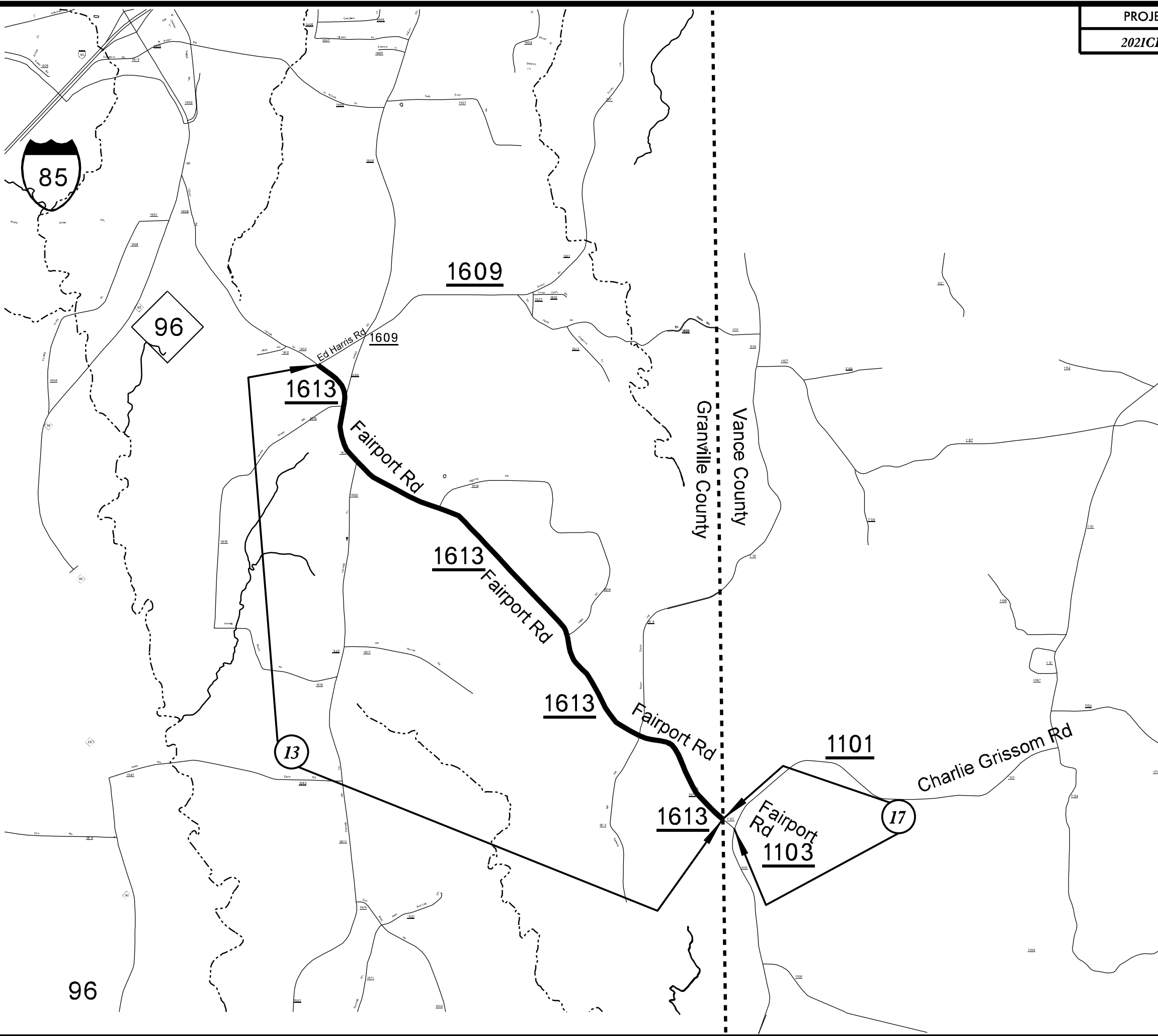


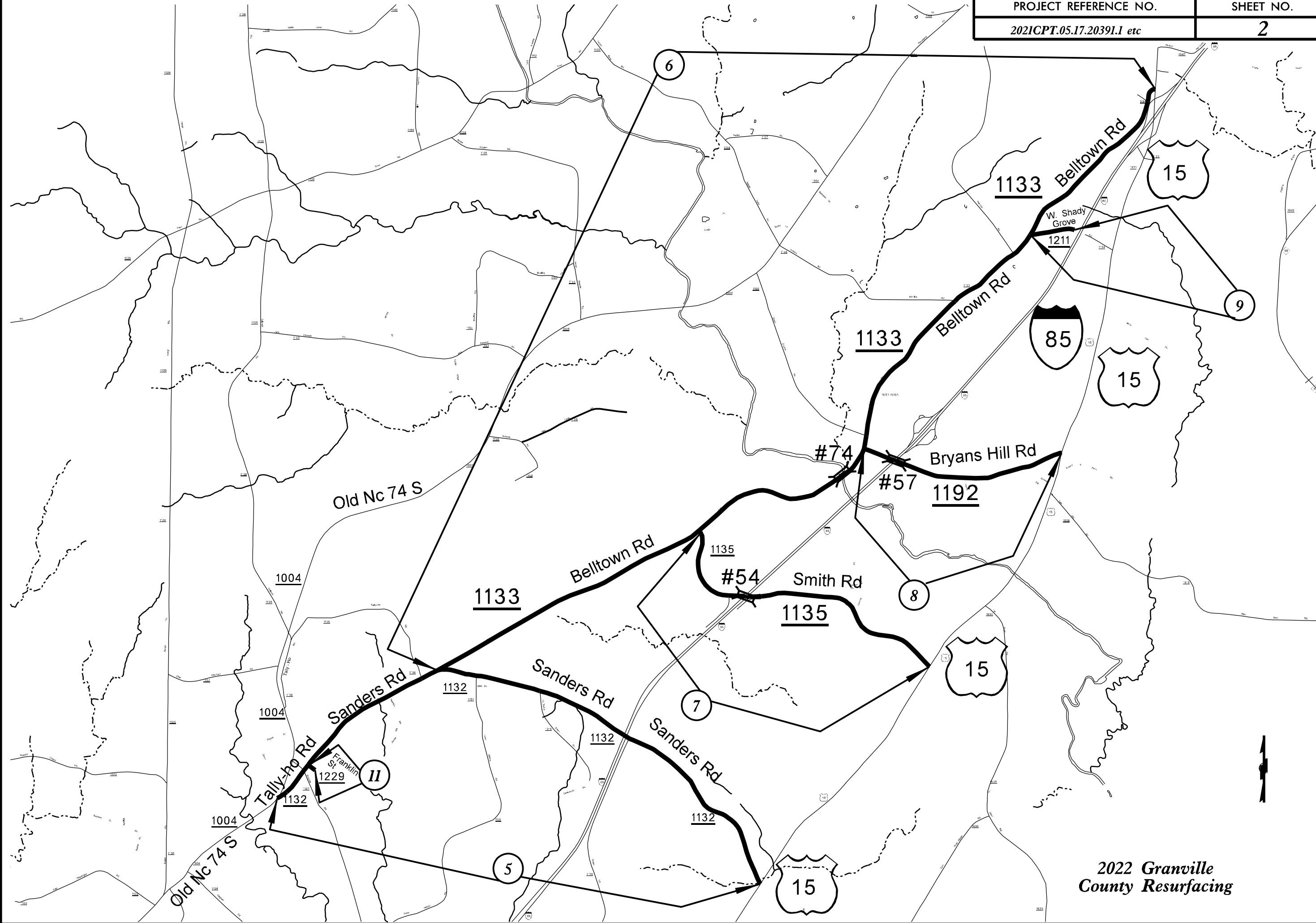
5/14/20

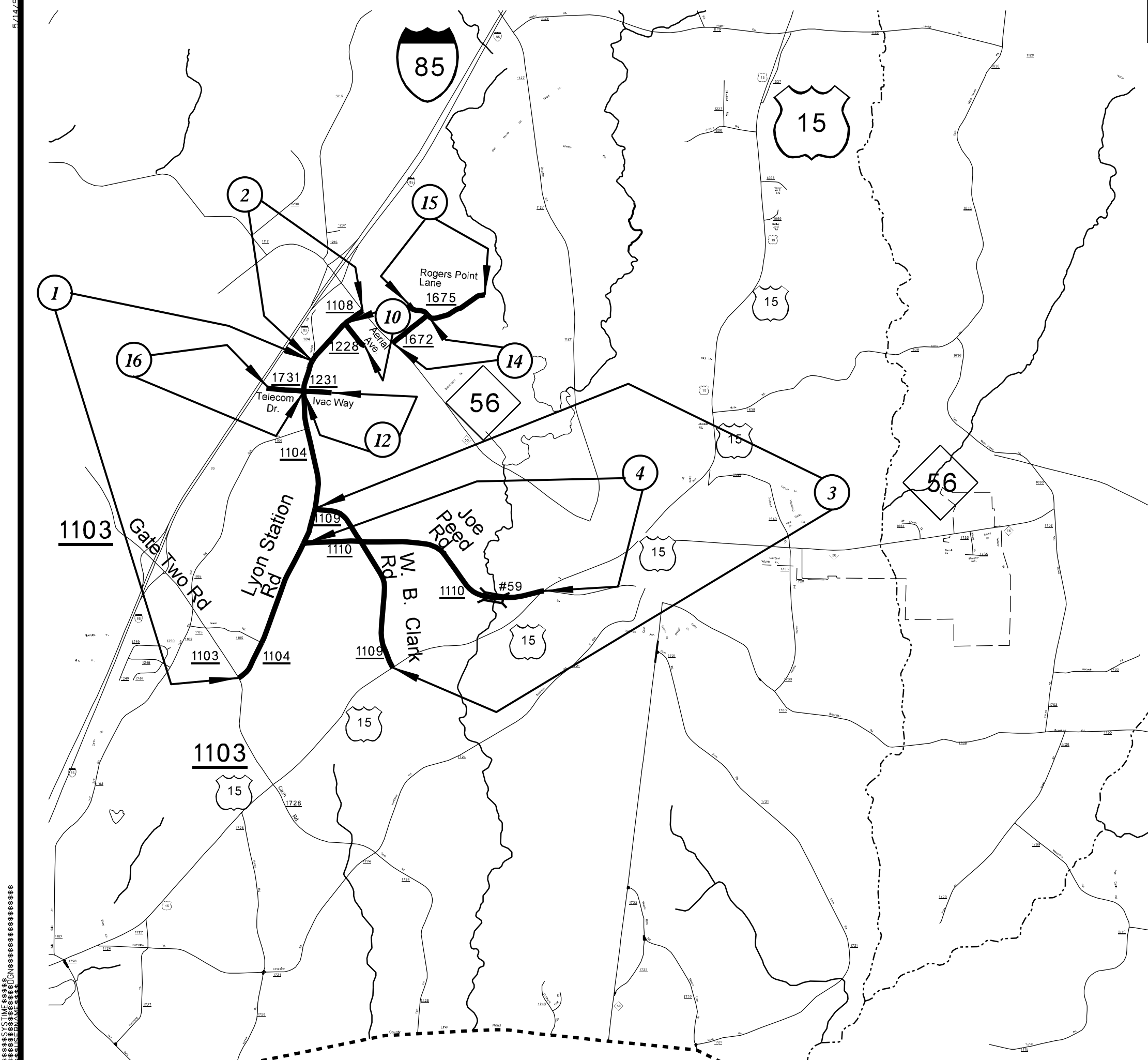
SECTION 16



5/14/20

*****SYTIME*****
*****DGN*****

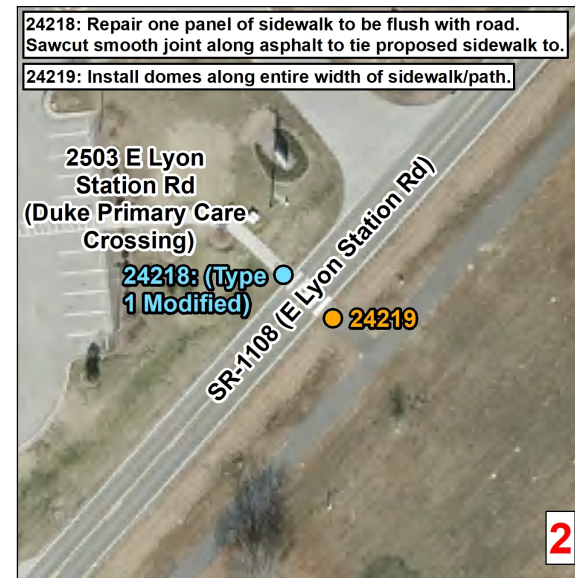
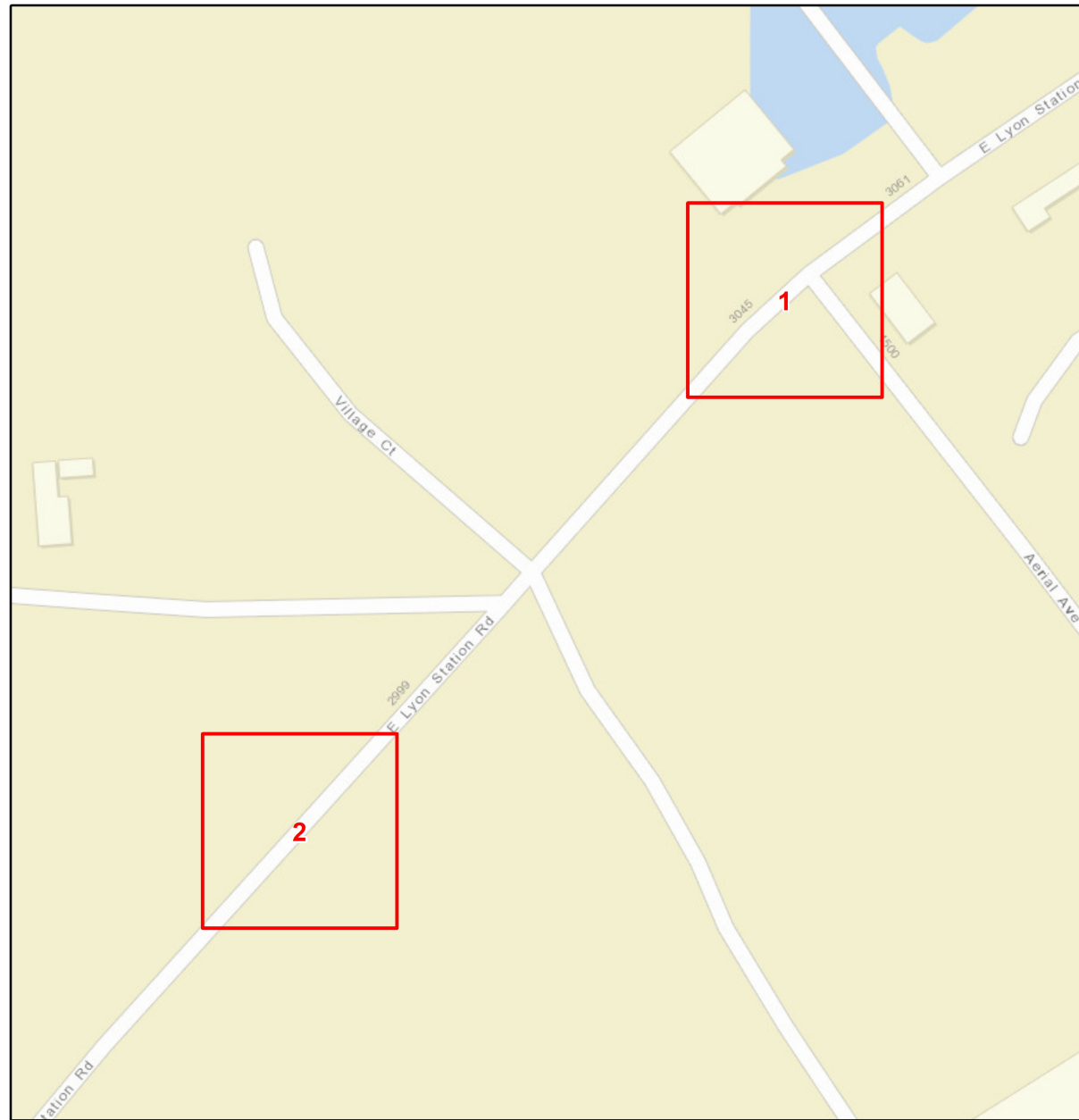




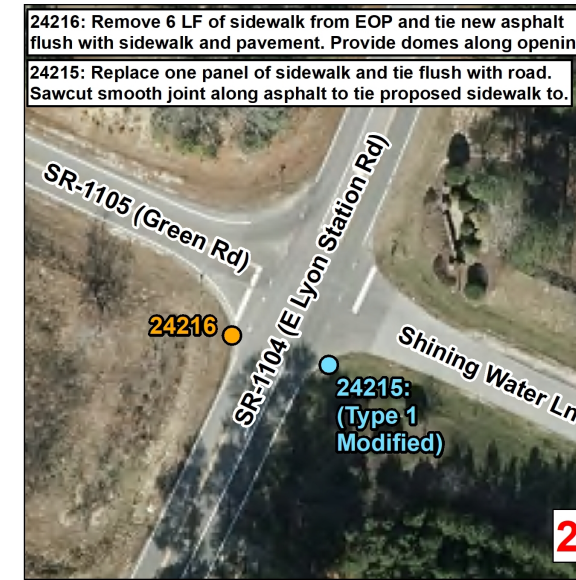
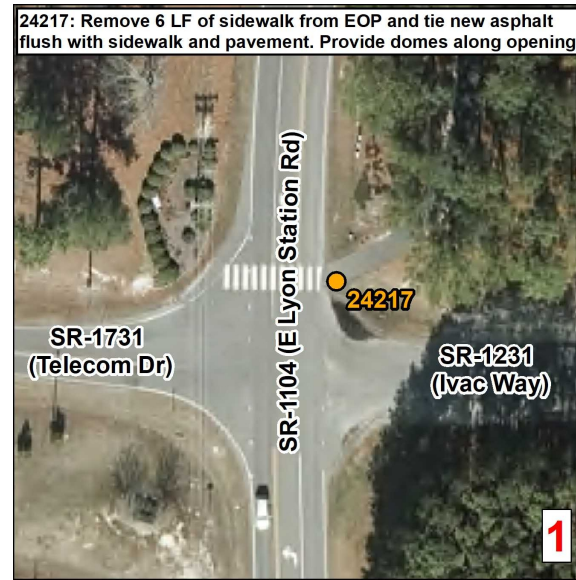
- 1. SR 1104 - E. LYON STATION RD
- 2. SR 1108 - E. LYON STATION RD
- 3. 1109 - WB CLARK RD
- 4. SR 1110 - JOE PEED RD
- 10. SR 1228 - AERIAL AVE
- 12. SR 1231 - IVAC WAY
- 14. SR 1672 - WASHINGTON AVE
- 15. SR 1675 - ROGERS POINT LANE
- 16. SR 1731 - TELECOM DR



5/14/23



Curb Ramps To Be Repaired		
	Retrofit	
	Remove and Replace	
	New Curb Ramp	
	Remove Ramp	
	Municipal Boundary	
	NCHPO Historic Boundary (NR and LHD)	
2022 Granville		
WBS: 2021CPT.05.17.20391.1		
E. Lyon Station Rd		
from NC 56 To SR 1104		
	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5	
