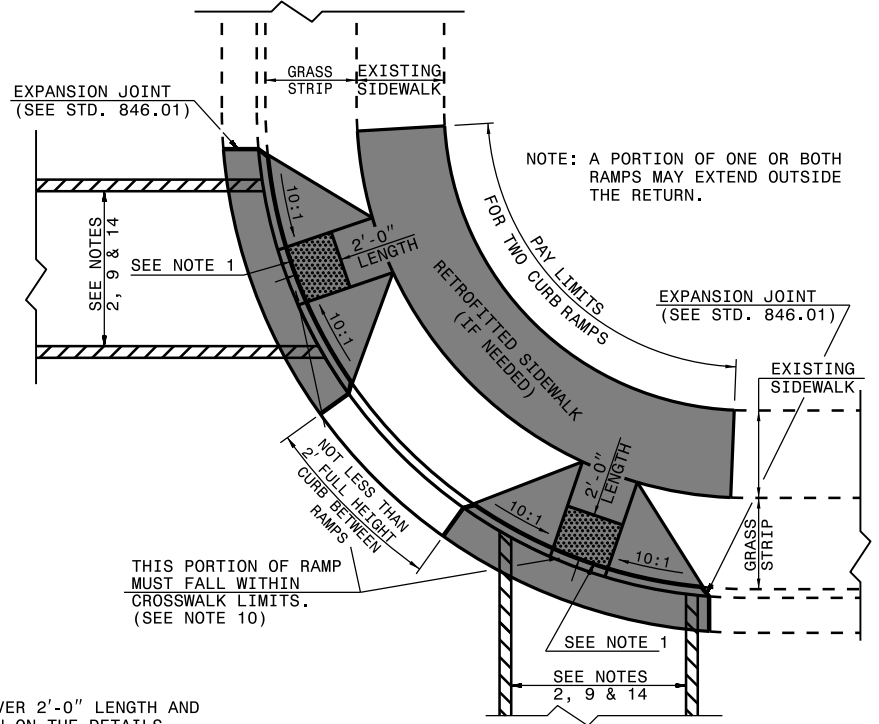
- NOTES:**
1. PLACE DETECTABLE WARNING DOMES TO COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
 2. OBTAIN VISIBLE CONTRAST WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



SECTION B-B



SECTION A-A



PLAN VIEW

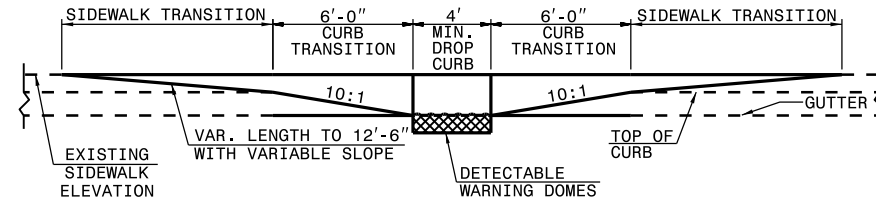
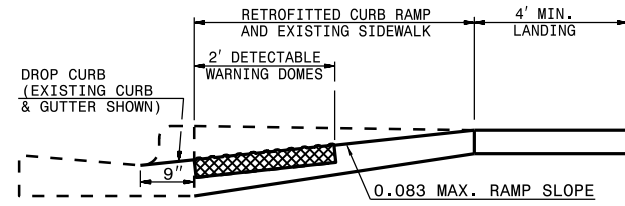
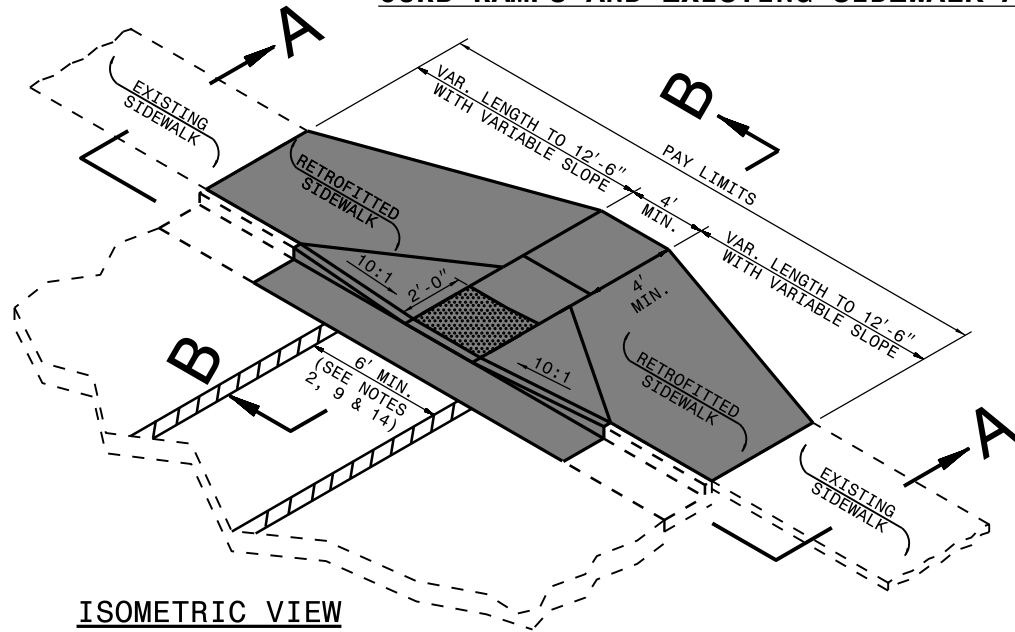
DUAL RAMPS
ANY RADII
(40" MIN. FLOOR WIDTH)

