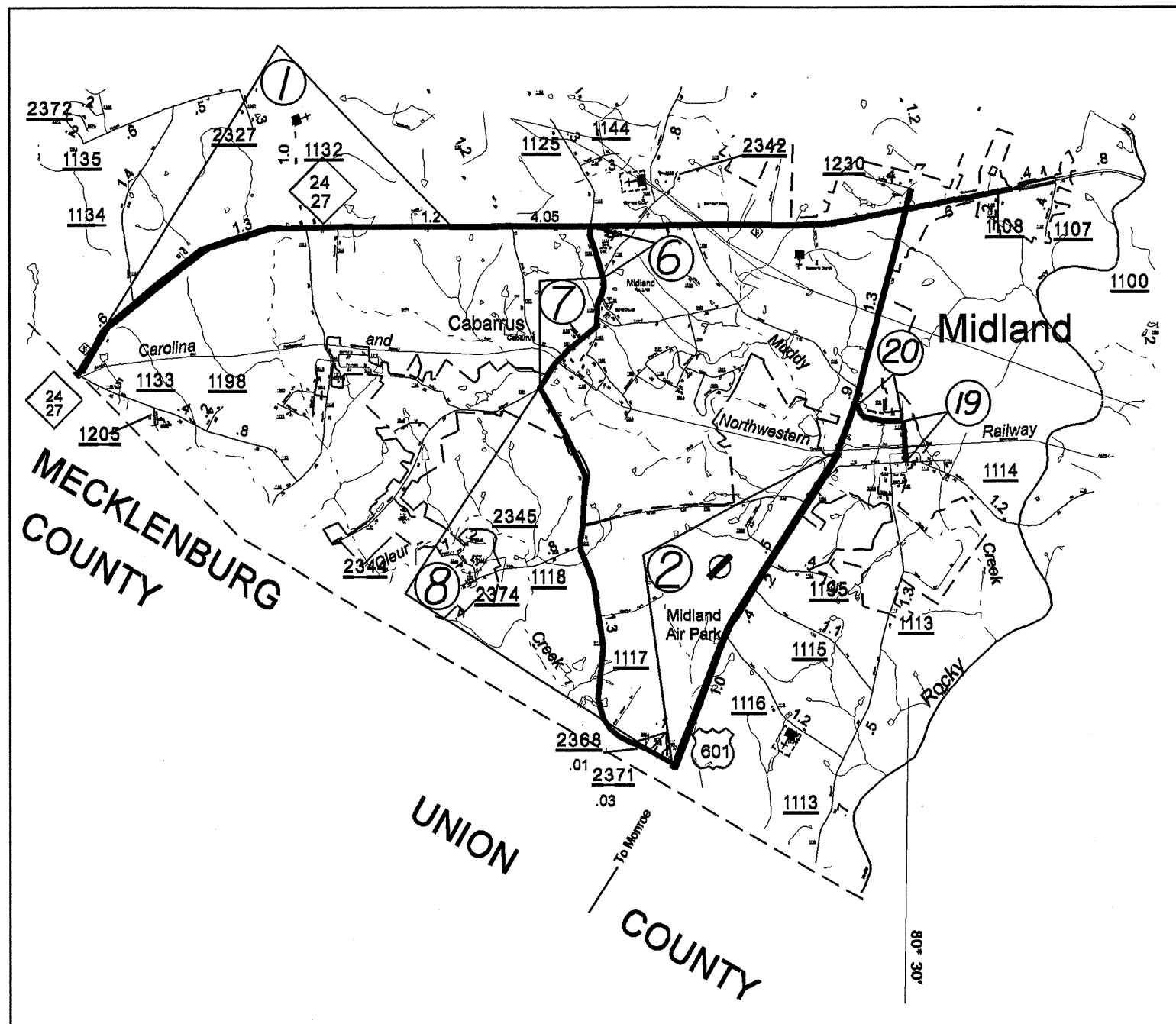


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	10CR.10131.17, etc.	1	
F.A. PROJECT NO.			



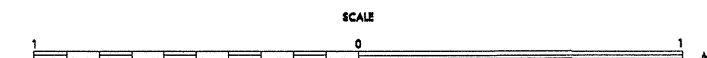
ENLARGED MUNICIPAL AND SUBURBAN AREAS

CABARRUS COUNTY

NORTH CAROLINA

PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - GIS UNIT

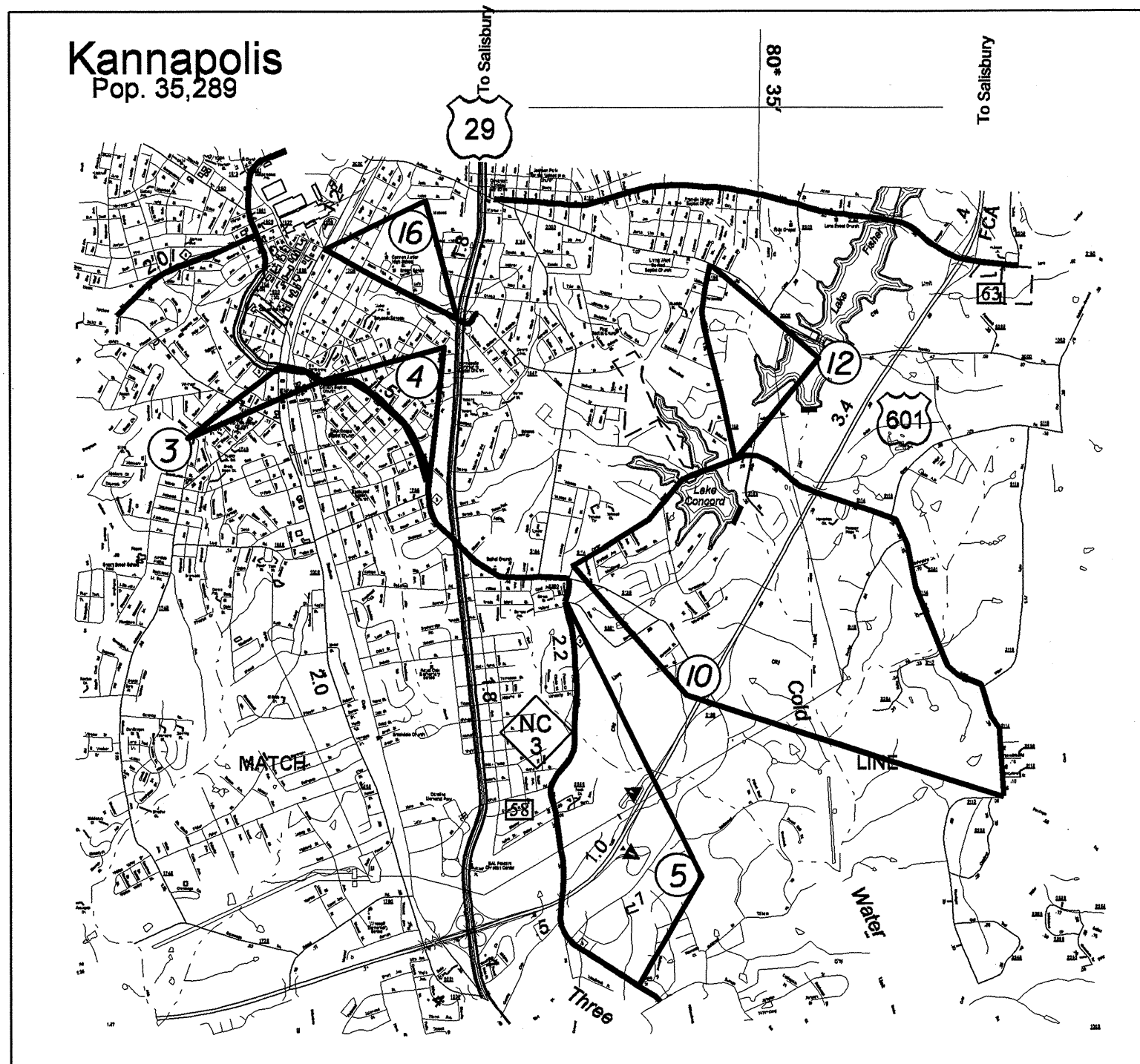
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION



MAP #	ROUTE	DESCRIPTION
1	NC 24/27	FROM END C&G SECTION TO MECKLENBURG COUNTY LINE
2	US 601	FROM UNION COUNTY LINE TO RAILROAD BRIDGE
3	NC 3	FROM SR 1008 (US28A) TO SPRING STREET
4	NC 3	FROM SPRING STREET TO PAVT. JOINT WEST OF US 29
5	NC 3	FROM BRADLEY STREET TO OLD EARNHARDT RD
6	SR 1125 (BETHEL CHURCH RD)	FROM NC 24/27 TO SR 1123 (JIM SOSSOMAN RD)
7	SR 1121/1123 (CABBARRUS STATION AVE)	FROM SR 1123 (JIM SOSSOMAN RD) TO SR 1117 (BETHEL AVE EXT)
8	SR 1117 (BETHEL AVE EXT)	FROM US 601 TO SR 1121 (CABBARRUS STATION RD)
9	SR 1310 (ROBERTA CHURCH RD)	FROM US 29 TO SR 1304 (ROBERTA RD)
10	SR 2114 (CENTERGROVE RD)	FROM NC 3 TO SR 2113 (PENNINGER RD)
11	SR 1171 (PLAZA RD)	FROM MECKLENBURG COUNTY LINE TO PAVT. JOINT SOUTH OF SR 1139 (ROCKY RIVER RD)
12	SR 2198 (MIDLAKE RD)	FROM SR 2114 (CENTERGROVE RD) TO SR 2000 (BRANTLEY RD)
13	SR 2622 (BARRIER STORE RD)	FROM SR 2817 (HAHN SCOTT RD) TO STANLEY COUNTY LINE
14	SR 1165 (ZION CHURCH RD)	FROM PAVT. JOINT SOUTH OF NC 49 TO SR 1163 (ZION CHURCH RD EAST)
15	SR 1306 (COCHRAN RD)	FROM SR 1304 (PIT SCHOOL RD) TO SR 1305 (ROBERTA RD)
16	SR 1706 (EAST FIRST ST)	FROM BRIDGE APPROACH OVER US 29 TO SR 1008 (US 29 A)
17	SR 1136 (LOWER ROCKY RIVER RD)	FROM SR 1139 (ROCKY RIVER RD) TO MECKLENBURG COUNTY LINE
18	SR 1156 (CENTRAL HEIGHTS DR)	FROM NC 49 TO SR 1163 (ZION CHURCH RD)
19	SR 1110 (BROADWAY AVE)	FROM SR 1108 (BARBERRY AVE) TO SR 1114 (GARMON MILL RD)
20	SR 1108 (BARBERRY AVE)	FROM US 601 TO SR 1110 (BROADWAY AVE)

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	IOCR.1013.17, etc.	2	
F.A. PROJECT NO.			

Kannapolis
Pop. 35,289



ENLARGED MUNICIPAL AND SUBURBAN AREAS

CABARRUS COUNTY

NORTH CAROLINA

PREPARED BY THE
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DIVISION OF HIGHWAYS - GIS UNIT

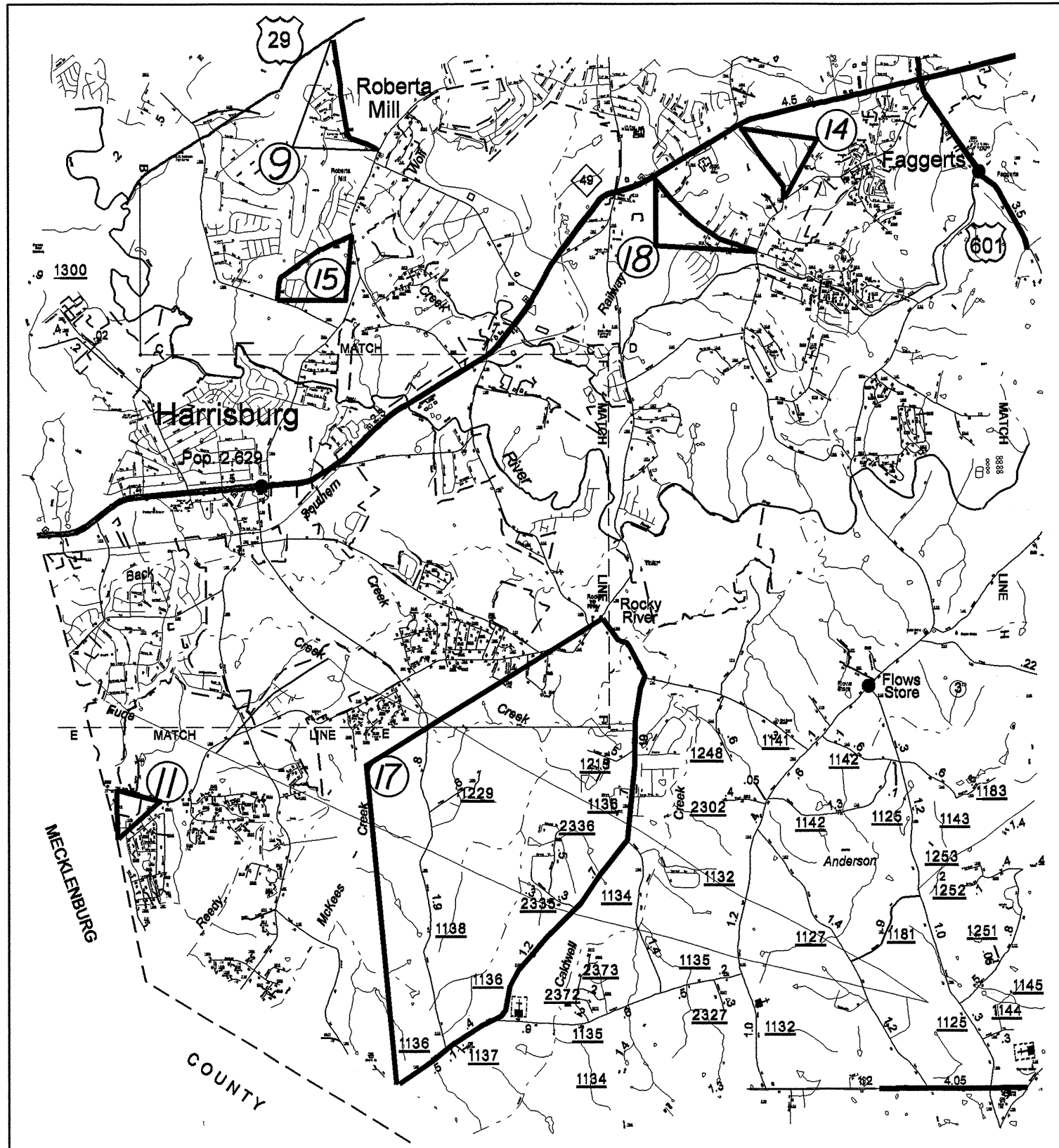
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE



MAP #	ROUTE	DESCRIPTION
1	NC 24/27	FROM END C&G SECTION TO MECKLENBURG COUNTY LINE
2	US 601	FROM UNION COUNTY LINE TO RAILROAD BRIDGE
3	NC 3	FROM SR 1008 (US29A) TO SPRING STREET
4	NC 3	FROM SPRING STREET TO PAVT. JOINT WEST OF US 29
5	NC 3	FROM BRADLEY STREET TO OLD EARNHARDT RD
6	SR 1126 (BETHEL CHURCH RD)	FROM NC 24/27 TO SR 1123 (JIM SOSSOMAN RD)
7	SR 1121/1123 (CABBARRUS STATION AVE)	FROM SR 1123 (JIM SOSSOMAN RD TO SR 1117 (BETHEL AVE EXT)
8	SR 1117 (BETHEL AVE EXT)	FROM US 601 TO SR 1121 (CABBARRUS STATION RD)
9	SR 1310 (ROBERTA CHURCH RD)	FROM US 29 TO SR 1304 (ROBERTA RD)
10	SR 2114 (CENTERGROVE RD)	FROM NC 3 TO SR 2113 (PENNINGER RD)
11	SR 1171 (PLAZA RD)	FROM MECKLENBURG COUNTY LINE TO PAVT. JOINT SOUTH OF SR 1139 (ROCKY RIVER RD)
12	SR 2198 (MIDLAKE RD)	FROM SR 2114 (CENTERGROVE RD) TO SR 2000 (BRANTLEY RD)
13	SR 2622 (BARRIER STORE RD)	FROM SR 2617 (HAHN SCOTT RD) TO STANLEY COUNTY LINE
14	SR 1155 (ZION CHURCH RD)	FROM PAVT. JOINT SOUTH OF NC 49 TO SR 1153 (ZION CHURCH RD EAST)
15	SR 1306 (COCHRAN RD)	FROM SR 1304 (PIT SCHOOL RD) TO SR 1305 (ROBERTA RD)
16	SR 1708 (EAST FIRST ST)	FROM BRIDGE APPROACH OVER US 29 TO SR 1008 (US 29 A)
17	SR 1138 (LOWER ROCKY RIVER RD)	FROM SR 1139 (ROCKY RIVER RD) TO MECKLENBURG COUNTY LINE
18	SR 1156 (CENTRAL HEIGHTS DR)	FROM NC 49 TO SR 1153 (ZION CHURCH RD)
19	SR 1110 (BROADWAY AVE)	FROM SR 1109 (BARBERRY AVE) TO SR 1114 (GARMON MILL RD)
20	SR 1109 (BARBERRY AVE)	FROM US 601 TO SR 1110 (BROADWAY AVE)

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	10CR.10131.17, etc.	3	
F.A. PROJECT NO.			



