8/2/2007

8-17-07 Special Letting, Item 001

PROJECT ENGINEER: KENSIL GARNETT (217)465-4181

SQUAD LEADER: CORY SHEEHY

CONTRACT NO. 70671

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

D-95-051-07

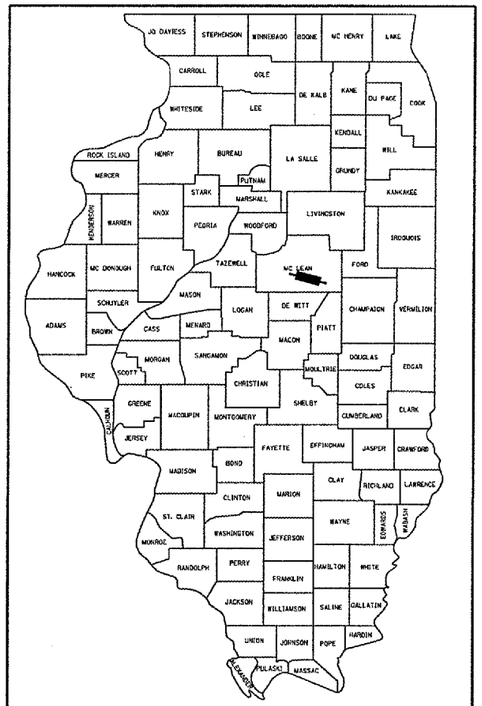
PROPOSED HIGHWAY PLANS

FAI ROUTE 74 (I-74)
SECTION (57-22)BR-2
MCLEAN COUNTY
PROJECT

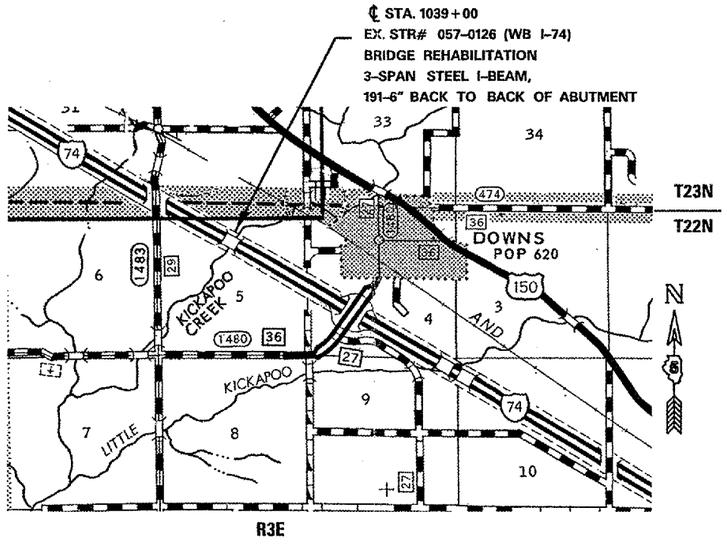
C-95-051-07

KICKAPOO CREEK 5.9 MI E OF US 51

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



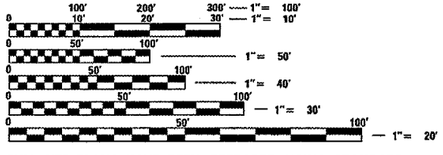
LOCATION OF SECTION INDICATED THUS:- ▬



TOTAL LENGTH OF SECTION & PROJECT = 800.00 FEET = 0.151 MILES
NET LENGTH OF SECTION & PROJECT = 800.00 FEET = 0.151 MILES

I-74 (WB)
ADT = 9,500 (2007)
% SU = 5.7
% MU = 39.2
%PCPU 55.1
DHV = 589

DESIGN DESIGNATION
FUNCTIONAL CLASSIFICATION
INTERSTATE



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

CONTRACT NO. 70671

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 8/2 2007
Joseph E. Gower
DEPUTY DIRECTOR OF HIGHWAYS, REGION 3 ENGINEER
August 3, 2007
Eric E. Harm
Interim ENGINEER OF DESIGN AND ENVIRONMENT
August 3, 2007
Milton R. Sees
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

c:\projects\d505107 tv81\70671_text.dgn

INDEX OF SHEETS

LIST OF STANDARDS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 70671

STD. NO.	TITLE
000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-03	TEMPORARY EROSION CONTROL SYSTEMS
420001-06	PAVEMENT JOINTS
420401-05	BRIDGE APPROACH PAVEMENT
421001-01	BAR REINFORCEMENT FOR CRC PAVEMENT
482001-01	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
482011-02	HMA SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-02	NAME PLATE FOR BRIDGES
601101	CONCRETE HEADWALL FOR PIPE DRAIN
630001-07	STEEL PLATE BEAM GUARDRAIL
630301-04	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-06	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
642001	SHOULDER RUMBLE STRIPS
667101	PERMANENT SURVEY MARKERS
701101-01	OFF-ROAD OPERATIONS, MULTILANE, 4.5 M (15 FT) TO 600 MM (24 IN) FROM PAVEMENT EDGE
701400-02	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-03	LANE CLOSURE, FREEWAY/EXPRESSWAY
701416-05	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH CROSSOVER AND BARRIER
701426-02	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS > 45 MPH
702001-06	TRAFFIC CONTROL DEVICES
704001-03	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 70671

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.-105.09A
ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

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.

UTLILITY 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 OR 811.

G.N.-406
THE QUANTITIES INCLUDED IN THE PLANS FOR HOT-MIX ASPHALT RESURFACING ARE INTENDED TO GIVE THE COVERAGE SHOWN ON THE TYPICAL CROSS SECTIONS. IT IS NOT INTENDED TO INCREASE THE THICKNESS OF THE HOT-MIX ASPHALT MIXTURE IN ORDER TO USE ALL OF THE QUANTITIES INCLUDED IN THE CONTRACT.

G.N.-406.05b
ALL LEVELING BINDER OR BINDER SHALL BE GIVEN A FOG COAT OF PRIME BEFORE THE SURFACE COURSE IS PLACED WHEN DIRECTED BY THE ENGINEER.

THE FOG COAT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER GALLON FOR BITUMINOUS MATERIAL (PRIME COAT) AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

GN 406H MIXTURE REQUIREMENTS			
Location	I-74	I-74	I-74
Mixture Use	Poly Binder	Poly Surface	Shoulder
Thickness	Min. 2-1/4IN.- Max. 4IN.		
AC/PG	SBS PG 70-22	SBS PG 70-22	PG 64-22
RAP % (Max)	10	10	30
Design Air Voids	4.0% @ Ndes=105	4.0% @ Ndes=105	3.0% @ Ndes=30
Mix Comp(Gradation)	IL 19.0	IL 9.5	IL 9.5L
Friction Aggregate	N.A.	Mix D	Mix C

G.N.-482
ALL MATERIAL PLACED AS HOT-MIX ASPHALT SHOULDERS SHALL BE COMPACTED TO 94.0 - 98.4 PERCENT OF THE MAXIMUM THEORETICAL DENSITY. THIS REQUIREMENT SHALL APPLY TO IL 9.5L GRADATION SHOULDER MIXES AND OTHER MIXES (BOTTOM LIFT OF SHOULDERS). THIS MAXIMUM DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE OF FOUR TESTS AS IN OTHER QC/QA TESTING. A NUCLEAR GAUGE DENSITY/CORE CORRELATION SHALL BE PERFORMED FOR THE IL 9.5L MIXES AND OTHER MIXES USING STANDARD CORRELATION PROCEDURES.

G.N.-501A
THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHOULD FOLLOW THE GUIDE BRIDGE SPECIAL PROVISIONS FOR CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.

G.N.-631
IF THE CONTRACTOR ELECTS TO USE THE ALTERNATE MOUNTING METHOD OF THRU DRILLING THE MOUNTING HOLES FOR THE TRAFFIC BARRIER TERMINALS, TYPE 6, THE HOLES SHALL BE DRILLED USING A CORE DRILL. A HAMMER DRILL WILL NOT BE ALLOWED.