1-18

ROADWAY STANDARD DRAWING FOR

CURB RAMP
EXISTING CURB AND GUTTER

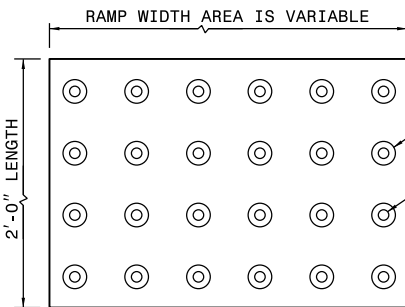
CURB RAMPS AND EXISTING SIDEWALK ADJACENT TO CURB



ISOMETRIC VIEW

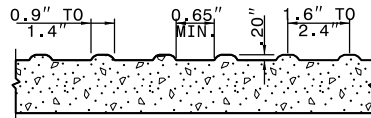
SECTION A-A

PAY LIMITS OF CURB RAMP

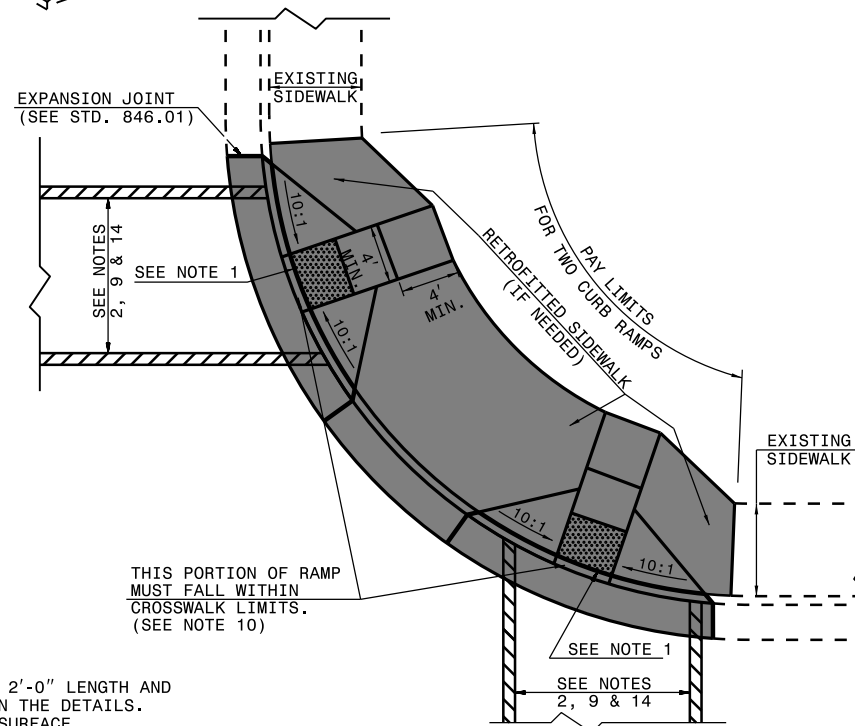


BASE DIAMETER
0.90"R TO 1.40"R

TOP DIAMETER OF NO LESS
THAN 50% TO NO MORE
THAN 65% OF THE BASE
DIAMETER



DETECTABLE WARNING DOMES



PLAN VIEW

DUAL RAMPS
ANY RADII
(40" MIN. FLOOR WIDTH)

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

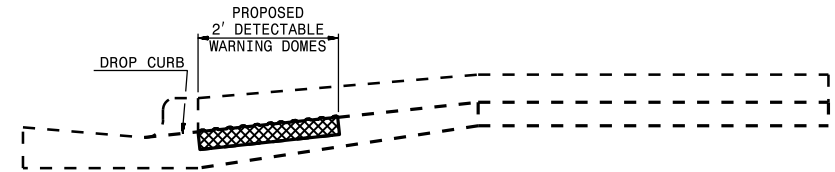
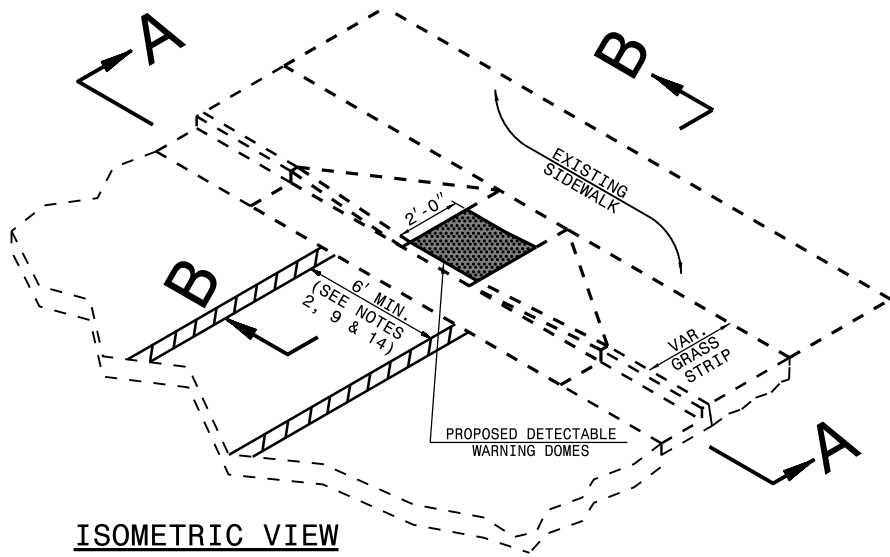
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ROADWAY STANDARD DRAWING FOR

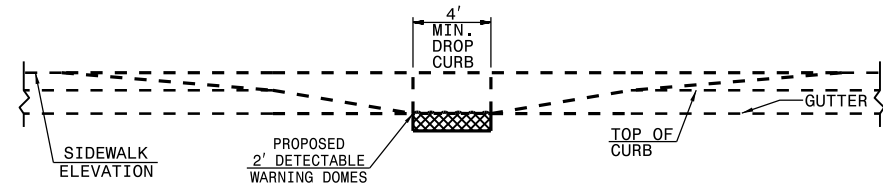
CURB RAMP

EXISTING CURB AND GUTTER

RETROFITTING DETECTABLE WARNING DOMES ONTO EXISTING CURB RAMP

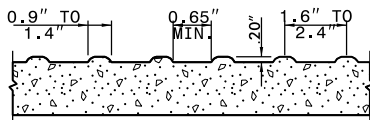
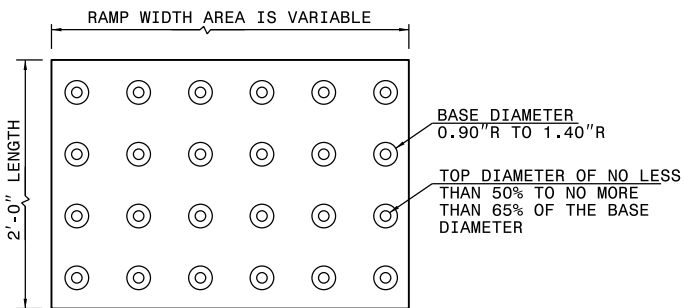