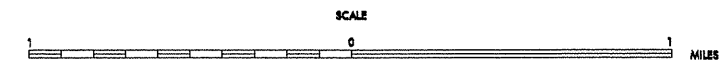
ENLARGED MUNICIPAL AND SUBURBAN AREAS

CABARRUS COUNTY

NORTH CAROLINA

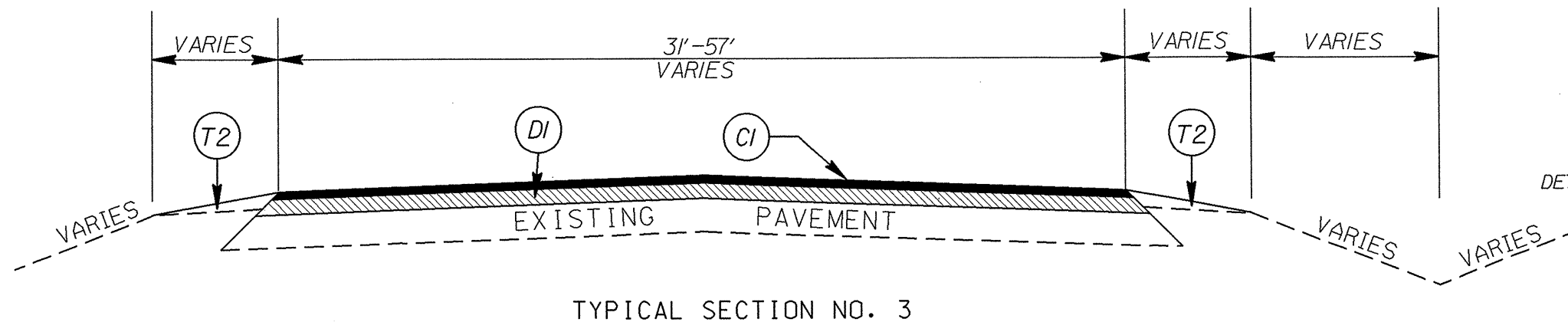
PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - GIS UNIT

IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

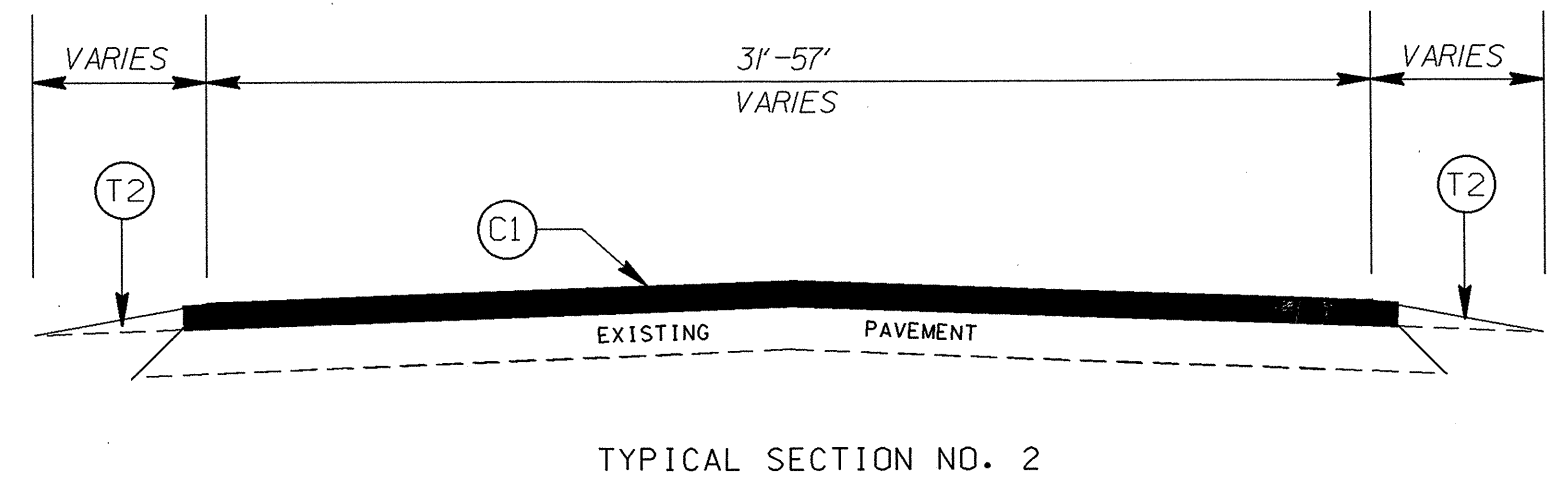
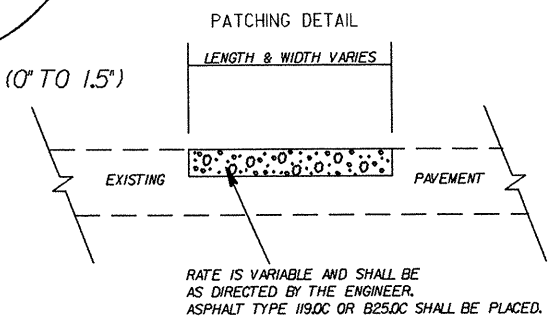


MAP #	ROUTE	DESCRIPTION
1	NC 24/27	FROM END C&G SECTION TO MECKLENBURG COUNTY LINE
2	US 601	FROM UNION COUNTY LINE TO RAILROAD BRIDGE
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12	SR 2198 (MIDLAKE RD)	FROM SR 2114 (CENTERGROVE RD) TO SR 2000 (BRANTLEY RD)
13	SR 2622 (BARRIER STORE RD)	FROM SR 2617 (HAHN SCOTT RD) TO STANLEY COUNTY LINE
14	SR 1155 (ZION CHURCH RD)	FROM PAVT. JOINT SOUTH OF NC 49 TO SR 1153 (ZION CHURCH RD EAST)
15	SR 1306 (COCHRAN RD)	FROM SR 1304 (PIT SCHOOL RD) TO SR 1305 (ROBERTA RD)
16	SR 1708 (EAST FIRST ST)	FROM BRIDGE APPROACH OVER US 29 TO SR 1008 (US 29 A)
17	SR 1138 (LOWER ROCKY RIVER RD)	FROM SR 1139 (ROCKY RIVER RD) TO MECKLENBURG COUNTY LINE
18	SR 1156 (CENTRAL HEIGHTS DR)	FROM NC 49 TO SR 1153 (ZION CHURCH RD)
19	SR 1110 (BROADWAY AVE)	FROM SR 1109 (BARBERRY AVE) TO SR 1114 (GARMON MILL RD)
20	SR 1108 (BARBERRY AVE)	FROM US 601 TO SR 1110 (BROADWAY AVE)

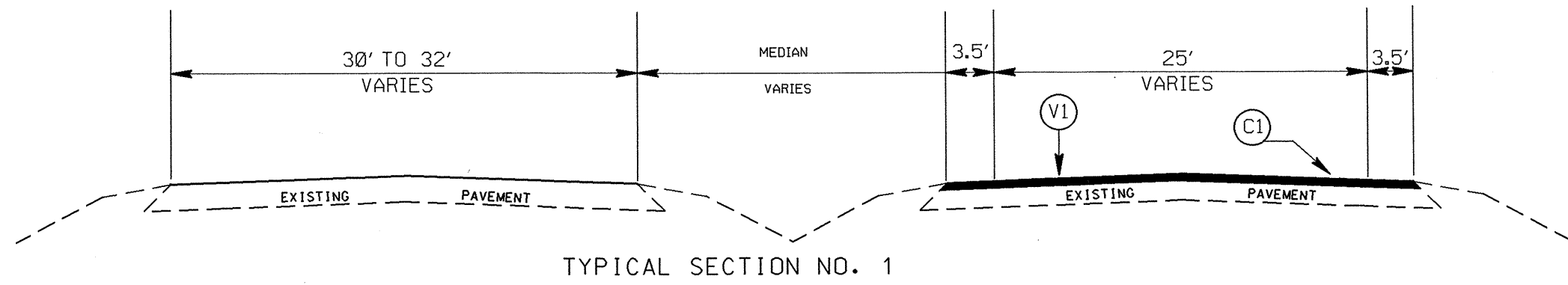
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	10CR.10131.17 etc.	5	
F.A. PROJECT NO.			



DETAIL FOR PROFILE MILLING (0' TO 1.5')



TYPICAL SECTION NO. 2



TYPICAL SECTION NO. 1

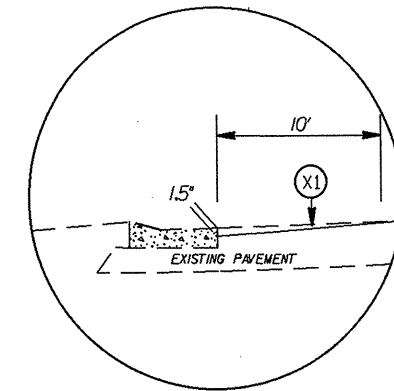
NOTE: WESTBOUND TRAVEL LANES TO BE MILLED AND FILLED ONLY ON THIS RESURFACING MAP

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
T1	SHOULDER CONSTRUCTION
T2	SHOULDER RECONSTRUCTION
V1	MILLING BITUMINOUS PAVEMENT 1.5" DEPTH.
V2	MILLING BITUMINOUS PAVEMENT 4.0" DEPTH.
X1	PROFILE MILLING BITUMINOUS PAVEMENT. 0. TO 1.5" DEPTH.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE SURFACE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN ONE LAYER

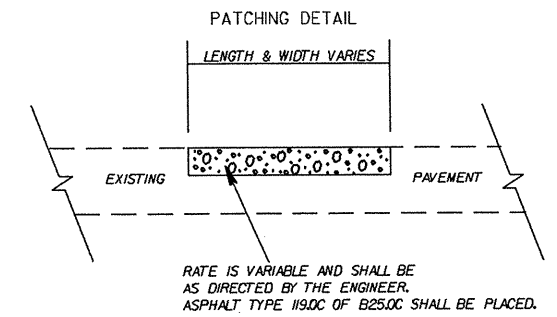
CABARRUS COUNTY
RESURFACING 2011

SCALE	-NA-		REVISIONS
DATE	2/11		
DWG. BY	JDA		
DESIGN BY	JDA		
APPROVED	MPM		

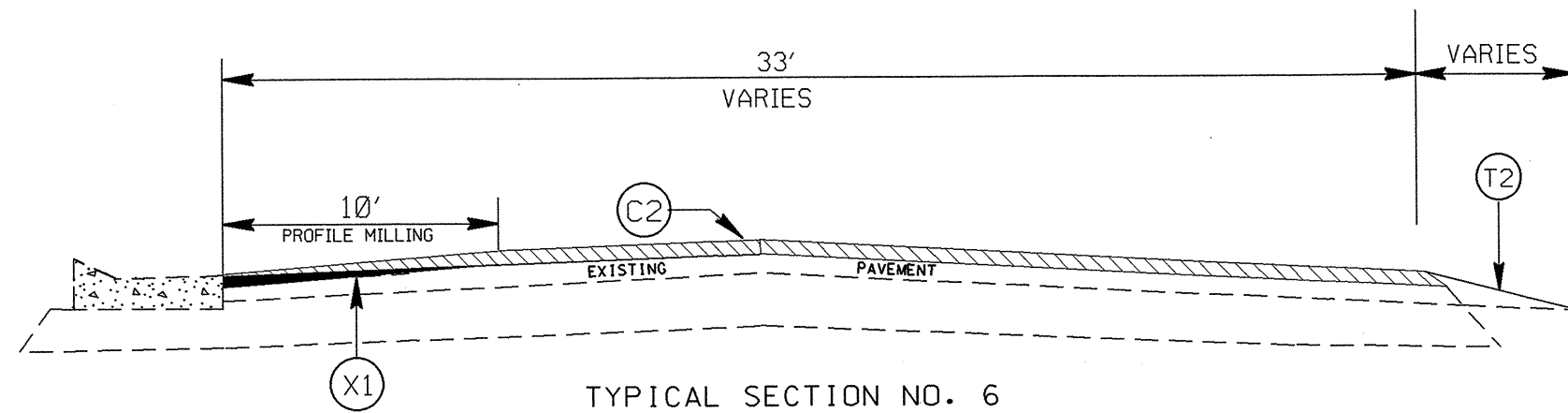
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	10CR.10131.17 ETC.	6	
F.A. PROJECT NO.			



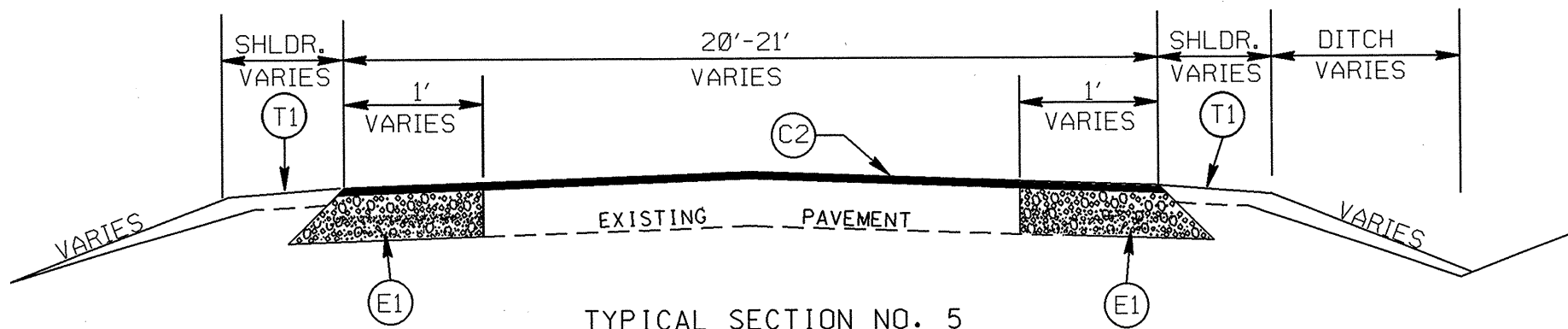
DETAIL FOR PROFILE MILLING (0" TO 1.5")



RATE IS VARIABLE AND SHALL BE AS DIRECTED BY THE ENGINEER. ASPHALT TYPE 119.0C OF B25.0C SHALL BE PLACED.