<small>Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO</small>		



Curb Ramps To Be Repaired

- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

Municipal Boundary
 NCHPO Historic Boundary (NR and LHD)

2022 Granville
WBS: 2021CPT.05.17.20391.1
E. Lyon Station Rd
from SR 1103 to SR 1108

NORTH CAROLINA DEPARTMENT
 OF TRANSPORTATION
 DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO

PAVEMENT SCHEDULE

S SHOULDER GRADING
ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)

PROJECT REFERENCE NO.

SHEET NO.

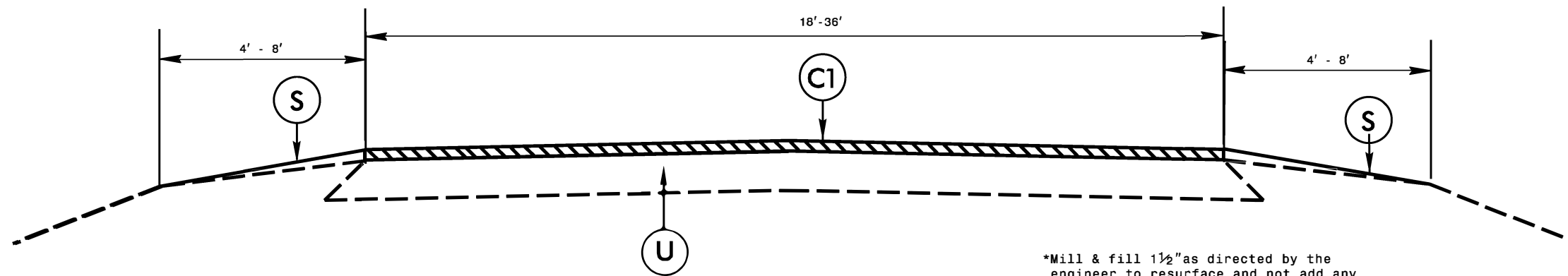
2021CPT.05.17.20391.1 etc.

6

C1

1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B,
AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.

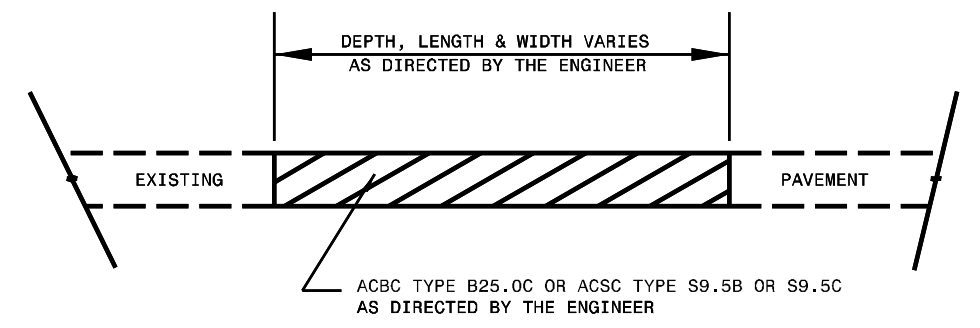
U EXISTING PAVEMENT



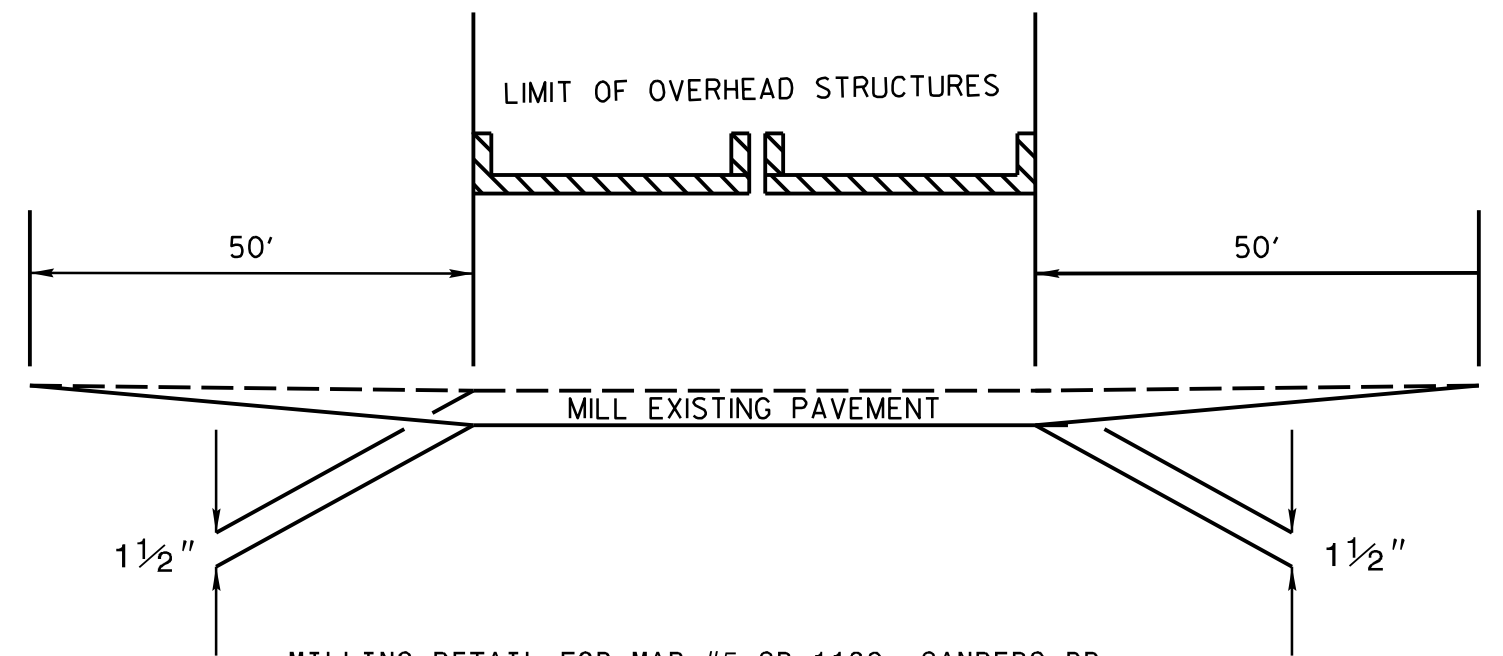
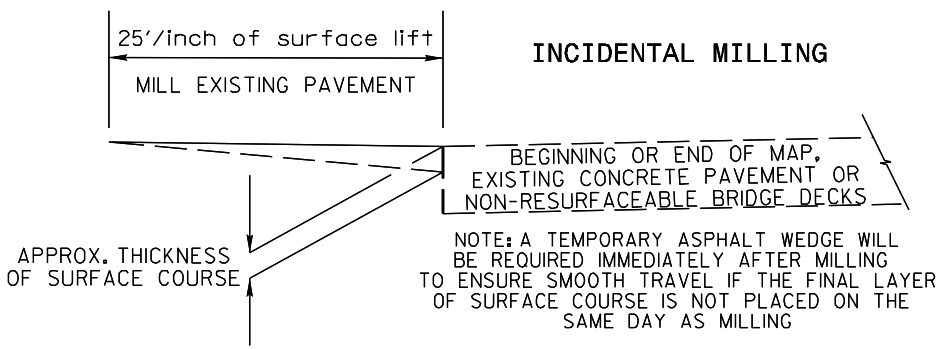
TYPICAL SECTION NO. 1