SECTION B-B



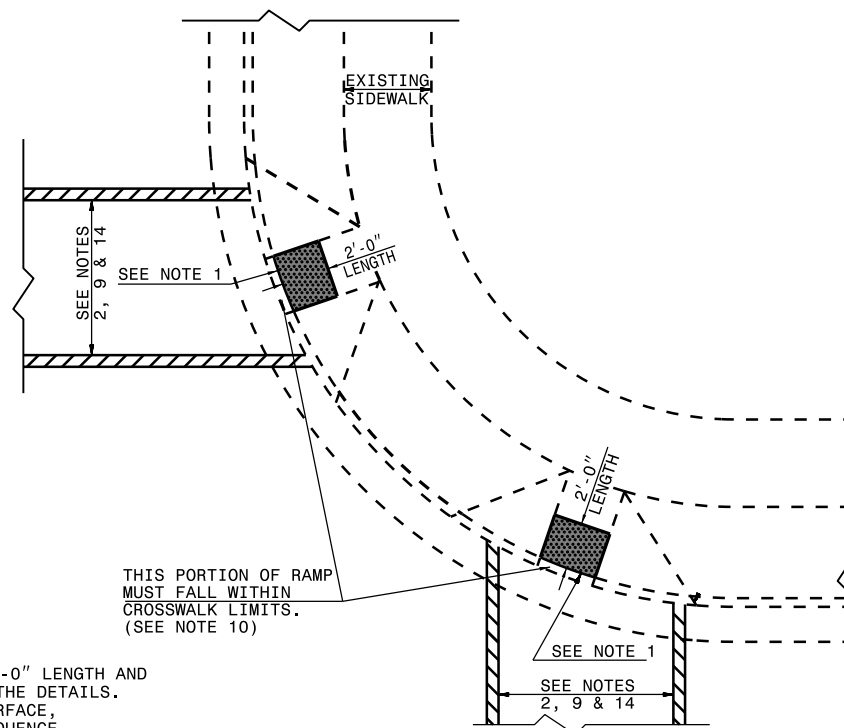
SECTION A-A

PAY LIMITS OF RETROFIT CURB RAMP



DETECTABLE WARNING DOMES

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



PLAN VIEW

DUAL RAMPS
ANY RADII
(40" MIN. FLOOR WIDTH)

ROADWAY STANDARD DRAWING FOR

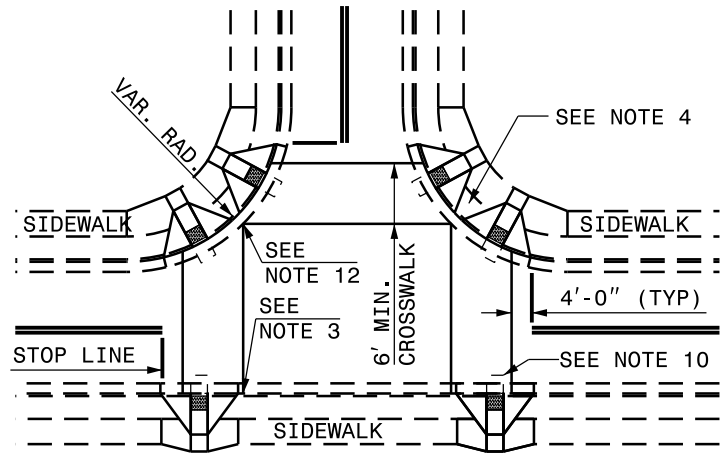
CURB RAMP

EXISTING CURB AND GUTTER

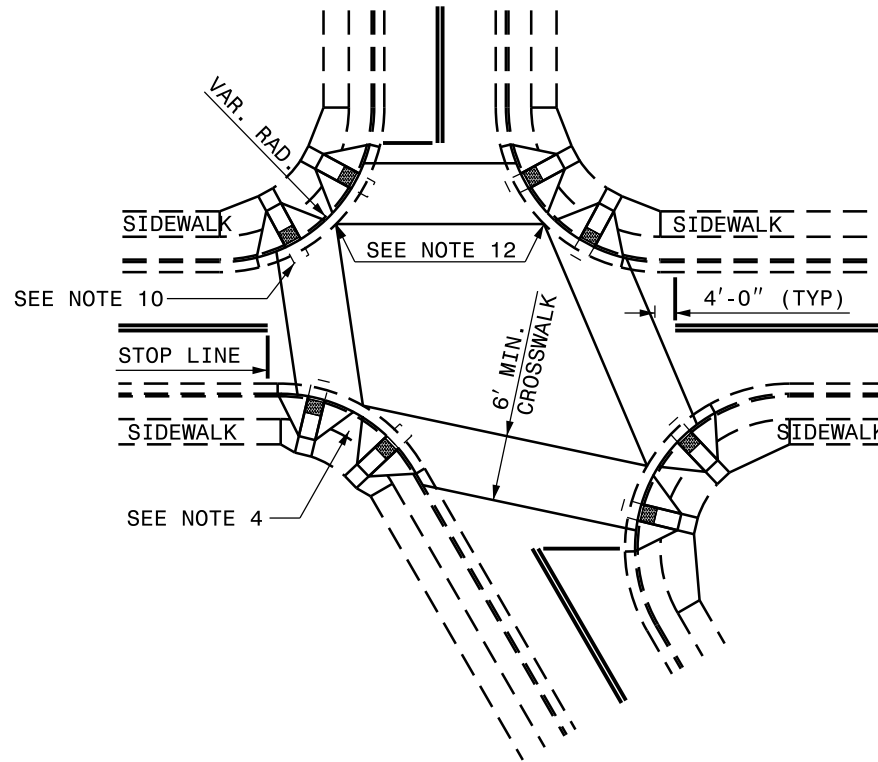
1-18

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

CURB RAMPS AND EXISTING SIDEWALK

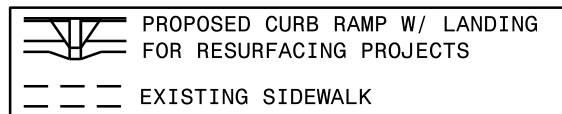


DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS



DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES

RESURFACING PROJECTS



ALLOWABLE LOCATIONS
 DUAL RAMP RADII.....ANY

CURB RAMP AND EXISTING SIDEWALK

NOTES:

1. CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM, AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP TYPE AS SHOWN IN THE PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER.
2. LOCATE CURB RAMPS AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN IN THE PAVEMENT MARKING PLANS. WHEN FIELD ADJUSTMENTS REQUIRE MOVING CURB RAMPS OR MARKINGS AS SHOWN, CONTACT THE SIGNING AND DELINEATION UNIT OR LOCATE AS DIRECTED BY THE ENGINEER.
3. COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS SO A 4'x4' CLEAR SPACE AT THE BASE OF THE CURB RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES.
4. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL LANE IS 4' MINIMUM.
5. REFER TO THE PAVEMENT MARKING PLANS FOR STOP BAR LOCATIONS AT SIGNALIZED INTERSECTIONS. IF A PAVEMENT MARKING PLAN IS NOT PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR LOCATE AS DIRECTED BY THE ENGINEER.
6. TERMINATE PARKING A MINIMUM OF 20' BACK OF A PEDESTRIAN CROSSWALK.
7. CONSTRUCT CURB RAMPS A MINIMUM OF 4' WIDE.
8. CONSTRUCT THE RUNNING SLOPE OF THE RAMP 8.33% MAXIMUM.
9. ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMPS WILL BE 2% MAXIMUM.
10. CONSTRUCT THE SIDE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
11. CONSTRUCT THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE BASE OF THE CURB RAMP A MAXIMUM OF 5% AND MAINTAIN A SMOOTH TRANSITION.
12. CONSTRUCT LANDINGS FOR SIDEWALK A MINIMUM OF 4'x4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. CONSTRUCT LANDINGS FOR MEDIAN ISLANDS A MINIMUM OF 5'x5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
13. TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' WIDE. CONSTRUCT MEDIAN ISLANDS TO PROVIDE PASSAGE OVER OR THROUGH THE ISLAND.
14. SMALL CHANNELIZATION ISLANDS THAT CAN NOT PROVIDE A 5'x5' LANDING AT THE TOP OF A RAMPS, WILL BE CUT THROUGH LEVEL WITH THE SURFACE STREET.
15. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
16. PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS SHOWN IN ROADWAY STANDARD DRAWING 848.01
17. PLACE ALL PEDESTRIAN PUSH BUTTON ACTUATORS AND CROSSING SIGNALS AS SHOWN IN THE PLANS OR AS SHOWN IN THE MUTCD.
18. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR THE DETAILS OR FOR A SPECIAL DESIGN.

