

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(C+J)R-RS-2	DU PAGE	18	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO.	60D42	

18
+ 4
22

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PROPOSED
HIGHWAY PLANS**

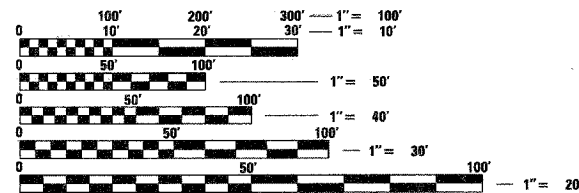
F.A.P. 347 (IL. 38)
SECTION: (C & J) R-RS-2
EB IL 38 RAMP TO SB IL 83
RESURFACING (MAINTENANCE)
PROJECT: ACHSIP-0347(019)
DU PAGE COUNTY
C-91-018-08

FOR INDEX OF SHEETS SEE SHEET 2

THIS IMPROVEMENT IS LOCATED
WITHIN THE VILLAGE OF OAKBROOK TERRACE

TRAFFIC DATA

IL 38 2005 ADT - 52,400
IL 83 2005 ADT - 85,900
IL 38 POSTED SPEED LIMIT - 55 MPH
IL 83 POSTED SPEED LIMIT - 50 MPH



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

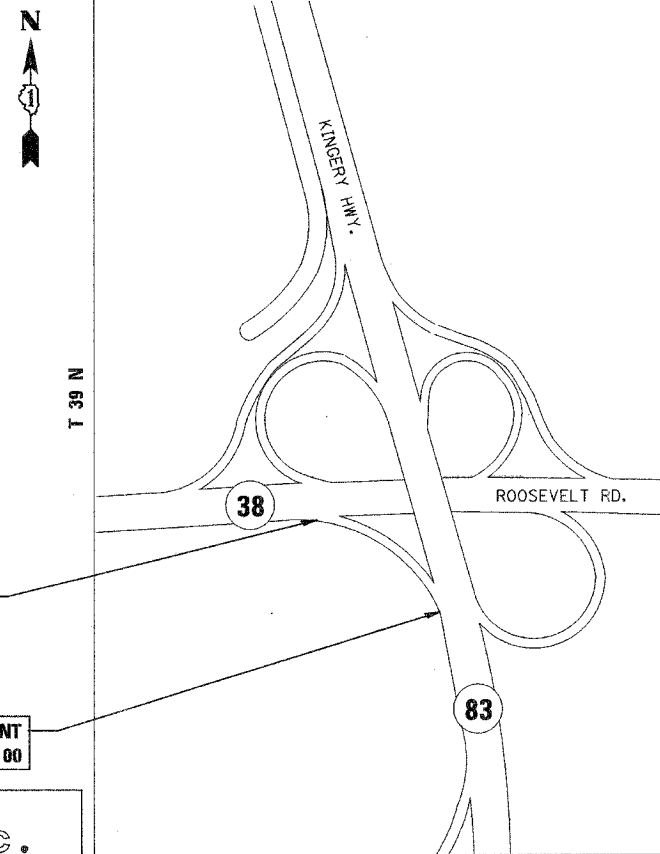
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

Ciorba Group, Inc.

DESIGN FIRM
REGISTRATION NUMBER

184-001016

CONSULTING ENGINEERS
SUITE 402, 5507 NORTH CUMBERLAND AVE
CHICAGO, ILLINOIS 60656 :: (773) 775-4009



BEGIN IMPROVEMENT
STA. 108+13

END IMPROVEMENT
STA. 115+00

YORK TOWNSHIP

LOCATION MAP
NOT TO SCALE

GROSS AND NET LENGTH OF PROJECT = 687 FT = 0.13 MI.



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED October 24, 2007

Diane O'Keefe / cpl
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 7, 2007
Erie E. Harsh / RD
INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

December 7, 2007
Christine M. Reed / RD
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

DISTRICT 1 DESIGN PLAN PREPARATION ENGINEER: K. ENG (847) 705-4247

CONTRACT NO. 60D42

INDEX OF SHEETS

SHEET NO.	DESCRIPTION	STATE STANDARDS
1	TITLE SHEET	000001-05 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
2	INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES	606001-03 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
3	SUMMARY OF QUANTITIES	701400-02 APPROACH TO LANE CLOSURE FREEWAY/EXPRESSWAY
4	ALIGNMENT AND CONTROL POINTS	701406-04 LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATION ONLY
5	TYPICAL SECTIONS	701901 TRAFFIC CONTROL DEVICES
6	PROPOSED ROADWAY PLAN	030001
7	ROADWAY PROFILE	
8	PAVEMENT MARKING PLAN	
9	MAINTENANCE OF TRAFFIC (DETOUR PLAN)	
10-11	CROSS SECTIONS	
12	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT (BD-24)	
13	BUTT JOINT AND HMA TAPER DETAILS (BD-32)	
14	FREEWAY ENTRANCE AND EXIT RAMP CLOSURE DETAILS (TC-8)	
15-16	MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS (TC-8)	
17	TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES (TC-17)	
18	ARTERIAL ROAD INFORMATION SIGN (TC-22)	
18A-18C	REMOVE & RE-ERECT STEEL PLATE BEAM GUARDRAIL DETAIL	

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES. (48 HOUR NOTIFICATIONS IS REQUIRED)
- 10 FEET TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS & GUTTERS AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- WHEN ARTIFICIAL LIGHTING IS USED IN NIGHT OPERATIONS THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
- WHEN MILLED PAVEMENT IS OPENED TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1 1/2 INCHES WHERE THE SPEED LIMIT IS 45 MPH OR LESS AND 1 INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH. WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 3:1 (H:V).
- BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND BITUMINOUS TAPER DETAILS", UNLESS OTHERWISE SPECIFIED.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN ASSUMED IN CALCULATING PLAN QUANTITIES:

BITUMINOUS MATERIALS (PRIME COAT)	0.0004 TONS/SQ YD
HOT-MIX ASPHALT SURFACE COURSE	112 LBS/SQ YD/INCH

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Ciorba Group, Inc.
CONSULTING ENGINEERS
6507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014

USER NAME = wlancoaster	DESIGNED - WBL	REVISED -
	DRAWN - MLB	REVISED -
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PLOT DATE = 10/25/2007	DATE - 9/19/2007	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAP ROUTE 347	
ILLINOIS ROUTE 38	
INDEX OF SHEETS, STATE STANDARDS & GENERAL NOTES	
SCALE: NO SCALE	SHEET NO. 1 OF 1 SHEETS
STA.	TO STA.


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(C&J) R-RS-2	DJ PAGE	18	2
CONTRACT NO. 60D42			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT	

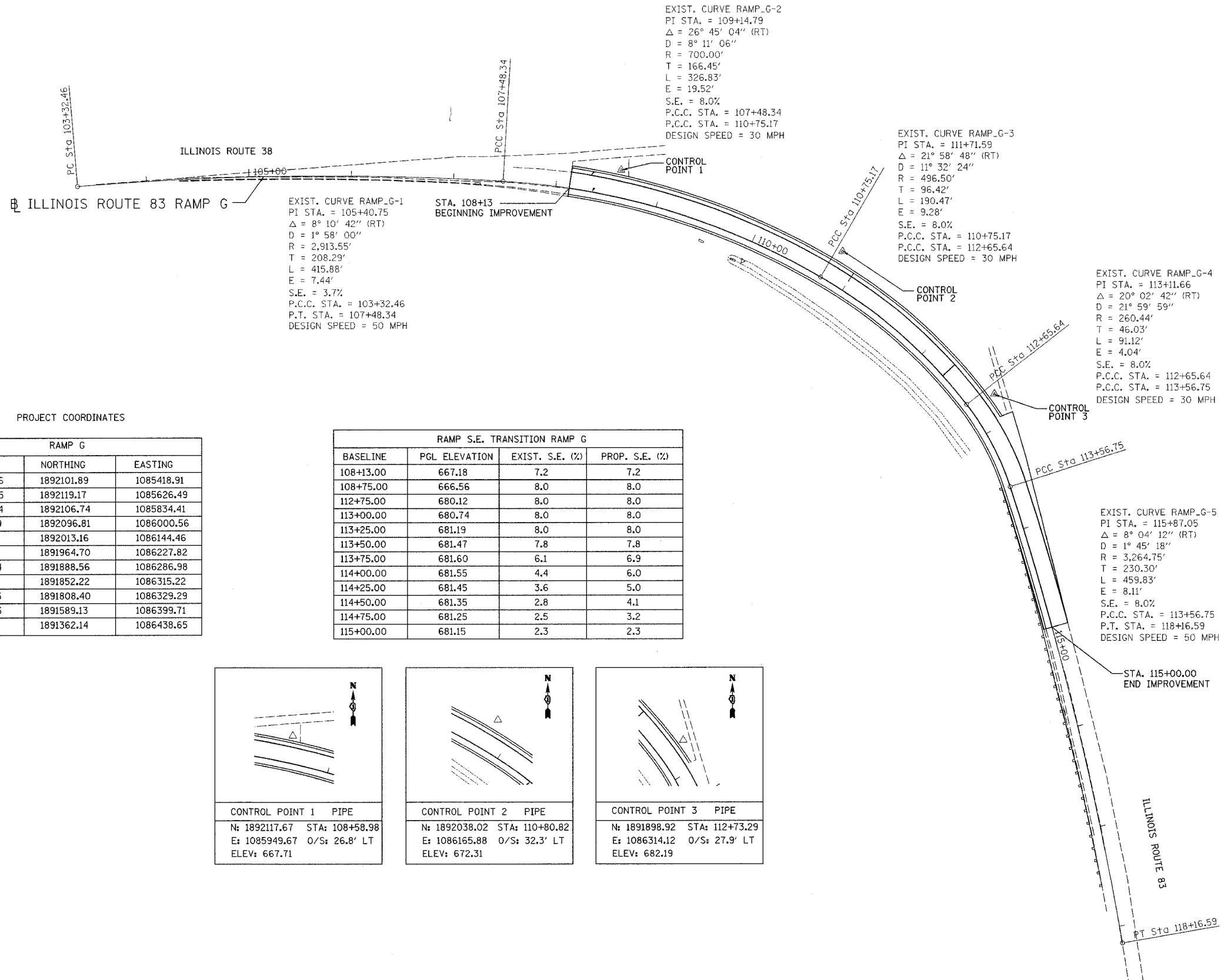
Rev.

CODE NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	901 FED. AID STATE ROADWAY 1000-2A
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	0.3	0.3
40600635	LEVELING BINDER (MACHINE METHOD), N70	TON	12	12
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	175	175
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	180	180
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	1240	1240
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	785	785
44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	125	125
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	1380	1380
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	34	34
63300115	REMOVAL AND REINSTALLATION OF EXISTING STEEL PLATE BEAM GUARDRAIL, SINGLE RAIL	FOOT	125	125
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	1	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1	1
70102550	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	EACH	1	1
70300200	TEMPORARY PAVEMENT MARKING	FOOT	1400	1400
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	960	960
* 78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	414	414
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	70	70
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	26	26

* SPECIALTY ITEM

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 Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014	USER NAME = dmorris DESIGNED - WBL DRAWN - MLB PLOT SCALE = 1/8" = 1.0000' / IN. CHECKED - MJL PLOT DATE = 10/29/2007	REVISIONS REVISIONS REVISIONS REVISIONS REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		FAP ROUTE 347 ILLINOIS ROUTE 38 SUMMARY OF QUANTITIES		F.A.P. RTE. 347	SECTION (C&J) R-RS-2	COUNTY DU PAGE	TOTAL SHEETS 18	SHEET NO. 3	CONTRACT NO. 60D42
	SCALE: NO SCALE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT							



EXIST. CURVE RAMP_G-2
 PI STA. = 109+14.79
 $\Delta = 26^\circ 45' 04''$ (RT)
 $D = 8^\circ 11' 06''$
 $R = 700.00'$
 $T = 166.45'$
 $L = 326.83'$
 $E = 19.52'$
 $S.E. = 8.0\%$
 P.C.C. STA. = 107+48.34
 P.T. STA. = 110+75.17
 DESIGN SPEED = 30 MPH

EXIST. CURVE RAMP_G-3
 PI STA. = 111+71.59
 $\Delta = 21^\circ 58' 48''$ (RT)
 $D = 11^\circ 32' 24''$
 $R = 496.50'$
 $T = 96.42'$
 $L = 190.47'$
 $E = 9.28'$
 $S.E. = 8.0\%$
 P.C.C. STA. = 110+75.17
 P.C.C. STA. = 112+65.64
 DESIGN SPEED = 30 MPH

EXIST. CURVE RAMP_G-4
 PI STA. = 113+11.66
 $\Delta = 20^\circ 02' 42''$ (RT)
 $D = 21^\circ 59' 59''$
 $R = 260.44'$
 $T = 46.03'$
 $L = 91.12'$
 $E = 4.04'$
 $S.E. = 8.0\%$
 P.C.C. STA. = 112+65.64
 P.C.C. STA. = 113+56.75
 DESIGN SPEED = 30 MPH

EXIST. CURVE RAMP_G-5
 PI STA. = 115+87.05
 $\Delta = 8^\circ 04' 12''$ (RT)
 $D = 1^\circ 45' 18''$
 $R = 3,264.75'$
 $T = 230.30'$
 $L = 459.83'$
 $E = 8.11'$
 $S.E. = 8.0\%$
 P.C.C. STA. = 113+56.75
 P.T. STA. = 118+16.59
 DESIGN SPEED = 50 MPH

PROJECT COORDINATES

RAMP G		
DESCRIPTION	NORTHING	EASTING
P.C.	103+32.46	1892101.89
P.I.	105+40.75	1892119.17
P.C.C.	107+48.34	1892106.74
P.I.	109+14.79	1892096.81
P.C.C.	110+75.17	1892013.16
P.I.	111+71.59	1891964.70
P.C.C.	112+65.64	1891888.56
P.I.	113+11.66	1891852.22
P.C.C.	113+56.75	1891808.40
P.I.	115+87.05	1891589.13
P.T.	118+16.59	1891362.14

