

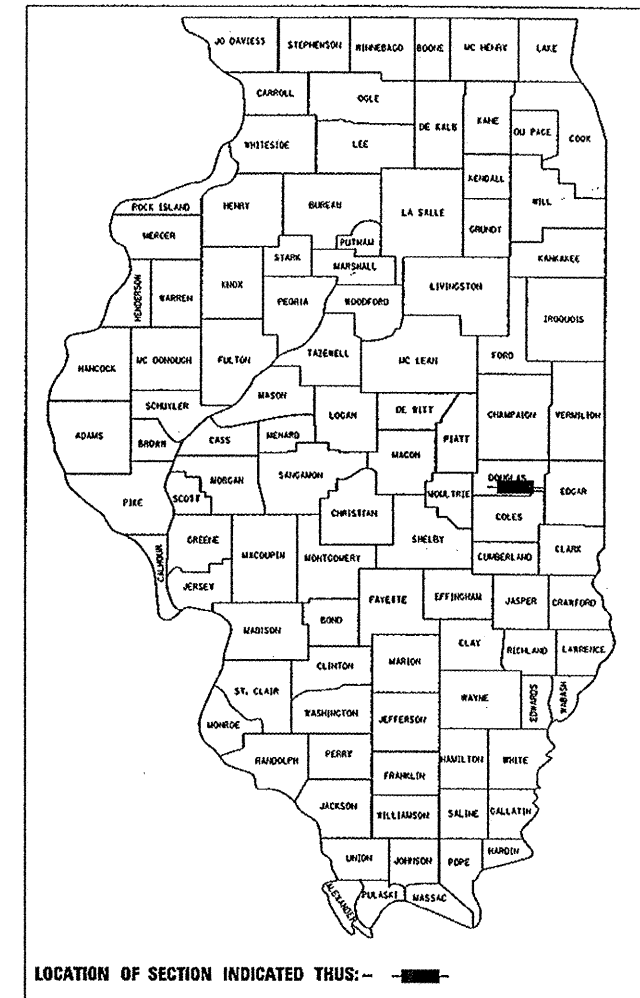
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 323 (US 36)
SECTION (145,146)CR
PROJECT ACNHF-0323(028)
DOUGLAS COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	1
		ILLINOIS	CONTRACT NO. 70696	

D-95-076-07



FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3 & 4

STRUCTURE INFORMATION

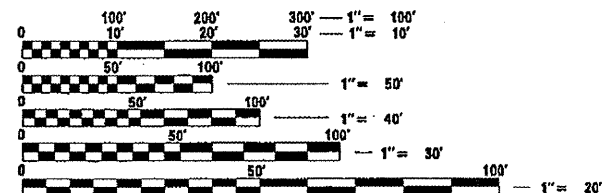
S.N.	SCOPE OF WORK
021-8021	CULVERT REPLACEMENT
021-8022	CULVERT REPLACEMENT
021-8024	CULVERT REPLACEMENT

C-95-076-07
CULVERT REPLACEMENT

DITCH 3.3 MI & 4.3 MI E OF CAMARGO & W OF NEWMAN

CURRENT ADT:	
ADT IS FOR ALL THREE BOX CULVERTS	
CURRENT ADT =	2,600 (2008)
20 YR ADT =	3,100 (2028)
PI & PC % =	80.2
SU % =	6.5
MUZ =	13.3

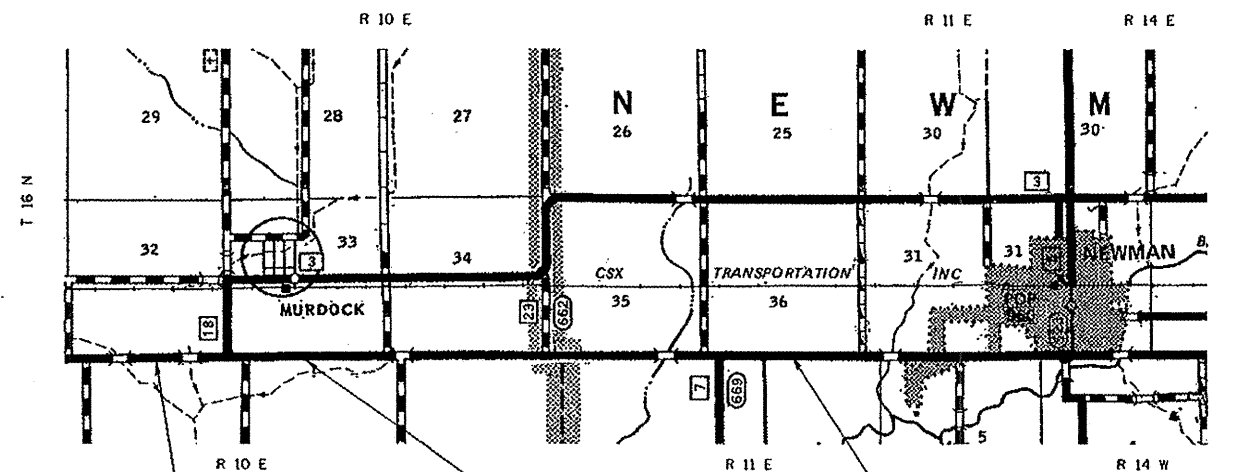
DESIGN DESIGNATION
OTHER PRINCIPAL ARTERIAL



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
NEWMAN & MURDOCK TOWNSHIPS

PROJECT ENGINEER : KEVIN TRAPP (217) 465-4181
PROJECT MANAGER : JEFF SHERER
DESIGNER : RANDY AUSTIN
CONTRACT NO. 70696



EXIST. S.N. 021-8021
PROP. S.N. 021-8052
CULVERT NO. 1
STATION 504+56.81
PROP. PC BOX CULVERT
1 @ 8' X 3' X 62'
W / CIP END SECTIONS

EXIST. S.N. 021-8022
PROP. S.N. 021-8053
CULVERT NO. 2
STATION 557+90.90
PROP. PC BOX CULVERT
2 @ 8' X 3' X 62'
W / CIP END SECTIONS

EXIST. S.N. 021-8024
PROP. S.N. 021-8054
CULVERT NO. 3
STATION 719+50.50
PROP. PC BOX CULVERT
1 & 12' X 4' X 62'
W / CIP END SECTIONS

GROSS & NET LENGTH = 91.6 FT. = 0.017 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 3/12/2010
Joselle A. Coover
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 7 2010
Scott E. Hill
ENGINEER OF DESIGN AND ENVIRONMENT

May 7 2010
Christine M. Rood
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

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20-24	DETAILS OF A.R. CULVERT NO. 3
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HIGHWAY STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
442201-03	CLASS C AND D PATCHES
515001-03	NAME PLATE FOR BRIDGES
701006-03	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO EDGE OF PAVEMENT FOR SPEEDS \geq 45 MPH
701011-02	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-03	
701901-01	TRAFFIC CONTROL DEVICES
780001-02	TYPICAL PAVEMENT MARKINGS

FILE NAME = c:\pwwork\pwwid01\BUCKLESJJ\d0134382\05	USER NAME = bucklesjj 70696-sh1-gennote.dgn	DESIGNED - R. AUSTIN	REVISED -
		DRAWN - CADD	REVISED -
	PLOT SCALE = 40,0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/22/2010	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

INDEX OF SHEETS AND HIGHWAY STANDARDS

SCALE: N/A SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	2
CONTRACT NO. 70696				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

GENERAL NOTES

G. N. -100
ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G. N. -107.31
UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C &/OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY.

UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED.
J. U. L. I. E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800)892-0123.

G. N. -250C
SEEDING, CLASS 7 IS INCLUDED IN THIS CONTRACT TO SEED THE AREAS ASSOCIATED WITH BOX CULVERT REPLACEMENTS DURING TIME PERIODS WHEN PERMANENT SEEDING IS NOT ALLOWED. SOME OR ALL OF THE CLASS 7 SEEDING WILL BE DELETED IF IT IS POSSIBLE TO PLACE PERMANENT SEEDING AT THE TIME OF THEIR COMPLETION.

G. N. -406H

MIXTURE REQUIREMENTS

The following mixture requirements are applicable for this project:

LOCATION	FAP 323 (US 36)	FAP 323 (US 36)
MIXTURE USE	CLASS D PATCH (BOTTOM 8")	CLASS D PATCH (TOP 2")
AC/PG	PG 64-22	PG 64-22
RAP % (MAX)	25	15
DESIGN AIR VOIDS	4.0% @ Ndes = 50	4.0% @ Ndes = 50
MIX COMP (GRADATION)	IL 19.0	IL 9.5
FRICION AGGREGATE	N/A	MIX C

G. N. -540
THE CONTRACTOR SHALL ASSEMBLE AND MATCH-MARK THE PRECAST BOX CULVERT SECTIONS AND END SECTIONS PRIOR TO SHIPMENT OF THESE COMPONENTS FROM THE MANUFACTURER, AND AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER FIT ON EACH JOINT. ANY SECTIONS OR END SECTIONS WHICH DO NOT PROVIDE A PROPER FIT AT THE JOINT SHALL BE REJECTED BY THE ENGINEER AND REPLACED BY THE CONTRACTOR WITH NO ADDITIONAL COMPENSATION BEING ALLOWED.

THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER FOOT FOR PRECAST CONCRETE BOX CULVERTS OF THE SIZE SPECIFIED.

G. N. -1004.01
COARSE AGGREGATE GRADATION CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARD SPECIFICATIONS.

G. N. -Z0038
AN ALUMINUM TABLET OF THE TYPE SHOWN ON STANDARD 667101 SHALL BE PLACED ON THE PROPOSED STRUCTURE AS DIRECTED BY THE ENGINEER. THE BENCH MARK ELEVATION WILL BE ESTABLISHED AND MARKED BY THE DEPARTMENT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR PERMANENT BENCH MARKS.

THERE ARE NO COMMITMENTS ASSOCIATED WITH THIS PROJECT.

FILE NAME =	USER NAME = bucklesjj	DESIGNED - RLA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ct:\pwork\PIWIDOT\BUCKLESJJ\10134382\05	70696-sh1-genote.dgn	DRAWN - RLA	REVISED -			323	(145,146)CR	DOUGLAS	36	3	
	PLOT SCALE = 40.0000' / IN.	CHECKED - JMS	REVISED -			CONTRACT NO. 70696					
	PLOT DATE = 3/22/2010	DATE - 10/8/09	REVISED -			SCALE: N/A	SHEET NO. 1	OF 1	SHEETS	STA.	TO STA.

SUMMARY OF QUANTITIES

FAP 323 (US 36)
DOUGLAS CO.
S.N. 021-8052
S.N. 021-8053
S.N. 021-8054
RURAL TWO -LANE
80% FED.
20% STATE

CODE NO.	ITEM	UNIT	Y007 TOTAL
20400800	FURNISHED EXCAVATION	CU YD	26.0
20700220	POROUS GRANULAR EMBANKMENT	CU YD	140.0
21301052	EXPLORATION TRENCH 52" DEPTH	FOOT	300.0
21400100	GRADING AND SHAPING DITCHES	FOOT	640.0
* 25000200	SEEDING, CLASS 2	ACRE	0.4
* 25000350	SEEDING, CLASS 7	ACRE	0.4
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	35.0
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	35.0
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	35.0
* 25100115	MULCH, METHOD 2	ACRE	0.4
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	38.0
28000305	TEMPORARY DITCH CHECKS	FOOT	144.0
28000400	PERIMETER EROSION BARRIER	FOOT	540.0
28000500	INLET AND PIPE PROTECTION	EACH	3.0
28100105	STONE RIPRAP, CLASS A3	SQ YD	375.0
28100201	STONE RIPRAP, CLASS A1	TON	80.0
28200200	FILTER FABRIC	SQ YD	375.0

* SPECIALTY ITEM

FILE NAME = c:\pwwork\pwwork\BUCKLESJJ\d0134392\05	USER NAME = bucklesjj 70696-shr-500.dgn	DESIGNED - RLA DRAWN - RLA	REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P. RTE. 323	SECTION (145.146)CR	COUNTY DOUGLAS	TOTAL SHEETS 36	SHEET NO. 4		
PLOT SCALE = 40.0000' / IN.	CHECKED - JMS	REVISED -	SCALE: N/A			SHEET NO. 1 OF 2 SHEETS	STA.	TO STA.	CONTRACT NO. 70696			
PLOT DATE = 3/22/2010	DATE - 10/8/09	REVISED -	ILLINOIS FED. AID PROJECT									

SUMMARY OF QUANTITIES

FAP 323 (US 36)
DOUGLAS CO.
S.N. 021-8052
S.N. 021-8053
S.N. 021-8054
RURAL TWO-LANE
80% FED.
20% STATE

4/18/09

Y007

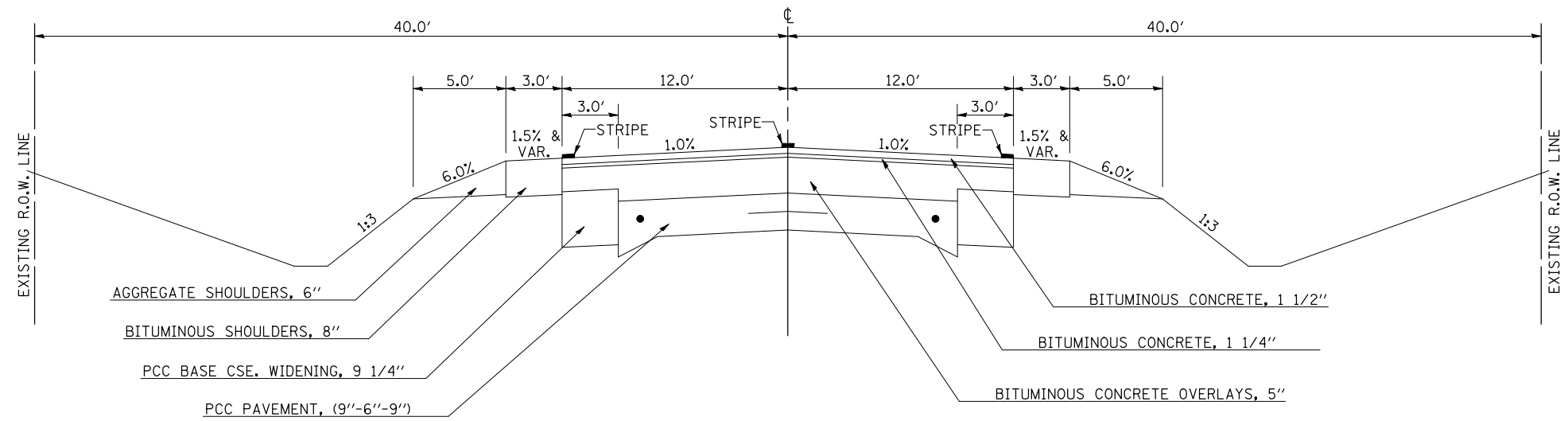
44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SQ YD	231.0
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	1.0
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1.0
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1.0
50100500	REMOVAL OF EXISTING STRUCTURES NO 3	EACH	1.0
51500100	NAME PLATES	EACH	3.0
54001001	BOX CULVERT END SECTION, CULVERT NO. 1	EACH	2.0
54001002	BOX CULVERT END SECTION, CULVERT NO. 2	EACH	2.0
54001003	BOX CULVERT END SECTION, CULVERT NO. 3	EACH	2.0
54020803	PRECAST CONCRETE BOX CULVERT 8' X 3' (M273)	FOOT	177.0
54021204	PRECAST CONCRETE BOX CULVERT 12' X 4' (M273)	FOOT	59.0
67100100	MOBILIZATION	L SUM	1.0
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	156.0
* X0324952	DETOUR SIGNING	L SUM	1.0
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	38.0
Z0038700	PERMANENT BENCH MARKS	EACH	3.0

* SPECIALTY ITEM

FILE NAME =	USER NAME = bucklesjj	DESIGNED - RLA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\pwork\WIDOT\BUCKLESJJ\d0134382\0570696-shr-500.dgn		DRAWN - RLA	REVISED -		SCALE: N/A	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	323	(145,146)CR	DOUGLAS	36	5
PLOT SCALE = 40,0000 ' / IN.		CHECKED - JMS	REVISED -		CONTRACT NO. 70696								
PLOT DATE = 3/22/2010		DATE - 10/8/09	REVISED -		ILLINOIS FED. AID PROJECT								

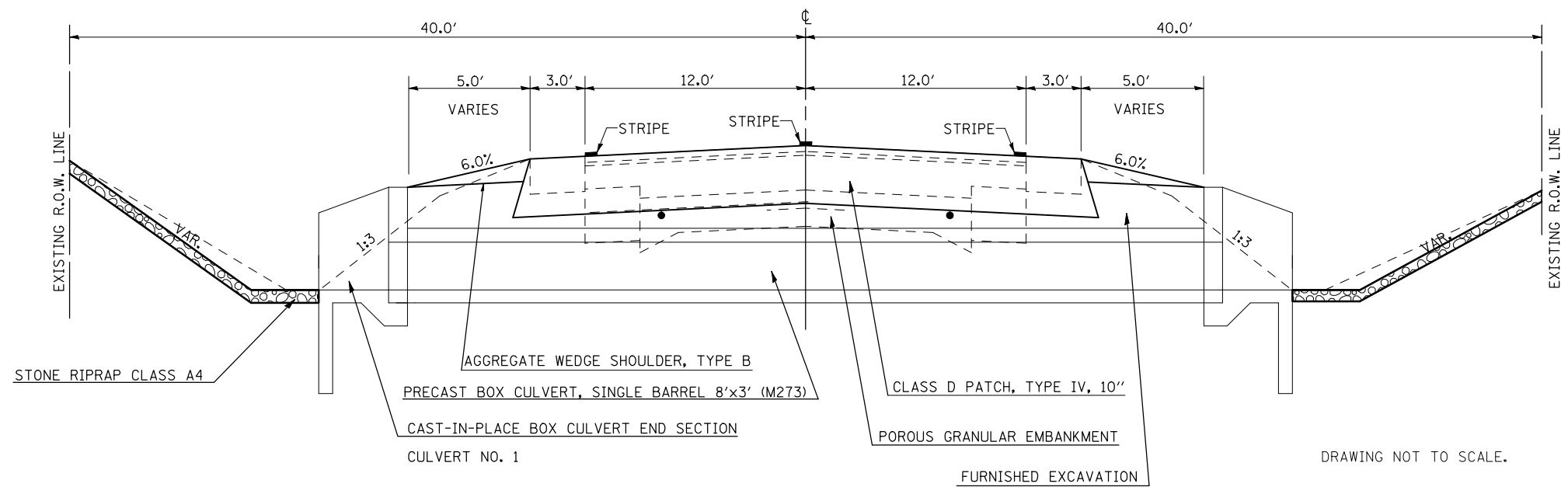
EXISTING TYPICAL CROSS-SECTION

STATION 504+56.81 TO STATION 719+50.00



① PROPOSED TYPICAL CROSS-SECTION

CULVERT NO. 1 STATION 504+56.81



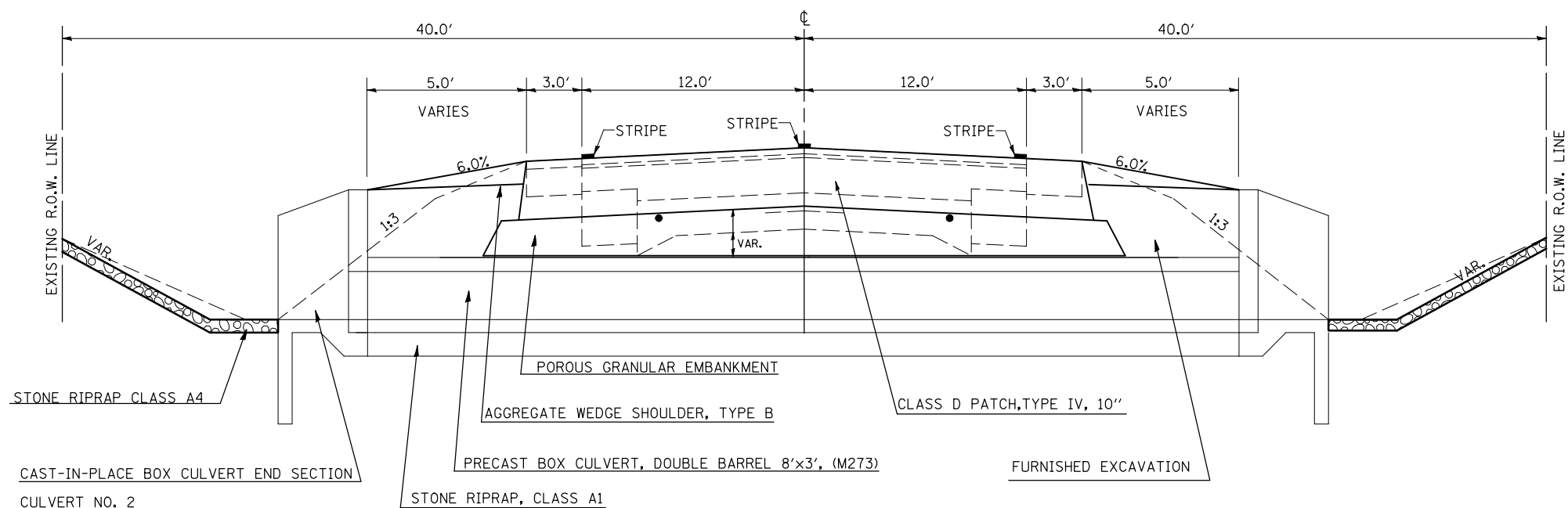
DRAWING NOT TO SCALE.

FILE NAME =	USER NAME = bucklesjj	DESIGNED - RLA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING & PROPOSED TYPICAL SECTION			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw\work\PWIDOT\BUCKLESJJ\d0134382\05706796.sht-typical.dgn	DRAWN - RLA	REVISED -	323					(145,146)CR	DOUGLAS	36	6	
PLOT SCALE = 40.0000' / IN.	CHECKED - JMS	REVISED -	CONTRACT NO. 70696									
PLOT DATE = 3/22/2010	DATE -	REVISED -	ILLINOIS FED. AID PROJECT									

SCALE: N/A SHEET NO. 1 OF 2 SHEETS STA. TO STA.

② PROPOSED TYPICAL CROSS-SECTION

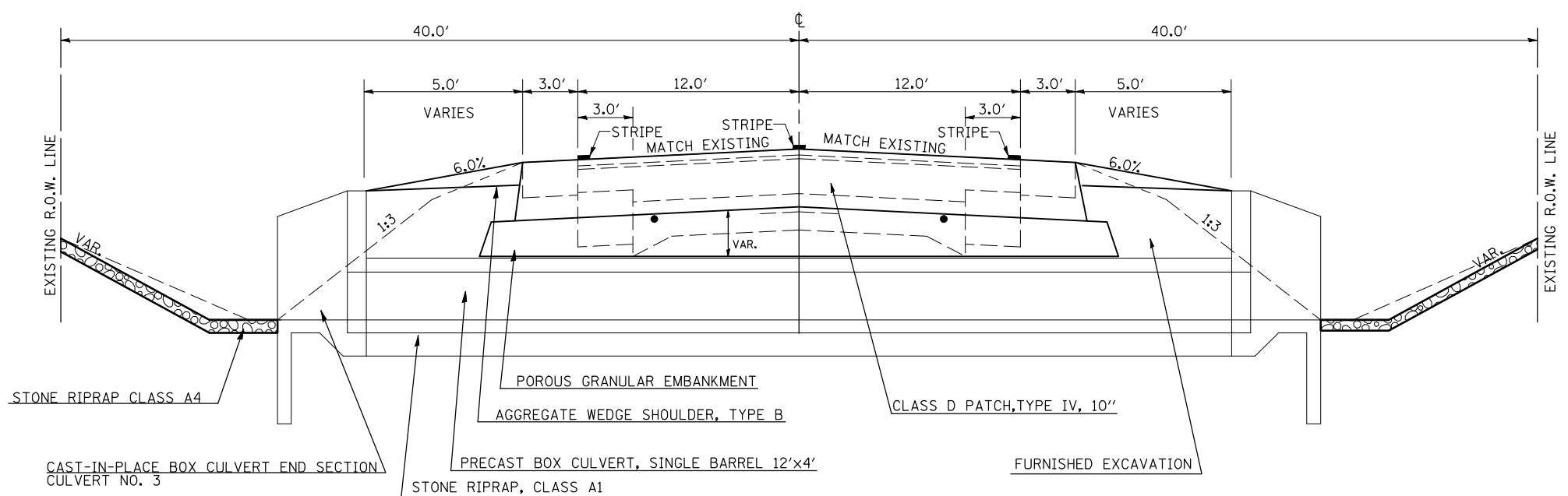
CULVERT NO. 2 STATION 557+90.90



DRAWING NOT TO SCALE.

③ PROPOSED TYPICAL CROSS-SECTION

CULVERT NO. 3 STATION 719+50.00



DRAWING NOT TO SCALE.

FILE NAME =	USER NAME = bucklesjj	DESIGNED - RLA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING & PROPOSED TYPICAL CROSS SECTION			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et\pwork\pwidot\BUCKLESJJ\d0134382\d0134382.dgn	70696-shr-typical.dgn	DRAWN - RLA	REVISED -		323	(145,146)CR	DOUGLAS	36	7			
PLOT SCALE = 40.0000' / IN.	CHECKED - JMS	REVISIED -	REVISIED -		SCALE: N/A			SHEET NO. 2 OF 2 SHEETS		CONTRACT NO. 70696		
PLOT DATE = 3/22/2010	DATE -	REVISIED -	REVISIED -		STA. TO STA.		ILLINOIS FED. AID PROJECT					

SCHEDULE OF DRAINAGE STRUCTURES

	(20700220)	(50100300)	(50100400)	(50100500)	(51500100)	(54001001)	(54001002)	(54001003)	(54021204)	(54020803)	(28100201)	(28100105)	(28200200)
	POROUS	REM EXIST STR.	REM. EXIST.STR.	REM. EXIST. STR.	NAME	BOX CUL	BOX CUL	BOX CUL	PCBC	PCBC	STONE	STONE	FILTER
	GRANULAR	NO. 1	NO.2	NO. 3	PLATES	END SECT.	END SECT.	END SECT.	12X4 (M273)	8X3 (M273)	RIPRAP	RIPRAP	FABRIC
	EMBANKMENT					CULVERT NO. 1	CULVERT NO. 2	CULVERT NO. 3			CLASS A1	CLASS A3	
	(CU YD)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)	(FOOT)	(FOOT)	(TON)	(SQ YD)	(SQ YD)
STATION													
S.N. 021-8052	504+56.81	22.0	1.0		1.0	2.0				59.0		111.0	111.0
S.N. 021-8053	557+90.90	28.0		1.0	1.0		2.0			118.0	45.0	138.0	138.0
S.N. 021-8054	719+50.00	90.0			1.0	1.0		2.0	59.0		35.0	126.0	126.0
TOTALS.=	140.0	1.0	1.0	1.0	3.0	2.0	2.0	2.0	59.0	177.0	80.0	375.0	375.0

AGGREGATE WEDGE SHOULDER, TYPE B (48102100)

	STATION	STATION	LENGTH (FT)	WIDTH (FT)	TON
LT & RT	504+69.81	504+43.81	17.3	5.0	0.1
LT & RT	558+08.70	557+73.10	26.9	5.0	0.1
LT & RT	719+67.00	719+37.00	25.0	5.0	0.1
			TOTAL =		0.2
			USE =		1.0

CLASS D PATCHES, TYPE IV, 10 INCH (44201771)

STATION	DIRECTION	LANE	LENGTH (FT)	WIDTH (FT)	DEPTH (IN)	TYPE IV (SQ YDS)
504+56.81	WB/EB	DRIVING	17.3	30	10	57.7
557+90.90	WB/EB	DRIVING	26.9	30	10	89.7
719+50.00	WB/EB	DRIVING	25	30	10	83.3
			TOTAL =			230.7
			USE =			231.0

GRADING AND SHAPING DITCHES (21400100)

	STATION	STATION	LENGTH (FEET)
LT & RT	503+98	505+02	208.0
LT & RT	557+48	558+52	208.0
LT & RT	718+90	720+02	224.0
			TOTAL = 640.0

FURNISHED EXCAVATION (20400800)

LOCATION	CU YD
S.N. 021-8052	
STA. 504+56.81	8.0
S.N. 021-8053	
STA. 557+90.90	9.0
S.N. 021-8054	
STA. 719+50.00	9.0
TOTAL =	26.0

LANDSCAPING SCHEDULE

STATION	STATION	AREA (ACRE)	(25000200)	(25000350)	(25000400)	(25000500)	(25000600)	(25100115)	(28000250)
			SEEDING CLASS 2 (ACRE)	SEEDING CLASS 7 (ACRE)	NITROGEN FERTILIZER (POUND)	PHOSPHOR. FERTILIZER (POUND)	POTASS. FERTILIZER (POUND)	MULCH METHOD 2 (ACRE)	EROSION CONTROL SEEDING (POUND)
LT & RT 503+98	503+98	0.12	0.12	0.12	10.8	10.8	10.8	0.12	12.0
LT & RT 557+48	558+52	0.14	0.14	0.14	12.6	12.6	12.6	0.14	14.0
LT & RT 718+90	720+02	0.12	0.12	0.12	10.8	10.8	10.8	0.12	12.0
TOTAL =		0.38	0.38	0.38	34.2	34.2	34.2	0.38	38.0
USE =		0.40	0.40	0.40	35.0	35.0	35.0	0.40	38.0

PAINT PAVEMENT MARKING-LINE 4" (78001110)

4" SOLID (WHITE)

STATION	TO	STATION	FOOT (x 2)
504+48.14		504+65048	34.6
557+77.44		558+04.32	53.8
719+37		719+62	50.0
TOTAL =			138.4
USE =			139.0

4" SKIP DASH (YELLOW)

STATION	TO	STATION	FOOT
504+48.14		504+65048	17.3
557+77.44		558+04.32	26.9
719+37		719+62	25.0
TOTAL =			69.2
69.2'/40*10 =			17.3
USE =			17.0
TOTAL =			156.0

TEMPORARY DITCH CHECKS (28000305)

STATION	Q/S	FOOT
504+06.81	36' RT	12.0
504+06.81	34' LT	12.0
505+06.81	37' RT	12.0
505+06.81	37' LT	12.0
557+40.90	37' RT	12.0
557+40.90	36' LT	12.0
558+40.90	35' RT	12.0
558+4.090	35' LT	12.0
719+50.00	40' RT	12.0
719+50.00	39' LT	12.0
720+00.00	40' RT	12.0
720+00.00	38' LT	12.0
TOTAL =		144.0

PERIMETER EROSION BARRIER (28000400)

STATION	STATION	FEET
503+98 R	505+02 RT	104.0
503+98 LT	505+02 LT	104.0
557+48 R	558+02 RT	54.0
557+48 LT	558+02 LT	54.0
718+90 R	720+02 RT	112.0
718+90 LT	720+02 LT	112.0
TOTAL =		540.0

INLET & PIPE PROTECTION (28000500)

STATION	Q/S	EACH
504+56.81 LT	44.96'	1.0
557+90.90 LT	45.55'	1.0
719+50.00 LT	39.94'	1.0
TOTAL =		3.0

EXPLORATION TRENCH, 52" DEPTH (21301052)

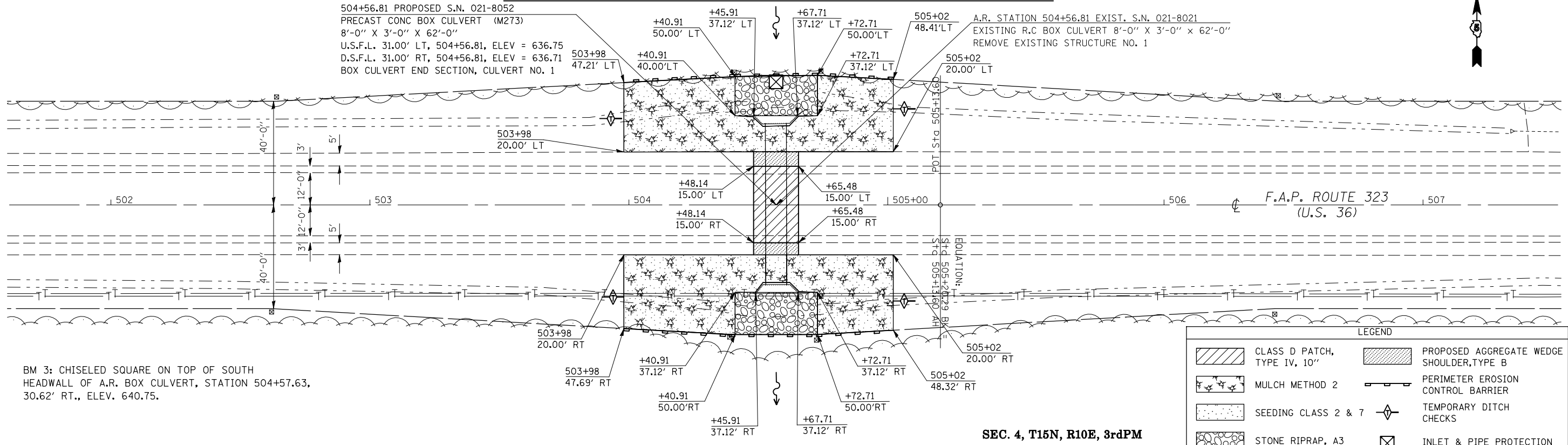
	STATION	STATION	LENGTH (FT)
LT	504+32	504+82	50.0
RT	504+32	504+82	50.0
LT	557+66	558+16	50.0
RT	557+66	558+16	50.0
LT	719+26	719+76	50.0
RT	719+26	719+76	50.0
TOTAL =			300.0

DETAIL OF ACROSS ROAD BOX CULVERT NO. 1 STATION 504+56.81 EXIST.S.N. 021-8021 PROP. S.N. 021-8052



504+56.81 PROPOSED S.N. 021-8052
 PRECAST CONC BOX CULVERT (M273)
 8'-0" X 3'-0" X 62'-0"
 U.S.F.L. 31.00' LT, 504+56.81, ELEV = 636.75
 D.S.F.L. 31.00' RT, 504+56.81, ELEV = 636.71
 BOX CULVERT END SECTION, CULVERT NO. 1

A.R. STATION 504+56.81 EXIST. S.N. 021-8021
 EXISTING R.C BOX CULVERT 8'-0" X 3'-0" x 62'-0"
 REMOVE EXISTING STRUCTURE NO. 1



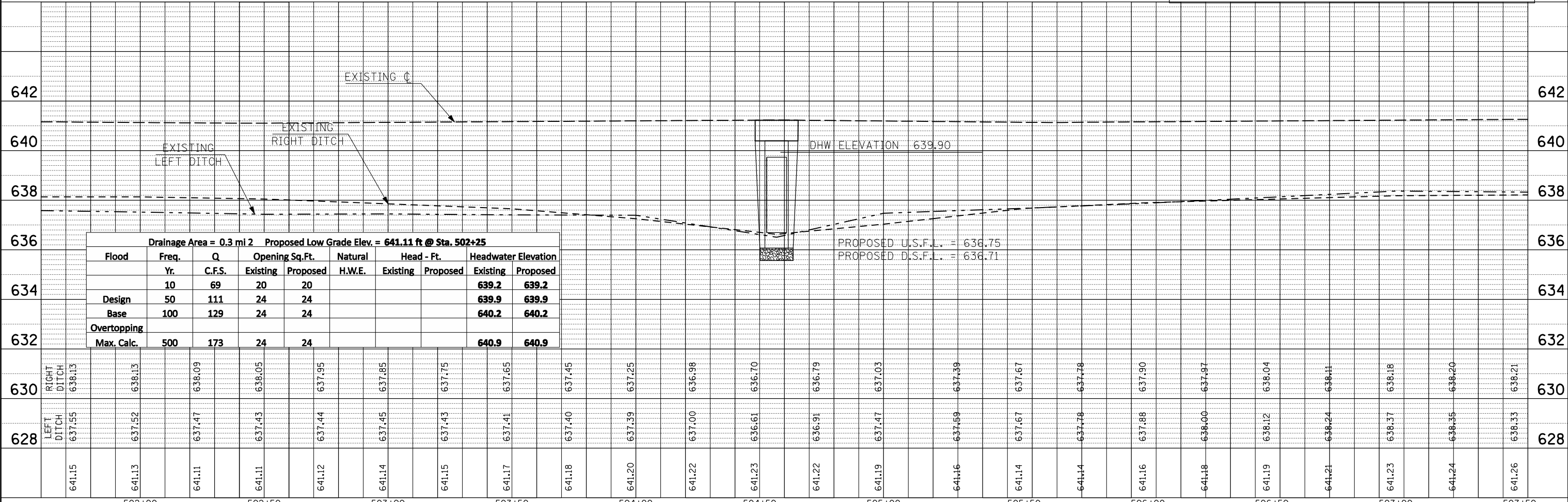
BM 3: CHISELED SQUARE ON TOP OF SOUTH HEADWALL OF A.R. BOX CULVERT, STATION 504+57.63, 30.62' RT., ELEV. 640.75.