1-18

ROADWAY STANDARD DRAWING FOR

CURB RAMP

EXISTING CURB AND GUTTER

STATE OF

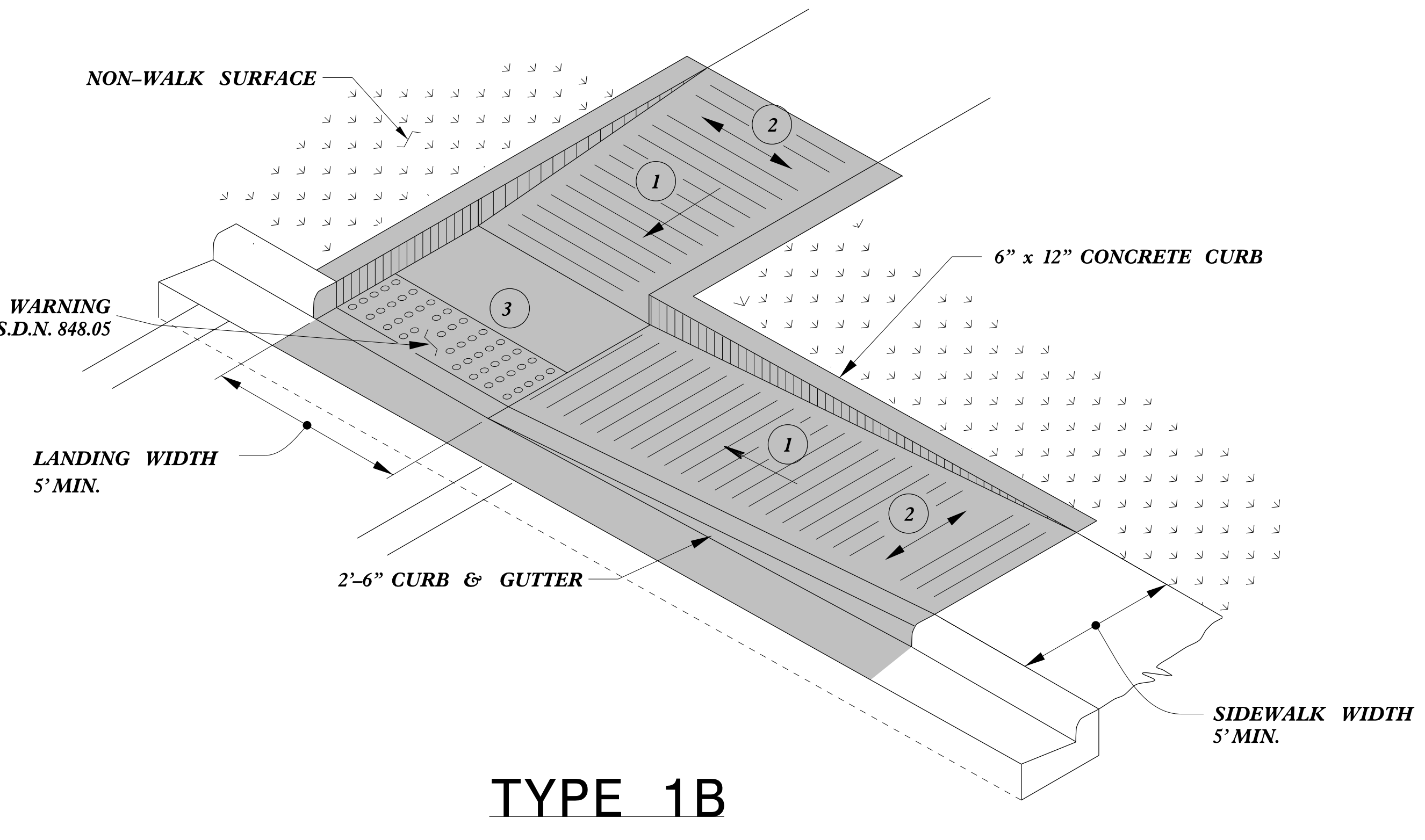
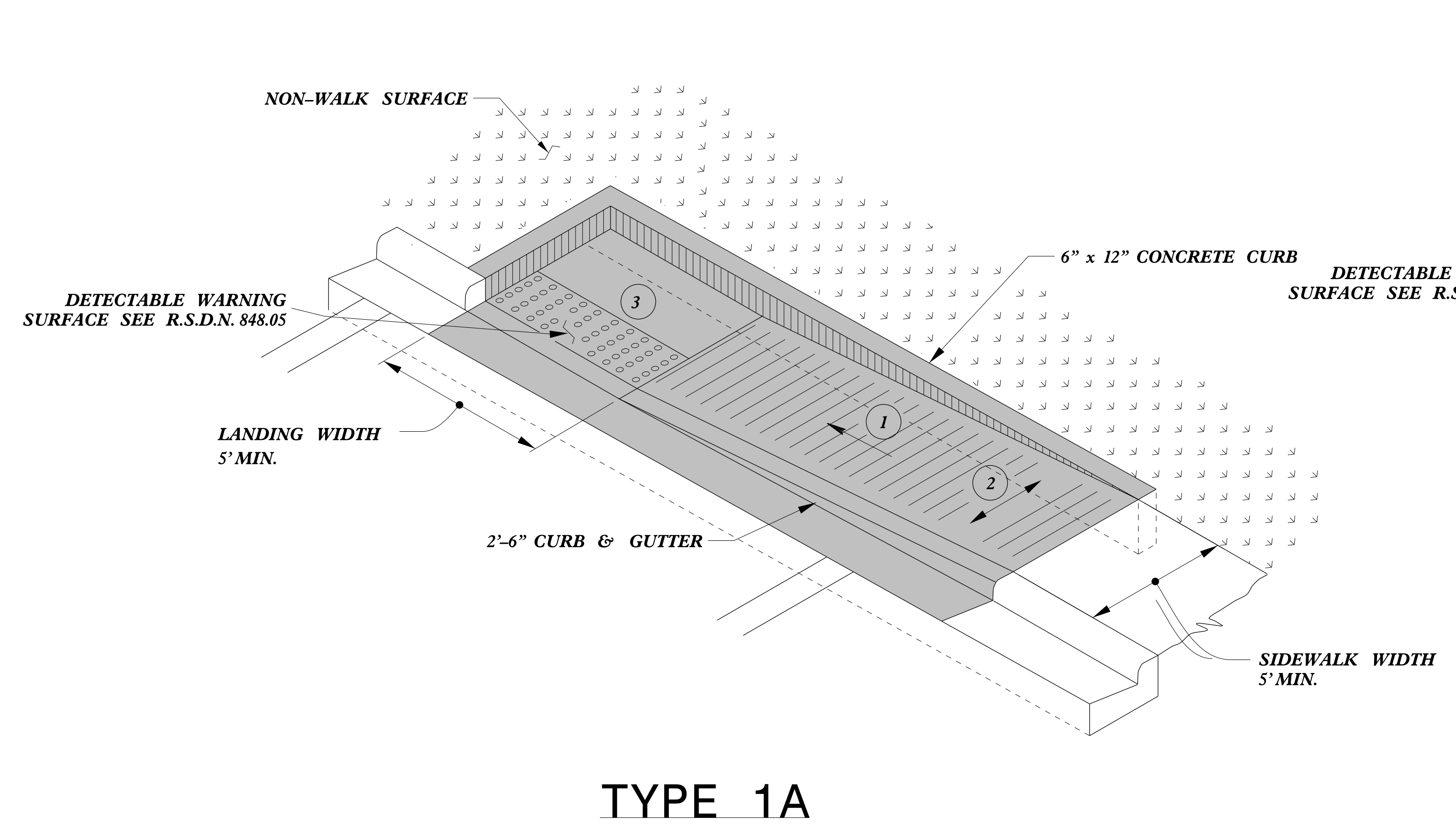
NORTH CAROLINA