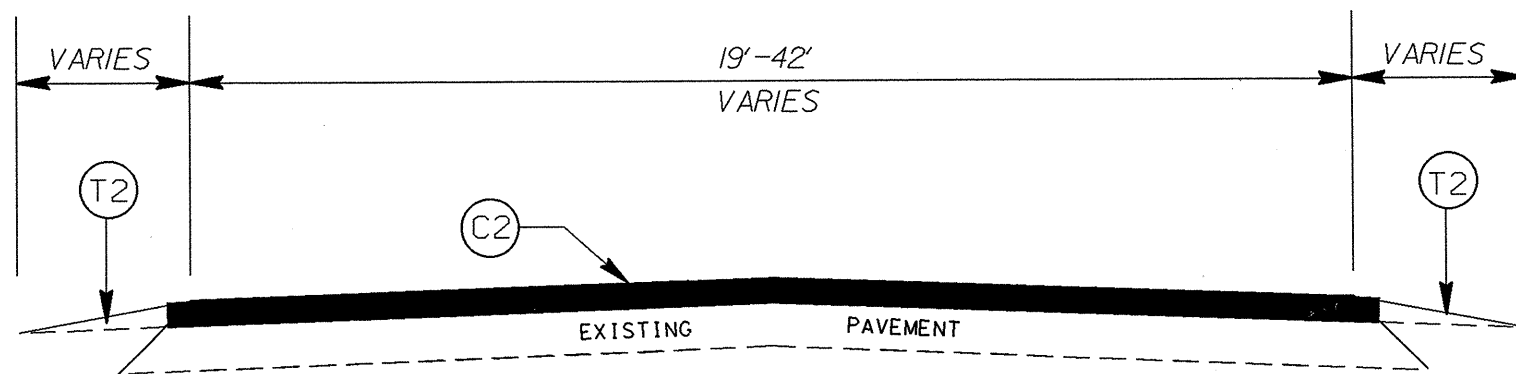


TYPICAL SECTION NO. 6



TYPICAL SECTION NO. 5

NOTE: WHEN WIDENING WITH THE MILLING MACHINE, MILL 6" OF THE EXISTING PAVEMENT EDGE TO ENSURE A SOLID EDGE TO TIE INTO BEFORE PLACING B25.0B BASE



TYPICAL SECTION NO. 4

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.8" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
T1	SHOULDER CONSTRUCTION
T2	SHOULDER RECONSTRUCTION
V1	MILLING BITUMINOUS PAVEMENT 1.5" DEPTH.
V2	MILLING BITUMINOUS PAVEMENT 4.0" DEPTH.
X1	PROFILE MILLING BITUMINOUS PAVEMENT. 0" TO 1.5" DEPTH.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE SURFACE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 466 LBS. PER SQ. YD. IN ONE LAYER

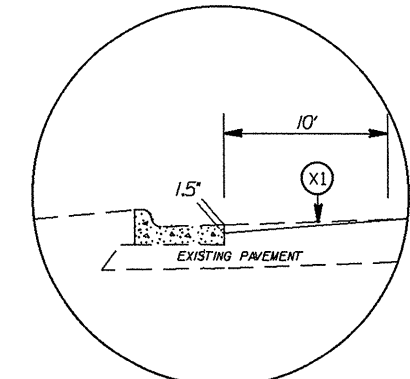
CABARRUS COUNTY
RESURFACING 2011

SCALE	-NA-
DATE	2/11
DWG. BY	JDA
DESIGN BY	JDA
APPROVED	NPM

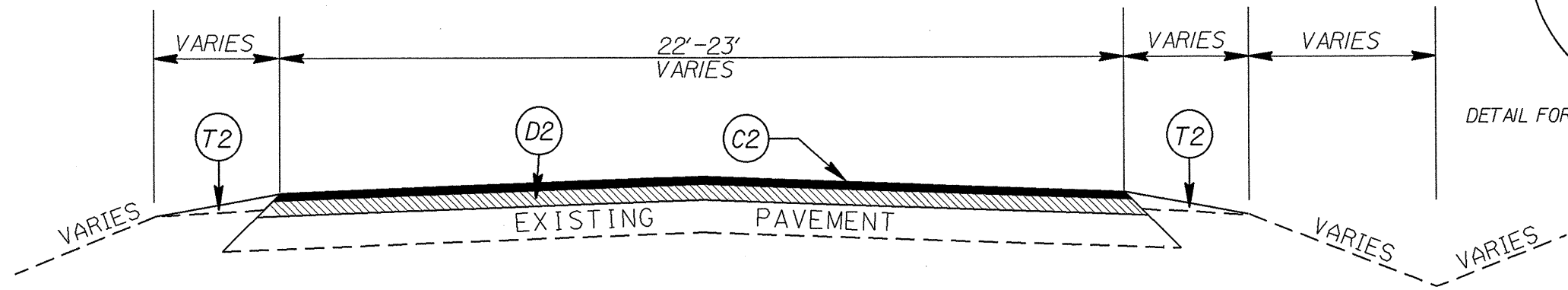
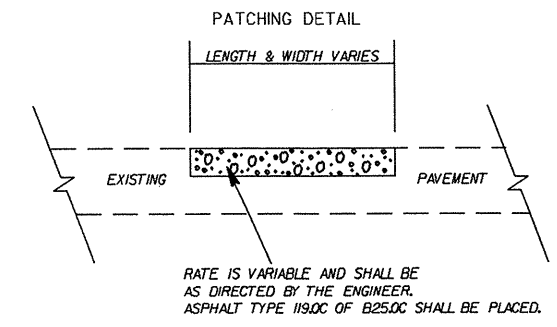


REVISIONS	

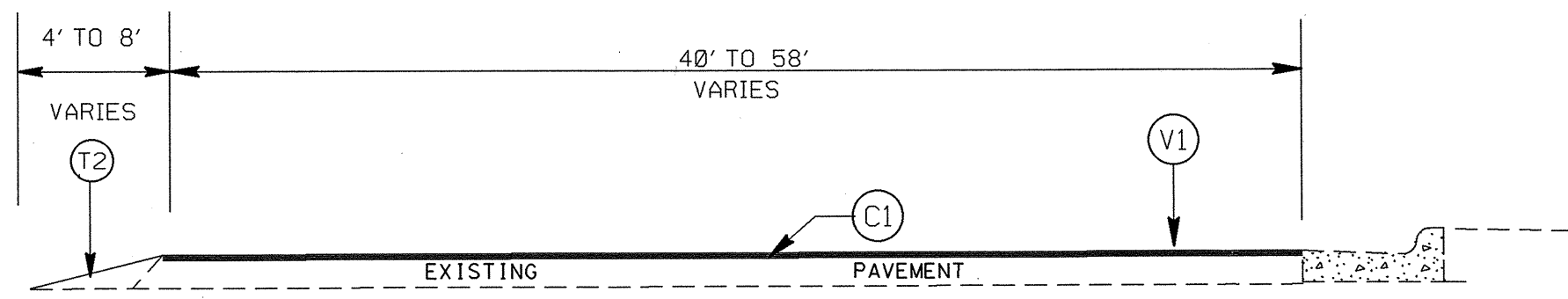
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	10CR.10131.17 etc.	7	
F.A. PROJECT NO.			



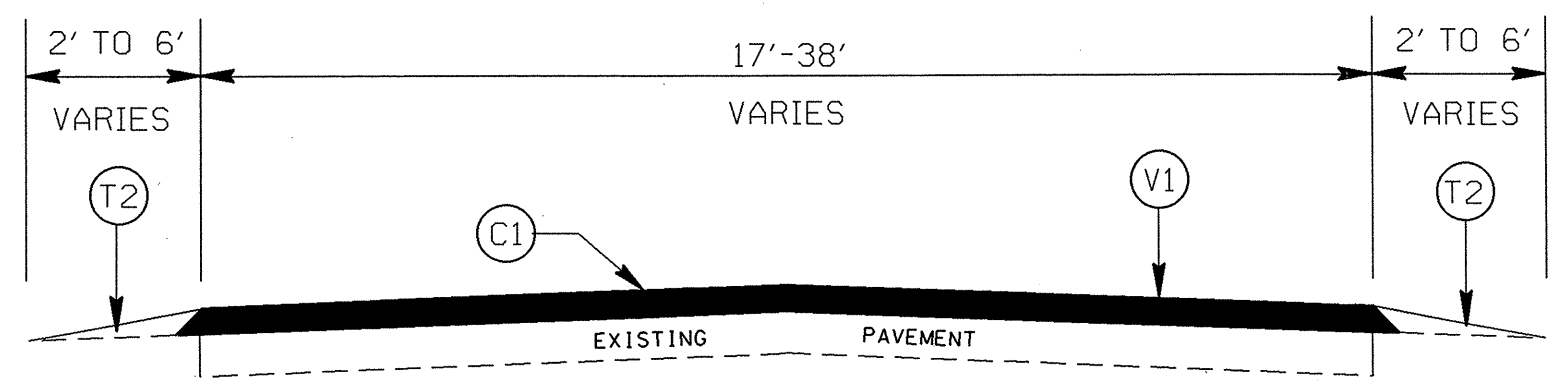
DETAIL FOR PROFILE MILLING (0" TO 1.5")



TYPICAL SECTION NO. 9



TYPICAL SECTION NO. 8



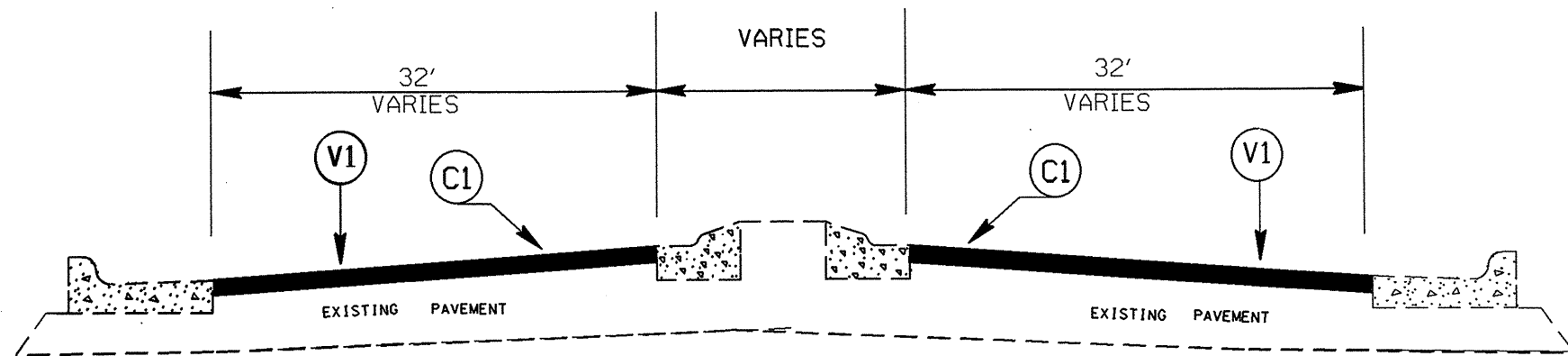
TYPICAL SECTION NO. 7

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 99.5C, AT AN AVERAGE RATE OF 166 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 99.5B, AT AN AVERAGE RATE OF 166 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
T1	SHOULDER CONSTRUCTION
T2	SHOULDER RECONSTRUCTION
V1	MILLING BITUMINOUS PAVEMENT 1.5" DEPTH.
V2	MILLING BITUMINOUS PAVEMENT 4.0" DEPTH.
X1	PROFILE MILLING BITUMINOUS PAVEMENT 0. TO 1.5" DEPTH.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE SURFACE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN ONE LAYER

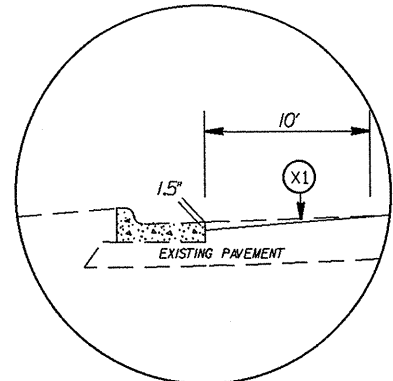
CABARRUS COUNTY
RESURFACING 2011

SCALE	-NA-		REVISIONS
DATE	2/11		
DWG. BY	JDA		
DESIGN BY	JDA		
APPROVED	MPM		

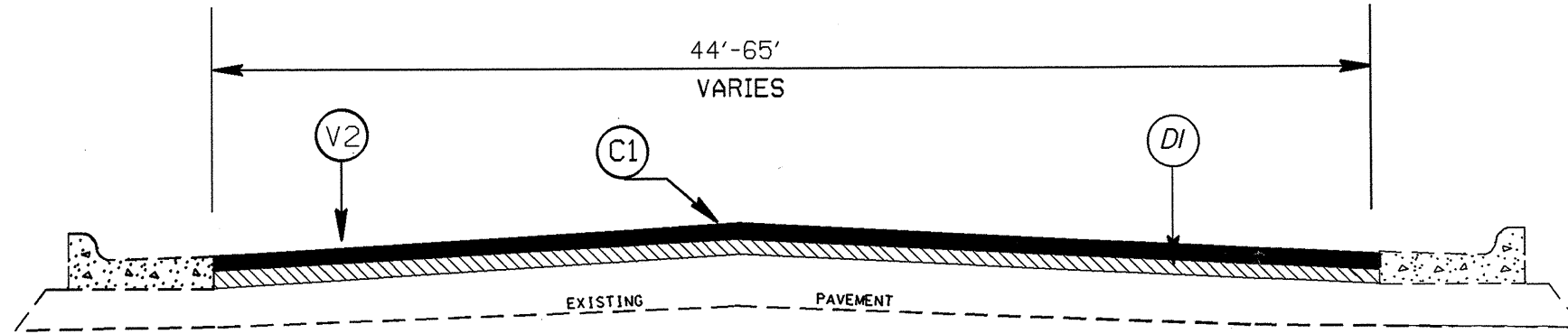
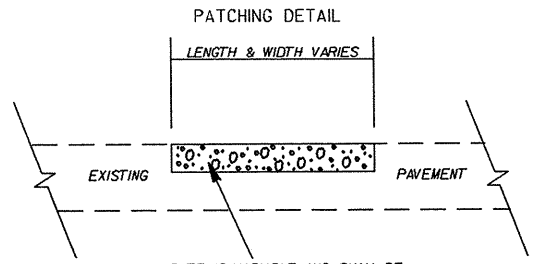
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	10CR.10131.17 etc.	8	
F.A. PROJECT NO.			



TYPICAL SECTION NO. 12

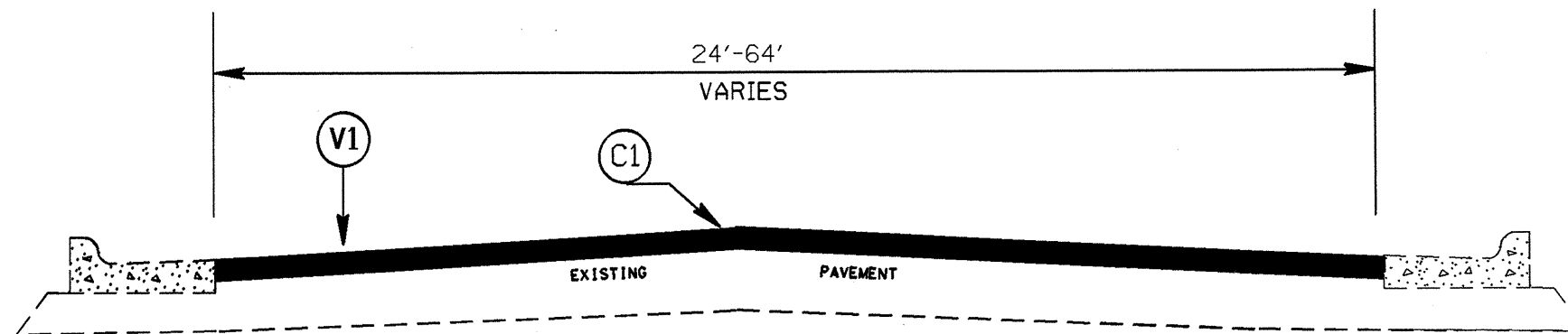


DETAIL FOR PROFILE MILLING (0" TO 1.5")



TYPICAL SECTION NO. 11

NOTE: 4.0" MILLING FROM 150' +/- WEST OF SPRING STREET TO WEST SIDE OF OLD CENTERGROVE STREET OR AS DIRECTED BY THE ENGINEER



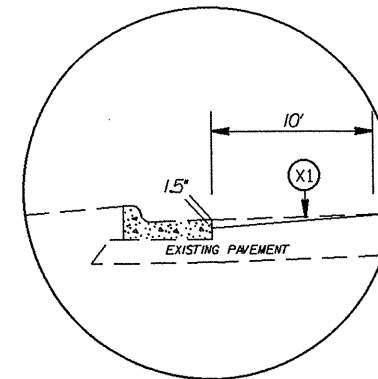
TYPICAL SECTION NO. 10

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
T1	SHOULDER CONSTRUCTION
T2	SHOULDER RECONSTRUCTION
V1	MILLING BITUMINOUS PAVEMENT 1.5" DEPTH.
V2	MILLING BITUMINOUS PAVEMENT 4.0" DEPTH.
X1	PROFILE MILLING BITUMINOUS PAVEMENT. 0. TO 1.5" DEPTH.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE SURFACE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 458 LBS. PER SQ. YD. IN ONE LAYER