G.N.-781
RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH STANDARD 781001, AND THE DETAILS SHOWN IN THE PLANS. IF THERE IS ANY DISCREPANCY BETWEEN THE STANDARD AND THE DETAILS IN THE PLANS, THE DETAILS IN THE PLANS SHALL GOVERN. THE FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING THE RAISED REFLECTIVE PAVEMENT MARKERS AND THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED MIDWAY IN THE 30 FOOT (9 m) SPACE BETWEEN THE DASHED CENTERLINE STRIPES (WHEN APPLICABLE).

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.

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

NO COMMITMENTS

EARTHWORK SCHEDULE

	Station	Distance Ft.	Cut SqFt	Fill SqFt	Balance CuYd
Outside	1042+75.00		0.00	0.00	
		25.0			4.0
Shoulder	1043+00.00		0.00	8.60	
		25.0			8.0
	1043+25.00		0.00	8.60	
		25.0			4.0
	1043+50.00		0.00	0.00	
			Outside Total		16.0
Median	1043+65.00		0.00	0.00	
Shoulder		25.0			2.4
	1043+90.00		0.00	5.08	
		25.0			4.7
	1044+15.00		0.00	5.08	
		25.0			2.4
	1044+40.00		0.00	0.00	
			Median Total		9.5

FURNISHED EXCAVATION **25.0** CUYD

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	4
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 70671

SUMMARY OF QUANTITIES

X071-ZA

RURAL
STA. 1035+00 TO STA. 1043+00
100% FED.

CODE NO.	DESCRIPTION	UNIT	TOTAL QUANTITY
20400800	FURNISHED EXCAVATION	CU YD	25.0
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	39.0
28000400	PERIMETER EROSION BARRIER	FOOT	120.0
28000500	INLET AND PIPE PROTECTION	EACH	2.0
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	364.0
40603245	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N105	TON	174.0
40603550	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N105	TON	140.0
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	277.0
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	54.0
44000196	HOT-MIX ASPHALT SUFACE REMOVAL, SPECIAL	SQ YD	954.0
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	1,431.0
44000700	APPROACH SLAB REMOVAL	SQ YD	267.0
48101200	AGGREGATE SHOULDERS, TYPE B	TON	32.0
48203100	HOT-MIX ASPHALT SHOULDERS	TON	81.0
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1.0
50102400	CONCRETE REMOVAL	CU YD	30.1
50104650	SLOPE WALL REMOVAL	SQ YD	120.0
50200100	STRUCTURE EXCAVATION	CU YD	39.0
50300225	CONCRETE STRUCTURES	CU YD	26.1
50300255	CONCRETE SUPERSTRUCTURE	CU YD	260.0
50300260	BRIDGE DECK GROOVING	SQ YD	1,058.0
50300300	PROTECTIVE COAT	SQ YD	1,293.0
50500305	ERECTING STRUCTURAL STEEL	L SUM	1.0
50500505	STUD SHEAR CONNECTORS	EACH	4,500.0
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	63,740.0
50800515	BAR SPLICERS	EACH	88.0
51100300	SLOPE WALL 6 INCH	SQ YD	120.0
51500100	NAME PLATES	EACH	1.0
52100210	ERECTING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12.0
52100220	ERECTING ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	6.0

RURAL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	5
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 70671

SUMMARY OF QUANTITIES

X071-2A

STA. 1035+00 TO STA. 1043+00
100% FED.

	CODE NO.	DESCRIPTION	UNIT	TOTAL QUANTITY
	52100520	ANCHOR BOLTS, 1"	EACH	24.0
	52100540	ANCHOR BOLTS, 1 1/2"	EACH	24.0
	58700300	CONCRETE SEALER	SQ FT	731.0
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	38.0
	60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	92.0
*	63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	450.0
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2.0
*	63100169	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)	EACH	2.0
	63200310	GUARDRAIL REMOVAL	FOOT	457.0
	63400105	GUARD POSTS	EACH	34.0
	64200105	SHOULDER RUMBLE STRIP	FOOT	1,073.0
	67100100	MOBILIZATION	L SUM	1.0
	70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1.0
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2227.0
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	7600.0
*	78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	950.0
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	86.0
*	78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	12.0
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	13.0
	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	2.0
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	21.0
	X0321750	REMOVE TEMPORARY CONCRETE BARRIER, STATE OWNED	FOOT	1,450.0
	X0323080	DRAINAGE SCUPPERS, DS-12	EACH	2.0
	X0324865	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	1,050.0
	52000110	PREFORMED JOINT STRIP SEAL	FOOT	84.0
	X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	40.0
	Z0038700	PERMANENT BENCH MARKS	EACH	1.0

* *DENOTES SPECIALTY ITEMS*

CONTRACT NO. 70671

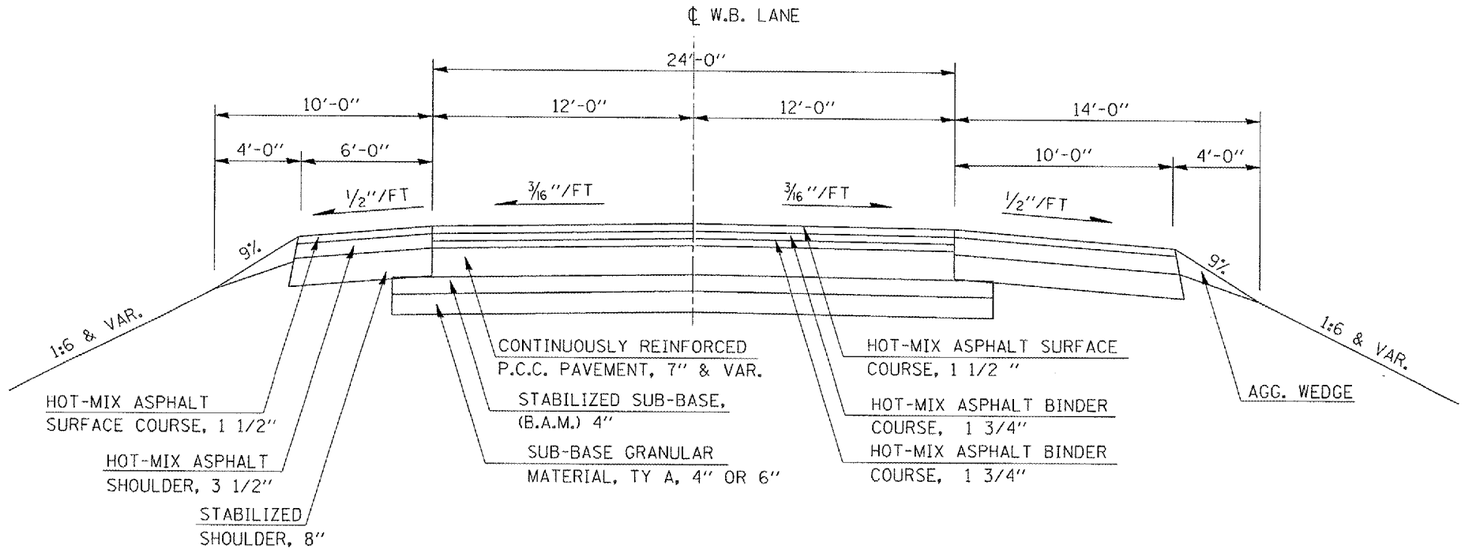
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	6