DEPT. OF TRANSPORTATION

DIVISION OF HIGHWAYS

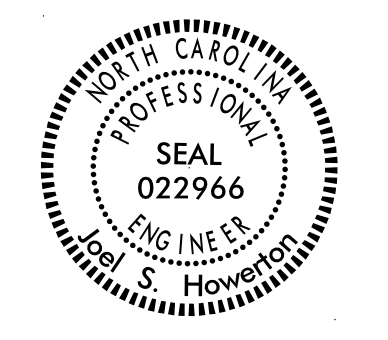
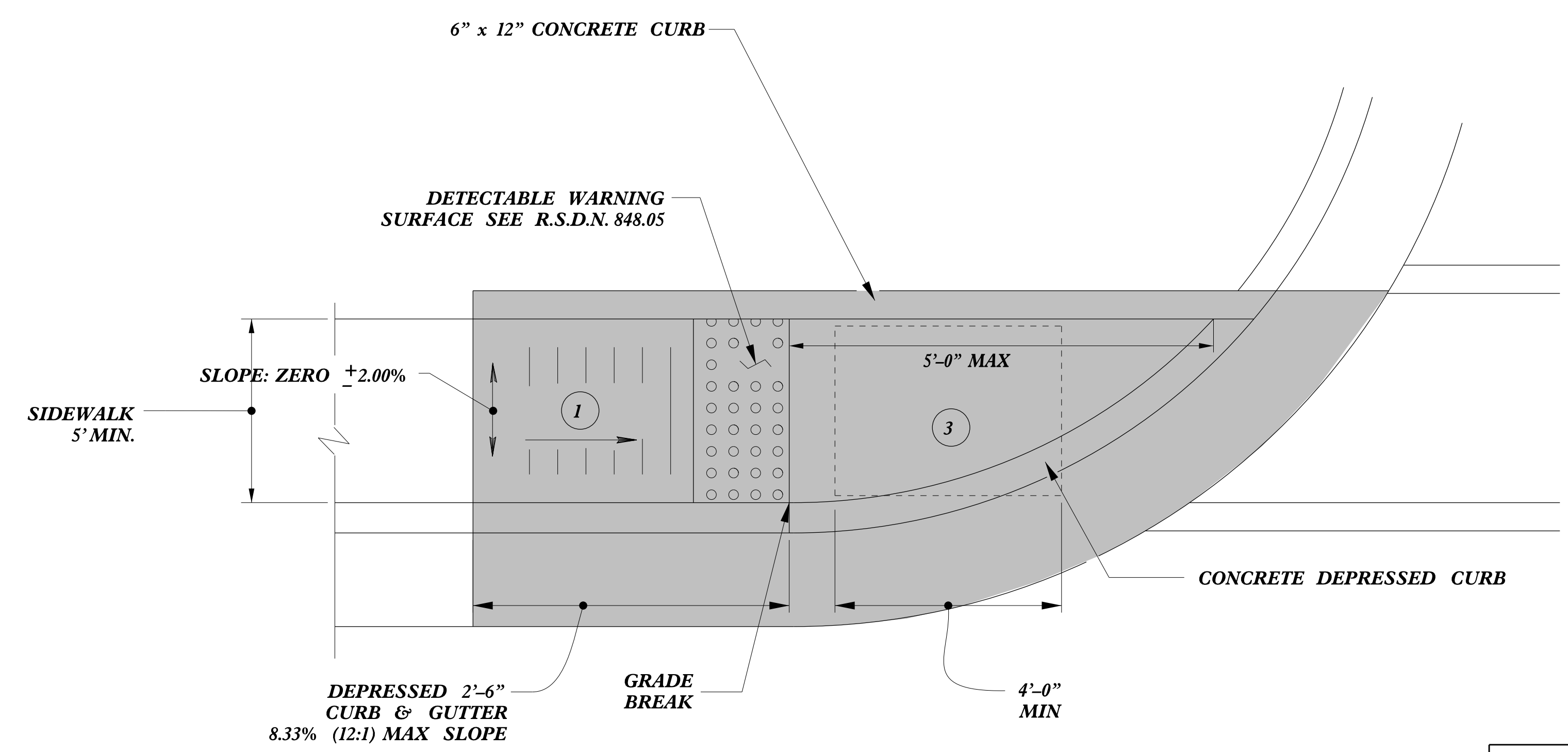
RALEIGH, N.C.

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.