RAMP S.E. TRANSITION RAMP G			
BASELINE	PGL ELEVATION	EXIST. S.E. (%)	PROP. S.E. (%)
108+13.00	667.18	7.2	7.2
108+75.00	666.56	8.0	8.0
112+75.00	680.12	8.0	8.0
113+00.00	680.74	8.0	8.0
113+25.00	681.19	8.0	8.0
113+50.00	681.47	7.8	7.8
113+75.00	681.60	6.1	6.9
114+00.00	681.55	4.4	6.0
114+25.00	681.45	3.6	5.0
114+50.00	681.35	2.8	4.1
114+75.00	681.25	2.5	3.2
115+00.00	681.15	2.3	2.3

CONTROL POINT 1 PIPE
 N: 1892117.67 STA: 108+58.98
 E: 1085949.67 O/S: 26.8' LT
 ELEV: 667.71

CONTROL POINT 2 PIPE
 N: 1892038.02 STA: 110+80.82
 E: 1086165.88 O/S: 32.3' LT
 ELEV: 672.31

CONTROL POINT 3 PIPE
 N: 1891898.92 STA: 112+73.29
 E: 1086314.12 O/S: 27.9' LT
 ELEV: 682.19

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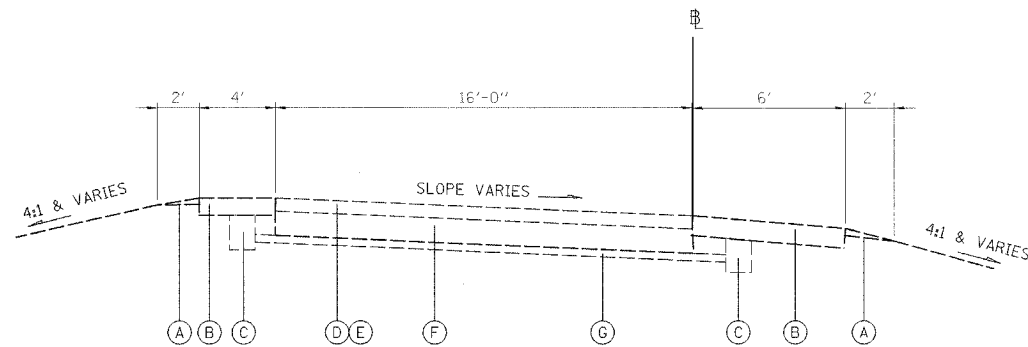
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DRAWN - MLB	REVISED -	
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PLOT DATE = 10/25/2007	DATE - 9/19/2007	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**FAP ROUTE 347
 ILLINOIS ROUTE 38
 ALIGNMENT AND CONTROL POINTS**

SCALE: 1"=50' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 347	SECTION (C&J) R-RS-2	COUNTY DU PAGE	TOTAL SHEETS 18	SHEET NO. 4
CONTRACT NO. 60D42				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



EXISTING TYPICAL RAMP G SECTION

EXISTING LEGEND

- (A) EXISTING AGGREGATE SHOULDER, TYPE B
- (B) EXISTING BITUMINOUS SHOULDER, 8"
- (C) EXISTING SUB-SURFACE DRAINS
- (D) EXISTING BITUMINOUS SURFACE COURSE, MIXTURE D 1 1/2"
- (E) EXISTING BITUMINOUS BINDER COURSE 3"
- (F) EXISTING P.C.C. PAVEMENT, 8"
- (G) EXISTING SUB-BASE GRANULAR MATERIAL, TYPE A 4"

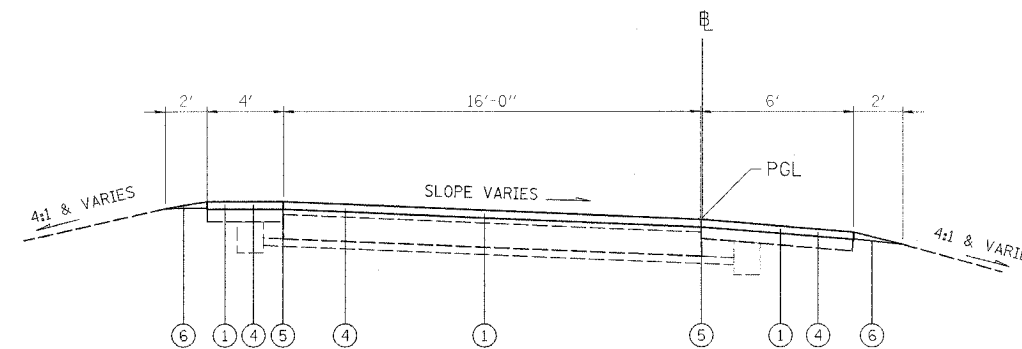
PROPOSED LEGEND

- (1) HOT-MIX ASPHALT REMOVAL, 1 1/2"
- (2) HOT-MIX ASPHALT REMOVAL, VARIABLE DEPTH (1 1/2" LEFT TO 4 1/2" RIGHT) - (FOR SUPERELEVATION CORRECTION)
- (3) LEVELING BINDER (MACHINE METHOD), N70 3/4" & VARIES
- (4) HOT-MIX ASPHALT SURFACE COURSE, MIX D, N70 (1 1/2")
- (5) STRIP REFLECTIVE CRACK CONTROL TREATMENT
- (6) AGGREGATE WEDGE SHOULDER, TYPE B
- (7) COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT
- (8) REMOVAL AND REINSTALLATION OF EXISTING STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL

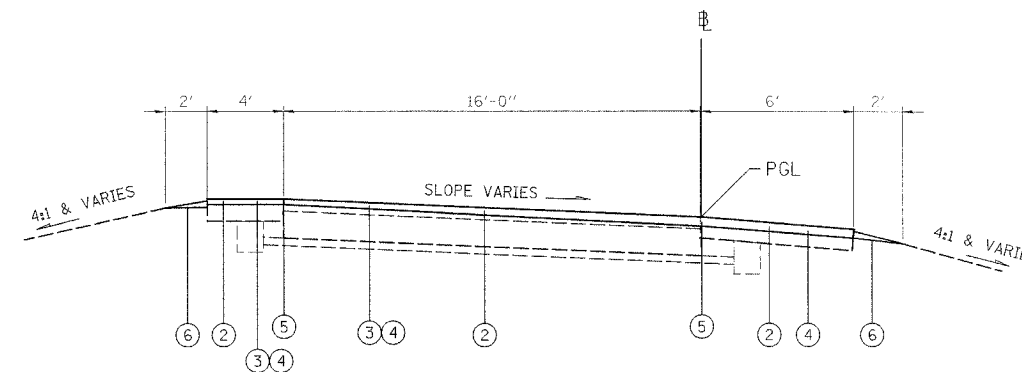
HOT-MIX ASPHALT MIXTURE REQUIREMENTS CHART

OPERATIONS	MIXTURE TYPE	AC TYPE	PERCENT AIR VOIDS
RAMPS & SHOULDERS	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	PG 64-22	4% @ 70 GYR.
	LEVELING BINDER (MACHINE METHOD), N70	PG 64-22 *	4% @ 70 GYR.

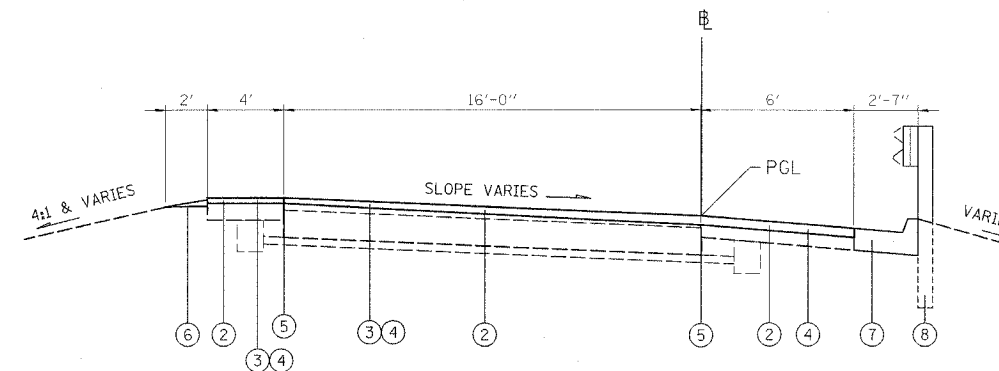
NOTE:
 THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURES QUANTITIES IS 112 LBS/SOYD/IN
 * WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22



PROPOSED TYPICAL RAMP G SECTION
 STA. 108+13 TO STA. 112+29.30

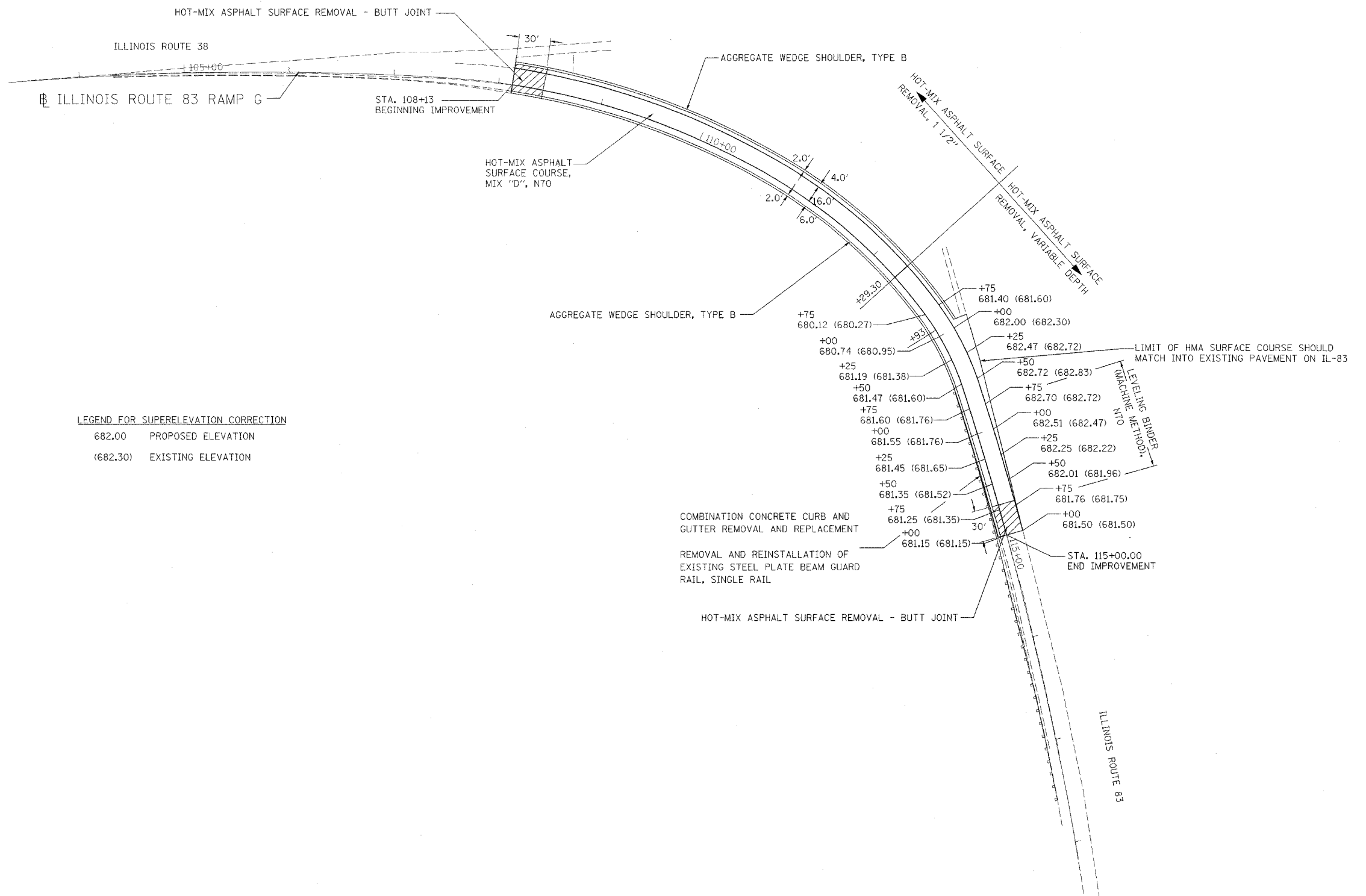


PROPOSED TYPICAL RAMP G SECTION
 STA. 112+29.30 TO STA. 113+75



PROPOSED TYPICAL RAMP G SECTION
 STA. 113+75 TO STA. 115+00

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LEGEND FOR SUPERELEVATION CORRECTION
 682.00 PROPOSED ELEVATION
 (682.30) EXISTING ELEVATION

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Ciorba Group, Inc.
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	DRAWN - MLB	REVISED -
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PLOT DATE = 10/29/2007	DATE - 9/19/2007	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**FAP ROUTE 347
 ILLINOIS ROUTE 38
 PROPOSED ROADWAY**