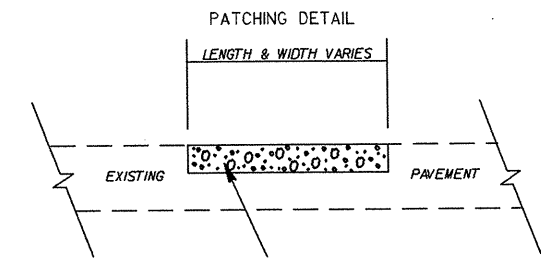
CABARRUS COUNTY
RESURFACING 2011

SCALE	-NA-		REVISIONS
DATE	2/11		
DWG. BY	JDA		
DESIGN BY	JDA		
APPROVED	MPM		

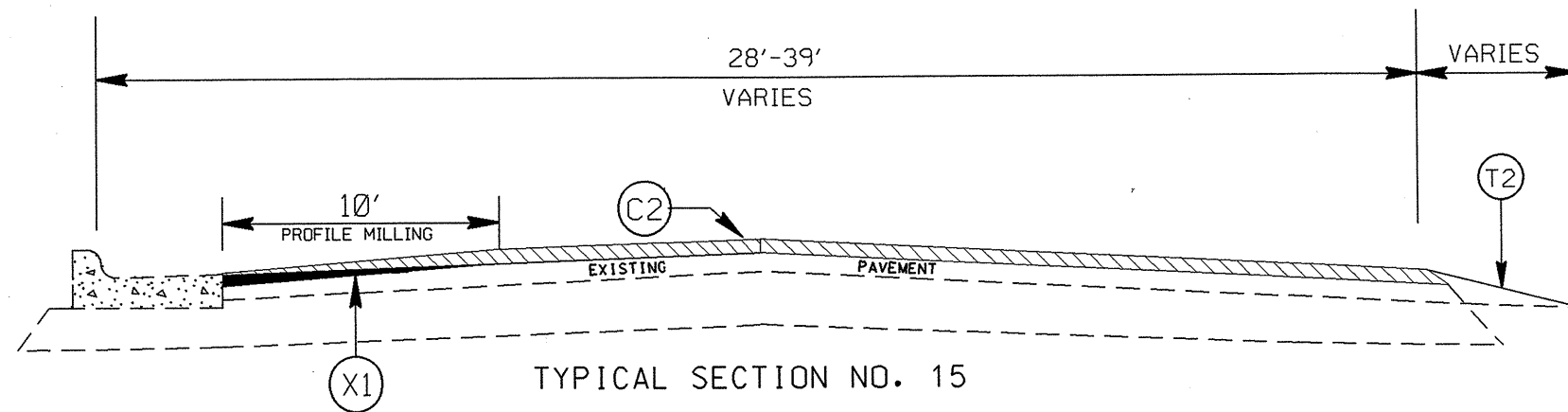
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	10CR.10131.17 et.c.	9	
F.A. PROJECT NO.			



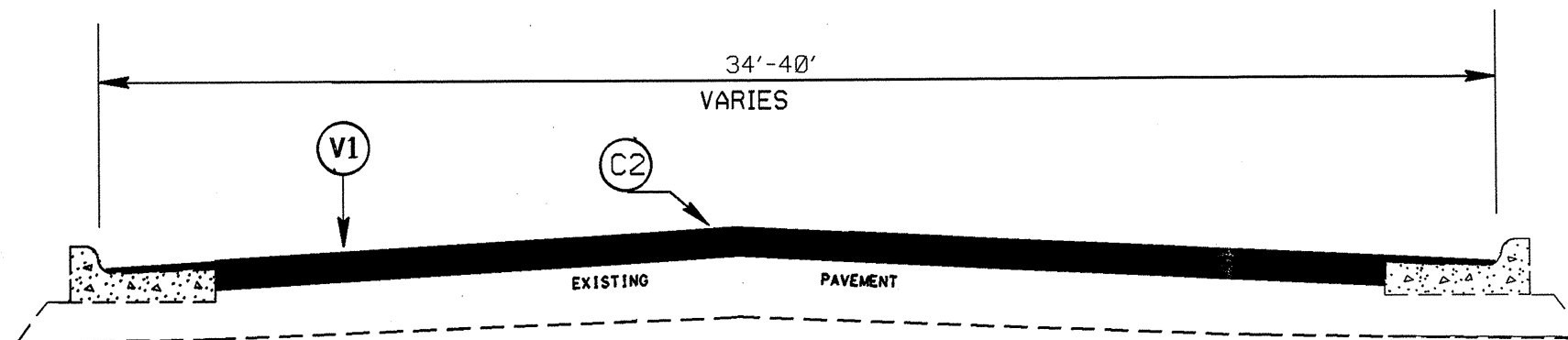
DETAIL FOR PROFILE MILLING (0" TO 1.5")



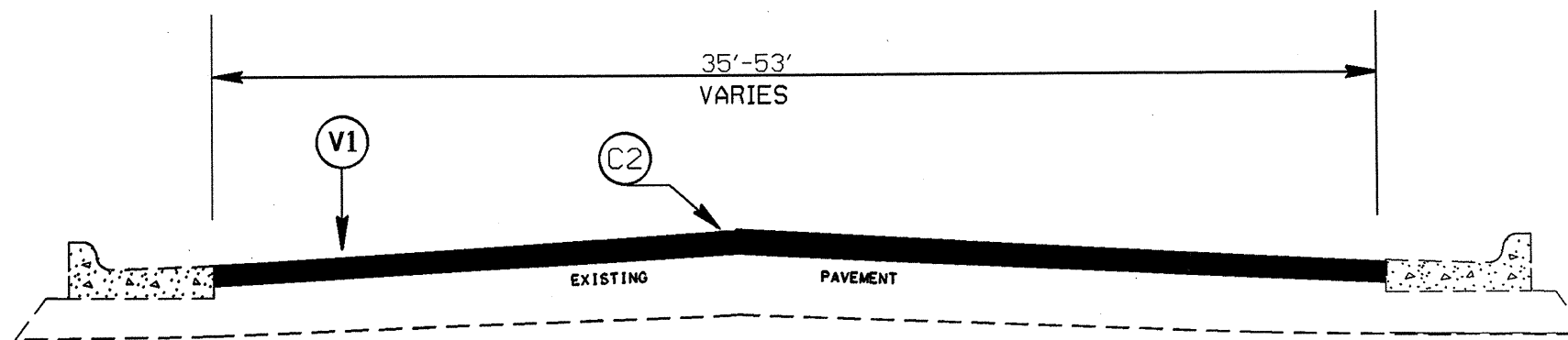
RATE IS VARIABLE AND SHALL BE AS DIRECTED BY THE ENGINEER. ASPHALT TYPE 119.0C OR B25.0C SHALL BE PLACED.



TYPICAL SECTION NO. 15



TYPICAL SECTION NO. 14



TYPICAL SECTION NO. 13

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.6C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
T1	SHOULDER CONSTRUCTION
T2	SHOULDER RECONSTRUCTION
V1	MILLING BITUMINOUS PAVEMENT 1.5" DEPTH.
V2	MILLING BITUMINOUS PAVEMENT 4.0" DEPTH.
X1	PROFILE MILLING BITUMINOUS PAVEMENT. 0" TO 1.5" DEPTH.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE SURFACE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 466 LBS. PER SQ. YD. IN ONE LAYER

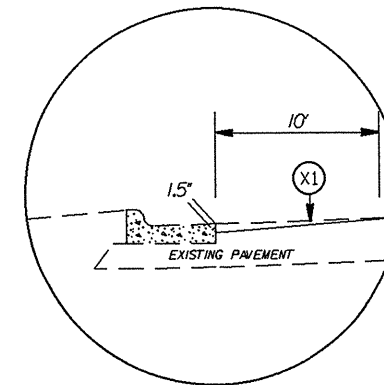
CABARRUS COUNTY
RESURFACING 2011

SCALE	-NA-
DATE	2/11
DWG. BY	JDA
DESIGN BY	JDA
APPROVED	MFM

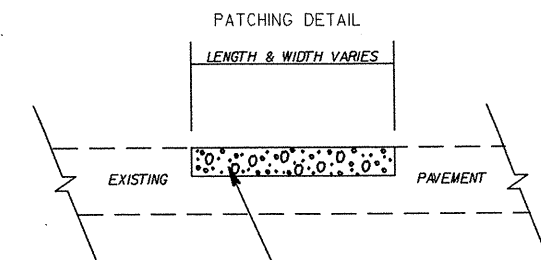


REVISIONS	

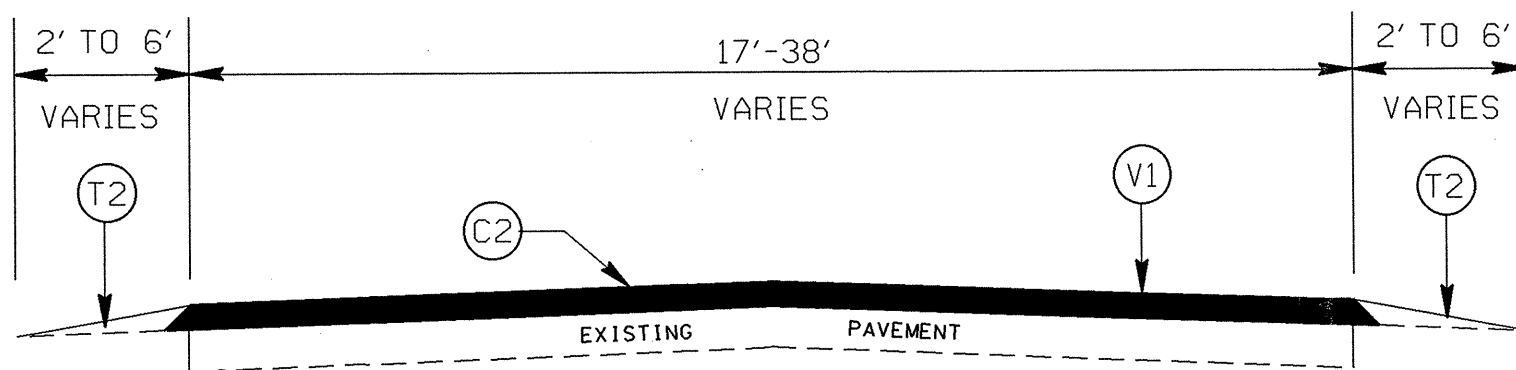
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	10CR.10131.17 etc.	10	
F.A. PROJECT NO.			



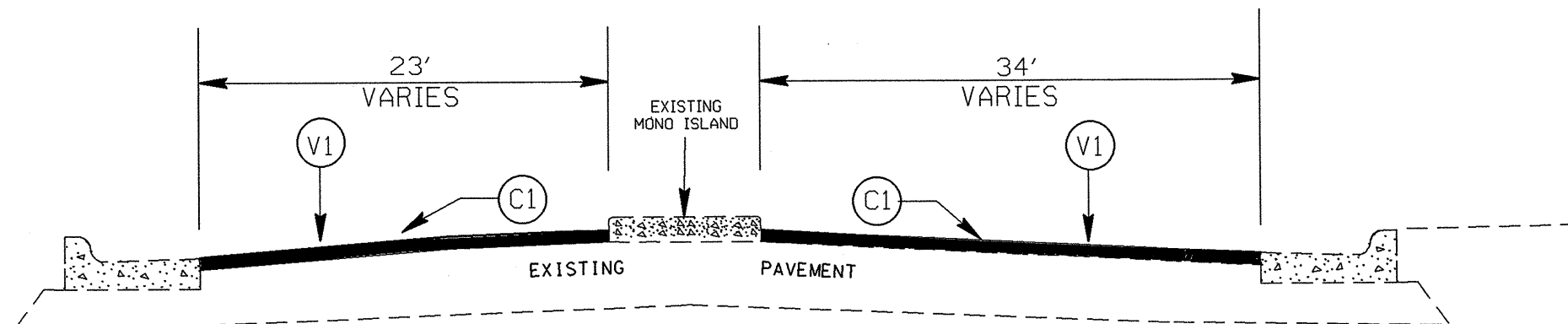
DETAIL FOR PROFILE MILLING (0" TO 1.5")



RATE IS VARIABLE AND SHALL BE AS DIRECTED BY THE ENGINEER. ASPHALT TYPE 119.0C OR B25.0C SHALL BE PLACED.



TYPICAL SECTION NO. 17



TYPICAL SECTION NO. 16

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.8" ASPHALT CONCRETE SURFACE COURSE, TYPE 99.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 99.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 286 LBS. PER SQ. YD.
T1	SHOULDER CONSTRUCTION
T2	SHOULDER RECONSTRUCTION
V1	MILLING BITUMINOUS PAVEMENT 1.5" DEPTH.
V2	MILLING BITUMINOUS PAVEMENT 4.0" DEPTH.
X1	PROFILE MILLING BITUMINOUS PAVEMENT. 0. TO 1.5" DEPTH.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE SURFACE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 458 LBS. PER SQ. YD. IN ONE LAYER

CABARRUS COUNTY
RESURFACING 2011

SCALE	-NA-
DATE	2/11
DWG. BY	JDA
DESIGN BY	JDA
APPROVED	MFM

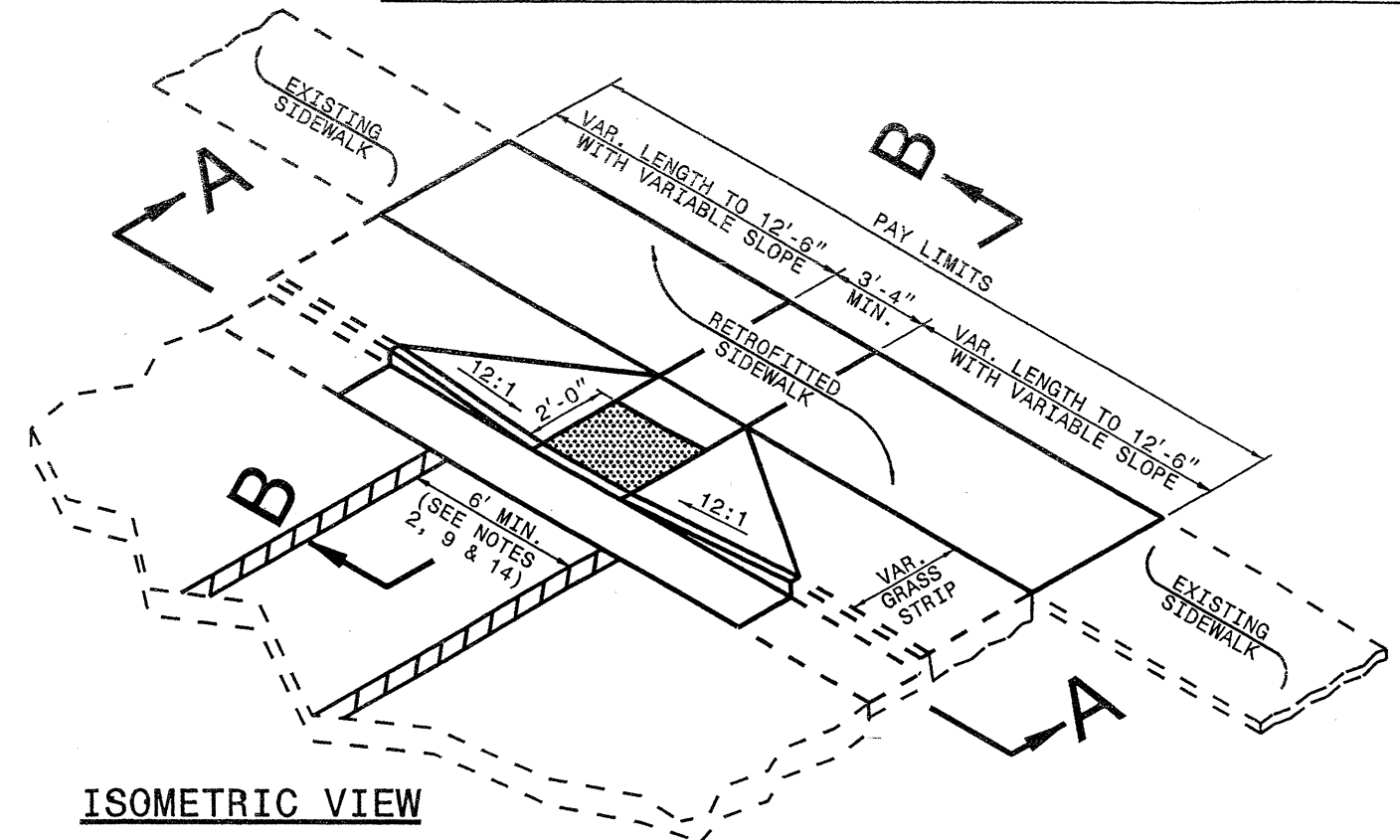


REVISIONS	

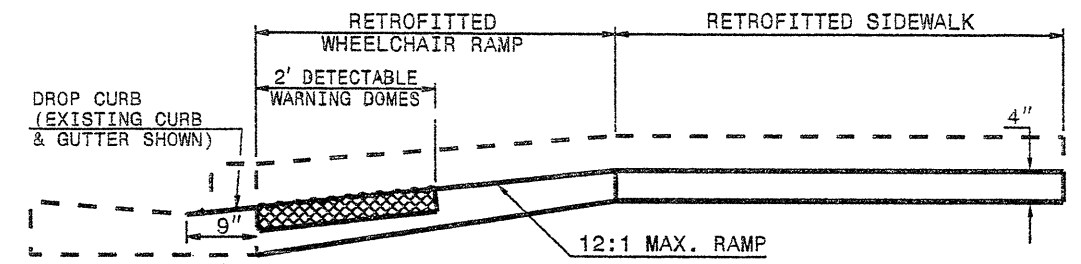
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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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