*Mill & fill 1½" as directed by the engineer to resurface and not add any additional weight on the bridge on map #4-SR 1110 bridge #59 and MAP# 6 SR 1133 bridge #74

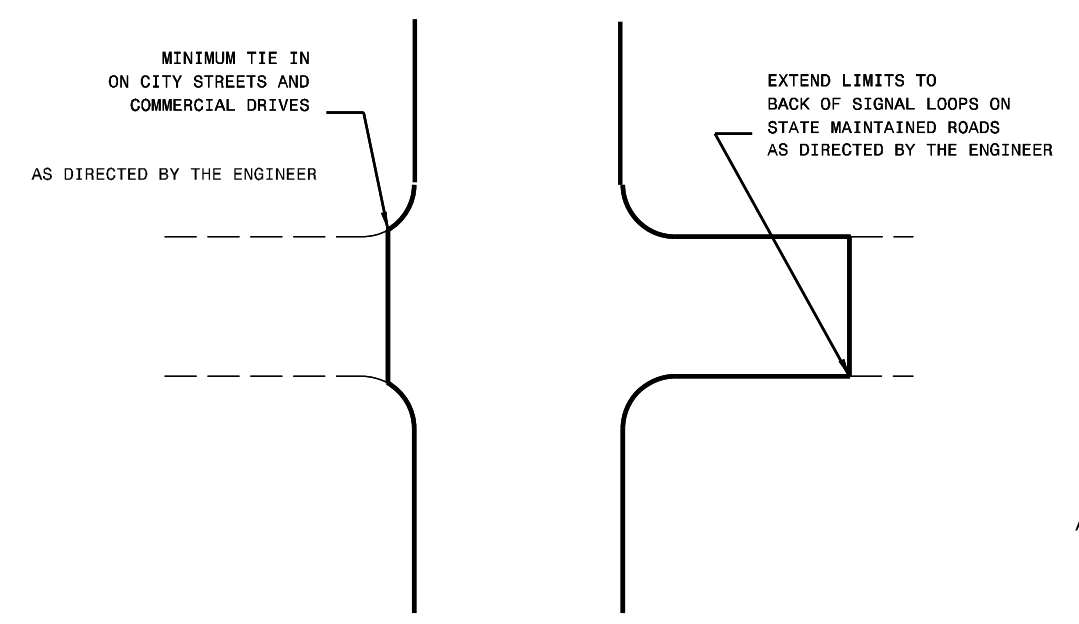
*Mill & fill 1½" as directed by the engineer to resurface and not add any additional hight under the Bridge # 51 and #52 on map # 5 SR 1132 - SANDERS RD/E. TALLY HO RD



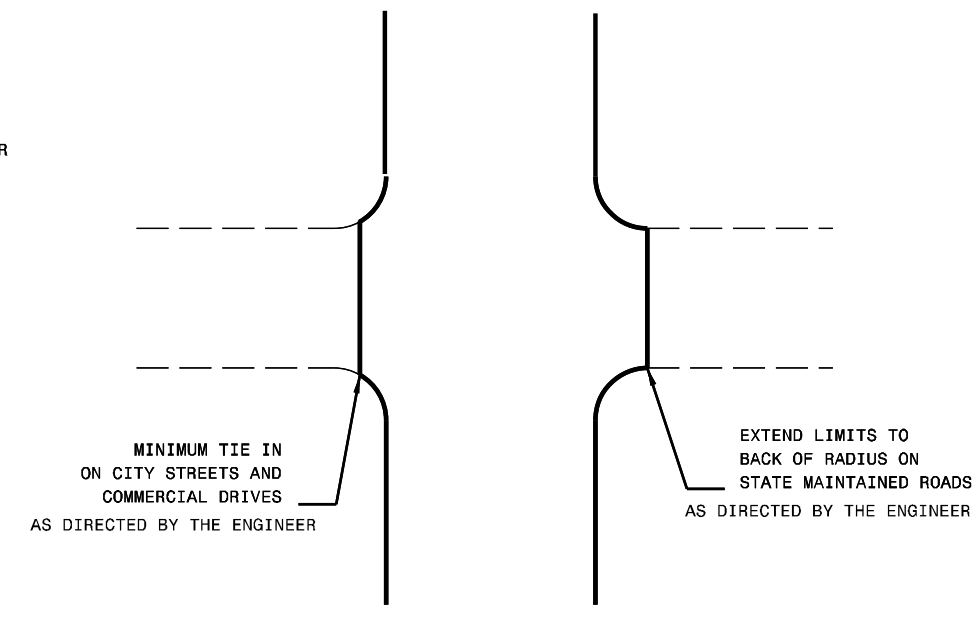
PATCHING EXISTING PAVEMENT
MILLING TO BE PERFORMED PRIOR TO PATCHING



MILLING DETAIL FOR MAP #5 SR 1132, SANDERS RD
*MILL & FILL 1 1/2" EXISTING PAVEMENT UNDER I-85
OVERHEAD STRUCTURES TO MAINTAIN VERTICAL CLEARANCE
MILL 0" to 1 1/2" ON STRUCTURE APPROACHES



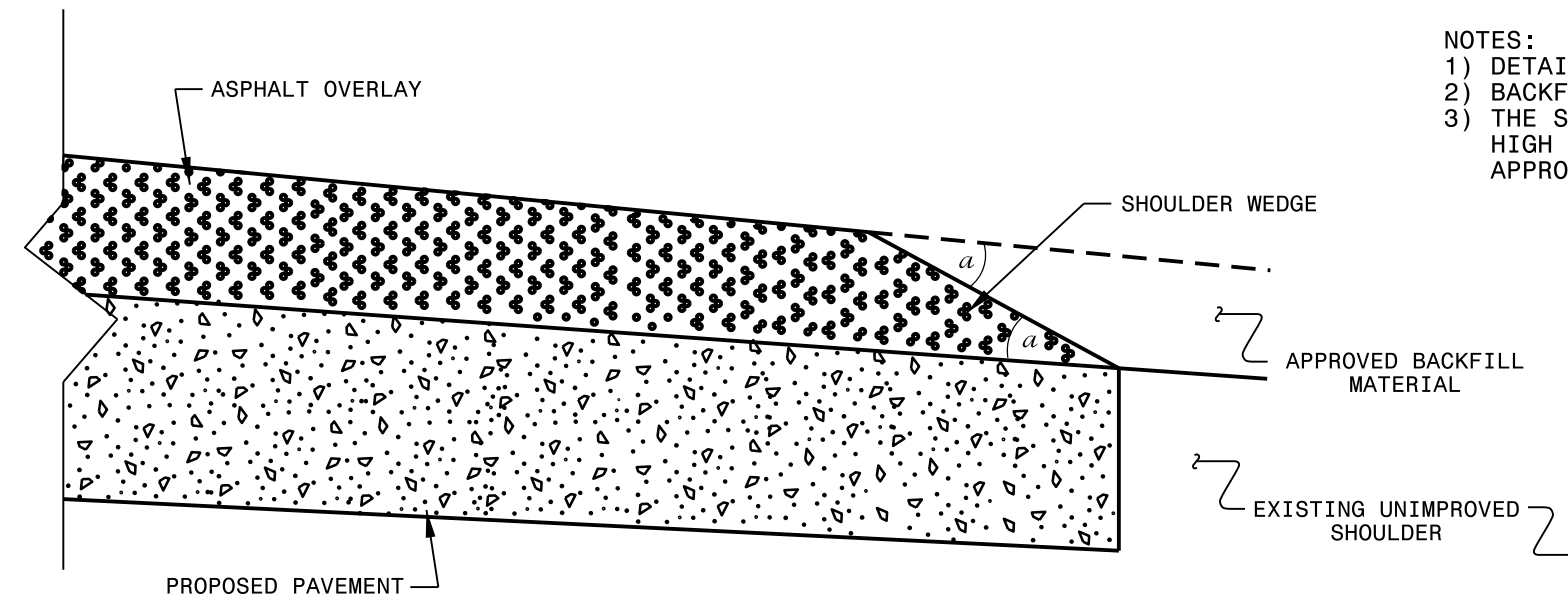
DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES



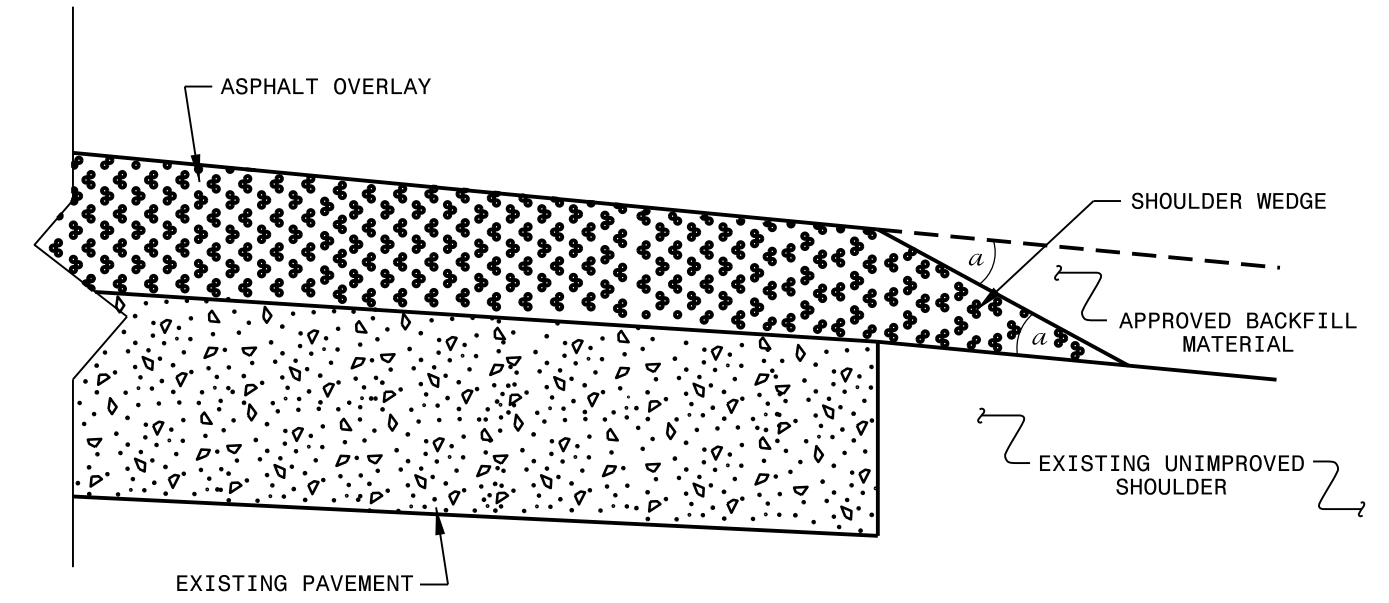
DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

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

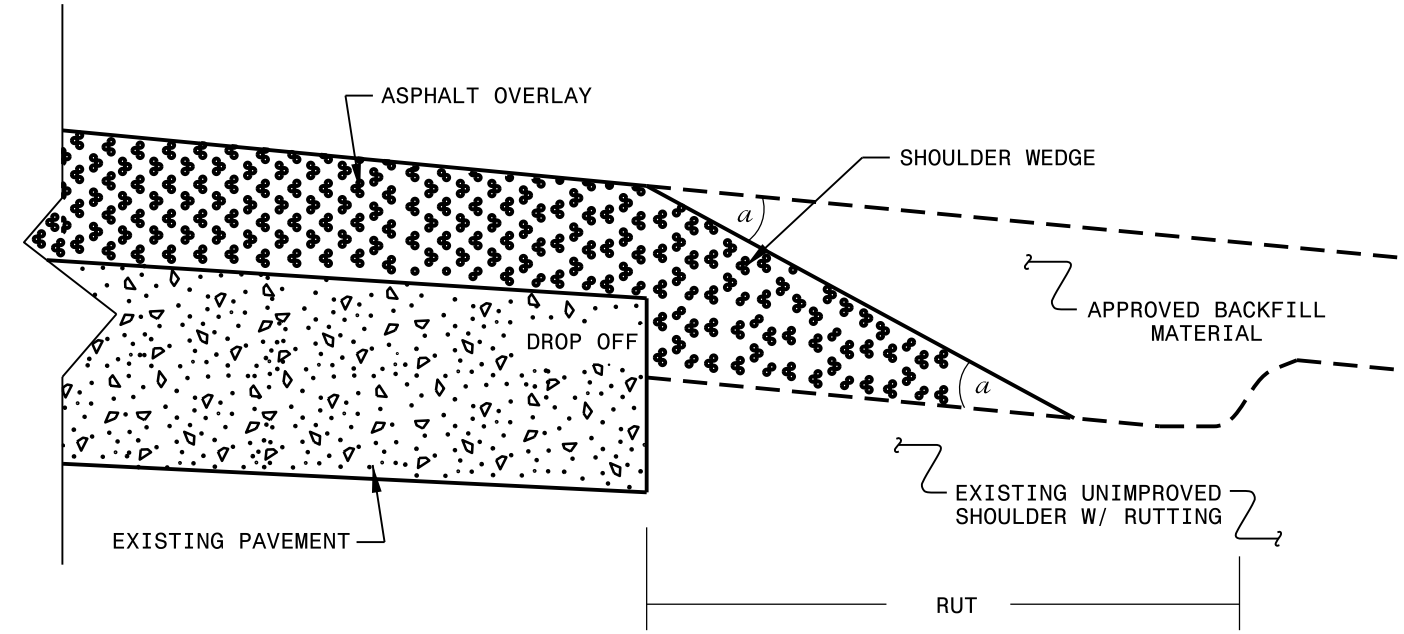
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



