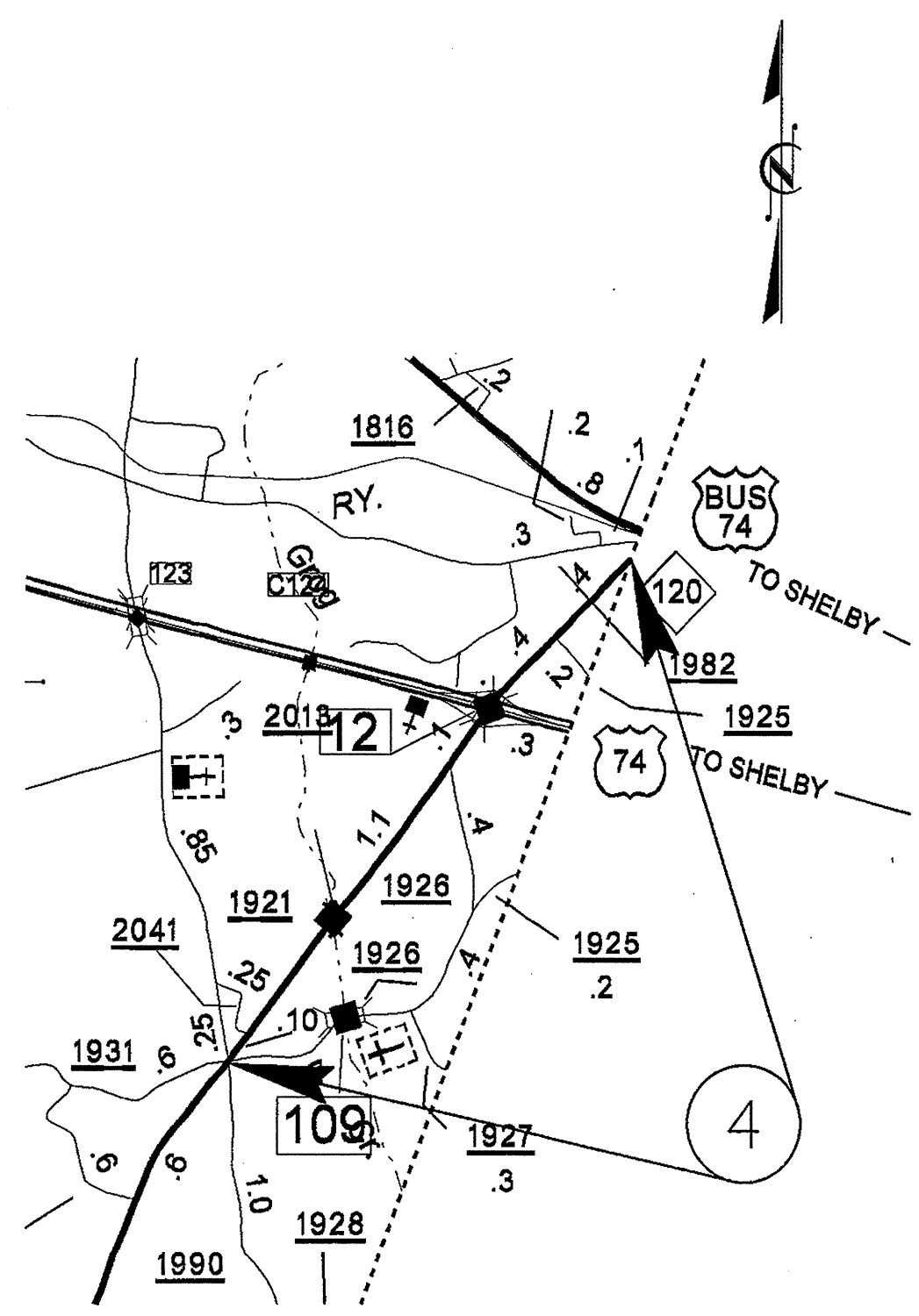
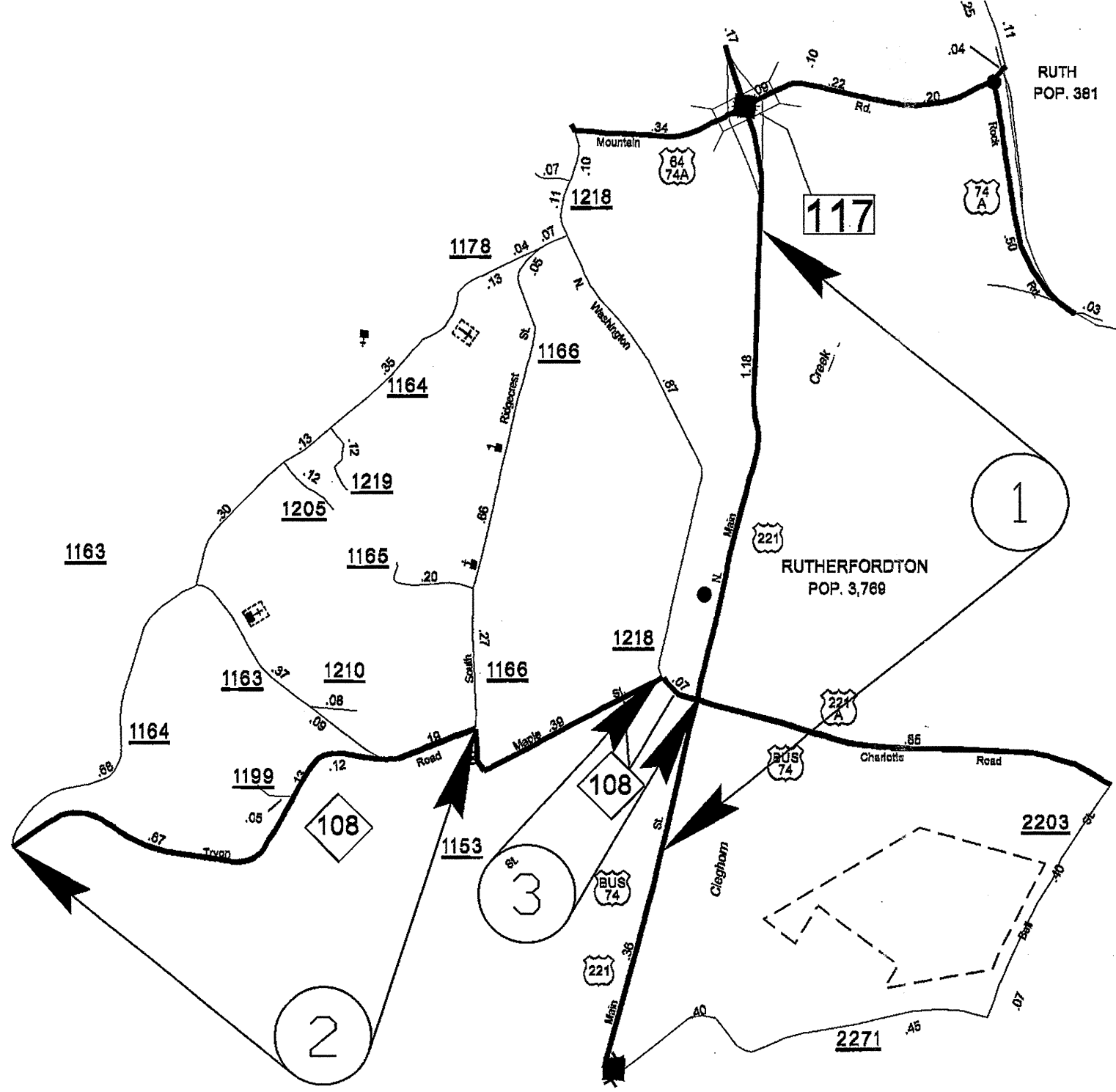
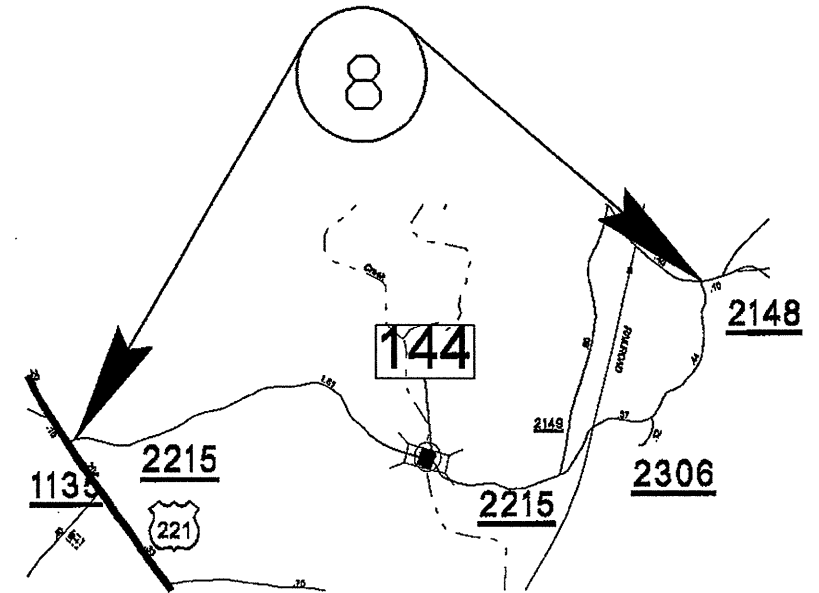
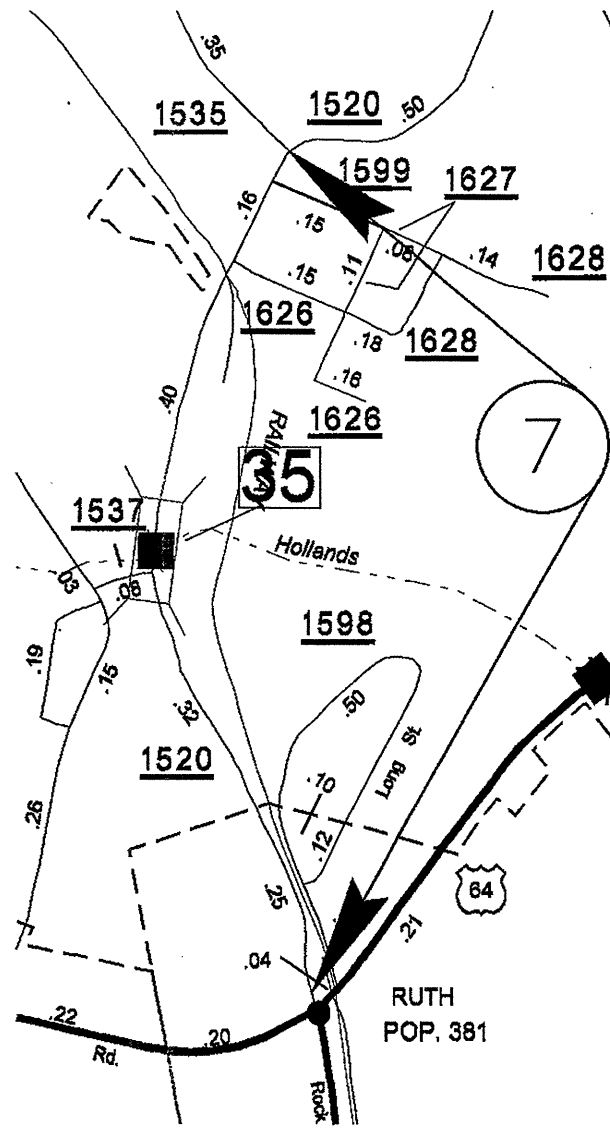
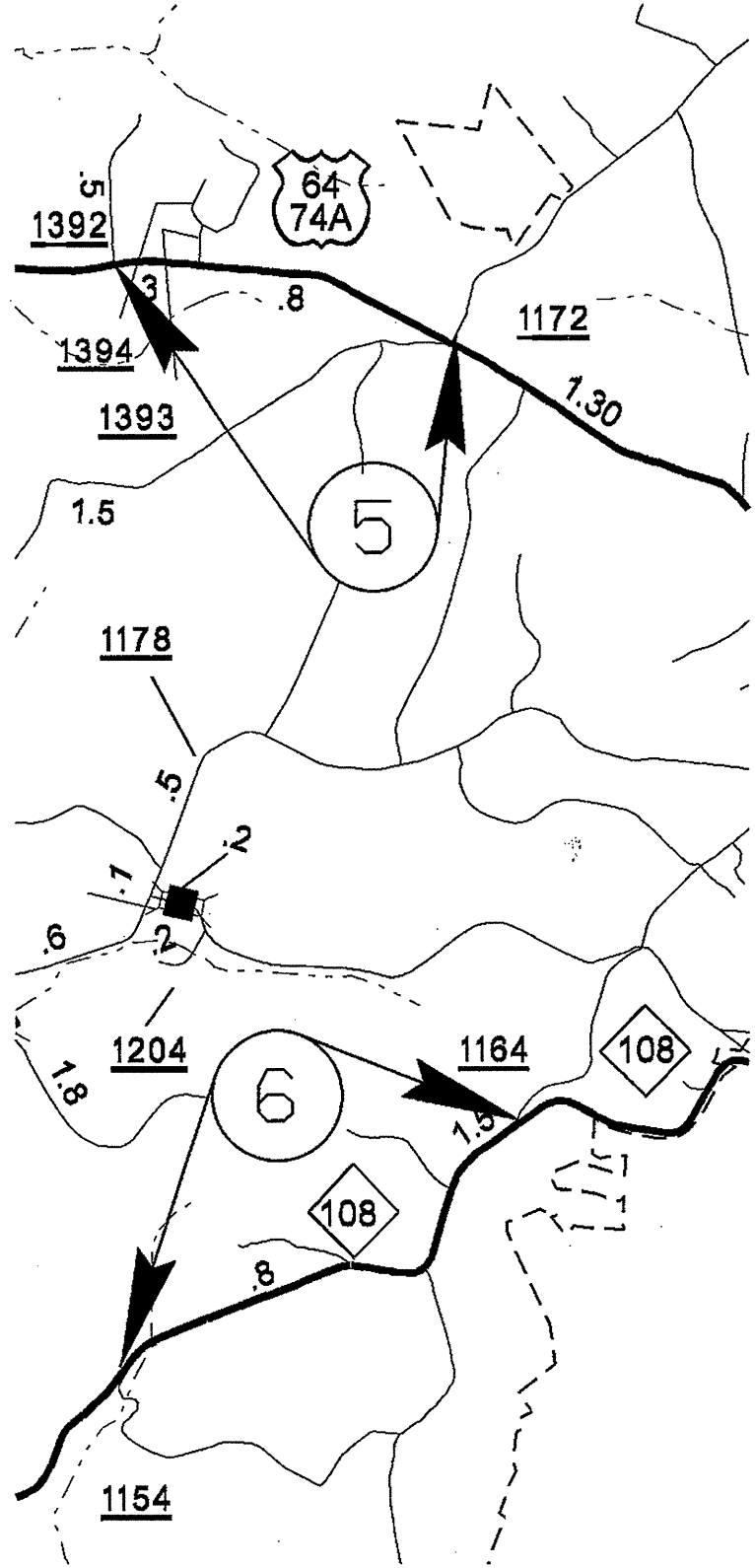