EXISTING TYPICAL CROSS SECTION

STA. 1035+00 to STA. 1043+00

RESURFACING OMISSION

STA.1038+04.25 to STA. 1039+95.75

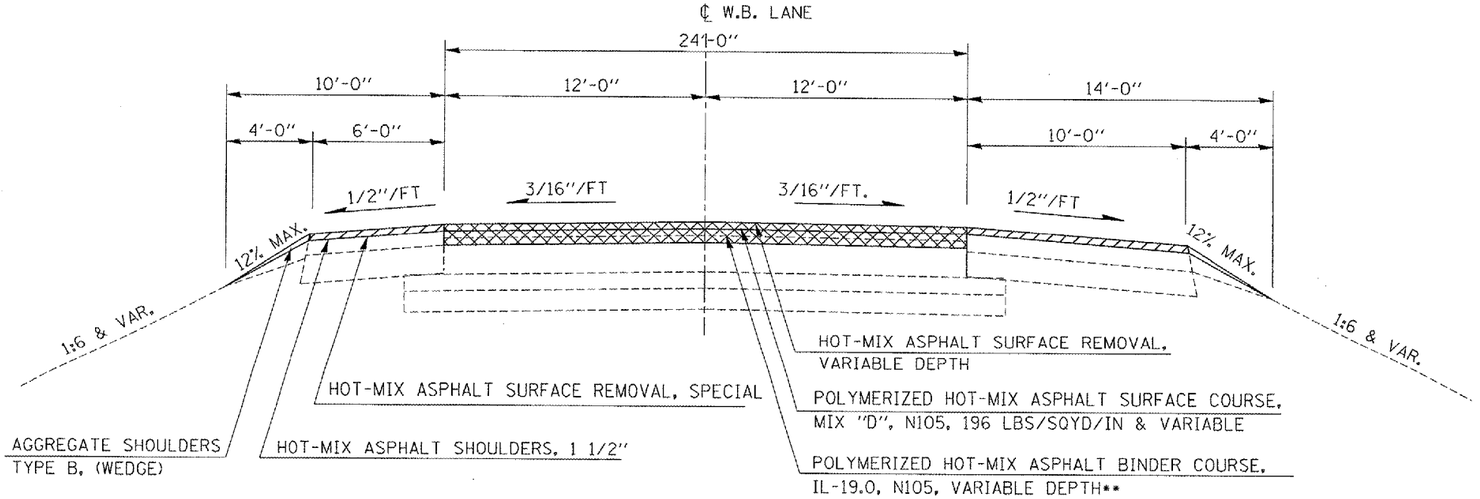


PROPOSED TYPICAL CROSS SECTION

STA. 1035+00 to STA. 1043+00

RESURFACING OMISSION

STA. 1037+68.25 to STA. 1040+31.75



**** NOTE: ALL MAINLINE HMA TO BE PLACED UTILIZING A STRINGLINE!**

**** NOTE: POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE ONLY 1040+31.75 TO STA. 1041+00.00**

PLOT DATE = 8/3/2007
FILE NAME = c:\prg_pcs1\d585187 (=81\70671_typnot1.dgn
PLOT SCALE = 211.765 ' / IN.
USER NAME = collier8a

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	7
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 70671

SCHEDULE OF QUANTITIES

STA.	Ex. CL Elev.	Theor. Top of Ex. PCC @-5" & Var.	Prop. CL Elev.	Prop Top of Binder @-1 3/4"	Pr. Binder Thickness Feet	Pr. Binder Thickness Inches	Binder Tons	Surface Tons	HMA Surf. Rem, Var. Dp. SqYd	HMA Surf. Rem, Spl. SqYd	HMA Shoulders Tons	Approach Slab Rem. SqYd	Br. Approach Pavt. Spl. SqYd	Bit Prime 0.1 Gal/SqYd	Shoulder Rumble Strip Feet
1035+00.00	**761.00**	760.58	**761.00**	**760.85**	**0.27**	**3.25**	**5.84**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1035+12.50	760.79	760.37	760.77	760.62	0.25	3.01	5.51	3.27	33.33	22.22	1.87			8.89	12.50
1035+25.00	**760.58**	**760.16**	**760.55**	**760.40**	**0.24**	**2.89**	**5.28**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1035+37.50	760.37	759.95	760.33	760.18	0.23	2.77	5.06	3.27	33.33	22.22	1.87			8.89	12.50
1035+50.00	**760.17**	**759.75**	**760.12**	**759.97**	**0.22**	**2.65**	**5.06**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1035+62.50	759.96	759.54	759.92	759.77	0.23	2.77	5.17	3.27	33.33	22.22	1.87			8.89	12.50
1035+75.00	**759.76**	**759.34**	**759.72**	**759.57**	**0.23**	**2.77**	**5.39**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1035+87.50	759.55	759.13	759.53	759.38	0.25	3.01	5.73	3.27	33.33	22.22	1.87			8.89	12.50
1036+00.00	**759.35**	**758.93**	**759.34**	**759.19**	**0.26**	**3.13**	**6.18**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1036+12.50	759.14	758.72	759.16	759.01	0.29	3.49	6.74	3.27	33.33	22.22	1.87			8.89	12.50
1036+25.00	**758.94**	**758.52**	**758.98**	**758.83**	**0.31**	**3.73**	**7.63**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1036+37.50	758.71	758.29	758.81	758.66	0.37	4.45	7.63	3.27	33.33	22.22	1.87			8.89	12.50
1036+50.00	**758.61**	**758.19**	**758.65**	**758.50**	**0.31**	**3.73**	**6.88**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1036+62.50	758.46	758.04	758.49	758.34	0.30	3.64	6.71	3.27	33.33	22.22	1.87			8.89	12.50
1036+75.00	**758.31**	**757.89**	**758.33**	**758.18**	**0.30**	**3.55**	**6.22**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1036+87.50	758.15	757.78	758.19	758.04	0.26	3.12	5.67	3.27	33.33	22.22	1.87			8.89	12.50
1037+00.00	**758.00**	**757.66**	**758.05**	**757.90**	**0.25**	**2.96**	**5.14**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1037+12.50	757.87	757.55	757.91	757.76	0.21	2.55	4.50	3.27	33.33	22.22	1.87			8.89	12.50
1037+25.00	**757.74**	**757.44**	**757.78**	**757.63**	**0.19**	**2.27**	**4.09**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1037+37.50	757.60	757.34	757.66	757.51	0.18	2.11	3.78	3.27	33.33	22.22	1.87			8.89	12.50
1037+50.00	**757.47**	**757.23**	**757.54**	**757.39**	**0.16**	**1.95**	**3.40**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1037+62.50	757.36	757.14	757.43	757.28	0.14	1.69	0.73	1.50	15.33	10.22	0.86			4.09	5.75
1037+68.25	**757.30**	**757.10**	**757.38**	*6'-0" Flexible Connector*			**118.36**	**70.10**	**715.33**	**476.89**	**40.06**			**190.76**	**268.25**
1037+74.25	757.25	757.06	757.32												
1037+75.00	757.24			***West Approach Pavement Sta. 1037+74.25 to Sta. 1038+04.25***								***133.33***	***138.55***		
1037+87.50	757.13														
1038+00.00	757.01														
1038+04.25	757.09	*Omission Form Resurfacing Sta.1037+68.3 to Sta.1040+31.8*		***Bridge Deck Sta. 1039+04.25 to Sta. 1039+95.75***											
1038+65.54	756.72														
1039+34.46	756.47														
1039+95.75	756.40														
1040+00.00	756.42														
1040+12.50	756.45			***East Approach Pavement Sta. 1039+95.75 to Sta. 1040+25.75***								***133.33***	***138.55***		
1040+25.00	756.49														
1040+25.75	756.53	756.34	756.43	*6'-0" Flexible Connector*											
1040+31.80	**756.53**	**756.41**	**756.43**				**0.26**	**15.20**	**10.13**	**0.85**				**2.53**	**5.70**
1040+37.50	756.53	756.32	756.43	*NO BINDER SURFACE ONLY Sta. 1040+25.75 to Sta. 1041+00.00*			2.51	33.33	22.22	1.87				5.56	12.50
1040+50.00	**756.56**	**756.32**	**756.45**				**2.87**	**33.33**	**22.22**	**1.87**				**5.56**	**12.50**
1040+62.50	756.60	756.34	756.48				3.23	33.33	22.22	1.87				5.56	12.50
1040+75.00	**756.63**	**756.34**	**756.51**				**3.81**	**33.33**	**22.22**	**1.87**				**5.56**	**12.50**
1040+87.50	756.67	756.35	756.55				4.39	33.33	22.22	1.87				5.56	12.50
1041+00.00	**756.70**	**756.36**	**756.60**	**756.45**	**0.10**	**1.16**	**2.56**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1041+12.50	756.74	756.37	756.65	756.50	0.13	1.59	3.48	3.27	33.33	22.22	1.87			8.89	12.50
1041+25.00	**756.77**	**756.38**	**756.70**	**756.55**	**0.18**	**2.14**	**4.14**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1041+37.50	756.85	756.43	756.77	756.62	0.19	2.29	4.16	3.27	33.33	22.22	1.87			8.89	12.50
1041+50.00	**756.92**	**756.50**	**756.83**	**756.68**	**0.18**	**2.17**	**3.83**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1041+62.50	757.02	756.60	756.91	756.76	0.16	1.93	3.38	3.27	33.33	22.22	1.87			8.89	12.50
1041+75.00	**757.12**	**756.70**	**756.99**	**756.84**	**0.14**	**1.69**	**2.93**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1041+87.50	757.22	756.80	757.07	756.92	0.12	1.45	2.59	3.27	33.33	22.22	1.87			8.89	12.50
1042+00.00	**757.32**	**756.90**	**757.16**	**757.01**	**0.11**	**1.33**	**2.48**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1042+12.50	757.42	757.00	757.26	757.11	0.11	1.33	2.48	3.27	33.33	22.22	1.87			8.89	12.50
1042+25.00	**757.52**	**757.10**	**757.36**	**757.21**	**0.11**	**1.33**	**2.59**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1042+37.50	757.62	757.20	757.47	757.32	0.12	1.45	2.93	3.27	33.33	22.22	1.87			8.89	12.50
1042+50.00	**757.72**	**757.30**	**757.59**	**757.44**	**0.14**	**1.69**	**3.49**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1042+62.50	757.81	757.39	757.71	757.56	0.17	2.05	4.05	3.27	33.33	22.22	1.87			8.89	12.50
1042+75.00	**757.91**	**757.49**	**757.83**	**757.68**	**0.19**	**2.29**	**4.61**	**3.27**	**33.33**	**22.22**	**1.87**			**8.89**	**12.50**
1042+87.50	758.01	757.59	757.96	757.81	0.22	2.65	5.39	3.27	33.33	22.22	1.87			8.89	12.50
1043+00.00	**758.11**	**757.69**	**758.10**	**757.95**	**0.26**	**3.13**									
							55.11	**69.33**	**715.20**	**476.80**	**40.05**			**172.53**	**268.20**