LEGEND	
	CLASS D PATCH, TYPE IV, 10"
	MULCH METHOD 2
	SEEDING CLASS 2 & 7
	STONE RIPRAP, A3
	PROPOSED AGGREGATE WEDGE SHOULDER, TYPE B
	PERIMETER EROSION CONTROL BARRIER
	TEMPORARY DITCH CHECKS
	INLET & PIPE PROTECTION

SEC. 4, T15N, R10E, 3rdPM

PLAN	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	BY	
	NOTE BOOK NO.	
	FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	BY	
	NOTE BOOK NO.	
	FILE NAME	



Drainage Area = 0.3 mi ² Proposed Low Grade Elev. = 641.11 ft @ Sta. 502+25									
Flood	Freq.	Q	Opening Sq.Ft.		Natural	Head - Ft.		Headwater Elevation	
	Yr.	C.F.S.	Existing	Proposed	H.W.E.	Existing	Proposed	Existing	Proposed
Design	10	69	20	20				639.2	639.2
Base	50	111	24	24				639.9	639.9
	100	129	24	24				640.2	640.2
Overtopping									
Max. Calc.	500	173	24	24				640.9	640.9

FILE NAME =	USER NAME = bucklesj	DESIGNED - RLA	REVISED -
ct:\pwwork\pwwid01\BUCKLESJ\0134382\0576696-sht-plnprf.dgn		DRAWN - JJB	REVISED -
		CHECKED - JMS	REVISED -
		DATE - 7-9-09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN & PROFILE S.N. 021-8052

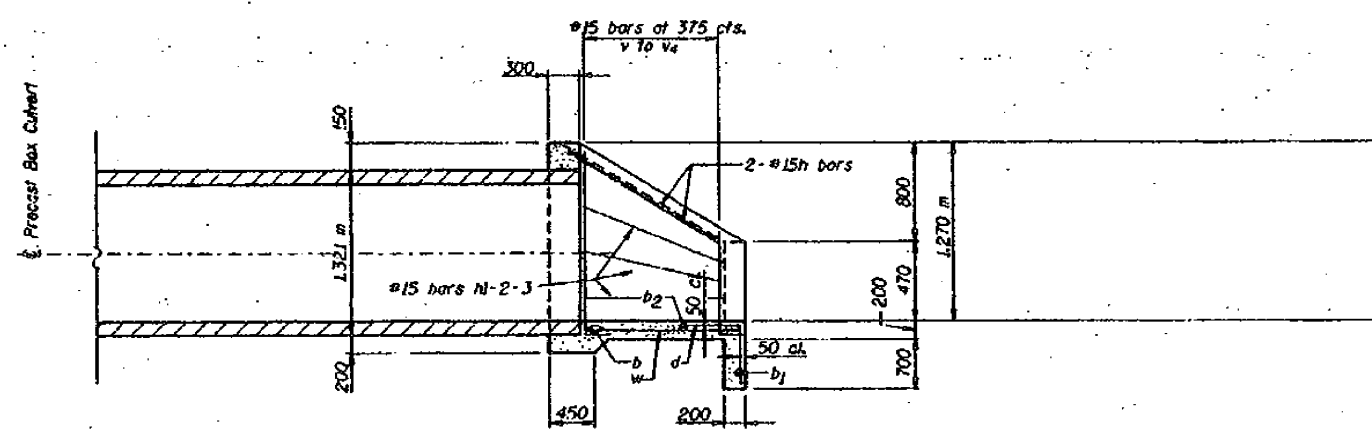
SCALE: 1:20 SHEET NO. 1 OF 5 SHEETS STA. 504+43+81 TO STA. 504+69.81

F.A.P. RTE. 323	SECTION (145,146)CR	COUNTY DOUGLAS	TOTAL SHEETS 31	SHEET NO. 10
CONTRACT NO. 70696			ILLINOIS FED. AID PROJECT	

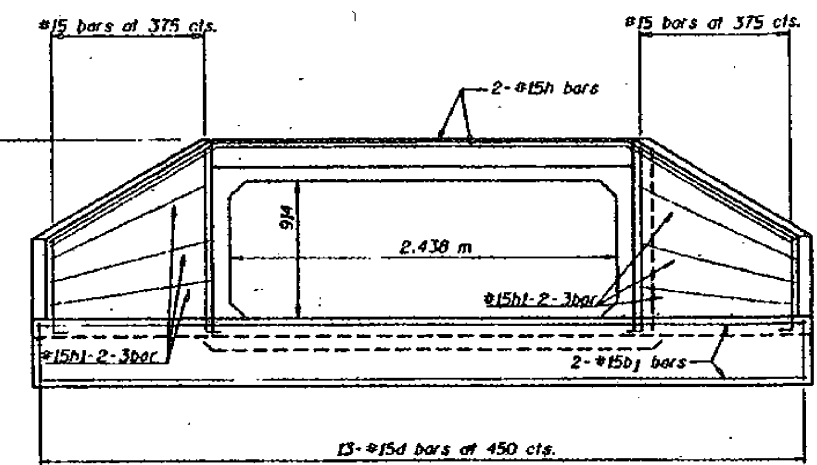
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 323			188	90B
STA.		TO STA.		
FED. RD. DIST. NO.		ILLINOIS	PROJECT	

• (145, 146) RS-2 & 147 RS-4
 •• DOUGLAS & EDGAR

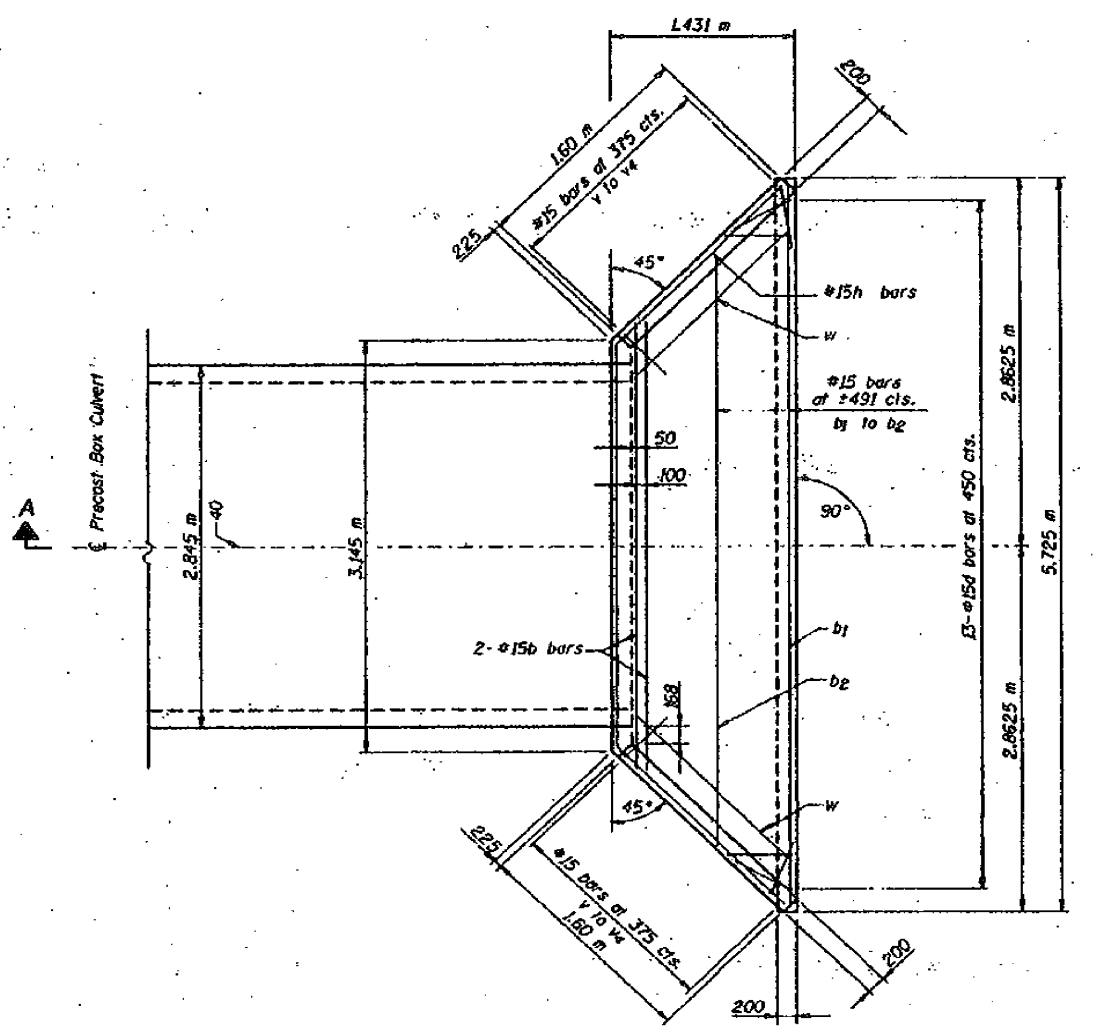
NOTES
 All bars shall be round and shall conform to the requirements of Art. 1006.10 of the Standard Specifications.
 Class SI Concrete Headwalls shall be used throughout.
 Build tops of headwalls parallel to grade line.
 The Precast Concrete Box Culvert Sections shall conform to the requirements of AASHTO M259.
 All dimensions are in millimeters (mm) unless otherwise noted.



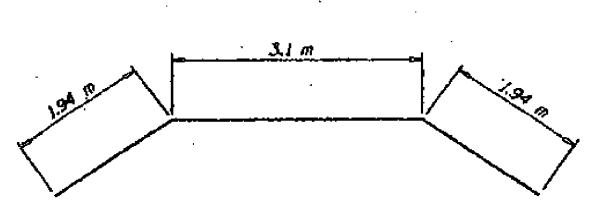
SECTION A-A



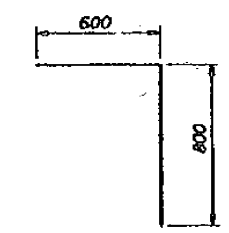
END VIEW



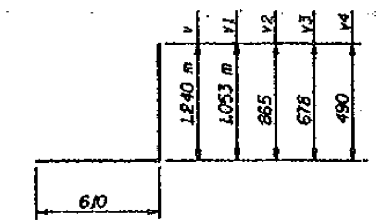
PLAN



BAR h



BAR d



BARS v, v1, v2 etc.

BILL OF MATERIAL (ONE HEADWALL)

Bar	No.	Size	Length (m)	Shape
b	2	#15	3.75	—
b1	2	#15	5.625	—
b2	1	#15	4.728	—
d	13	#15	1.40	⌈
h	2	#15	6.98	⌒
h1	2	#15	1.602	—
h2	2	#15	1.546	—
h3	2	#15	1.512	—
v	4	#15	1.85	⌋
v1	2	#15	1.663	⌋
v2	2	#15	1.475	⌋
v3	4	#15	1.288	⌋
v4	2	#15	1.10	⌋
w	2	#15	1.458	—
Reinforcement Bars			kg	136
Class SI Conc Headwalls			Cu. m	3.0

BOX CULVERT END SECTIONS (CAST IN PLACE)
 STA. 32+455.914, 34+083.786 0° SKEW

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DATE
NO.	BY	REASON		DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT 5 PARIS, ILLINOIS	DRYAN BY DATE KEB 12-99
SCALE: N/A	SHEET NO. 2 OF 5 SHEETS
F.A.P. RTE. 323	SECTION (145,146)CR
COUNTY DOUGLAS	TOTAL SHEETS 36
PROJECT NO. CONTRACT NO. 70696	SHEET NO. 11
ILLINOIS FED. AID PROJECT	

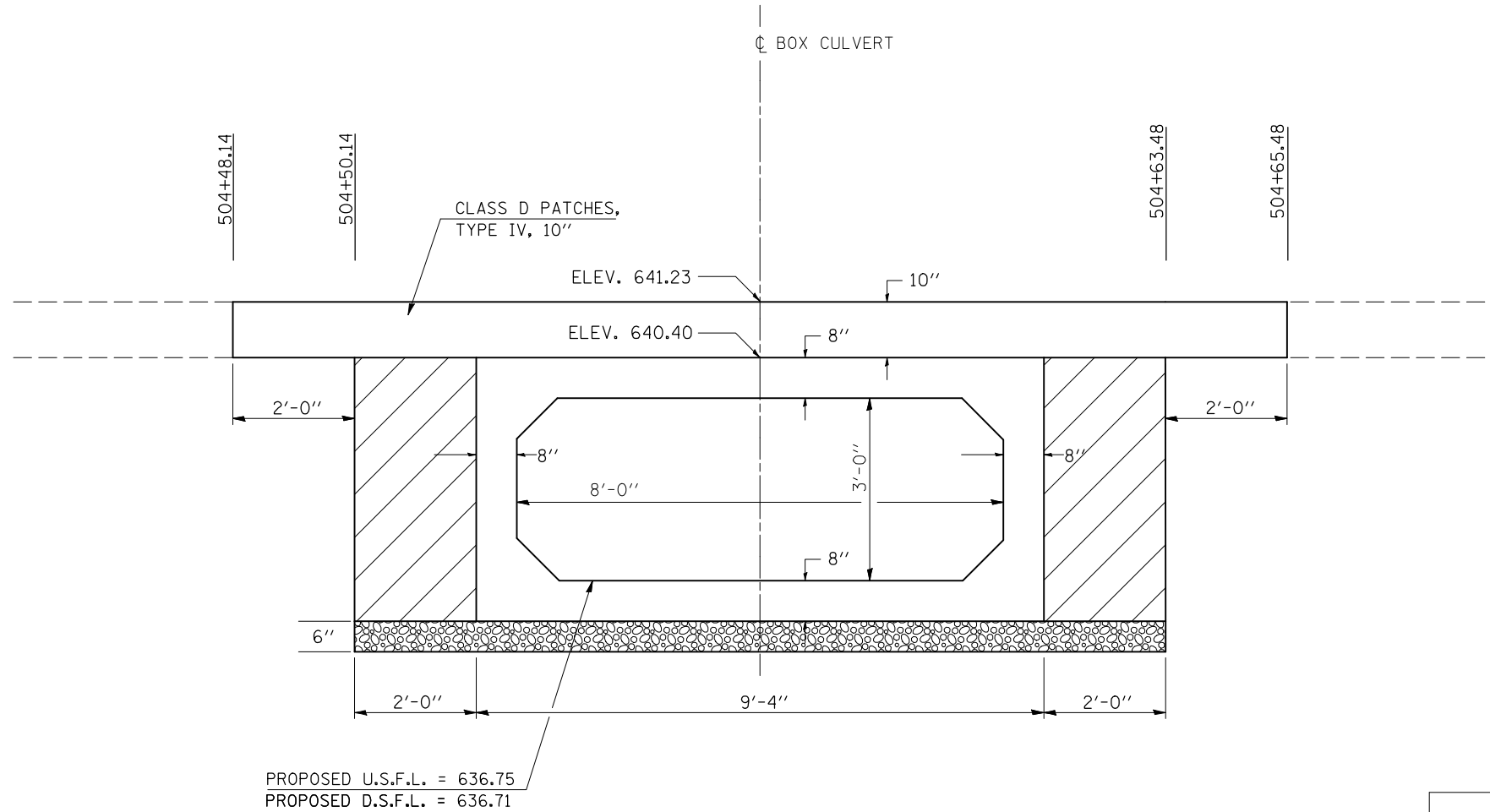
FILE NAME =	USER NAME = bucklesjj	DESIGNED - RLA	REVISED -
ca:\pwwork\pwwid\BUCKLESJJ\d0134382.D	70696-shd-details.dgn	DRAWN - RLA	REVISED -
	PLOT SCALE = 40.0000 "/ IN.	CHECKED - JMS	REVISED -
	PLOT DATE = 3/22/2010	DATE - 10/23/09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**AS BUILT PLANS
FOR INFORMATION ONLY**

POROUS GRANULAR EMBANKMENT DETAILS

CULVERT NO. 1, STATION 504 + 56.81 S.N. 021-8052



GENERAL NOTES

- 1 POROUS GRANULAR EMBANKMENT SHALL EXTEND 2 FT. BEYOND THE AGGREGATE SHOULDER.
- 2 WORK SHOWN IN THIS DETAIL SHALL BE PERFORMED ACCORDING TO THE APPLICABLE PROVISIONS OF ARTICLE 207 AND ARTICLE 540 OF THE STANDARD SPECIFICATIONS.
- 3 THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR POROUS GRANULAR EMBANKMENT.
- 4 THE AREA TO BE EXCAVATED FOR THE PROPOSED BOX CULVERT SHALL NOT BE MEASURED FOR PAYMENT. THE COST OF THE EXCAVATION SHALL BE CONSIDERED AS INCLUDED IN THE COST OF PRECAST CONCRETE BOX CULVERTS AND BOX CULVERT END SECTIONS.

BILL OF MATERIAL

ITEM	CU YDS
POROUS GRANULAR EMBANKMENT	22

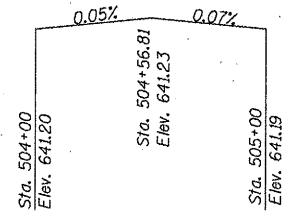
DRAWING NOT TO SCALE.

LEGEND	
	POROUS GRANULAR EMBANKMENT (CA-6)
	POROUS GRANULAR MATERIAL (CA-7) INCLUDED WITH BOX CULVERT ITEMS

FILE NAME =	USER NAME = bucklesJJ	DESIGNED - RLA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	POROUS GRANULAR EMBANKMENT DETAILS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw\work\PWIDOT\BUCKLESJJ\d0134382\05	70696-sht-details.dgn	DRAWN - RLA	REVISED -		323	(145,146)CR	DOUGLAS	36	12			
	PLOT SCALE = 40.0000' / IN.	CHECKED - JMS	REVISED -		CONTRACT NO. 70696			ILLINOIS FED. AID PROJECT				
	PLOT DATE = 3/22/2010	DATE - 10/23/09	REVISED -		SCALE: N/A	SHEET NO. 3 OF 5 SHEETS	STA.	TO STA.				

EXISTING STRUCTURE: S.N. 021-8021 was constructed in 1927 at STA. 503+00 as a 8'x3'x42' cast-in-place box culvert with concrete headwalls as S.B.I. 121, Sec. 146 in Douglas County. In 2000 the box was extended with precast concrete box culverts and cast-in-place end sections, under Section (145,146)RS-2 & 147 RS-4. The existing structure is to be completely removed and replaced. There will be no salvage of any materials. Road closure will be utilized.

BENCHMARK ELEV. = 640.75 Chiseled square on top of center of south headwall of S.N. 021-8021 at STA. 504+57.63, 30.62' RT.



PROFILE GRADE

Along ϕ Roadway

STATION 504+56.81
BUILT 201 BY
STATE OF ILLINOIS
F.A.P. RT. 323 SEC. (145,146)CR
LOADING HS 20
STRUCTURE NO. 021-8052

NAME PLATE
See Std. 515001

INDEX OF SHEETS

1. Plan & Profile
2. As Built Plan
3. Porous Granular Embankment Detail
4. General Plan and Elevation
5. Box Culvert End Section Details

DESIGN SPECIFICATIONS

2002 AASHTO

LOADING HS20-44

Allow 50#/sq.ft. for future wearing surface

DESIGN STRESSES

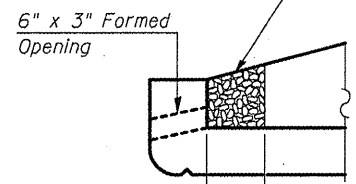
FIELD UNITS

$f'c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 65,000$ psi (welded wire fabric)

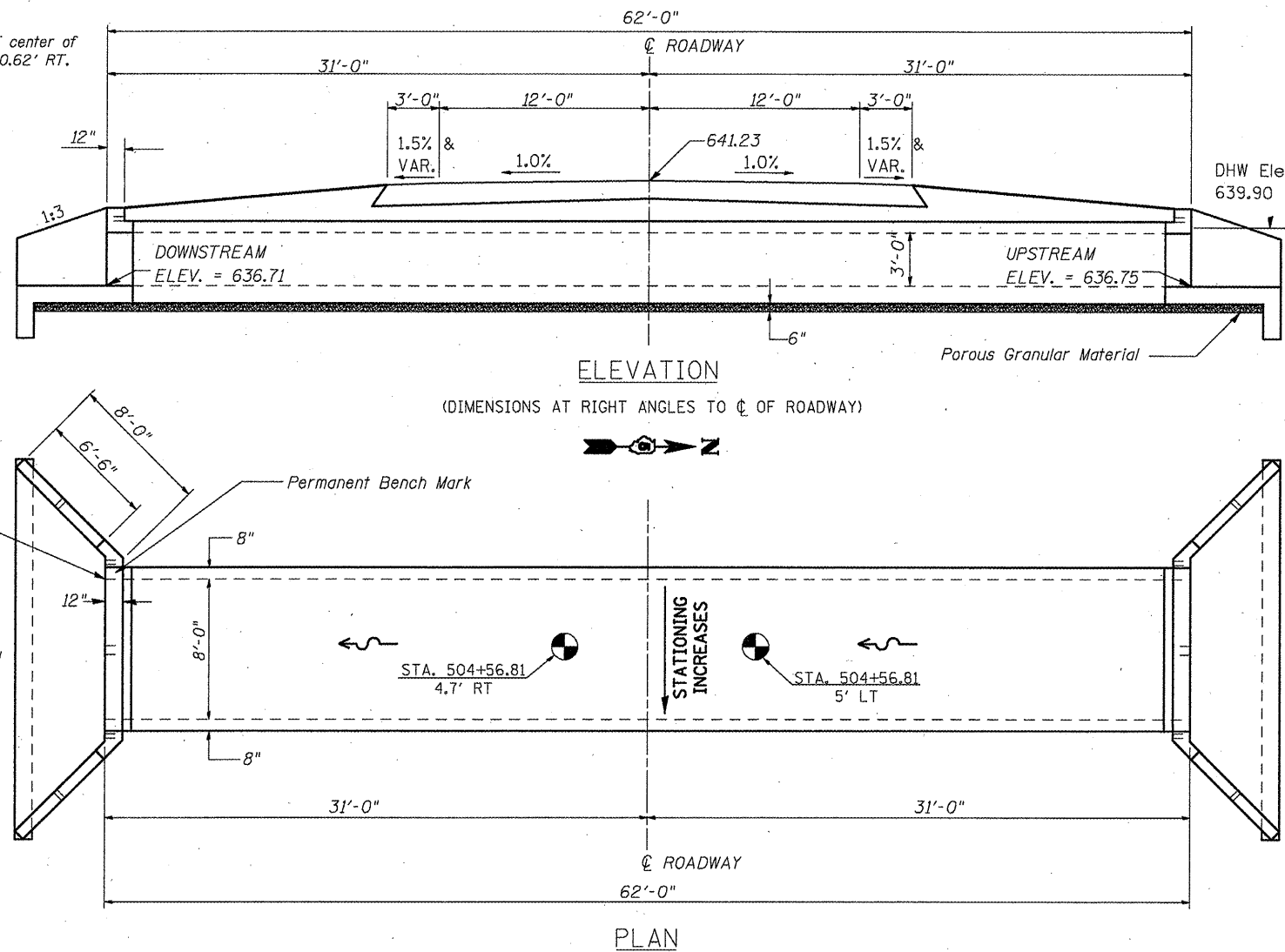
PRECAST UNITS

$f'c = 5,000$ psi
 $f_y = 65,000$ psi (welded wire fabric)

Coarse aggregate full length of both headwalls. To be placed by Grading Contractor. Cost included with Box Culvert End Sections.



1. Plan & Profile
2. As Built Plan
3. Porous Granular Embankment Detail
4. General Plan and Elevation
5. Box Culvert End Section Details



General Notes

Build tops of headwalls parallel to the grade lines.

All construction joints shall be bonded according to Article 503.09 of the Standard Specifications.

Reinforcement bars shall conform to the requirements of ASTM A706 Gr. (1L Modified). See Special Provisions.

The 6" Porous Granular Material required per Art. 540.06 of the Standard Specifications shall also extend beneath the Box Culvert End Sections and shall be considered included in the cost of Precast Concrete Box Culverts and Box Culvert End Sections.

When lapping sheets of welded wire fabric, the overlap measured between the outermost cross wires of each fabric sheet shall not be less than 8"

End Sections will be paid for at the contract unit price per each for BOX CULVERT END SECTIONS, as outlined in Section 540 of the Standard Specifications.

Class SI Concrete shall be used throughout.

Concrete, Rebar, and Welded Wire Fabric quantities and lengths calculated for the cast-in-place End Sections may vary based on the precast box culverts supplied.

Drain holes shall be provided in accordance with Article 503.11 of the Standard Specifications.

The design reinforcement areas shall conform to those found in Table 1 of AASHTO M273 for an 8'x4' box section except the extension of the Asl bars into the top slab shall be equal to (23 inches + 2 longitudinal wire spaces).

The box culvert end section may be built in the field or using precast construction methods. If the contractor elects to use precast construction methods, shop drawings and a proposed construction sequence shall be submitted to the Engineer for approval. See Special Provisions.

The ends of the precast box sections adjacent to the end section shall be formed without the male and female shapes specified in Article 8.1 of AASHTO M273. See Sections B-B, D-D, E-E, and F-F on Sheet 5.

The design fill height for this box is less than 2 feet. The Precast Concrete Box Culvert Sections shall conform to the requirements of AASHTO M 273.

The joints between precast box sections shall be sealed, all voids filled with a mastic joint sealer. In addition, the joints shall be externally sealed on all four sides with a 13 inch wide external sealing band. The seal shall be centered over the joint, secured in place and protected during the backfilling process.

All dimensions are in FEET (') - INCHES (") unless otherwise noted.

Drawings not to scale.

TOTAL BILL OF MATERIAL

Item	Unit	Total
Removal of Existing Structures No. 1	Each	1
Precast Concrete Box Culvert 8'x3'(M273)	Foot	59
Box Culvert End Section, Culvert No. 1	Each	2
Name Plates	Each	1
Permanent Bench Marks	Each	1
Porous Granular Embankment	Cu.Yd.	22

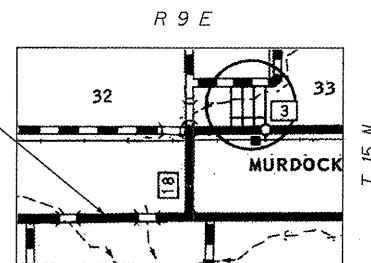
WATERWAY INFORMATION

Drainage Area = 0.3 sq. mi. Low Grade Elev. 641.11 @ Sta. 502+25

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	69	20	20			639.2	639.2	
Base	50	111	24	24			639.9	639.9	
Overtopping	100	129	24	24			640.2	640.2	
Max. Calc.	500	173	24	24			640.9	640.9	

Note: Information provided using the Regression Method.