PROJECT NO.	SHEET NO.	TOTAL SHEETS
13CR.10811.12, 13CR.20811.12	1	



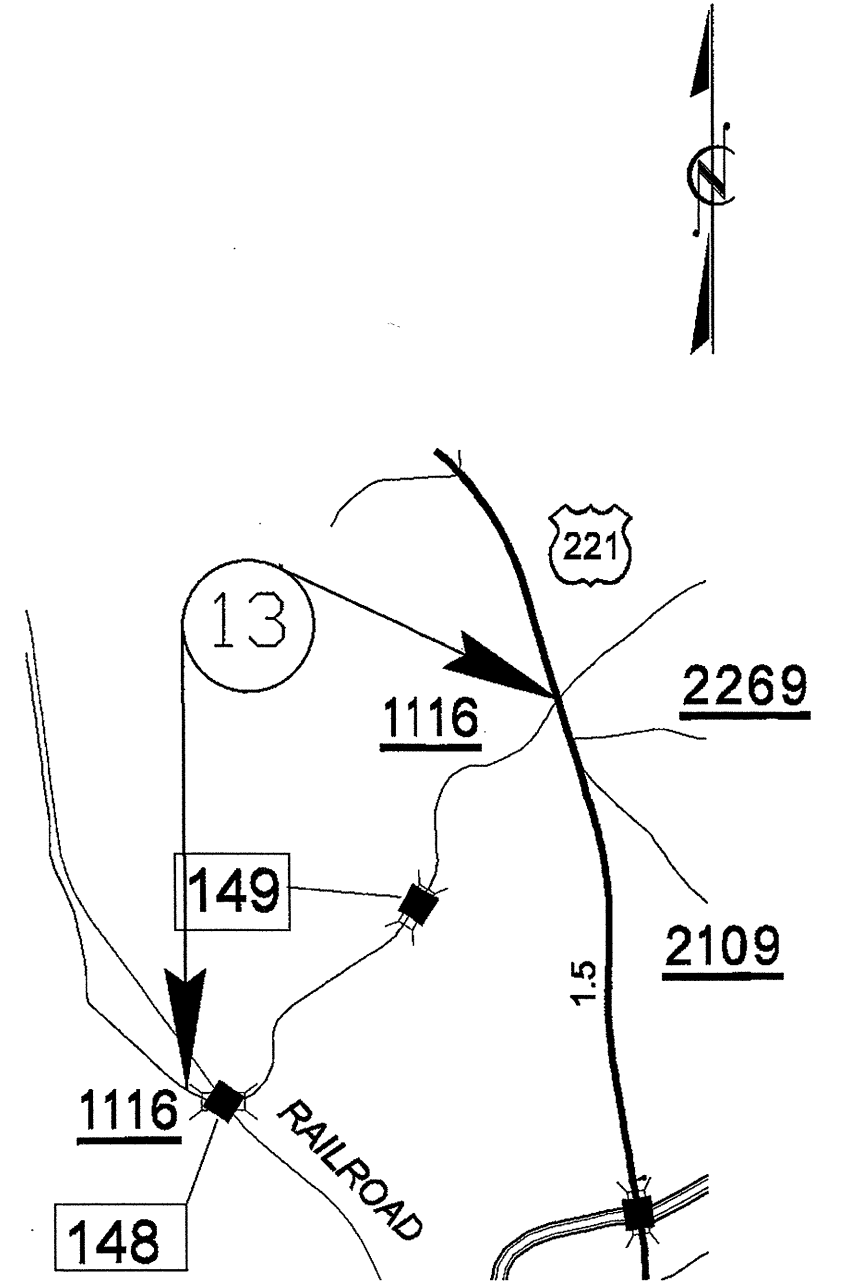
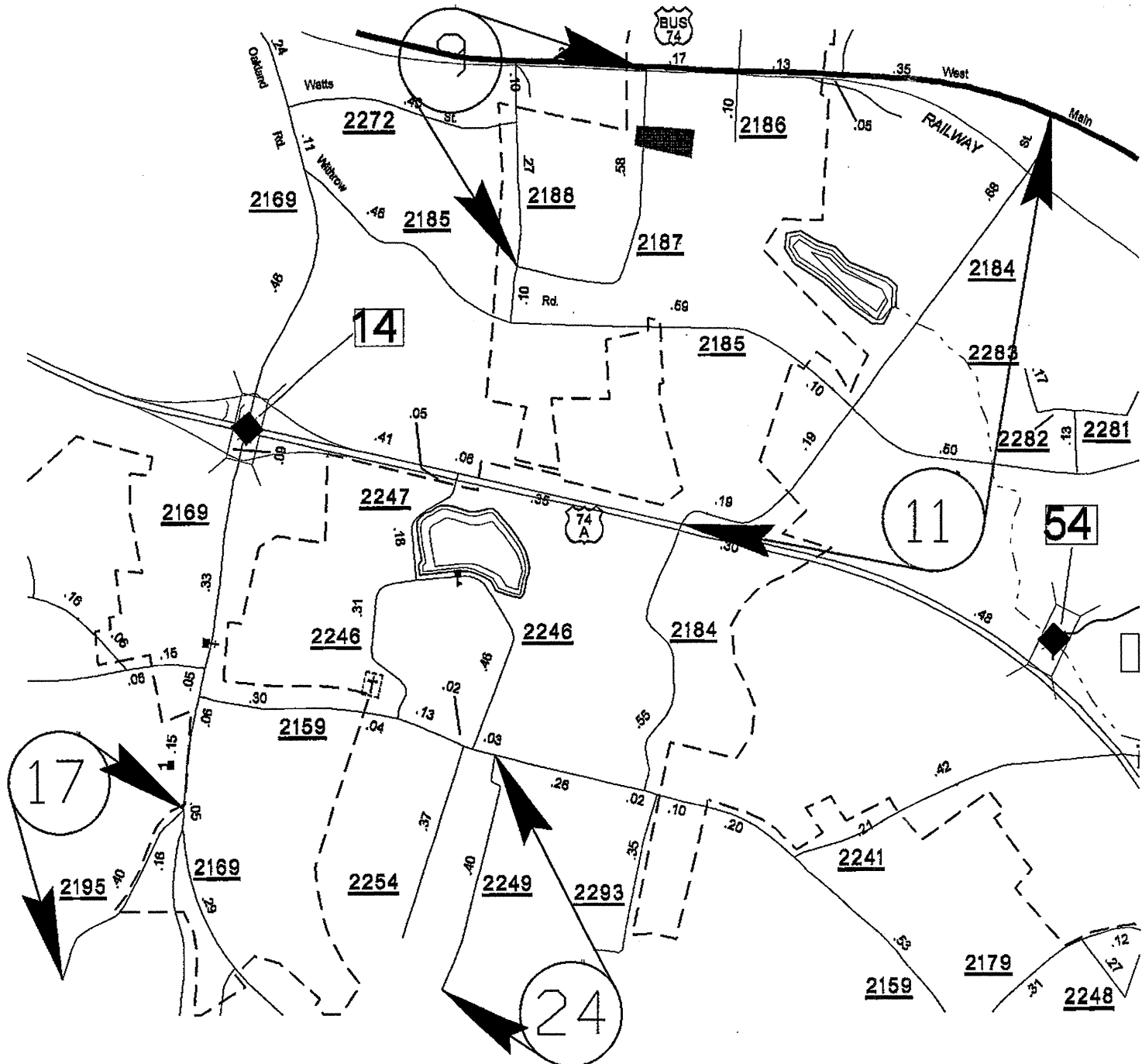
RUTHERFORD COUNTY