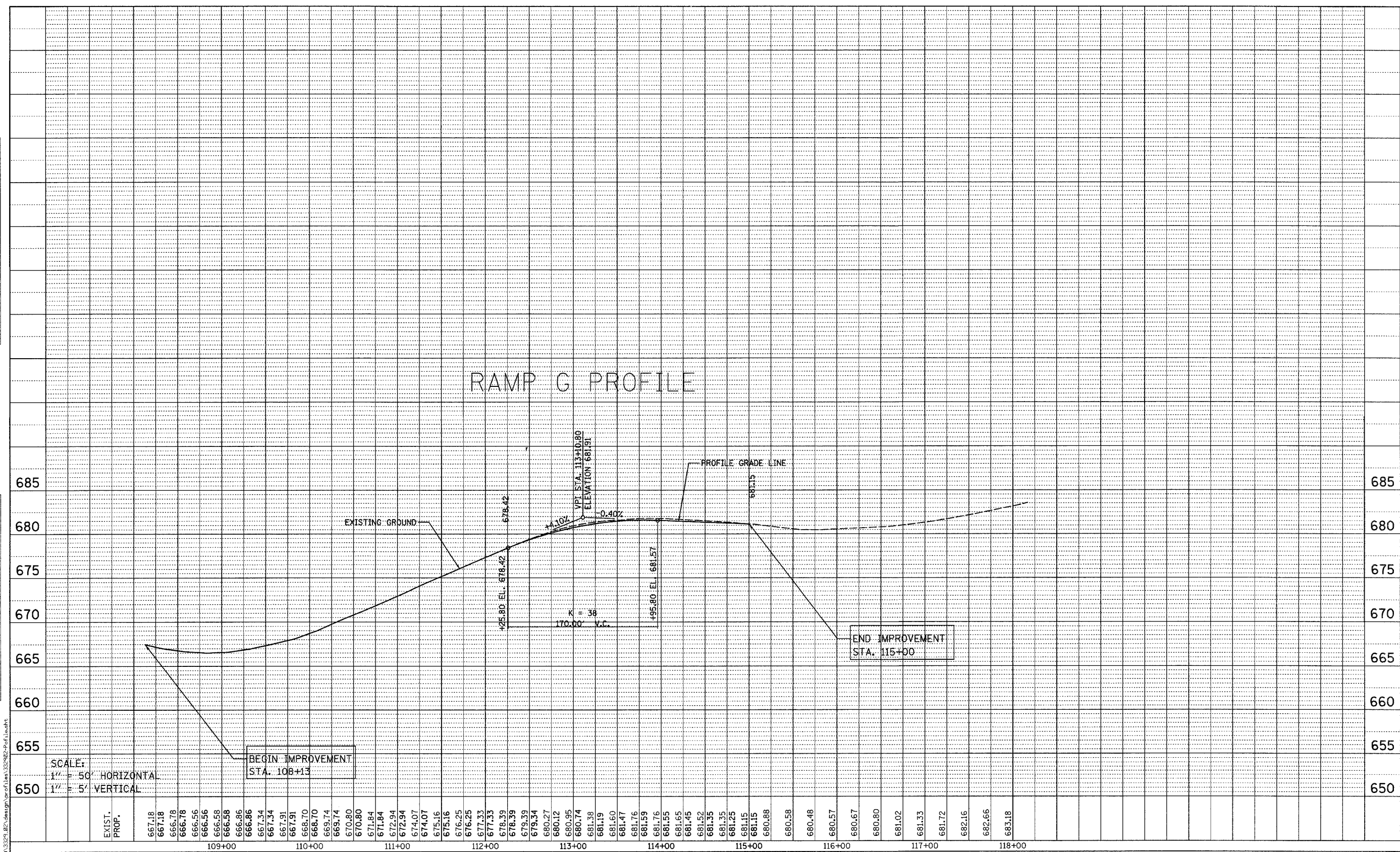
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F.A.P. RTE. 347	SECTION (C&J) R-RS-2	COUNTY DU PAGE	TOTAL SHEETS 18	SHEET NO. 6
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60D42	

PLAN	DESIGNED	BY	DATE
NOTE BOOK NO.	ALIGNED		
	PLOTTED		
	CHECKED		
	FILE NAME		

PROFILE	DESIGNED	BY	DATE
NOTE BOOK NO.	ALIGNED		
	PLOTTED		
	CHECKED		
	FILE NAME		

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SCALE:
 1" = 50' HORIZONTAL
 1" = 5' VERTICAL

EXIST. PROP.
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 682.16
 682.66
 682.66
 683.18
 683.18

BEGIN IMPROVEMENT
 STA. 108+13

END IMPROVEMENT
 STA. 115+00

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 CONSULTING ENGINEERS
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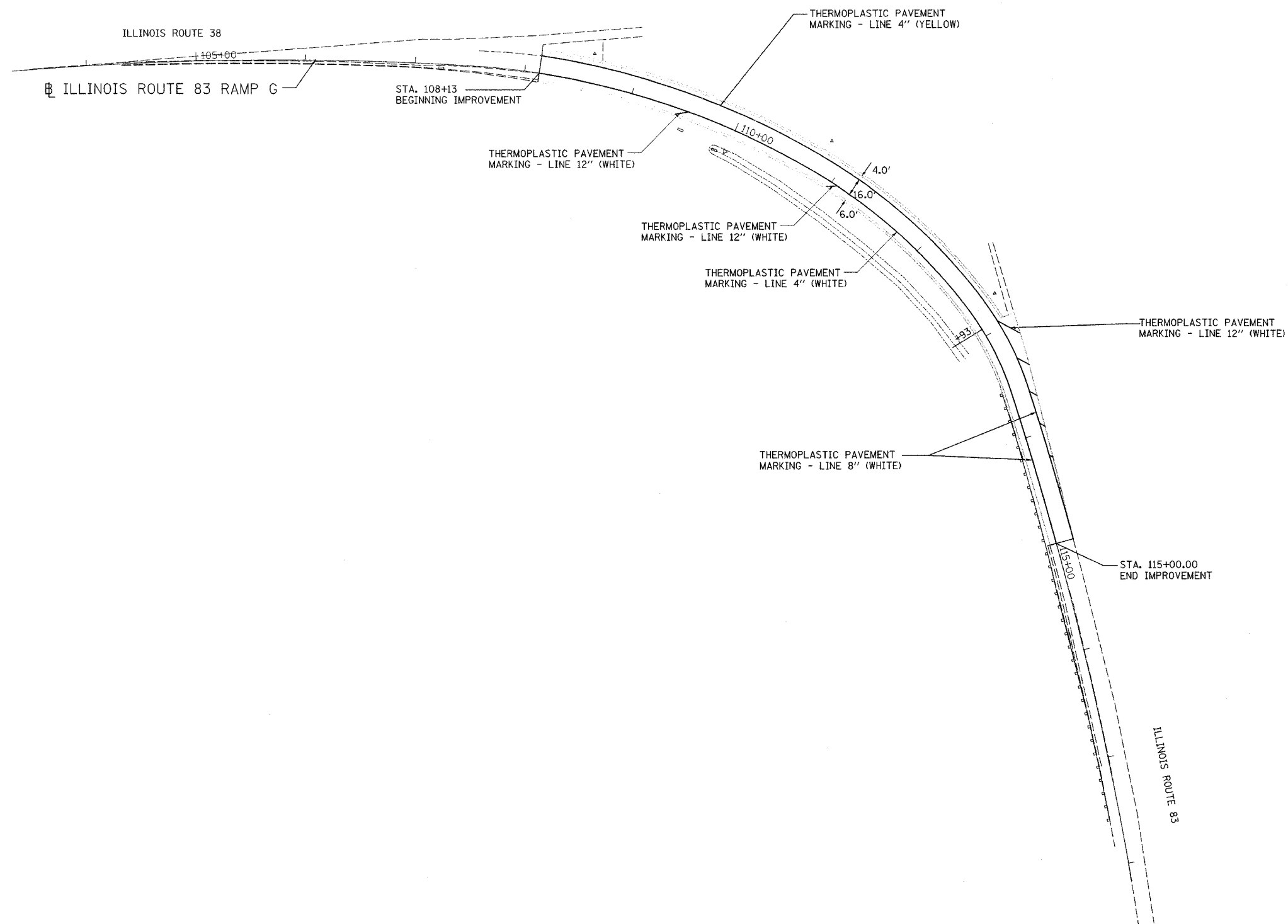
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	DATE = 9/19/2007	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**FAP ROUTE 347
 ILLINOIS ROUTE 38
 RAMP G PROFILE**

SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(C&J) R-RS-2	DU PAGE	18	7
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
CONTRACT NO. 60D42				



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	DRAWN - MLB	REVISED -
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PLOT DATE = 10/25/2007	DATE - 9/19/2007	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

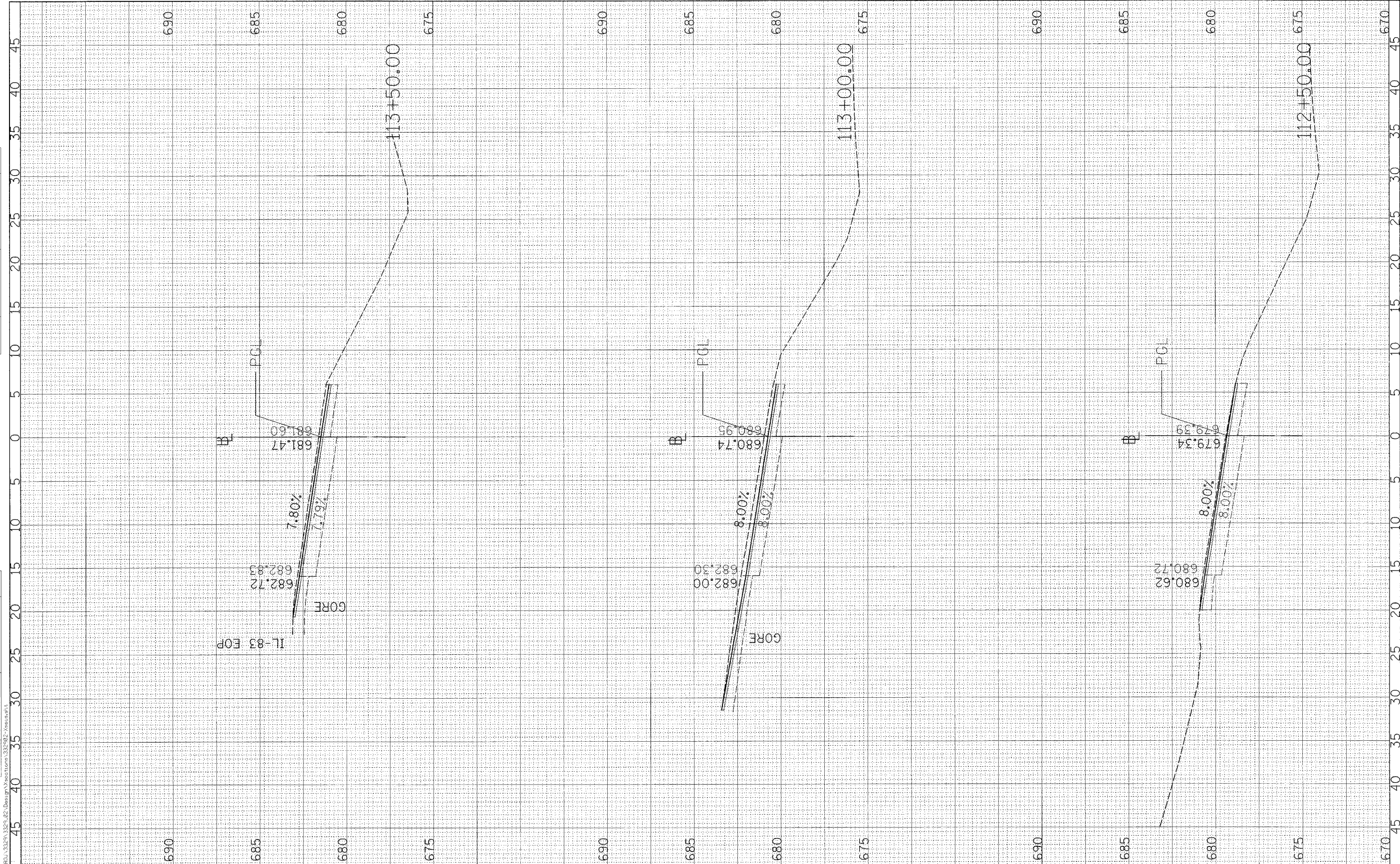
**FAP ROUTE 347
 ILLINOIS ROUTE 38
 PAVEMENT MARKING PLAN**

SCALE: 1"=50' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(C&J) R-RS-2	DU PAGE	18	8
CONTRACT NO. 60D42				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

FINAL SURVEY	DATE
NO. _____	_____
BY _____	
DESIGNED	DATE
DRAWN	_____
CHECKED	_____
REVISIONS	

ORIGINAL SURVEY	DATE
NO. _____	_____
BY _____	
DESIGNED	DATE
DRAWN	_____
CHECKED	_____
REVISIONS	



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 Tel. 773.775.4009 Fax 773.775.4014

USER NAME = w1ancaster	DESIGNED -	REVISED -
PLOT SCALE = 5,0000' / IN.	DRAWN -	REVISED -
PLOT DATE = 10/25/2007	CHECKED -	REVISED -
	DATE = 9/19/2007	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

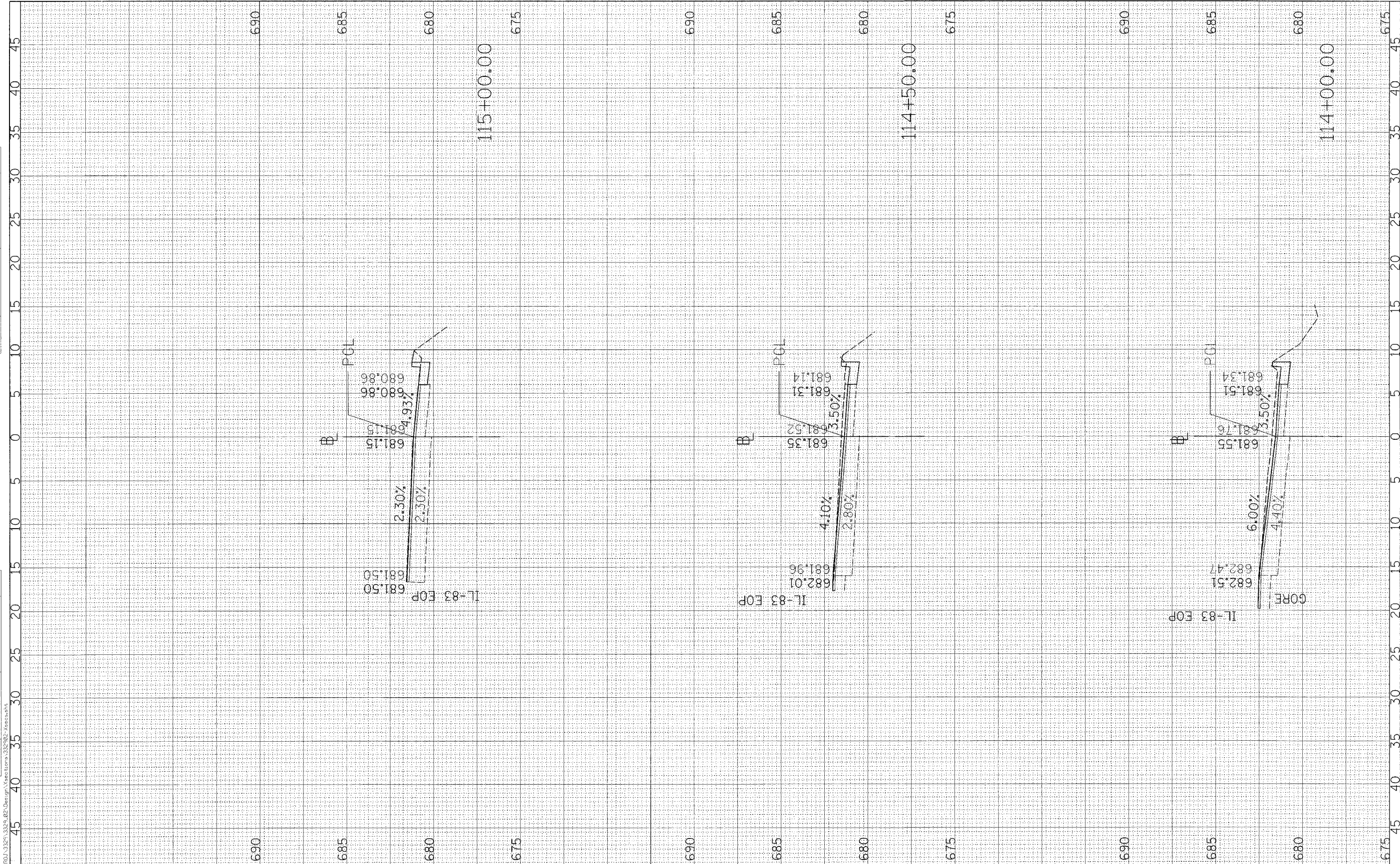
**FAP ROUTE 347
 ILLINOIS ROUTE 38
 CROSS SECTIONS**