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



SHOULDER WEDGE DETAIL
 (Resurfacing Projects w/ NO Widening)



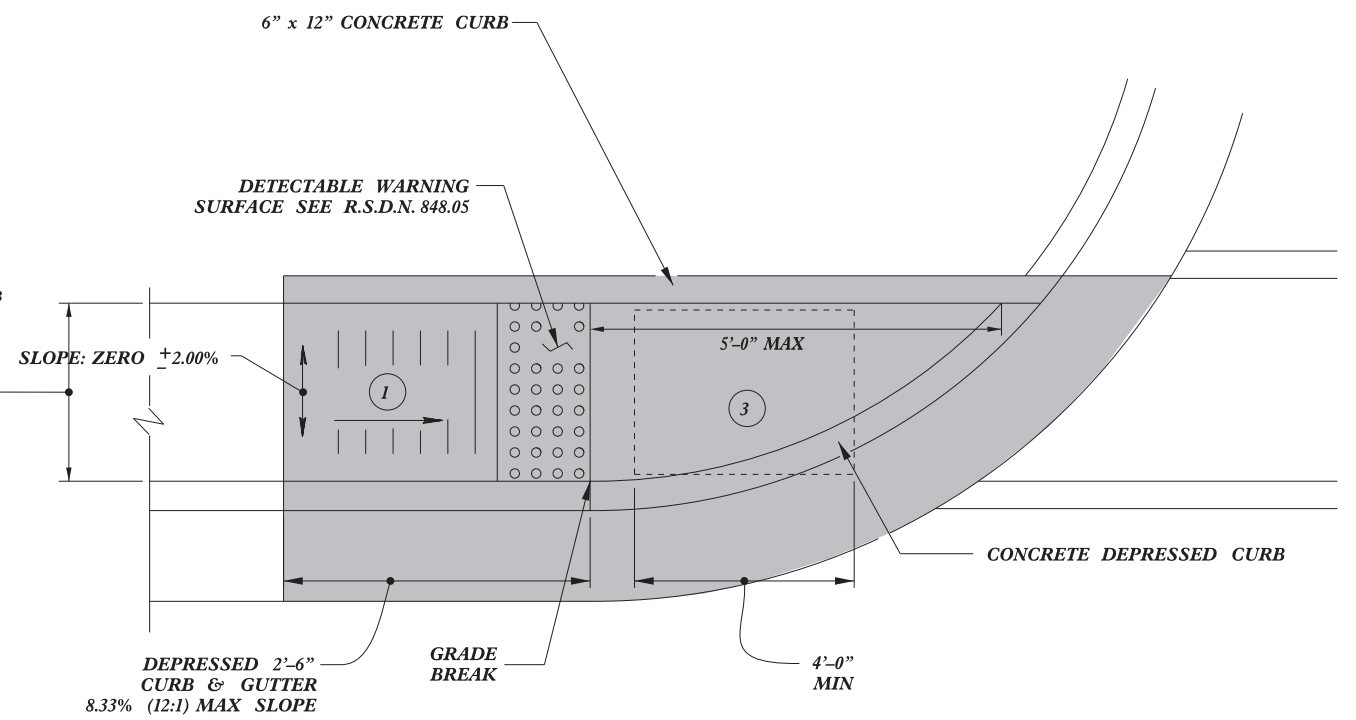
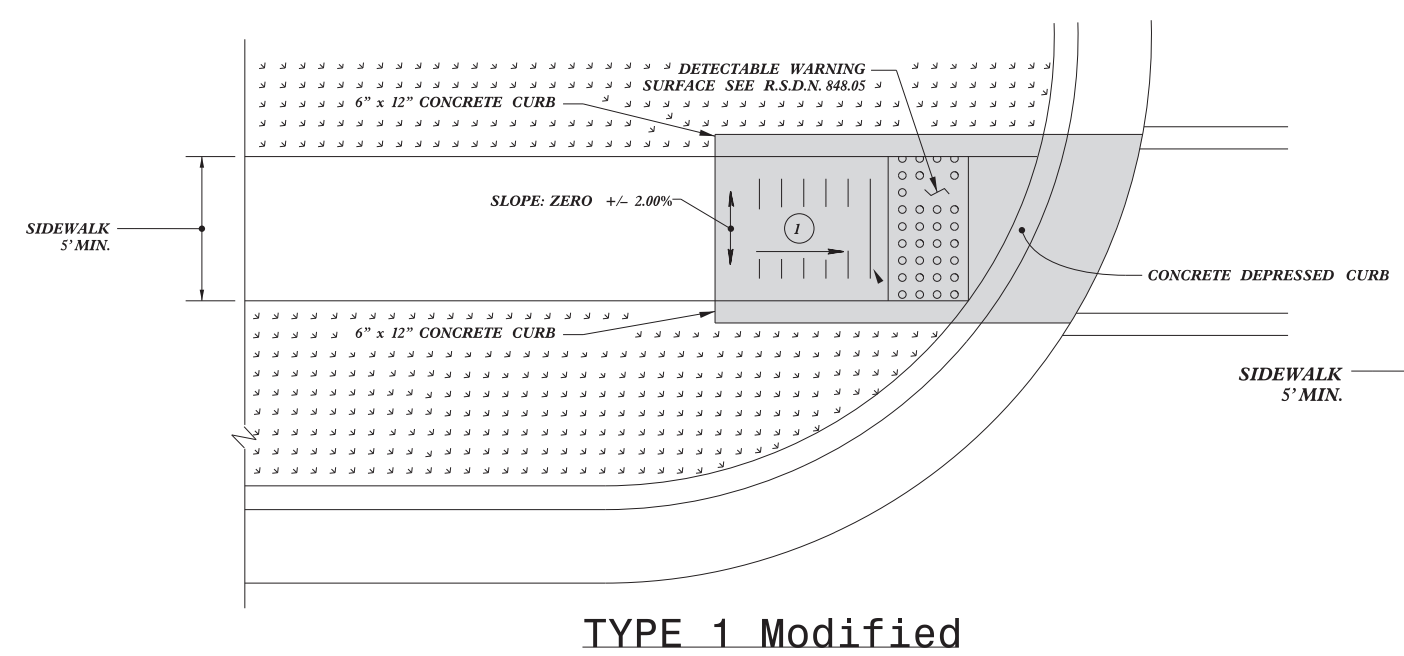
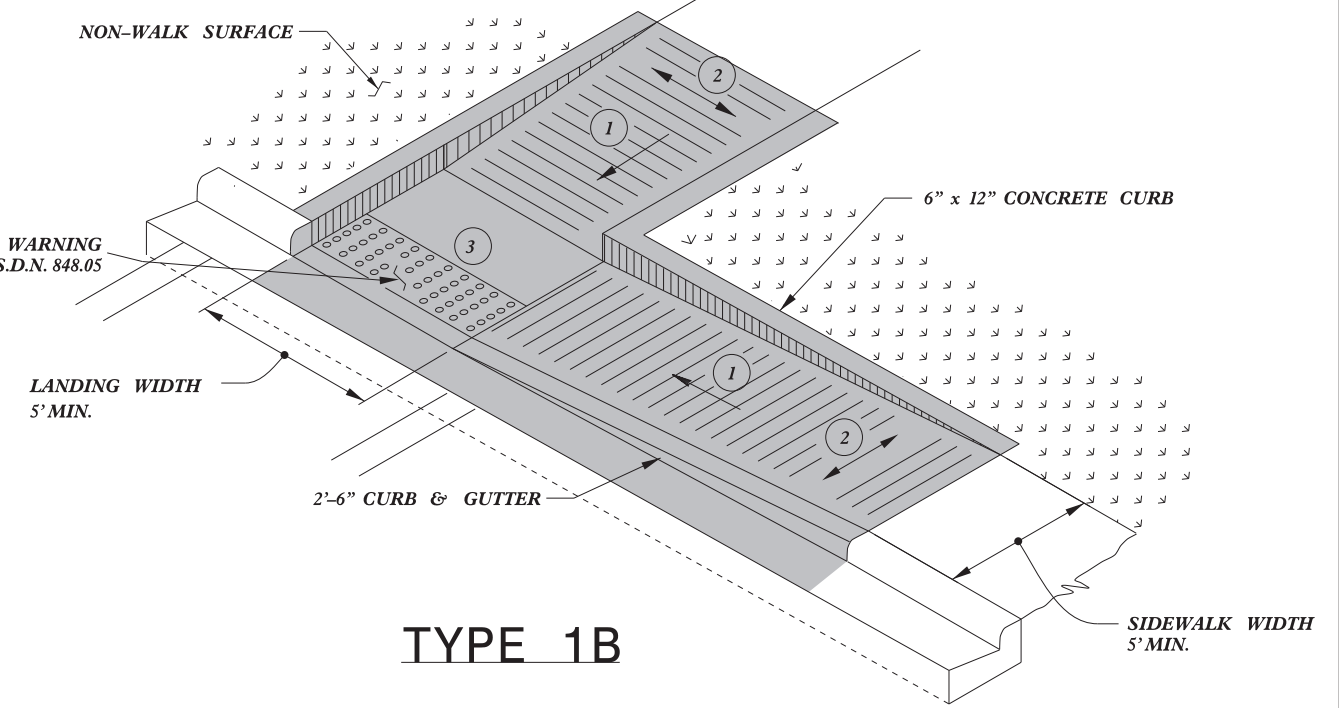
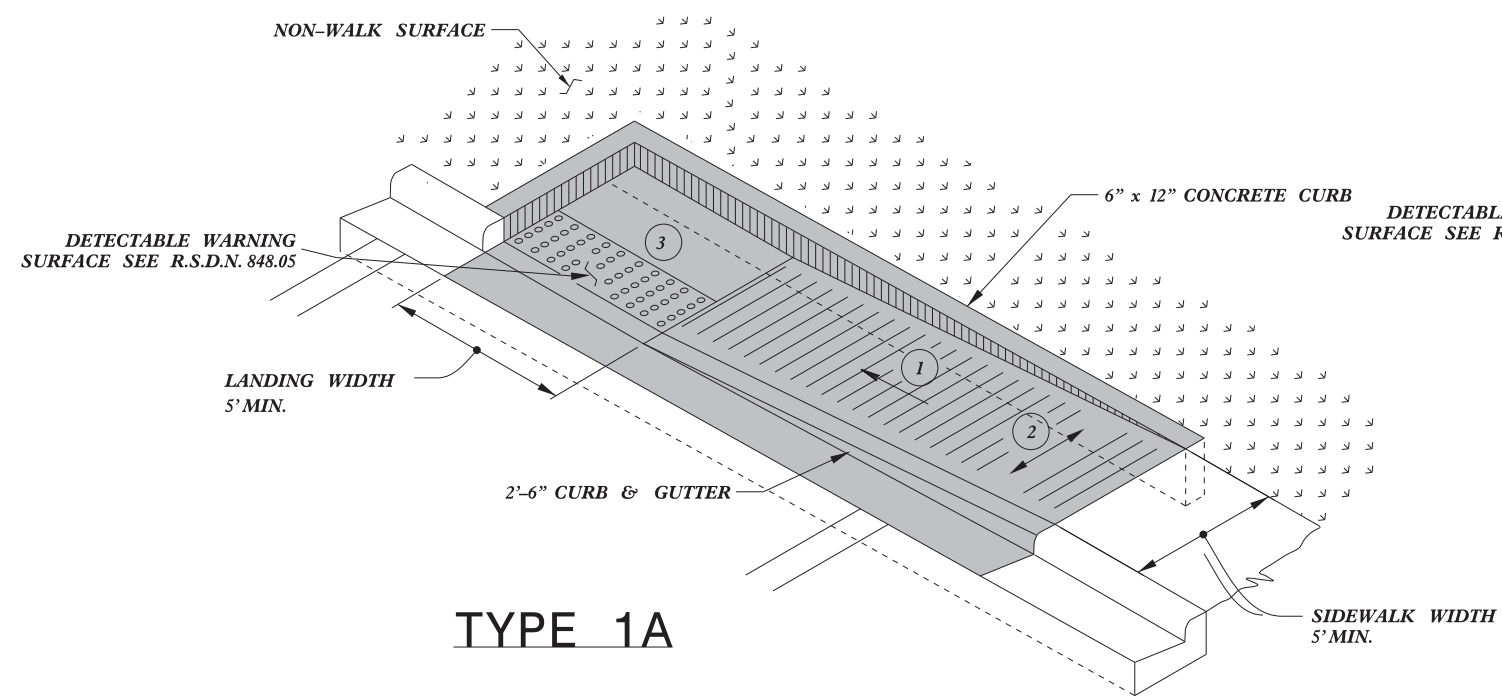
SHOULDER WEDGE DETAIL
 (Resurfacing Adjacent to
 Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