PROJECT NO.	SHEET NO.	TOTAL SHEETS
13CR.10811.12, 13CR.20811.12	2	



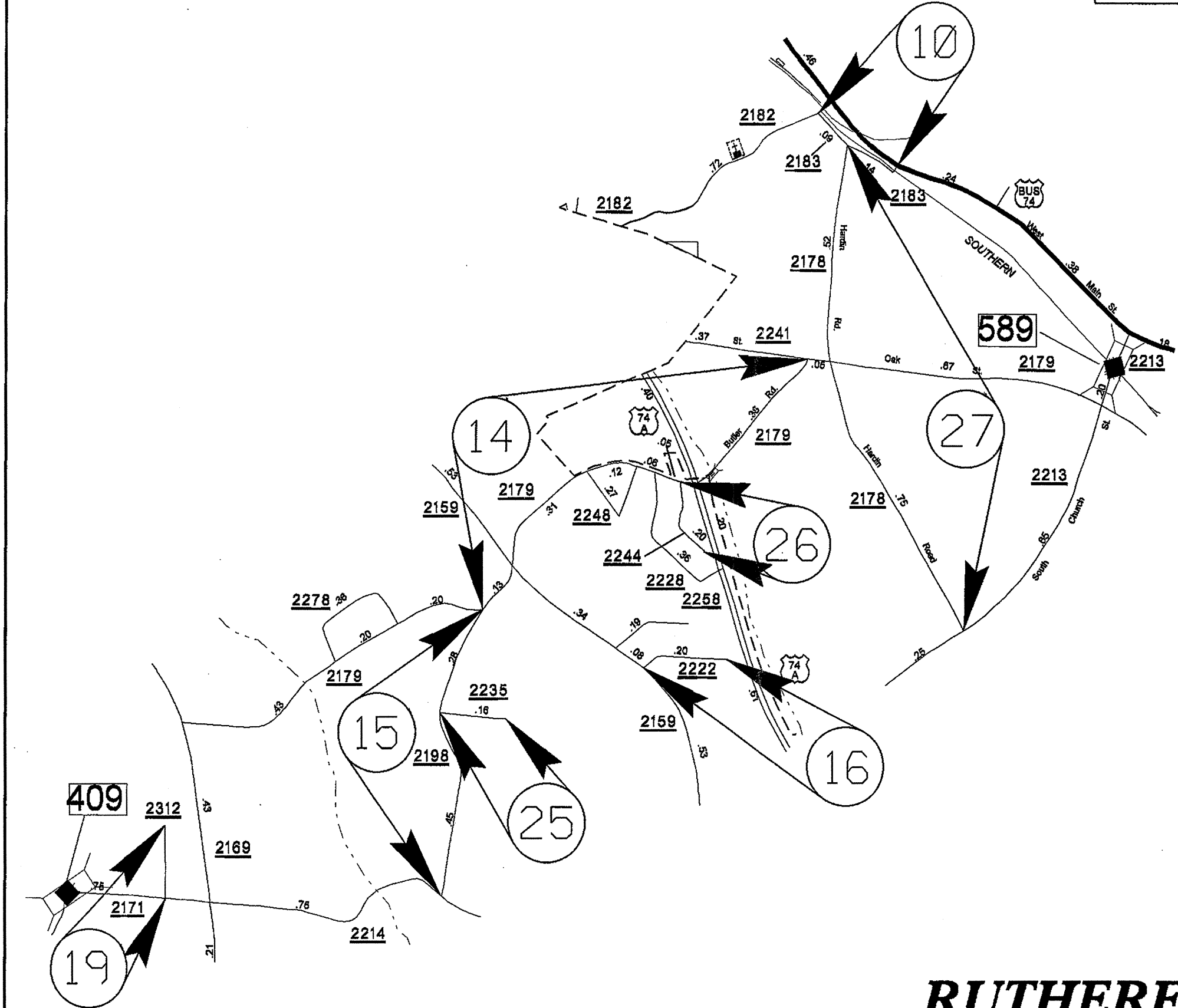
RUTHERFORD COUNTY

PROJECT NO.	SHEET NO.	TOTAL SHEETS
13CR.10811.12, 13CR.20811.12	3	



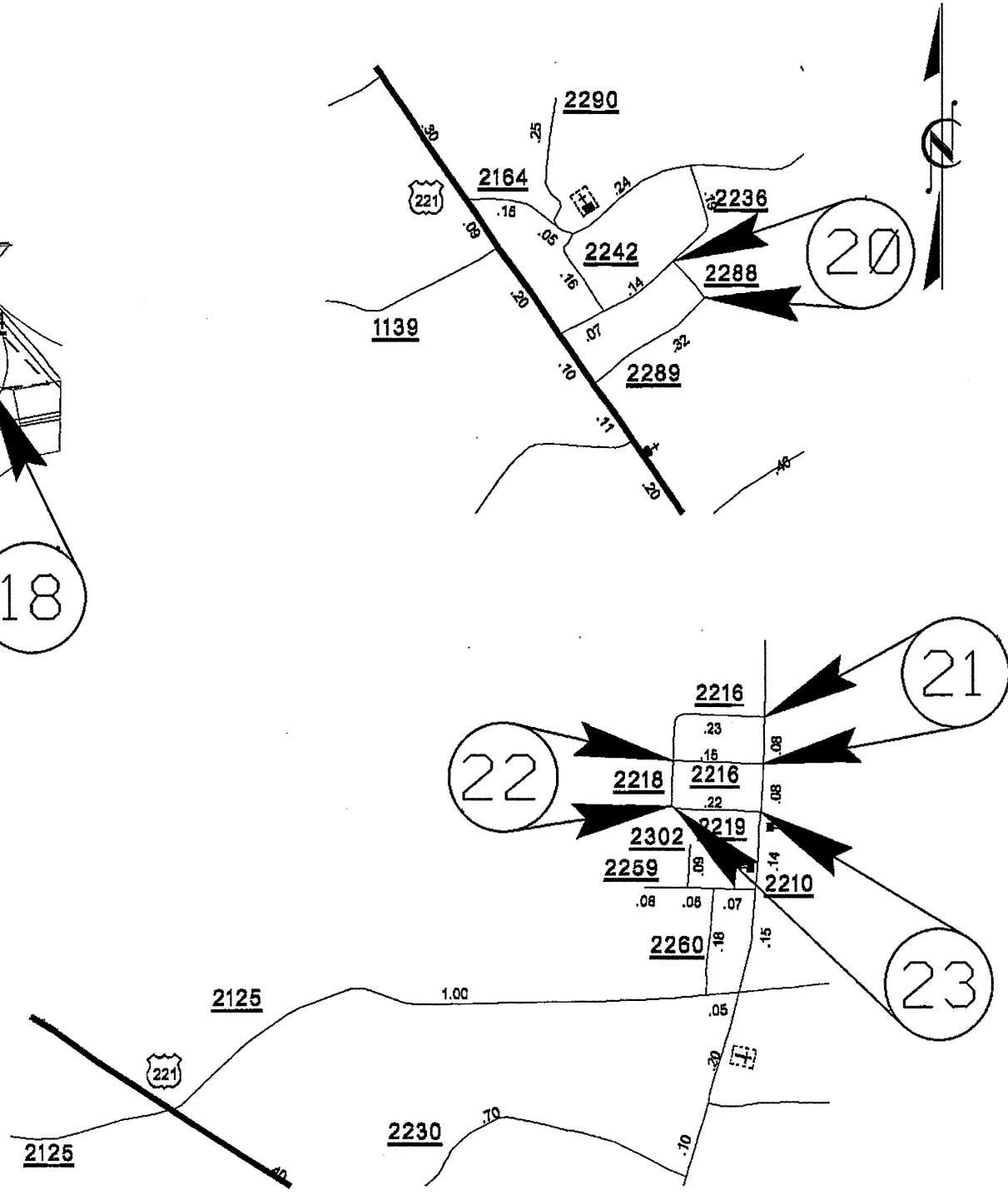
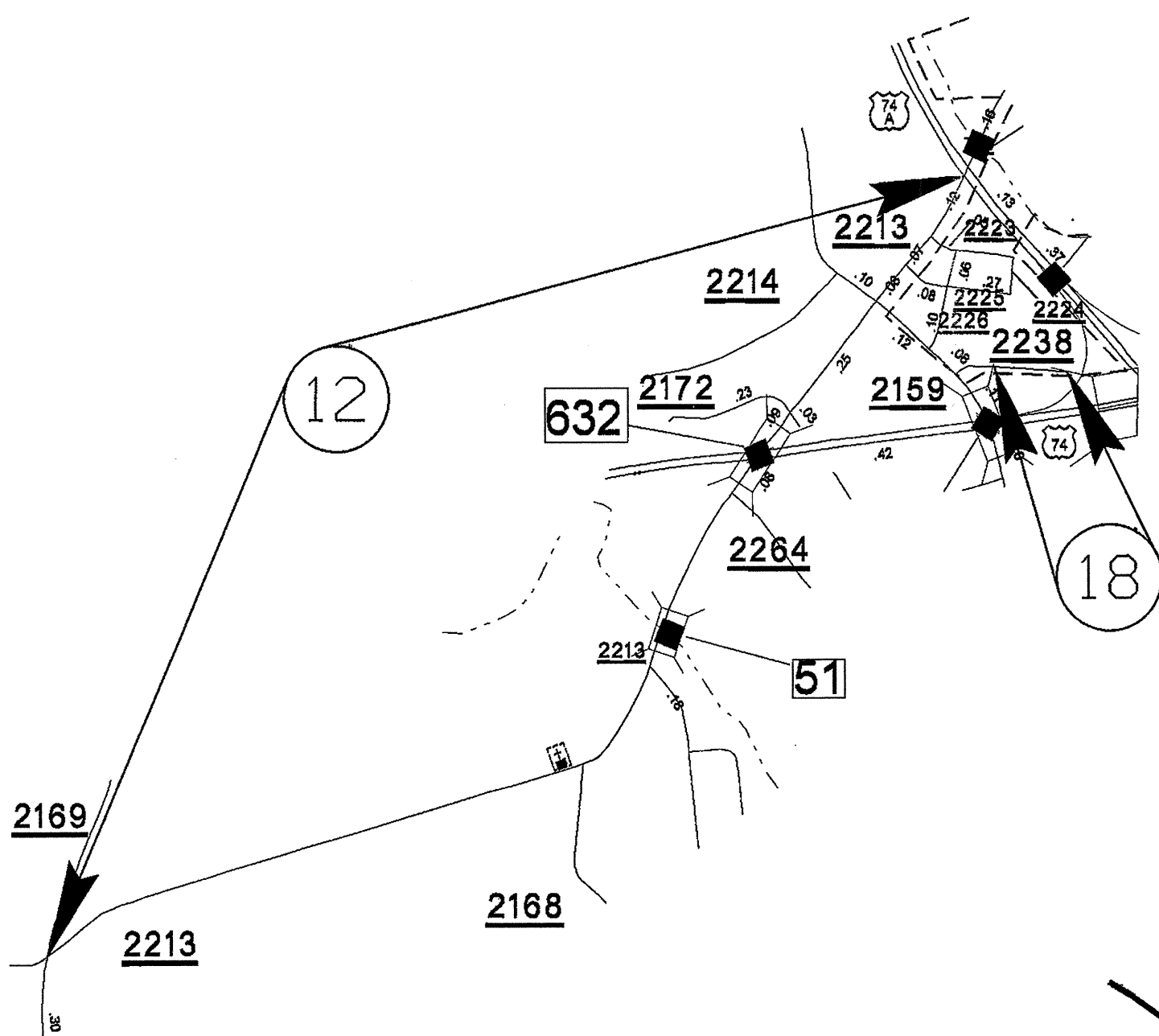
RUTHERFORD COUNTY

PROJECT NO.	SHEET NO.	TOTAL SHEETS
13CR.10811.12, 13CR.20811.12	4	



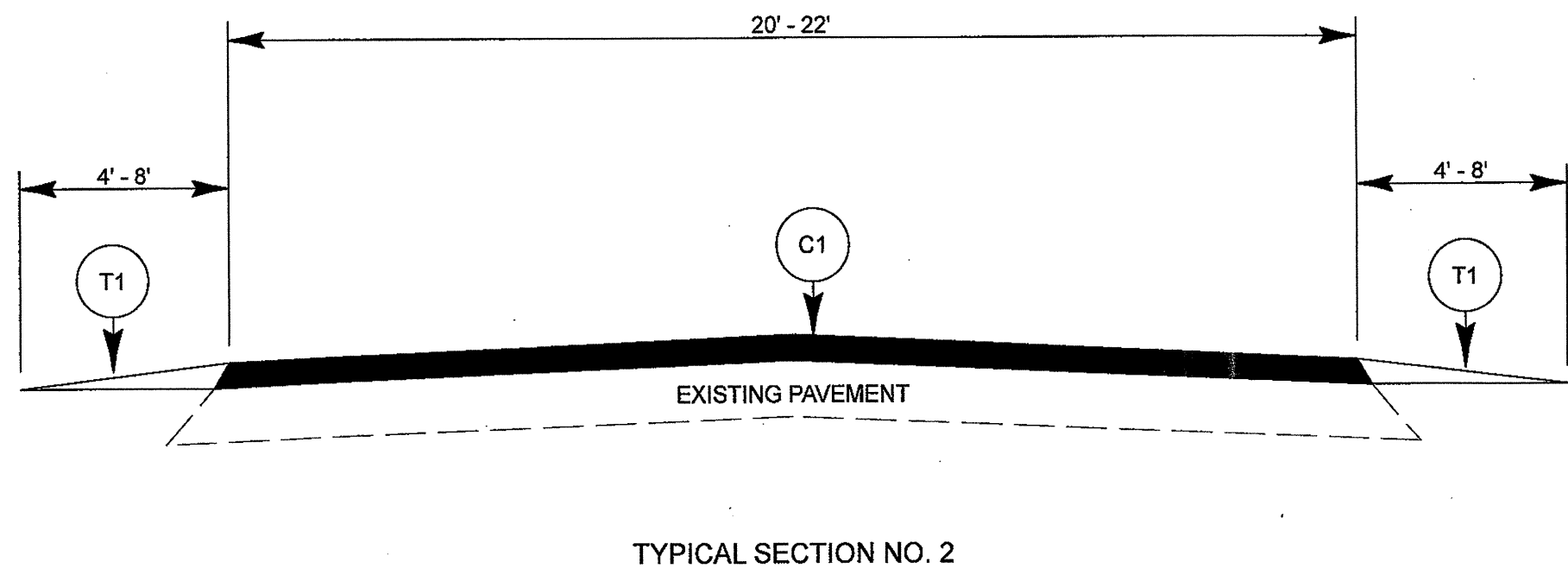
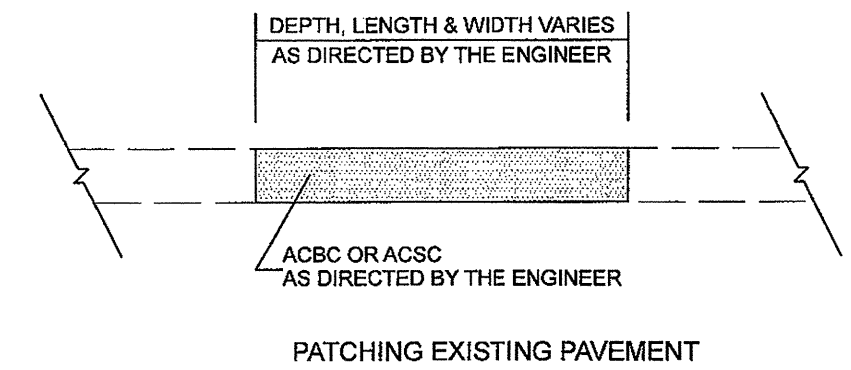
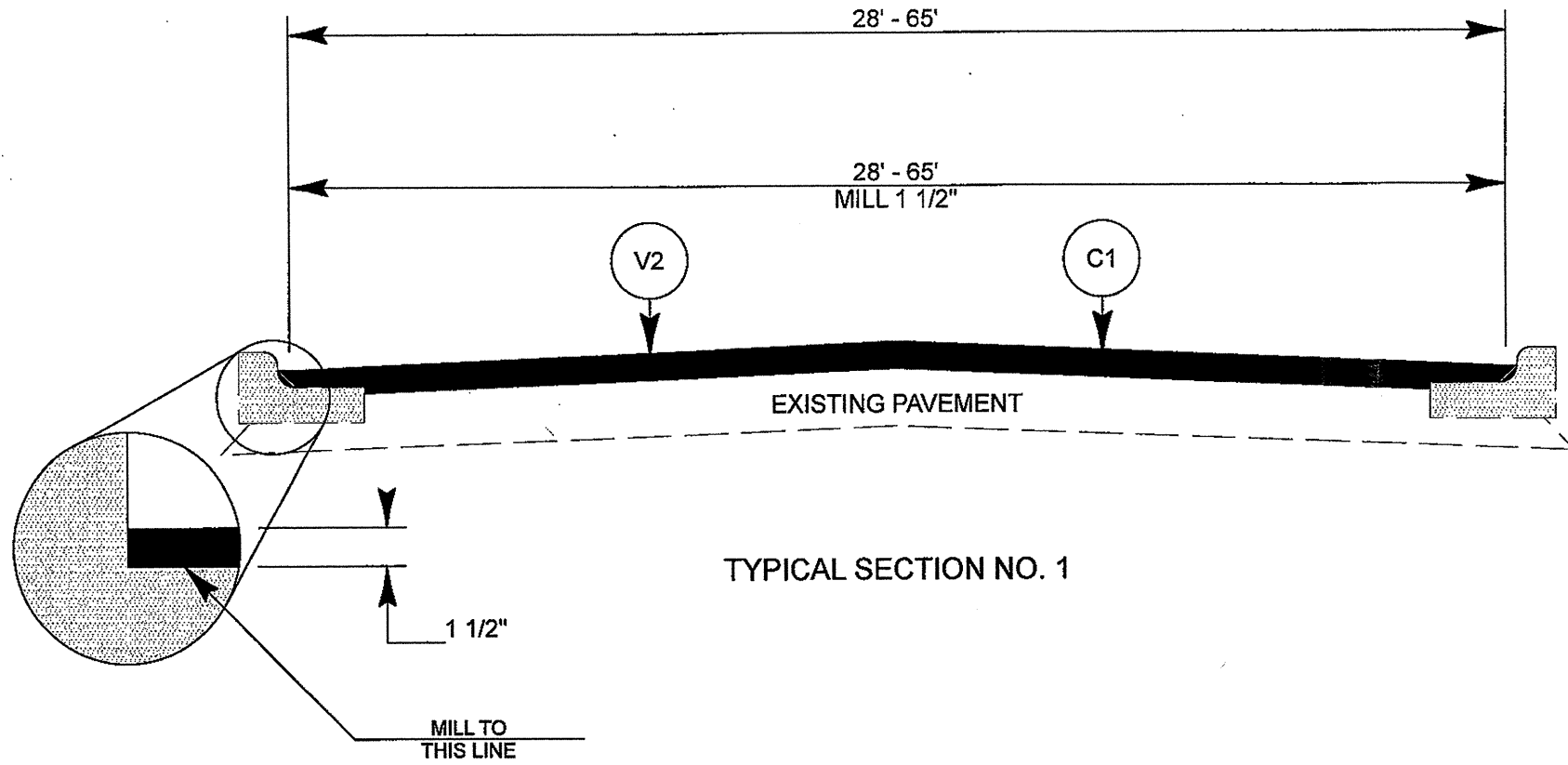
RUTHERFORD COUNTY