	Binder Tons	Surface Tons	HMA Surf. Rem, Var. Dp. SqYd	HMA Surf. Rem, Spl. SqYd	HMA Shoulders Tons	Approach Slab Rem. SqYd	Br. Approach Pavt. Spl. SqYd	Bit Prime Gal.	Shoulder Rumble Strip Feet	
TOTALS	173.47	139.43	1430.53	953.69	80.11	266.67	277.09	363.29	536.45	x2
USE	**174.00**	**140.00**	**1431.00**	**954.00**	**81.00**	**267.00**	**278.00**	**364.00**	**1073.00**	

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE

KICKAPOO CREEK

STR# 057-0126 (WB I-74)

SCALE: DRAWN BY

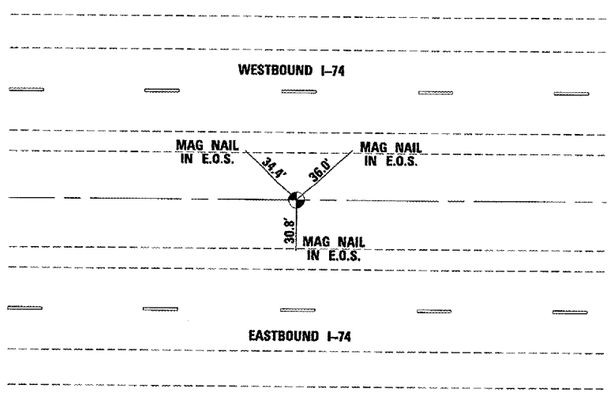
DATE CHECKED BY

TIE POINT LAYOUT

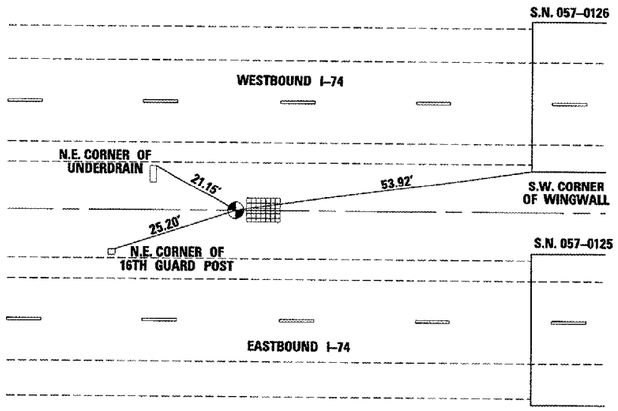
CONTRACT NO. 70671

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

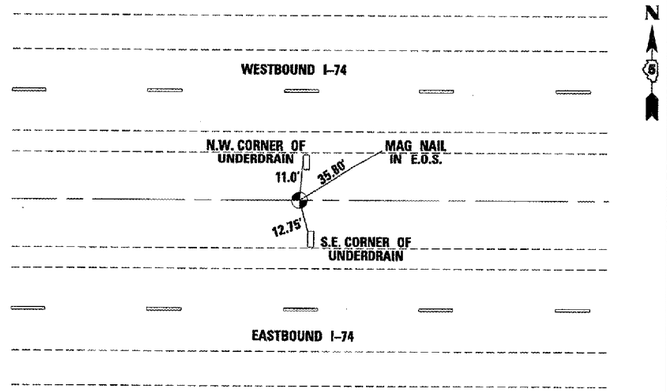
P.O.T. #4 1012+43.82
O/S = 0.0'



P.O.T. #3 1037+48.27
O/S = 0.25' RT



P.O.T. #1 1060+00.81
O/S = 0.0'



BENCHMARK DESCRIPTIONS

4818-1
STA. 1051+02
O/S = 0.15' RT
Description: Brass Stem
Location: To reach from the intersection of I-74 and Kickapoo Creek, go east on I-74 for 1300' to mark on the left. Said mark is a broken brass stem on the west side of a concrete drop box. Drop box is located 50' east of a turn around.

4818-2
STA. 1040+05.7
O/S = 69.1' LT
Description: Chiseled Square
Location: Said mark is a chiseled square located on the top of the NE wingwall of the North structure over Kickapoo Creek on I-74.

4818-3
STA. 1037+98
O/S = 28.8' RT
Description: Chiseled Square
Location: Said mark is a chiseled square located on the top of the NW wingwall of the South structue over Kickapoo Creek on I-74.

4814-4
STA. 1021+11.4
O/S = 10.8' LT
Description: Chiseled Square
Location: To reach from the intersection of I-74 and Kickapoo Creek, go west on I-74 for 1500' to mark on the left. Said mark is a chiseled square located on the SE corner of a drop box on the north side of the median.