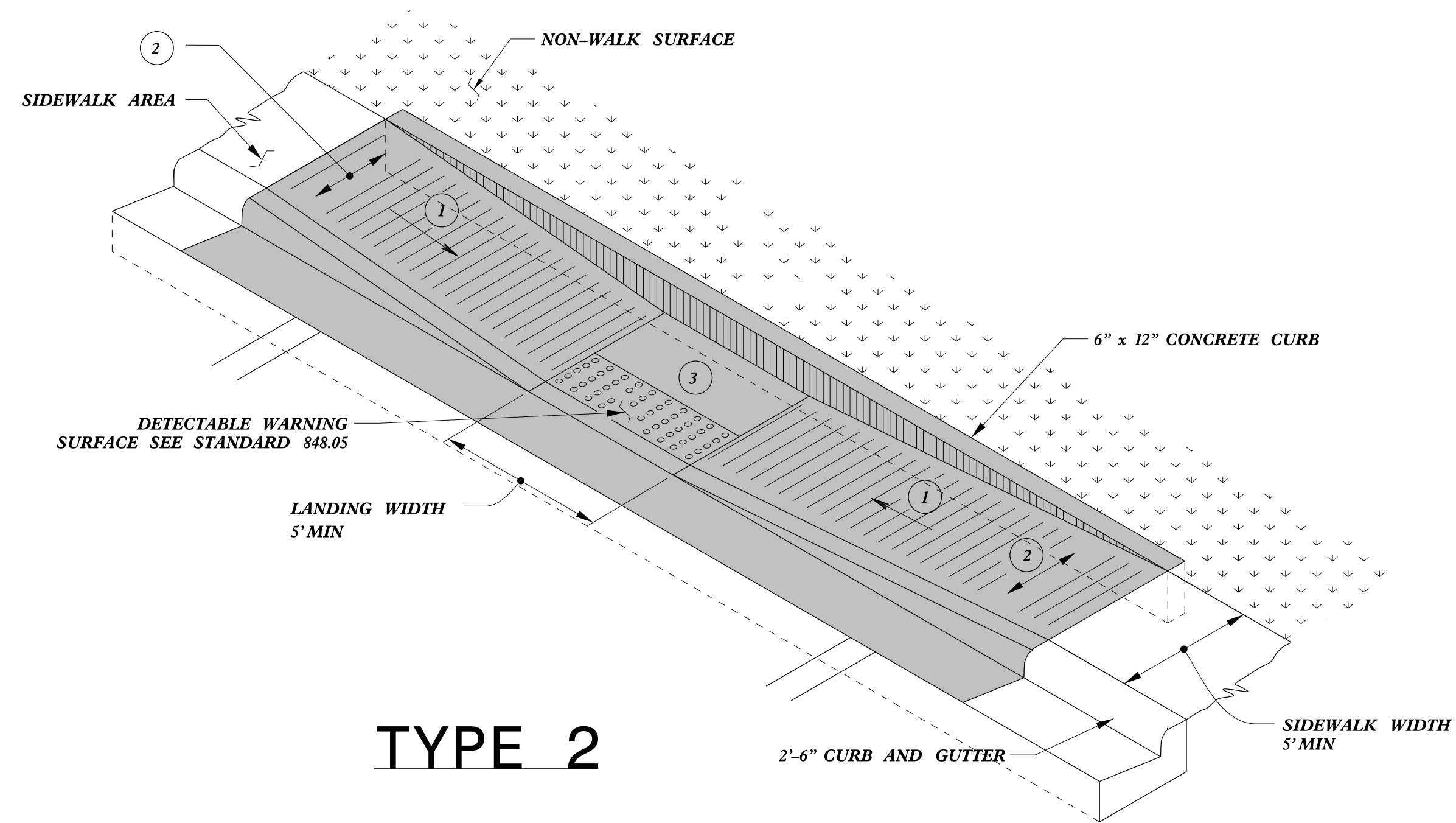


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

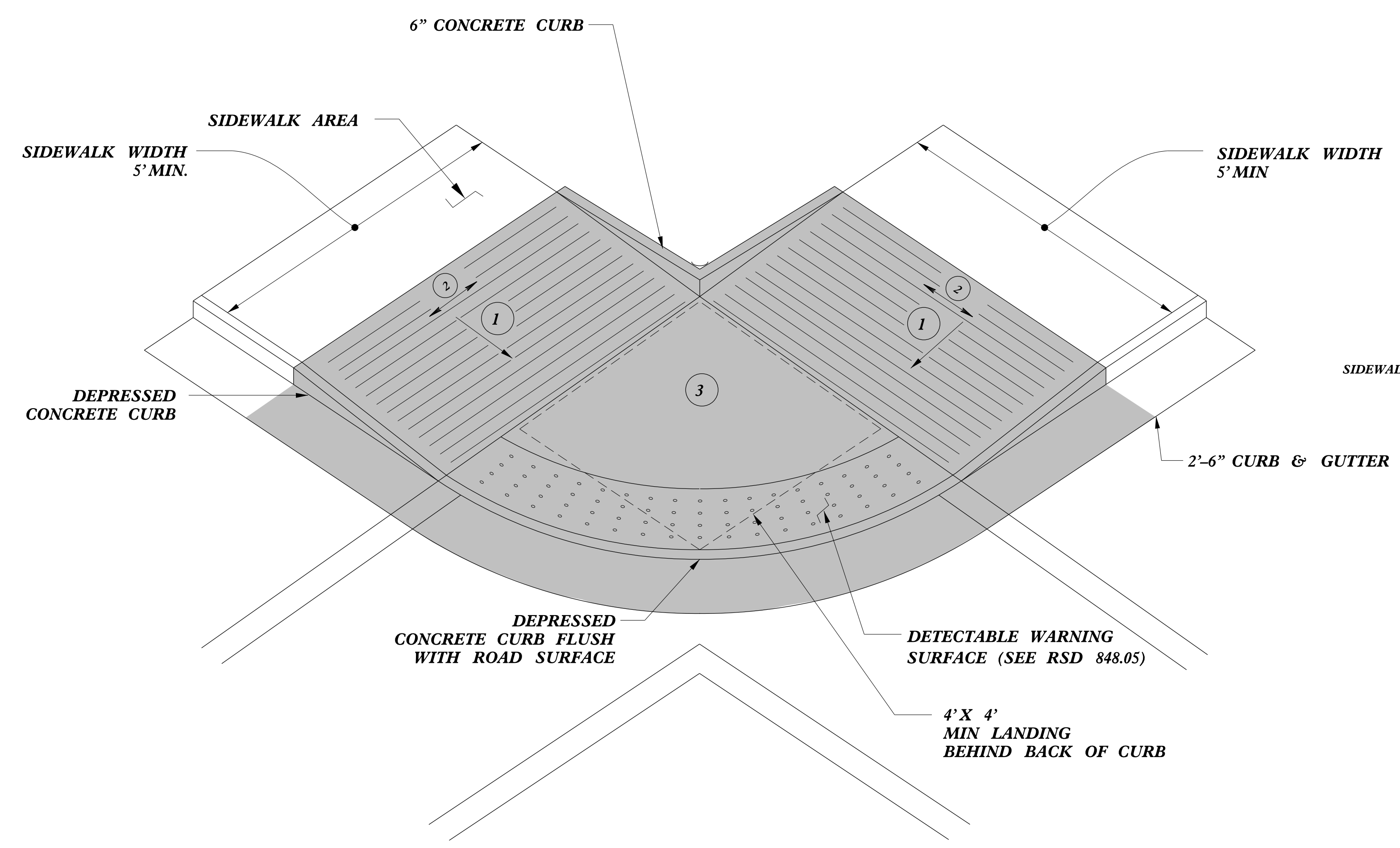
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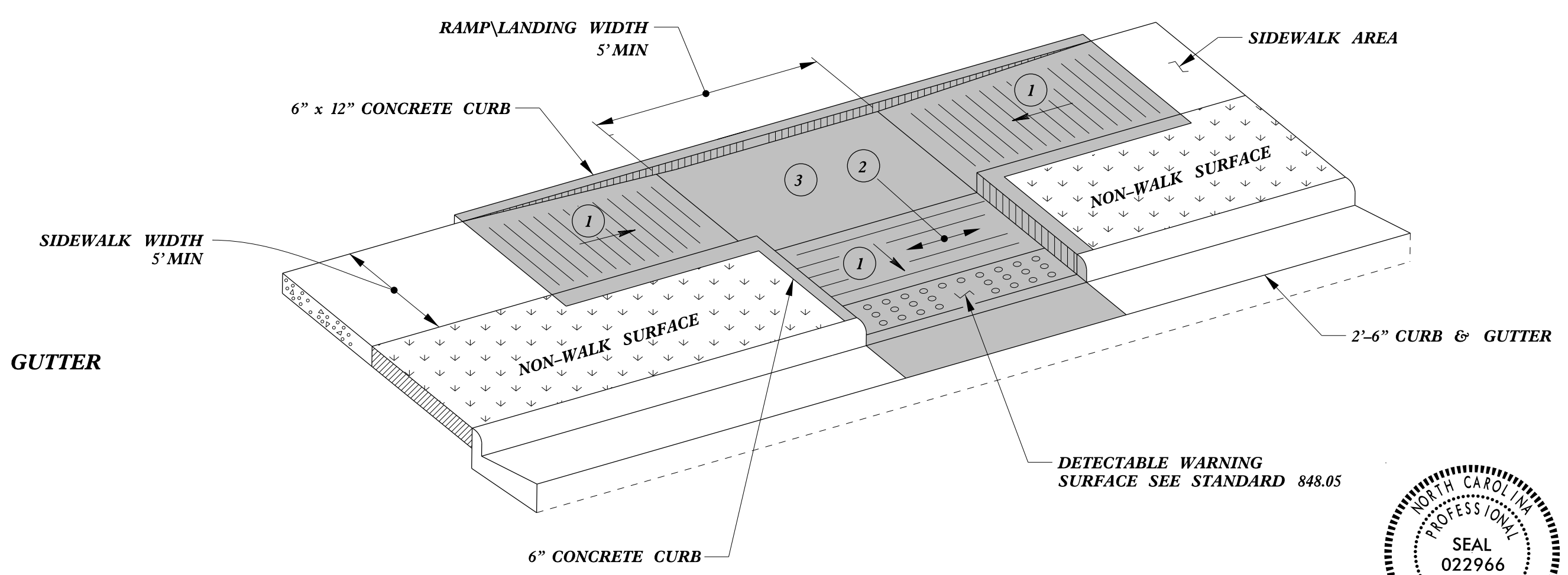
TYPE 2