PROP. S.N. 021-8052
STA. 504+56.81



Design Scour Elevation Table

Design Scour Elevation (ft.)	Upstream	Downstream
	633.75	633.71

**GENERAL PLAN AND ELEVATION
SINGLE 8'x3' PRECAST BOX CULVERT
F.A.P. ROUTE 323 - SECTION (145,146)CR
DOUGLAS COUNTY
STATION 504+56.81 S.N. 021-8052
CULVERT NO. 1**

FILE NAME = 4. General Plan and Elevation
DRAWN BY: JMS
CHECKED BY: JMS
DATE: 11/2/09
PLOT SCALE = 48.0000 / 1 IN.
PLOT DATE = 3/22/2010

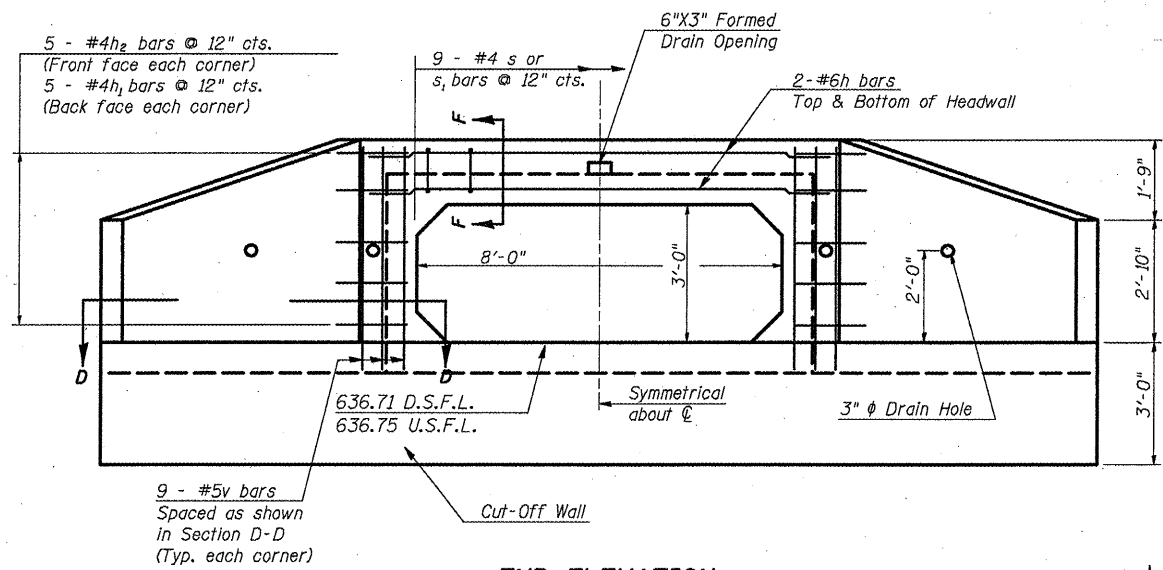
DESIGNED - RLA
DRAWN - RLA
CHECKED - JMS
DATE - 11/2/09
REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

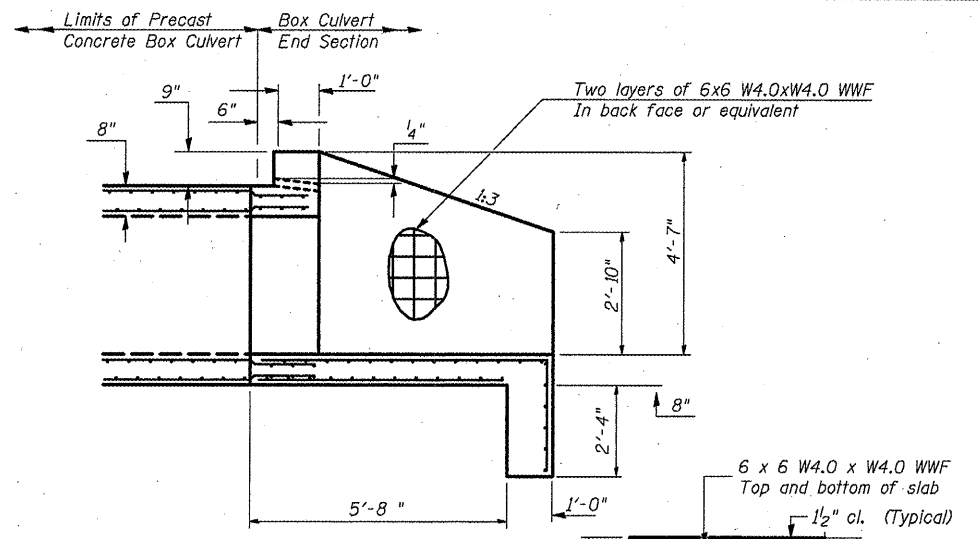
**GENERAL PLAN AND ELEVATION
PROPOSED CULVERT NO. 1 - S.N. 021-8052**
SCALE: N/A
SHEET NO. 4 OF 5 SHEETS
STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	13

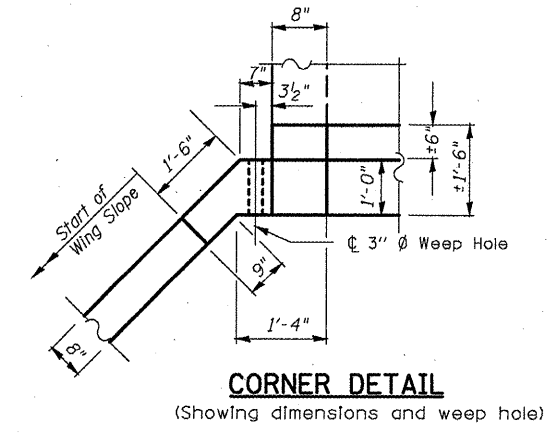
CONTRACT NO. 70696
ILLINOIS FED. AID PROJECT



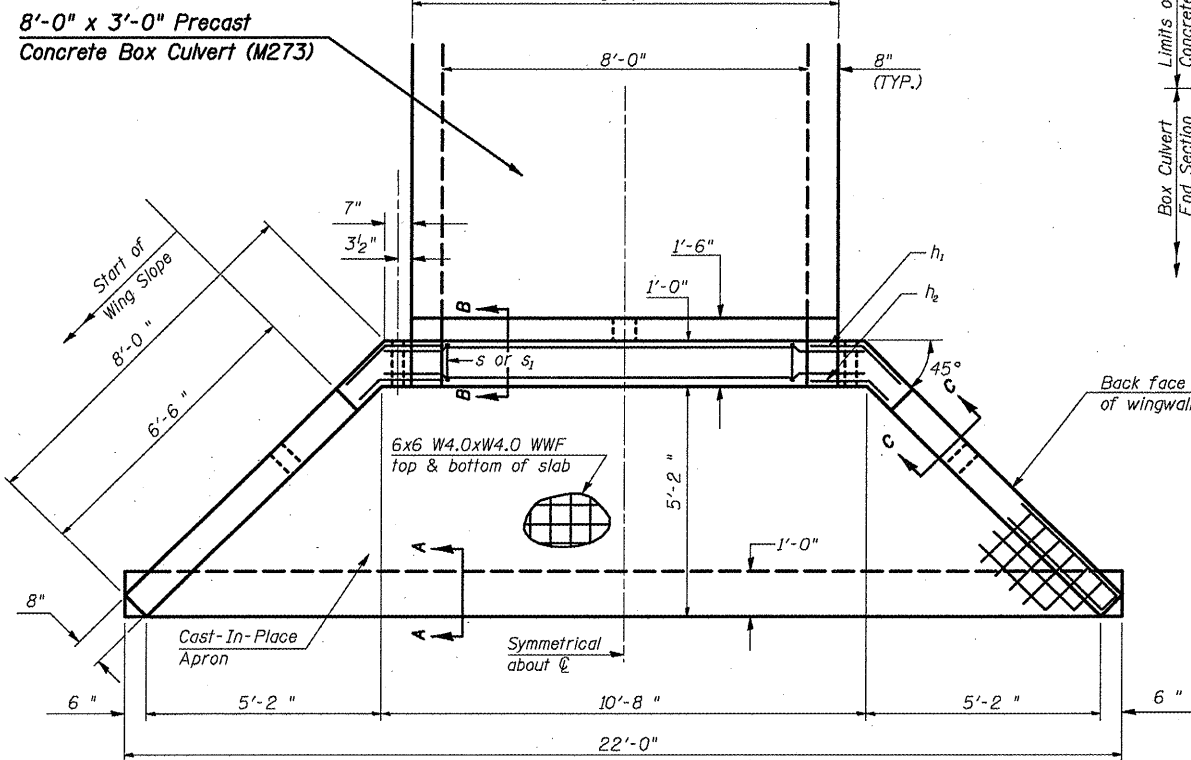
END ELEVATION



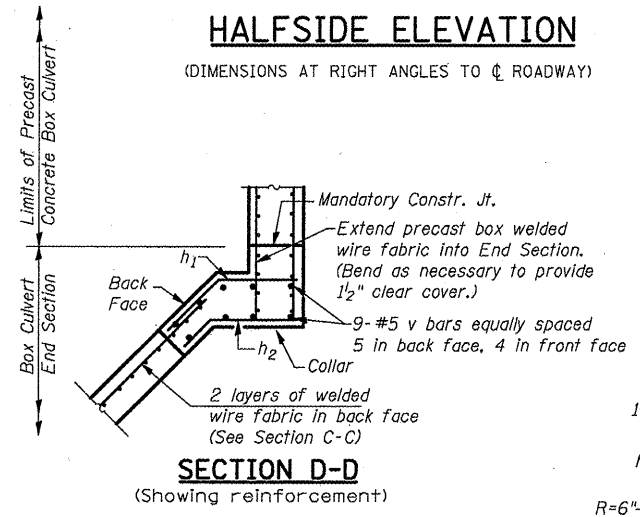
HALFSIDE ELEVATION
(DIMENSIONS AT RIGHT ANGLES TO ROADWAY)



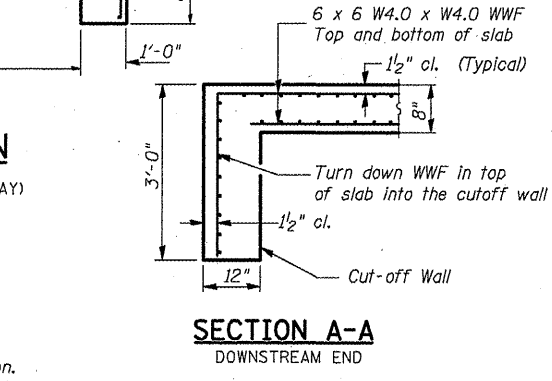
CORNER DETAIL
(Showing dimensions and weep hole)



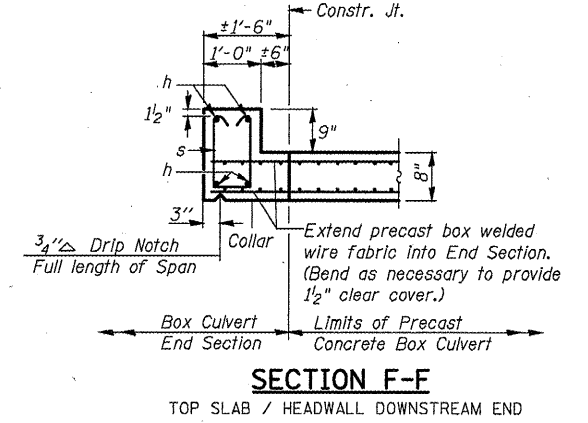
8'-0" x 3'-0" Precast Concrete Box Culvert (M273)



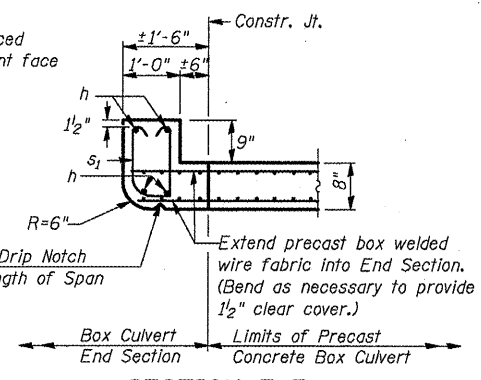
SECTION D-D
(Showing reinforcement)



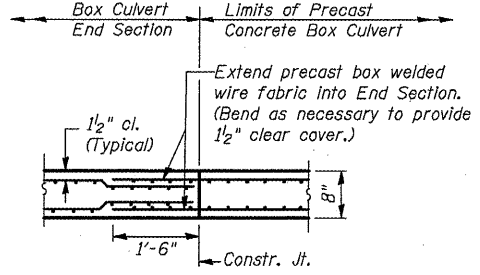
SECTION A-A
DOWNSTREAM END



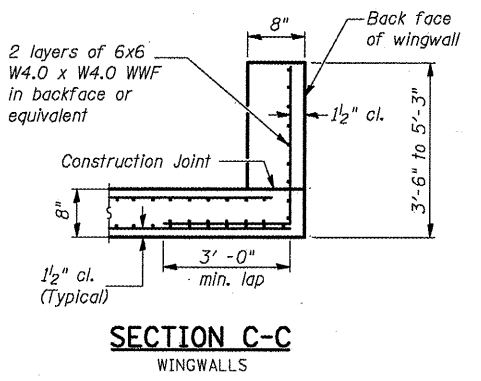
SECTION F-F
TOP SLAB / HEADWALL DOWNSTREAM END



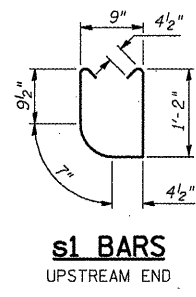
SECTION F-F
TOP SLAB / HEADWALL UPSTREAM END



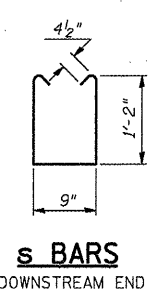
SECTION B-B
BOTTOM SLAB



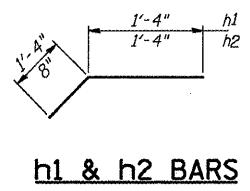
SECTION C-C
WINGWALLS



s1 BARS
UPSTREAM END



s BARS
DOWNSTREAM END



h1 & h2 BARS

BILL OF MATERIAL
For Information Only
(One End Section)

Bar	No.	Size	Length	Shape
h	4	#6	10'-5"	—
h1	10	#4	2'-8"	—
h2	10	#4	2'-0"	—
s or s1	9	#4	3'-10"	U
v	18	#5	4'-10"	—
Item		Unit	Total	
Concrete Box Culverts		Cu. Yd.	7.0	
Reinforcement Bars		Pound	230.0	
Welded Wire Fabric		Sq. Ft.	391.0	

END SECTION DETAILS
SINGLE 8'x3' PRECAST BOX CULVERT
F.A.P. ROUTE 323 - SECTION (145.146)CR
DOUGLAS COUNTY
STATION 504+56.81, S.N. 021-8052
CULVERT NO. 1

FILE NAME =	USER NAME = bucklesj	DESIGNED - RLA	REVISED -
ar\pk_work\PWIDOT\BUCKLESJ\140131302\0578696-sh1-detail.dgn		DRAWN - RLA	REVISED -
PLOT SCALE = 48.0000' / IN.		CHECKED - JMS	REVISED -
PLOT DATE = 3/22/2010		DATE - 11/4/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BOX CULVERT END SECTION DETAILS
PROPOSED CULVERT NO. 1 - S.N. 021-8052
SCALE: N/A SHEET NO. 5 OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145.146)CR	DOUGLAS	36	14
			CONTRACT NO. 70696	
ILLINOIS FED. AID PROJECT				

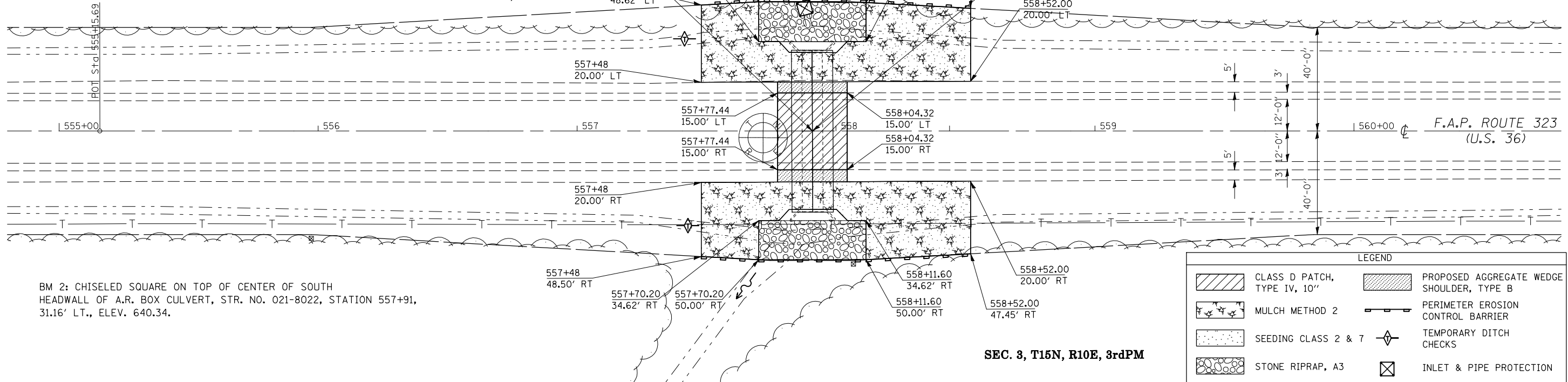
DETAIL OF ACROSS ROAD BOX CULVERT NO. 2

STATION 557+90.90 EXIST. S.N. 021-8022 PROP. S.N. 021-8053



557+90.90 PROPOSED S.N. 021-8053
 PRECAST CONC BOX CULVERT (M273)
 8'-0" X 3'-0" X 62'-0"
 U.S.F.L. 31.00' LT, 557+90.90, ELEV = 636.21
 D.S.F.L. 31.00' RT, 557+90.90, ELEV = 636.21
 BOX CULVERT END SECTION, CULVERT NO. 2

A.R. STATION 557+90.90 EXIST. S.N. 021-8022
 EXISTING R.C BOX CULVERT 8'-0" X 3'-0" X 62'-0"
 REMOVE EXISTING STRUCTURE NO. 2



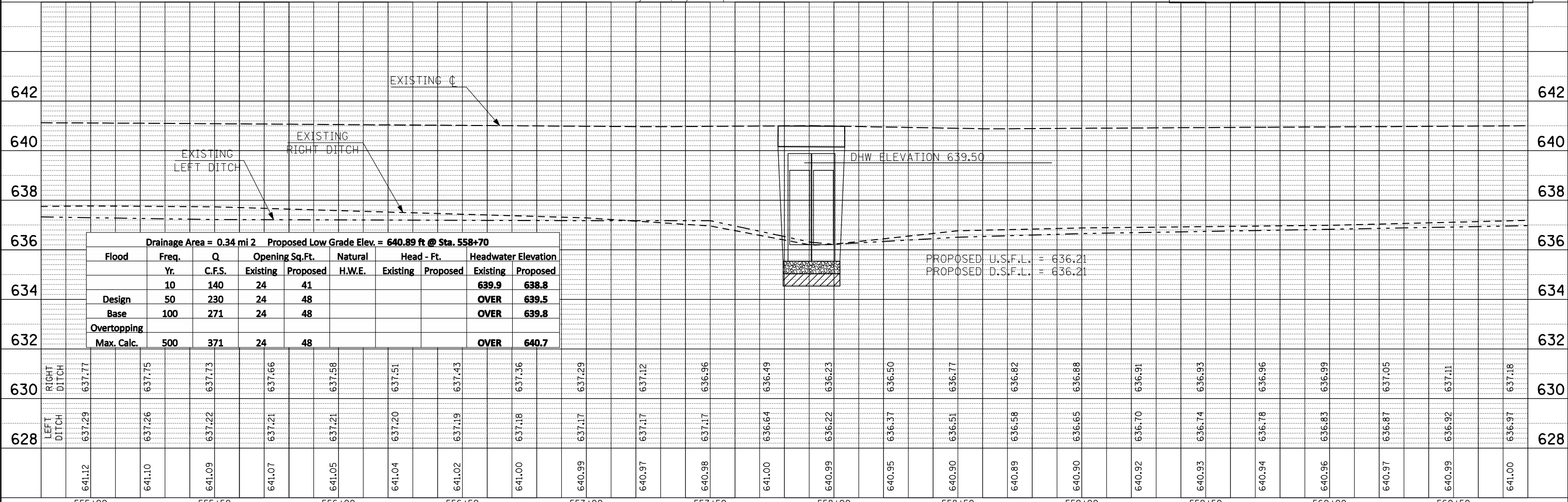
BM 2: CHISELED SQUARE ON TOP OF CENTER OF SOUTH HEADWALL OF A.R. BOX CULVERT, STR. NO. 021-8022, STATION 557+91, 31.16' LT., ELEV. 640.34.

LEGEND	
	CLASS D PATCH, TYPE IV, 10"
	MULCH METHOD 2
	SEEDING CLASS 2 & 7
	STONE RIPRAP, A3
	PERIMETER EROSION CONTROL BARRIER
	TEMPORARY DITCH CHECKS
	INLET & PIPE PROTECTION
	PROPOSED AGGREGATE WEDGE SHOULDER, TYPE B

SEC. 3, T15N, R10E, 3rdPM

PLAN	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	CHECKED		
	AT		
	FORM		
	NO.		
	CAD		
	FILE		
	NAME		

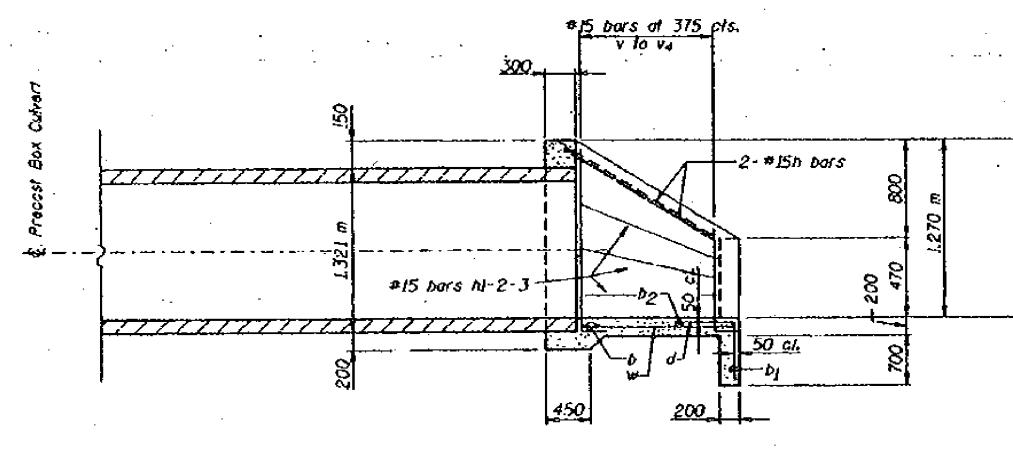
PROFILE	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	CHECKED		
	AT		
	FORM		
	NO.		
	STRUCTURE		
	NOTATION		
	OR		



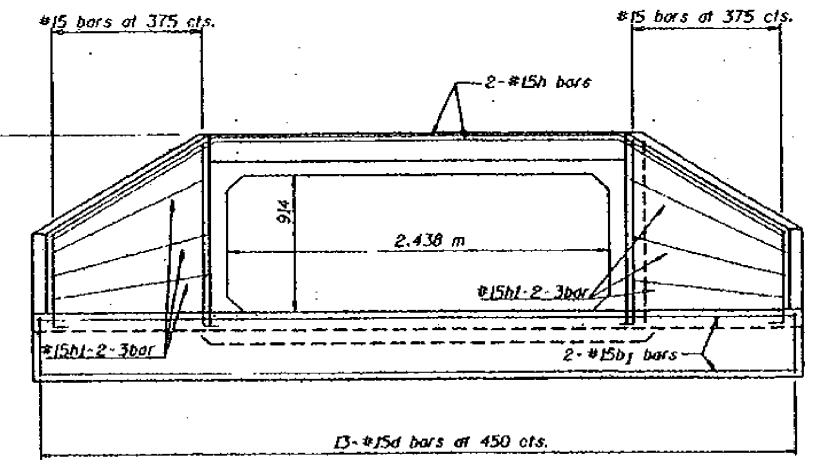
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 323	*	**	188	50B
STA.		TO STA.		
FED. RD. DIST. NO.		ILLINOIS	PROJECT	

▲ (145, 146) RS-2 & 147 RS-4
 ** DOUGLAS & EDGAR

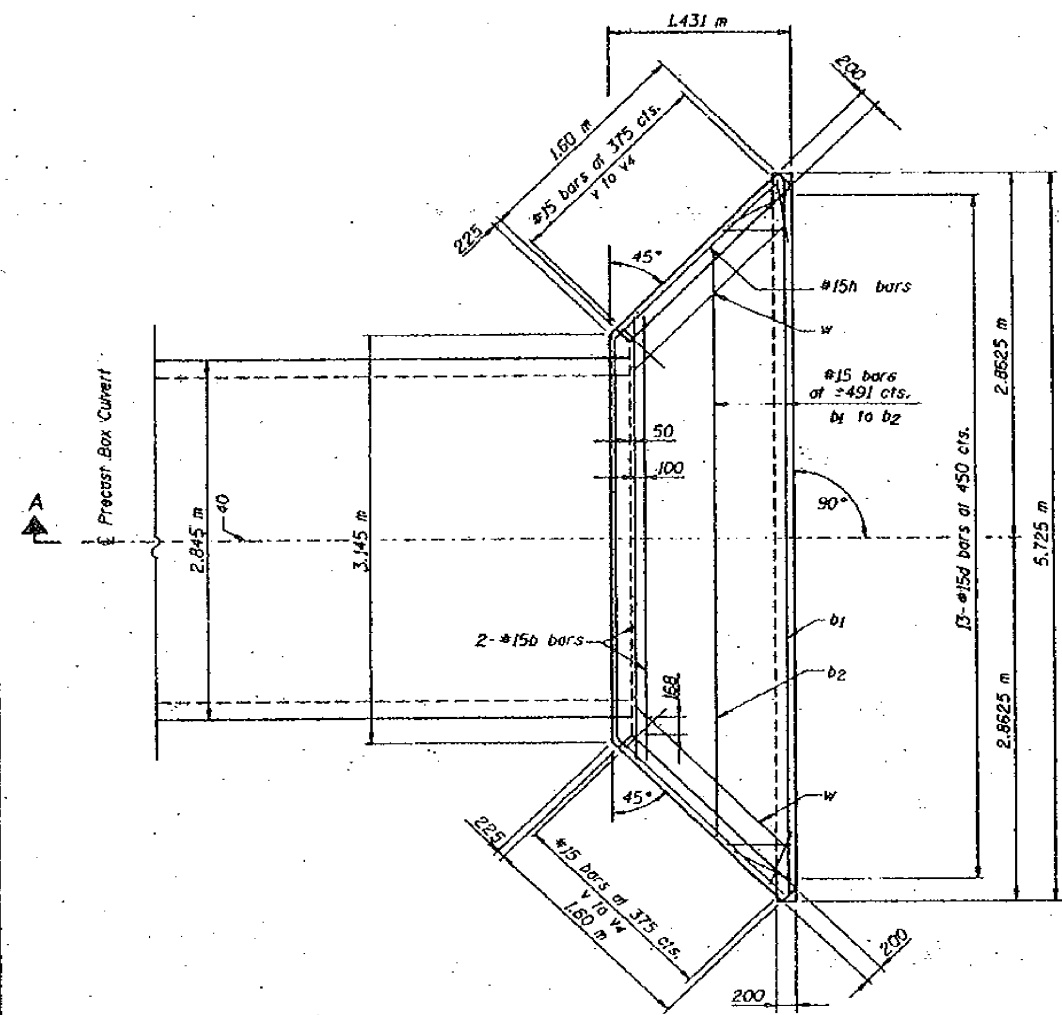
NOTES
 All bars shall be round and shall conform to the requirements of Art. 1006.10 of the Standard Specifications.
 Class SI Concrete Headwalls shall be used throughout.
 Build tops of headwalls parallel to grade line.
 The Precast Concrete Box Culvert Sections shall conform to the requirements of AASHTO M259.
 All dimensions are in millimeters (mm) unless otherwise noted.



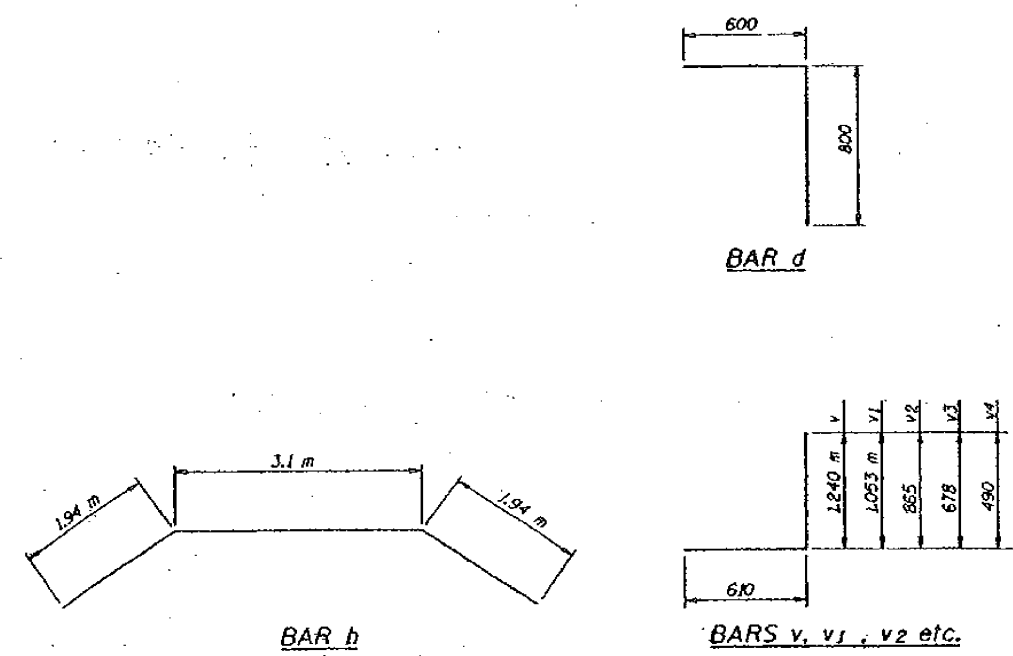
SECTION A-A



END VIEW



PLAN



BILL OF MATERIAL (ONE HEADWALL)

Bar	No.	Size	Length (m)	Shape
b	2	#15	3.75	—
b1	2	#15	5.625	—
b2	1	#15	4.728	—
d	13	#15	1.40	⌒
h	2	#15	6.38	⌒
h1	2	#15	1.602	—
h2	2	#15	1.546	—
h3	2	#15	1.512	—
v	4	#15	1.85	⌒
v1	2	#15	1.663	⌒
v2	2	#15	1.475	⌒
v3	4	#15	1.288	⌒
v4	2	#15	1.10	⌒
w	2	#15	1.458	—
Reinforcement Bars			kg	136
Class SI Conc Headwalls			Cu. m	3.0

BOX CULVERT END SECTIONS (CAST IN PLACE)
 STA. 32+455.914, 34+083.786 0° SKEW

FOR INFORMATION ONLY

REINFORCED CONCRETE HEADWALL DETAILS

REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	DRAWN BY: AJL K.E.B. 12-99 CHECKED BY: AJL
1		ISS. NUMBER
2		PROJECT NO.
3		SHEET NO.
4		
5		
6		
7		
8		
9		
10		
11		
12		

FILE NAME =	USER NAME = bucklesJJ	DESIGNED - RLA	REVISED -
ct:\pwork\p\WIDOT\BUCKLESJJ\d0134382\070676.sht-details.dgn		DRAWN - RLA	REVISED -
PLOT SCALE = 40.0000 / IN.		CHECKED - JMS	REVISED -
PLOT DATE = 3/22/2010		DATE - 11/4/09	REVISED -

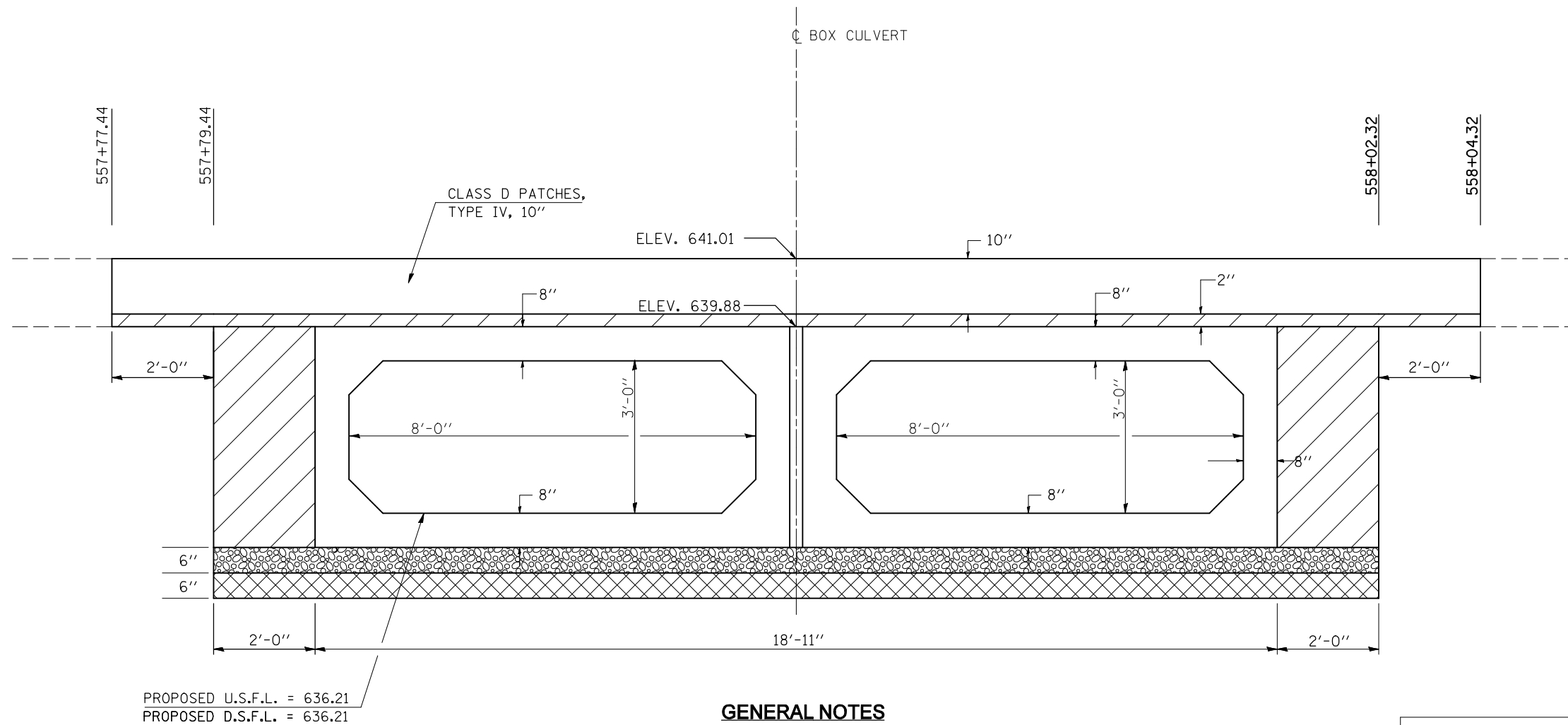
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS BUILT PLANS
FOR INFORMATION ONLY

SCALE: N/A	SHEET NO. 2 OF 5 SHEETS	STA. TO STA.	F.A.P. RTE. 323	SECTION (145,146)CR	COUNTY DOUGLAS	TOTAL SHEETS 36	SHEET NO. 16
						CONTRACT NO. 70696	
ILLINOIS FED. AID PROJECT							

POROUS GRANULAR EMBANKMENT DETAILS

CULVERT NO. 2, STATION 557 + 90.90 S.N. 021-8053



GENERAL NOTES

- ① STONE RIPRAP, CLASS A1 SHALL BE USED WHERE A.R. CULVERTS ARE REQUIRED TO BE UNDERCUT DUE TO UNSTABLE SOIL CONDITIONS.
- ② WORK SHOWN IN THE DETAIL SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 281 AND SECTION 282 OF THE STANDARD SPECIFICATIONS.
- ③ THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR STONE RIPRAP, CLASS A1. FILTER FABRIC WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED WITH THE PAY ITEM FOR STONE, RIPRAP, CLASS A1.
- ④ THE EXCAVATION AND REMOVAL OF THE UNSUITABLE MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED WITH THE PAY ITEM FOR STONE RIPRAP, CLASS A1.
- ⑤ POROUS GRANULAR EMBANKMENT SHALL EXTEND 2 FT. BEYOND THE AGGREGATE SHOULDER
- ⑥ WORK SHOWN IN DETAIL SHALL BE DONE ACCORDING TO THE APPLICABLE PORTIONS OF ARTICLE 207 AND ARTICLE 540 OF THE STANDARD SPECIFICATIONS.
- ⑦ THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR POROUS GRANULAR EMBANKMENT.
- ⑧ THE AREA TO BE EXCAVATED FOR THE PROPOSED BOX CULVERT SHALL NOT BE MEASURED FOR PAYMENT. THE COST OF THE EXCAVATION SHALL BE CONSIDERED AS INCLUDED IN THE COST OF PRECAST CONCRETE BOX CULVERTS AND BOX CULVERT END SECTIONS.