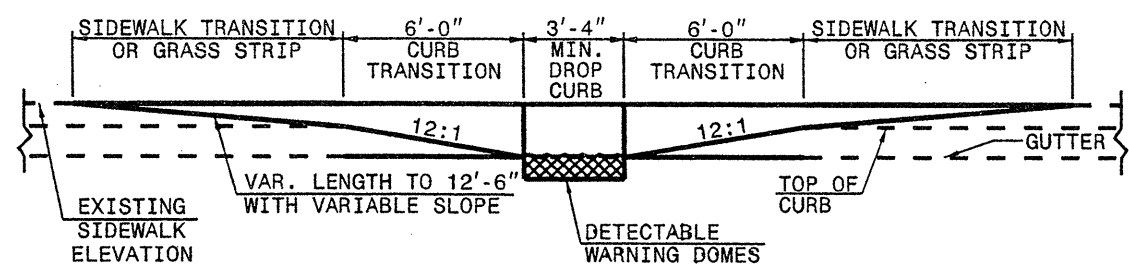
WHEELCHAIR RAMP AND EXISTING SIDEWALK WITH GRASS STRIP



ISOMETRIC VIEW

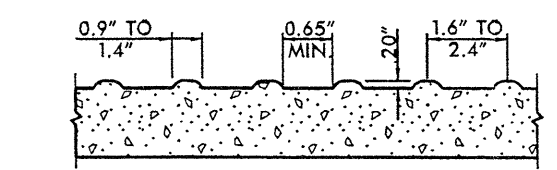
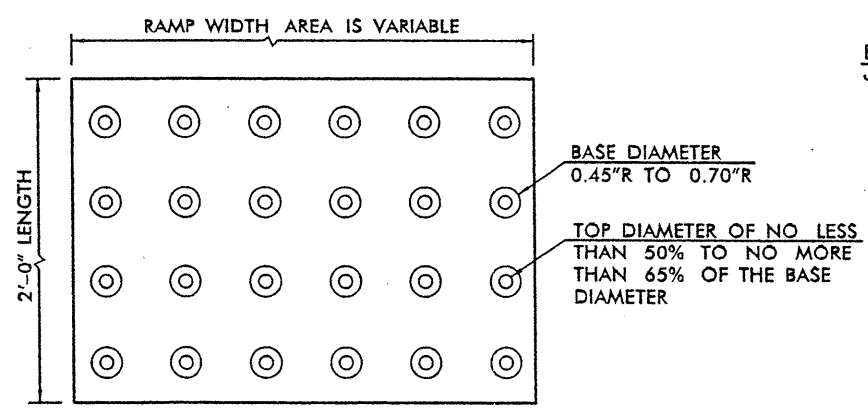


SECTION B-B

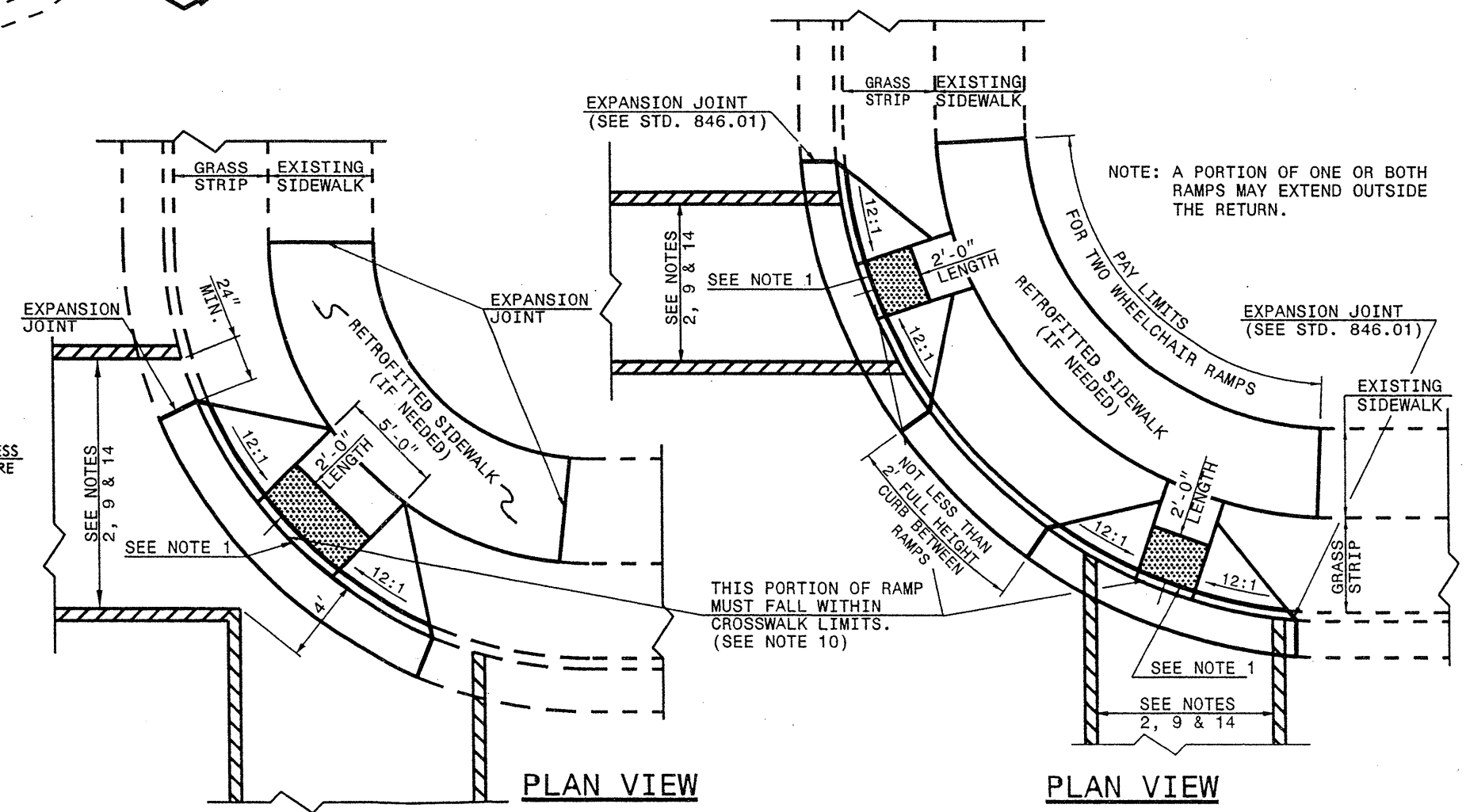


SECTION A-A

- NOTES:
1. DETECTABLE WARNING DOMES SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
 2. OBTAIN 70% CONTRAST VISIBILITY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING DOMES



PLAN VIEW

DIAGONAL RAMP
MAX. 25' RADII
(60" MIN. FLOOR WIDTH)

PLAN VIEW

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

NOTE: A PORTION OF ONE OR BOTH RAMPS MAY EXTEND OUTSIDE THE RETURN.

ENGLISH DETAIL DRAWING FOR

WHEELCHAIR RAMP

EXISTING CURB AND GUTTER

ENGLISH DETAIL DRAWING FOR

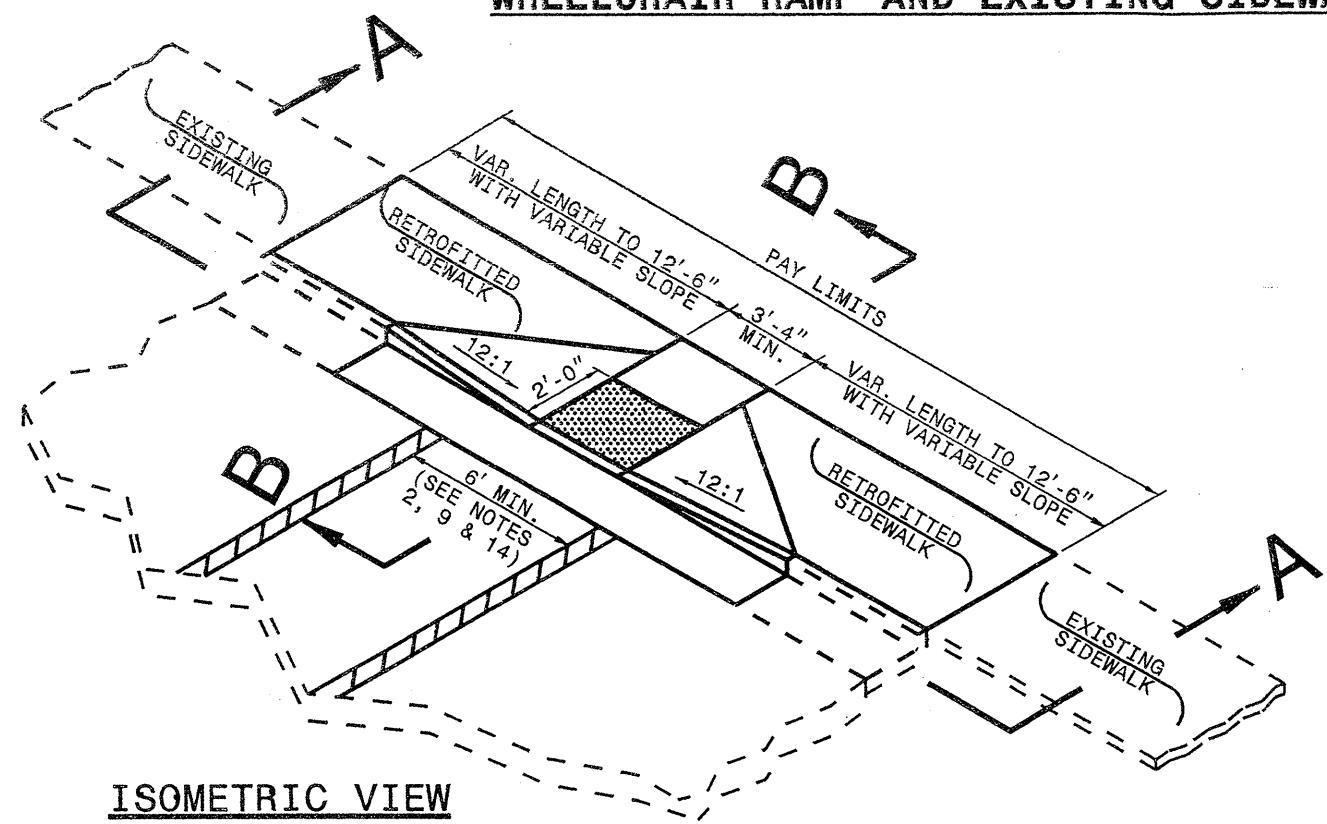
WHEELCHAIR RAMP

EXISTING CURB AND GUTTER

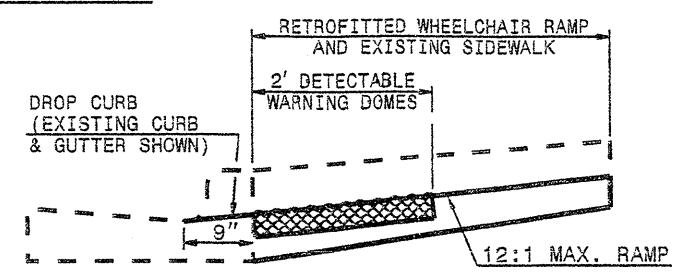
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ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
EXISTING CURB AND GUTTER

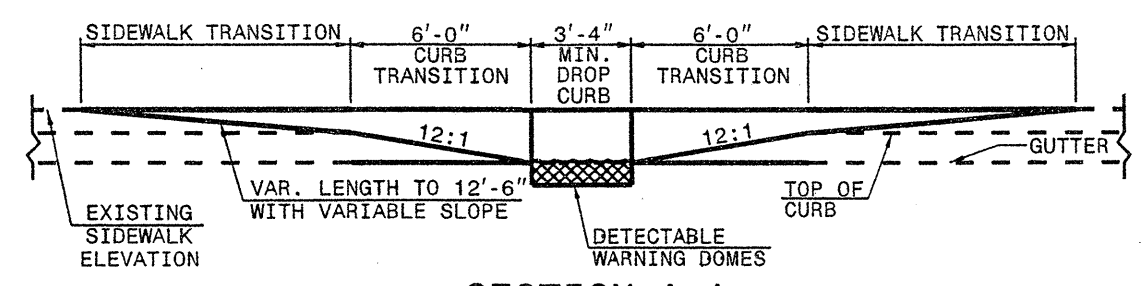
WHEELCHAIR RAMP AND EXISTING SIDEWALK ADJACENT TO CURB



ISOMETRIC VIEW

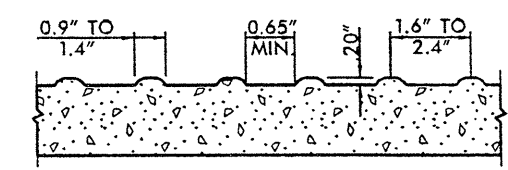
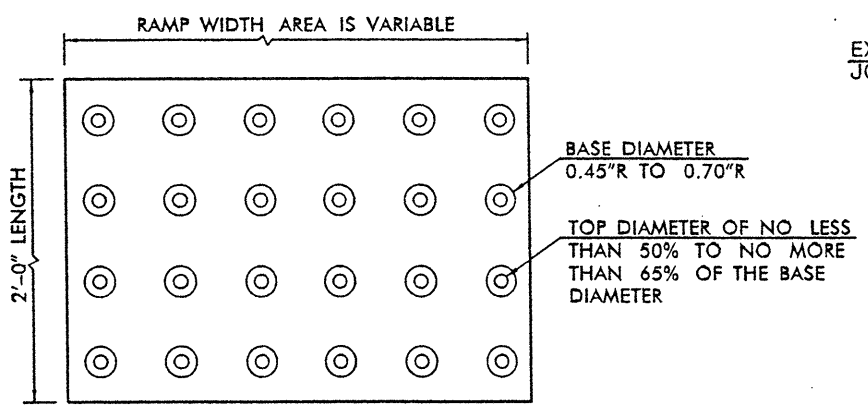