PAY LIMITS FOR 1 CURB RAMP

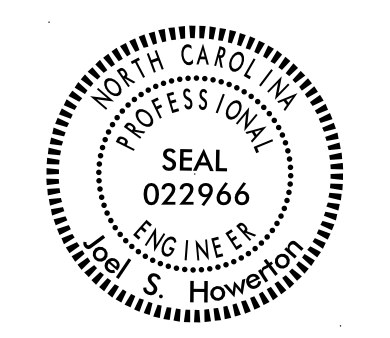
- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



TYPE 2A



TYPE 3

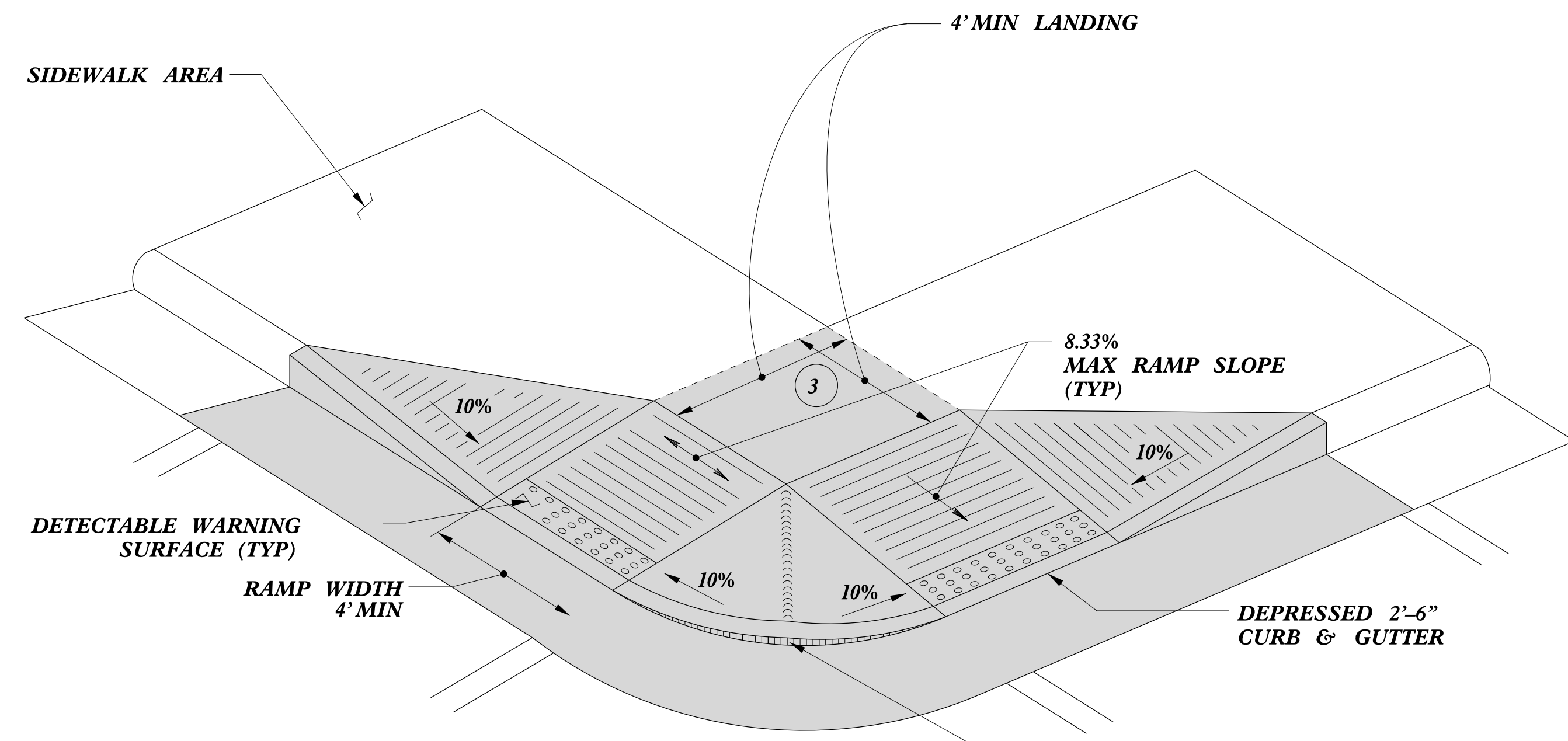


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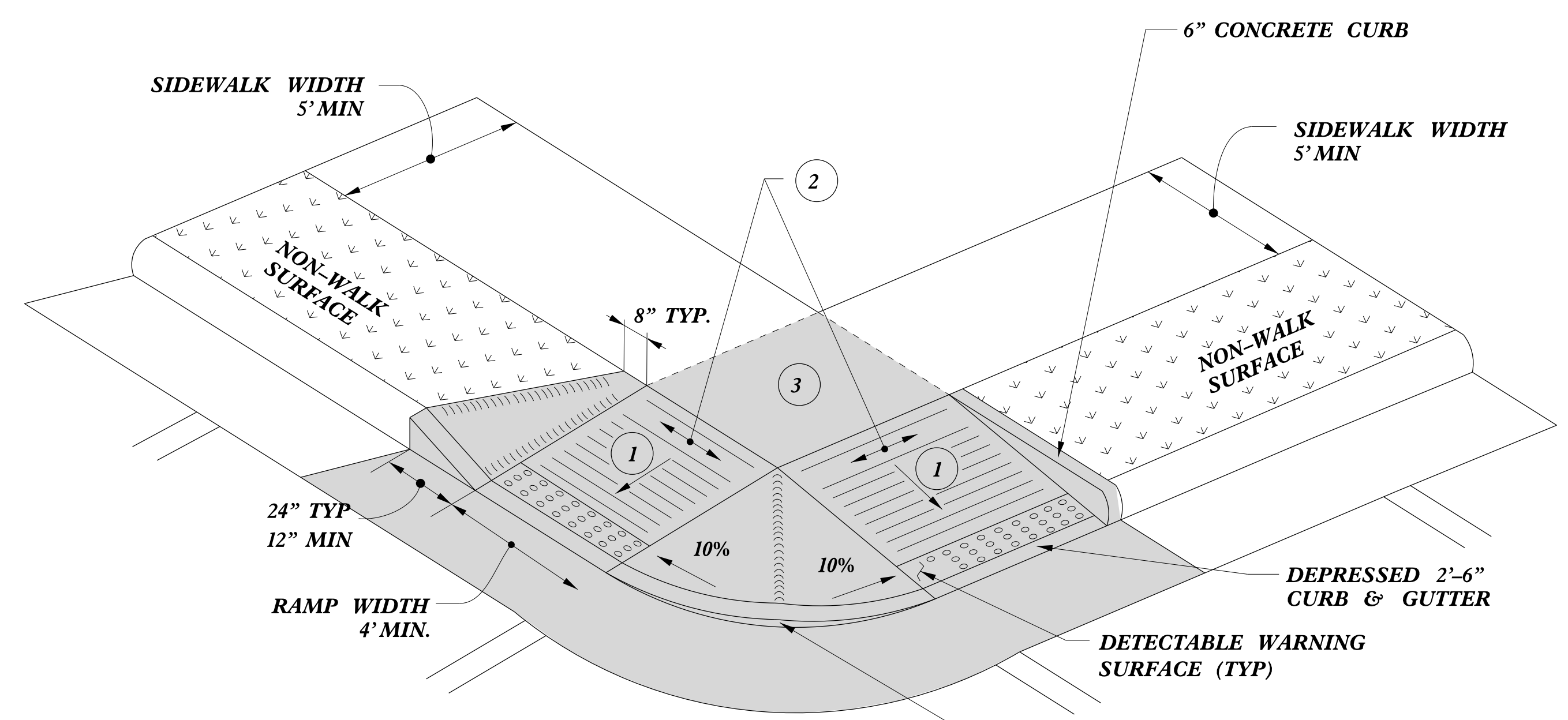
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
Parallel Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