\$\$\$\$SYTIME\$\$\$\$
 \$\$\$USERNAME\$\$\$

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950 FAX 919-250-4119	
SHOULDER WEDGE DETAILS	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 2/2/16
CHECKED BY:	DATE:
FILE SPEC.:	s:\usr\detatl1s\stand\shoulderwedgedetatl1.dgn

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED



- 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



1/8/2020

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

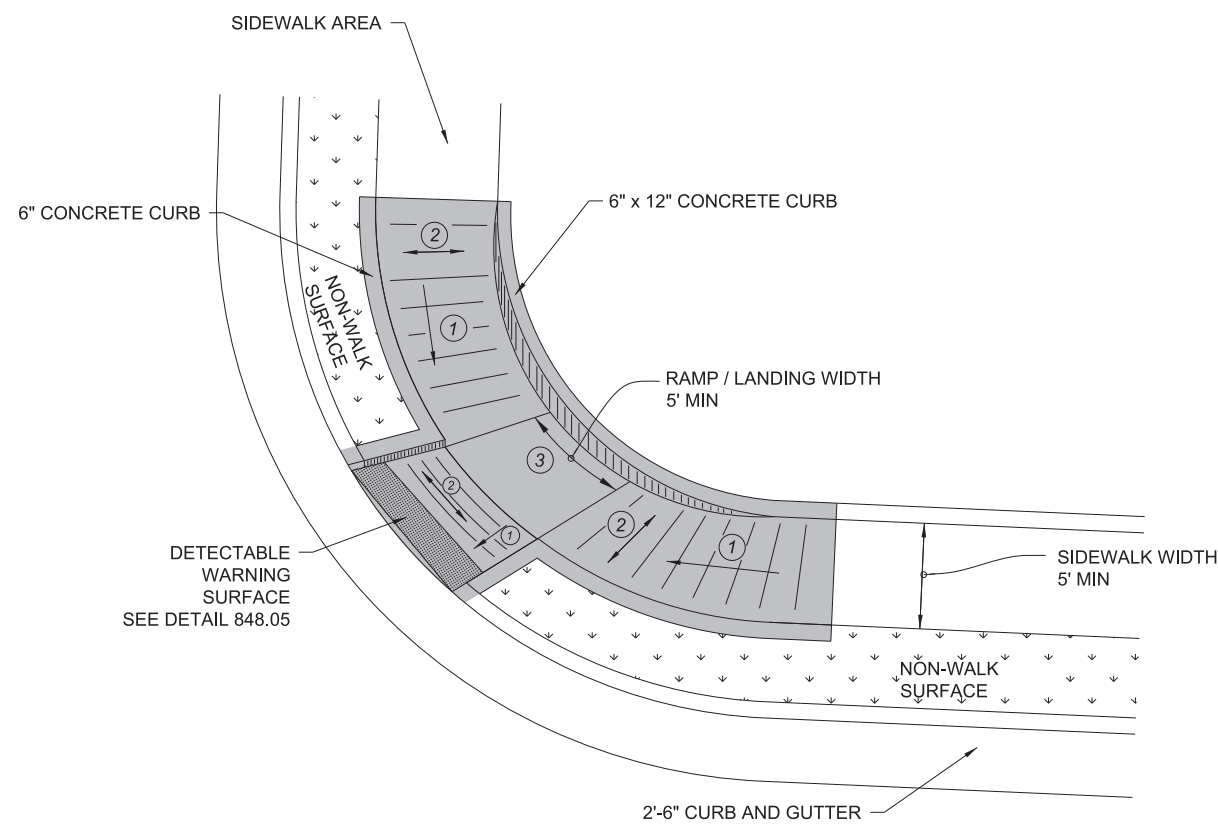
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MODIFIED BY: DATE: _____
CHECKED BY: DATE: _____
FILE SPEC: sids/2012CurbRamp/CurbRampDetails.dgn

5/14/99
SYTIME
C:\P\2021\05\17\20391\1\1.dgn
J.S. HOWERTON
022966

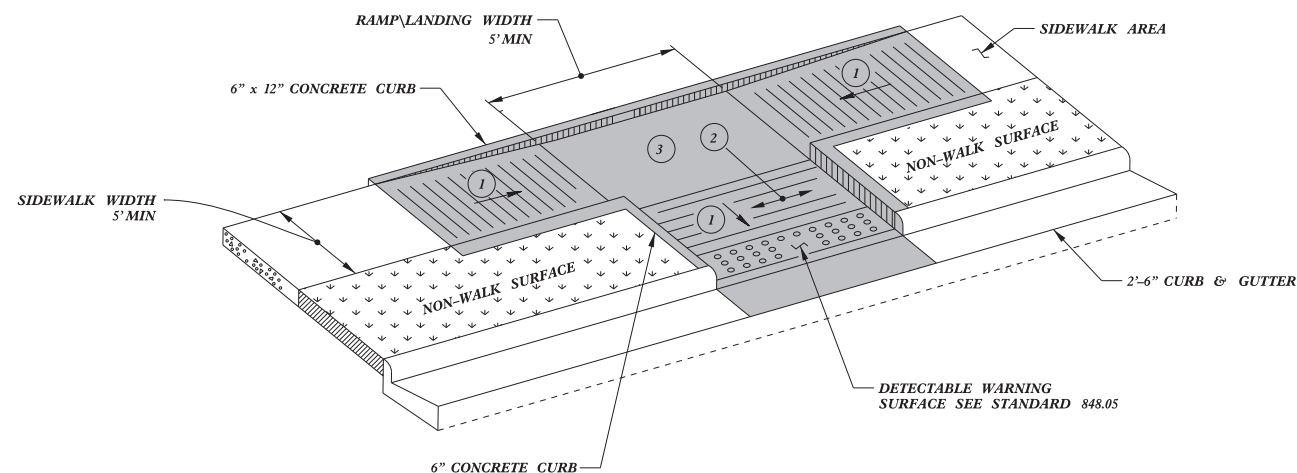
5/14/99

ETC.

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.

1/8/2020



Designed by:

J.S. Howerton
873F3D17DCDC45F...

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

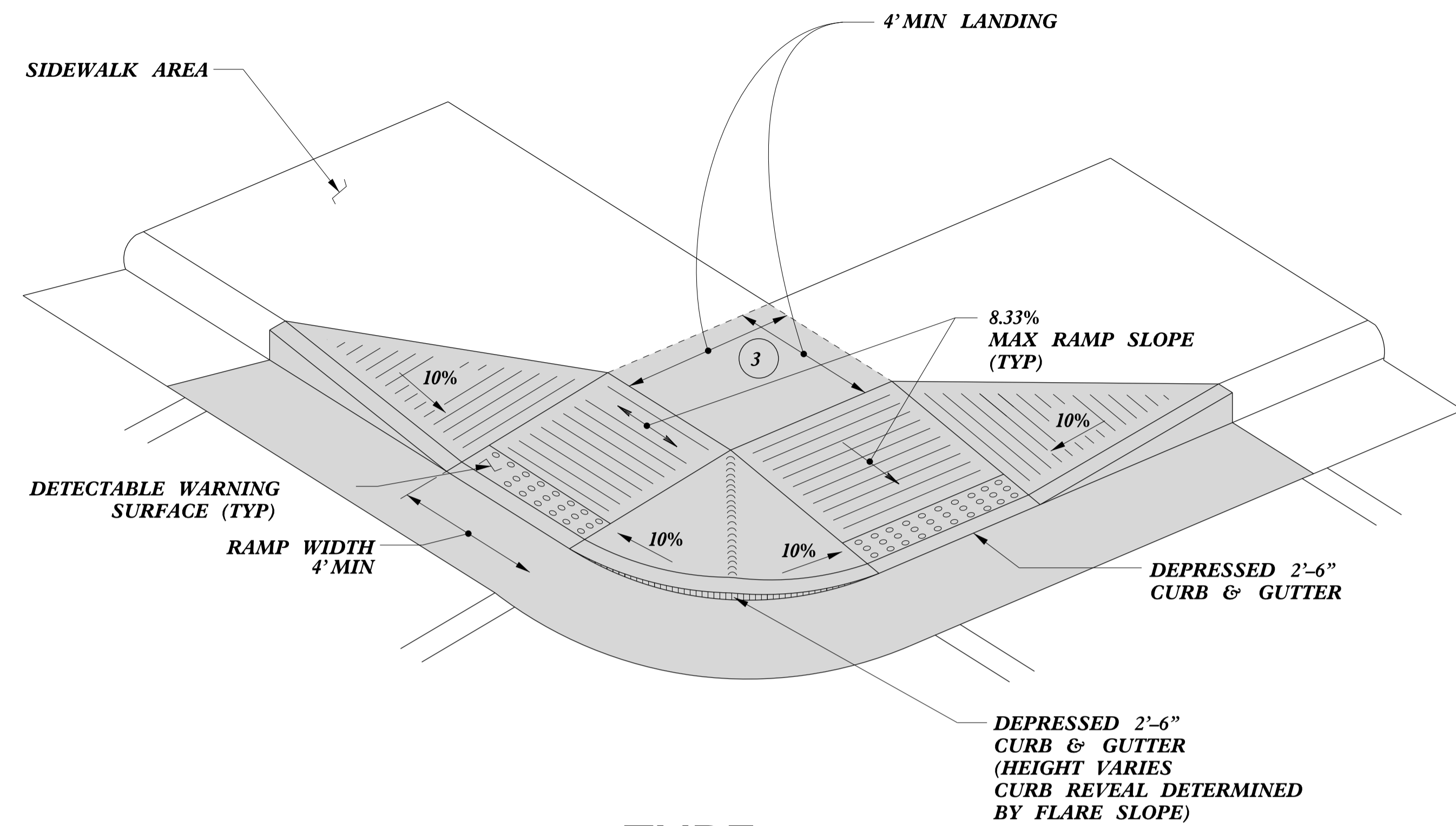
CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

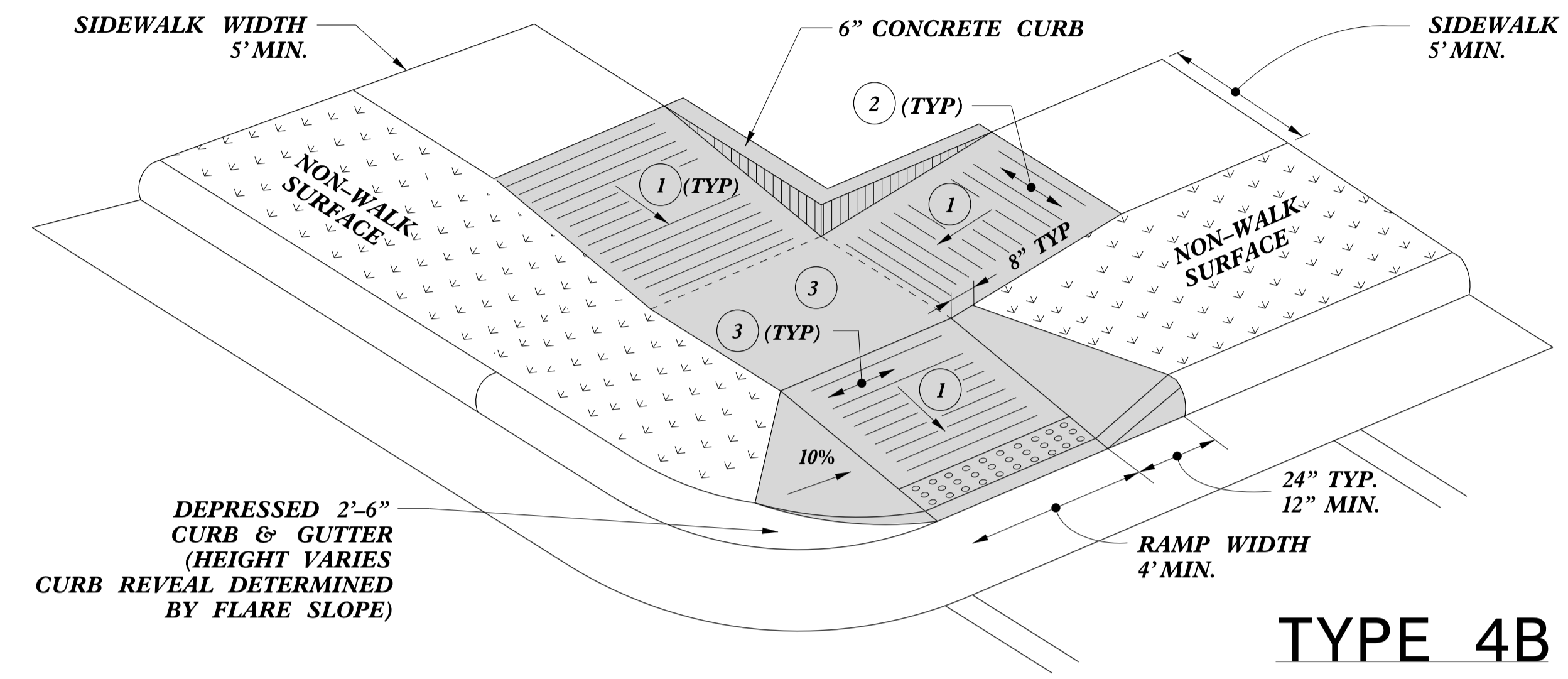
ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
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SYTIME\$CON\$D\$N\$C\$U\$S\$R\$NAME\$S\$