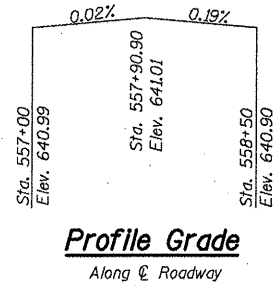
BILL OF MATERIAL

ITEM	CU YDS
POROUS GRANULAR EMBANKMENT	28
	TONS
STONE RIPRAP, CLASS A1	45

DRAWING NOT TO SCALE.

LEGEND	
	POROUS GRANULAR EMBANKMENT (CA-6)
	POROUS GRANULAR MATERIAL (CA-7) INCLUDED WITH PRECAST BOX CULVERT ITEMS
	STONE RIP RAP, CLASS A1

EXISTING STRUCTURE: S.N. 021-8022 was constructed in 1927 at STA. 557+86 as a 8'x3'x42' cast-in-place box culvert with concrete headwalls as S.B.I. 121, Sec. 146 in Douglas County. In 2000 the box was extended with precast box culverts and cast-in-place end sections, under Section (145,146)RS-2 & 147 RS-4. The existing structure is to be completely removed and replaced. There will be no salvage of any materials. Road closure will be utilized. BENCHMARK ELEV. = 640.34 Chiseled square on top of center of south headwall of S.N. 021-8022 at STA. 557+91, 31.16' RT.



Profile Grade

Along ϕ Roadway

STATION 557+90.90
BUILT 201 BY
STATE OF ILLINOIS
F.A.P. RT. 323 SEC. (145,146)CR
LOADING HS 20
STRUCTURE NO. 021-8053

NAME PLATE

See Std. 515001

INDEX OF SHEETS

1. Plan & Profile
2. As Built Plan
3. Porous Granular Embankment Detail
4. General Plan and Elevation
5. Box Culvert End Section Details

DESIGN SPECIFICATIONS

2002 AASHTO

LOADING HS20-44

Allow 50#/sq.ft. for future wearing surface

DESIGN STRESSES

FIELD UNITS

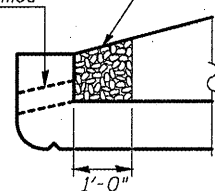
f'_c = 3,500 psi
 f_y = 60,000 psi (reinforcement)
 f_y = 65,000 psi (welded wire fabric)

PRECAST UNITS

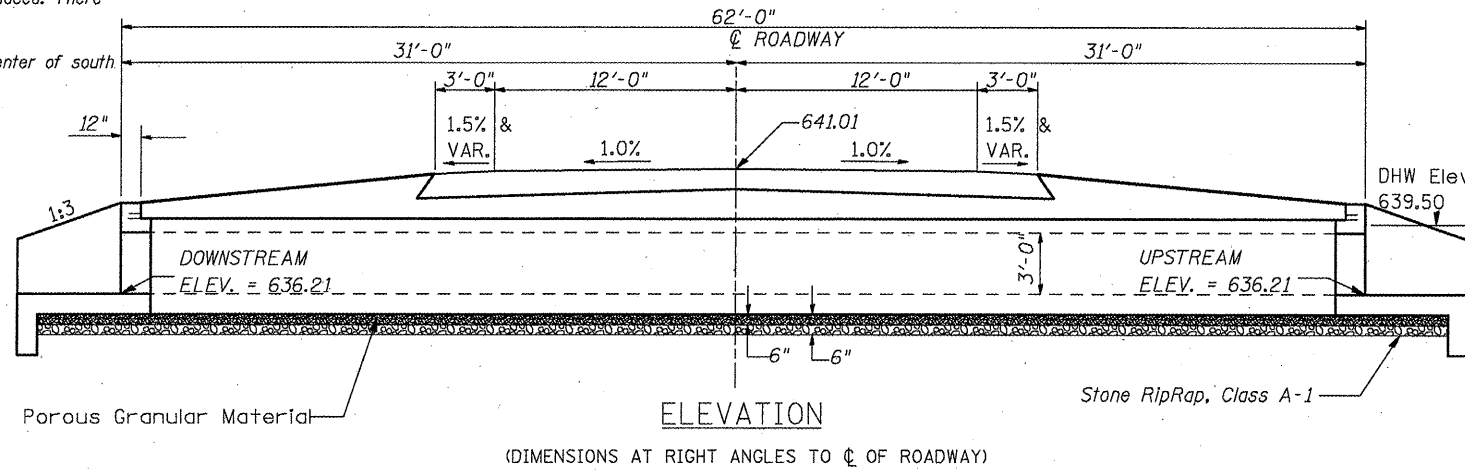
f'_c = 5,000 psi
 f_y = 65,000 psi (welded wire fabric)

Coarse aggregate full length of both headwalls. To be placed by Grading Contractor. Cost included with Box Culvert End Sections.

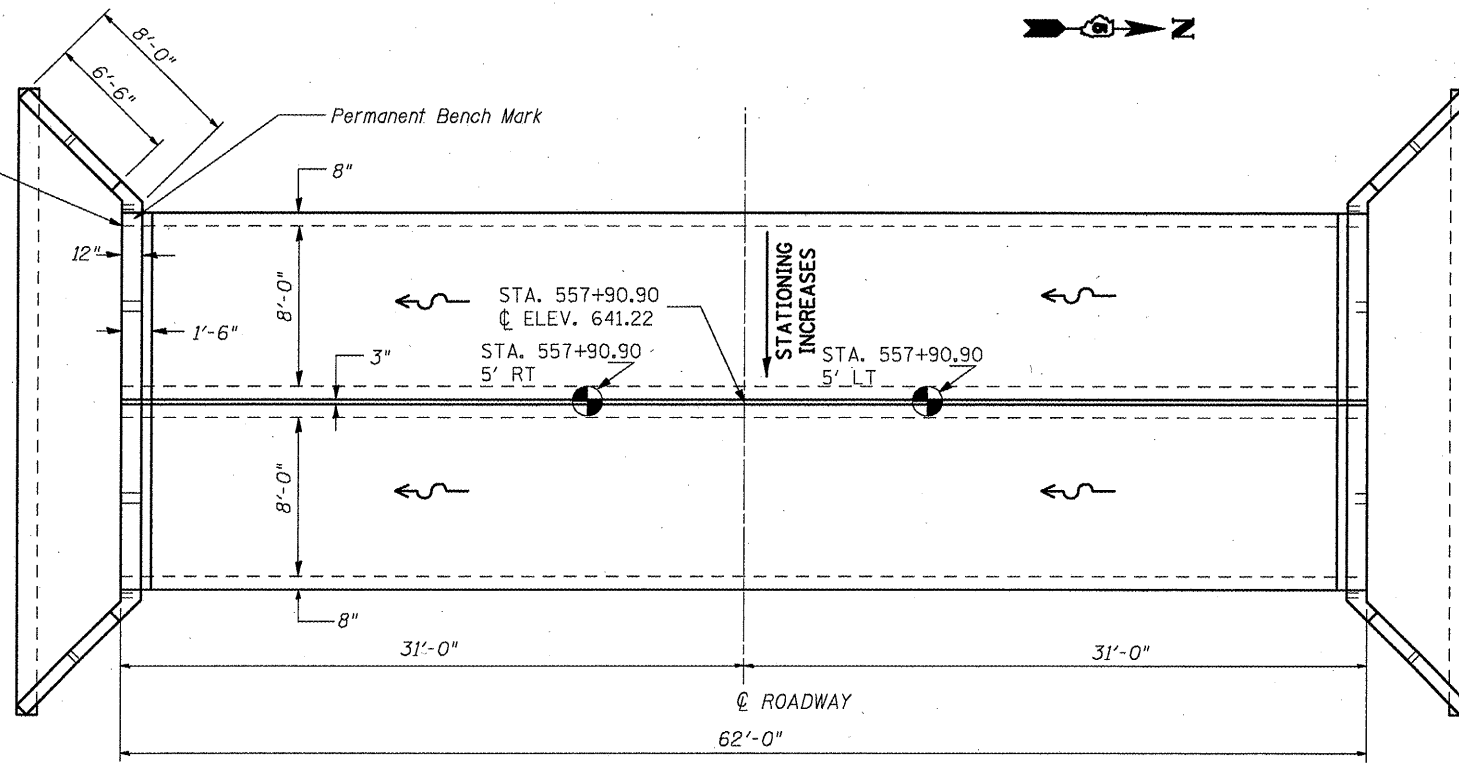
6" x 3" Formed Opening



DRAIN DETAIL



ELEVATION
(DIMENSIONS AT RIGHT ANGLES TO ϕ OF ROADWAY)



PLAN

\oplus Pavement Borings

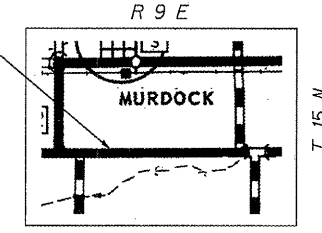
WATERWAY INFORMATION

Drainage Area = 0.4 sq. mi. Low Grade Elev. 640.89 @ Sta. 558+70

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
	10	140	24	41			639.9	638.8	
Design	50	230	24	48			Over	639.5	
Base	100	271	24	48			Over	639.8	
Overtopping									
Max. Calc.	500	371	24	48			Over	640.7	

Note: Information provided using the Regression Method.

PROP. S.N. 021-8053
STA. 557+90.90



Design Scour Elevation Table

Design Scour Elevation (ft.)	Upstream	Downstream
	633.21	633.21

General Notes

- Build tops of headwalls parallel to the grade lines.
- All construction joints shall be bonded according to Article 503.09 of the Standard Specifications.
- Reinforcement bars shall conform to the requirements of ASTM A706 Gr. (IL Modified). See Special Provisions.
- The 6" Porous Granular Material required per Art. 540.06 of the Standard Specifications shall also extend beneath the Box Culvert End Sections and shall be considered included in the cost of Precast Concrete Box Culverts and Box Culvert End Sections.
- When lapping sheets of welded wire fabric, the overlap measured between the outermost cross wires of each fabric sheet shall not be less than 8"
- End Sections will be paid for at the contract unit price per each for BOX CULVERT END SECTIONS, as outlined in Section 540 of the Standard Specifications.
- Class SI Concrete shall be used throughout.
- Concrete, Rebar, and Welded Wire Fabric quantities and lengths calculated for the cast-in-place End Sections may vary based on the precast box culverts supplied.
- Drain holes shall be provided in accordance with Article 503.11 of the Standard Specifications.

The design reinforcement areas shall conform to those found in Table 1 of AASHTO M273 for an 8'x4' box section except the extension of the AsI bars into the top slab shall be equal to (23 inches + 2 longitudinal wire spaces).

The box culvert end section may be built in the field or using precast construction methods. If the contractor elects to use precast construction methods, shop drawings and a proposed construction sequence shall be submitted to the Engineer for approval. See Special Provisions.

The ends of the precast box sections adjacent to the end section shall be formed without the male and female shapes specified in Article 8.1 of AASHTO M273. See Sections B-B, D-D, E-E, and F-F on Sheet 5.

The design fill height for this box is less than 2 feet. The Precast Concrete Box Culvert Sections shall conform to the requirements of AASHTO M 273.

The joints between precast box sections shall be sealed, all voids filled with a mastic joint sealer. In addition, the joints shall be externally sealed on all four sides with a 13 inch wide external sealing band. The seal shall be centered over the joint, secured in place and protected during the backfilling process.

All dimensions are in FEET (') - INCHES (") unless otherwise noted.

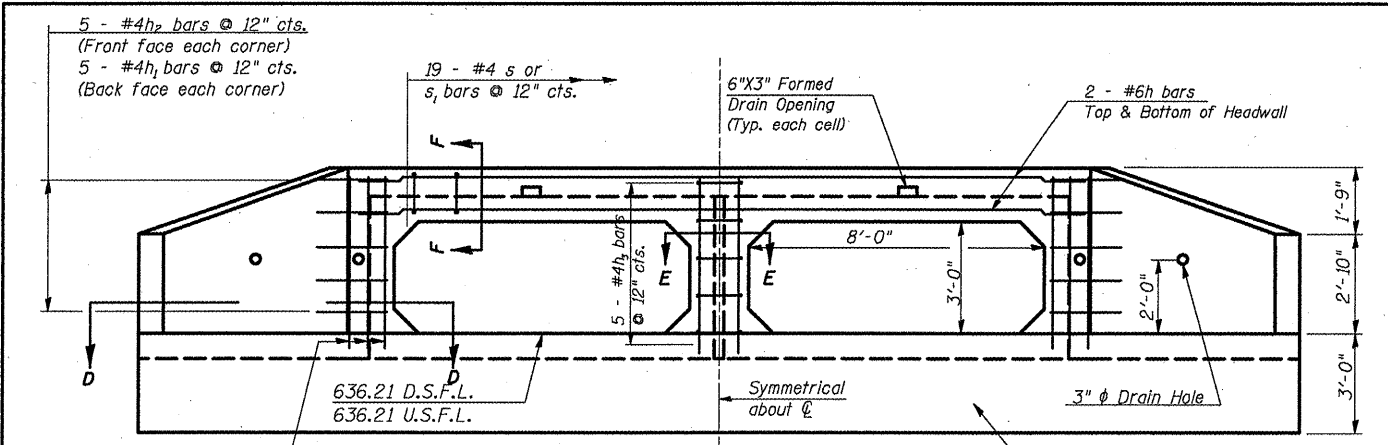
Drawings not to scale.

TOTAL BILL OF MATERIAL

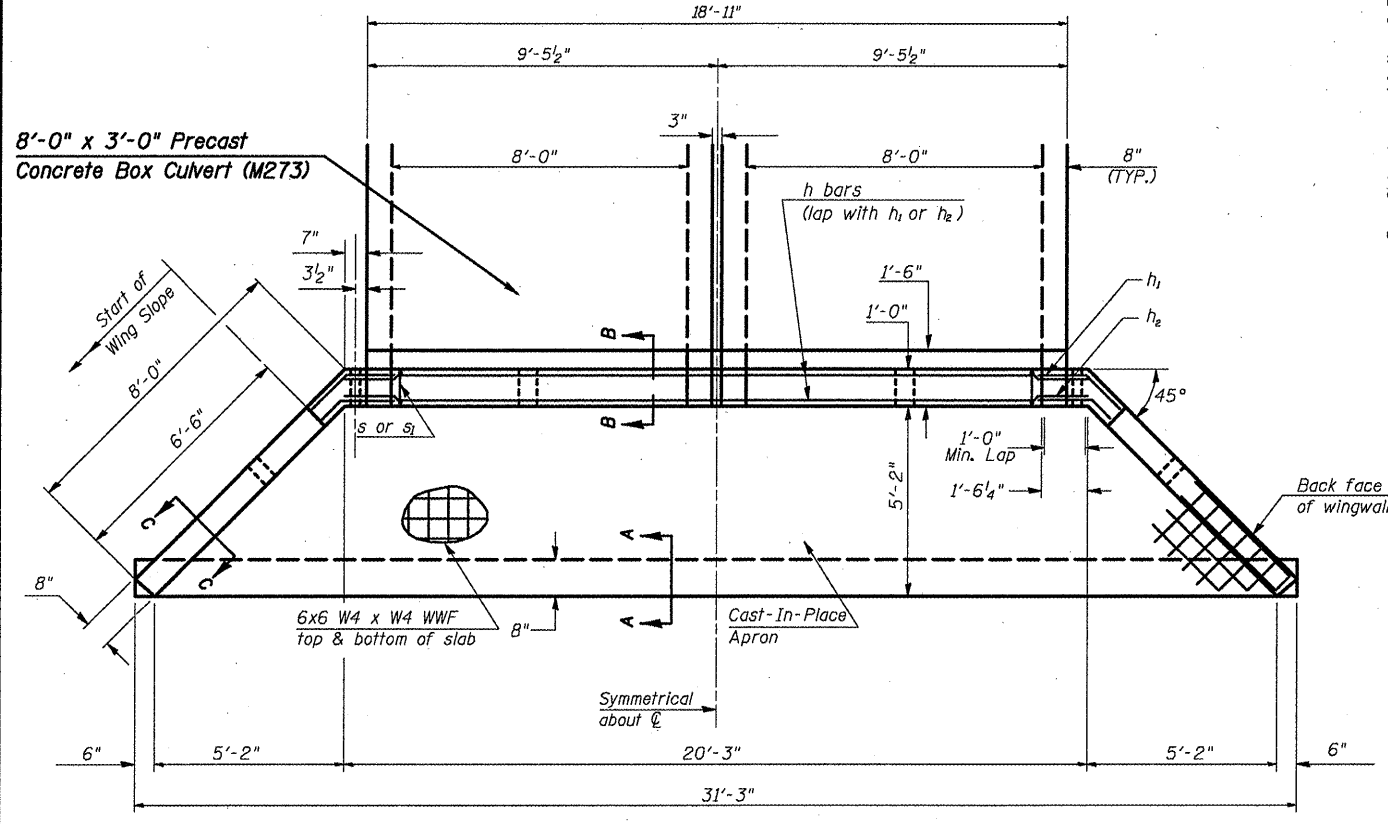
Item	Unit	Total
Removal of Existing Structures No. 2	Each	1
Precast Concrete Box Culvert 8'x3' (M273)	Foot	118
Box Culvert End Section, Culvert No. 2	Each	2
Name Plates	Each	1
Permanent Bench Marks	Each	1
Porous Granular Embankment	Cu. Yd.	28
Stone RipRap, Class A1	Ton	45

**GENERAL PLAN AND ELEVATION
DOUBLE 8'x3' PRECAST BOX CULVERT
F.A.P. ROUTE 323 - SECTION (145,146)CR
DOUGLAS COUNTY
STATION 557+90.90 S.N. 021-8053
CULVERT NO. 2**

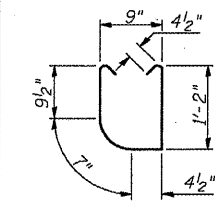
FILE NAME =	USER NAME = bucklesj	DESIGNED - RLA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION PROPOSED CULVERT NO. 2 - S.N. 021-8053	F.A.P. RTE. 323	SECTION (145,146)CR	COUNTY DOUGLAS	TOTAL SHEETS 36	SHEET NO. 18
DRAWN - RLA	CHECKED - JMS	REVISIONS -	SCALE: N/A			SHEET NO. 4 OF 5 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 70696
PLOT SCALE = 48,000 / 1" = 100'	DATE - 10/29/09									
PLOT DATE = 3/22/2010										



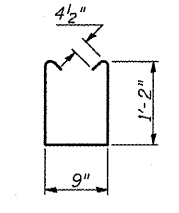
END ELEVATION



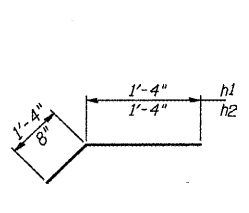
PLAN



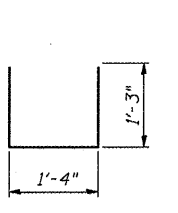
s1 BARS
UPSTREAM END



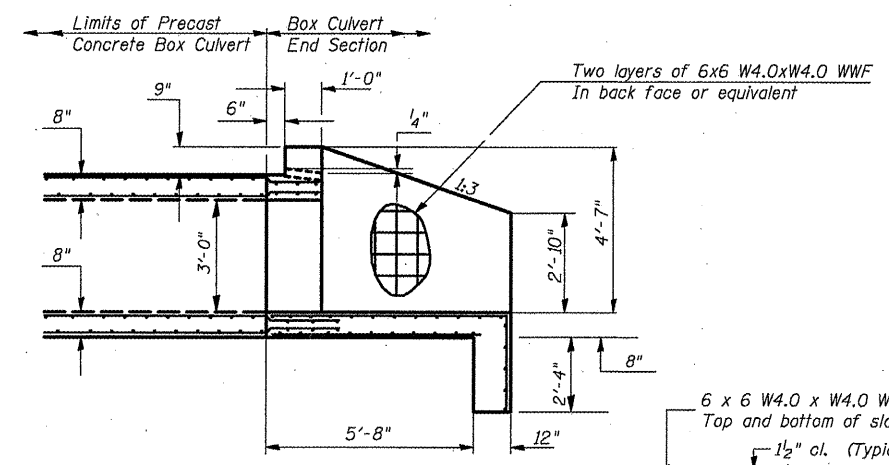
s BARS
DOWNSTREAM END



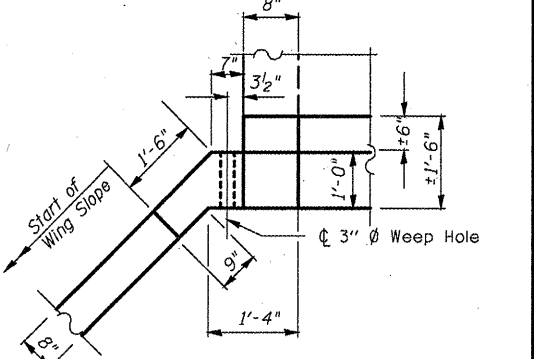
h1 & h2 BARS



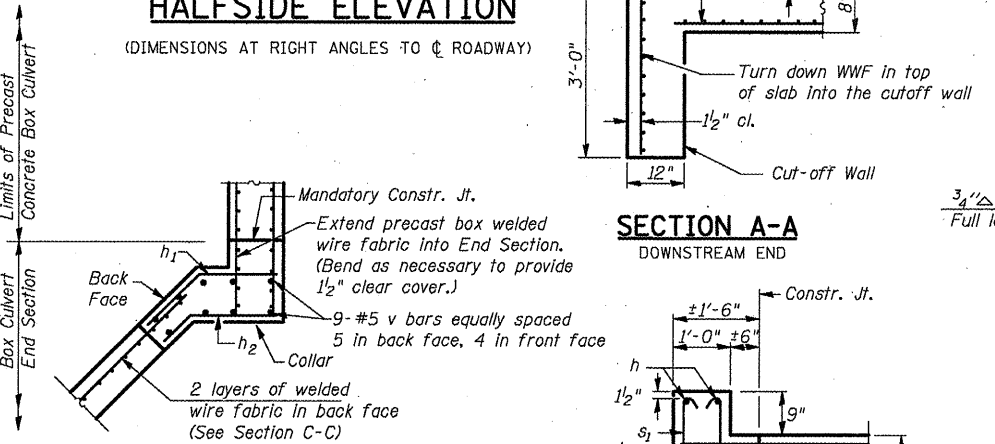
h3 BARS
DOWNSTREAM END



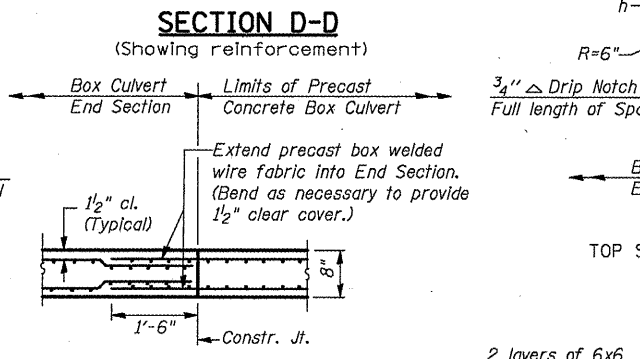
HALFSIDE ELEVATION
(DIMENSIONS AT RIGHT ANGLES TO CL ROADWAY)



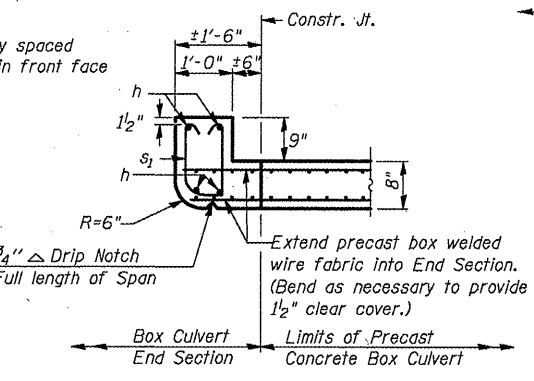
CORNER DETAIL
(Showing dimensions and weep hole)



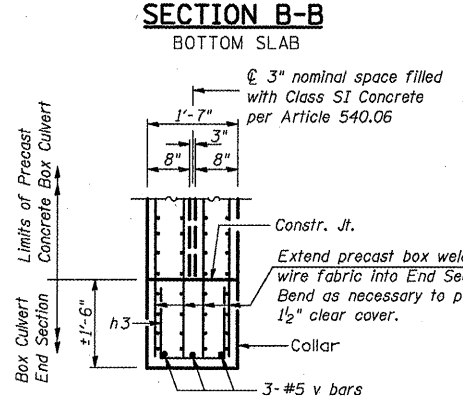
SECTION A-A
DOWNSTREAM END



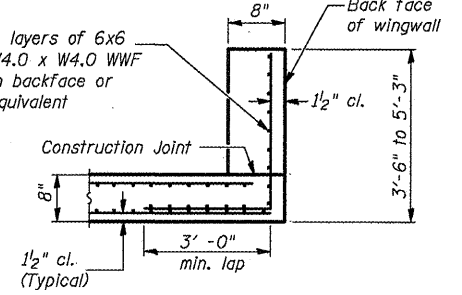
SECTION D-D
(Showing reinforcement)



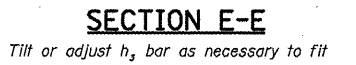
SECTION F-F
TOP SLAB / HEADWALL UPSTREAM END



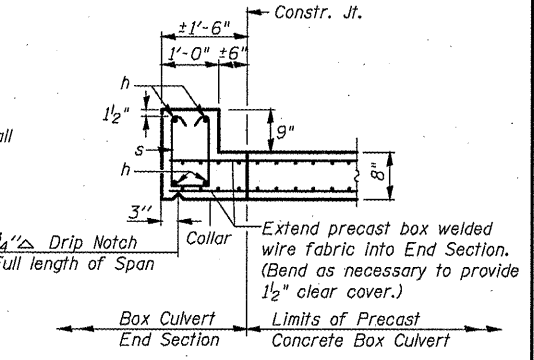
SECTION B-B
BOTTOM SLAB



SECTION C-C
WINGWALLS



SECTION E-E
Tilt or adjust h3 bar as necessary to fit



SECTION F-F
TOP SLAB / HEADWALL DOWNSTREAM END

BILL OF MATERIAL
For Information Only
(One End Section)

Bar	No.	Size	Length	Shape
h	4	#6	20'-0"	—
h1	10	#4	2'-8"	—
h2	10	#4	2'-0"	—
h3	5	#4	3'-10"	—
s or s1	19	#4	3'-10"	—
v	21	#5	4'-10"	—
Item		Unit	Total	
Concrete Box Culverts		Cu. Yd.	10.3	
Reinforcement Bars		Pound	353.0	
Welded Wire Fabric		Sq. Ft.	571.0	

GENERAL PLAN AND ELEVATION
DOUBLE 8'x3' PRECAST BOX CULVERT
F.A.P. ROUTE 323 - SECTION (145.146)CR
DOUGLAS COUNTY
STATION 557+90.90 S.N. 021-8053
CULVERT NO. 2

FILE NAME =	USER NAME = bucklesjj	DESIGNED - RLA	REVISED -
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	PLOT DATE = 3/22/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

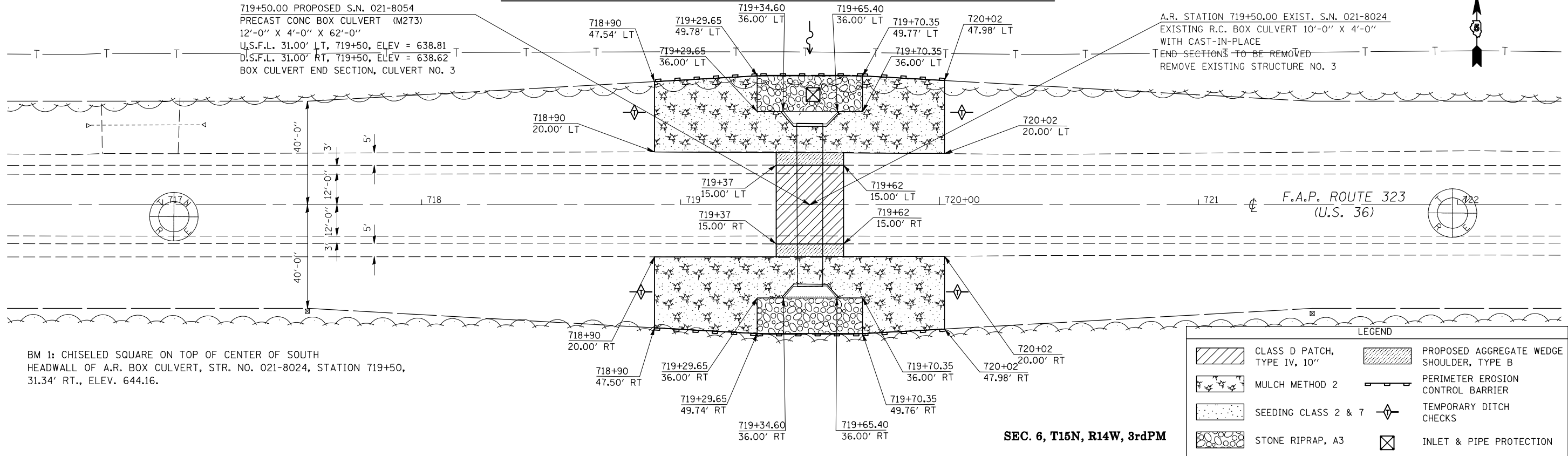
BOX CULVERT END SECTION DETAILS
PROPOSED CULVERT NO. 2 - S.N. 021-8053
SCALE: N/A SHEET NO. 5 OF 5 SHEETS STA. TO STA.

F.A.P. RTE. 323	SECTION (145.146)CR	COUNTY DOUGLAS	TOTAL SHEETS 36	SHEET NO. 19
			CONTRACT NO. 70696	
ILLINOIS FED. AID PROJECT				

DETAIL OF ACROSS ROAD BOX CULVERT NO. 3 STATION 719+50.00 EXIST. S.N. 021-8024 PROP. S.N. 021-8054



PLAN	SURVEYED	BY
NOTE BOOK NO.	PLOTTED	DATE
	CHECKED	
	AT	
	FILE NAME	

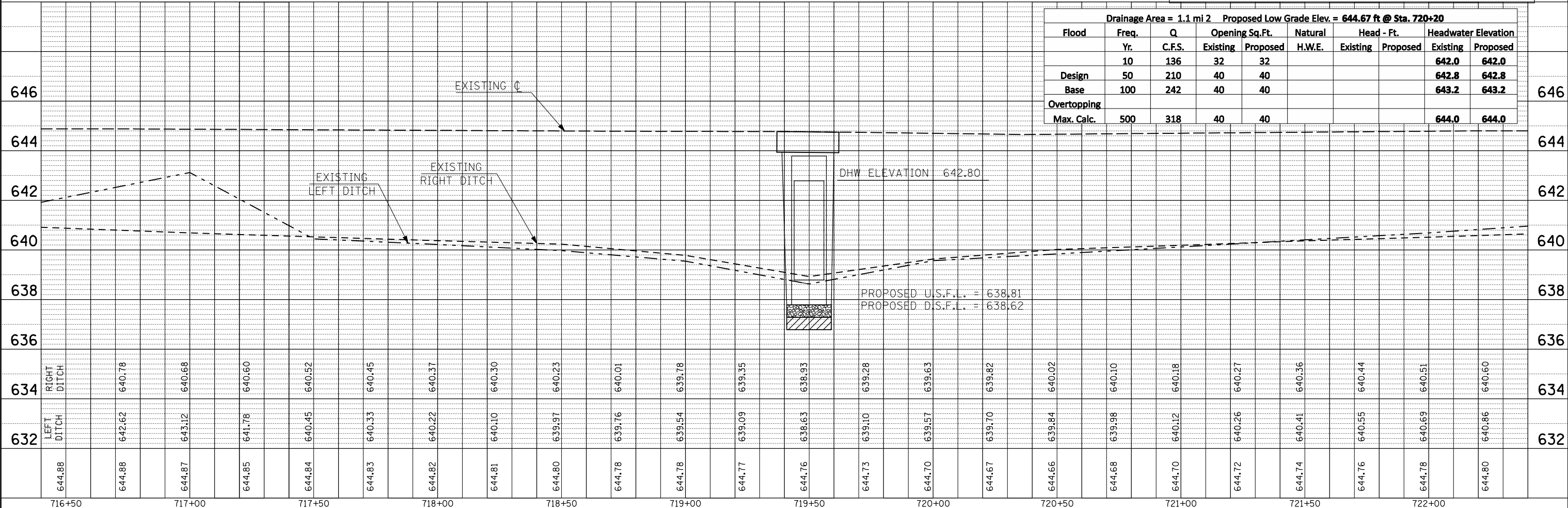


BM 1: CHISELED SQUARE ON TOP OF CENTER OF SOUTH HEADWALL OF A.R. BOX CULVERT, STR. NO. 021-8024, STATION 719+50, 31.34' RT., ELEV. 644.16.