PROJECT NO.	SHEET NO.	TOTAL SHEETS
13CR.10811.12, 13CR.20811.12	5	



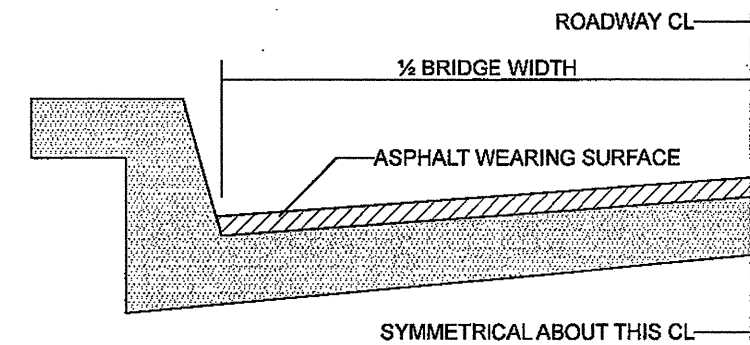
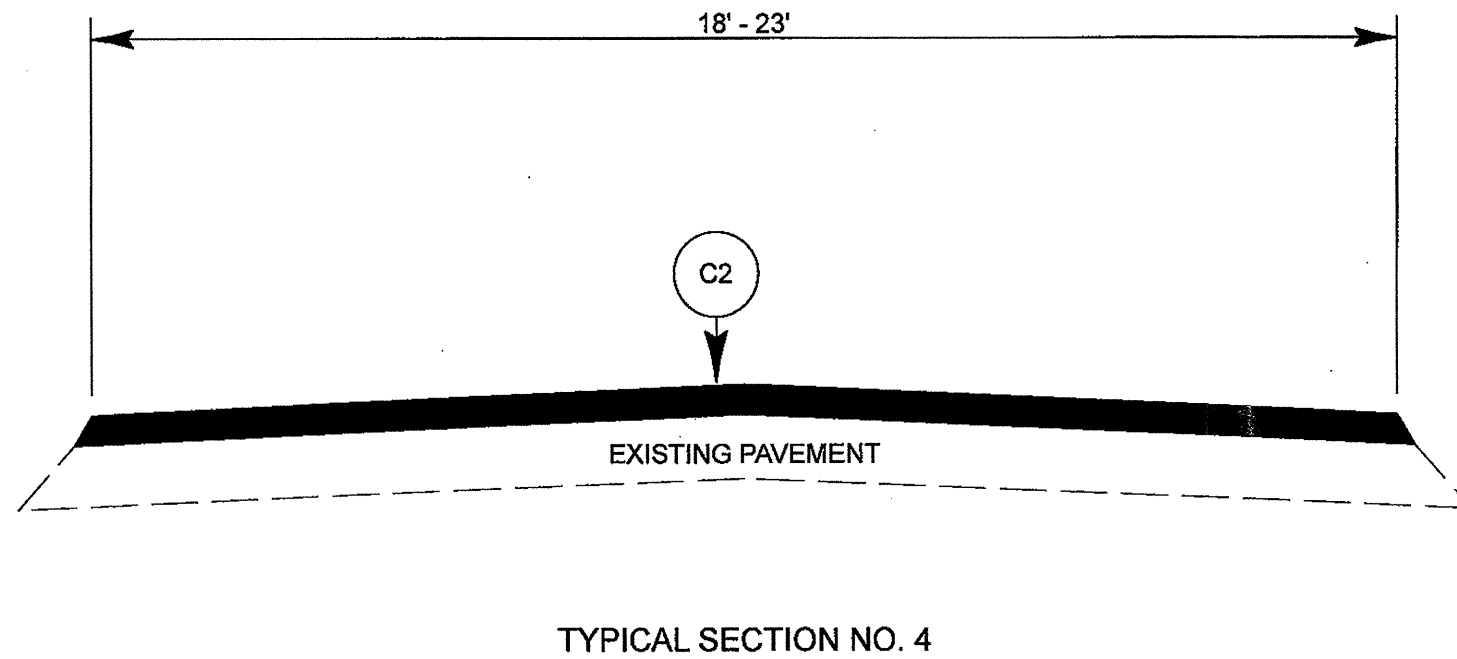
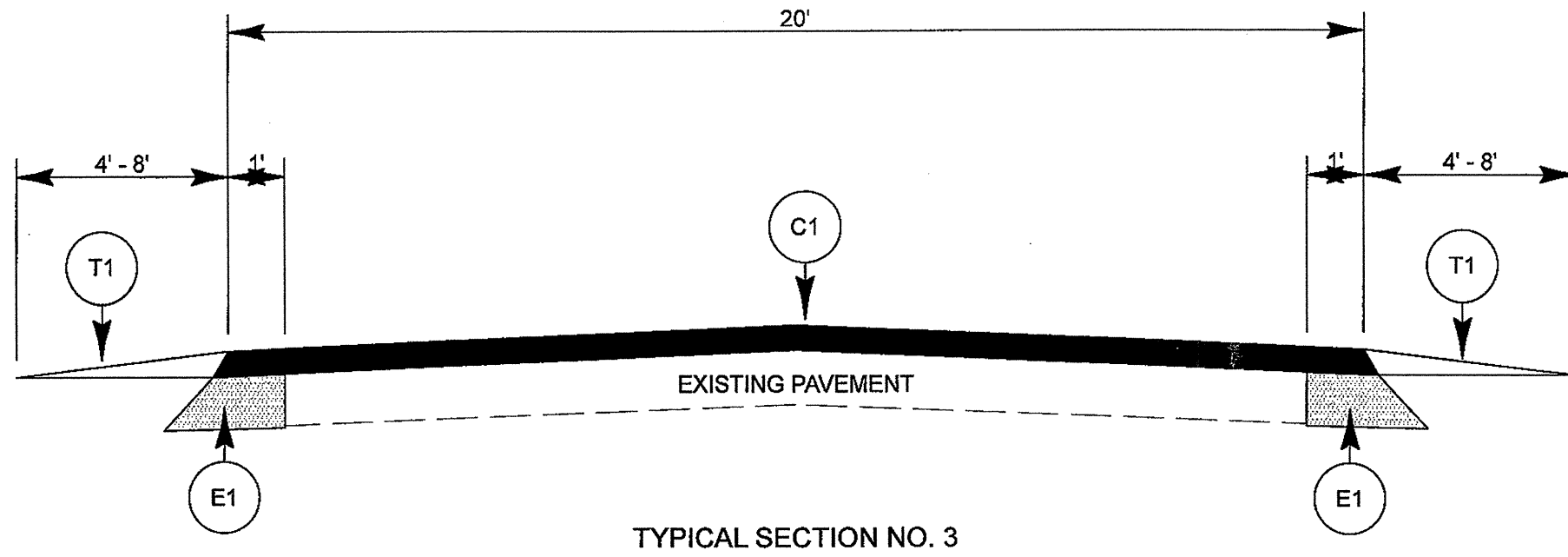
RUTHERFORD COUNTY

PROJECT NO. 13CR.10811.12, 13CR.20811.12	SHEET NO. 6	TOTAL SHEETS
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PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1-1/2" ACSC, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1-1/2" ACSC, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C3	PROP. APPROX. 1" ACSC, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD.
E1	PROP. APPROX. 6" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
T1	SHOULDER RECONSTRUCTION
V1	MILLING ASPHALT PAVEMENT, 0 TO 1-1/2" DEPTH
V2	MILLING ASPHALT PAVEMENT, 1-1/2" DEPTH

PROJECT NO.	SHEET NO.	TOTAL SHEETS
13CR.10811.12, 13CR.20811.12	7	



BRIDGE HALF TYPICAL SECTION

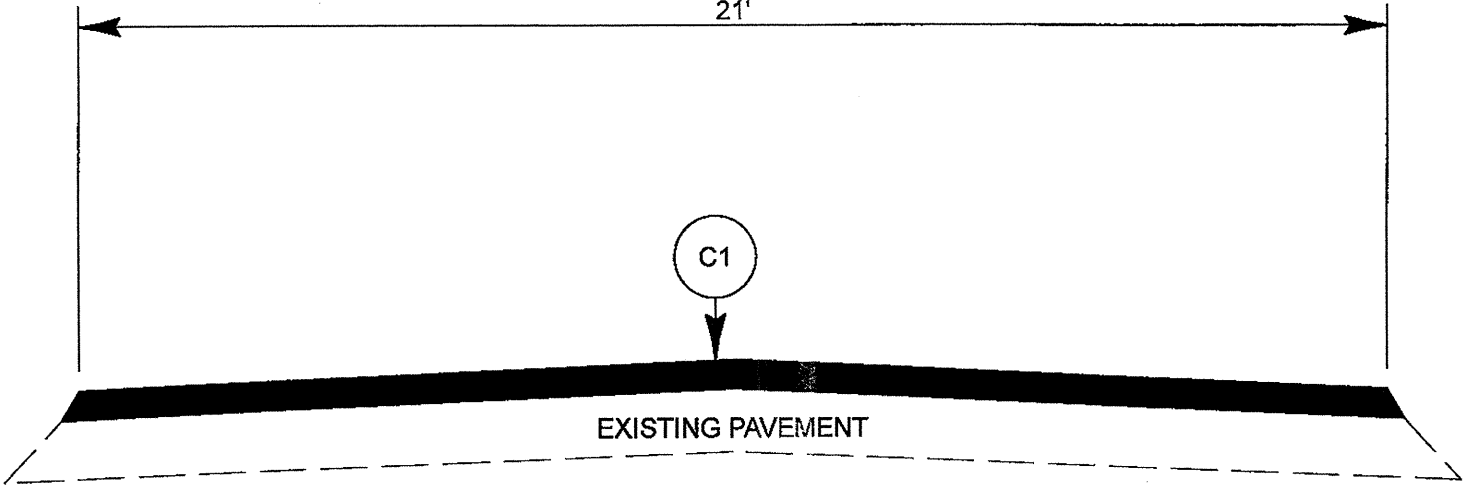
FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. THE MINIMUM THICKNESS SHOULD DEPEND ON PAVEMENT TYPE AS FOLLOWS: S4.75A 1/2", SF9.5A 1.0", S9.5X 1.5", S12.5X 2.0", ULTRATHIN HOT MIX ASPHALT-TYPE A 3/4", ULTRATHIN HOT MIX ASPHALT-TYPE B 5/8", ULTRATHIN HOT MIX ASPHALT-TYPE C 1/2". THE MAXIMUM THICKNESS SHOULD DEPEND ON PAVEMENT TYPE AS FOLLOWS: S4.75A 1.0", SF9.5A 1.5", S9.5X 2.0", S12.5X 2.0", ULTRATHIN HOT MIX ASPHALT-TYPE A 3/4", ULTRATHIN HOT MIX ASPHALT-TYPE B 5/8", ULTRATHIN HOT MIX ASPHALT-TYPE C 1/2".

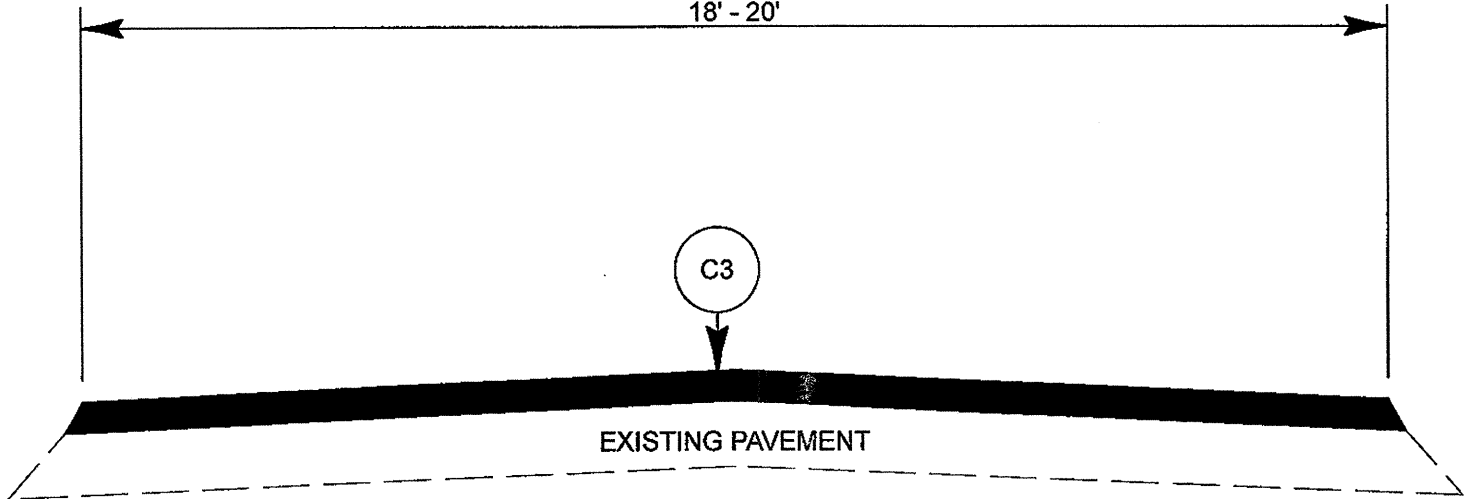
NOTES

ALL UNPAVED 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.
 SHOULDERS AND DITCHES ARE TO BE CONSTRUCTED BY OTHERS UNLESS OTHERWISE INDICATED.
 BRIDGES ARE TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.