SECTION B-B

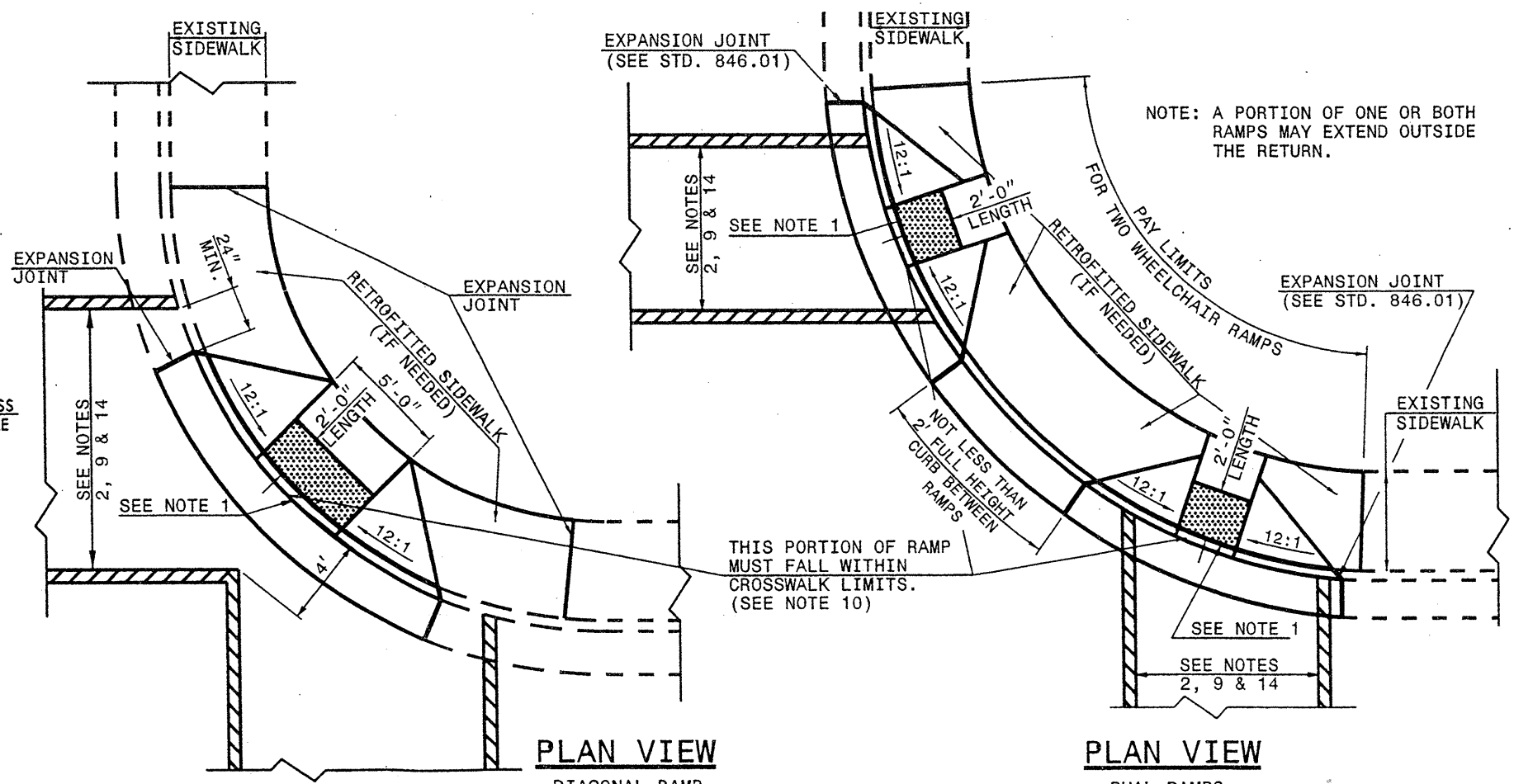


SECTION A-A

- NOTES:
1. DETECTABLE WARNING DOMES SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
 2. OBTAIN 70% CONTRAST VISIBILITY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING DOMES



PLAN VIEW

DIAGONAL RAMP
MAX. 25' RADII
(60" MIN. FLOOR WIDTH)

PLAN VIEW

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

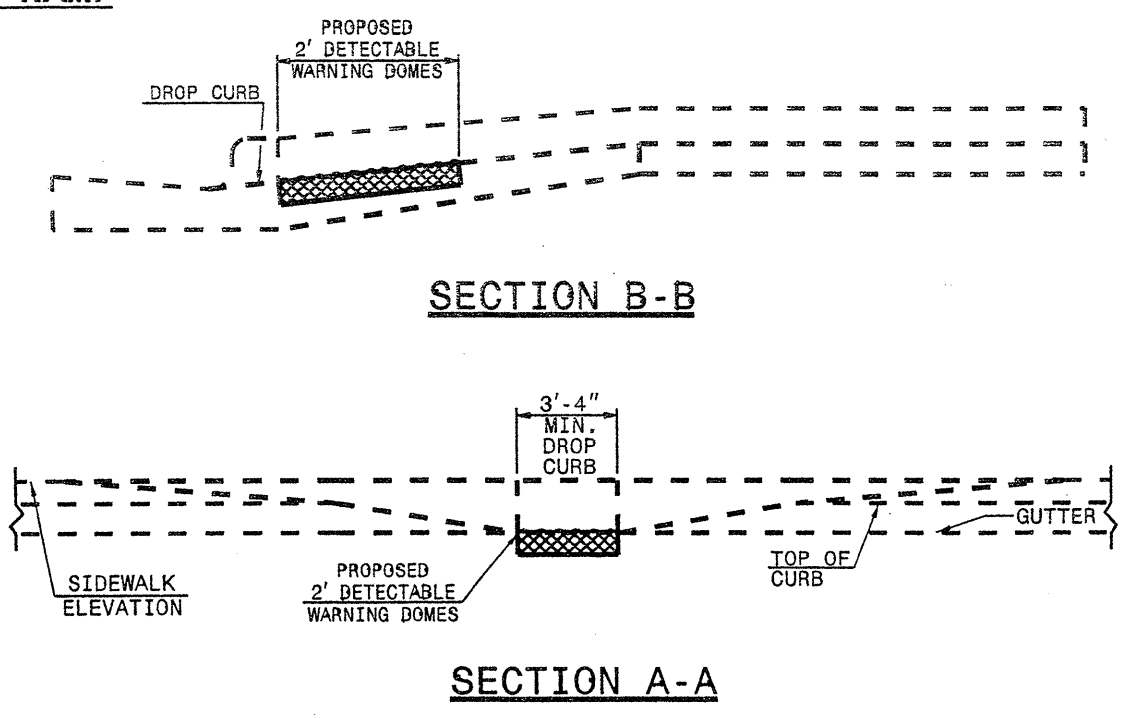
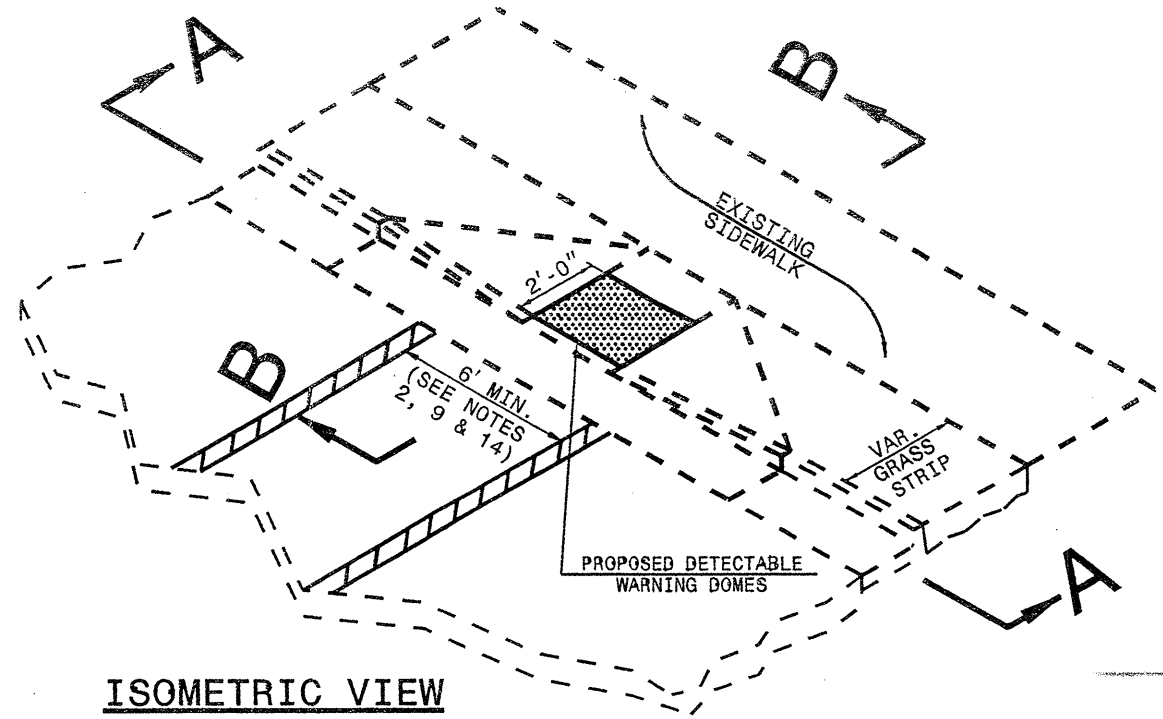
ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
EXISTING CURB AND GUTTER

STATE OF NORTH CAROLINA
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RALEIGH, N.C.

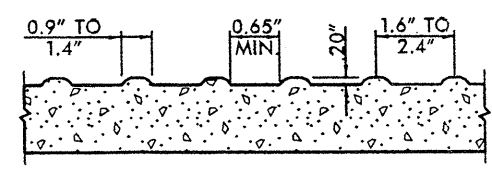
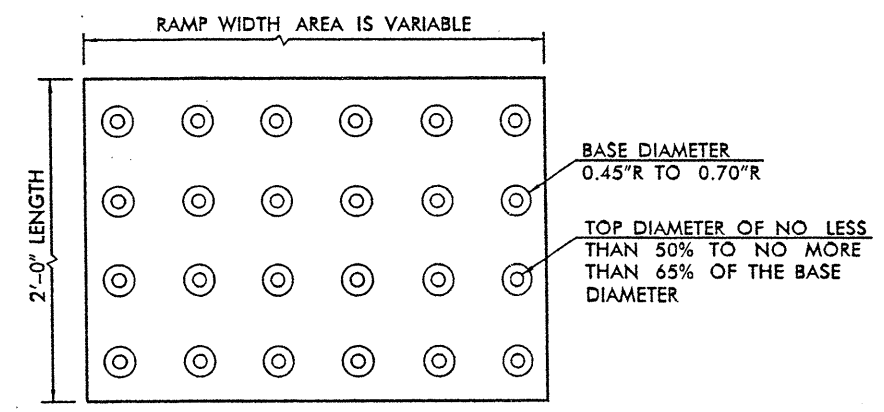
RETROFITTING DETECTABLE WARNING DOMES ONTO EXISTING WHEELCHAIR RAMP

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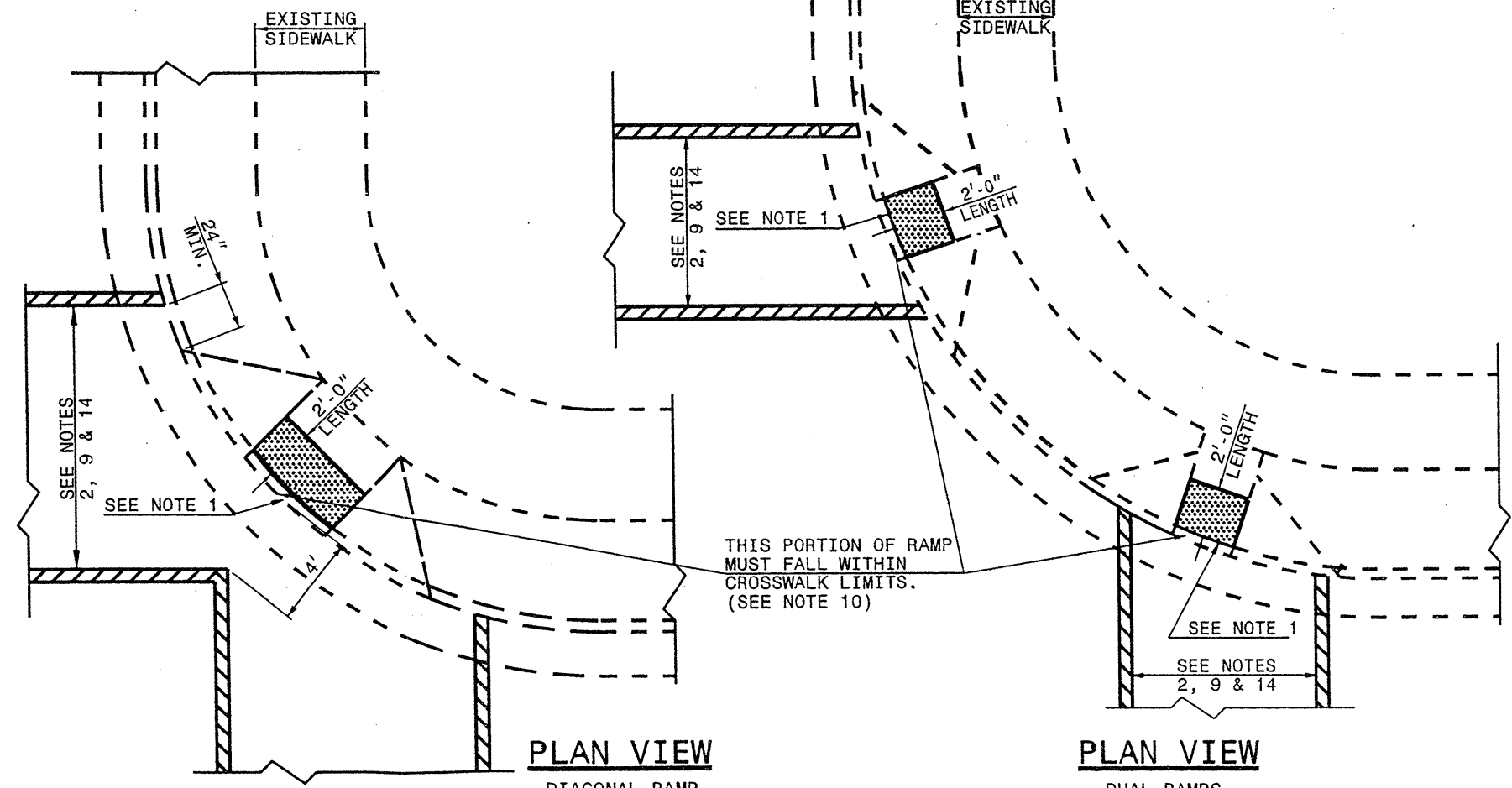
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.



- NOTES:
1. DETECTABLE WARNING DOMES SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
 2. OBTAIN 70% CONTRAST VISIBILITY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING DOMES



PLAN VIEW

DIAGONAL RAMP
MAX. 25' RADII
(60" MIN. FLOOR WIDTH)

PLAN VIEW

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

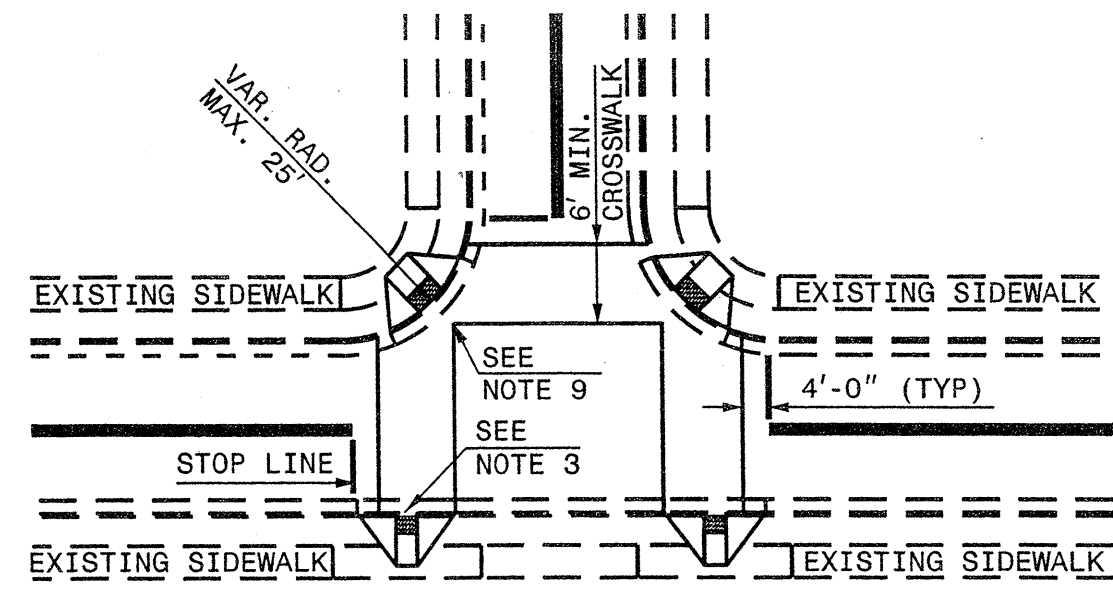
ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
EXISTING CURB AND GUTTER

ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
EXISTING CURB AND GUTTER

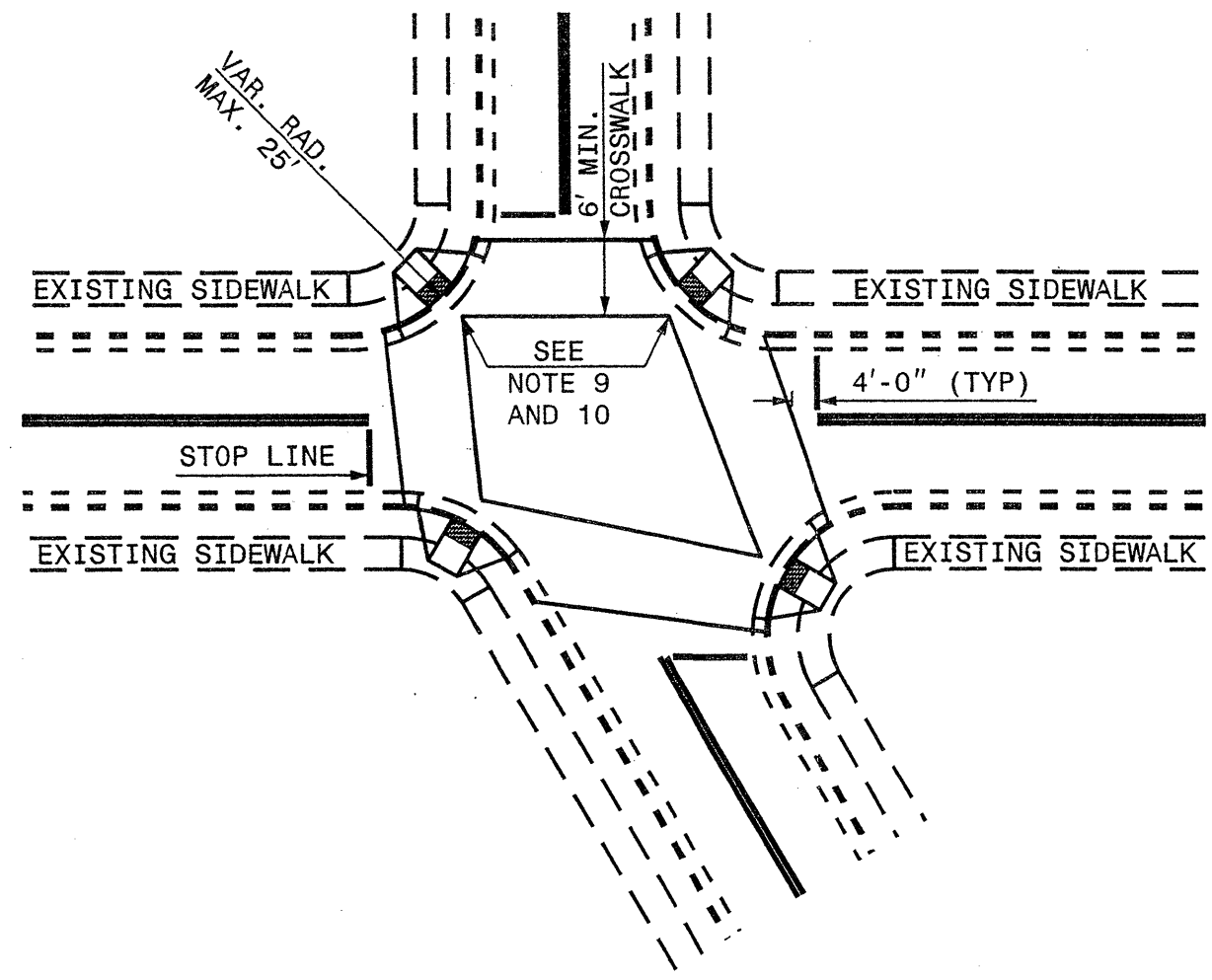
WHEELCHAIR RAMP AND EXISTING SIDEWALK

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DIVISION OF HIGHWAYS
RALEIGH, N.C.

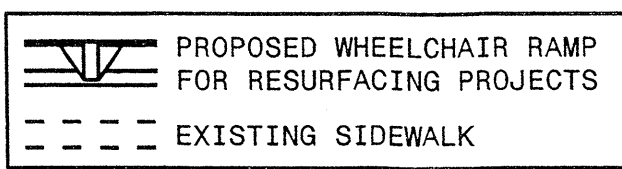


DETAIL SHOWING TYPICAL LOCATION OF WHEELCHAIR RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS



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

RESURFACING PROJECTS



ALLOWABLE LOCATIONS

DIAGONAL RAMP RADII...MAX. 25'

ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
EXISTING CURB AND GUTTER

ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
EXISTING CURB AND GUTTER

WHEELCHAIR RAMP AND EXISTING SIDEWALK

NOTES:

1. CONSTRUCT THE WALKING SURFACE WITH SLIP RESISTANCE AND A 70% CONTRASTING COLOR TO THE SIDEWALK.
2. CROSSWALK WIDTHS AND CONFIGURATION VARY, BUT MUST CONFORM TO TRAFFIC DESIGN STANDARDS.
3. NORTH CAROLINA GENERAL STATUTE 136-44.14 REQUIRES THAT ALL STREET CURBS BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1, 1973 SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY DISABLED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTER AND SIDEWALKS ARE PROVIDED AND AT OTHER POINTS OF PEDESTRIAN FLOW.

IN ADDITION, SECTION 228 OF THE 1973 FEDERAL AID HIGHWAY SAFETY ACT REQUIRES PROVISION OF CURB RAMPS ON ANY CURB CONSTRUCTION AFTER JULY 1, 1976 WHETHER A SIDEWALK IS PROPOSED INITIALLY OR IS PLANNED FOR A FUTURE DATE.

THE AMERICANS WITH DISABILITIES ACT (ADA) OF 1990 EXTENDS TO INDIVIDUALS WITH DISABILITIES, COMPREHENSIVE CIVIL RIGHTS PROTECTIONS SIMILIAR TO THOSE PROVIDED TO PERSONS ON THE BASIS OF RACE, SEX, NATIONAL ORIGIN AND RELIGION UNDER THE CIVIL RIGHTS ACT OF 1964. THESE CURB RAMPS HAVE BEEN DESIGNED TO COMPLY WITH THE CURRENT ADA STANDARDS.
4. PROVIDE WHEELCHAIR RAMPS AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. LOCATE WHEELCHAIR RAMPS AS DIRECTED BY THE ENGINEER WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT. WHERE TWO RAMPS ARE INSTALLED PLACE NOT LESS THAN 2 FEET OF FULL HEIGHT CURB BETWEEN THE RAMPS. PLACE DUAL RAMPS AS NEAR PERPENDICULAR TO THE TRAVEL LANE BEING CROSSED AS POSSIBLE.
5. DO NOT EXCEED 0.08 (12:1) SLOPE ON THE WHEELCHAIR RAMP IN RELATIONSHIP TO THE GRADE OF THE STREET.
6. CONSTRUCT WHEELCHAIR RAMPS 40" (3'-4") OR GREATER FOR DUAL RAMPS AND 60" (5'-0") OR GREATER FOR DIAGONAL RAMPS.
7. USE CLASS "B" CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NON-SKID TYPE SURFACE.
8. PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE WHEELCHAIR RAMP JOINS THE CURB AND AS SHOWN ON STD. DWG. 848.01.
9. PLACE THE INSIDE PEDESTRIAN CROSSWALK LINES NO CLOSER IN THE INTERSECTION BY BISECTING THE INTERSECTION RADII, WITH ALLOWANCE OF A 4' CLEAR ZONE IN THE VEHICULAR TRAVELWAY WHEN ONE RAMP IS INSTALLED. (SEE NOTE 14)
10. COORDINATE THE CURB CUT AND THE PEDESTRIAN CROSSWALK LINES SO THE FLOOR OF THE WHEELCHAIR RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES. PLACE DIAGONAL RAMPS WITH FLARED SIDES SO 24" OF FULL HEIGHT CURB FALLS WITHIN THE CROSSWALK MARKINGS ON EACH SIDE OF THE FLARES.
11. CONSTRUCT THE PEDESTRIAN CROSSWALK A MINIMUM OF 6 FEET. A CROSSWALK WIDTH OF 10 FEET OR GREATER IS DESIRABLE.
12. USE STOP LINES, NORMALLY PERPENDICULAR TO THE LANE LINES, WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN OR OTHER LEGAL REQUIREMENT. AN UNUSUAL APPROACH SKEW MAY REQUIRE THE PLACEMENT OF THE STOP LINE TO BE PARALLEL TO THE INTERSECTING ROADWAY.
13. TERMINATE PARKING A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK.
14. PLACE ALL PAVEMENT MARKINGS IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION AND THE NORTH CAROLINA SUPPLEMENT TO THE MUTCD.

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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
EXISTING CURB AND GUTTER

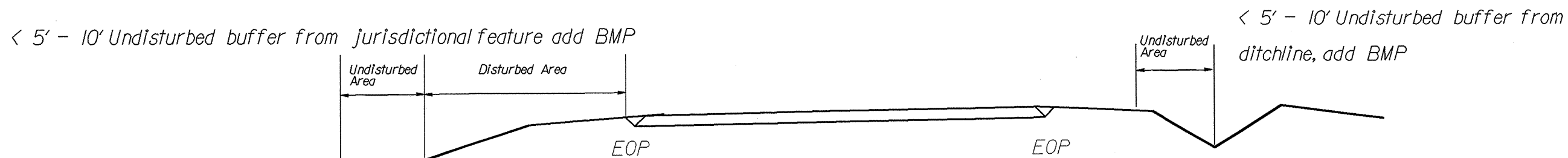
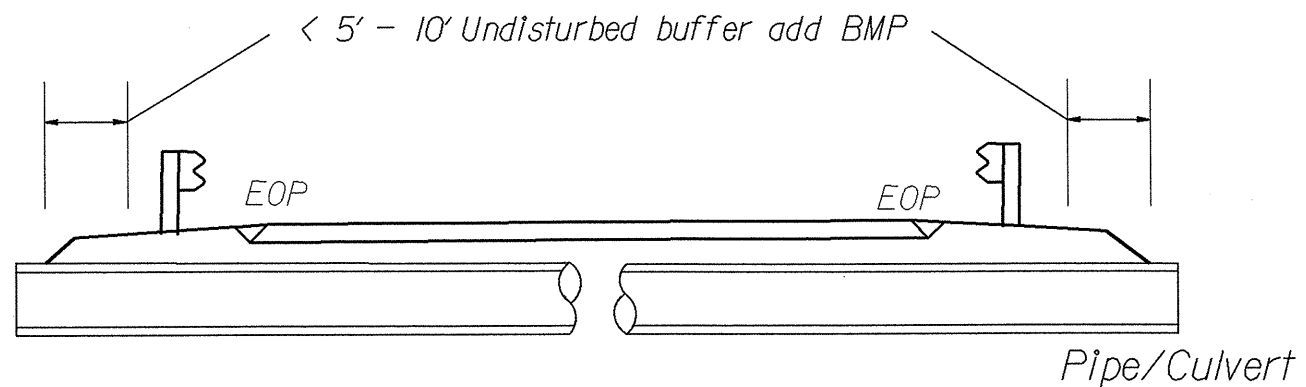
ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP
EXISTING CURB AND GUTTER

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

BMP Options: Wattle or Silt Fence

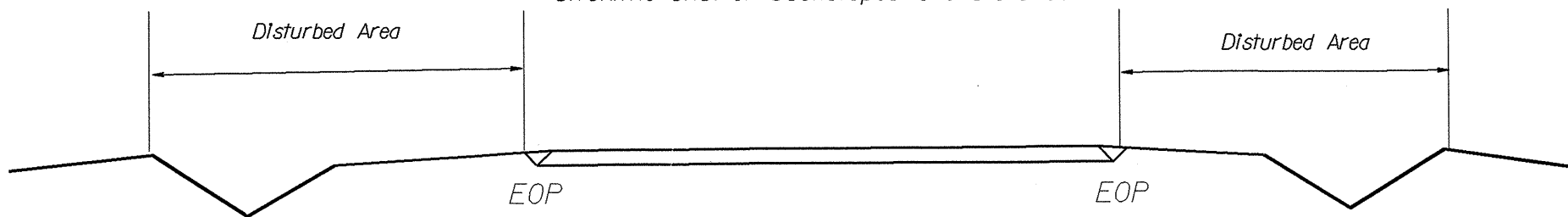
EROSION CONTROL DETAIL

PROJECT REFERENCE NO. 10CRJ0131J, e+c.	SHEET NO. EC-1
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

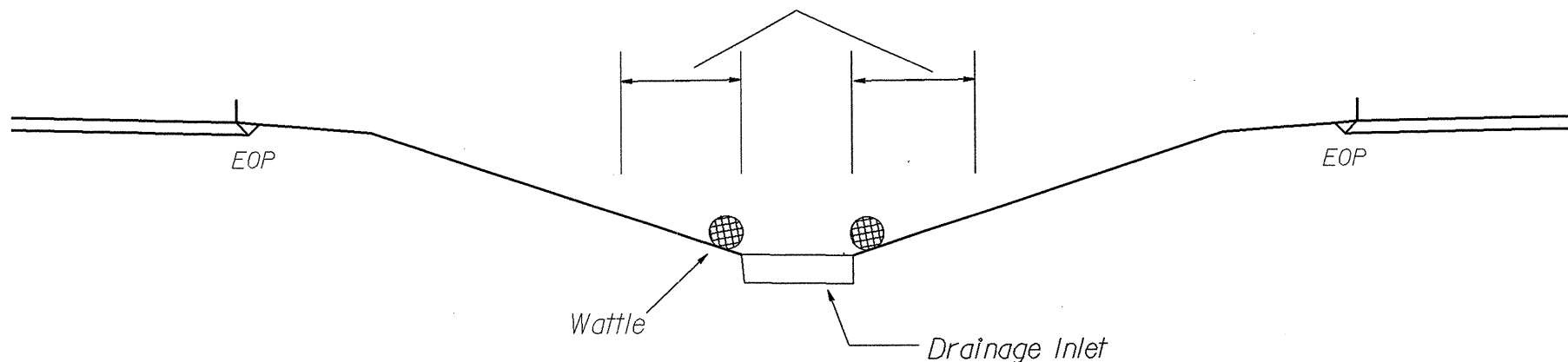


Jurisdictional Feature

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



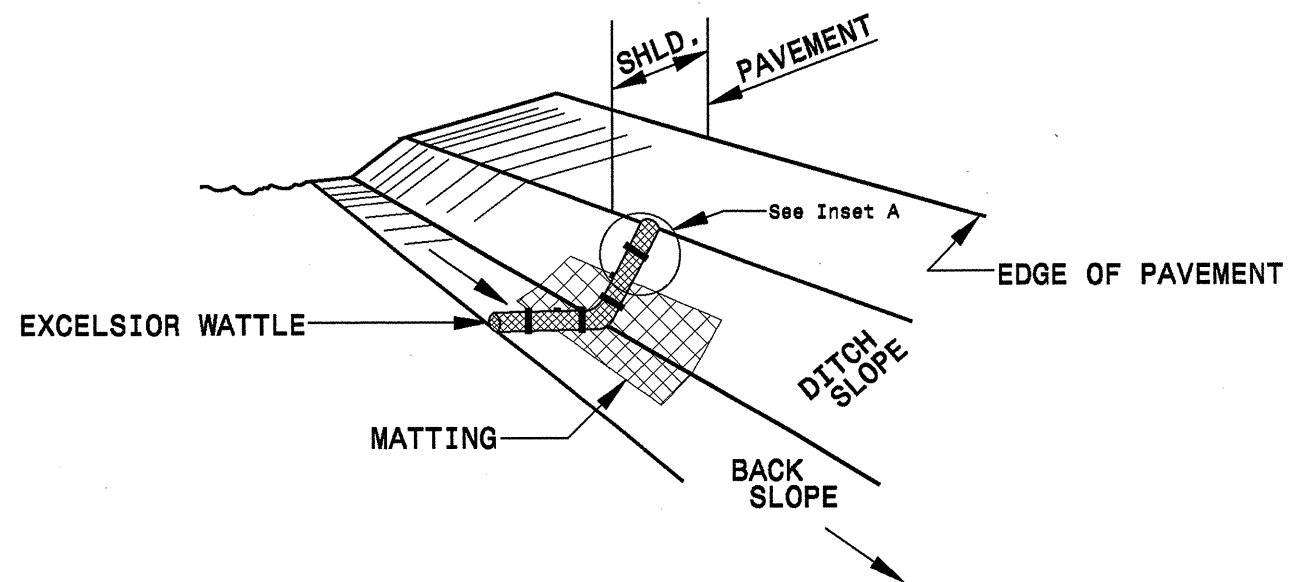
< 5' - 10' Undisturbed buffer from inlet, add wattle



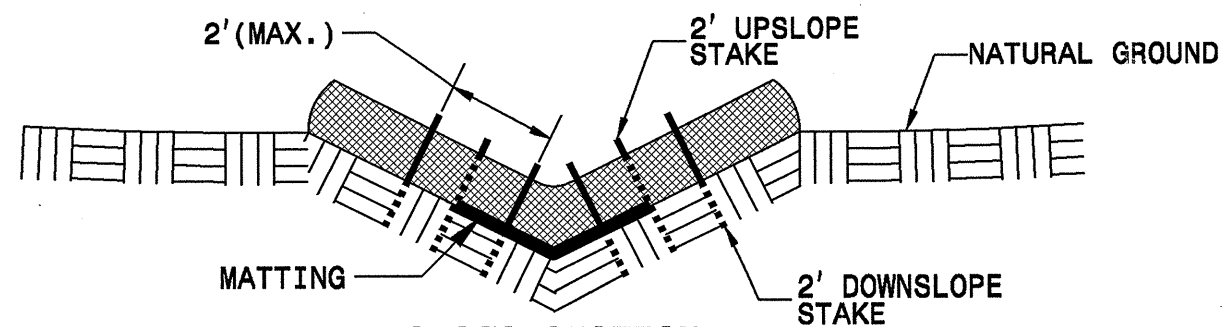
NOT TO SCALE

PROJECT REFERENCE NO. 10CRJ0131J7, etc.	SHEET NO. EC-2
RWY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

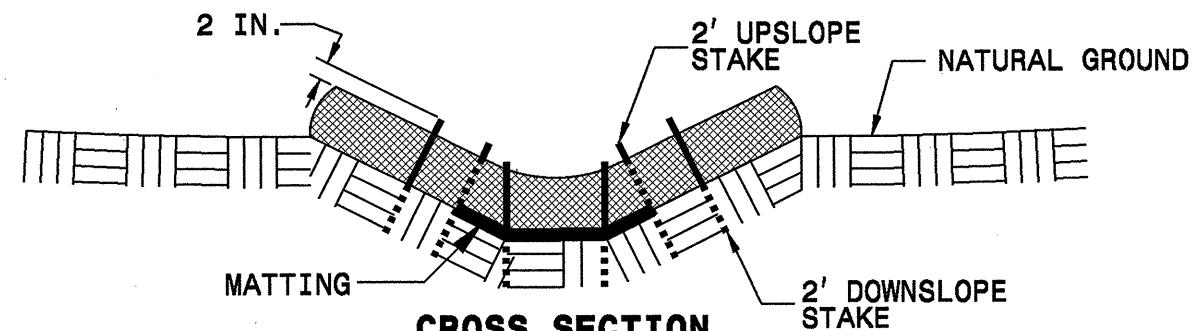
WATTLE DETAIL



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.