LEGEND			
	CLASS D PATCH, TYPE IV, 10"		PROPOSED AGGREGATE WEDGE SHOULDER, TYPE B
	MULCH METHOD 2		PERIMETER EROSION CONTROL BARRIER
	SEEDING CLASS 2 & 7		TEMPORARY DITCH CHECKS
	STONE RIPRAP, A3		INLET & PIPE PROTECTION

SEC. 6, T15N, R14W, 3rdPM

PROFILE	SURVEYED	BY
NOTE BOOK NO.	GRADES CHECKED	DATE
	STRUCTURE NOTATIONS CHKD	



Drainage Area = 1.1 mi ² Proposed Low Grade Elev. = 644.67 ft @ Sta. 720+20							
Flood Yr.	Freq.	Q C.F.S.	Opening Sq.Ft. Existing	Opening Sq.Ft. Proposed	Natural H.W.E.	Head - Ft. Existing Proposed	Headwater Elevation Existing Proposed
10		136	32	32			642.0 642.0
Design	50	210	40	40			642.8 642.8
Base	100	242	40	40			643.2 643.2
Overtopping							
Max. Calc.	500	318	40	40			644.0 644.0

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		CHECKED - JMS	REVISED -		
		DATE - 7-9-09	REVISED -		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

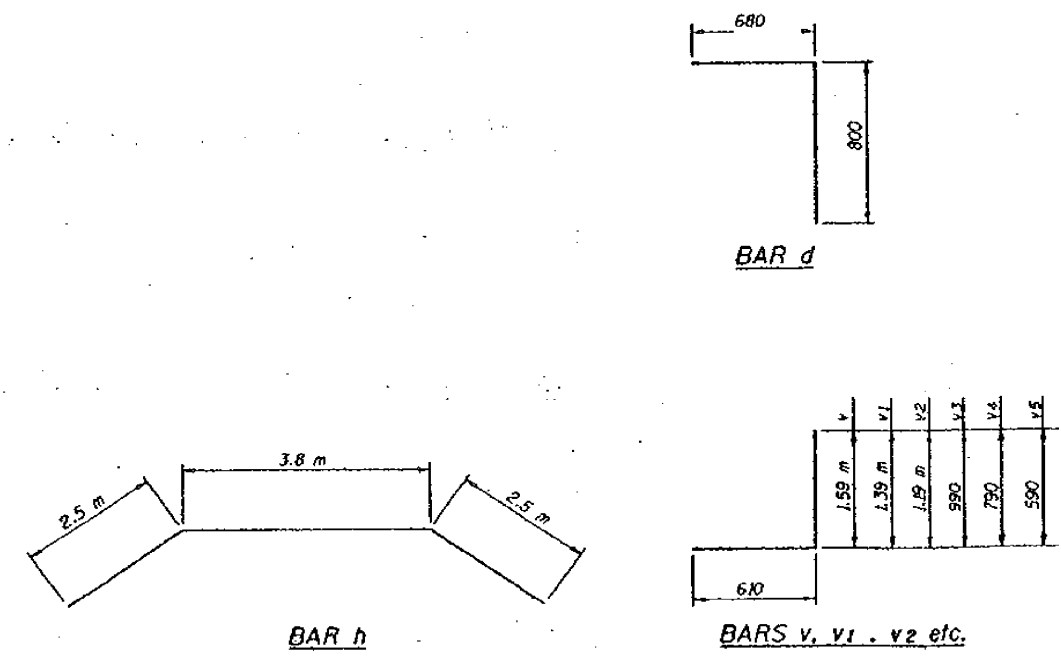
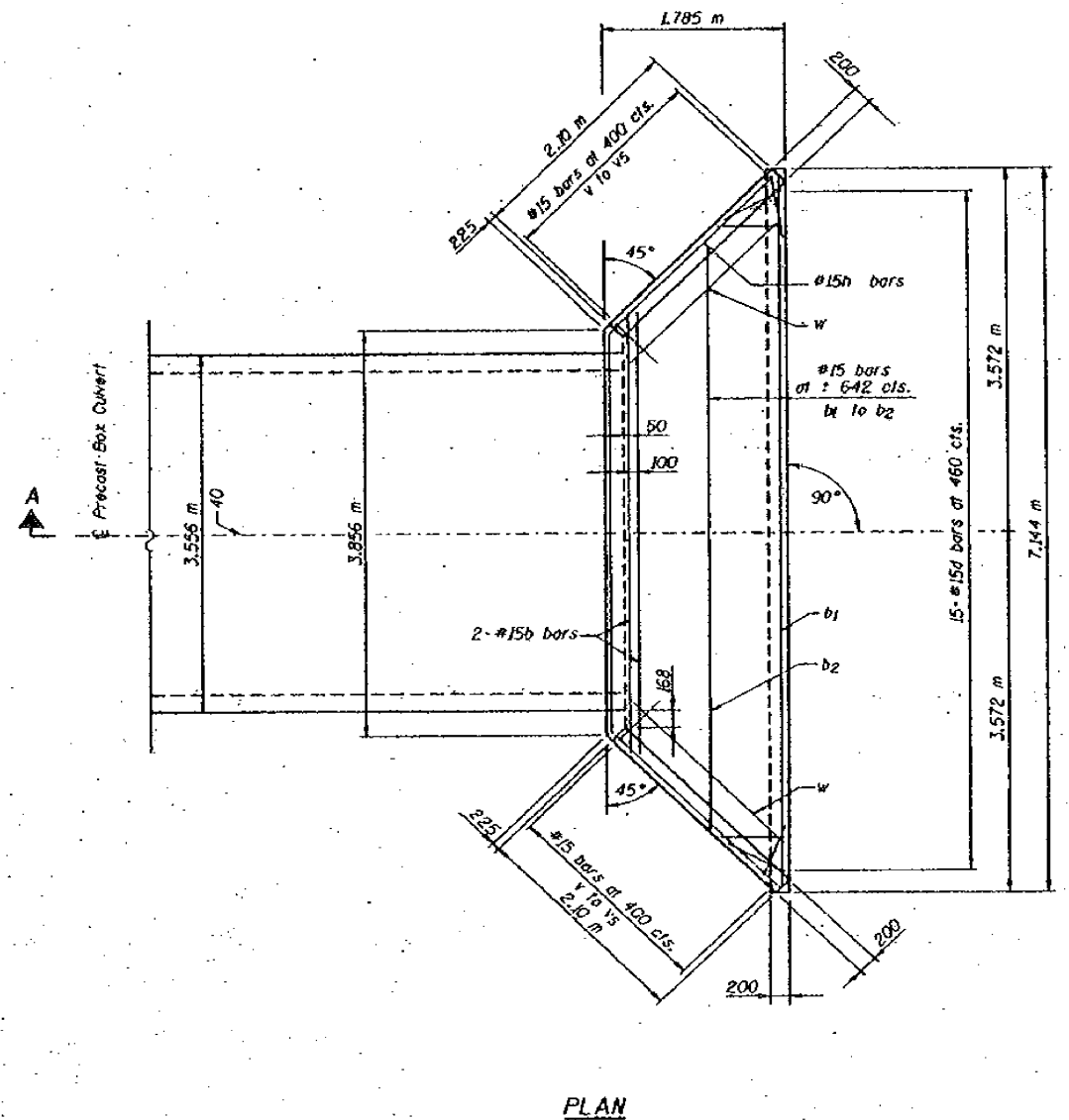
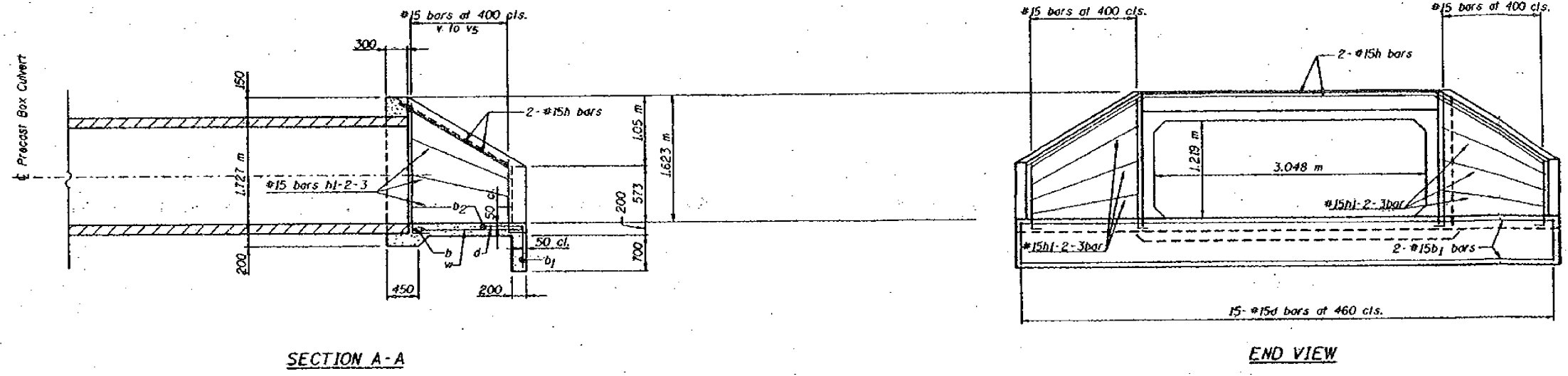
PLAN & PROFILE S.N. 021-8054

SCALE: 1:20 SHEET NO. 1 OF 5 SHEETS STA. 719+37.00 TO STA. 719+67.00

F.A.P. RTE. 323	SECTION (145,146)CR	COUNTY DOUGLAS	TOTAL SHEETS 31	SHEET NO. 20
CONTRACT NO. 70696				ILLINOIS FED. AID PROJECT

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 323	a	00	108	90C
STA.		TO STA.		
FED. RD. DIST. NO.		ILLINOIS	PROJECT	
• (145, 146) RS-2 & 147 RS-4				
•• DOUGLAS & EDGAR				

NOTES
 All bars shall be round and shall conform to the requirements of Art. 1006.10 of the Standard Specifications.
 Class S1 Concrete Headwalls shall be used throughout.
 Build tops of headwalls parallel to grade line.
 The Precast Concrete Box Culvert Sections shall conform to the requirements of AASHTO M259.
 All dimensions are in millimeters (mm) unless otherwise noted.



BILL OF MATERIAL (ONE HEADWALL)

Bar	No.	Size	Length (m)	Shape
d	2	#15	4.513	—
b1	2	#15	7.05	—
b2	1	#15	5.9	—
d	15	#15	1.48	┘
h	2	#15	8.8	—
h1	2	#15	2.136	—
h2	2	#15	2.062	—
h3	2	#15	2.016	—
v	4	#15	2.2	┘
v1	2	#15	2.0	┘
v2	2	#15	1.8	┘
v3	2	#15	1.6	┘
v4	2	#15	1.4	┘
v5	2	#15	1.2	┘
w	2	#15	1.96	—
Reinforcement Bars			kg	173
Class S1 Conc Headwalls			Cu. m	4.4

FOR INFORMATION ONLY

BOX CULVERT END SECTIONS (CAST IN PLACE)
 STA. 39+008.225 0° SKEW

REVISIONS			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DATE KEB 12-99
1					
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PLOT SCALE = 40.0000 / IN.		CHECKED - JMS	REVISED -
PLOT DATE = 3/22/2010		DATE - 11/2/09	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

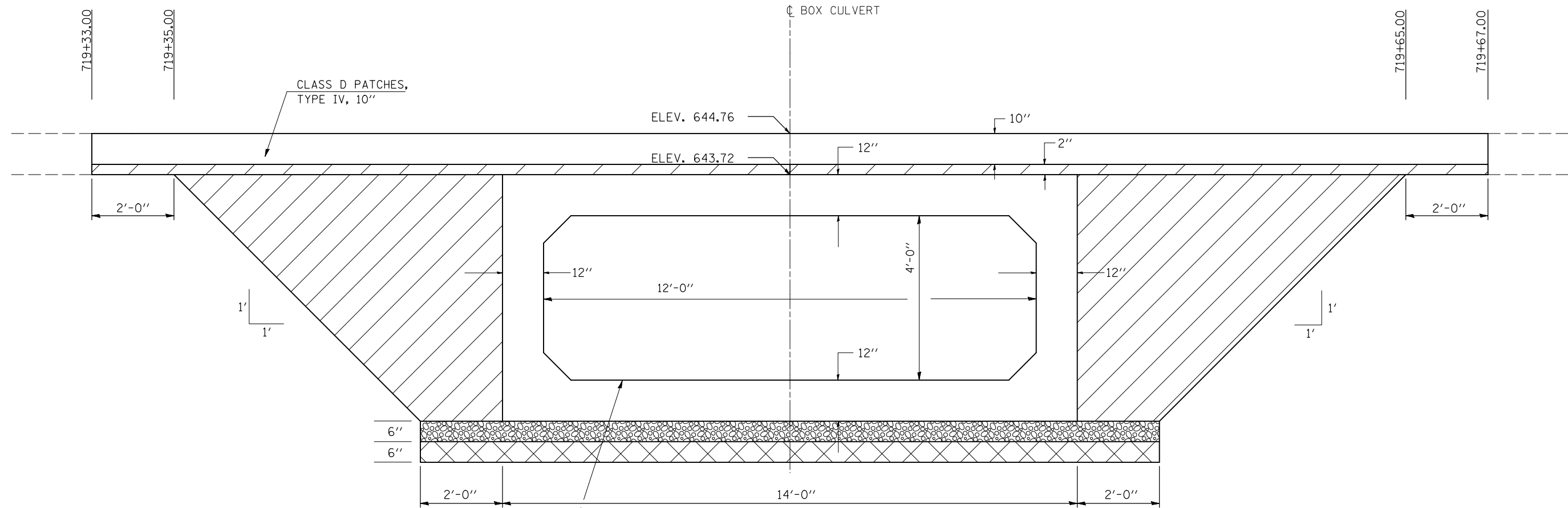
AS BUILT PLANS
 FOR INFORMATION ONLY

SCALE: N/A SHEET NO. 2 OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	21
CONTRACT NO. 70696				
ILLINOIS FED. AID PROJECT				

POROUS GRANULAR EMBANKMENT DETAILS

CULVERT NO. 3, STATION 719+50.00 S.N. 021-8054



PROPOSED U.S.F.L. = 638.81
 PROPOSED D.S.F.L. = 638.62

GENERAL NOTES

- ① STONE RIPRAP, CLASS A1 SHALL BE USED WHERE A.R. CULVERTS ARE REQUIRED TO BE UNDERCUT DUE TO UNSTABLE SOIL CONDITIONS.
- ② WORK SHOWN IN THE DETAIL SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 281 AND SECTION 282 OF THE STANDARD SPECIFICATIONS.
- ③ THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR STONE RIPRAP, CLASS A1. FILTER FABRIC WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED WITH THE PAY ITEM FOR STONE RIPRAP, CLASS A1.
- ④ THE EXCAVATION AND REMOVAL OF THE UNSUITABLE MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED WITH THE PAY ITEM FOR STONE RIPRAP, CLASS A1.
- ⑤ POROUS GRANULAR EMBANKMENT SHALL EXTEND 2 FT. BEYOND THE AGGREGATE SHOULDER
- ⑥ WORK SHOWN IN DETAIL SHALL BE DONE ACCORDING TO THE APPLICABLE PORTIONS OF ARTICLE 207 AND ARTICLE 540 OF THE STANDARD SPECIFICATIONS.
- ⑦ THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR POROUS GRANULAR EMBANKMENT.
- ⑧ THE AREA TO BE EXCAVATED FOR THE PROPOSED BOX CULVERT SHALL NOT BE MEASURED FOR PAYMENT. THE COST OF THE EXCAVATION SHALL BE CONSIDERED AS INCLUDED IN THE COST OF PRECAST CONCRETE BOX CULVERTS AND BOX CULVERT END SECTIONS.

DRAWING NOT TO SCALE.

LEGEND	
	POROUS GRANULAR EMBANKMENT (CA-6)
	POROUS GRANULAR MATERIAL (CA-7) INCLUDED WITH PRECAST BOX CULVERT ITEMS
	STONE RIP RAP, CLASS A1

BILL OF MATERIAL

ITEM	CU YDS
POROUS GRANULAR EMBANKMENT	90
	TONS
STONE RIPRAP, CLASS A1	35

FILE NAME =	USER NAME = bucklesJJ	DESIGNED -	REVISED -
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PLOT SCALE = 40.0000' / IN.		CHECKED -	REVISED -
PLOT DATE = 3/22/2010		DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

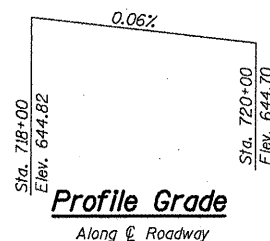
POROUS GRANULAR EMBANKMENT DETAILS

SCALE: N/A SHEET NO. 3 OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	22
CONTRACT NO. 70696				
ILLINOIS FED. AID PROJECT				

EXISTING STRUCTURE: S.N. 021-8024 was constructed in 1927 at STA. 719+50 as a 10'x4'x42' cast-in-place box culvert with concrete headwalls as S.B.I. 121, Sec. 146 in Douglas County. In 2000 the box was extended with precast box culverts and cast-in-place end sections, under Section (145,146)RS-2 & 147. The existing structure is to be completely removed and replaced. There will be no salvage of any materials. Road closure will be utilized.

BENCHMARK ELEV. = 640.34 Chiseled square on top of center of south headwall of S.N. 021-8024 at STA. 719+50, 31.34' RT.



Profile Grade

Along ϕ Roadway

STATION 719+50.00
BUILT 201 BY
STATE OF ILLINOIS
F.A.P. RT. 323 SEC. (145,146)CR
LOADING HS 20
STRUCTURE NO. 021-8054

NAME PLATE
See Std. 515001

INDEX OF SHEETS

1. Plan & Profile
2. Existing As-Built
3. Porous Granular Embankment Details
4. General Plan And Elevation
5. Box Culvert End Section Detail

DESIGN SPECIFICATIONS
2002 AASHTO

LOADING HS20-44

Allow 50#/sq.ft. for future wearing surface

DESIGN STRESSES

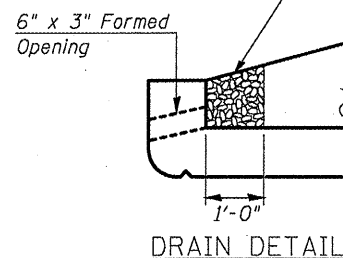
FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 65,000$ psi (welded wire fabric)

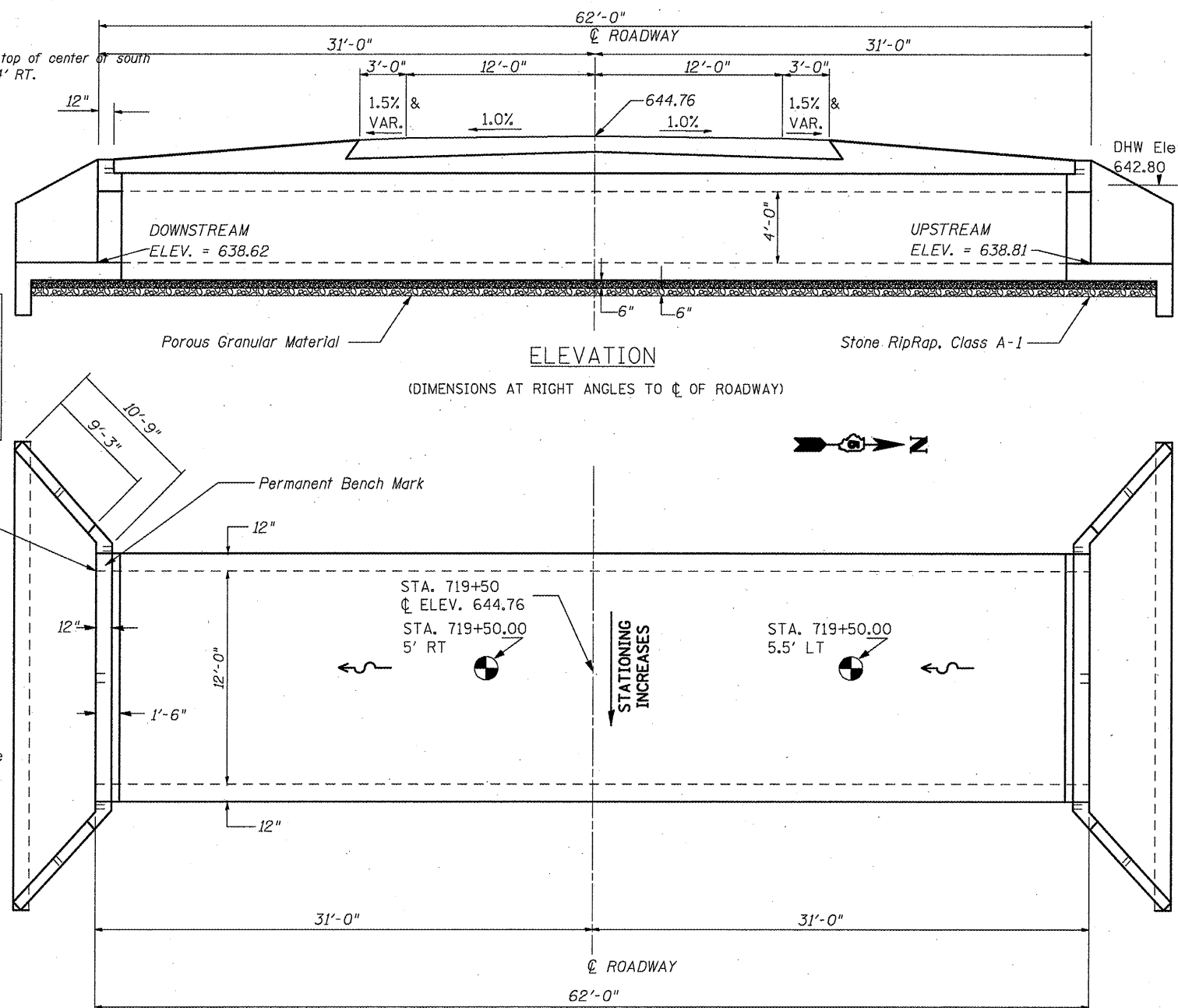
PRECAST UNITS

$f'_c = 5,000$ psi
 $f_y = 65,000$ psi (welded wire fabric)

Coarse aggregate full length of both headwalls. To be placed by Grading Contractor. Cost included with Box Culvert End Sections.



DRAIN DETAIL



ELEVATION
(DIMENSIONS AT RIGHT ANGLES TO ϕ OF ROADWAY)

PLAN

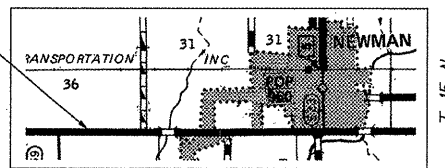
WATERWAY INFORMATION

Drainage Area = 1.1 sq. mi. Low Grade Elev. 644.67 @ Sta. 720+20.00

Flood	Freq. Yr.	Q C.F.S.	Opening Exist.	Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Headwater El. Prop.
Design	10	136	32	32			642.0/642.0
Base	50	210	40	40			642.8/642.8
Overtopping	100	242	40	40			643.2/643.2
Max. Calc.	500	318	40	40			644.0/644.0

Note: Information provided using the Regression Method.

PROP. S.N. 021-8054
STA. 719+50.00



Design Scour Elevation Table

Design Scour Elevation (ft.)	Upstream	Downstream
	635.81	635.62

General Notes

Build tops of headwalls parallel to the grade lines.

All construction joints shall be bonded according to Article 503.09 of the Standard Specifications.

Reinforcement bars shall conform to the requirements of ASTM A706 Gr. (IL Modified). See Special Provisions.

The 6" Porous Granular Material required per Art. 540.06 of the Standard Specifications shall also extend beneath the Box Culvert End Sections and shall be considered included in the cost of Precast Concrete Box Culverts and Box Culvert End Sections.

When lapping sheets of welded wire fabric, the overlap measured between the outermost cross wires of each fabric sheet shall not be less than 8"

End Sections will be paid for at the contract unit price per each for BOX CULVERT END SECTIONS, as outlined in Section 540 of the Standard Specifications.

Class SI Concrete shall be used throughout.

Concrete, Rebar, and Welded Wire Fabric quantities and lengths calculated for the cast-in-place End Sections may vary based on the precast box culverts supplied.

Drain holes shall be provided in accordance with Article 503.11 of the Standard Specifications.

The box culvert end section may be built in the field or using precast construction methods. If the contractor elects to use precast construction methods, shop drawings and a proposed construction sequence shall be submitted to the Engineer for approval. See Special Provisions.

The ends of the precast box sections adjacent to the end section shall be formed without the male and female shapes specified in Article 8.1 of AASHTO M273. See Sections B-B, D-D, E-E, and F-F on Sheet 5.

The design fill height for this box is less than 2 feet. The Precast Concrete Box Culvert Sections shall conform to the requirements of AASHTO M 273.

The joints between precast box sections shall be sealed, all voids filled with a mastic joint sealer. In addition, the joints shall be externally sealed on all four sides with a 13 inch wide external sealing band. The seal shall be centered over the joint, secured in place and protected during the backfilling process.

All dimensions are in FEET (') - INCHES (") unless otherwise noted.

Drawings not to scale.

TOTAL BILL OF MATERIAL

Item	Unit	Total
Removal of Existing Structures No. 3	Each	1
Precast Concrete Box Culvert 12'x4' (M273)	Foot	59
Box Culvert End Section, Culvert No. 3	Each	2
Name Plates	Each	1
Porous Granular Embankment	Cu.Yd.	90
Stone RipRap, Class A1	Ton	35
Permanent Bench Marks	Each	1

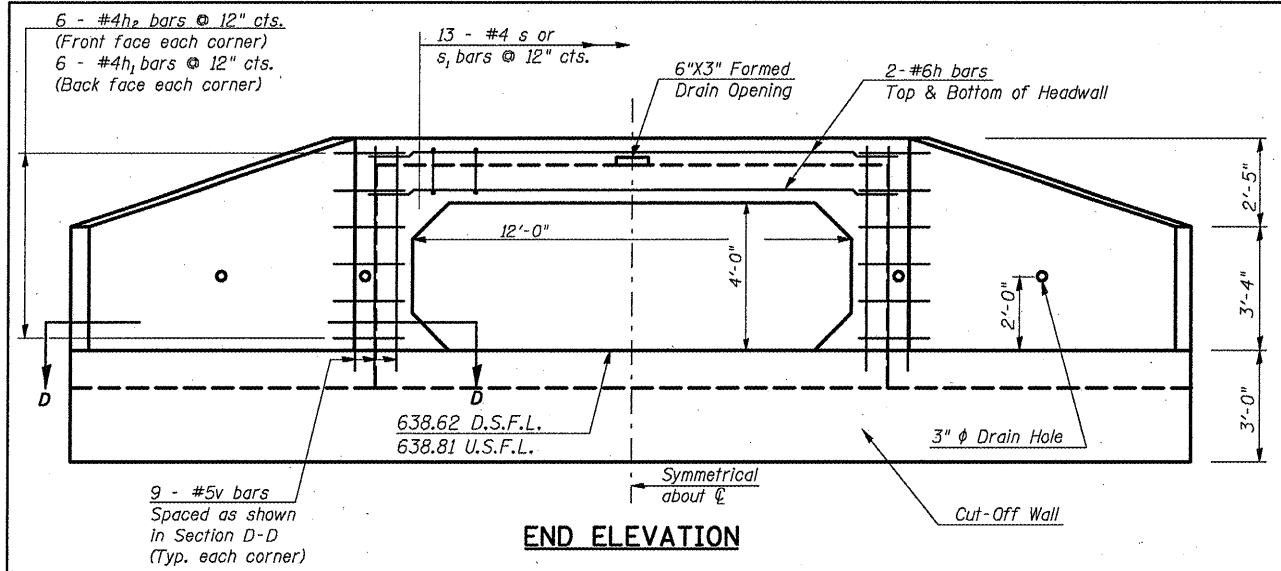
GENERAL PLAN AND ELEVATION
SINGLE 12'x4' PRECAST BOX CULVERT
F.A.P. ROUTE 323 - SECTION (145,146)CR
DOUGLAS COUNTY
STATION 719+50.00 S.N. 021-8054
CULVERT NO. 3

FILE NAME =	USER NAME = bucklesj	DESIGNED - RLA	REVISED -
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PLOT DATE = 3/22/2010		DATE - 11/3/09	REVISED -

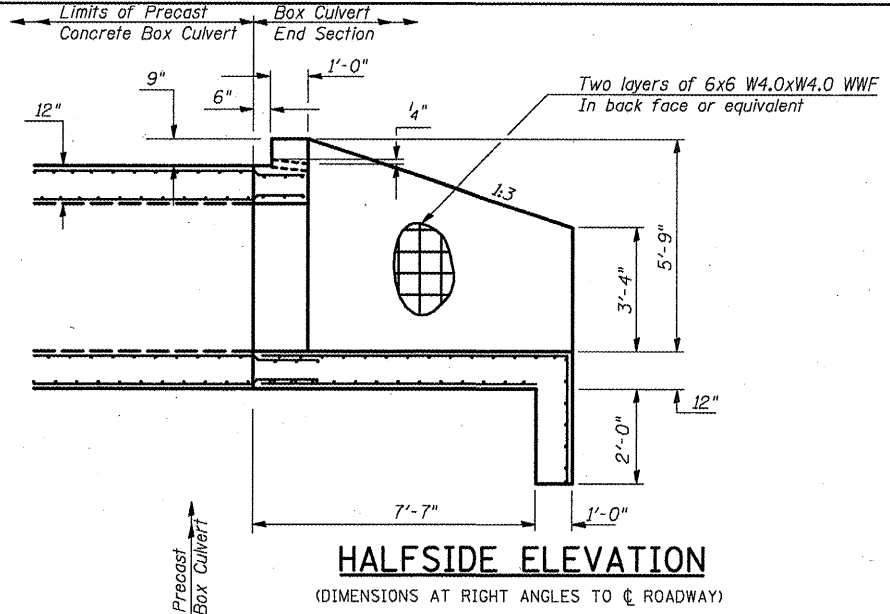
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION	
PROPOSED CULVERT NO. 3 - S.N. 021-8054	
SCALE:	SHEET NO. 4 OF 5 SHEETS STA. TO STA.