PROJECT NO.	SHEET NO.	TOTAL SHEETS
13CR.10811.12, 13CR.20811.12	8	

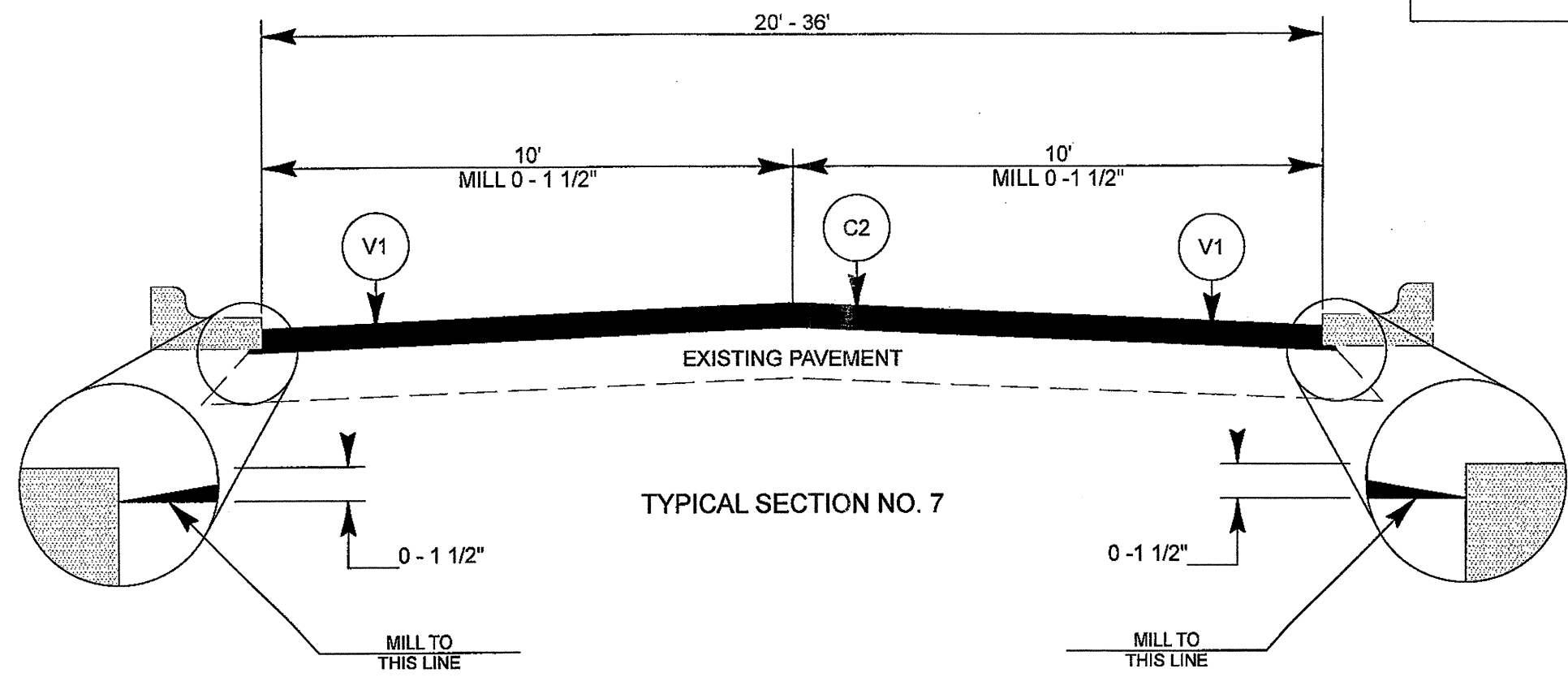


TYPICAL SECTION NO. 5

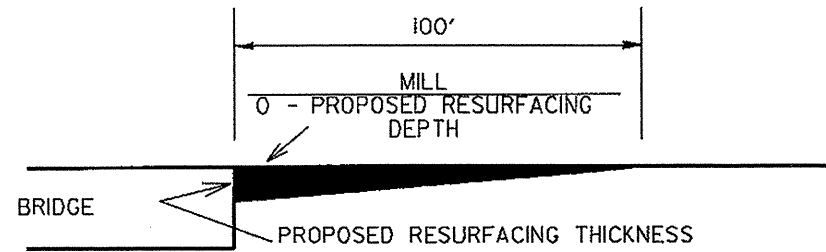


TYPICAL SECTION NO. 6

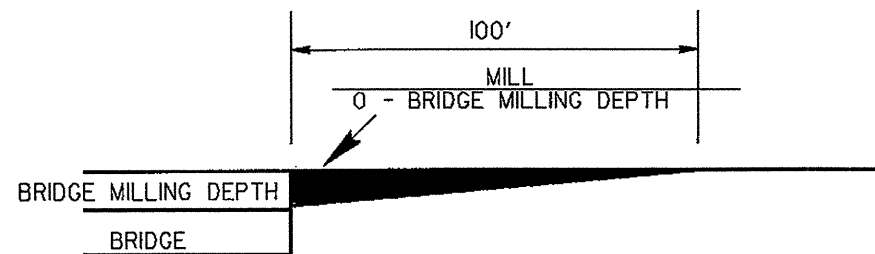
PROJECT NO.	SHEET NO.	TOTAL SHEETS
13CR.10811.12, 13CR.20811.12	9	



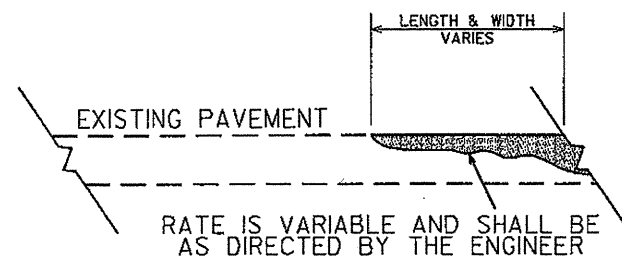
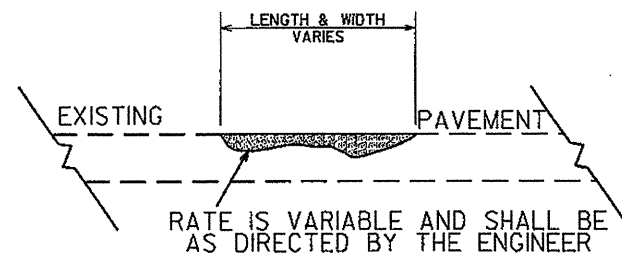
PROJECT NO.	SHEET NO.	TOTAL SHEETS
13CR.10811.12 13CR.20811.12	10	



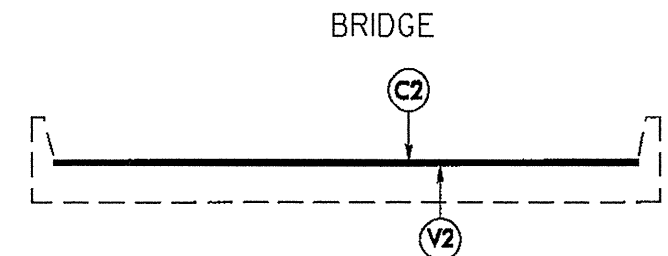
INCIDENTAL MILLING DETAIL AT BRIDGE APPROACHES
WHERE BRIDGES WILL NOT BE RESURFACED
COST OF BRIDGE APPROACH MILLING IS INCIDENTAL TO OTHER ITEMS



INCIDENTAL MILLING DETAIL AT BRIDGE APPROACHES
WHERE BRIDGES WILL BE MILLED THEN RESURFACED
COST OF BRIDGE APPROACH MILLING IS INCIDENTAL TO OTHER ITEMS



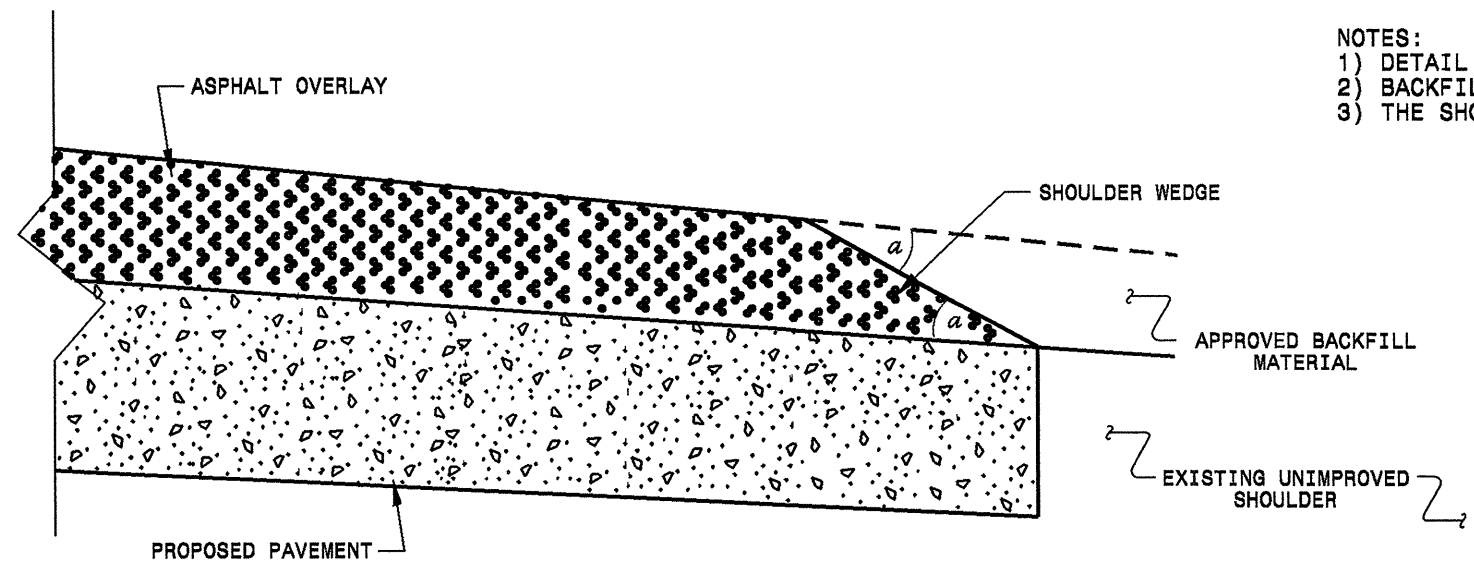
**DETAIL SHOWING
METHOD OF WEDGING**



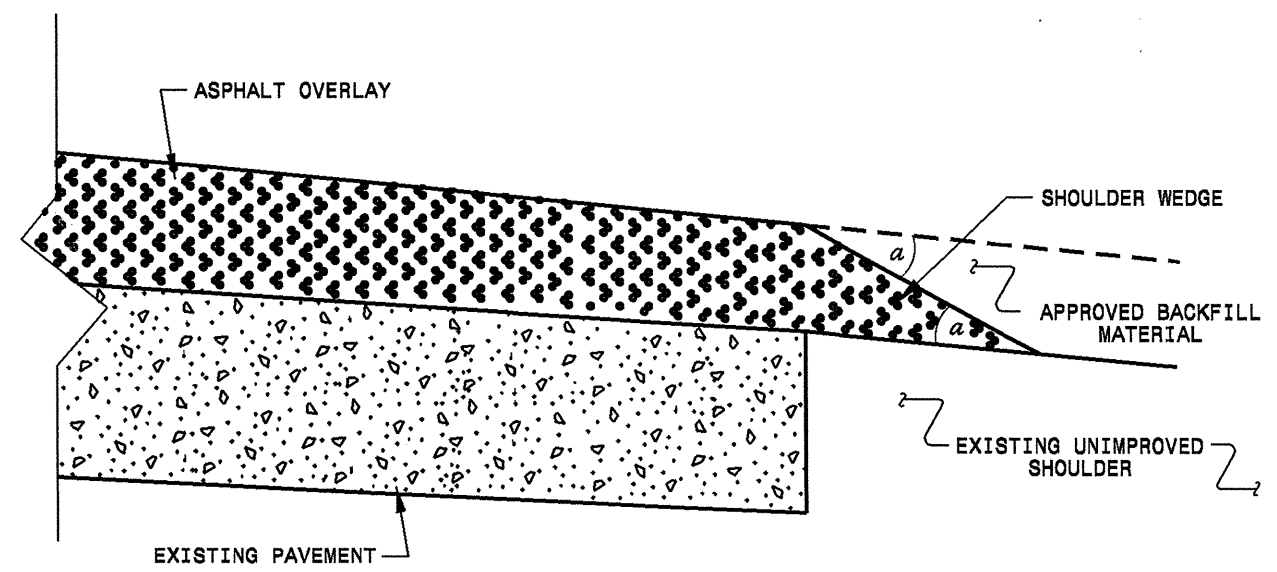
BRIDGE DETAIL

BRIDGE # 35 MAP 7
BRIDGE # 51 MAP 12 AND
BRIDGE # 148 MAP 13
MILL 1/2" OFF EXISTING PAVEMENT
SEE MAPS FOR BRIDGE LOCATION

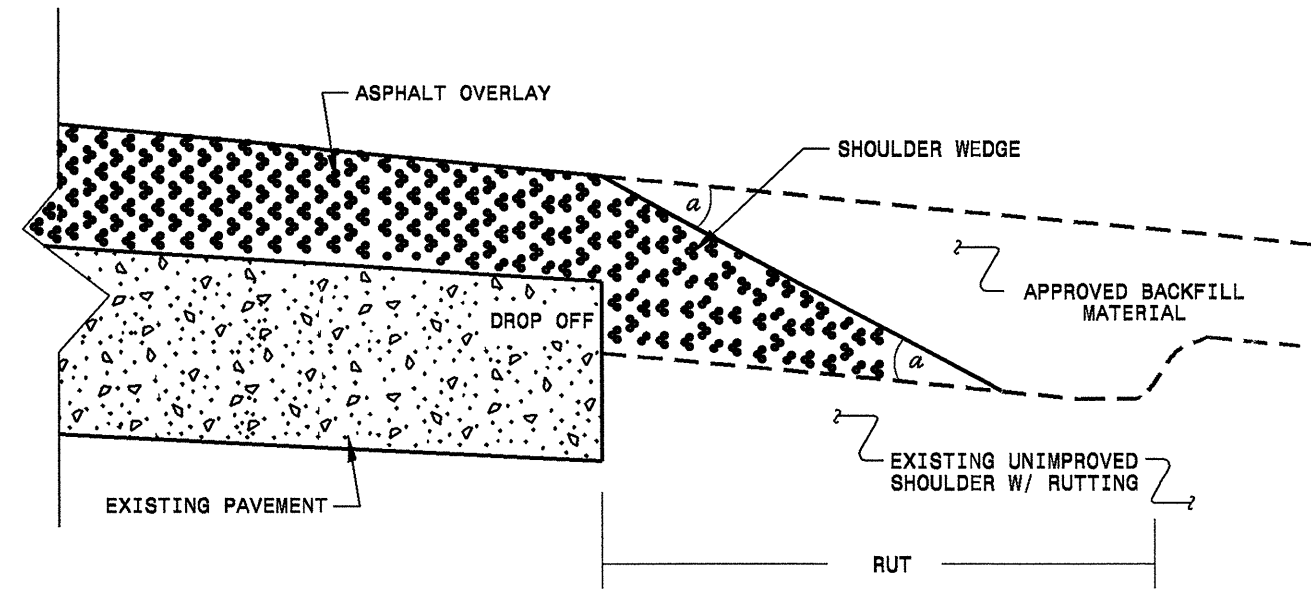
- NOTES:
 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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