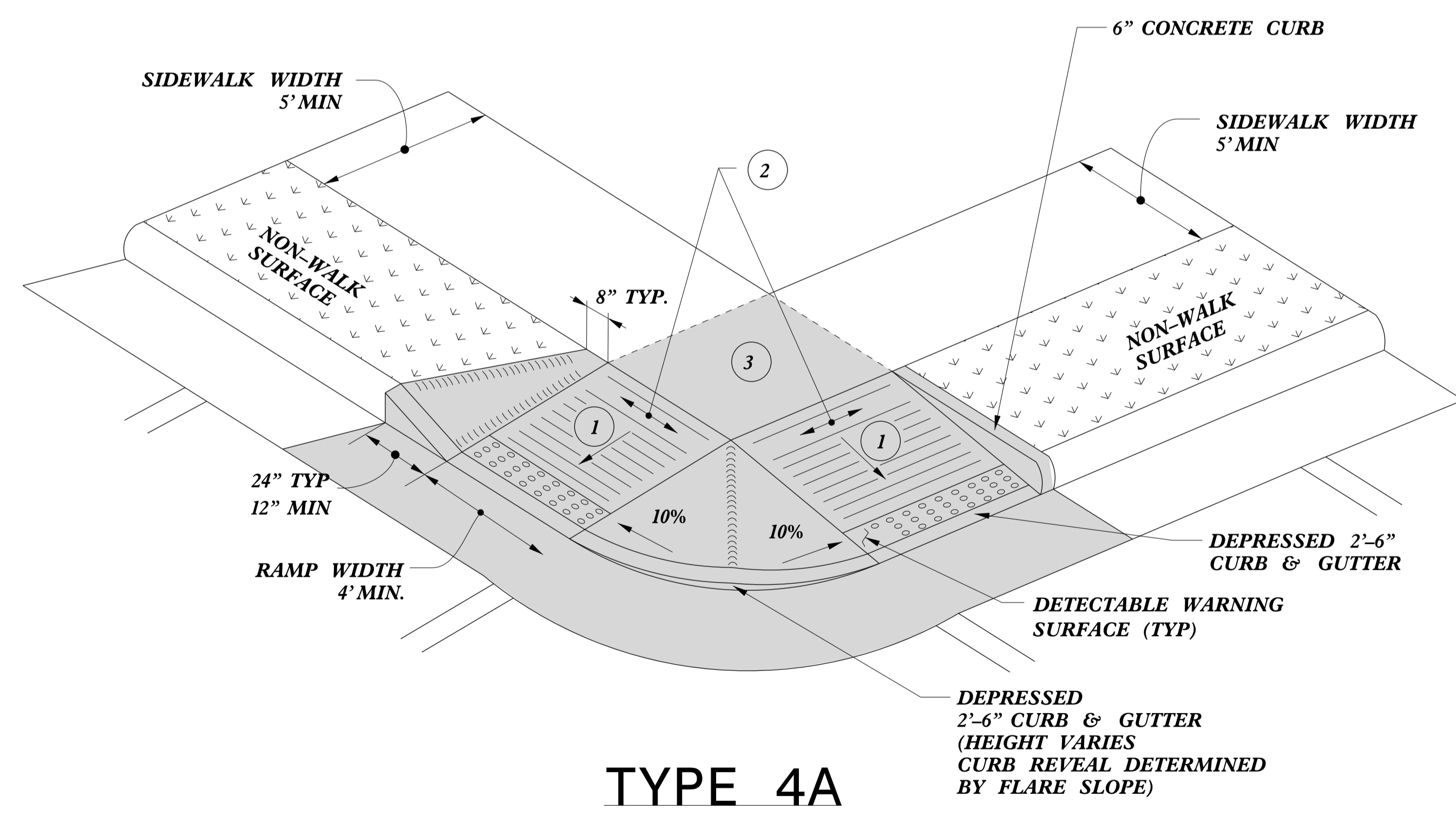
PAY LIMITS FOR 1 OR 2 CURB RAMPS
(CALCULATE BASED ON NUMBER OF SETS
OF TRUNCATED DOMES)
ETC.



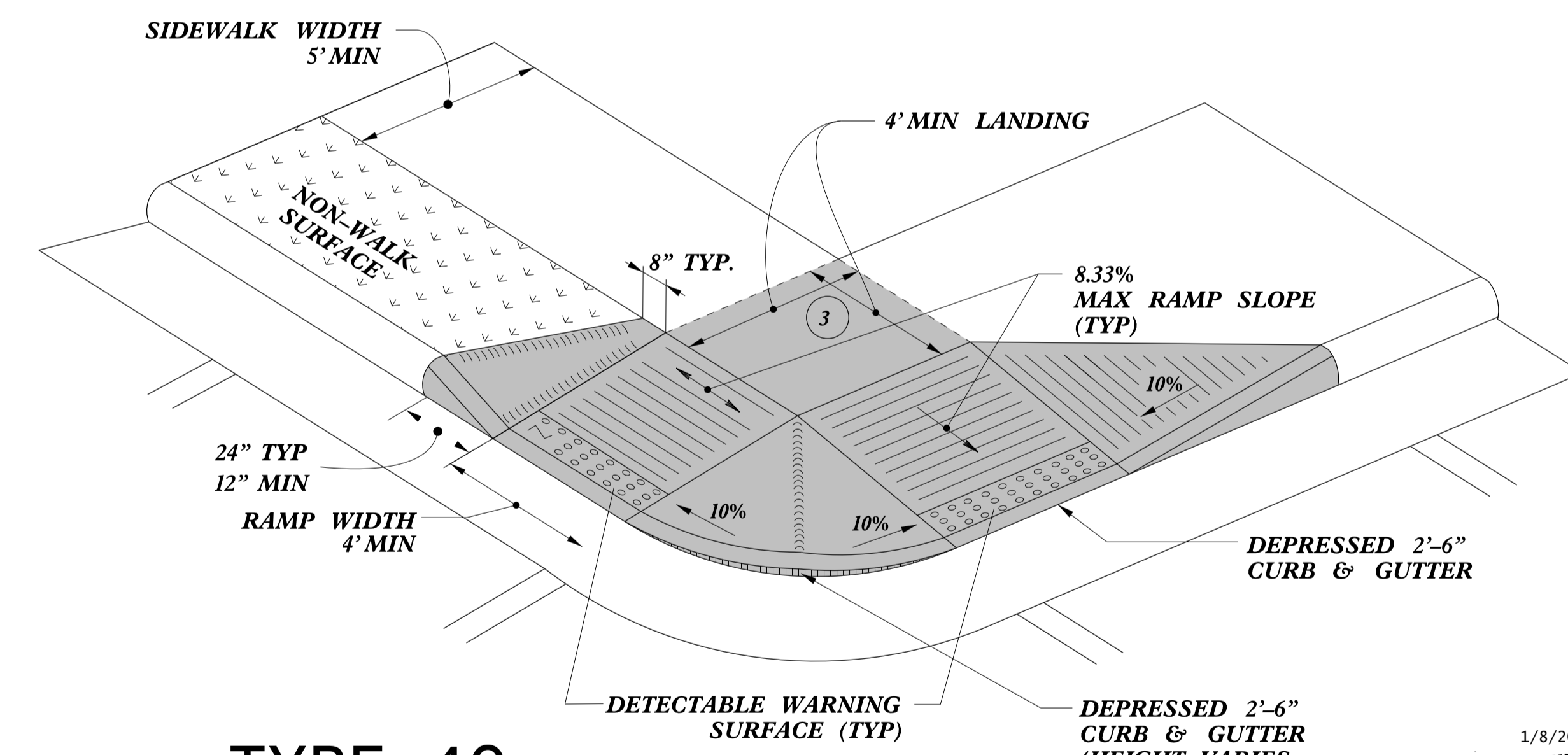
TYPE 4



TYPE 4B

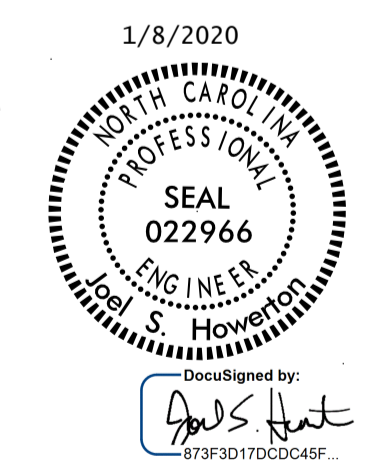


TYPE 4A



TYPE 4C

- 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

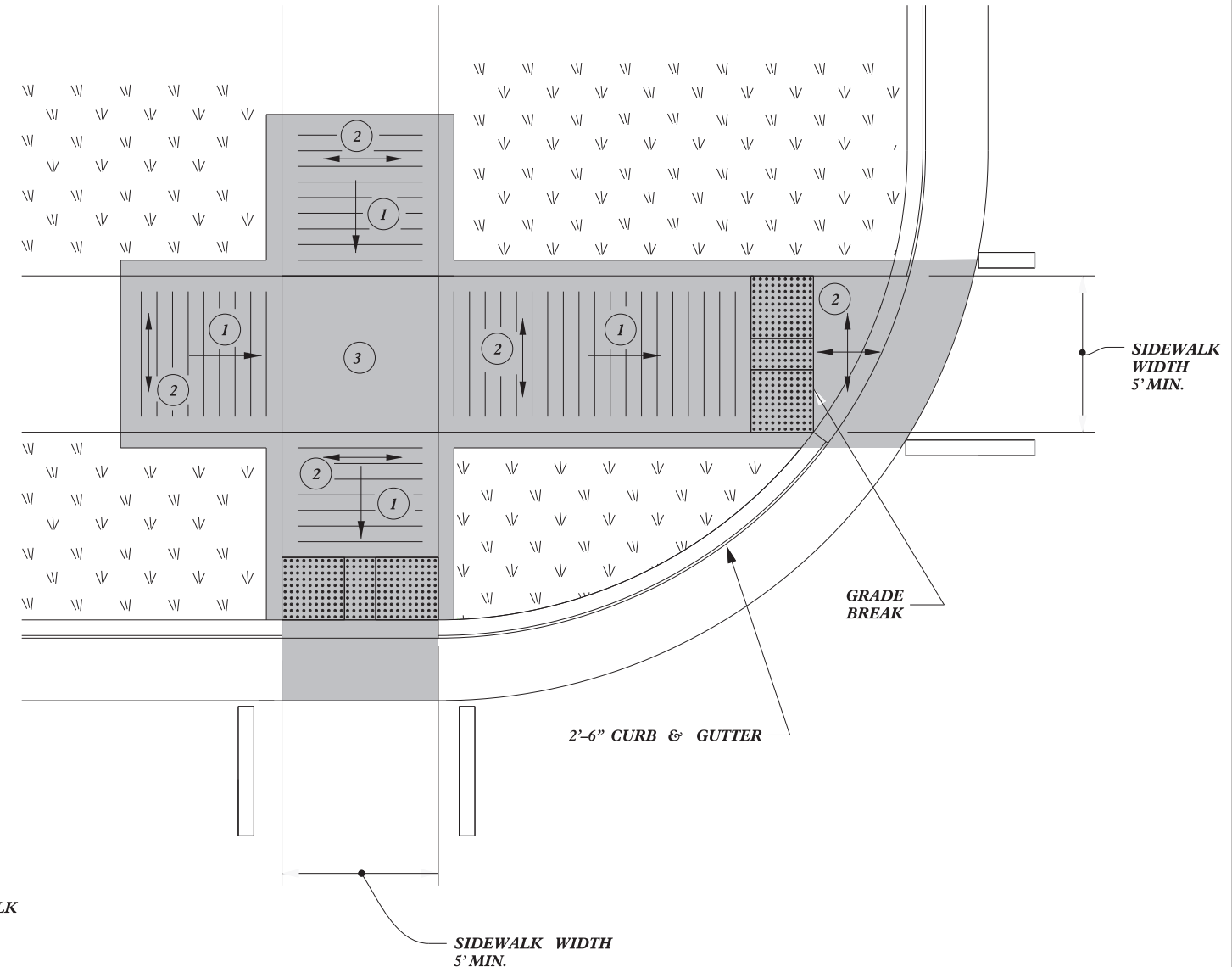
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REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