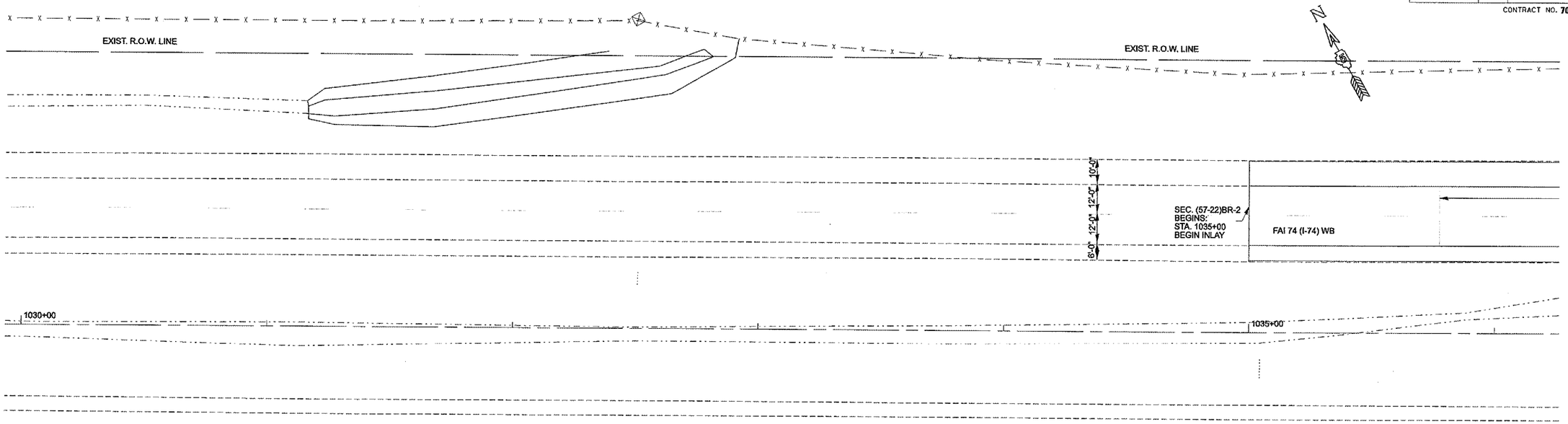
PLOT DATE = 9/7/2007
FILE NAME = d:\projects\d0605107 (v8i)\78971.ten.dgn
PLOT SCALE = 21.1765 '/ IN.
USER NAME = colliersw

8/2/2007

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	9
STA. 1036+00		TO STA.1042+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

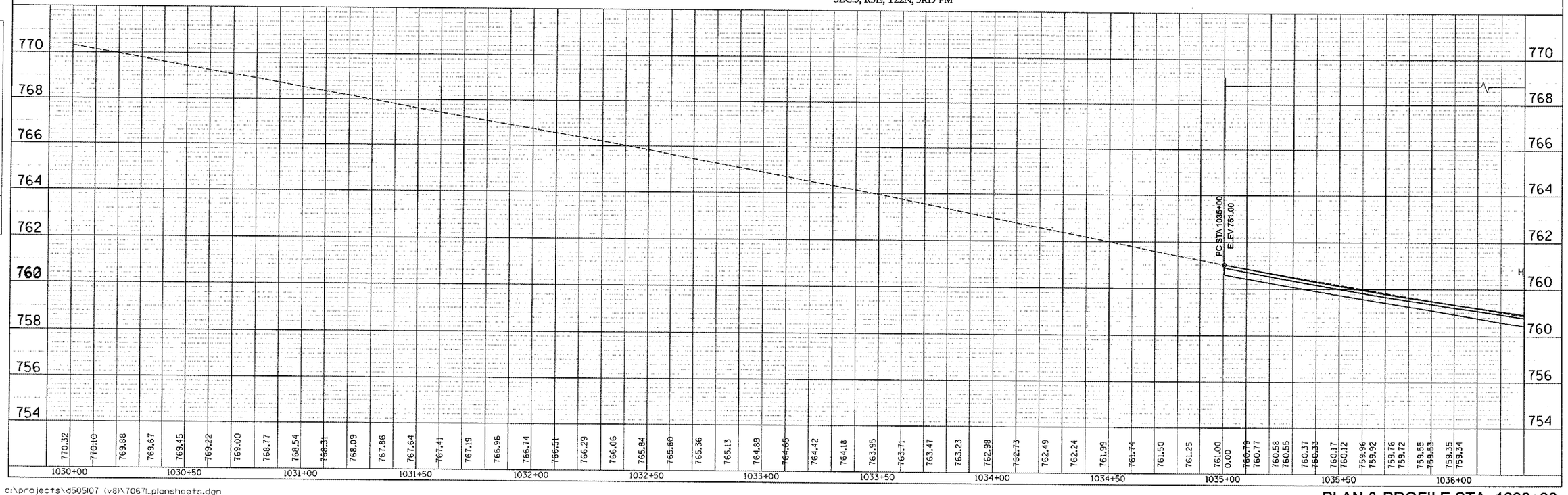
CONTRACT NO. **70671**

PLAN — SURVEYED / PLOTTED / ALIGNMENT CHECKED / NOTE BOOK / NO. / BY / DATE / QUANTITIES CHECKED / CADD FILE NAME



SEC.5, R3E, T22N, 3RD PM

PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / NOTE BOOK / NO. / BY / DATE / STRUCTURE NO(TYPE ORD)

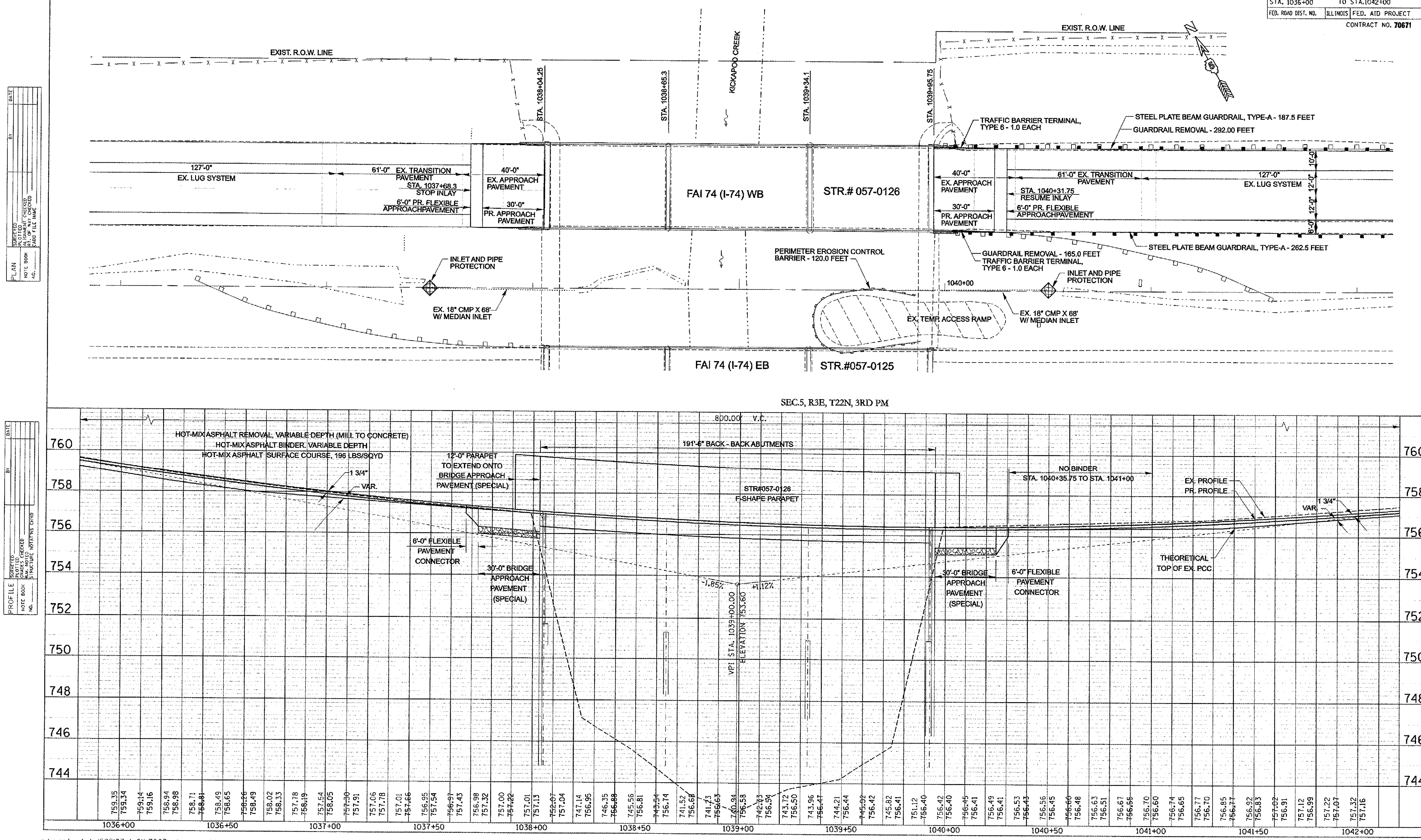


c:\projects\d505107 (v8)\70671_plansheets.dgn

PLAN & PROFILE STA. 1030+00

8/2/2007

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	10
STA. 1036+00	TO STA.1042+00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
		CONTRACT NO. 70671		



c:\projects\d505107 (v8)\70671_plansheets.dgn

PLAN & PROFILE STA. 1036+00

8/3/2007

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	11
STA. 1036+00		TO STA.1042+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. **70671**