SHOULDER WEDGE DETAIL
 (Resurfacing Projects w/ NO Widening)

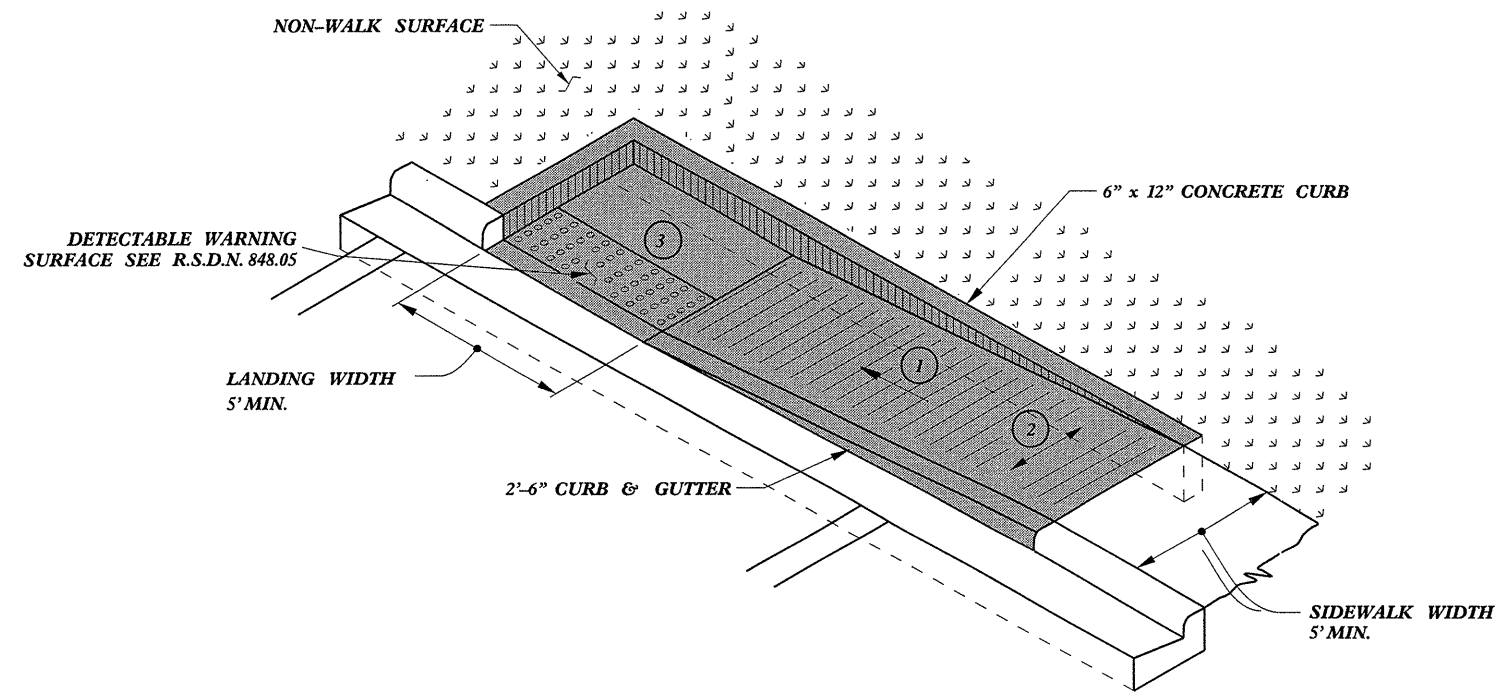



SHOULDER WEDGE DETAIL
 (Resurfacing Adjacent to
 Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

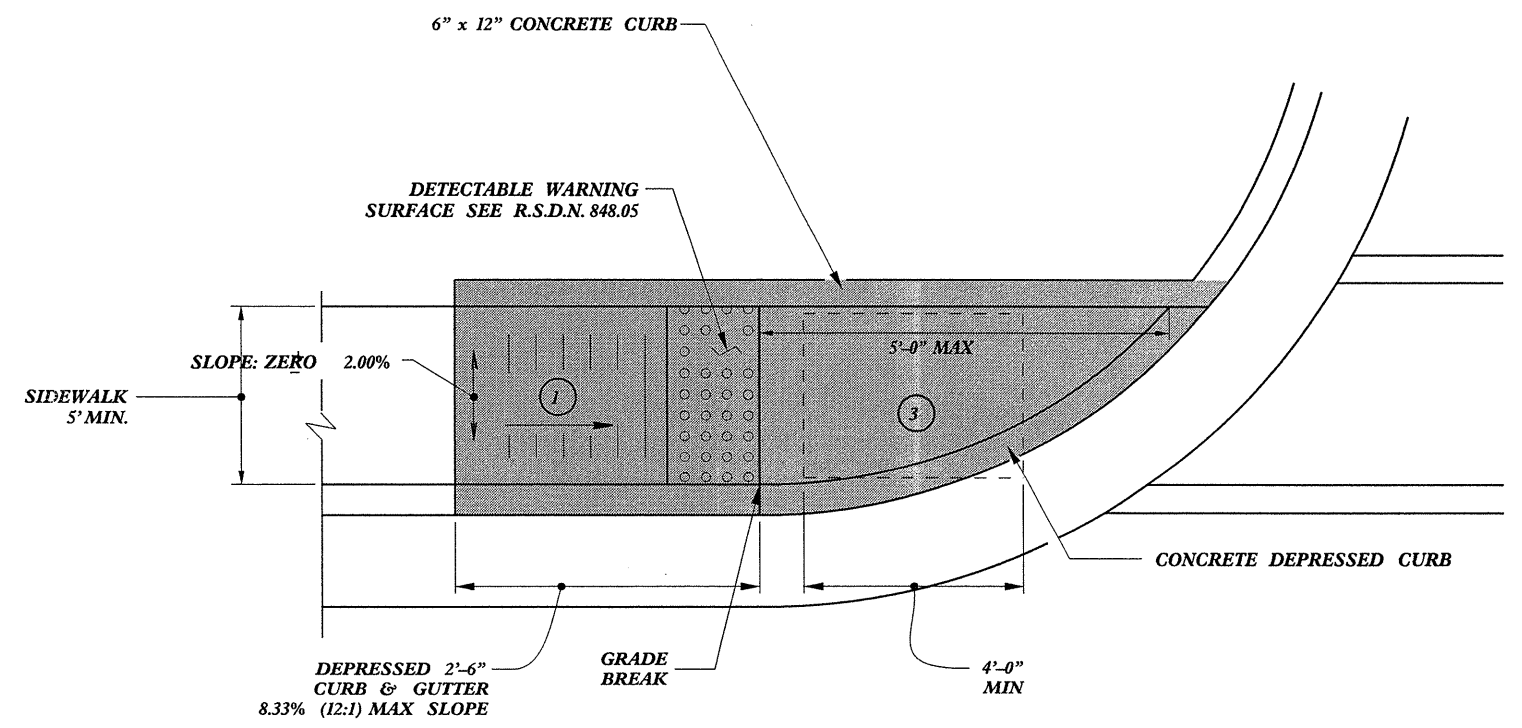
CONTRACT STANDARDS AND DEVELOPMENT UNIT Office 919-707-8850 FAX 919-250-4119		
SHOULDER WEDGE DETAILS		
ORIGINAL BY: T.SPELL	DATE: 7-19-11	
MODIFIED BY:	DATE: 10/10/12	
CHECKED BY:	DATE:	
FILE SPEC.: asuer/detail/etend/shoulderwedgeDetail.dgn		

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 PAY LIMITS FOR CURB RAMP

TYPE 1A



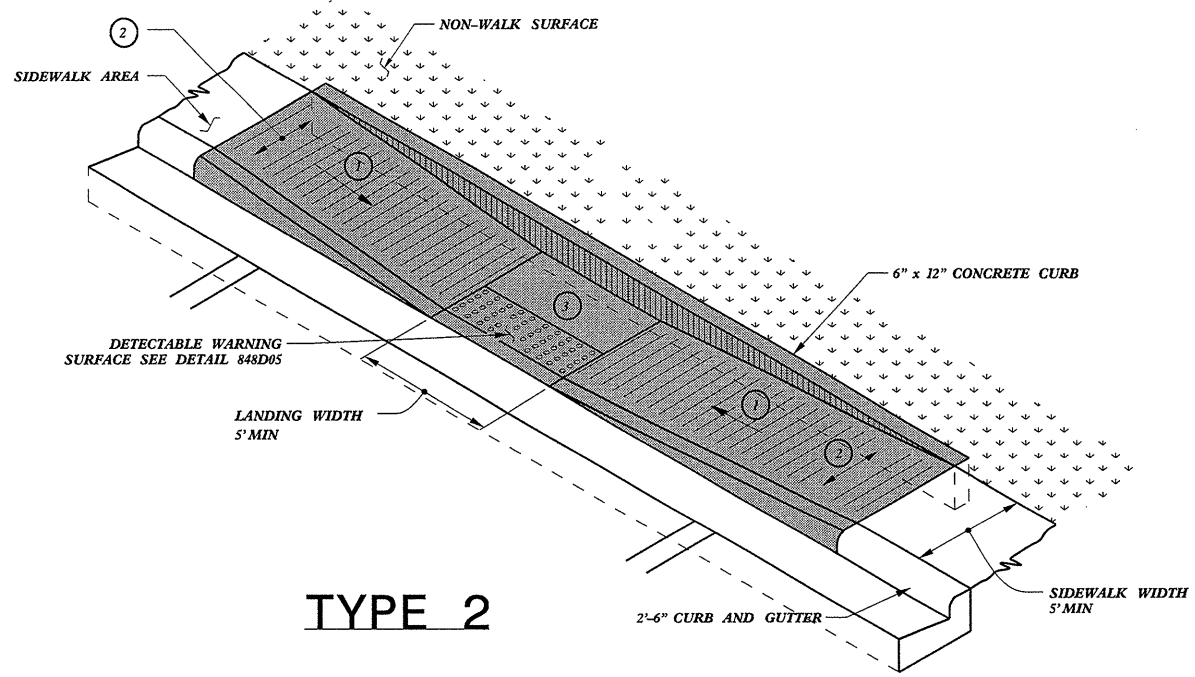
TYPE 1

- 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

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	

5/14/99
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 Howerton
 13CR.10811.12