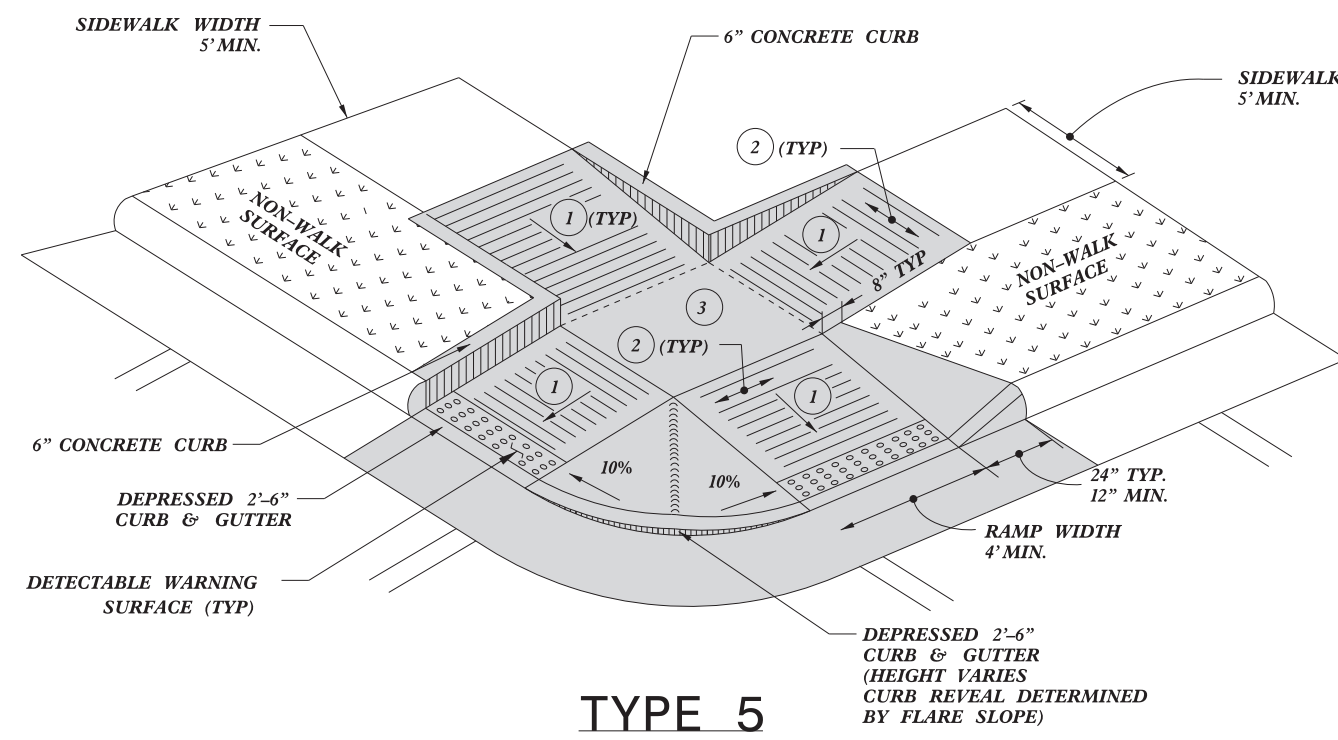
5/14/99
 TIME
 CURB
 USER
 NAME

5/14/99

**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.

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

1/8/2020



Signed by:

 873F3D17DCDC45F...

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: sids/2012CurbRamp/CurbRampDetails.dgn	

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 \$\$\$\$SERNAME\$\$\$\$\$
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PROJECT NO.	SHEET NO.	TOTAL NO.
2021CPT.05.17.20391.1,etc	16	

THERMOPLASTIC AND PAINT QUANTITIES

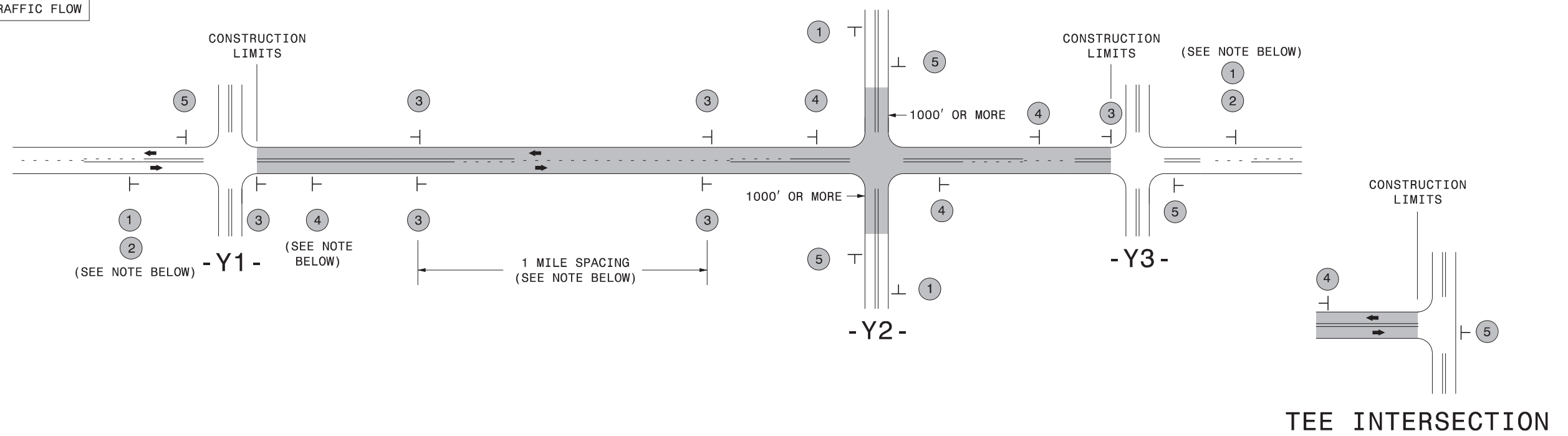
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LENGTH		WIDTH		4413000000-E	4447000000-E	4457000000-N	4685000000-E		4695000000-E		4720000000-E				4725000000-E			4770000000-E		4850000000-E	4891000000-E			
							MI	FT	SF	LF	LS	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	8" X 90 M YELLOW THERMO	8" X 90 M WHITE THERMO	THERMO MSG RXR 90 M	THERMO MSG AHEAD 90 M	THERMO MSG STOP 90 M	THERMO MSG SCHOOL 90 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO YIELD TRIANGLE 90 M	4" WHITE COLD APPLIED PLASTIC, TYPE II	4" YELLOW COLD APPLIED PLASTIC, TYPE II	REMOVAL OF PAVEMENT MARKING LINES (4")	24" X 90 M WHITE THERMO	16" X 90 M WHITE THERMO				
2021CPT.05.17.20391.1	Granville	1	SR 1104 - E. LYON STATION RD	SR 1103 GATE TWO RD TO SR 1108 E LYON STATION RD	1	2	2.21	20-32	126						24,412	25,788	335				6	14	2						250		
		2	SR 1108 - E. LYON STATION RD	NC 56 TO SR 1104 - E. LYON STATION RD	1	2	0.45	20-36	51							4,745	4,778						4	2						150	
		3	SR 1109 - WB CLARK RD	US 15 TO SR 1104 E. LYON STATION RD	1	2	1.27	20	142							13,116	13,116														
		4	SR 1110 - JOE PEED RD	SR 1104 -OLD NC 75 S TO US 15	1	2	1.71	20	192							17,854	17,854													45	
		5	SR 1132 - SANDERS RD/E. TALLY HO RD	US 15 TO SR 1004 - OLD NC 75S	1	2	4.66	20	522							49,210	50,074	178		4	10	8	12	3	2					68	80
		6	SR 1133 - BELLTOWN RD	US 15 TO SR 1132 - SANDERS RD/E. TALLY HO RD	1	2	7.34	20	823							77,561	77,080	195	12							9				18	
		7	SR 1135 - SMITH RD	US 15 TO SR 1133 - BELLTOWN RD	1	2	2.36	20	265							24,404	24,404										720	720	1440		
		8	SR 1192 - BRYANS HILL RD	SR 1133 - BELLTOWN RD TO US 15	1	2	1.56	20	174							16,038	16,038										600	75	675		
		9	SR 1211 - W. SHADY GROVE RD	SR 1133 - BELLTOWN RD TO DEAD END	1	2	0.32	18	36			*																			
		10	SR 1228 - AERIAL AVE	SR 1108 - LYON STATION RD TO END MAINT.	1	2	0.17	24	19							1,844	1,844													121	
		11	SR 1229 - FRANKLIN ST	SR 1132 - SANDERS RD/E. TALLY HO RD TO END MAINT.	1	2	0.06	20	7																						
		12	SR 1231 - IVAC WAY	SR 1104 - E. LYON STATION RD TO DEAD END	1	2	0.18	22	20																						
		13	SR 1613 - FAIRPORT RD	SR 1609 - ED HARRIS RD TO VANCE CO	1	2	4.37	20	489							45,942	57,684														
		14	SR 1672 - WASHINGTON AVE	NC 56 TO SR 1675 - ROGERS POINT LANE	1	2	0.3	20	33																						
		15	SR 1675 - ROGERS POINT LANE	CUL DE SAC TO CUL DE SAC	1	2	0.58	20	65																						
		16	SR 1731 - TELECOM DR	SR 1104 E. LYON STATION RD TO DEAD END	1	2	0.25	20	28							2,820	2,820														
TOTAL FOR PROJ NO. 2021CPT.05.17.20391.1							27.79		2,992	12	*	277,946	291,480	708	12	4	10	8	18	21	6	9	1,320	795	2,115	652	80				
												569,426	720			40		36		2,115											
2021CPT.05.17.20911.1	Vance	17	SR 1103 - FAIRPORT RD	SR 1101 - CHARLIE GRISSOM RD TO GRANVILLE CO LINE	1	2	0.1	18	11						1,100	1,100															
		TOTAL FOR MAP NO. 17							0.1		11	*	1,100	1,100																	
		TOTAL FOR PROJ NO. 2021CPT.05.17.20911.1							0.1		11	*	1,100	1,100																	
												2,200																			
GRAND TOTAL							27.89		3,003	12	1	279,046	292,580	708	12	4	10	8	18	21	6	9	1,320	795	2,115	652	80				
												571,626	720			40		36		2,115											

SIGNING FOR RESURFACING PROJECTS

LEGEND

┆ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

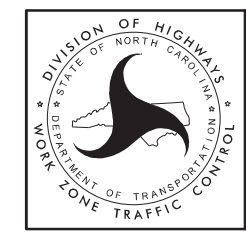
-Y- LINE SIGNING

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		- 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

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

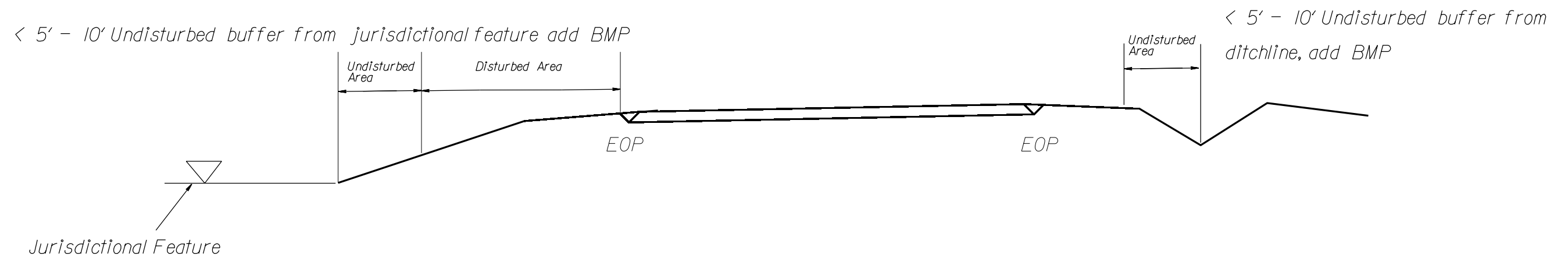
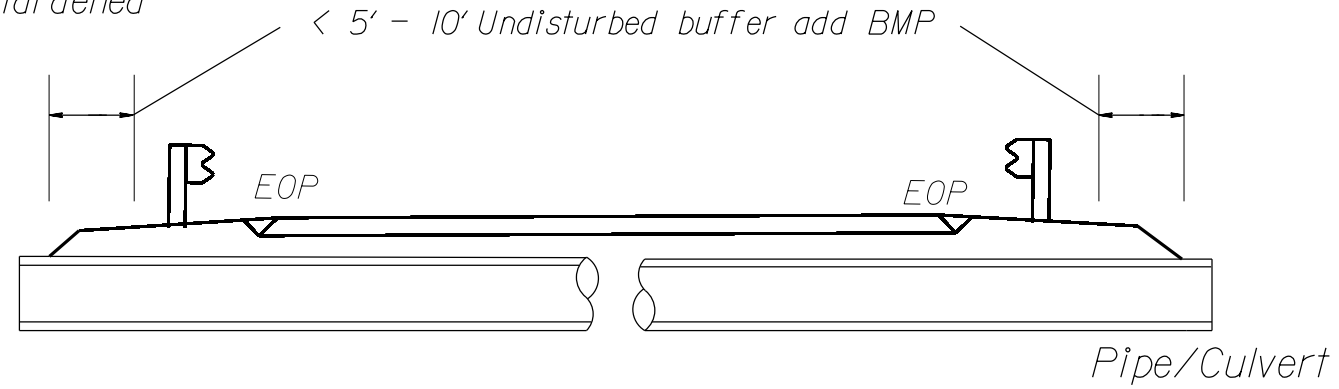
SOIL STABILIZATION TIMEFRAMES