PLAN — SURVEYED / PLOTTED / CHECKED / ALIGNMENT CHECKED / ADD'D FILE NAMES / NOTE BOOK / NO. / BY / DATE

PROFILE — SURVEYED / PLOTTED / CHECKED / ALIGNMENT CHECKED / ADD'D FILE NAMES / NOTE BOOK / NO. / BY / DATE

EXIST. R.O.W. LINE

TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (FLARED)- 1.0 EACH

SEC. (57-22)BR-2
ENDS:
STA. 1043+00
END INLAY

10'-0" 12'-0" 12'-0" 6'-0"

FAI 74 (I-74) WB

TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (FLARED) - 1.0 EACH

1045+00

SEC.5, R3E, T22N, 3RD PM

P.I. STA 1043+00
ELEV 758.10

1042+00	1042+50	1043+00	1043+50	1044+00	1044+50	1045+00	1045+50	1046+00	1046+50	1047+00
757.32	757.16	757.42	757.26	757.52	757.36	757.62	757.47	757.72	757.59	757.81
757.71	757.91	757.83	758.01	757.96	758.11	758.10	758.23	758.35	758.47	758.59
758.70	758.82	758.94	759.06	759.18	759.30	759.44	759.58	759.71	759.85	759.99
760.13	760.27	760.40	760.54	760.68	760.82	760.95	761.09	761.23	761.33	761.44
761.54	761.65	761.75	761.86	761.96	762.07	762.17	762.28	762.38		

c:\projects\d505107 (v8)\70671_plansheets.dgn

PLAN & PROFILE STA. 1042+00

Benchmark: Chiseled square located on the top of N.E. wingwall of the North structure over Kickapoo Creek on I-74, Sta. 1040+05.7, 69.1' left, Elev. 757.87.

Existing Structure: S.N. 057-0126, originally built in 1968 as F.A.I. Route 74, Section 57-22B. The existing structure is a three-span continuous, non-composite, rolled steel girder structure on pile bent abutments and solid wall piers on spread footing. The back to back abutment measured 191'-6" and the out to out of deck is 42'-0". The existing superstructure is to be removed and replaced. The roadway will be closed during construction.

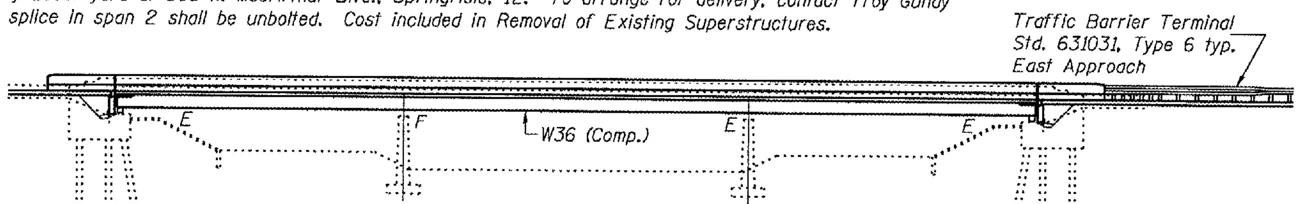
Salvage: The existing steel beams in span 1 and in span 2 up to approximately 60' from pier 1 shall be salvaged and delivered to the IDOT Day Labor yard at 505 N. MacArthur Blvd., Springfield, IL. To arrange for delivery, contact Troy Gundy at 217-782-7416. The splice in span 2 shall be unbolted. Cost included in Removal of Existing Superstructures.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

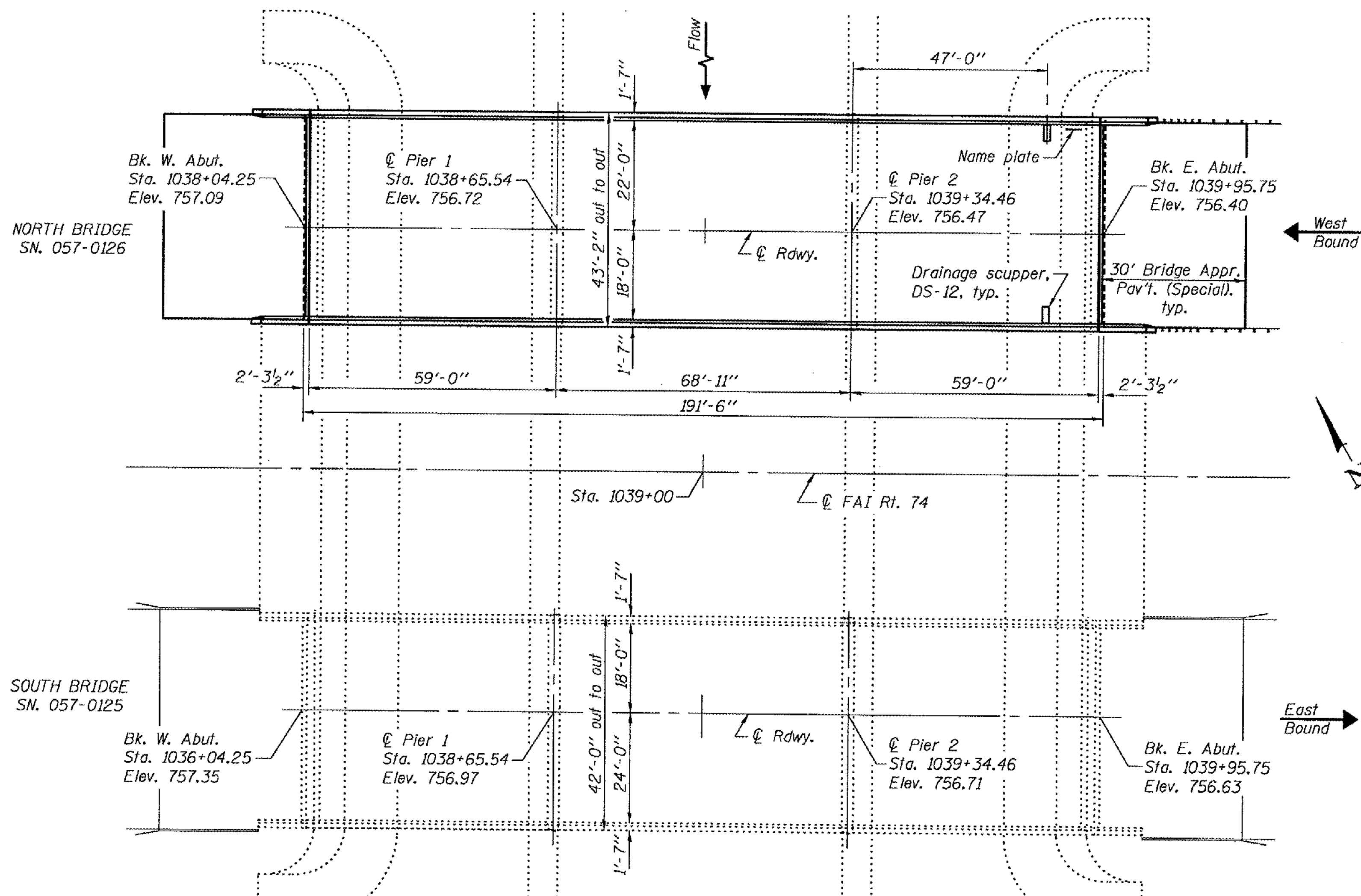
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	12
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
23 SHEETS

Contract No. 70671



ELEVATION



PLAN

INDEX OF SHEETS

STATION 1039+00
REBUILT 20 BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. (57-22)BR-2
LOADING HS20
STRUCTURE NO. 057-0126 (W.B.)

NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plate.

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts ⅞" ϕ, holes $^{15}/_{16}$" ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 199,560 lbs. (AASHTO M270 Gr. 50)
= 23,690 lbs. (AASHTO M270 Gr. 36)

The structural steel and bearings are to be furnished under separate contract and erected under this contract.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of ⅛ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Concrete sealer shall be applied to the inside face of the back walls, the existing abutment seats, and the exposed front face of the abutments.

Cleaning and field painting of structural steel shall be done under a separate painting contract.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Slipforming of parapets will not be allowed.

Up to ¼" will be ground off the bridge deck and the bridge approach pavement. See special provisions.

Reinforcement bars designated (E) shall be epoxy coated.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		39.0	39.0
Removal of Existing Superstructures	Each			1
Concrete Removal	Cu. Yd.		30.1	30.1
Structure Excavation	Cu. Yd.		39.0	39.0
Concrete Structures	Cu. Yd.		26.1	26.1
Concrete Superstructure	Cu. Yd.	260.0		260.0
* Bridge Deck Grooving	Sq. Yd.	1058		1058
* Protective Coat	Sq. Yd.	1293		1293
Erecting Structural Steel	L. Sum	1.0		1.0
Stud Shear Connectors	Each	4500		4500
Reinforcement Bars, Epoxy Coated	Pound	61310	2430	63740
Bar Splicers	Each	88		88
Name Plates	Each	1		1
Erecting Elastomeric Bearing Assembly, Type I	Each	12		12
Erecting Elastomeric Bearing Assembly, Type II	Each	6		6
Anchor Bolt 1" ϕ	Each	24		24
Anchor Bolt 1½" ϕ	Each	24		24
Slopewall Removal	Sq. Yd.		120.0	120.0
Slopewall 6"	Sq. Yd.		120.0	120.0
* Diamond Grinding (Bridge Section)	Sq. Yd.	1050.0		1050.0
Geocomposite Wall Drain	Sq. Yd.		38.0	38.0
Pipe Underdrains for Structures, 4"	Foot		92.0	92.0
Drainage Scupper, DS-12	Each	2		2
Concrete Sealer	Sq. Ft.		731.0	731.0
Preformed Joint Strip Seal	Foot	84.0		84.0
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.		40.0	40.0

* Includes bridge approach pavements.

LOADING HS20-44 & ALT.

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

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

New Construction

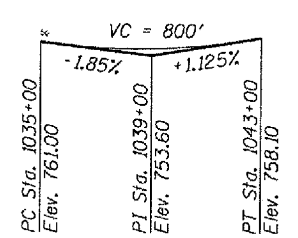
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (M270 Grade 50)

Existing Construction

f'_c = 3,500 psi
f_y = 40,000 psi (reinforcement)

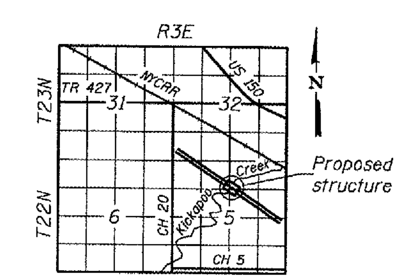
SEISMIC DATA

Seismic Performance Category (SPZ) = A
Bedrock Acceleration Coefficient (A) = 0.045g
Site Coefficient (S) = 1.2



PROFILE GRADE

The profile grade shows the final elevations after grinding.



LOCATION SKETCH

DESIGNED	[signature]
CHECKED	[signature]
DRAWN	h.t. duong
CHECKED	DWC / CCC

EXAMINED [signature] Aug. 2, 2007
ENGINEER OF BRIDGE DESIGN
PASSED [signature]
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
081-004625
LICENSED STRUCTURAL ENGINEER
SPRINGFIELD

EXPIRES 11-30-2008

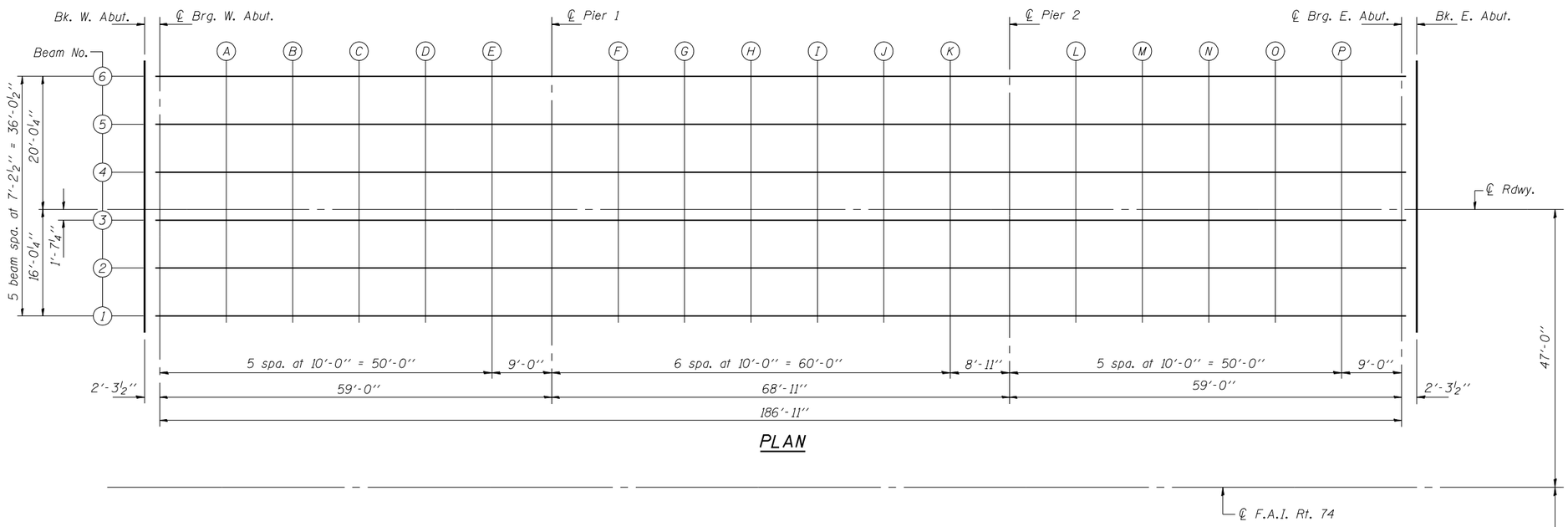
GENERAL PLAN & ELEVATION
F.A.I. RT. 74 OVER KICKAPOO CREEK
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

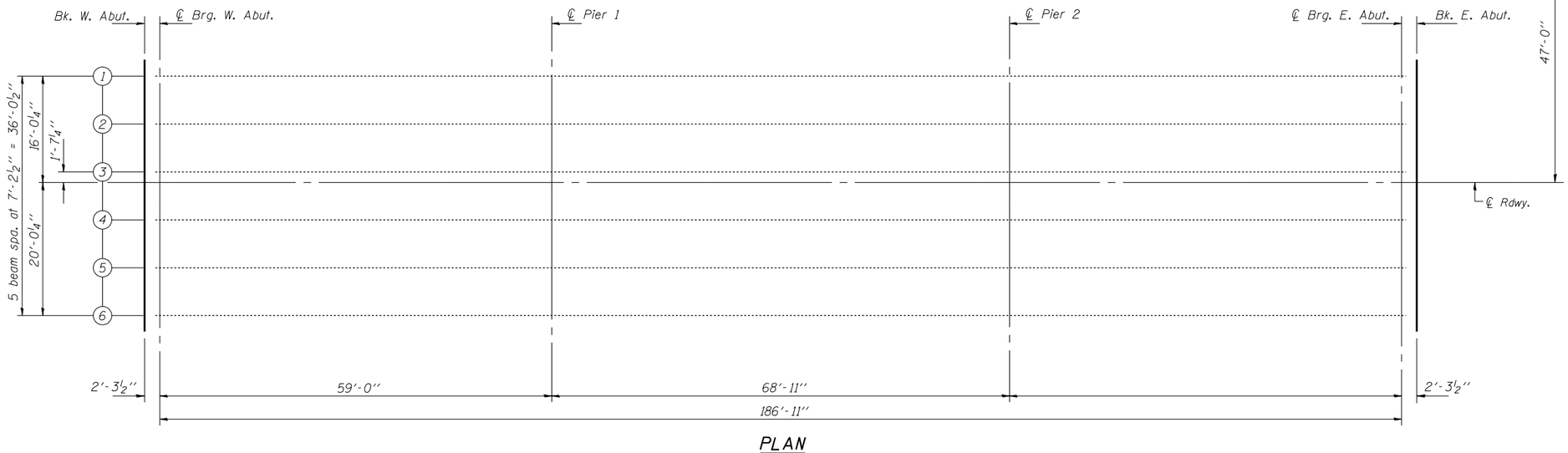
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
23 SHEETS