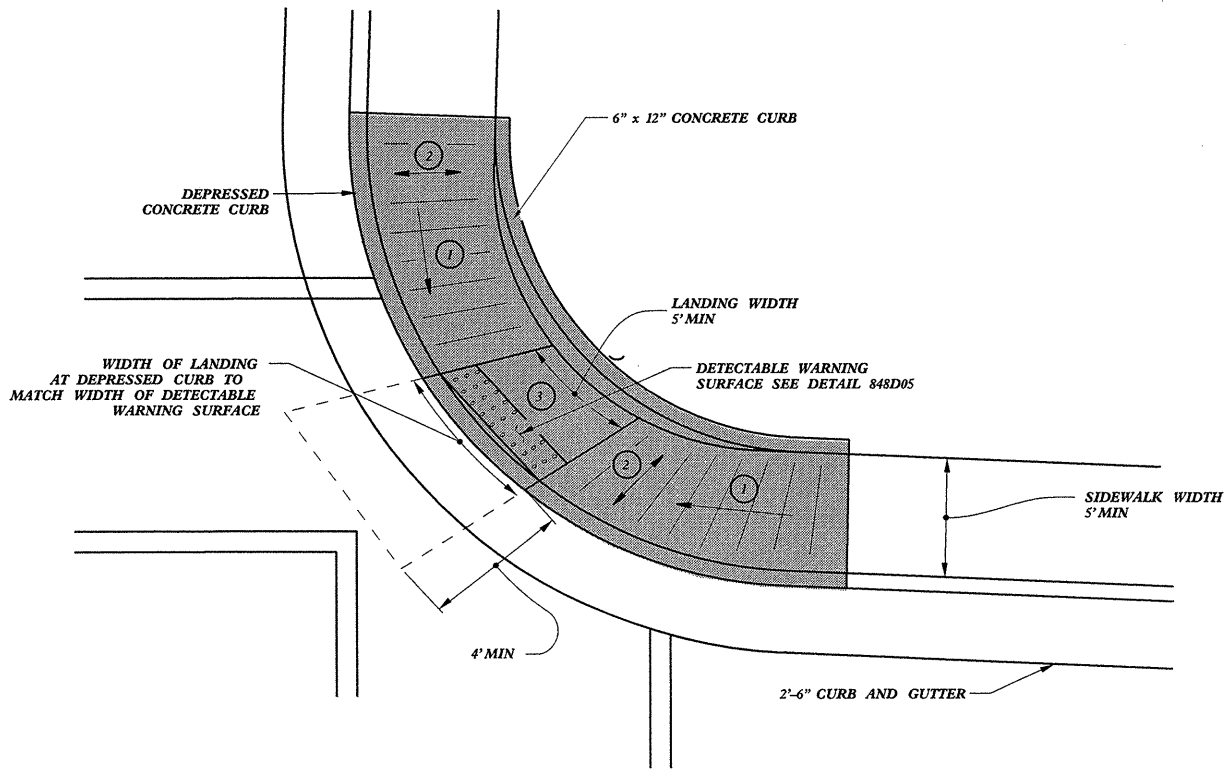


TYPE 2

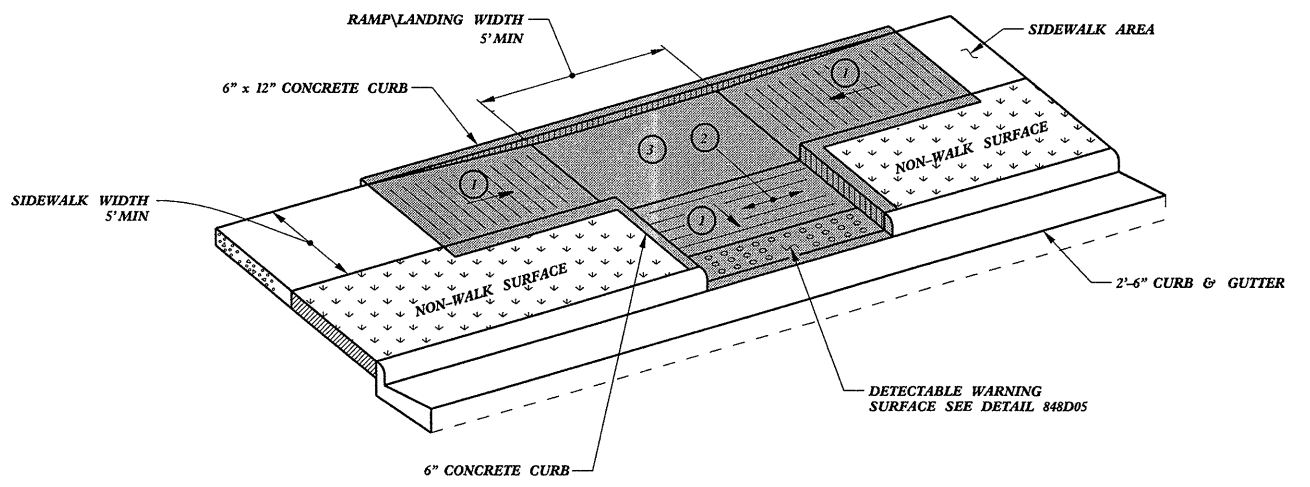


PAY LIMITS FOR CURB RAMP

- 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

14-SEP-2011 08:04
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 Howerton

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

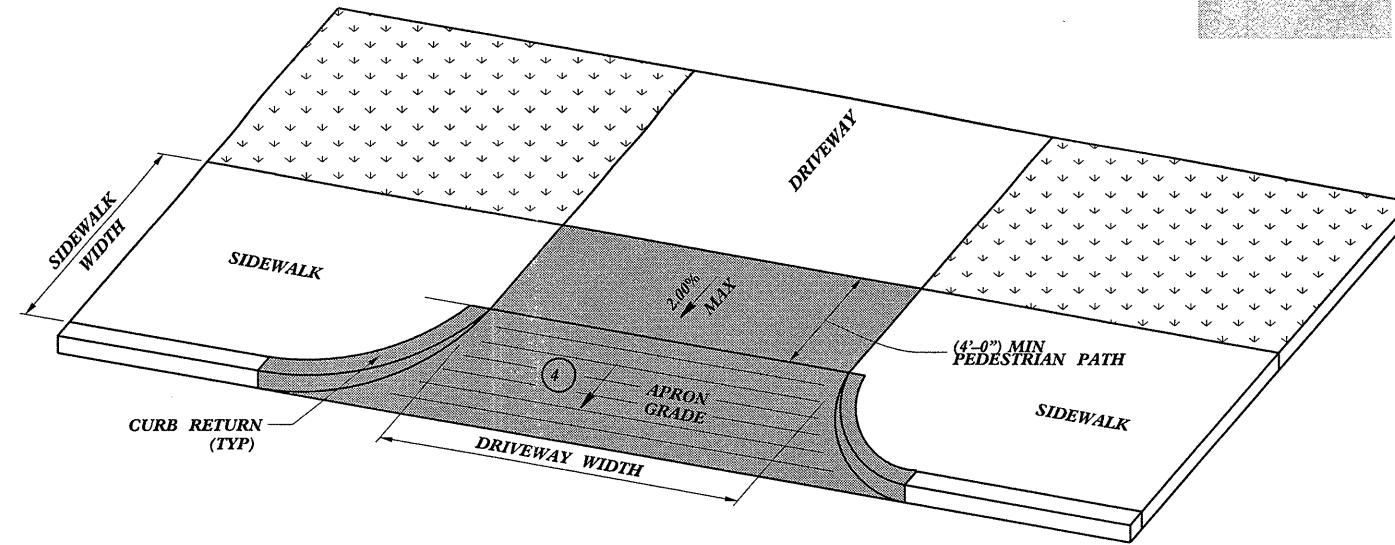
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950 FAX 919-250-4119	
CURB RAMPS	
Parallel Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dgn	

5/14/99

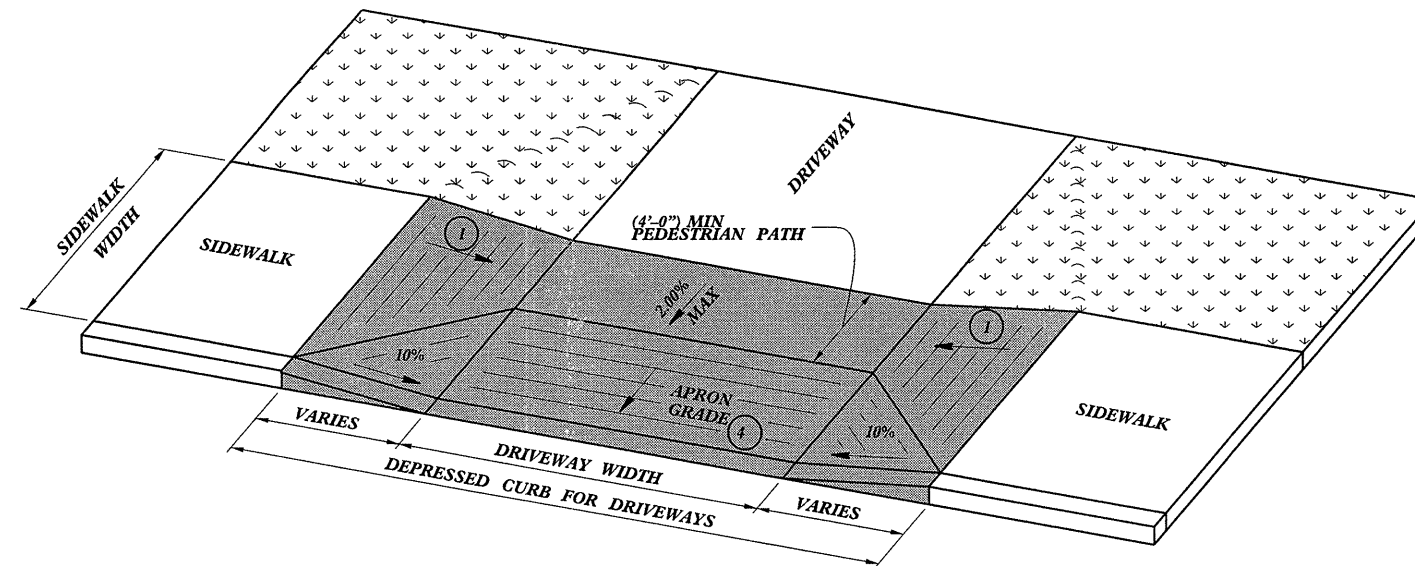
PROJECT REFERENCE NO.	SHEET NO.
13CR.10811.12, ETC	14

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

PAY LIMITS FOR 1 CURB RAMP



DRIVEWAY APRON
OPTION 1



DRIVEWAY APRON
OPTION 2

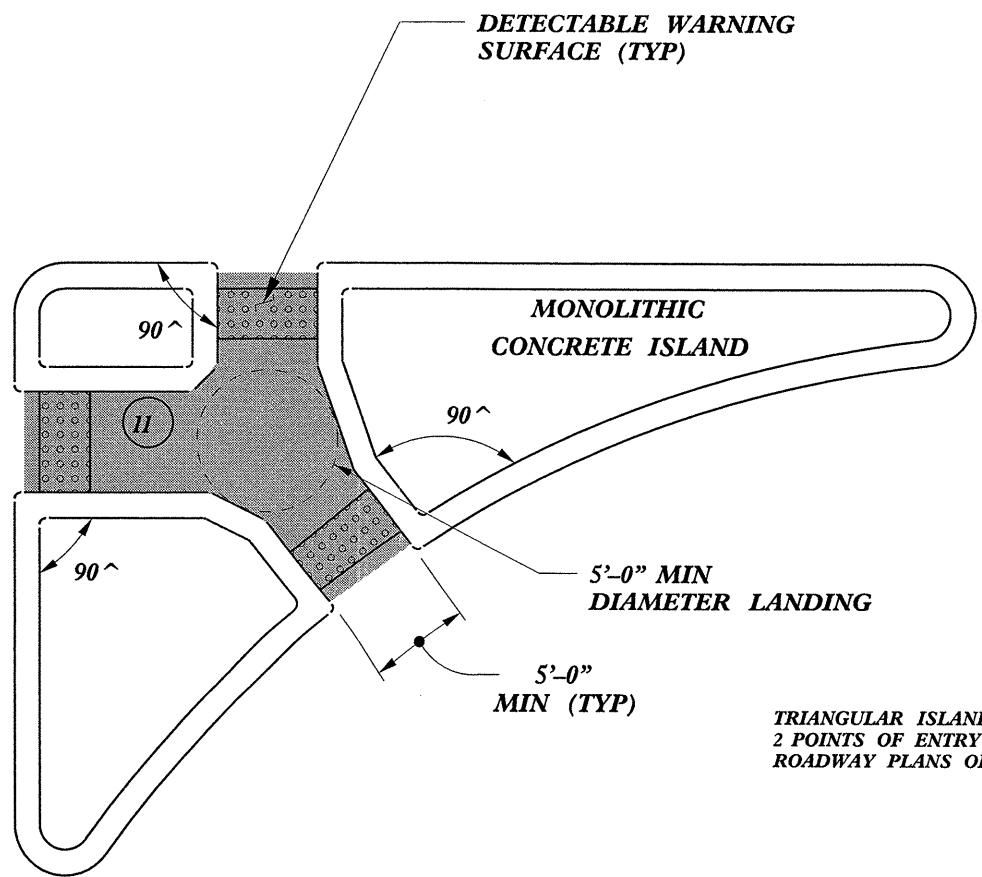
-SEE ROADWAY DETAIL DRAWING 848.05 FOR DETECTABLE WARNING SURFACE AND FOR RAMP NOTES.

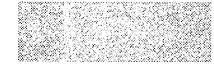
-SEE ROADWAY STANDARD DRAWING 848.02 FOR CONCRETE DRIVEWAYS.