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REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

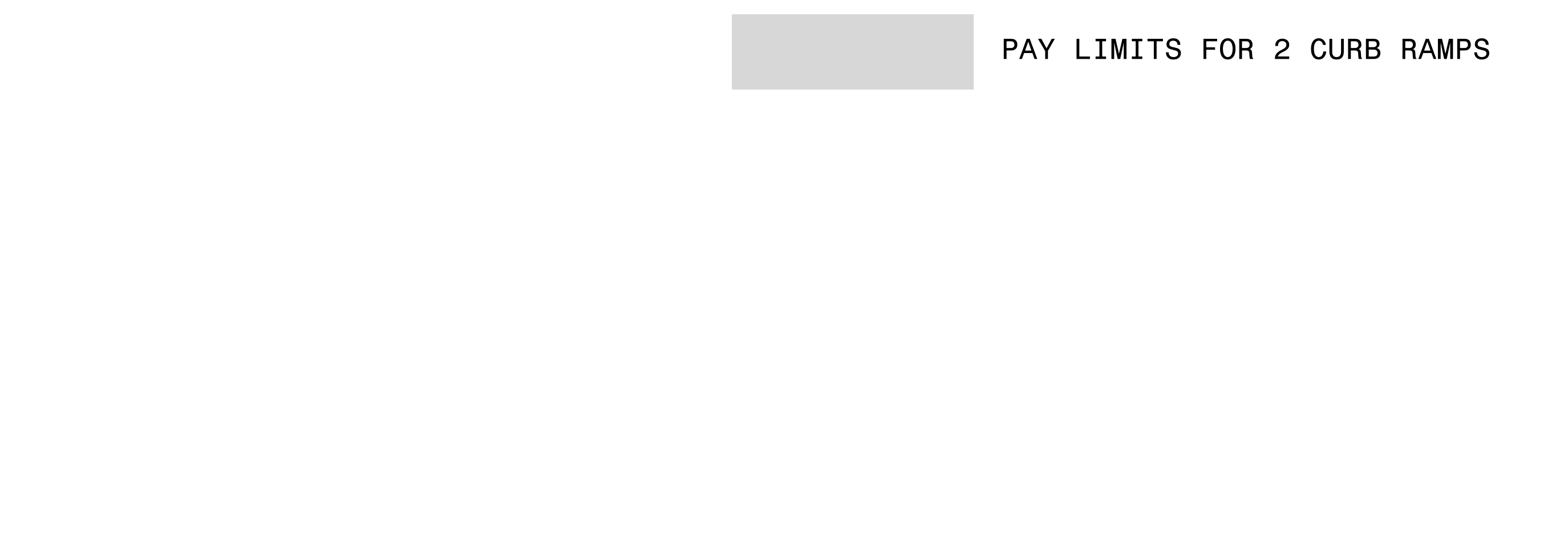
5/14/99
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TYPE 4



TYPE 4A



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
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