SCALE: SHEET NO. 1 OF 2 SHEETS STA. 112+50 TO STA. 113+50

F.A. RTE. 347	SECTION (C&J) R-RS-2	COUNTY DU PAGE	TOTAL SHEETS 18	SHEET NO. 10
CONTRACT NO. 60D42				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

FINAL SURVEY	DATE
REVISED	BY
TEMPLATE	
AREAS	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
REVISED	BY
TEMPLATE	
AREAS	
AREAS CHECKED	



Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue, Suite 402
 Chicago, Illinois 60666
 Tel. 773.775.4009 Fax 773.775.4014

USER NAME = wlancaester	DESIGNED - WBL	REVISED -
PLOT SCALE = 5.0000' / IN.	DRAWN - WBL	REVISED -
PLOT DATE = 10/25/2007	CHECKED - MJL	REVISED -
	DATE - 9/19/2007	REVISED -

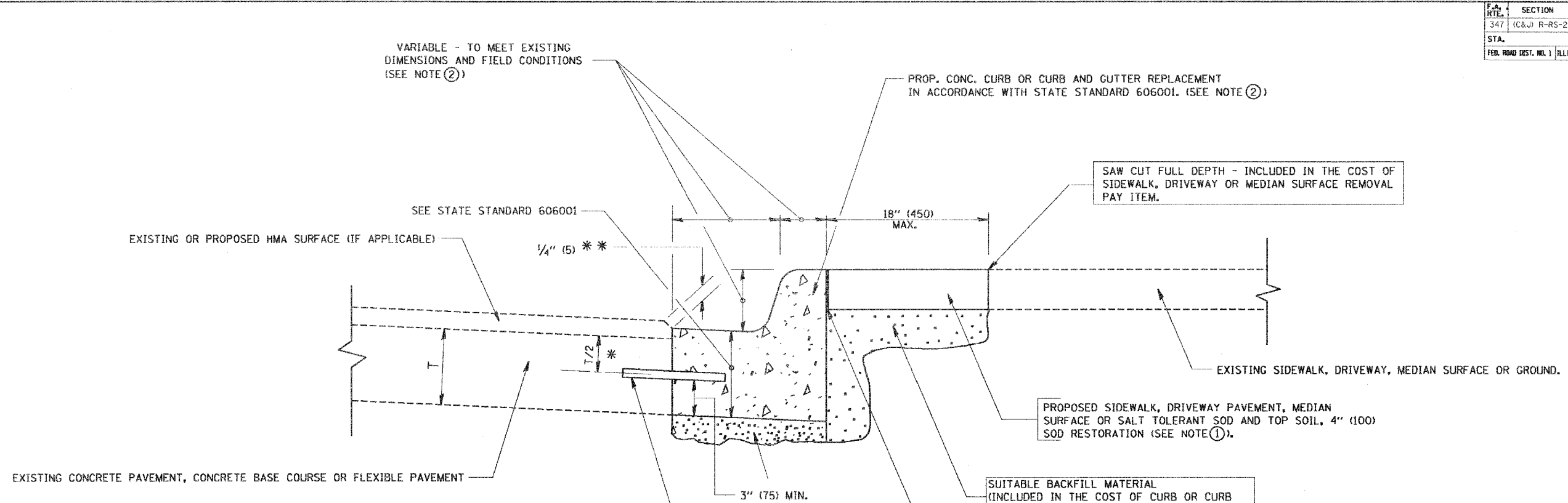
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**FAP ROUTE 347
 ILLINOIS ROUTE 38
 CROSS SECTIONS**

SCALE: NO SCALE SHEET NO. 2 OF 2 SHEETS STA. 114+00 TO STA. 115+00

F.A. RTE. 347	SECTION (C&J) R-RS-2	COUNTY DU PAGE	TOTAL SHEETS 18	SHEET NO. 11
CONTRACT NO. 60D42				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(C&J) R-RS-2	DU PAGE	18	12
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		



* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

** IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.

SALT TOLERANT SOD AND TOP SOIL, 4" (100) RESTORATION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

② CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

③ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

④ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

⑤ THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.

⑥ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.

⑦ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.

REMOVAL AND REPLACEMENT 4" (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

REMOVAL AND REPLACEMENT IN EXCESS OF 4" (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

PROPOSED #6 (20) EPOXY COATED TIE BARS 24" (600) LONG AT 24" (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USUABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

BASIS OF PAYMENT:
THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
A. HOUSEH	03/11/94
R. SHAH	02/24/96
R. SHAH	03/02/96
R. SHAH	08/19/96
R. SHAH	09/12/96
R. SHAH	09/19/96
R. SHAH	10/03/96
A. ABBAS	03/21/97
M. GOMEZ	01/22/01
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

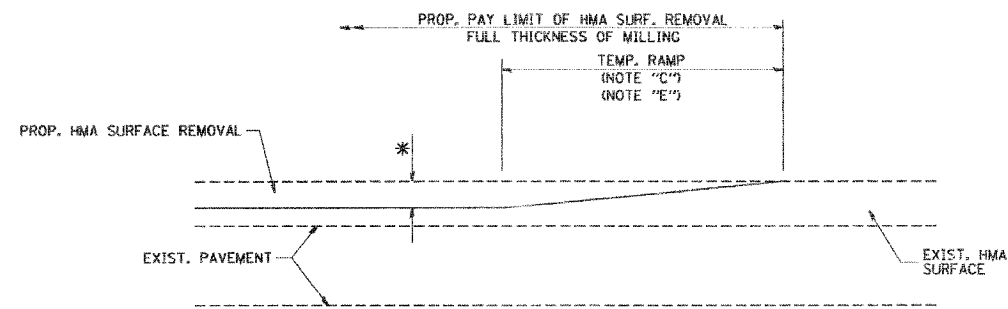
CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

SCALE: VERT. NONE
HORIZ. NONE
DRAWN BY
CHECKED BY
BD600-06 (BD-24)

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

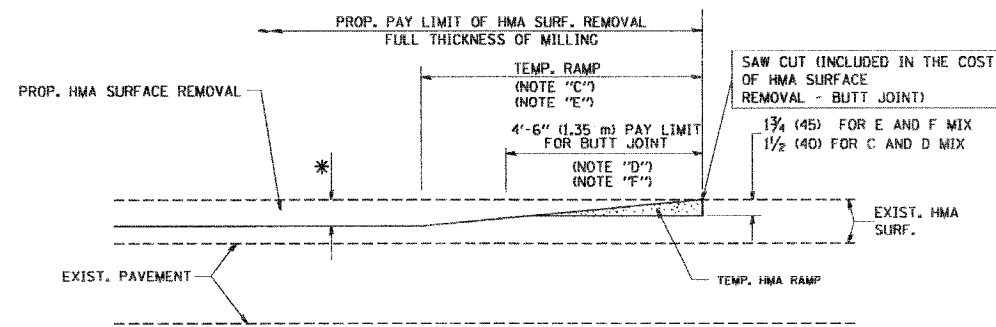
PLT DATE: 3/1/2007
FILE NAME: K:\dms\60d42.dgn
PLOT SCALE: 80000 / 1 IN.
USER NAME: bborod

CONTRACT NO. 60042			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
347	(C&J) R-RS-2	DU PAGE	18
STA.	TO STA.		SHEET NO.
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	13



MILLED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

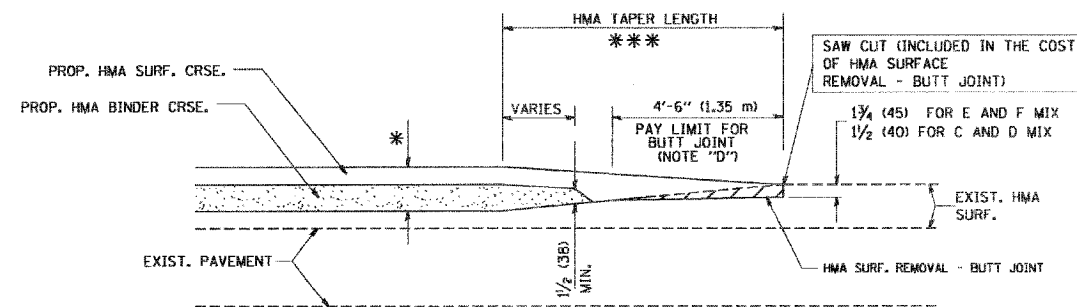
OPTION 1



HMA CONSTRUCTED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

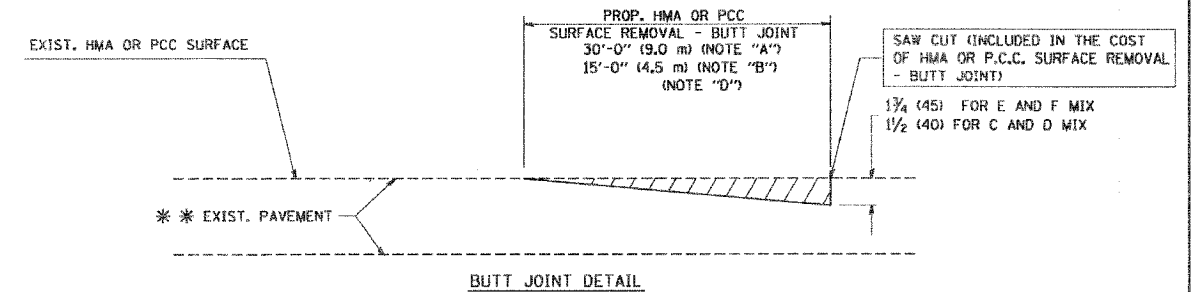
OPTION 2

TYPICAL TEMPORARY RAMP

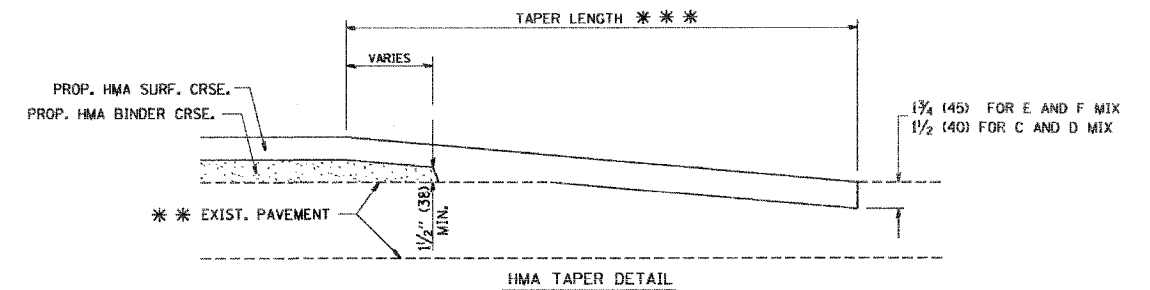


BUTT JOINT AND
HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER
FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



TYPICAL BUTT JOINT AND HMA TAPER
FOR RESURFACING ONLY

*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
- G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

*** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01
R. BORD	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND
HMA TAPER
DETAILS

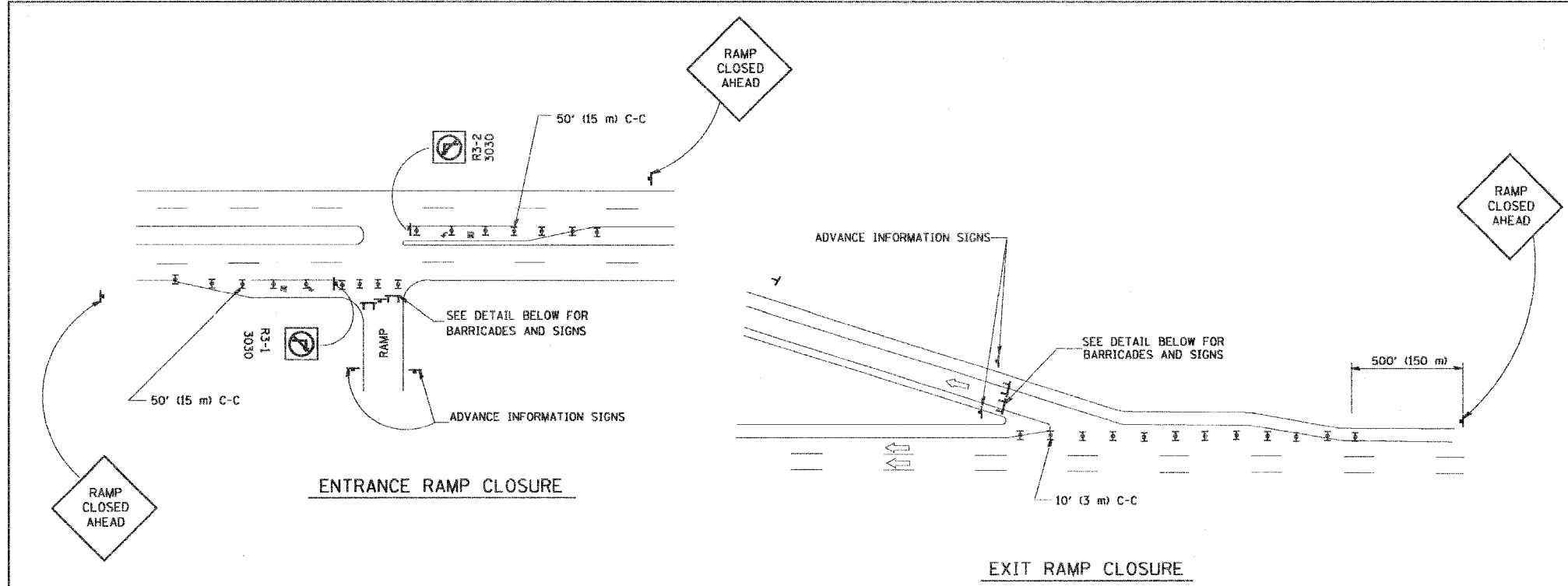
SCALE: VERT. NONE
HORIZ.