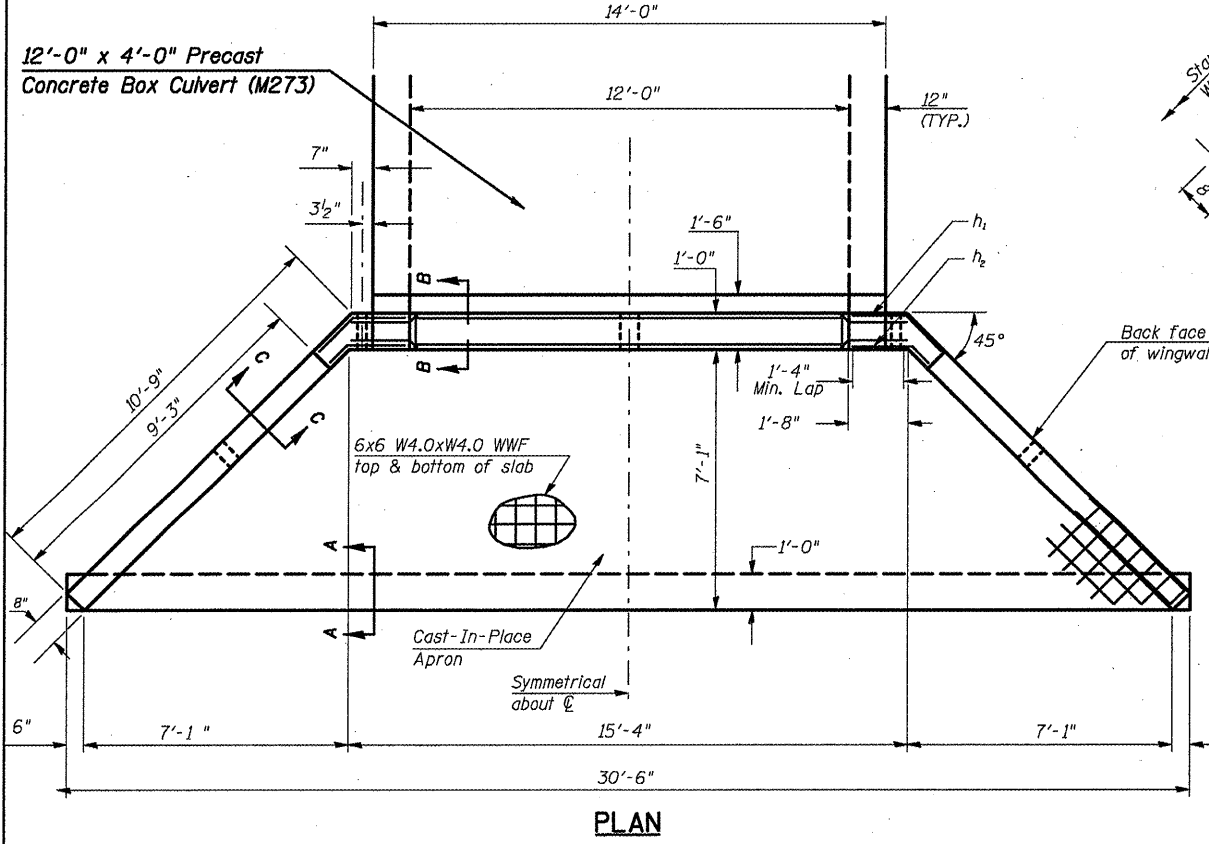
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	23
ILLINOIS FED. AID PROJECT			CONTRACT NO. 70696	



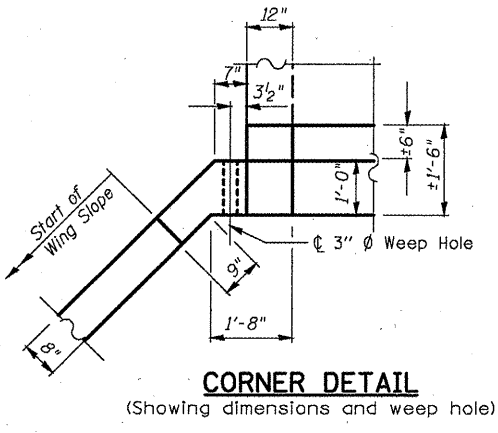
END ELEVATION



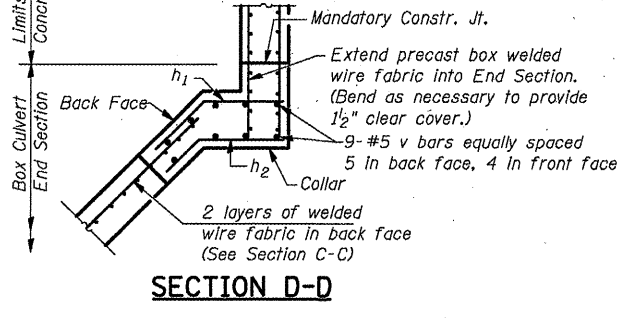
HALFSIDE ELEVATION
(DIMENSIONS AT RIGHT ANGLES TO ϕ ROADWAY)



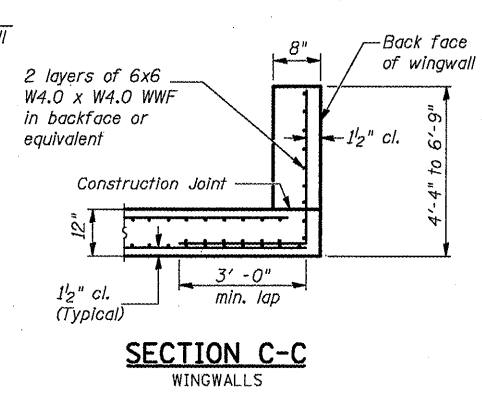
PLAN



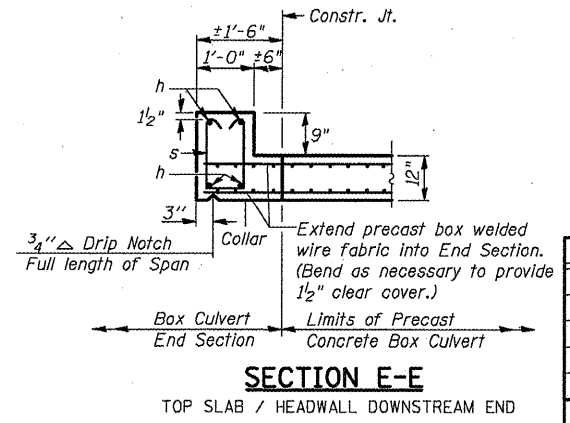
CORNER DETAIL
(Showing dimensions and weep hole)



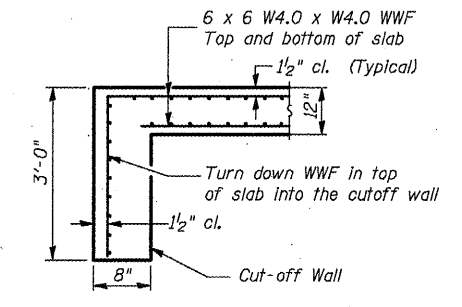
SECTION D-D



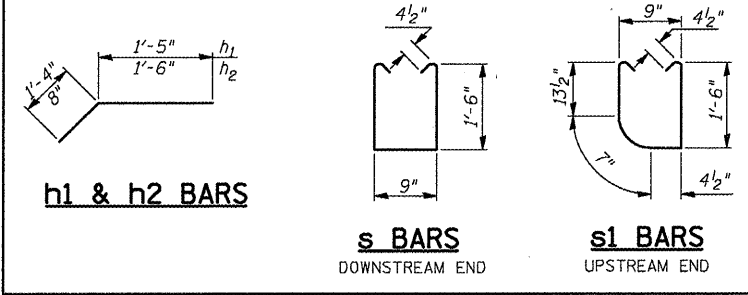
SECTION C-C
WINGWALLS



SECTION E-E
TOP SLAB / HEADWALL DOWNSTREAM END



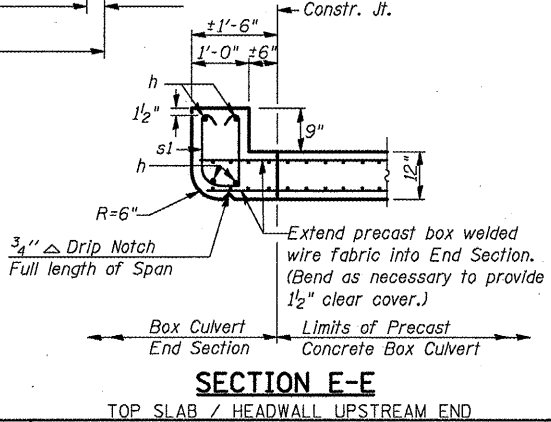
SECTION A-A
DOWNSTREAM END



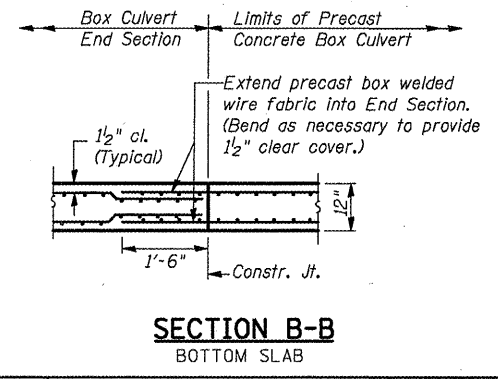
h1 & h2 BARS

s BARS
DOWNSTREAM END

s1 BARS
UPSTREAM END



SECTION E-E
TOP SLAB / HEADWALL UPSTREAM END



SECTION B-B
BOTTOM SLAB

BILL OF MATERIAL
For Information Only
(One End Section)

Bar	No.	Size	Length	Shape
h	4	#6	15'-1"	
h ₁	12	#4	2'-9"	
h ₂	12	#4	2'-2"	
s or s ₁	13	#4	4'-6"	
v	18	#5	6'-6"	
Item	Unit	Total		
Concrete Box Culverts	Cu. Yd.	15.5		
Reinforcement Bars	Pound	329.0		
Welded Wire Fabric	Sq. Ft.	718.0		

GENERAL PLAN AND ELEVATION
SINGLE 12'x4' PRECAST BOX CULVERT
F.A.P. ROUTE 323 - SECTION (145.146)CR
DOUGLAS COUNTY
STATION 719+50.00 S.N. 021-8054
CULVERT NO. 3

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PLOT DATE = 3/22/2010		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BOX CULVERT END SECTION DETAILS
PROPOSED CULVERT NO. 3 - S.N. 021-8054
SCALE: N/A SHEET NO. 5 OF 5 SHEETS STA. TO STA.

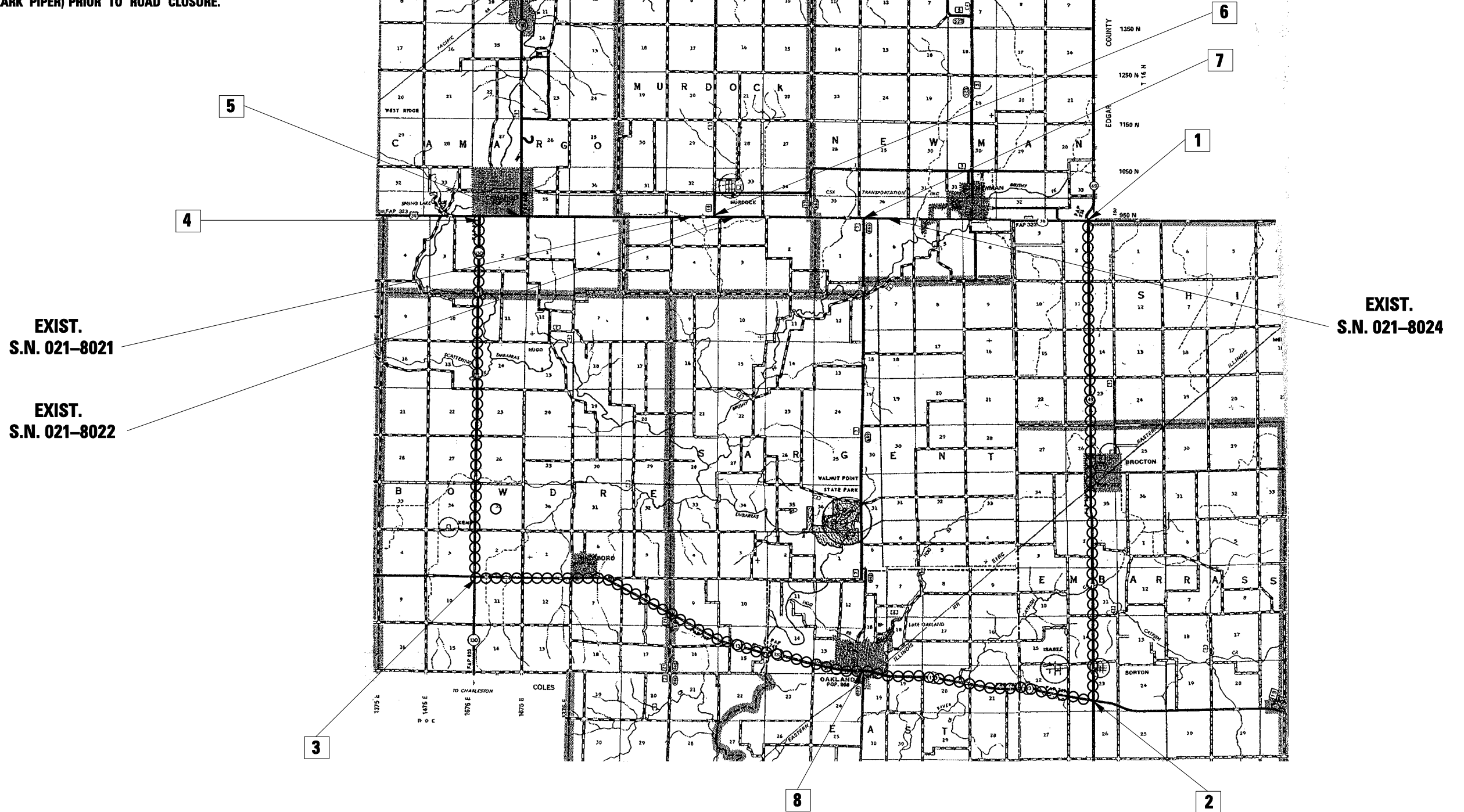
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145.146)CR	DOUGLAS	36	24
			CONTRACT NO. 70696	
ILLINOIS FED. AID PROJECT				

ROAD CLOSURE DETOUR DETAIL

Marked Detour Route



DETAIL NOTE:
 ALL DETOUR SIGN LOCATIONS ARE SUBJECT TO FIELD
 ADJUSTMENTS IN CASE OF CONFLICTS. ANY
 ADJUSTMENTS WILL BE COORDINATED BY THE
 ENGINEER, THE CONTRACTOR, AND THE BUREAU OF
 OPERATIONS (CLARK PIPER) PRIOR TO ROAD CLOSURE.



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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

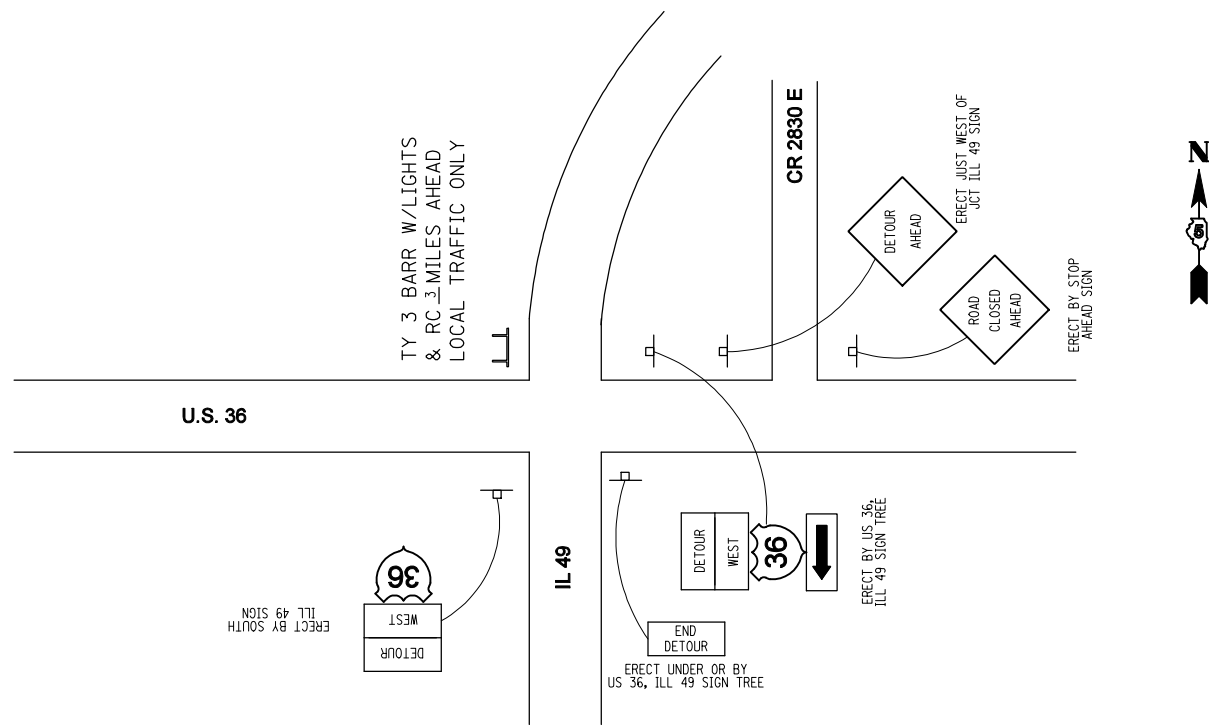
ROAD CLOSURE DETOUR DETAIL

SCALE: N/A SHEET NO. 1 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 70696				
ILLINOIS FED. AID PROJECT				

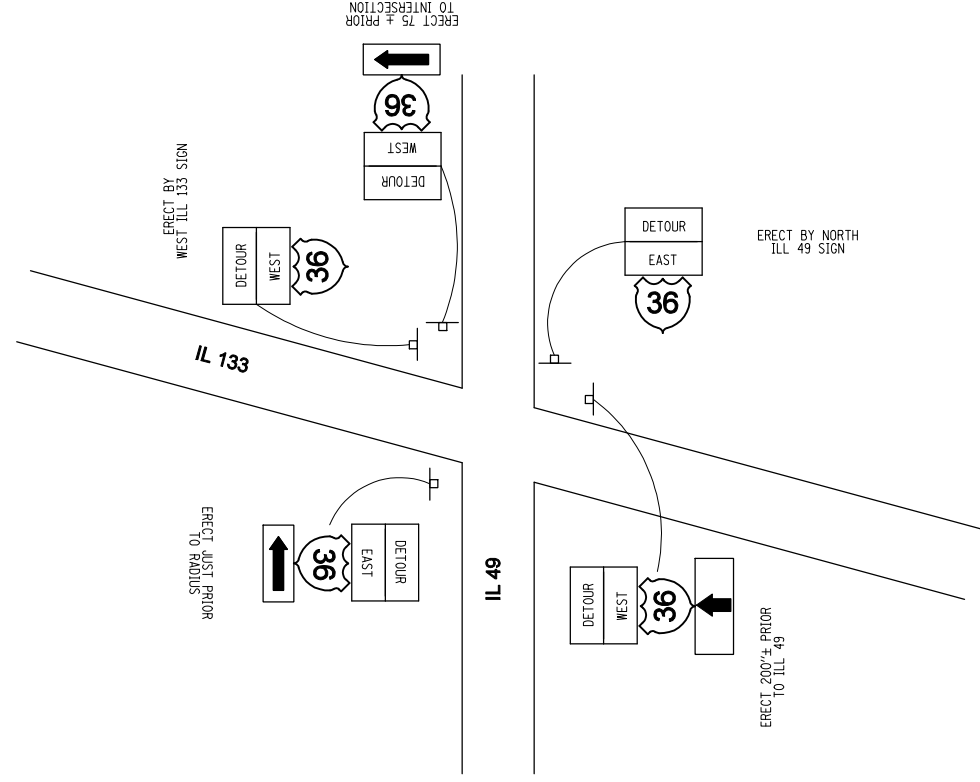
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U.S. 36 & IL 49



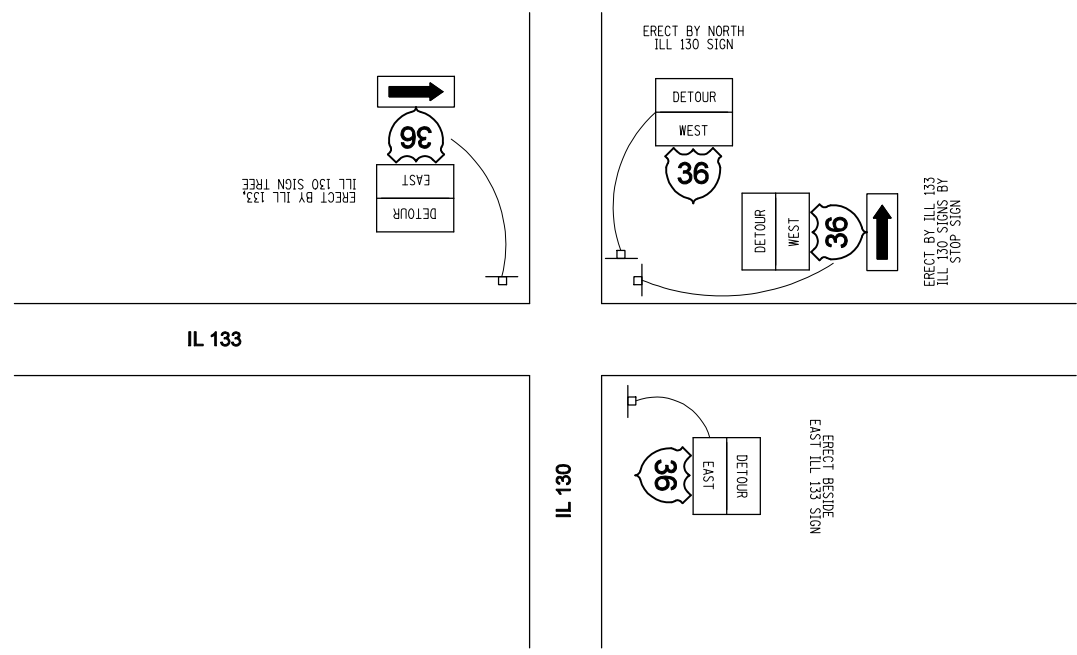
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IL 133 & IL 49



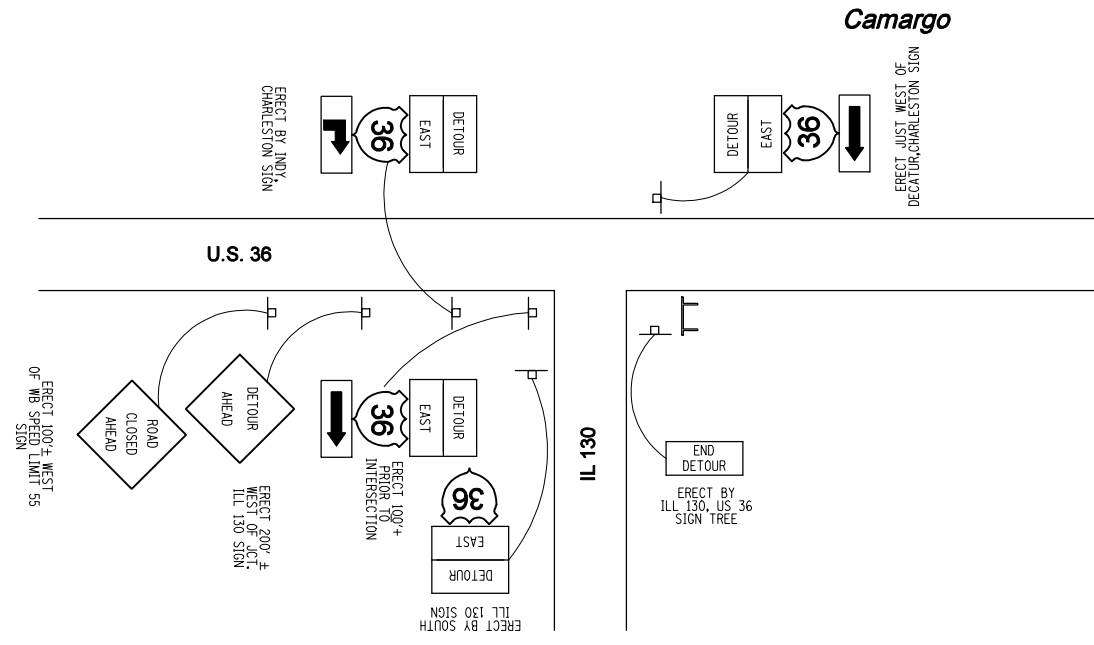
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IL 133 & IL 130



4

U.S. 36 & IL 130



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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

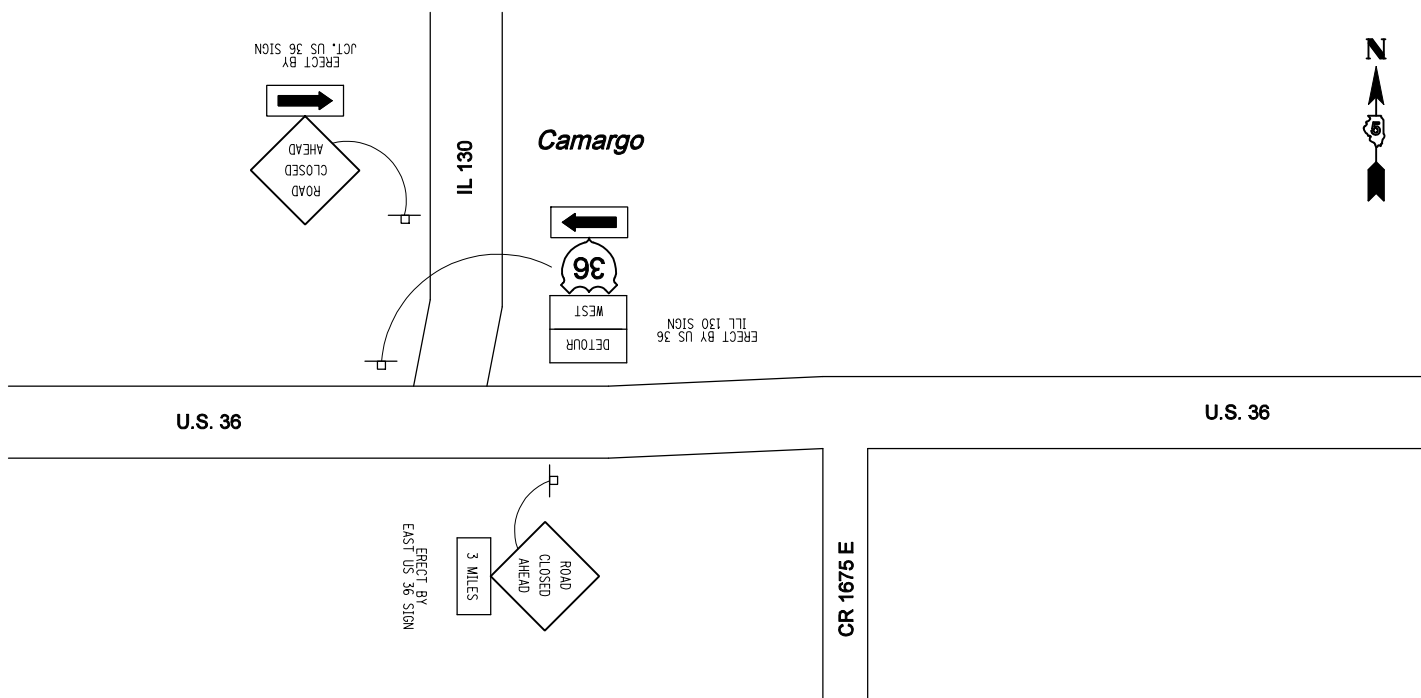
DETOUR SIGNING DETAILS

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 70696				
ILLINOIS FED. AID PROJECT				

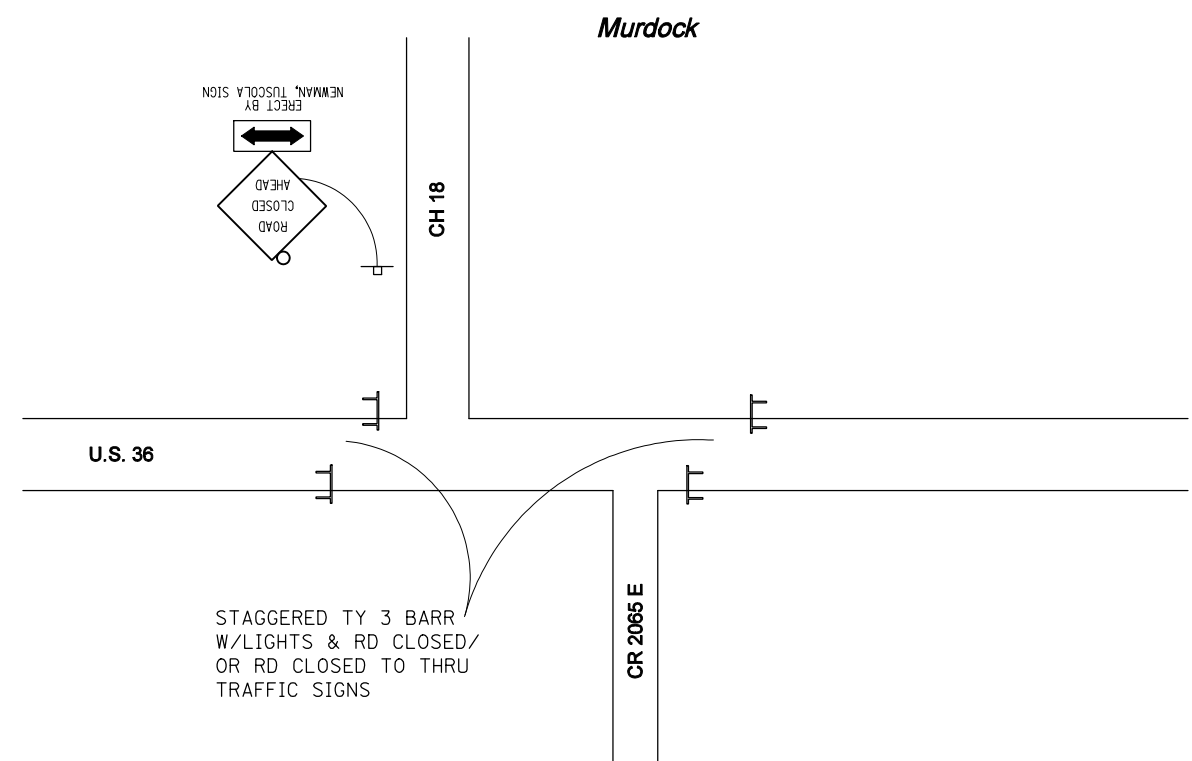
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U.S. 36 & IL 130



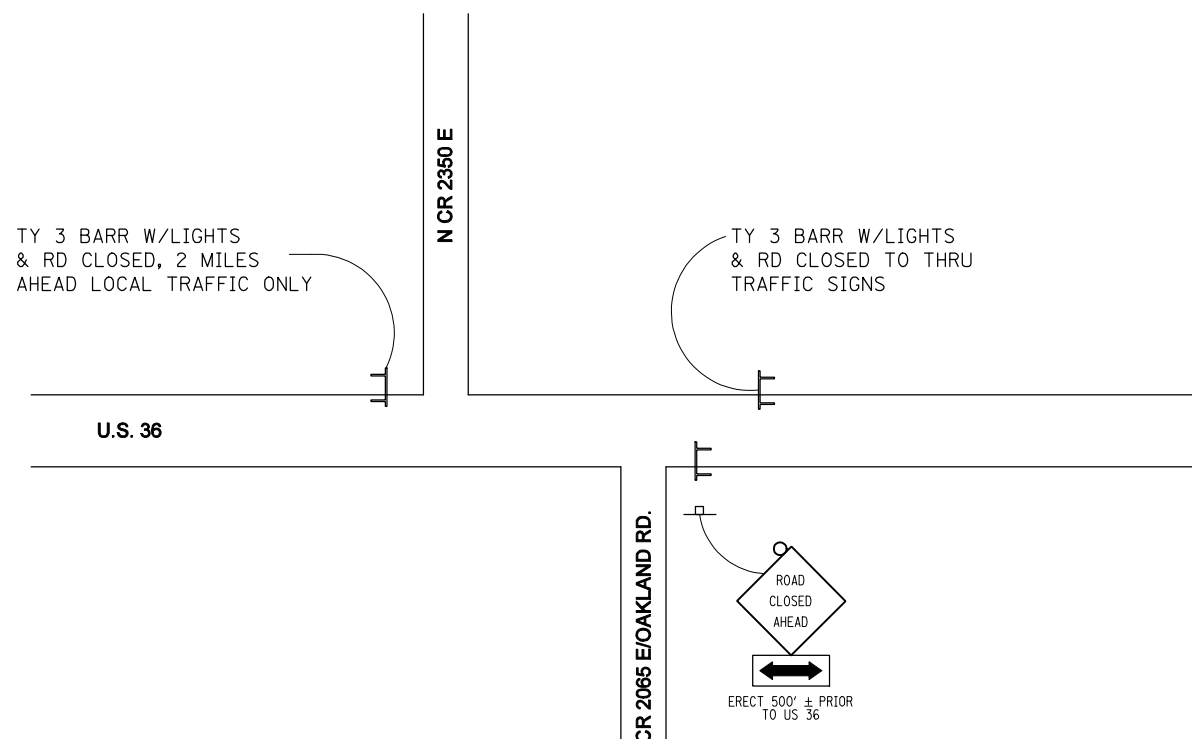
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U.S. 36 & CH 18



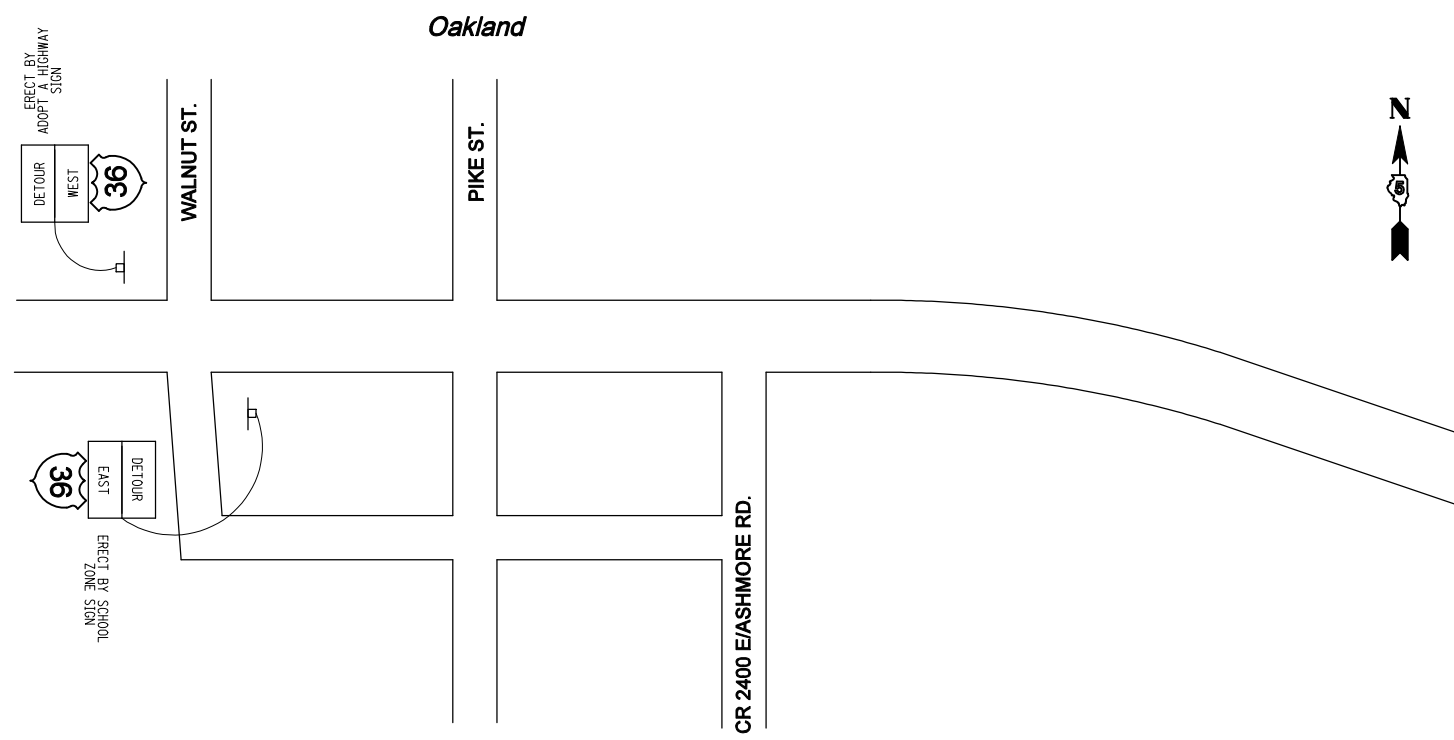
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U.S. 36 & OAKLAND RD.