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

SYSTEMS...
USER: JSH

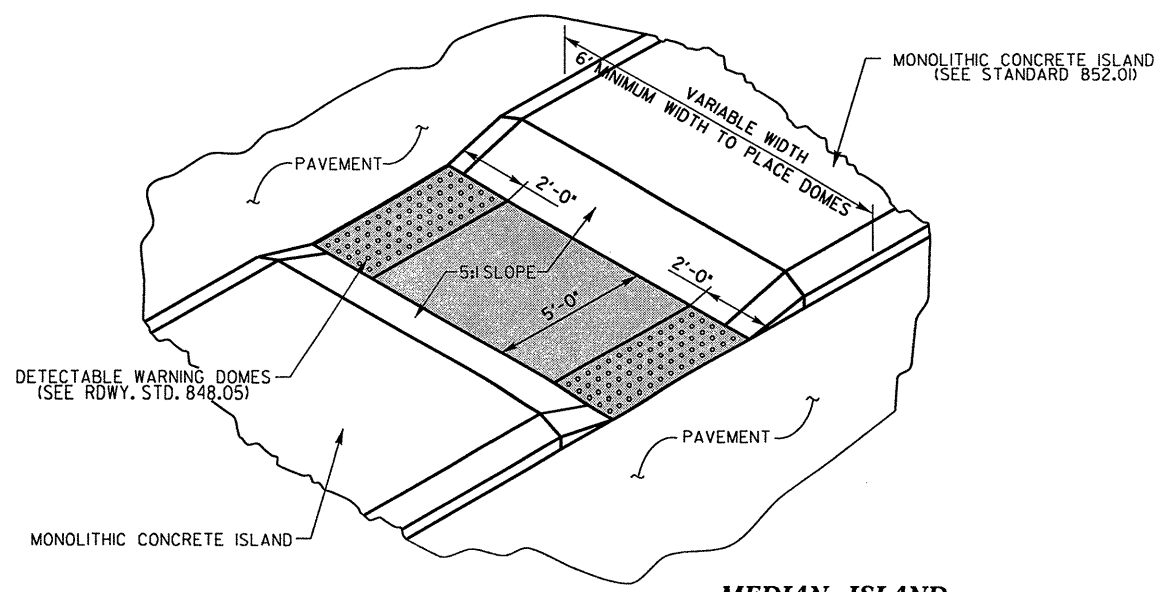
5/14/99



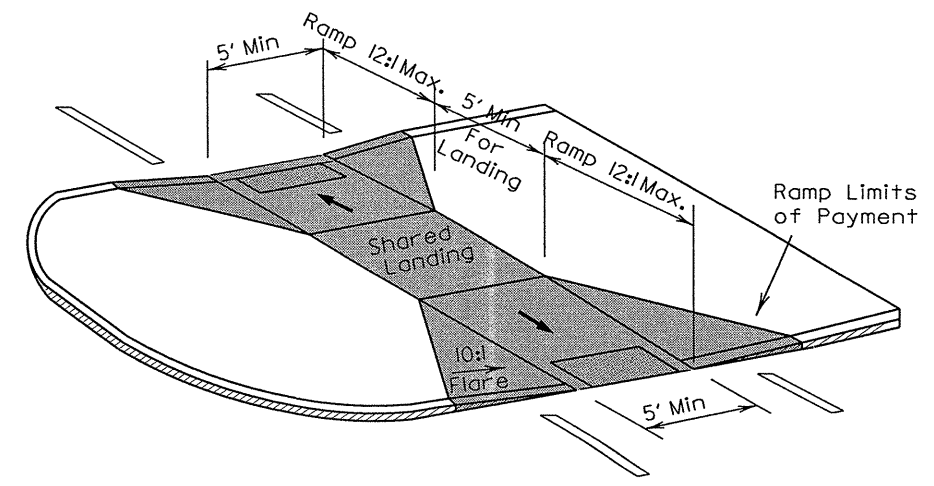
 PAY LIMITS FOR 1 CURB RAMP

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



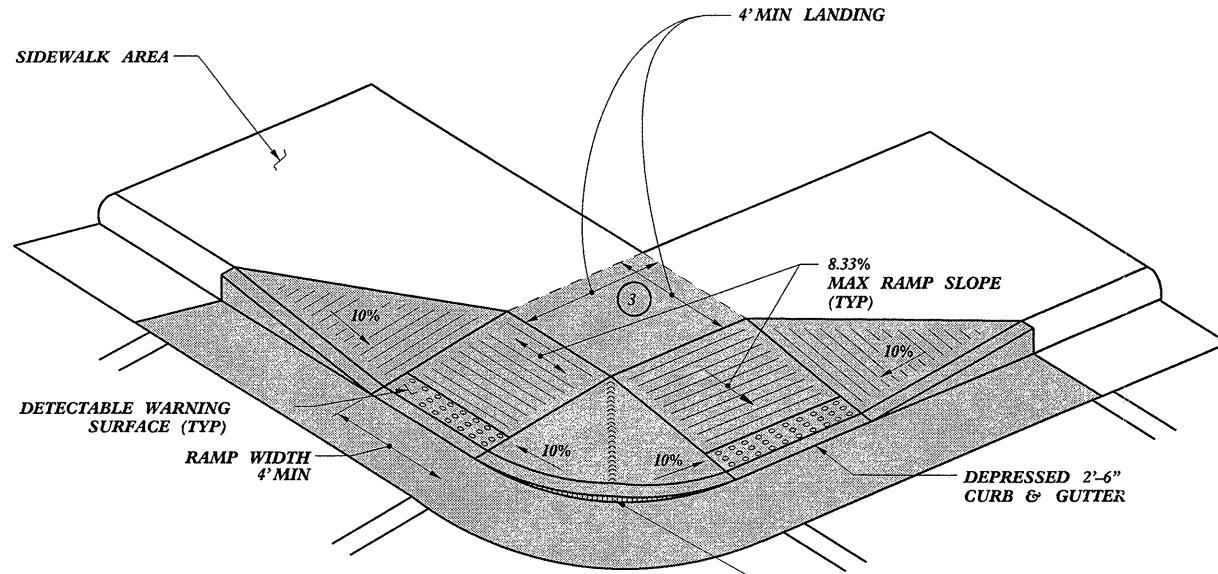
MEDIAN ISLAND WITH CUT THROUGH



MEDIAN ISLAND CURB RAMPS

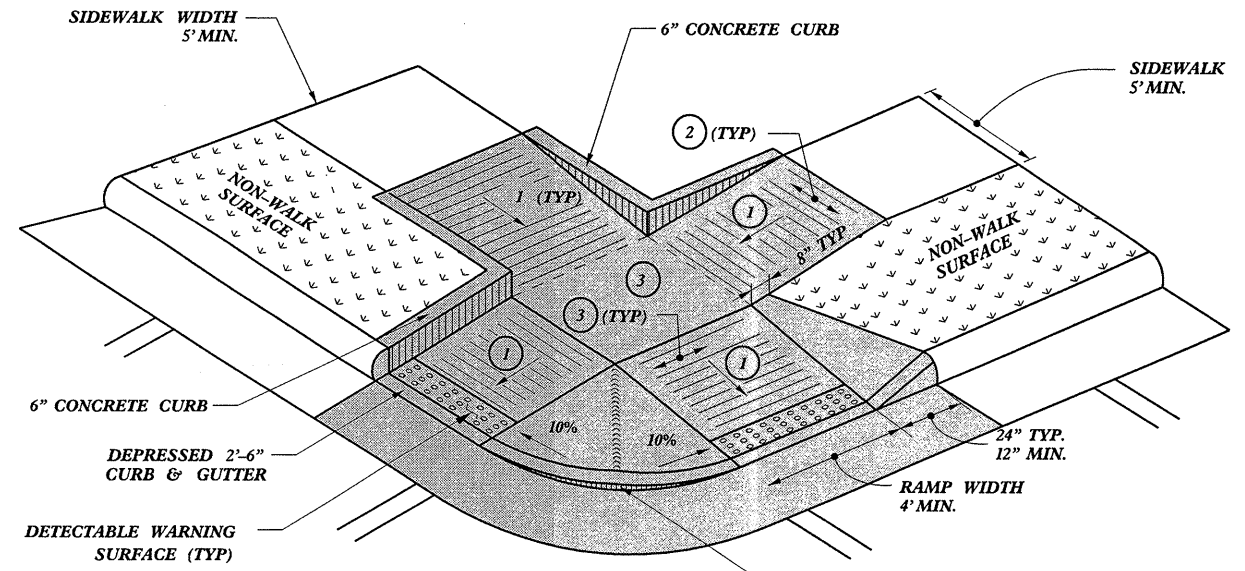
 SYSTEMS

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.dwg	

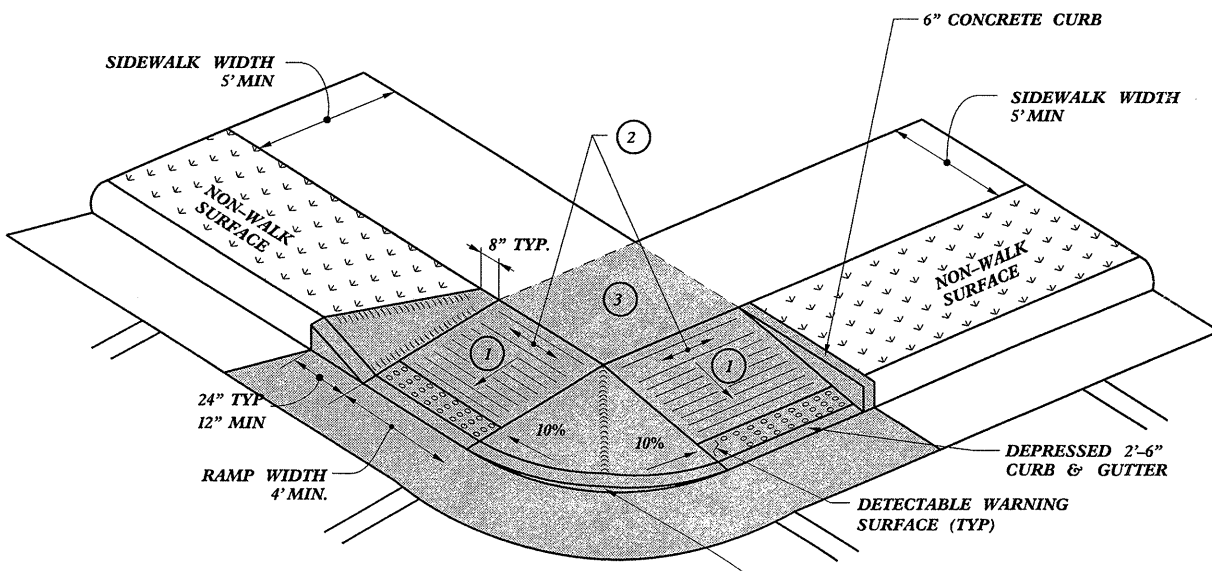


TYPE 4

PAY LIMITS FOR CURB RAMP



TYPE 5



TYPE 4A

- 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

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	

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PROJECT NO.	SHEET NO.	TOTAL NO.
13CR.10811.12, 13CR.20811.12	17	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	INCIDENTAL STONE BASE TON	SHOULDER RECONSTRUCTION SMI	MILLING ASPHALT PAVEMENT, 1-1/2" DEPTH SY	MILLING ASPHALT PAVEMENT, 0" TO 1 1/2" DEPTH SY	ASPHALT CONC BASE COURSE, TYPE B25.0B TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A TON	ASPHALT BINDER FOR PLANT MIX TON	PATCHING EXISTING PAVEMENT TON	CONCRETE CURB RAMP (std. 848.05/etc) EA	ADJUSTMENT OF MANHOLES EA	ADJUSTMENT OF METER BOXES OR VALVE BOXES EA	PORTABLE LIGHTING LS
13CR.10811.12	Rutherford	1	US 221	END C&G TO BEG C&G (MP 15.23 - MP 16.55)	1	NO	NO	1.32	28 - 65			28,107			2,548		153	200	51	19	22	*
13CR.10811.12	Rutherford	2	NC 108	SR 1164 TO NEW PAVEMENT (MP 4.94 - MP 6.01)	2	NO	NO	1.07	22	54	2.14		644		1,283		77	150		1		
13CR.10811.12	Rutherford	3	NC 108	NEW PAVEMENT TO US 221 (MP 6.48 - MP 6.57)	1	NO	NO	0.09	42			2,618			206		12	50				*
13CR.10811.12	Rutherford	4	NC 120	SR 1931 TO CLEVELAND CO. (MP 2.52 - MP 4.62)	3	NO	NO	2.1	20	105	4.20		1,890	1,053	2,291		184	550			2	
13CR.10811.12	Rutherford	5	US 64	FROM SR 1392 TO SR 1172 (MP 19.55 - MP 20.591)	2	NO	NO	1.04	22	52	2.08		1,225		1,247		75	200				
13CR.10811.12	Rutherford	6	NC 108	FROM SR 1154 TO SR 1164 (MP 3.47 - MP 4.94)	2	NO	NO	1.47	20	74	2.94		1,467		1,604		96	150				
TOTAL FOR PROJ NO. 13CR.10811.12								7.09		285	11.36	30,725	5,226	1,053	9,179		597	1,300	51	20	24	1
13CR.20811.12	Rutherford	7	SR 1520	FROM SR 1535 TO US 64 (MP 3.89 - MP 5.00)	4	NO	NO	1.11	22	56		83				1,308	88	775			2	
13CR.20811.12	Rutherford	8	SR 2215	FROM US 221 TO SR 2148 (MP 0.00 - MP 2.41)	4	NO	NO	2.41	18	121						2,326	156	1,150				
13CR.20811.12	Rutherford	9	SR 2187	FROM US 74 BUS TO SR 2188 (MP 0.00 - MP 0.59)	5	NO	NO	0.59	21	30			467		676		41	800		2	1	
13CR.20811.12	Rutherford	10	SR 2183	FROM SR 2182 TO US 74 BUS (MP 0.00 - MP 0.26)	4,7	NO	NO	0.26	18	13			100			251	17	180		3	4	
13CR.20811.12	Rutherford	11	SR 2184	FROM US 74 BUS TO US 74 A (MP 0.00 - MP 1.10)	4,7	NO	YES	1.1	23 - 36	55			350			1,416	95	550		1	7	
13CR.20811.12	Rutherford	12	SR 2213	FROM US 74A TO SR 2169 (MP 1.41 - MP 3.73)	4	NO	NO	2.32	20	116			199			2,599	174	1,075		8		
13CR.20811.12	Rutherford	13	SR 1116	FROM THE PVT CHANGE TO US 221 (MP 2.54 - MP 4.22)	4	NO	NO	1.68	20	84			602			1,800	121	975				
13CR.20811.12	Rutherford	14	SR 2179	FROM SR 2241 TO SR 2198 (MP 1.26 - MP 2.41)	4,7	NO	NO	1.15	20 - 36	57			750			1,336	90	425				
13CR.20811.12	Rutherford	15	SR 2198	FROM SR 2179 TO SR 2214 (MP 0.00 - MP 0.73)	4	NO	YES	0.73	18	37						704	47	125				
13CR.20811.12	Rutherford	16	SR 2222	FROM SR 2159 TO E.O.M. (MP 0.00 - MP 0.21)	6	NO	NO	0.21	18							135	9	160				
13CR.20811.12	Rutherford	17	SR 2195	FROM SR 2169 TO DE (MP 0.00 - MP 0.40)	6	NO	NO	0.4	20							285	19	160				
13CR.20811.12	Rutherford	18	SR 2238	FROM BEG 18' PAVEMENT TO DE (MP 0.08 - MP 0.21)	6	NO	NO	0.13	18							83	6	80				
13CR.20811.12	Rutherford	19	SR 2312	FROM SR 2171 TO E.O. M. (MP 0.00 - MP 0.12)	6	NO	NO	0.12	18							77	5	15				
13CR.20811.12	Rutherford	20	SR 2288	FROM SR 2236 TO SR 2289 (MP 0.00 - MP 0.08)	6	NO	NO	0.08	18							51	3	15				
13CR.20811.12	Rutherford	21	SR 2216	FROM SR 2210 TO SR 2210 (MP 0.00 - MP 0.39)	6	NO	NO	0.39	18							250	17	85				
13CR.20811.12	Rutherford	22	SR 2218	FROM SR 2216 TO SR 2219 (MP 0.00 - MP 0.08)	6	NO	NO	0.08	18							51	3	20				
13CR.20811.12	Rutherford	23	SR 2219	FROM SR 2218 TO SR 2210 (MP 0.00 - MP 0.16)	6	NO	NO	0.16	18							103	7	35				
13CR.20811.12	Rutherford	24	SR 2249	FROM SR 2159 TO E.O.M. (MP 0.00 MP 0.46)	6	NO	NO	0.46	20							328	22	85				
13CR.20811.12	Rutherford	25	SR 2235	FROM SR 2198 TO E.O.M. (MP 0.00 - MP 0.16)	6	NO	NO	0.16	18							103	7	15				
13CR.20811.12	Rutherford	26	SR 2244	FROM SR 2179 TO E.O.M. (MP 0.00 - MP 0.19)	6	NO	NO	0.19	18							122	8	30				
13CR.20811.12	Rutherford	27	SR 2178	FROM SR 2213 TO SR 2183 (MP 0.00 - MP 1.27)	4,7	NO	NO	1.27	20 - 36	64			1,500			1,361	91	400	6	18		
TOTAL FOR PROJ NO. 13CR.20811.12								15.00		633	11.36	884	3,167		676	14,689	1,026	7,155	6	32	14	
GRAND TOTAL								22.09		918	11.36	31,609	8,393	1,053	9,855	14,689	1,623	8,455	57	52	38	1

* Note: Portable Lighting is for night work on Maps 1 and 3