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

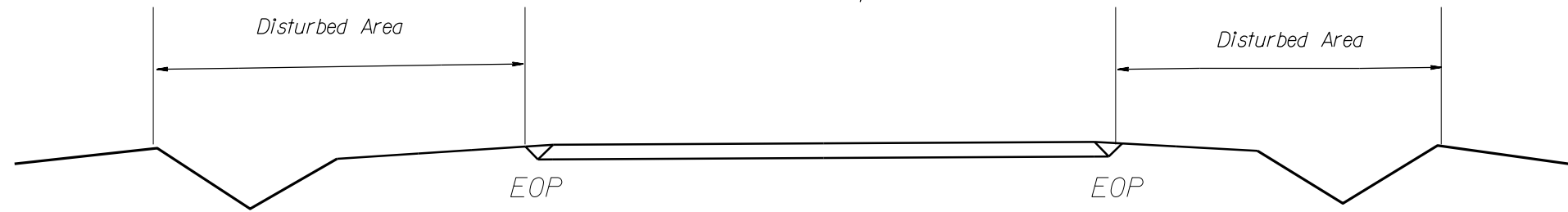
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

EROSION CONTROL DETAIL

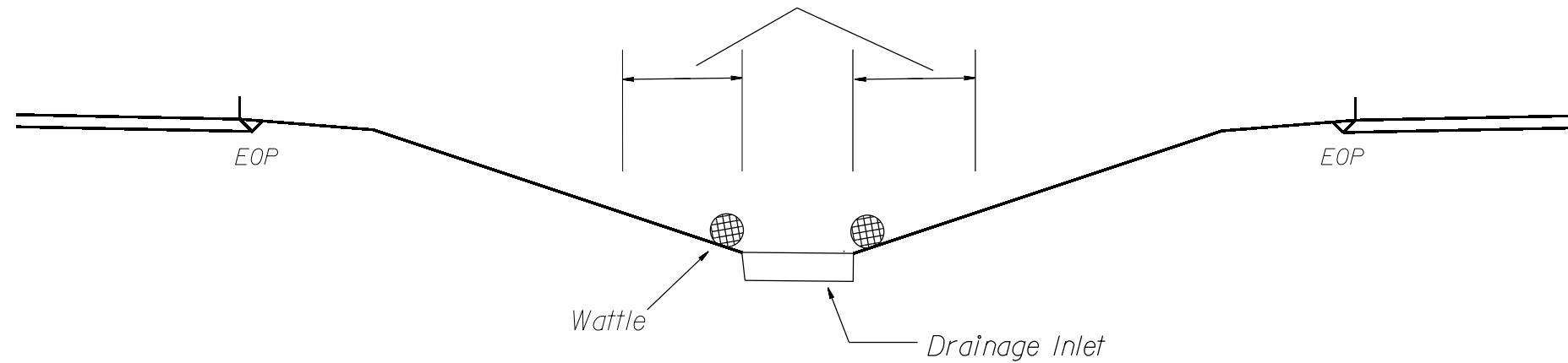
BMP Options: Wattle, Silt Fence or Hardened Aggregate.



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

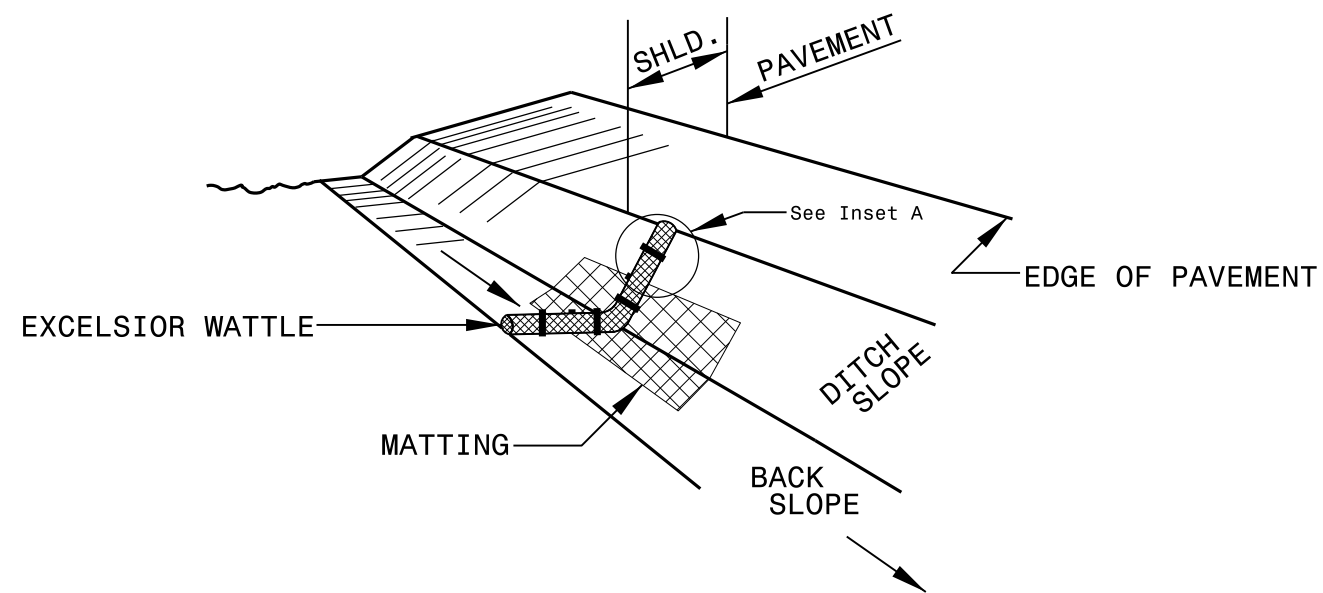


< 5' - 10' Undisturbed buffer from inlet, add wattle

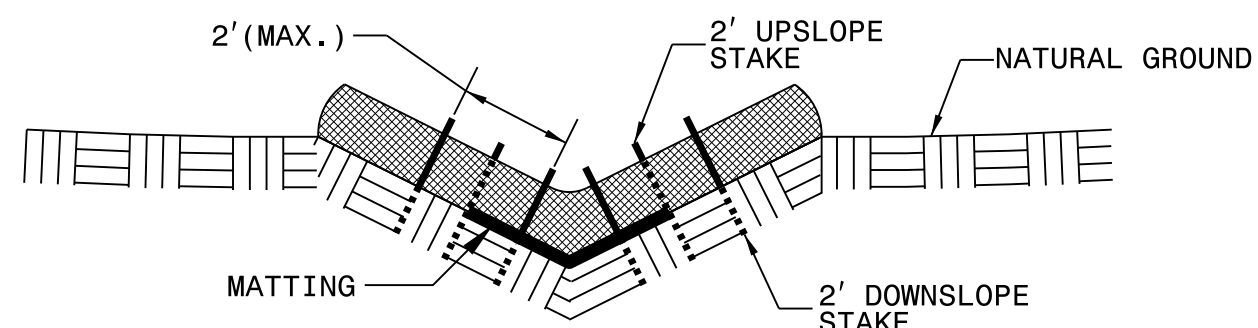


NOT TO SCALE

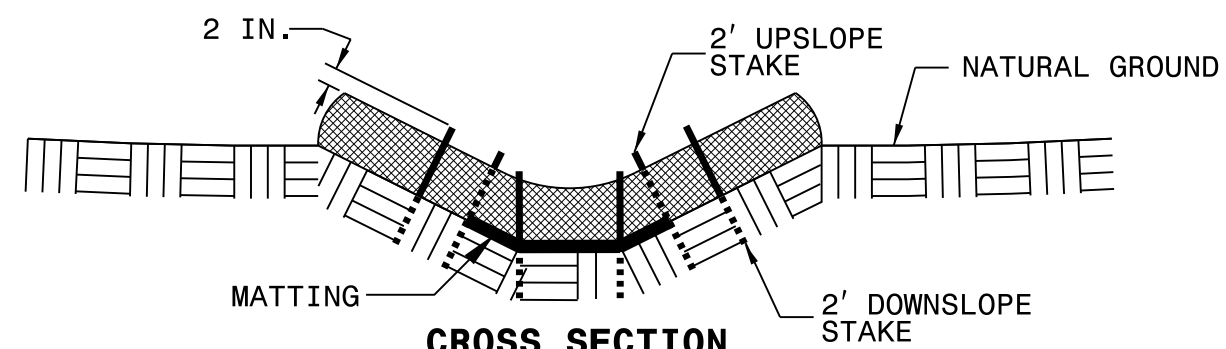
WATTLE DETAIL



ISOMETRIC VIEW



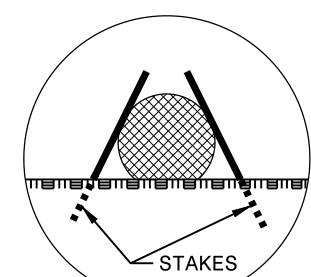
CROSS SECTION VEE DITCH



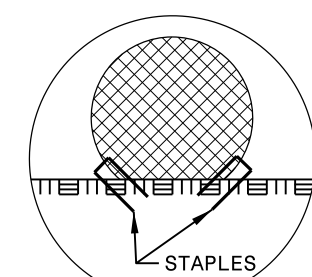
CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

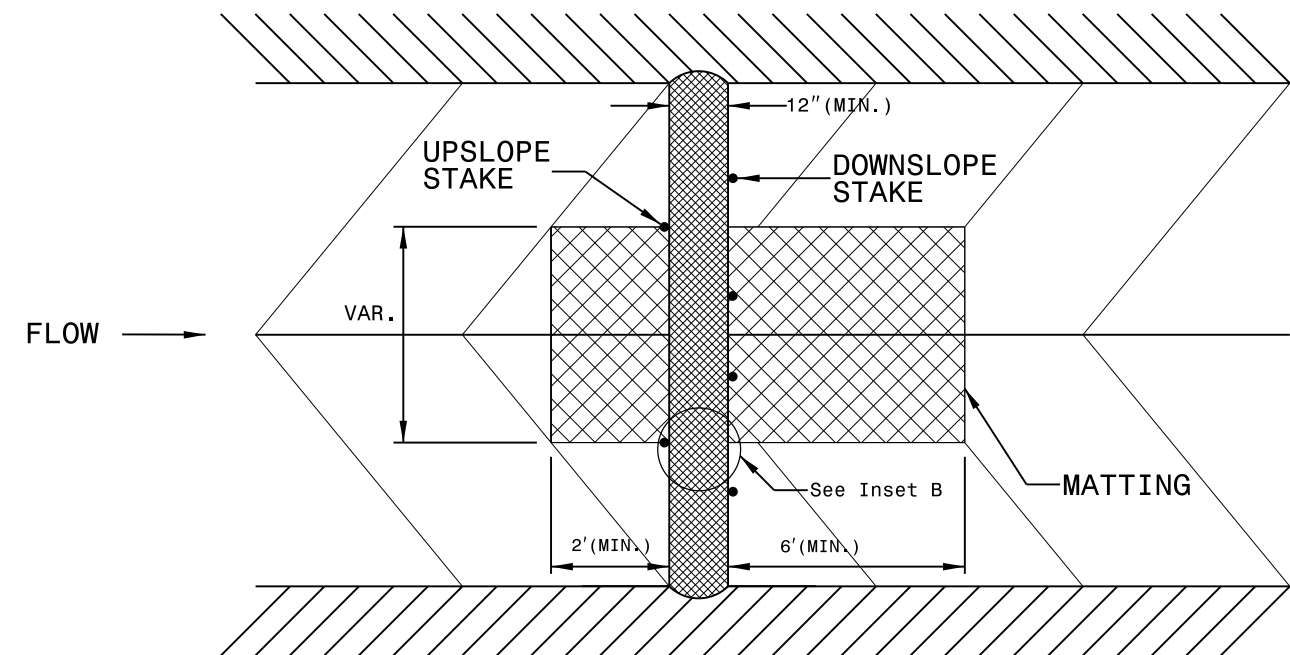
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



INSET B



TOP VIEW