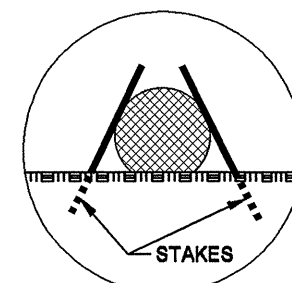
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

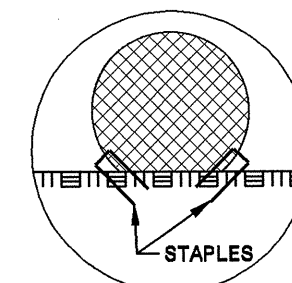
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

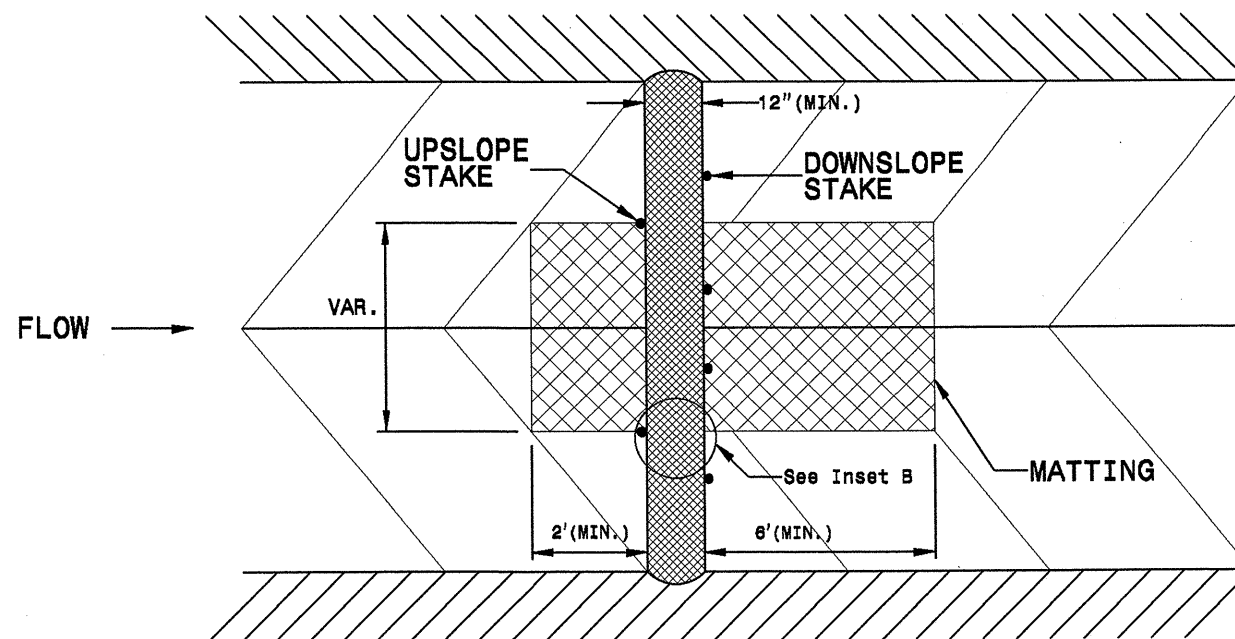
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A

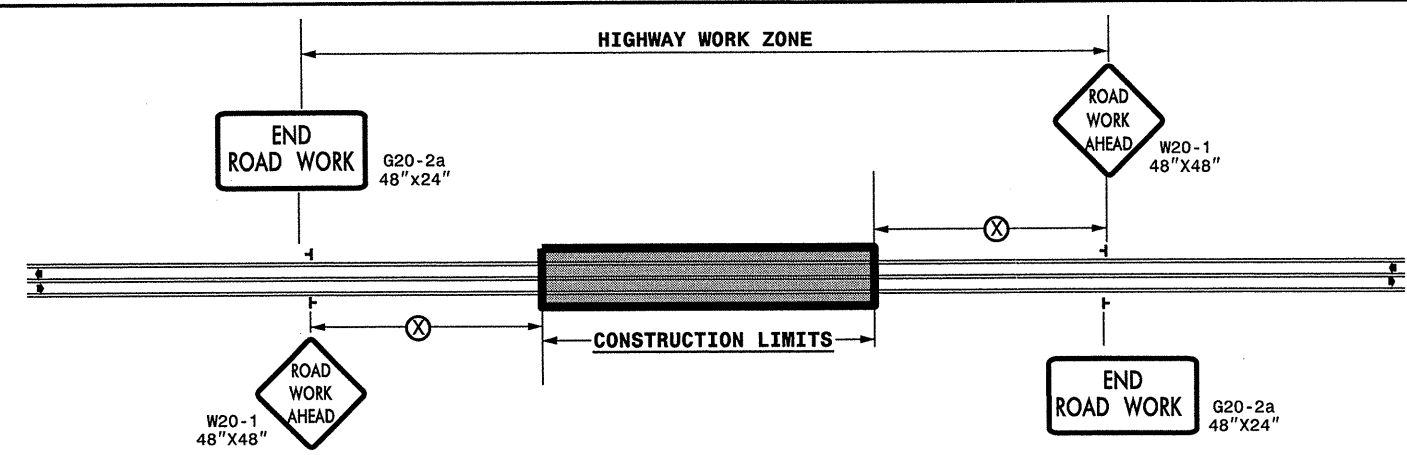


INSET B



TOP VIEW

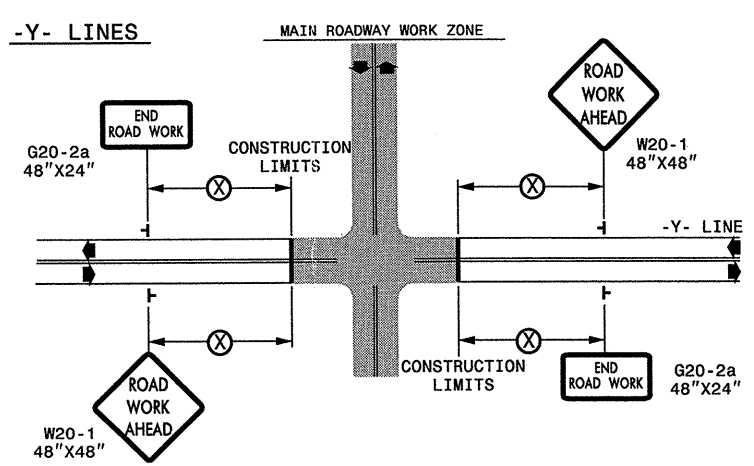
TWO-WAY UNDIVIDED ** (L-LINES)



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
≤ 50	500'
≥ 55	1000'

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ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

┆ STATIONARY SIGN

◀ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

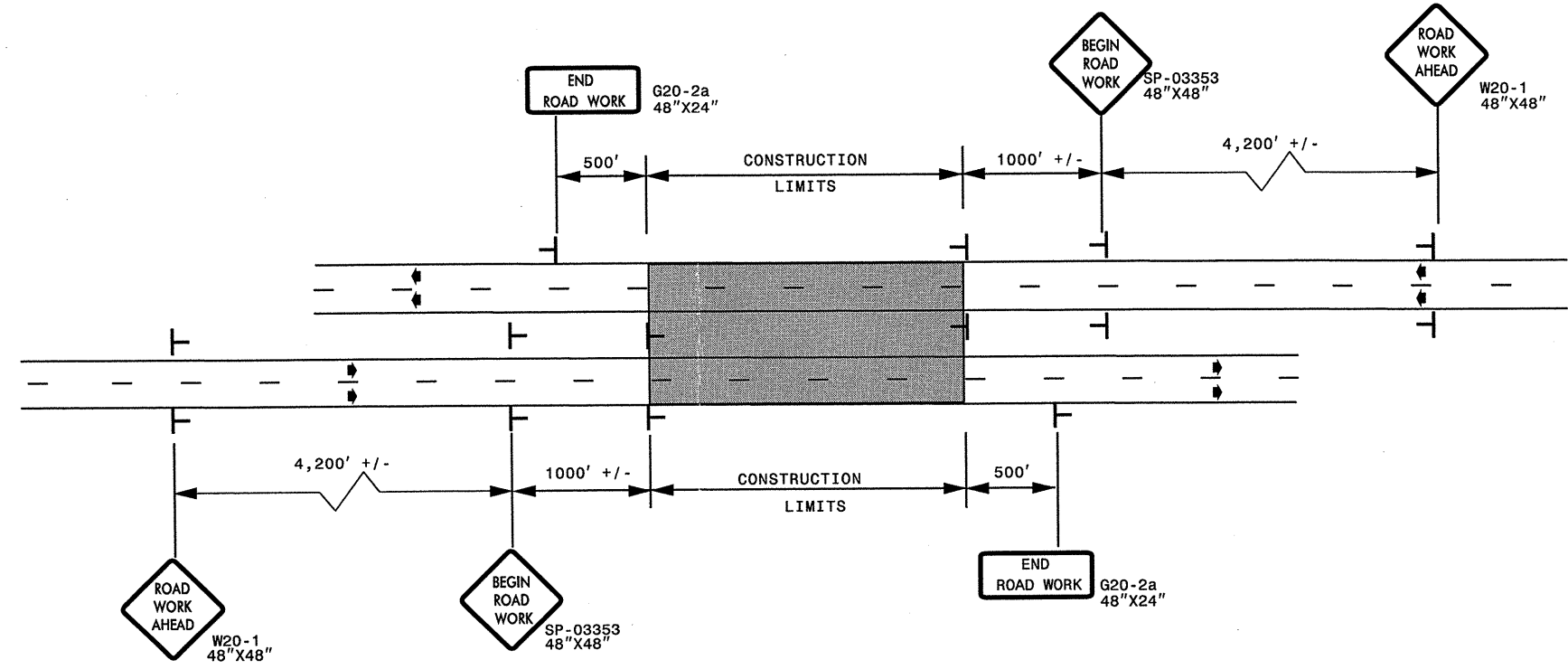
APPROVED: _____	DATE: _____	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS	
SEAL			
SCALE: NONE		REVISIONS	
DATE: _____		7-98	10/01
DWG. BY: _____		10-98	03/04
DESIGN BY: _____		01/01	11/04
REVIEWED BY: _____			

23-FEB-2011 10:35
 \\DOT\DFSR001\GROUPS-WZTC\TC\Resurfacing\2011\Western\2011\DIV\2027\xxA-T\10CR.10131.17x20.2way_undiv.&.Urban_Frws-stationary.dgn
 AT 12:44:33
 sngreen

ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

PROJ. REFERENCE NO.	SHEET NO.
10CR.10131.17-21 10CR.20131.51-65	TCP-2

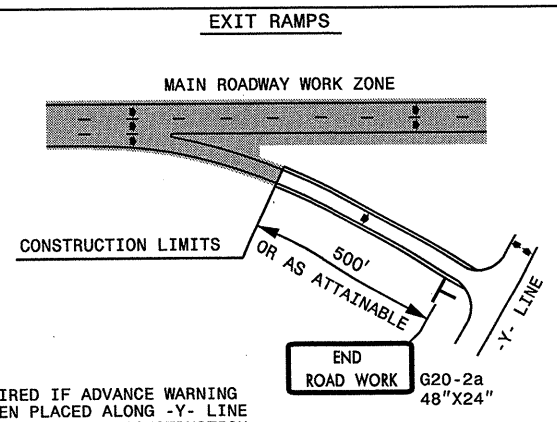
DETAIL A



LEGEND	
	STATIONARY SIGN
◆	DIRECTION OF TRAFFIC FLOW

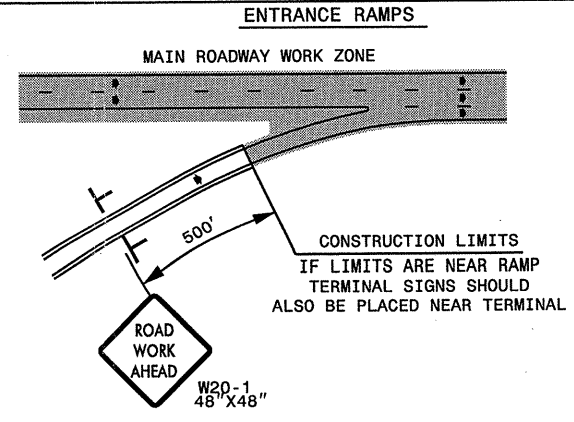
* USE THE "\$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "\$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.

DETAIL B

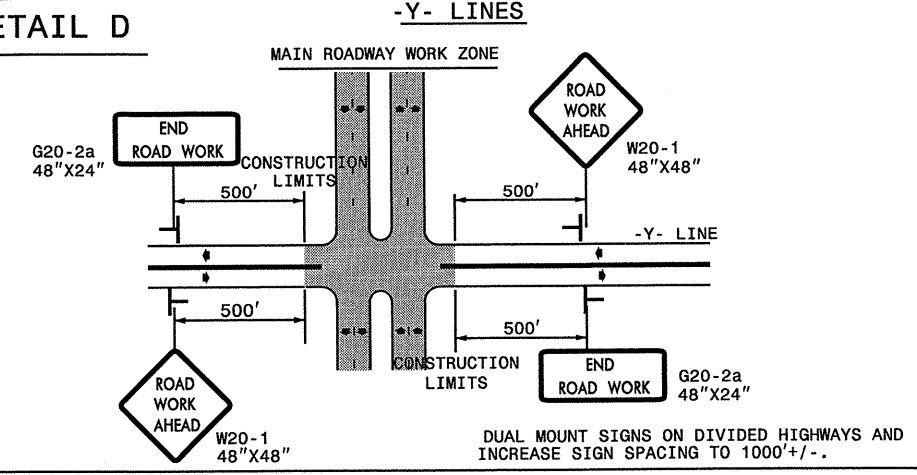


NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

DETAIL C



DETAIL D



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
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- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

APPROVED: _____ DATE: _____	ADVANCED WORK ZONE WARNING SIGNS FOR FREEWAYS (4 LANES OR GREATER)	
SEAL	SCALE: NONE	REVISIONS
	DATE: 8/03	03/04
	DWG. BY: JI	
	DESIGN BY: JI	
REVIEWED BY: _____		

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