DRAWN BY
CHECKED BY

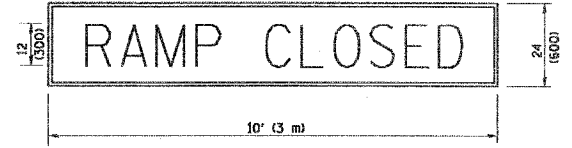
BD400-05 (VI-6032)

PLOT DATE = 2/01/2007
FILE NAME = K:\Roadwork\60042\BDD400-05.dwg
USER NAME = R. BORD
PLOT SCALE = 1/8"=1'-0"

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(C&J) R-RS-2	DU PAGE	18	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

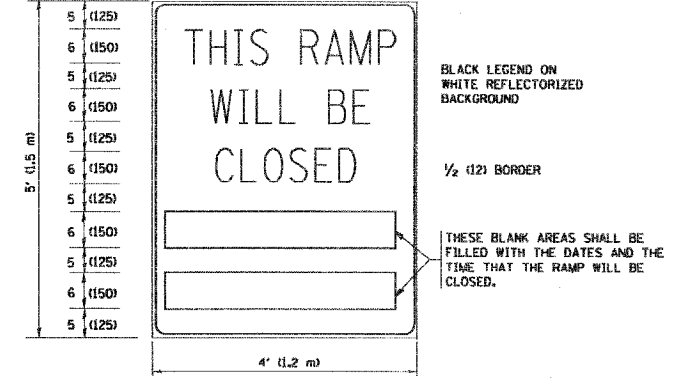


RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE REFLECTORIZED BACKGROUND
1 (25) BORDER
THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR THE CLOSED EXIT RAMP.

RAMP CLOSURE ADVANCE INFORMATION SIGN

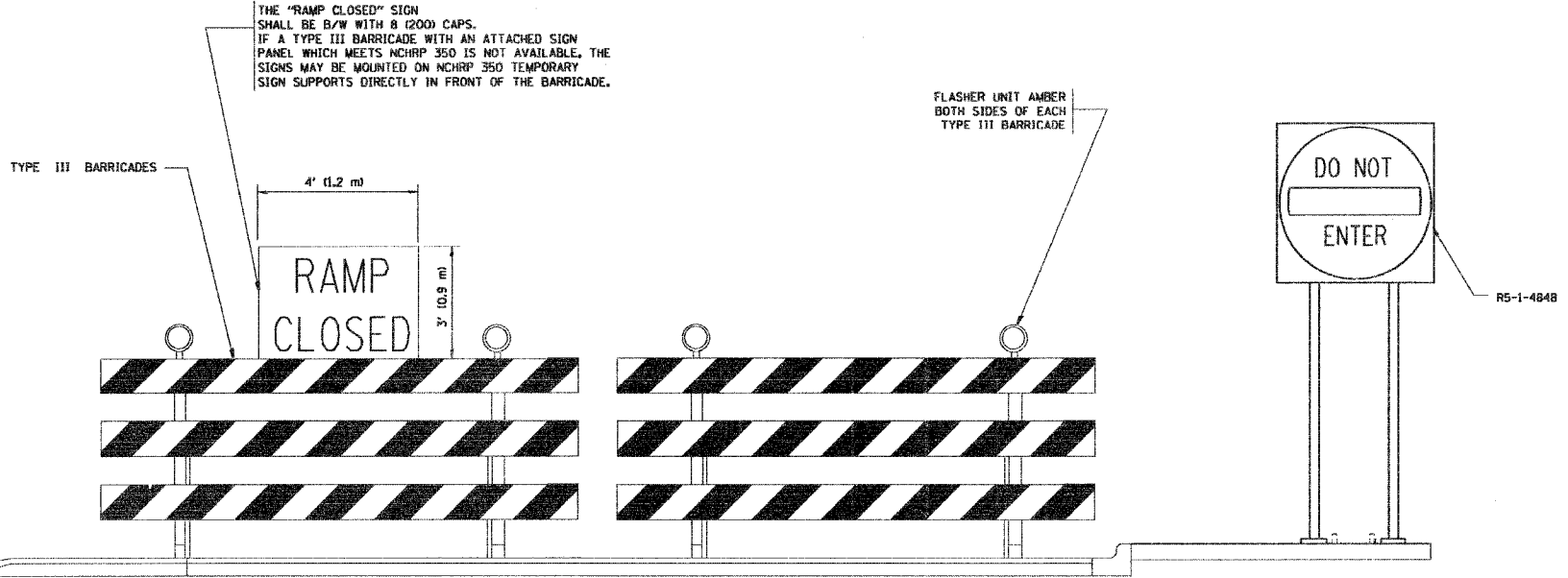


THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

GENERAL NOTES:

- CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES.
- ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED.
- THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED TWENTY FOUR (24) HOURS IN LENGTH.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



DETAIL FOR REQUIRED BARRICADES & SIGNS

- SYMBOLS**
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
 - TYPE III BARRICADE WITH FLASHING LIGHT

REVISIONS	
NAME	DATE
DWS	2-83
DWS	1/90
DWS	9/94
DWS	12/94
DWS/JAF	12/02
JAF	2/06
SPB	1/07
Revise devices to meet NCHRP 350	4/03

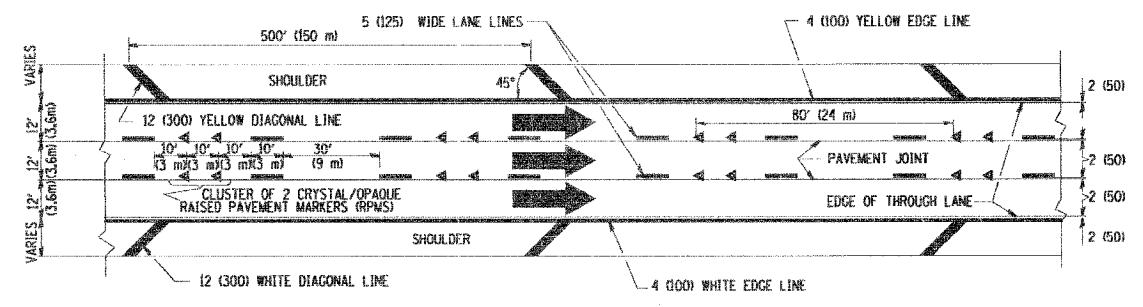
ILLINOIS DEPARTMENT OF TRANSPORTATION
FREWAY ENTRANCE AND EXIT RAMP CLOSURE DETAILS

SCALE: NONE
DRAWN BY
CHECKED BY

PLOT DATE: 3/16/07
FILE NAME: K:\projects\60d42\plan\60d42_14.dwg
PLOT SCALE: 1/8"=1'-0"
USER NAME: bbarrett

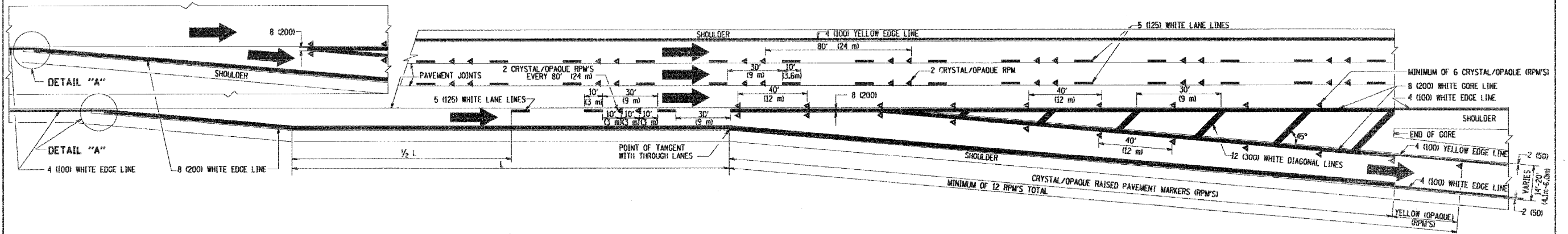
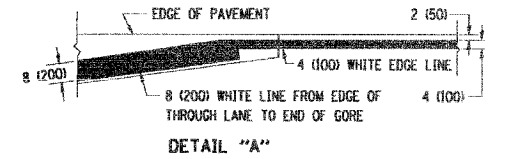
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(C&J) R-RS-2	DU PAGE	18	15
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS IN LENGTH
THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 6' (1.8 m) OR LESS IN WIDTH

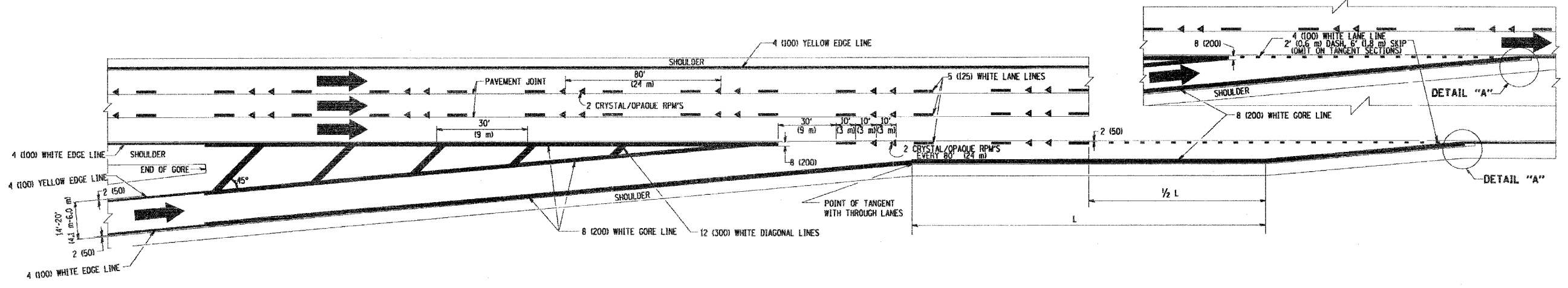


TYPICAL EDGE LINES & LANE LINES

- NOTES:
1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON BITUMINOUS PAVEMENT ONLY.
 2. PREFORMED PLASTIC TYPE B PAVEMENT MARKING LINE SHALL BE USED FOR ALL LANE LINES ON BITUMINOUS PAVEMENT
 3. POLYUREA PAVEMENT MARKING SHALL BE USED FOR ALL MARKINGS ON PCC



TYPICAL EXIT RAMP PAVEMENT MARKINGS



TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS

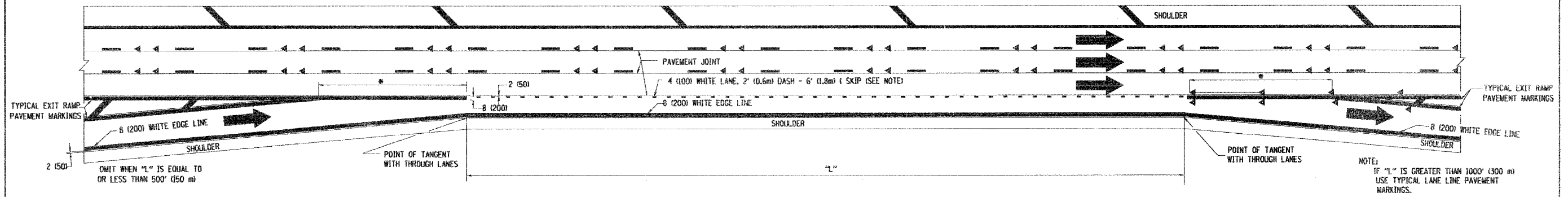
REVISIONS	
NAME	DATE
DWS	1/90
DWS	5/91
AH	3/96
DWS	7/96
JAF	2/06
SPB	1/07

ILLINOIS DEPARTMENT OF TRANSPORTATION
MULTI-LANE FREEWAY
PAVEMENT MARKING
DETAILS

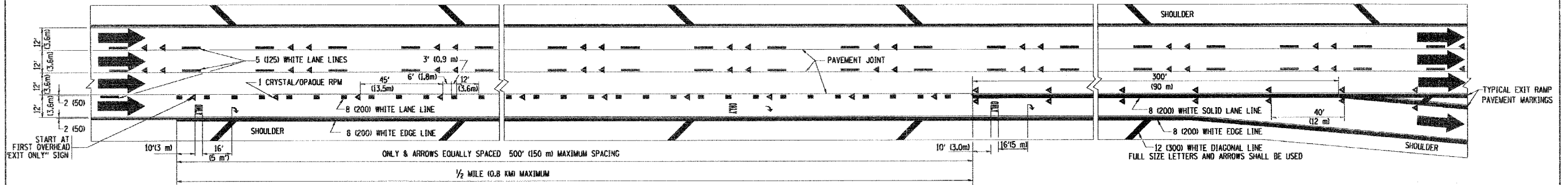
SCALE: NONE
DRAWN BY C.A.D.D.
CHECKED BY
TC12 SHEET 1 OF 2