8

IL 133 & ASHMORE RD.



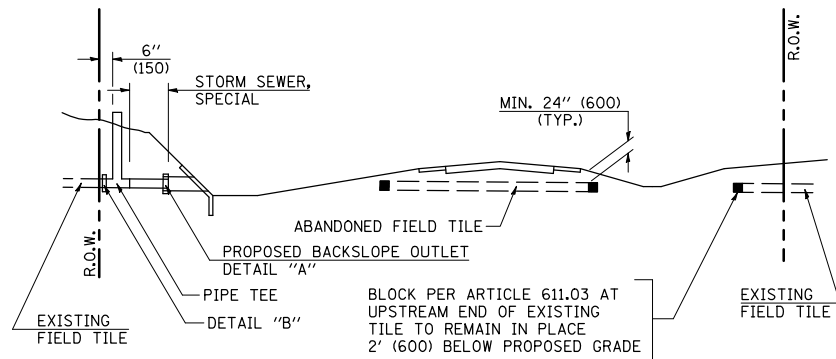
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETOUR SIGNING DETAILS

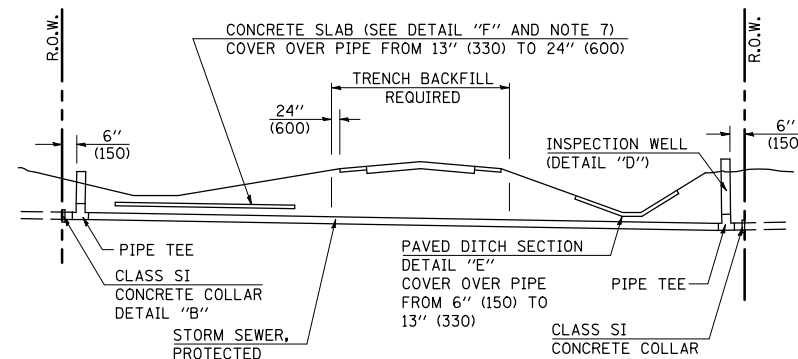
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 70696				
ILLINOIS FED. AID PROJECT				



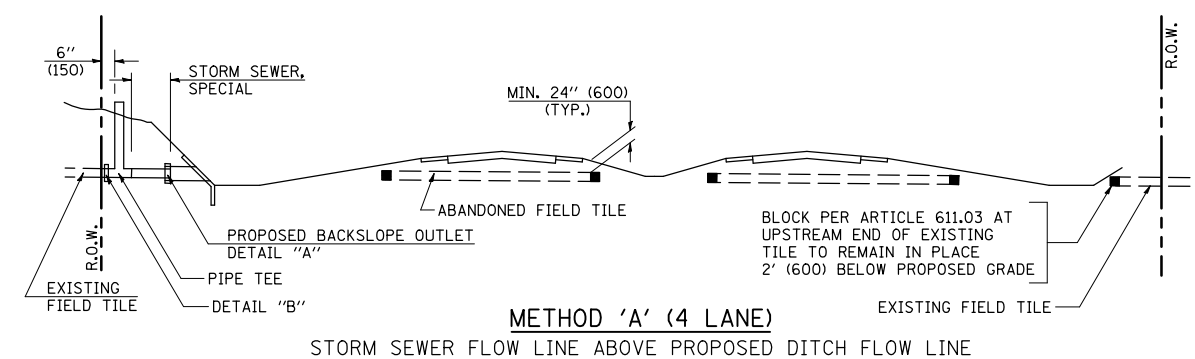
METHOD 'A' (2 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



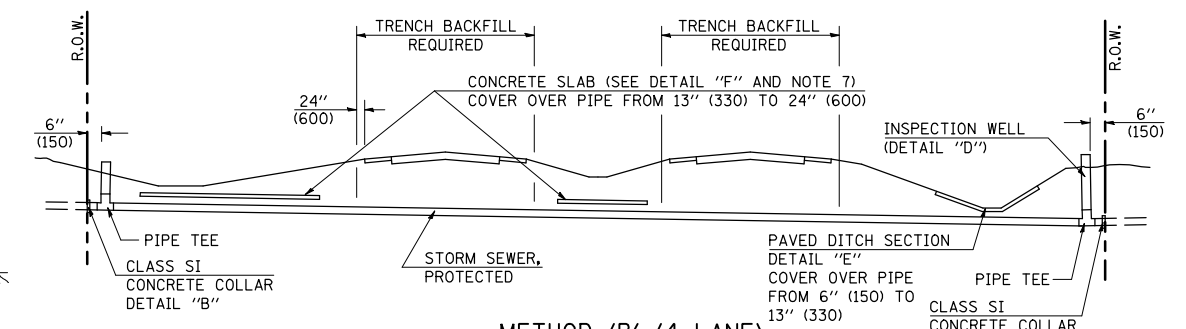
METHOD 'B' (2 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENT AND PAVED DITCH



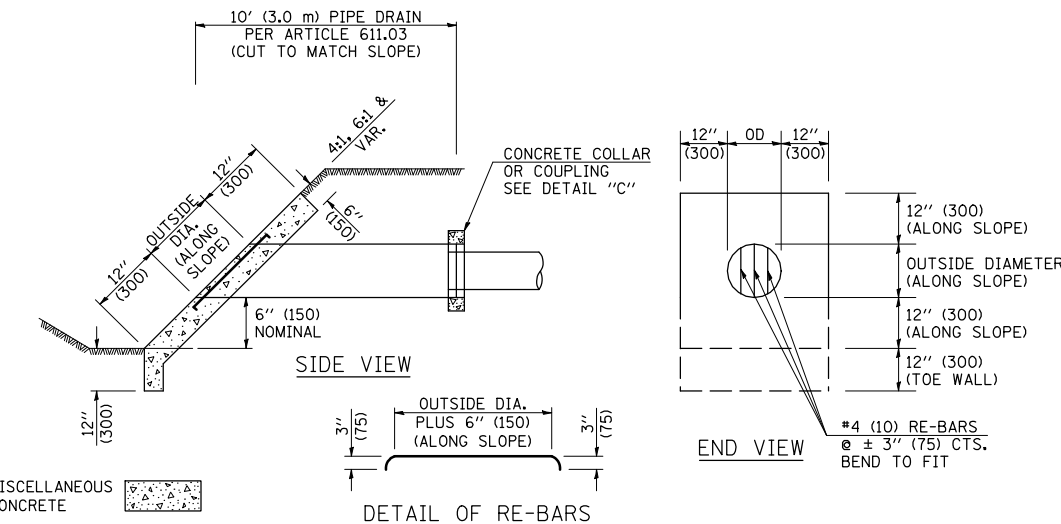
METHOD 'A' (4 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE

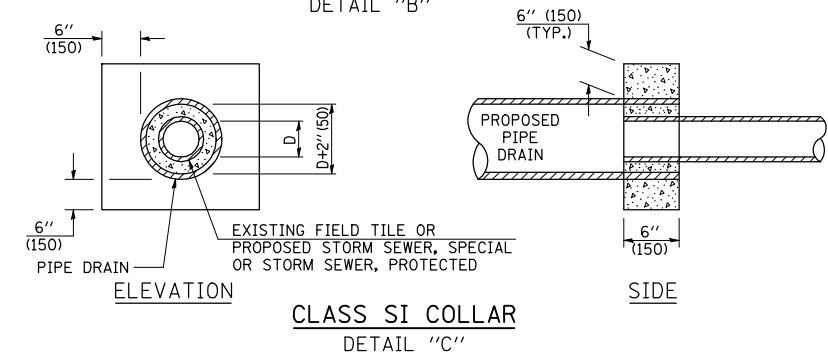
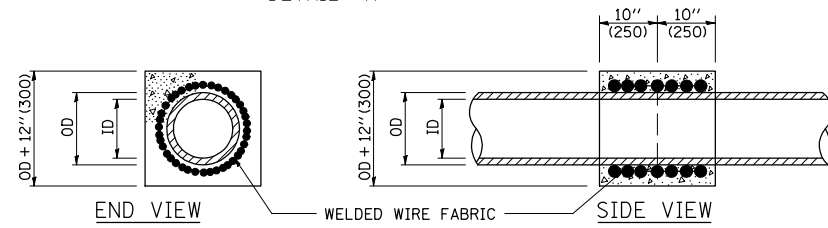


METHOD 'B' (4 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENTS AND PAVED DITCHES

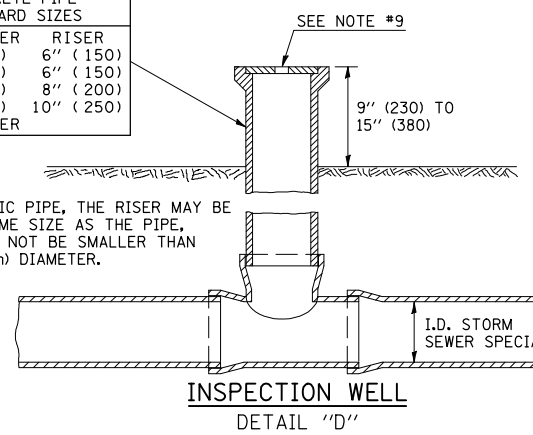


HEADWALL FOR BACKSLOPE OUTLET DETAIL 'A'



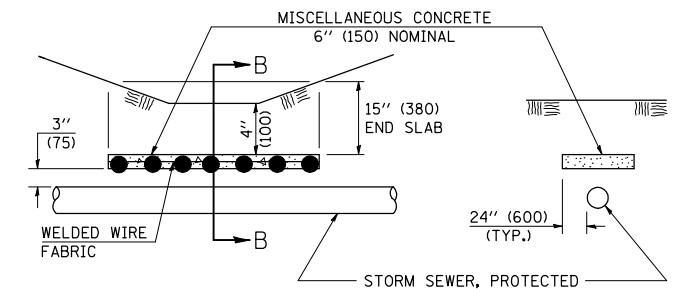
CONCRETE PIPE STANDARD SIZES	
STORM SEWER	RISER
6" (150)	6" (150)
8" (200)	6" (150)
10" (250)	8" (200)
12" (300)	10" (250)
OR GREATER	

FOR PLASTIC PIPE, THE RISER MAY BE OF THE SAME SIZE AS THE PIPE, BUT SHALL NOT BE SMALLER THAN 4" (100 mm) DIAMETER.



GENERAL NOTES

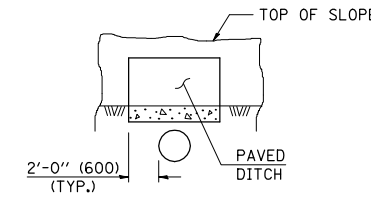
- EXISTING FIELD TILE ENCOUNTERED BY EXPLORATION TRENCH SHALL BE INSPECTED BY THE ENGINEER FOR UNOBSTRUCTED FLOW WITHIN THE LIMITS OF THE RIGHT-OF-WAY.
- ONLY FIELD TILE THAT DOES NOT HAVE SATISFACTORY FLOW AND OR HAS VISIBLE SIGNS OF DETERIORATION (SINK HOLES, ETC.) SHALL BE REPLACED WITHIN THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH METHOD "B".
- INSPECTION WELLS SHALL BE CONSTRUCTED APPROXIMATELY 6" (150 mm) INSIDE OF BOTH RIGHT-OF-WAY LINES AT ALL FIELD TILE LOCATIONS.
- EXISTING FIELD TILE ABANDONED UNDER EXISTING PAVEMENTS OR PAVED SHOULDERS SHALL BE FILLED WITH FLOWABLE GROUT AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.
- NON-CIRCULAR FIELD TILE SHALL BE REPLACED WITH STORM SEWER, SPECIAL OF AT LEAST THE SAME CROSS SECTIONAL AREA. ALL EXISTING FIELD TILE SHALL BE REPLACED WITH STORM SEWER OF THE TYPE REQUIRED FOR THE MINIMUM DEPTH OF COVER.
- THE 6" (150 mm) CONCRETE SLAB OR DITCH LINING SHALL BE POURED THE LENGTH OF THE TRENCH AT ALL DITCH FLOW LINE LOCATIONS WITHIN THE RIGHT-OF-WAY WITH LESS THAN 2' (600 mm) OF EARTH COVER. MISCELLANEOUS CONCRETE SHALL BE USED ACCORDING TO SECTION 611.
- ALL MISCELLANEOUS SLABS, APRONS AND DITCH LININGS SHALL BE REINFORCED WITH WELDED WIRE FABRIC AS SHOWN FOR PAVED DITCH IN STANDARD 606401.
- HEADWALL FOR BACKSLOPE OUTLET MAY BE USED FOR PIPE DRAIN DIAMETERS UP TO 10" (250 mm). SPECIAL DESIGNS WILL BE REQUIRED FOR LARGER SIZES.
- THE INSPECTION WELL LID FOR P.C.C. PIPE SHALL BE CONSTRUCTED OF 3/8" (10 mm) CAST IRON AND PROVIDED WITH A 1" (25 mm) DIAMETER HOLE IN CENTER. THE LID FOR THE OTHER PIPE MATERIALS SHALL BE A GRATE ASSEMBLY PREFABRICATED FOR AND COMPATIBLE WITH THE PIPE SYSTEM.



SLAB ELEVATION

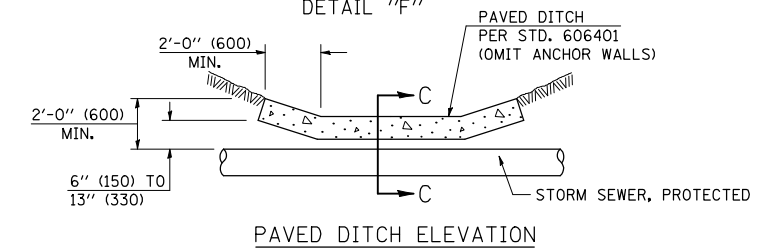
CONCRETE SLAB DETAIL 'F'

SECTION B-B



SECTION C-C

PAVED DITCH DETAIL 'E'



PAVED DITCH ELEVATION

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 61101011A

FILE NAME =	USER NAME = bucklesjj	DESIGNED -	REVISED - 11/06
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	PLOT DATE = 3/22/2010	DATE -	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

FIELD TILE SYSTEMS (TREATMENT OF EXISTING)

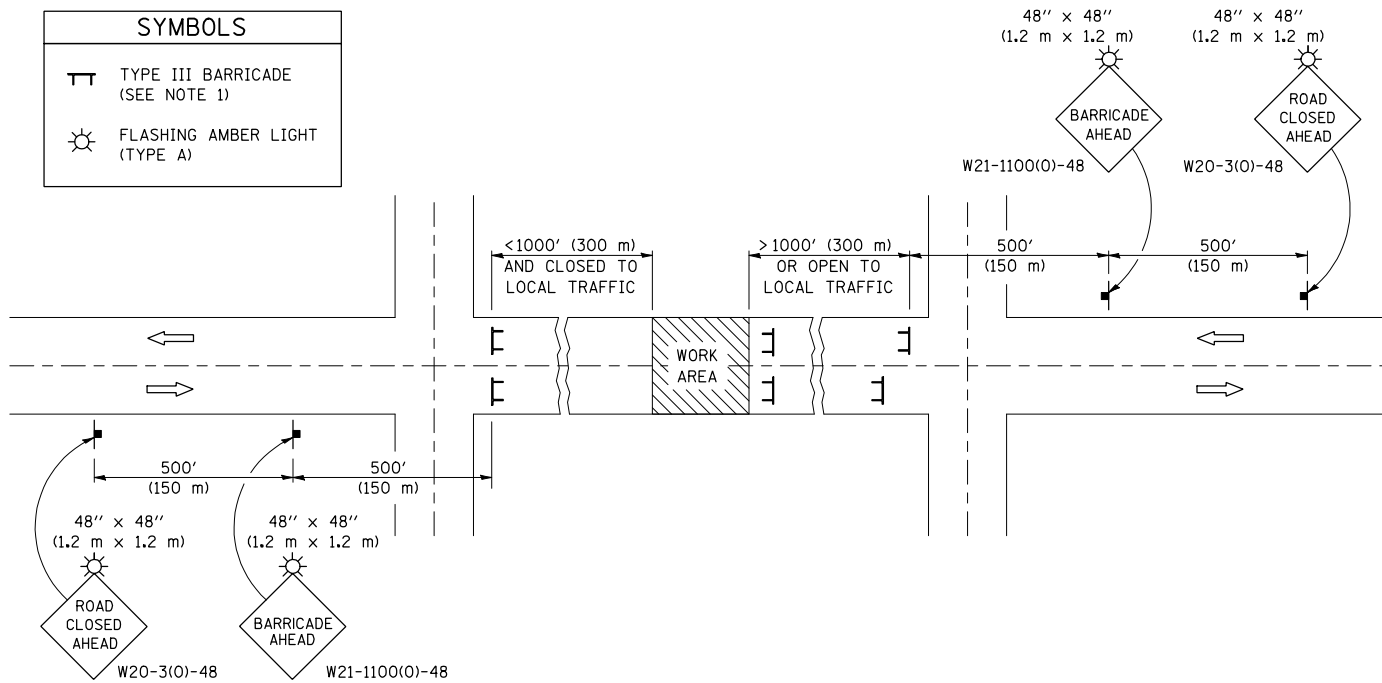
SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	28
CONTRACT NO. 70696				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

ROAD CLOSURE

SIDEROAD / STREET CLOSURE

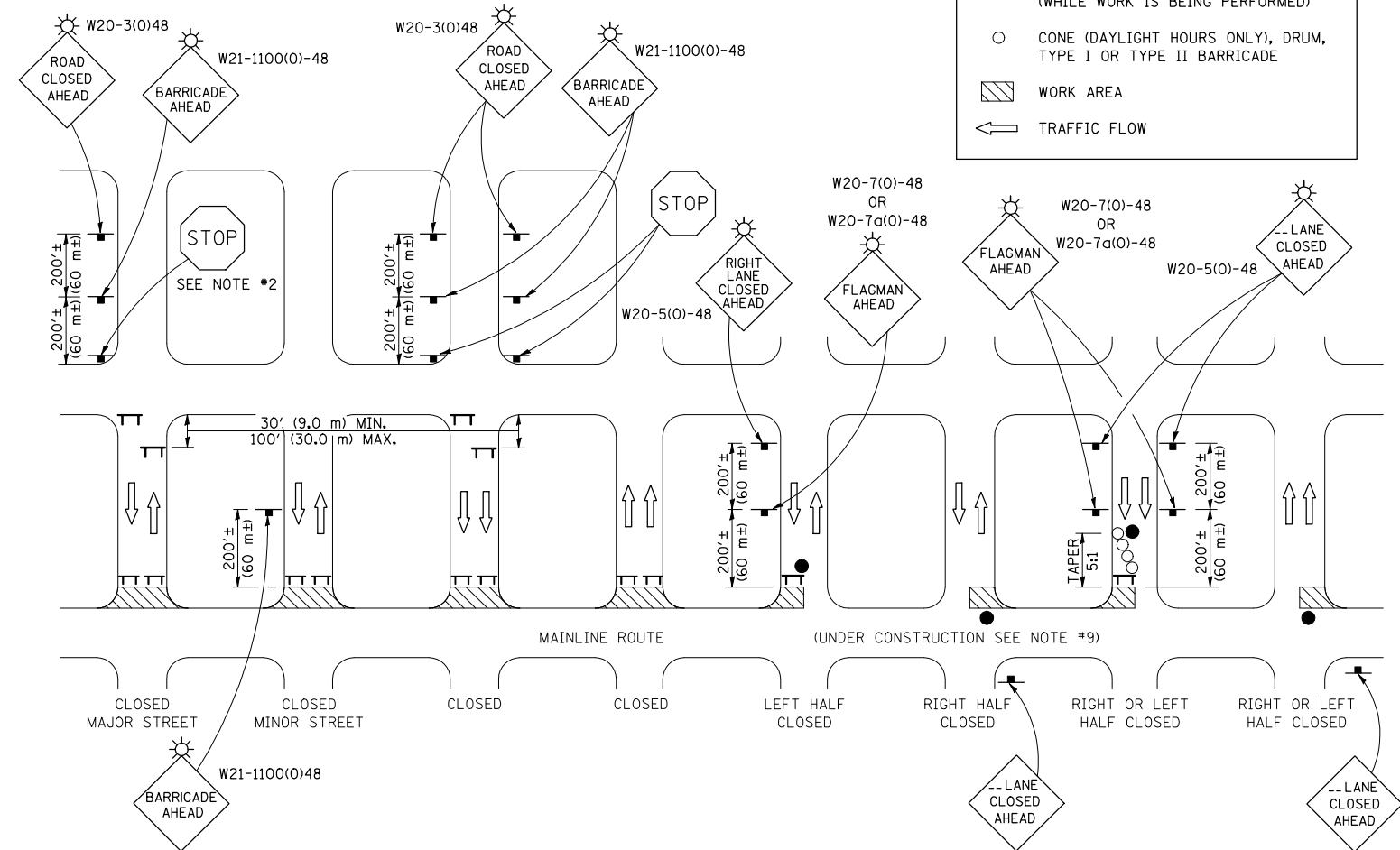
SYMBOLS	
	TYPE III BARRICADE (SEE NOTE 1)
	FLASHING AMBER LIGHT (TYPE A)



GENERAL NOTES

- TYPE III BARRICADES SHALL BE AS SHOWN ON STANDARD 701901 "TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD". EACH TYPE III BARRICADE SHALL HAVE TWO FLASHING AMBER LIGHTS MOUNTED ABOVE IT.
- IF THE ROAD IS OPEN TO LOCAL TRAFFIC OR EXCEEDS 1000' (300 m), ANOTHER SET OF TYPE III BARRICADES, EQUIPPED AS IN NOTE 1 ABOVE, SHALL BE PLACED AT EACH END OF THE WORK AREA.
- WHEN A STOP CONDITION EXISTS, NO SIGNS ARE REQUIRED IN ADVANCE OF THE "STOP" SIGN WHEN THE ROAD IS CLOSED WITHIN 100' (30 m) OF THE INTERSECTION.
- STANDARD 701901 SHALL APPLY FOR THE PLACEMENT & DESIGN OF TYPE III BARRICADES.
- IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON AN NCHRP 350 TEMPORARY SIGN SUPPORT DIRECTLY IN FRONT OF THE BARRICADE.
- REFLECTORIZED STRIPING SHALL APPEAR ON BOTH SIDES OF THE TYPE III BARRICADES IF ROAD IS OPEN TO LOCAL TRAFFIC.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- A MINIMUM OF TWO FLASHING LIGHTS SHALL BE USED AT NIGHT ON EACH APPROACH IN ADVANCE OF THE WORK AREA. FLASHING LIGHTS SHALL BE INSTALLED ABOVE THE FIRST TWO SIGNS IN THE SERIES.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
- FORMS BT. 725 AND BT. 726 ARE REQUIRED.
- WHEN A SIDEROAD INTERSECTS THE HIGHWAY ON WHICH WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC DEVICES SHALL BE ERECTED AND PROVIDED AS DIRECTED BY THE ENGINEER.
- AN ADDITIONAL SIGN MAY BE REQUIRED AT A MAJOR INTERSECTING ROAD IN ADVANCE OF THE CLOSURE. THE ADDITIONAL SIGN SHALL GIVE THE DISTANCE TO THE BARRICADE IN MILES OR FRACTIONS OF A MILE.

SYMBOLS	
	TYPE III BARRICADE (SEE NOTE)
	FLASHING LIGHT
	FLAGGER WITH TRAFFIC CONTROL SIGN (WHILE WORK IS BEING PERFORMED)
	CONES (DAYLIGHT HOURS ONLY), DRUM, TYPE I OR TYPE II BARRICADE
	WORK AREA
	TRAFFIC FLOW



GENERAL NOTES

- TYPE III BARRICADES SHALL BE AS SHOWN ON "TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD". EACH TYPE III BARRICADE SHALL HAVE TWO FLASHING AMBER LIGHTS MOUNTED ABOVE IT.
- WHERE A STOP CONDITION EXISTS, AS SHOWN ABOVE, WARNING SIGNS MAY BE OMITTED IN ADVANCE OF THE "STOP" SIGN.
- STANDARD 701901 SHALL APPLY FOR THE PLACEMENT & MANUFACTURE OF TYPE III BARRICADES.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- ONE FLASHING LIGHT IS REQUIRED ABOVE EACH ADVANCE WARNING SIGN DURING HOURS OF DARKNESS.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
- FORMS BT 725 AND BT 726 ARE REQUIRED.
- THE MAINLINE ROUTE TEMPORARY TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND STANDARD SPECIFICATIONS.
- ALL FLAGGERS REQUIRED AT SIDE ROADS AND ENTRANCES REMAINING OPEN TO TRAFFIC AND/OR ADDITIONAL BARRICADES REQUIRED BY THE ENGINEER TO CLOSE SIDE ROADS AND ENTRANCES WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = bucklesJJ	DESIGNED -	REVISED - 11/06
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	PLOT DATE = 3/22/2010	DATE -	REVISED -

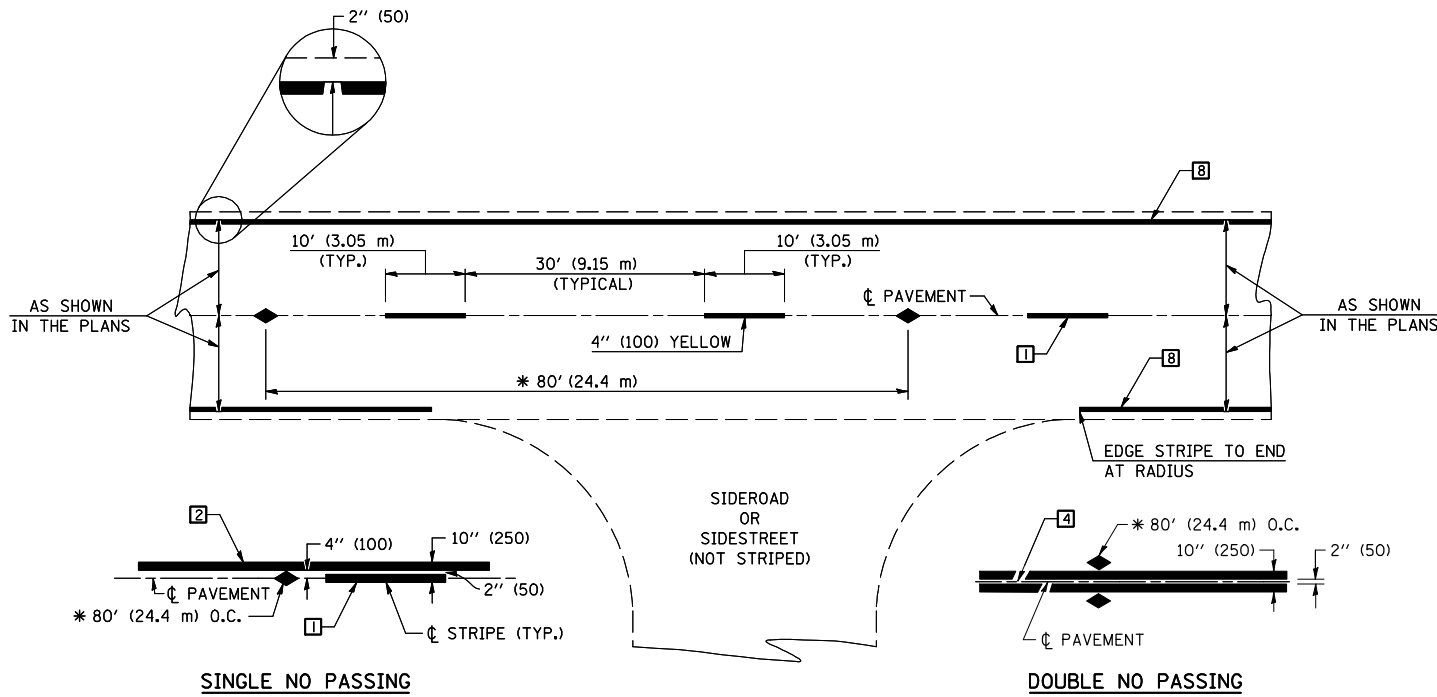
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL & PROTECTION DEVICES
(ROAD & SIDEROAD/STREET CLOSURES)

SCALE: N/A SHEET NO. 1 OF 1 SHEETS STA. TO STA.

DISTRICT 5 DETAIL NO. 7020000

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	29
CONTRACT NO. 70696				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

TWO LANE/TWO WAY

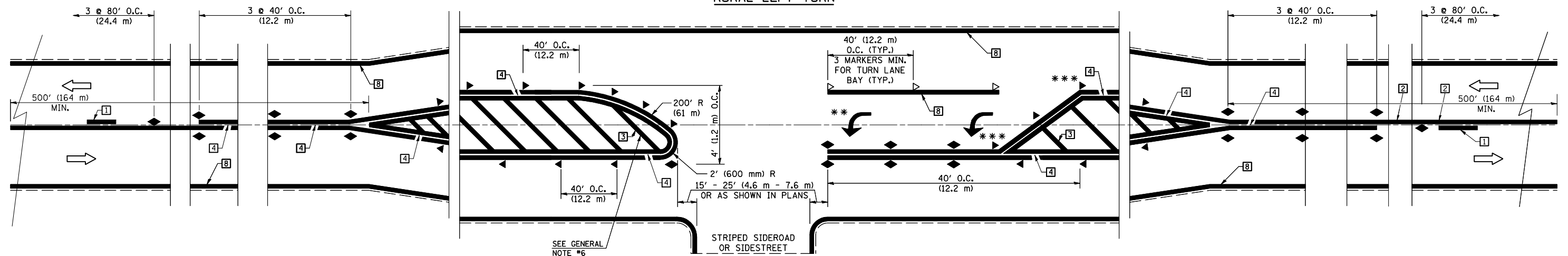
TYPICAL PAVEMENT MARKING LEGEND

- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 RESERVED
- 6 RESERVED
- 7 4" (100) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) LANE LINE EXTENSIONS (WHITE)
- 14 4" (100) PARKING WHITE

TYPICAL PAVEMENT MARKERS LEGEND

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER

RURAL LEFT TURN



*** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

** TURN ARROWS SHALL BE PLACED AS SHOWN ON SHEET #2.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = bucklesJJ	DESIGNED -	REVISED - 11/06
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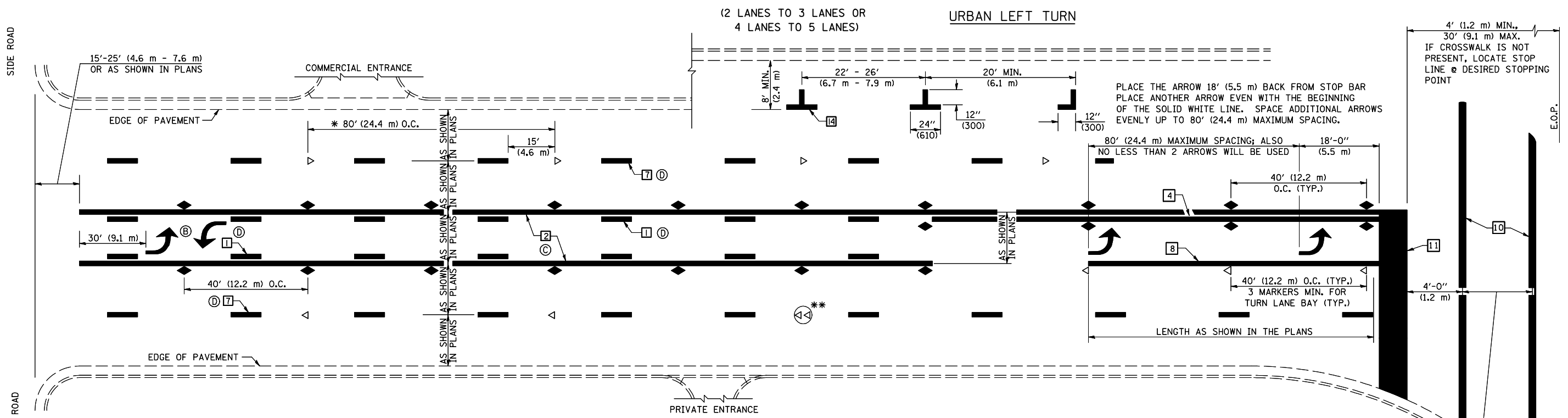
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)**

SCALE: SHEET NO. 1 OF 4 SHEETS STA. TO STA.

DISTRICT 5 DETAIL NO. 7800AAA

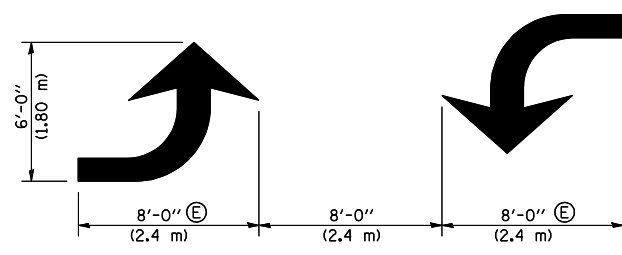
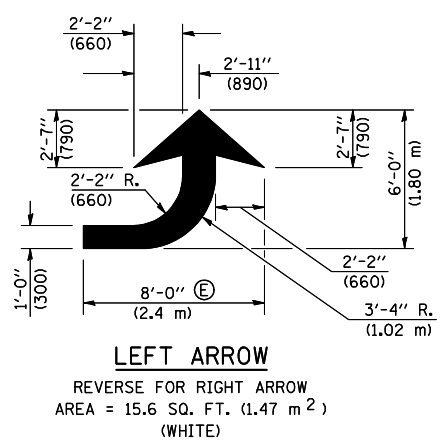
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	30
CONTRACT NO. 70696				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



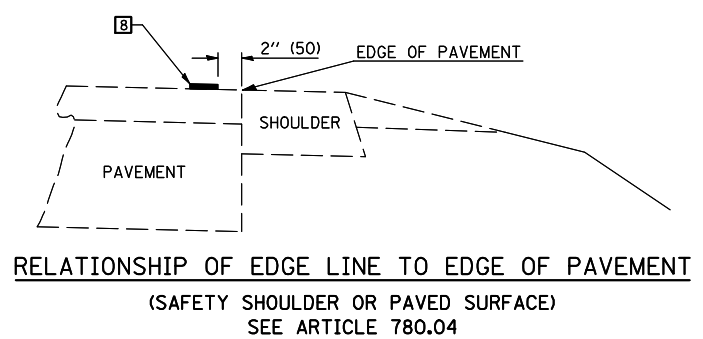
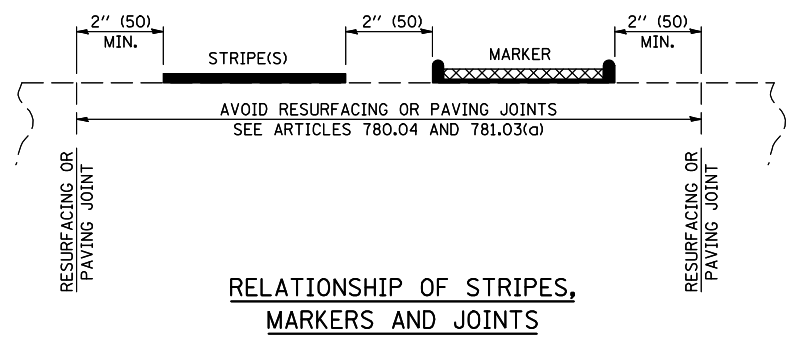
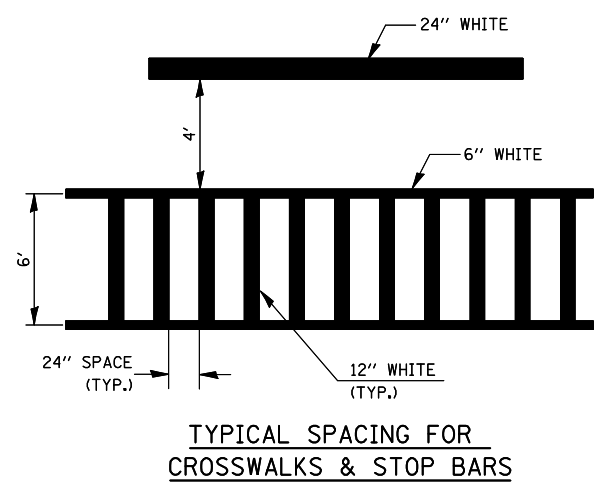
* REDUCE TO 40 FEET (12.2 METERS) ON CENTER ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

- GENERAL NOTES:**
- ⓑ TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.
 - ⓒ THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
 - ⓓ THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER. SEE EXAMPLE ON SHEET 2 OF 3.
 - ⓔ USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR SYMBOLS TABLE)



BLOOMINGTON-NORMAL CITY LIMITS ONLY



Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAA

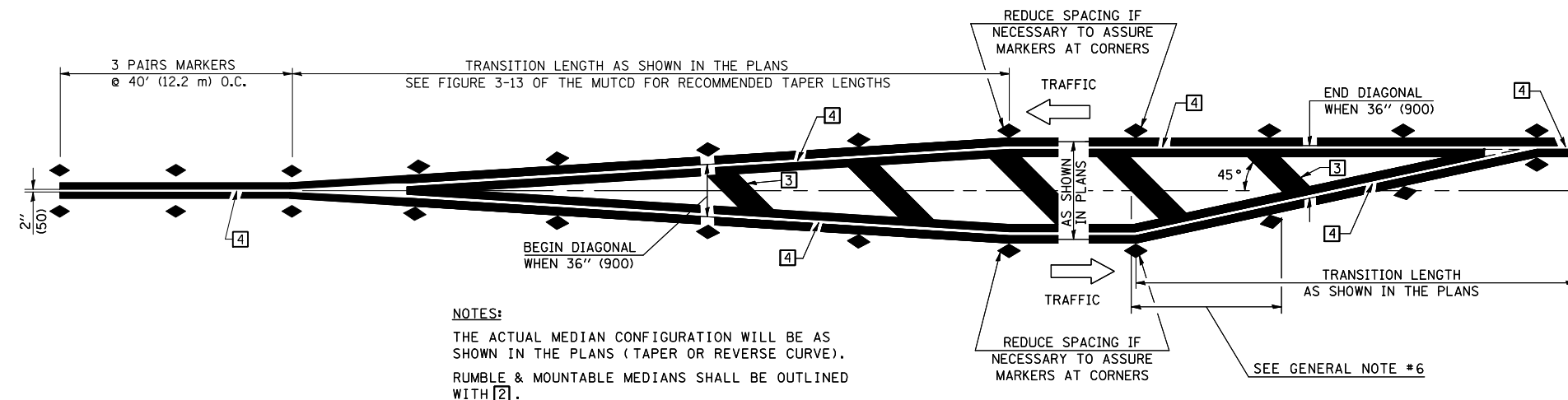
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	PLOT DATE = 3/22/2010	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND MARKERS
 (RURAL & URBAN APPLICATIONS)**

SCALE: SHEET NO. 2 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	31
CONTRACT NO. 70696				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

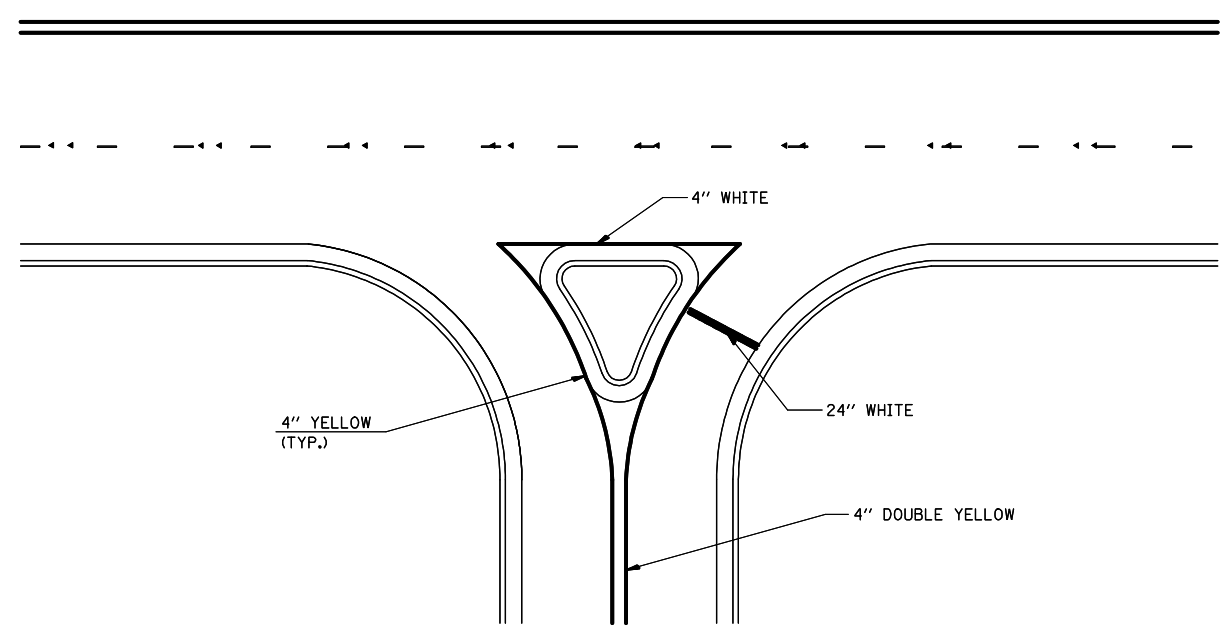


NOTES:
 THE ACTUAL MEDIAN CONFIGURATION WILL BE AS SHOWN IN THE PLANS (TAPER OR REVERSE CURVE).
 RUMBLE & MOUNTABLE MEDIANS SHALL BE OUTLINED WITH [2].

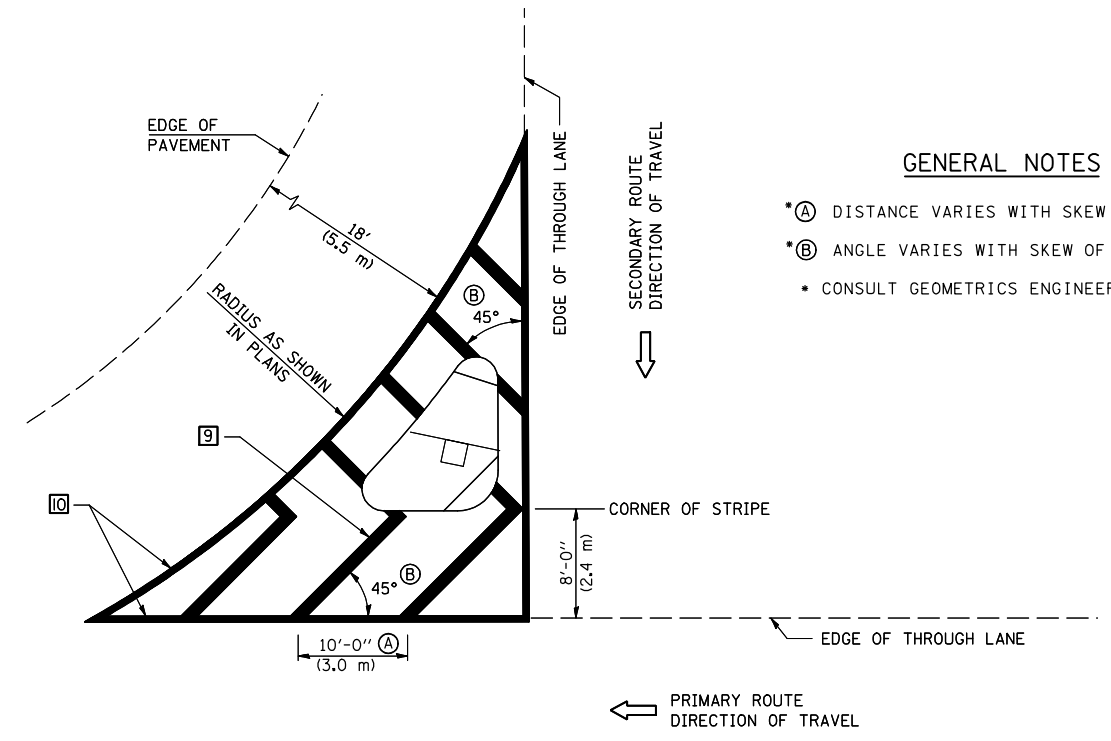
TYPICAL MEDIAN TRANSITIONS

GENERAL NOTES

1. WHEN MEDIANS ARE PRESENT, PAVEMENT MARKINGS ARE TO BE PLACED ADJACENT TO MEDIANS.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. A STRIPING KEY IS AVAILABLE ELSEWHERE AND SHALL BE SHOWN WHERE THE QUANTITIES ARE LISTED.
5. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
6. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING,
 < 30 MPH USE 15' (< 50 km/h USE 4.5 m)
 30-45 MPH USE 20' (50-75 km/h USE 6.0 m)
 > 45 MPH USE 30' (> 75 km/h USE 9.0 m)



RIGHT IN - RIGHT OUT ACCESS



GENERAL NOTES

- *A DISTANCE VARIES WITH SKEW OF INTERSECTION.
- *B ANGLE VARIES WITH SKEW OF INTERSECTION.
- CONSULT GEOMETRICS ENGINEER

ISLAND

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = bucklesJJ	DESIGNED -	REVISED - 11/06
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	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/22/2010	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND MARKERS
 (RURAL & URBAN APPLICATIONS)**

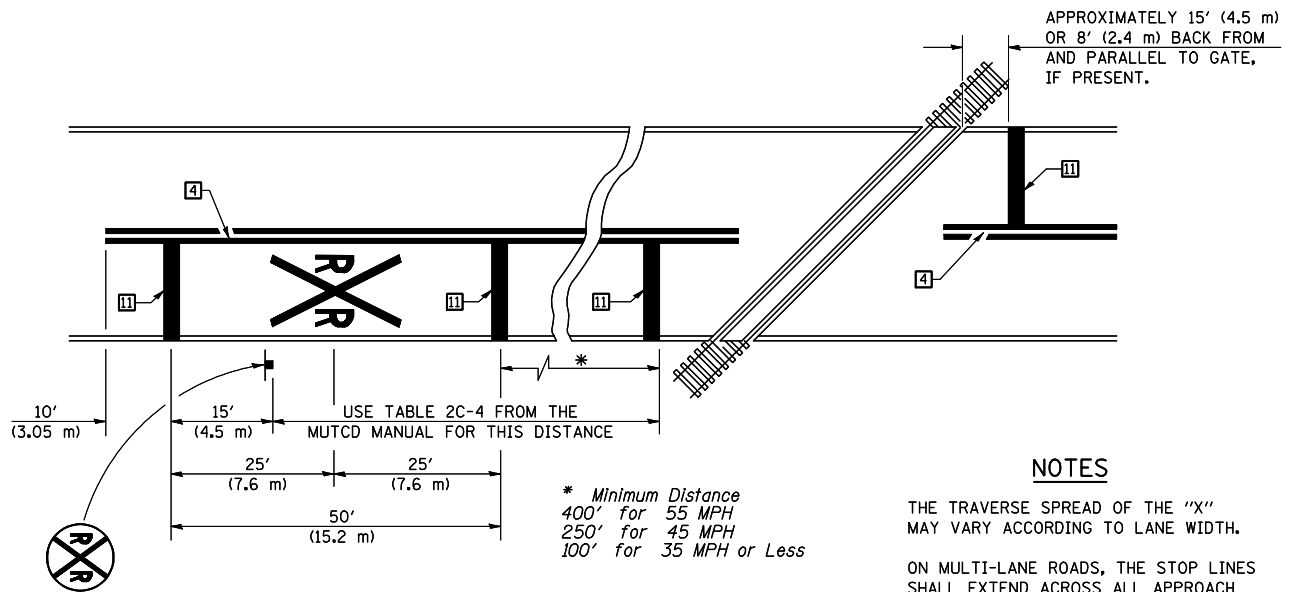
SCALE: SHEET NO. 3 OF 4 SHEETS STA. TO STA.

DISTRICT 5 DETAIL NO. 7800AAA

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	32
CONTRACT NO. 70696				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

RAILROAD CROSSING WITH INTERCONNECT ONLY

RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



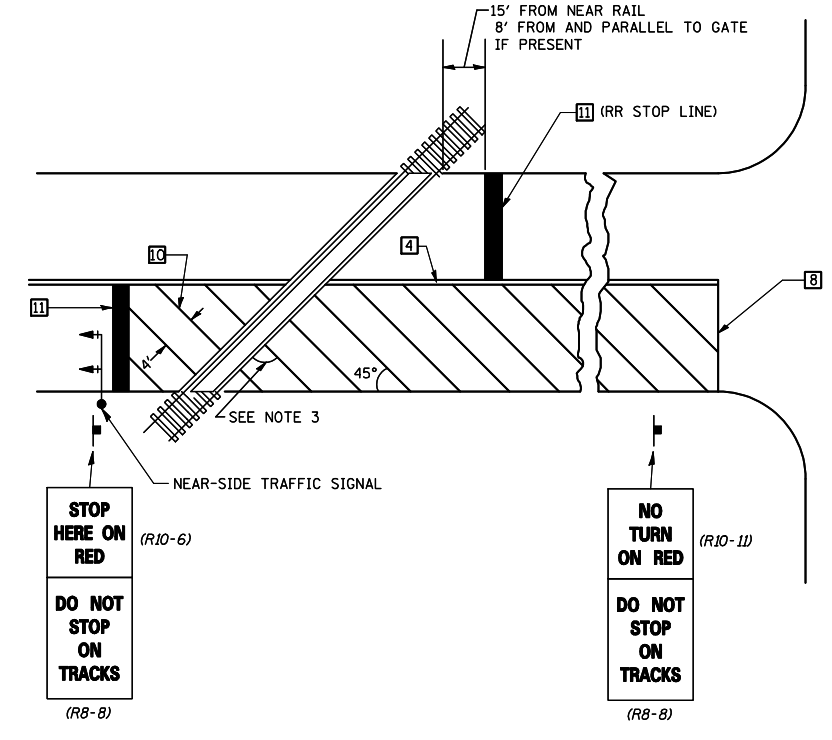
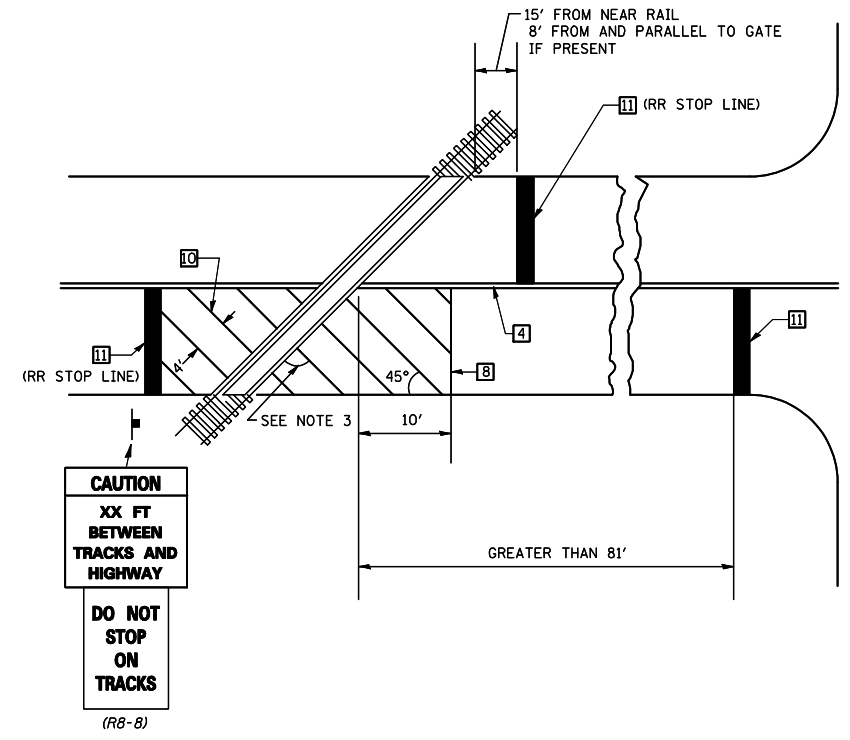
PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING

NOTES

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

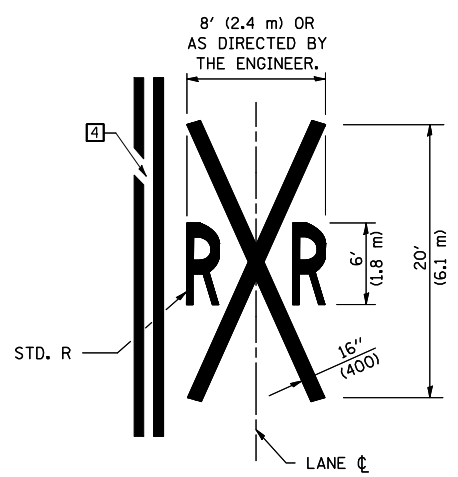
WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.



SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

GENERAL NOTES

- SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
- WHERE THE ANGLE BETWEEN THE DIAGONAL PAVEMENT MARKINGS AND THE TRACK WOULD BE LESS THAN 20°, THE PAVEMENT MARKINGS SHOULD BE PLACED IN THE OPPOSITE DIRECTION FROM THAT SHOWN.



Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = bucklesjj	DESIGNED -	REVISED - 11/06
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	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/22/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)

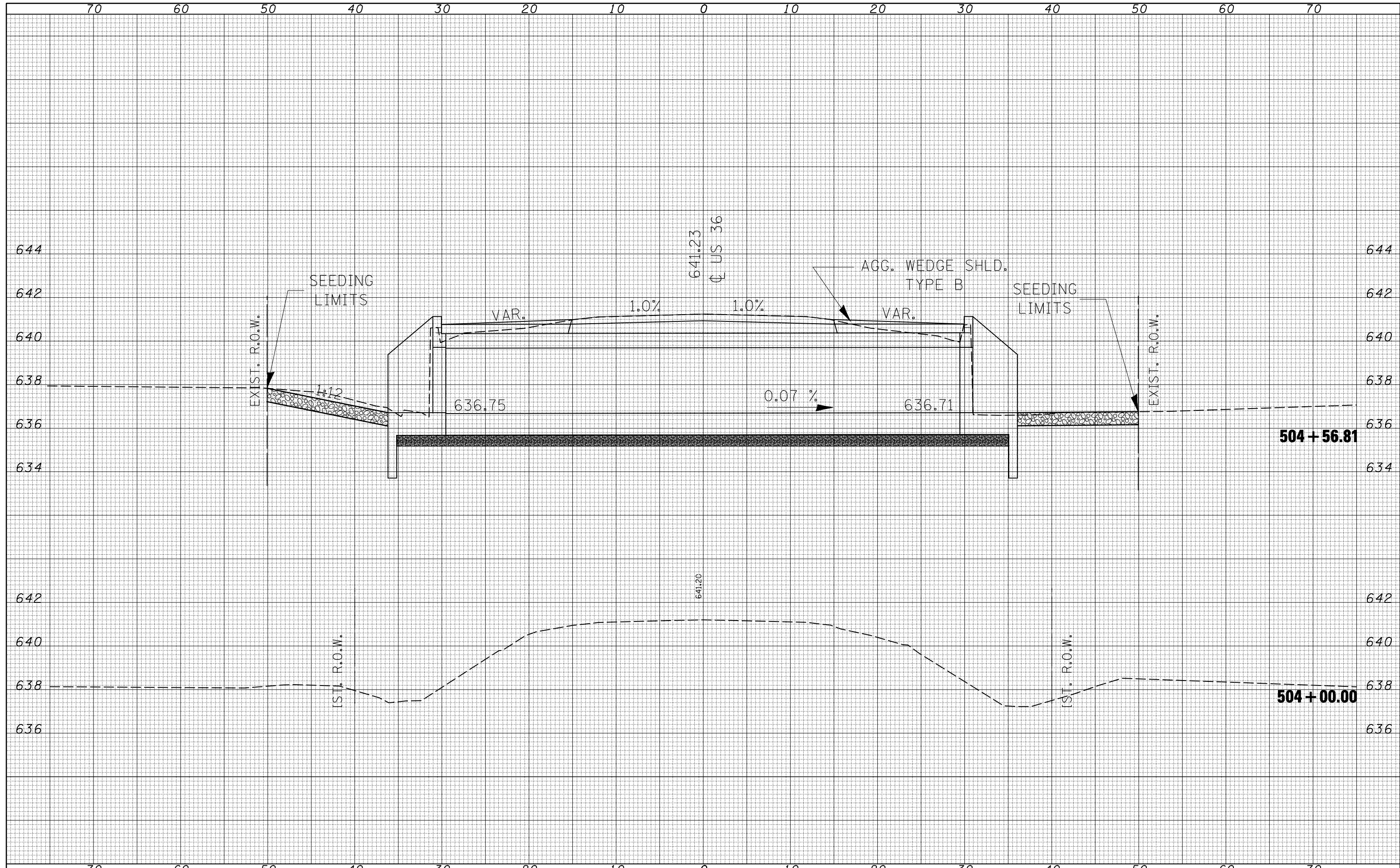
SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.

DISTRICT 5 DETAIL NO. 7800AAAA

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	33
CONTRACT NO. 70696				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINISHED SURVEY	
PLOTTED TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



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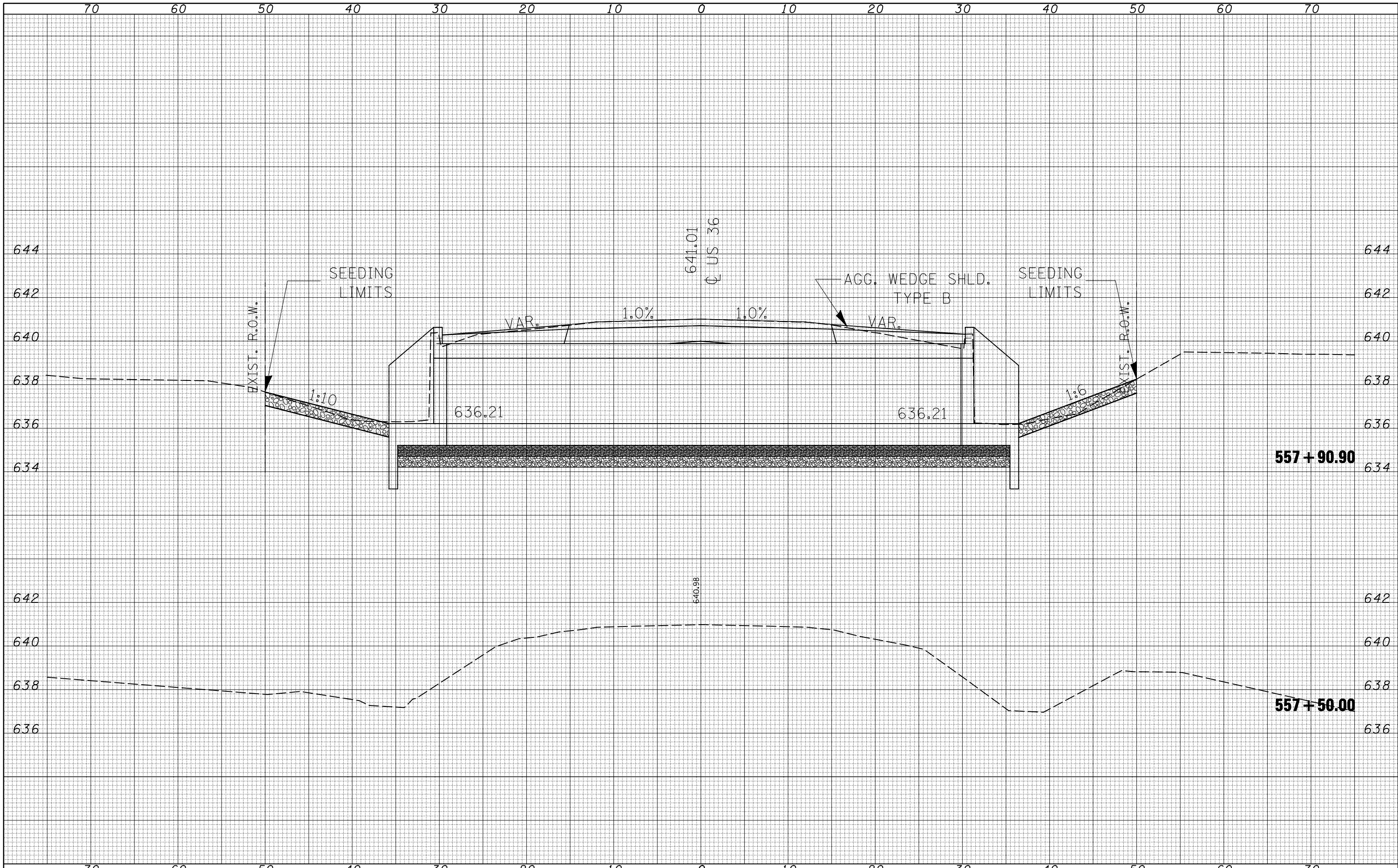
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS
S.N. 021-8052
 SCALE: SHEET NO. 1 OF 3 SHEETS STA. 504+00.00 TO STA. 504+56.81

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	34
CONTRACT NO. 70696				
ILLINOIS FED. AID PROJECT				

BY	DATE
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

BY	DATE
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



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USER NAME = bucklesjj
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 PLOT DATE = 3/22/2010
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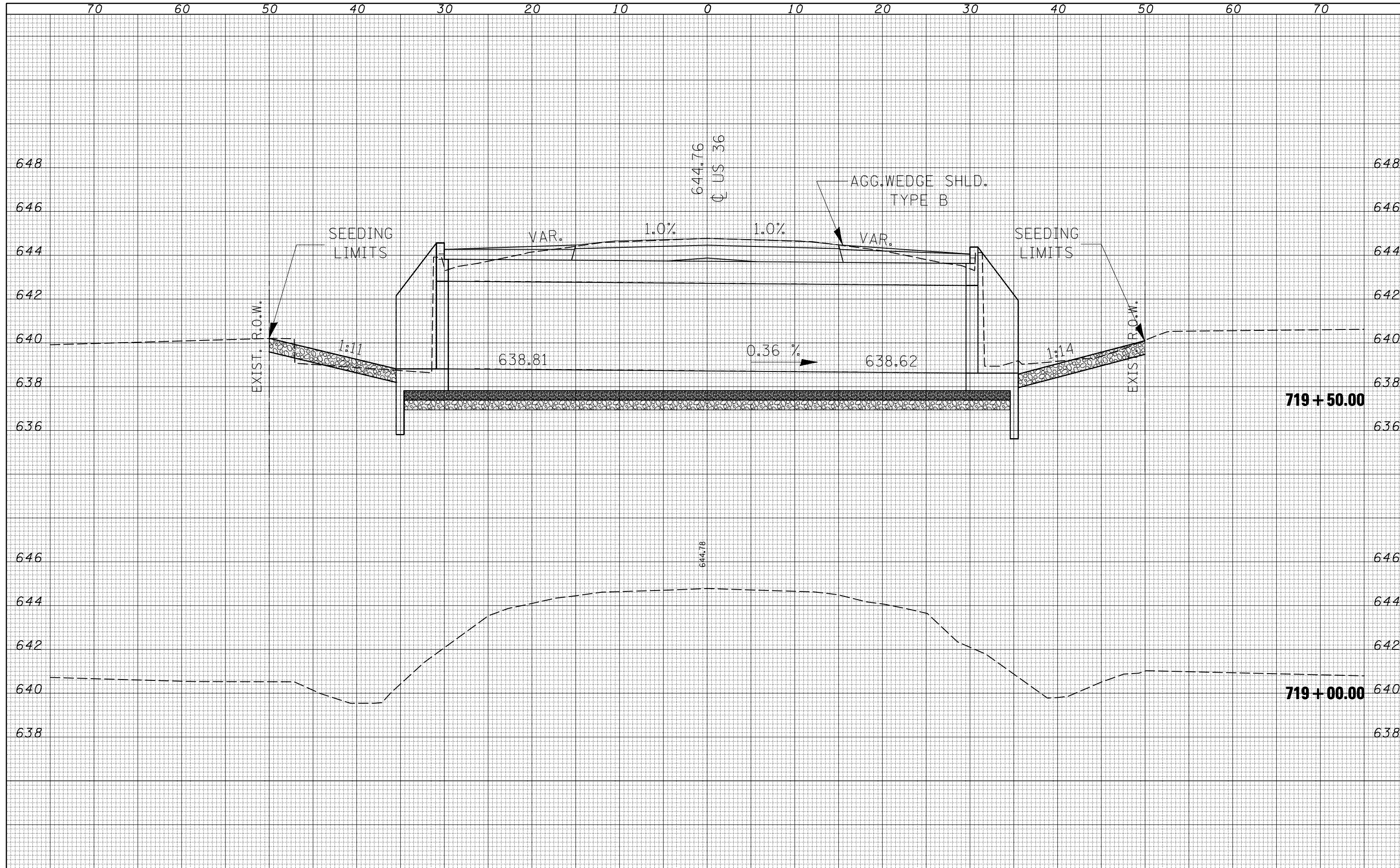
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
 S.N. 021-8053
 SCALE: SHEET NO. 2 OF 3 SHEETS STA. 557+50.00 TO STA. 557+90.90

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	35
ILLINOIS FED. AID PROJECT			CONTRACT NO. 70696	

DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



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PLOT SCALE = 10.0000' / IN.	CHECKED -	REVISD -
PLOT DATE = 3/22/2010	DATE -	REVISD -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS	
S.N. 021-8054	
SCALE:	SHEET NO. 3 OF 3 SHEETS
	STA. 719+00.00 TO STA. 719+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(145,146)CR	DOUGLAS	36	36
				CONTRACT NO. 70696
ILLINOIS FED. AID PROJECT				