PLOT DATE = 3/20/07
FILE NAME = D:\CADD\112401
PLOT SCALE = 0.5000' / 1" = 12.0000'
USER NAME = bennet-01

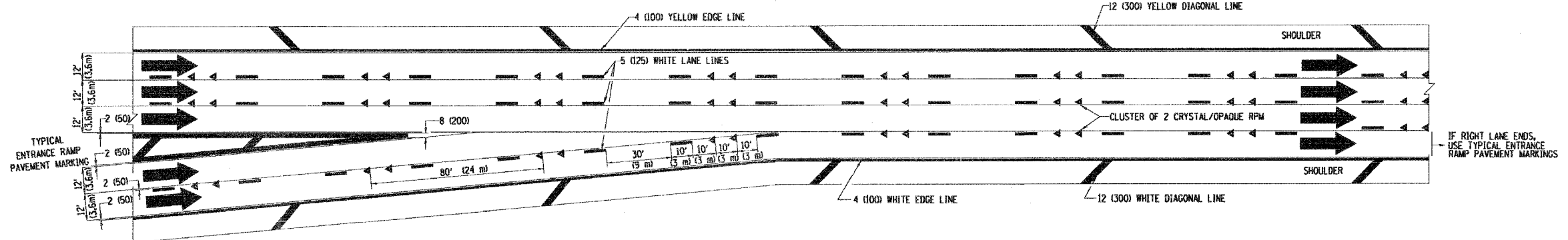
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(C&J) R-RS-2	DU PAGE	18	16
STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		



TYPICAL ENTRANCE/EXIT RAMP COMBINATION PAVEMENT MARKINGS



TYPICAL EXIT ONLY LANE PAVEMENT MARKINGS



TYPICAL TWO LANE ENTRANCE RAMP PAVEMENT MARKINGS

REVISIONS	
NAME	DATE
DWS	1/30
DWS	5/31
SPB	1/07

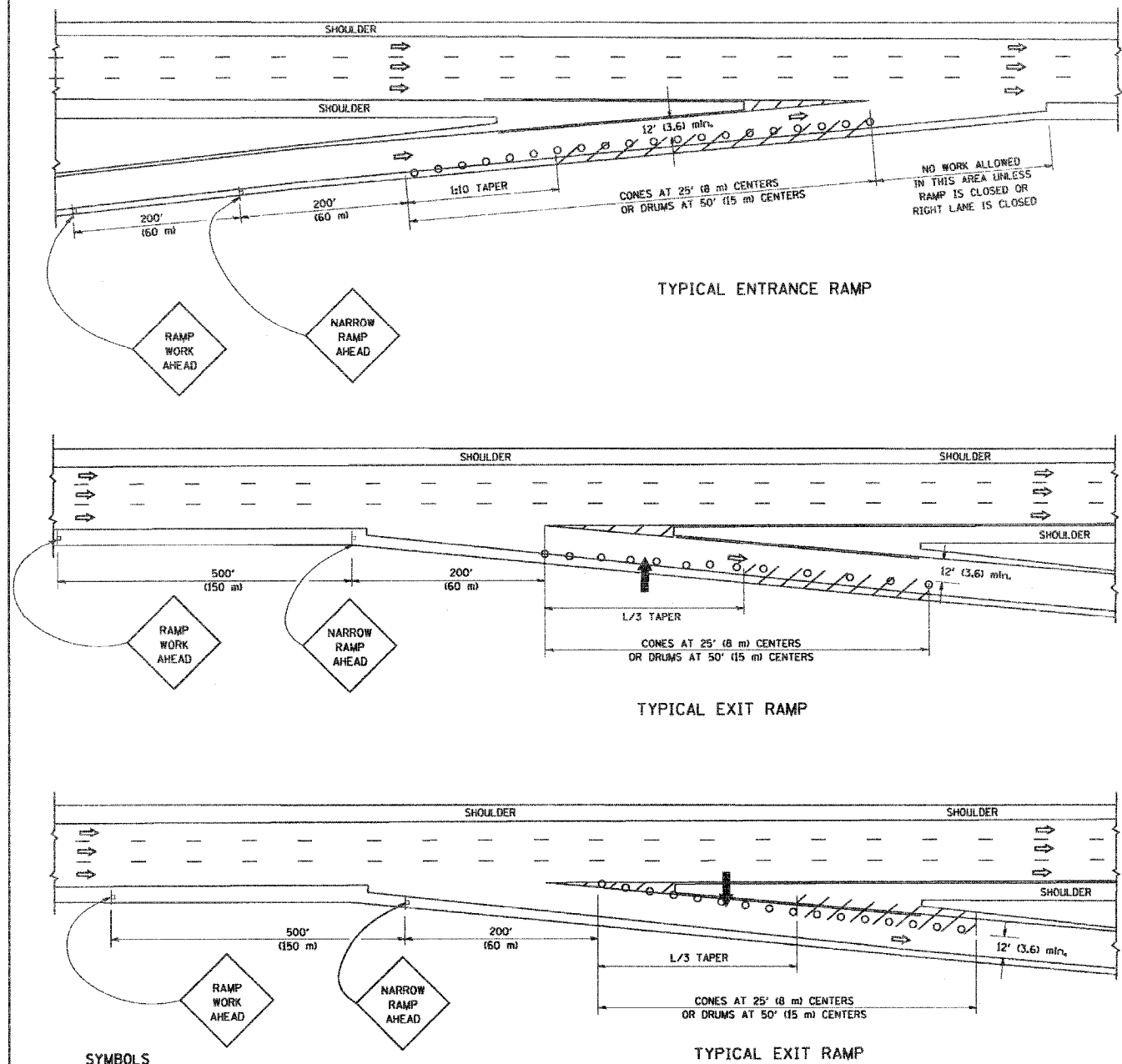
ILLINOIS DEPARTMENT OF TRANSPORTATION
 MULTI-LANE FREEWAY
 PAVEMENT MARKING
 DETAILS
 SCALE: NONE
 DRAWN BY C.A.D.D.
 CHECKED BY
 TC12 SHEET 2 OF 2

PLOT DATE: 3/14/2007
 FILE NAME: K:\highway\60d42.dgn
 PLOT SCALE: 0.8000 / 1x
 USER NAME: bauerd

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(C&J) R-RS-2	DU PAGE	18	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CREATED: 03-23-95

PARTIAL RAMP CLOSURE DETAILS



SYMBOLS

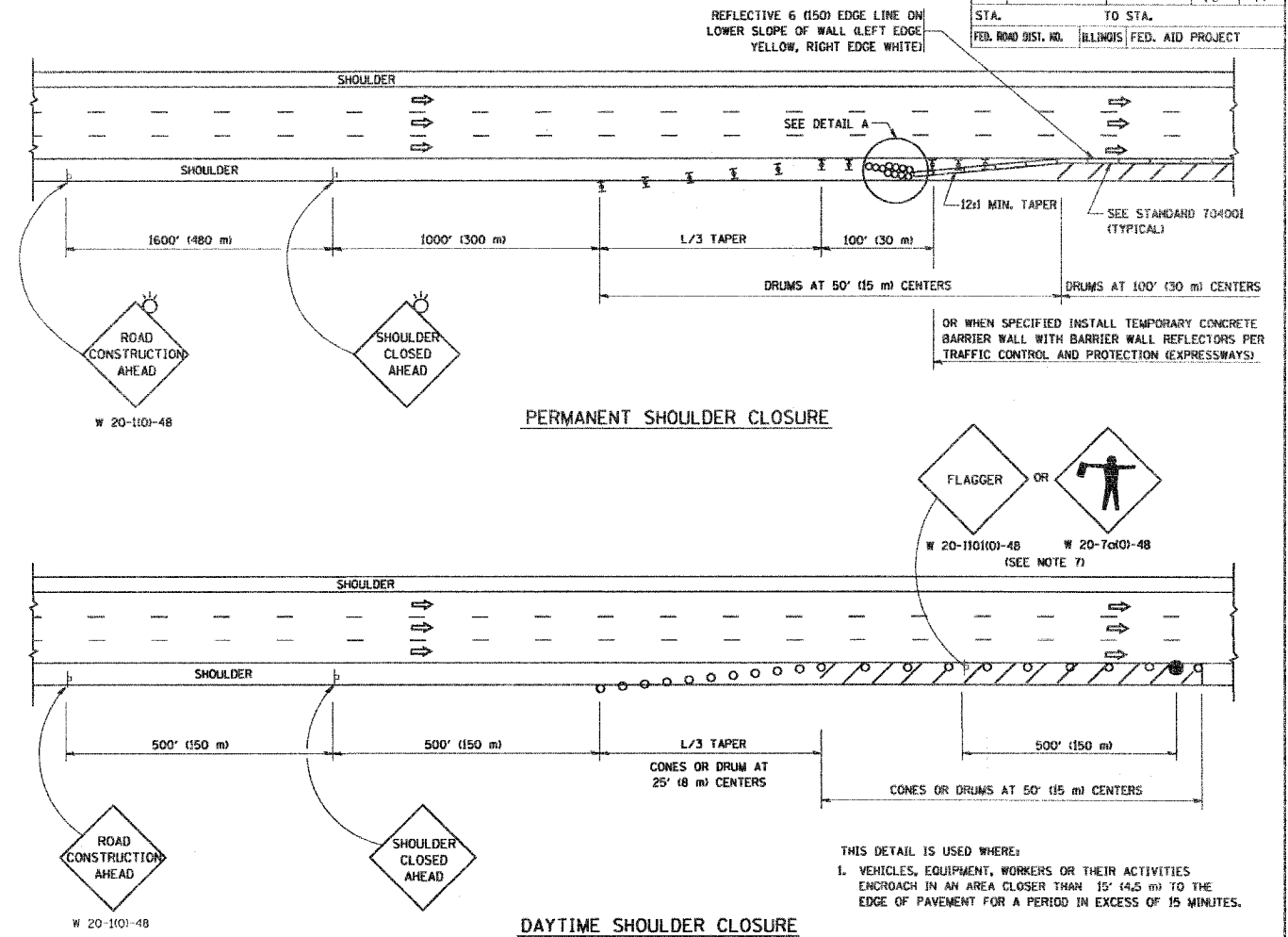
- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

GENERAL NOTES

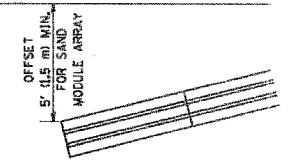
1. THE "L" DISTANCE EQUALS:

SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC: $L=0.65(W)(S)$ ENGLISH: $L=(W)(S)$
W = WIDTH OF OFFSET IN FEET (METERS)	
S = NORMAL POSTED SPEED MPH (KM/H)	
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

SHOULDER CLOSURE DETAILS



ARRAY DESIGN PER MANUFACTURER TO BE NCHRP 350 COMPLIANT FOR POSTED SPEED.



DETAIL "A" IMPACT ATTENUATOR, TEMPORARY (SEE NOTE 5)

5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE "TRAFFIC BARRIER TERMINAL, TYPE III, TEMPORARY" DEVICE TO MEET NCHRP350 FOR POSTED SPEED.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
 - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
 - b. THE WORK ACTIVITY REQUIRES FREQUENT ENCR OACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.

REVISIONS	
NAME	DATE
DWS	11/96
JAF	12/02
NCHRP 350	04/03
JAF	2/06
SPB	1/07

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

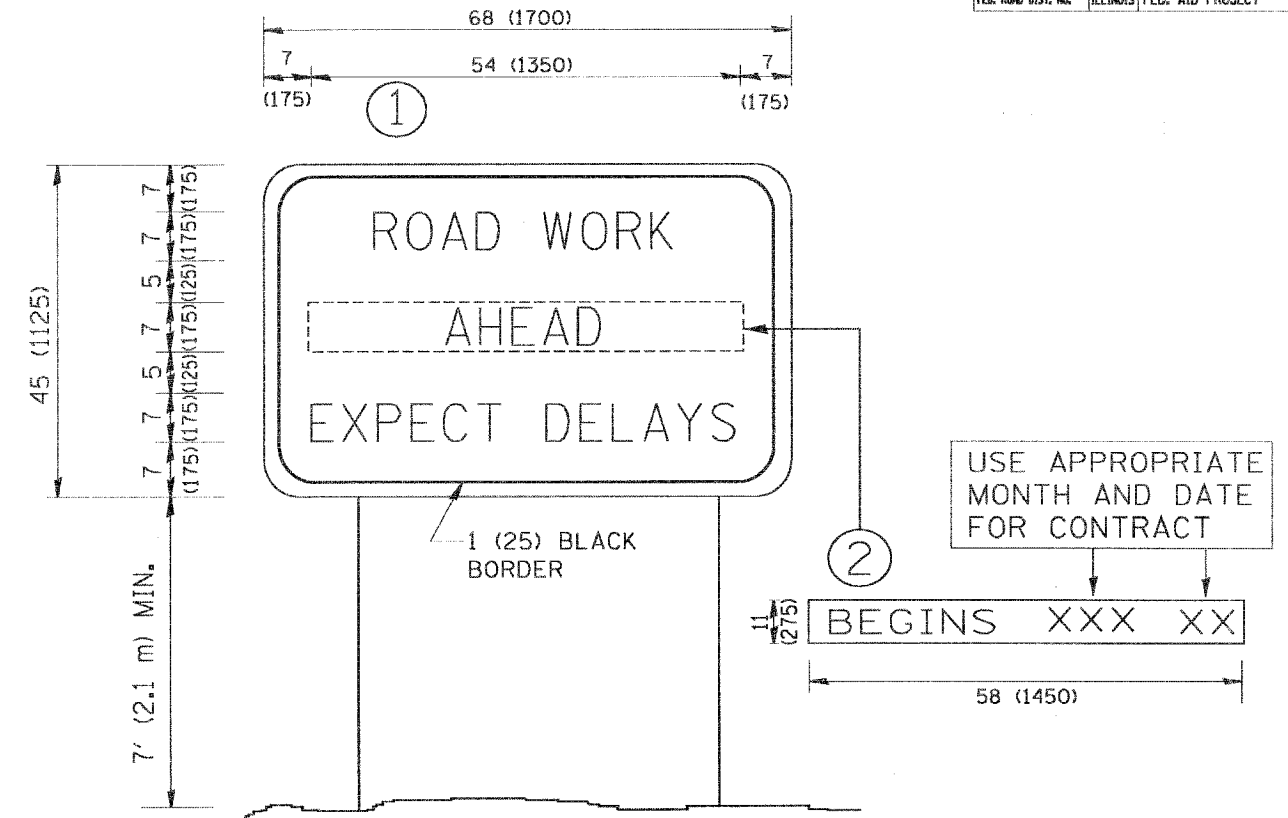
ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES

SCALE: NONE

DESIGNED BY: DWS
 DRAWN BY:
 CHECKED BY:
 TC-17

PLOT DATE = 3/7/2007
 FILE NAME = R:\NCHRP350\17.dwg
 PLOT SCALE = 0.800000 / 1.000000
 USER NAME = bawerel

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(C&J) R-RS-2	DU PAGE	12	18
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
R. MIRS	9-15-97
R. MIRS	12-11-97
T. RAMMACHER	2-2-99
C. JUCIUS	1-31-07

ILLINOIS DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN

SCALE: NONE

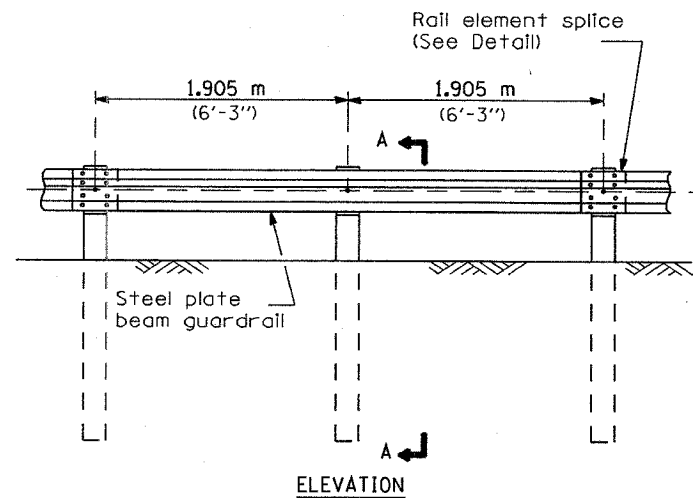
DRAWN BY DESIGN
CHECKED BY

TC22

PLOT DATE = 3/10/2007
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PLOT SCALE = DBE800 * / IN.
CUBET NAME = baward

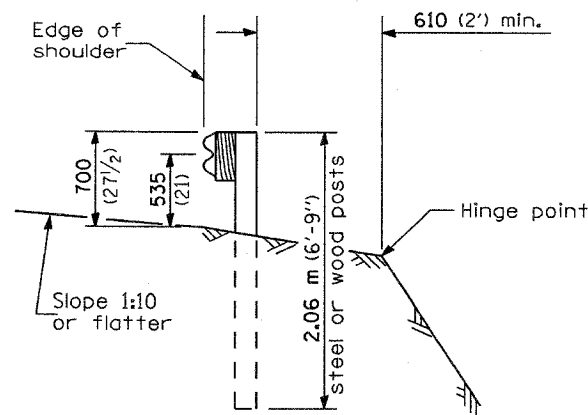
F.A.P. RYE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(C&U)R-RS-2	DeWitt	18	18A
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

Contract 60042

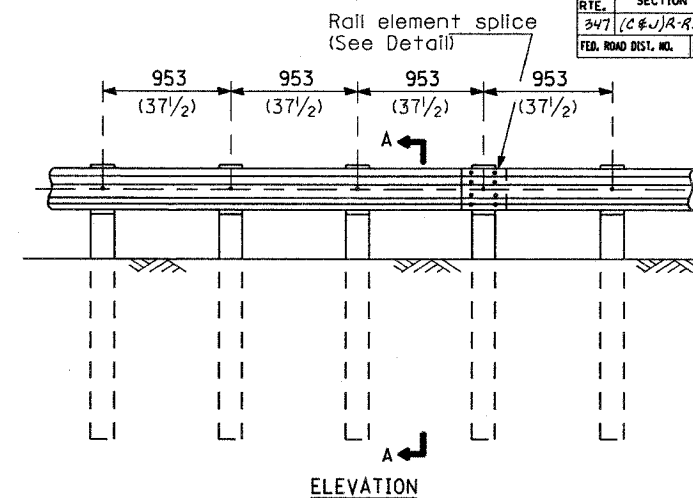


TYPE A

1.905 m (6'-3") Typical post spacing

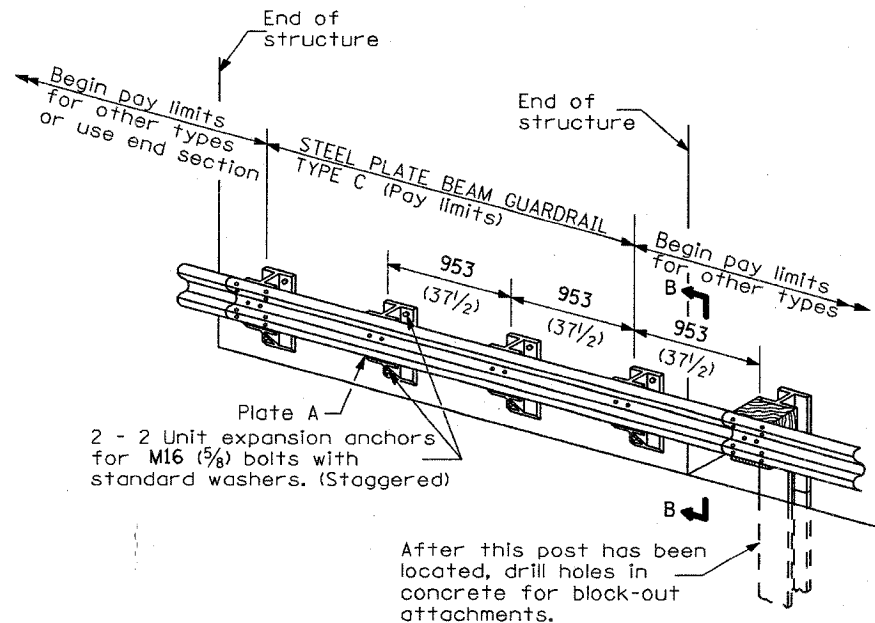


SECTION A-A



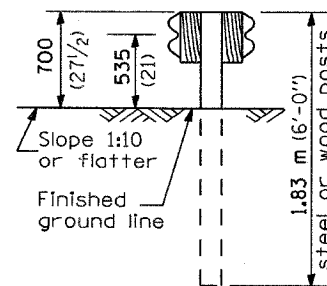
TYPE B

953 (37 1/2) Closed post spacing

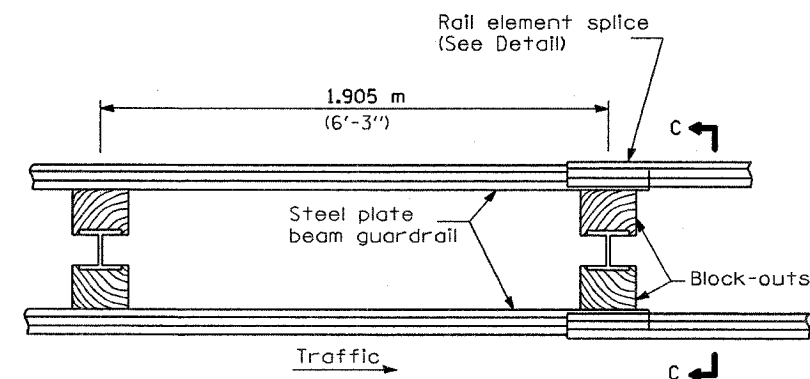


TYPE C

953 (37 1/2) Block-out spacing



SECTION C-C



PLAN

TYPE D

Double steel plate beam guardrail
1.905 m (6'-3") typical post spacing

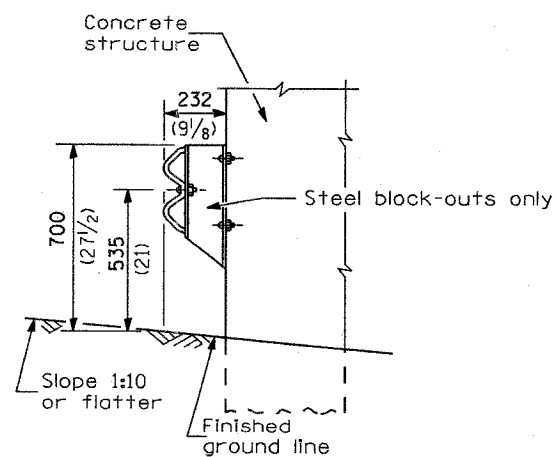
GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in millimeters (inches) unless otherwise shown.

The existing steel posts may be drilled to match the bolt pattern shown herein for the wood block-out, or a new steel post shall be provided.

This detail is applicable to the guardrail system used prior to January 1, 2007. For details on the Midwest Guardrail System, see Standard 630001.



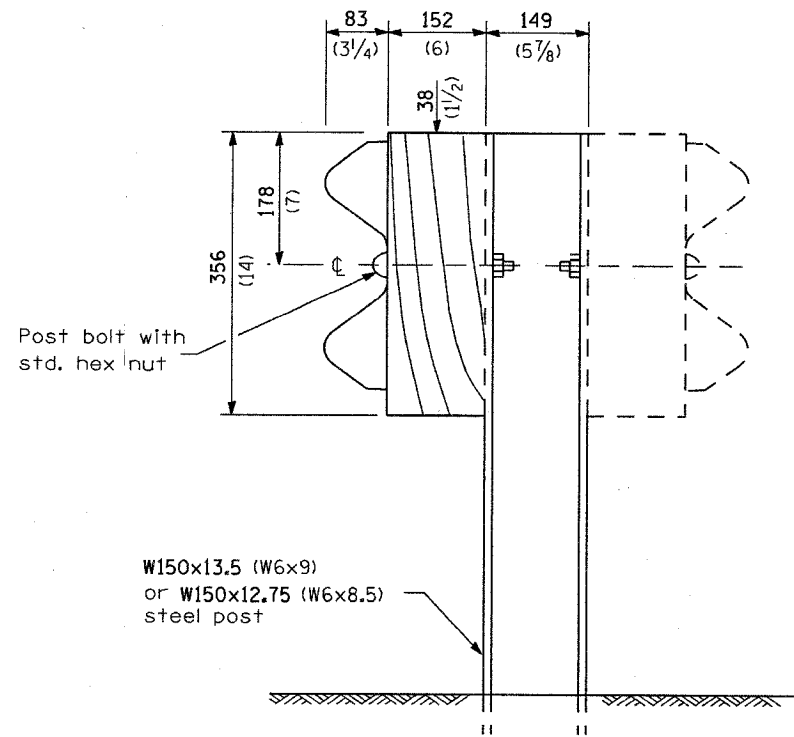
SECTION B-B

**REMOVE AND REERECT
STEEL PLATE BEAM GUARDRAIL**

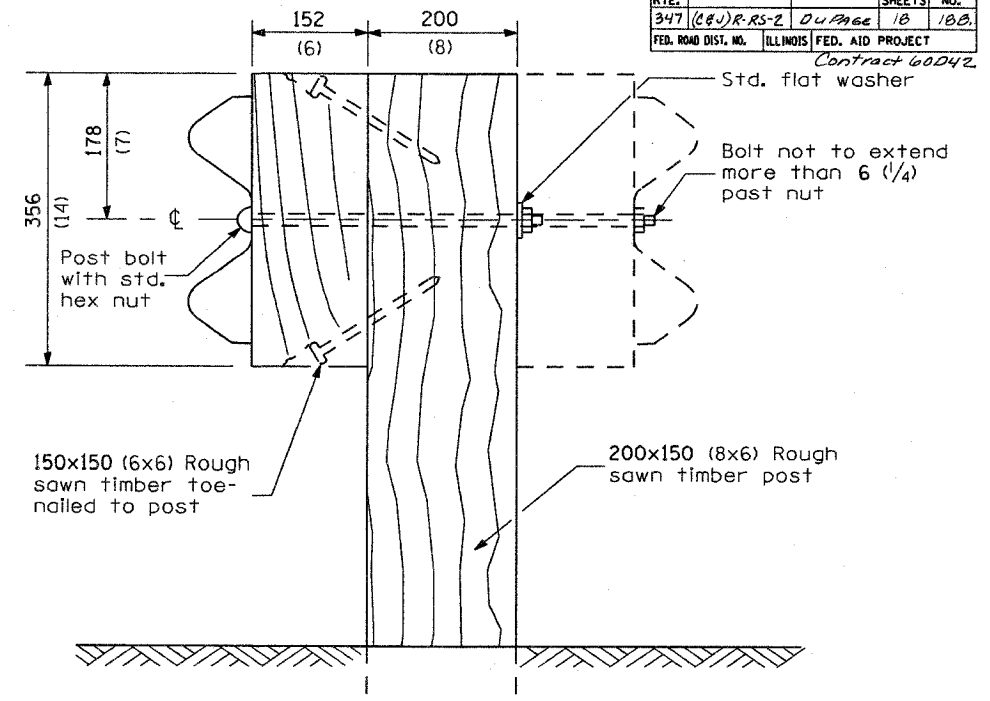
(Sheet 1 of 4)

DETAIL

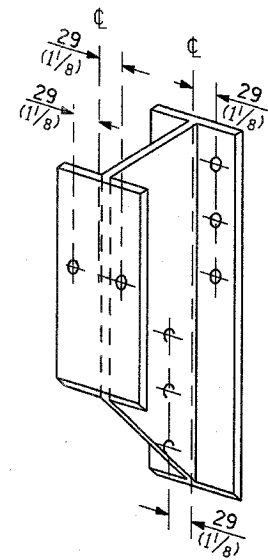
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(64)R-RS-2	DuPage	18	10B.
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
Contract 60D42				



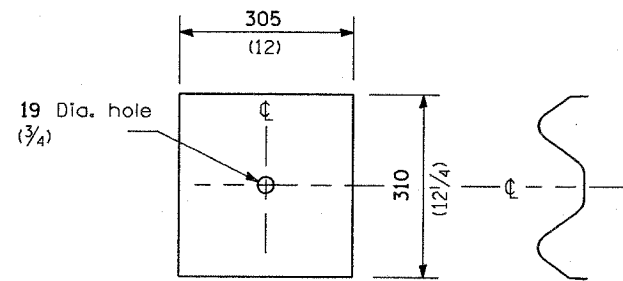
STEEL POST CONSTRUCTION



WOOD POST CONSTRUCTION



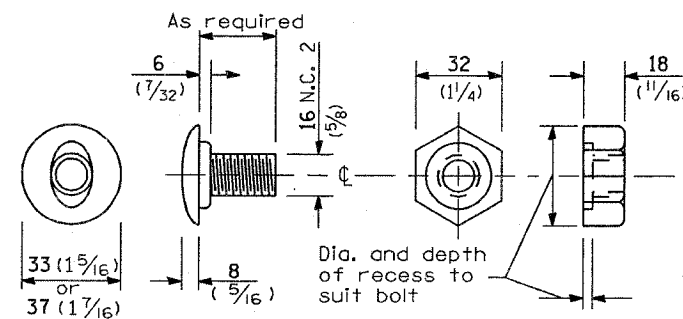
STEEL BLOCK-OUT DETAIL



NOTE

Plate A shall be placed between rail element and block-out at non-splice mounting points only when steel block-outs are used.

PLATE A



POST OR SPLICE BOLT & NUT

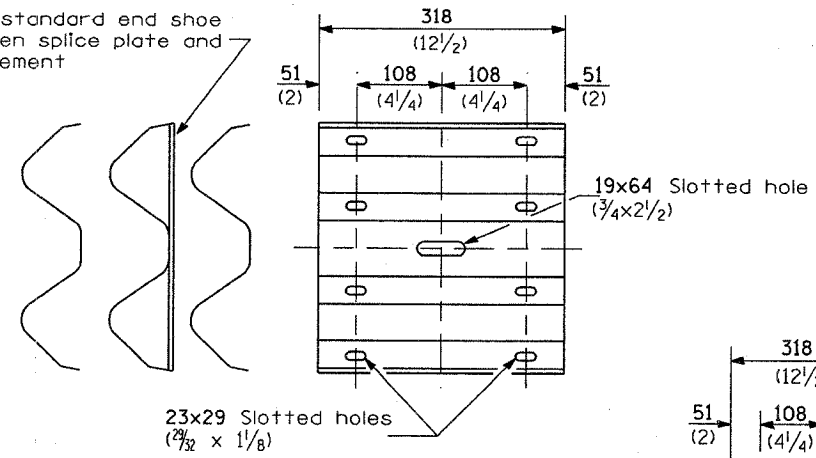
**REMOVE AND REERECT
STEEL PLATE BEAM GUARDRAIL**

(Sheet 2 of 4)

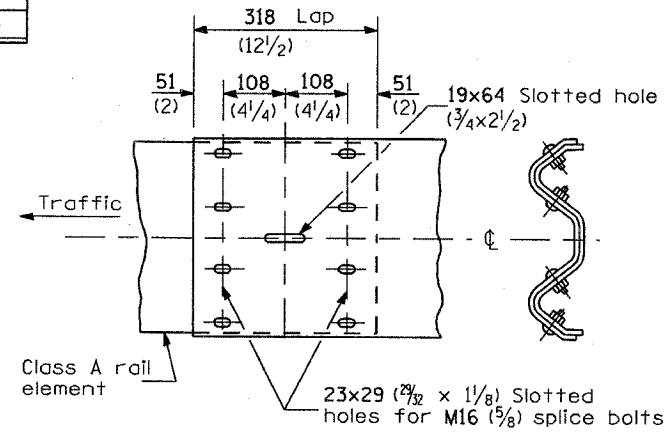
DETAIL

F.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	(C.B.) R.R.S-2	DU PAGE	18	18C
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			Contract 60040	

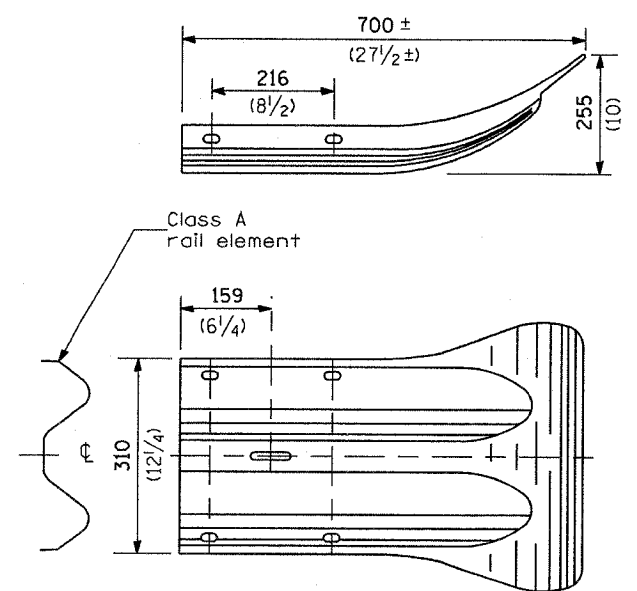
Place standard end shoe between splice plate and rail element



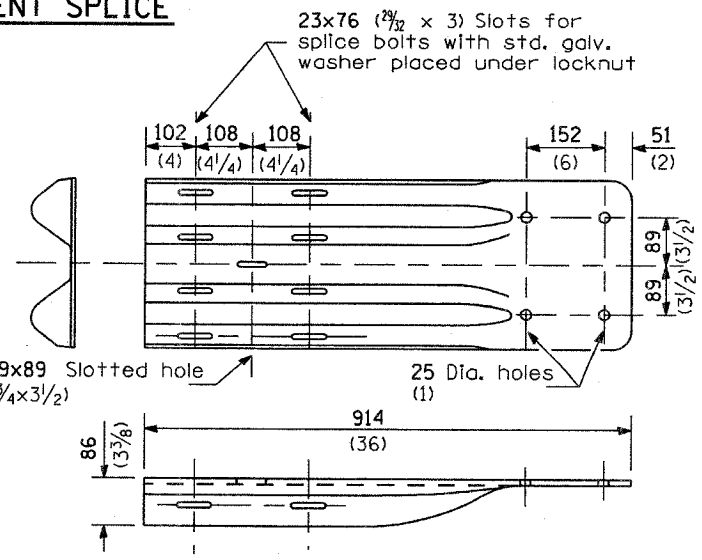
SPLICE PLATE



RAIL ELEMENT SPLICE



END SECTION



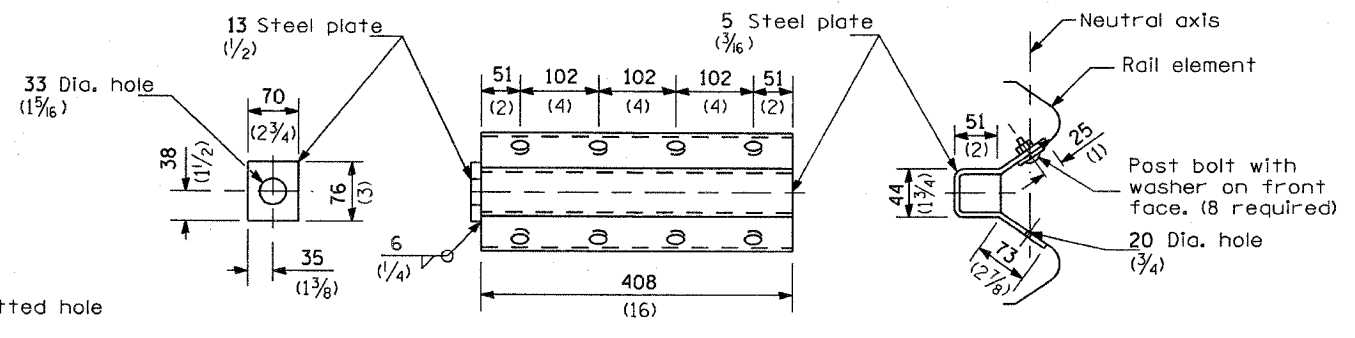
NOTE

When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

Externally threaded studs protruding from the surface of the concrete will not be permitted.

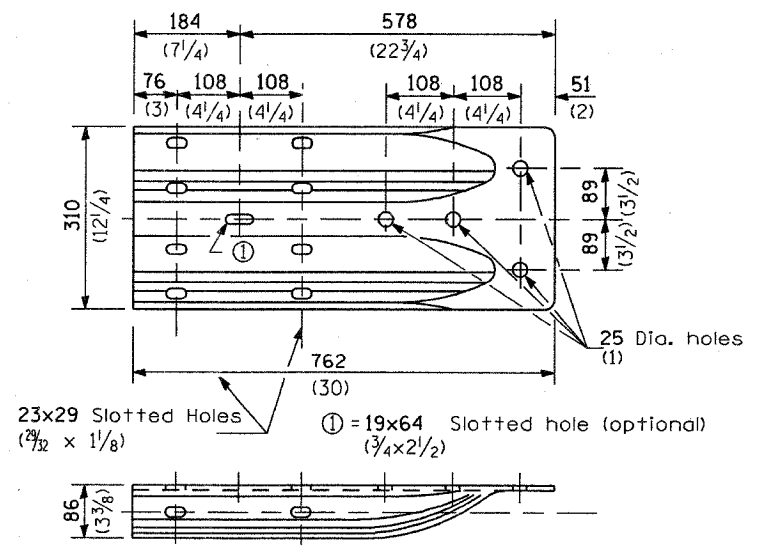
END SHOE



NOTE

Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

ANCHOR PLATE T DETAILS

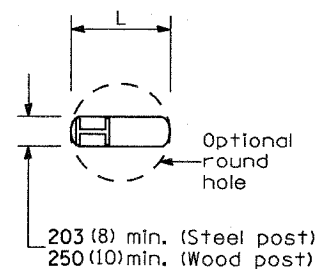


ALTERNATE END SHOE

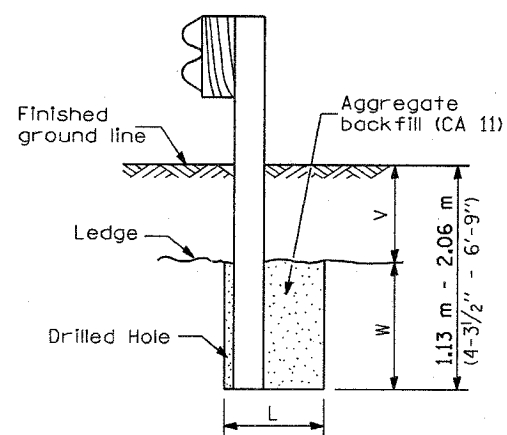
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

(Sheet 3 of 4)

DETAIL



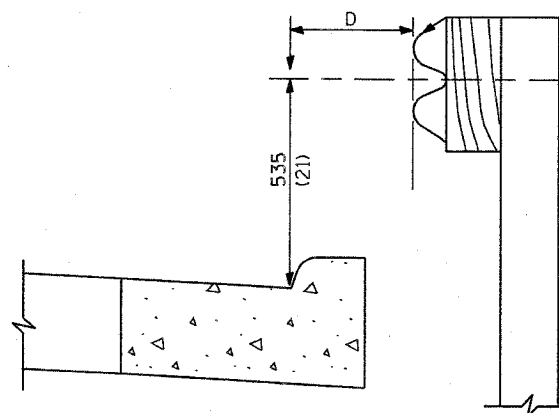
PLAN



Note:
Ledge line is top of rock ledge or hard slag fill.

ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

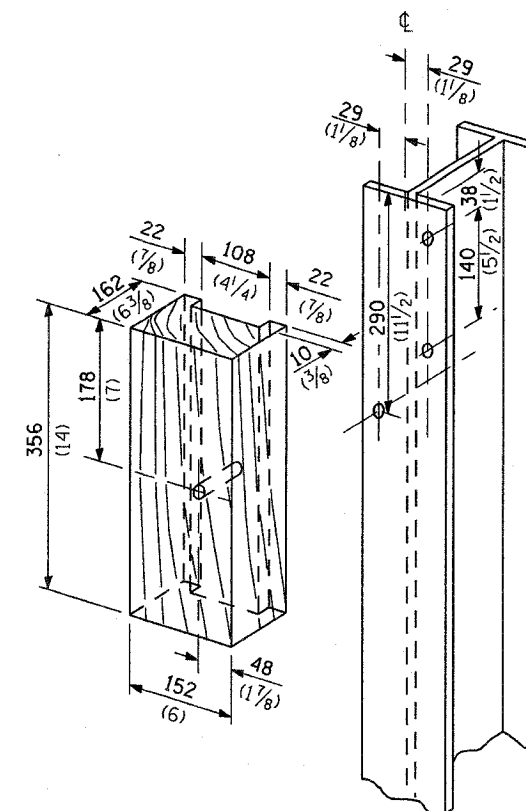


Note:
If it is necessary for D to be more than 300 (12) and less than 3.0 m (10'-0") type M-5 (M-2) curb and gutter (Std. 606001) shall be used in front of and in advance of the guardrail.

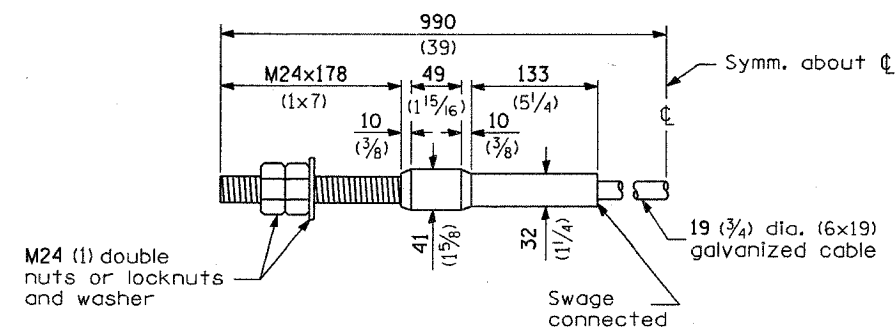
GUARDRAIL PLACED BEHIND CURB

(D = 0 desirable to 300 (12) maximum)

V	W	L	
		Steel Post	Wood Post
0 - 460 (0 - 18)	610 (24)	530 (21)	580 (23)
>460 - 825 (>18 - 41.5)	305 (12)	203 (8)	250 (10)
>825 - 1.13 m (>41.5 - 53.5)	305 - 0 (12 - 0)	203 (8)	250 (10)



WOOD BLOCK-OUT AND STEEL POST DETAILS



CABLE ASSEMBLY

(18,100 kg (40,000 lbs.) min. breaking strength)
Tighten to taut tension.

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

(Sheet 4 of 4)

DETAIL