Contract No. 70671



PLAN

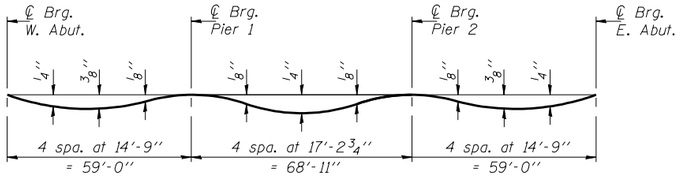


PLAN
(Not in contract)

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2, 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)



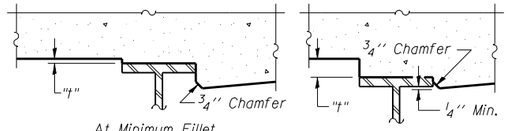
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note: . The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.

. . . . . .

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
23 SHEETS

Contract No. 70671

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections and Grinding" shown below and on shts. 4 & 5 of 23, minus 8 1/4'' deck thickness, equals the fillet heights "t" above top flanges of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown below and on sheets 4 & 5 of 23. For grinding the deck, see Special Provisions.

FILLET HEIGHTS

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W .ABUT.	103804.25	16.02	756.82	756.84
EXP. JT.	103805.83	16.02	756.81	756.83
CL. BRG. W. ABUT.	103806.54	16.02	756.81	756.83
A	103816.54	16.02	756.74	756.76
B	103826.54	16.02	756.67	756.71
C	103836.54	16.02	756.61	756.65
D	103846.54	16.02	756.55	756.58
E	103856.54	16.02	756.50	756.52
CL. BRG. PIER 1	103865.54	16.02	756.45	756.47
F	103875.54	16.02	756.40	756.43
G	103885.54	16.02	756.36	756.40
H	103895.54	16.02	756.32	756.36
I	103905.54	16.02	756.28	756.33
J	103915.54	16.02	756.25	756.29
K	103925.54	16.02	756.22	756.26
CL. BRG. PIER 2	103934.46	16.02	756.2	756.22
L	103944.46	16.02	756.18	756.20
M	103954.46	16.02	756.16	756.18
N	103964.46	16.02	756.15	756.17
O	103974.46	16.02	756.14	756.16
P	103984.46	16.02	756.13	756.15
CL. BRG. E. ABUT.	103993.46	16.02	756.13	756.15
EXP. JT.	103994.17	16.02	756.13	756.15
BK. E. ABUT.	103995.75	16.02	756.13	756.15

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W .ABUT.	103804.25	8.81	756.96	756.98
EXP. JT.	103805.83	8.81	756.94	756.96
CL. BRG. W. ABUT.	103806.54	8.81	756.94	756.96
A	103816.54	8.81	756.87	756.90
B	103826.54	8.81	756.80	756.84
C	103836.54	8.81	756.74	756.78
D	103846.54	8.81	756.68	756.72
E	103856.54	8.81	756.63	756.66
CL. BRG. PIER 1	103865.54	8.81	756.58	756.60
F	103875.54	8.81	756.54	756.57
G	103885.54	8.81	756.49	756.53
H	103895.54	8.81	756.45	756.50
I	103905.54	8.81	756.42	756.46
J	103915.54	8.81	756.39	756.43
K	103925.54	8.81	756.36	756.39
CL. BRG. PIER 2	103934.46	8.81	756.33	756.35
L	103944.46	8.81	756.31	756.33
M	103954.46	8.81	756.30	756.32
N	103964.46	8.81	756.28	756.30
O	103974.46	8.81	756.27	756.29
P	103984.46	8.81	756.26	756.28
CL. BRG. E. ABUT.	103993.46	8.81	756.26	756.28
EXP. JT.	103994.17	8.81	756.26	756.28
BK. E. ABUT.	103995.75	8.81	756.26	756.28

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W .ABUT.	103804.25	1.60	757.07	757.09
EXP. JT.	103805.83	1.60	757.06	757.08
CL. BRG. W. ABUT.	103806.54	1.60	757.05	757.07
A	103816.54	1.60	756.98	757.01
B	103826.54	1.60	756.92	756.95
C	103836.54	1.60	756.85	756.89
D	103846.54	1.60	756.80	756.83
E	103856.54	1.60	756.74	756.77
CL. BRG. PIER 1	103865.54	1.60	756.70	756.72
F	103875.54	1.60	756.65	756.68
G	103885.54	1.60	756.61	756.64
H	103895.54	1.60	756.57	756.61
I	103905.54	1.60	756.53	756.58
J	103915.54	1.60	756.50	756.54
K	103925.54	1.60	756.47	756.50
CL. BRG. PIER 2	103934.46	1.60	756.45	756.47
L	103944.46	1.60	756.43	756.45
M	103954.46	1.60	756.41	756.43
N	103964.46	1.60	756.39	756.41
O	103974.46	1.60	756.38	756.40
P	103984.46	1.60	756.38	756.40
CL. BRG. E. ABUT.	103993.46	1.60	756.37	756.39
EXP. JT.	103994.17	1.60	756.37	756.39
BK. E. ABUT.	103995.75	1.60	756.37	756.39

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2. 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
23 SHEETS

Contract No. 70671

℄ ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W .ABUT.	103804.25	0.0	757.09	757.11
EXP. JT.	103805.83	0.0	757.08	757.10
CL. BRG. W. ABUT.	103806.54	0.0	757.08	757.10
A	103816.54	0.0	757.01	757.03
B	103826.54	0.0	756.94	756.98
C	103836.54	0.0	756.88	756.92
D	103846.54	0.0	756.82	756.86
E	103856.54	0.0	756.77	756.79
CL. BRG. PIER 1	103865.54	0.0	756.72	756.74
F	103875.54	0.0	756.67	756.70
G	103885.54	0.0	756.63	756.67
H	103895.54	0.0	756.59	756.63
I	103905.54	0.0	756.56	756.60
J	103915.54	0.0	756.52	756.57
K	103925.54	0.0	756.49	756.53
CL. BRG. PIER 2	103934.46	0.0	756.47	756.49
L	103944.46	0.0	756.45	756.47
M	103954.46	0.0	756.43	756.45
N	103964.46	0.0	756.42	756.44
O	103974.46	0.0	756.41	756.43
P	103984.46	0.0	756.40	756.42
CL. BRG. E. ABUT.	103993.46	0.0	756.40	756.42
EXP. JT.	103994.17	0.0	756.40	756.42
BK. E. ABUT.	103995.75	0.0	756.40	756.42

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W .ABUT.	103804.25	-5.60	757.01	757.03
EXP. JT.	103805.83	-5.60	756.99	757.01
CL. BRG. W. ABUT.	103806.54	-5.60	756.99	757.01
A	103816.54	-5.60	756.92	756.95
B	103826.54	-5.60	756.85	756.89
C	103836.54	-5.60	756.79	756.83
D	103846.54	-5.60	756.73	756.77
E	103856.54	-5.60	756.68	756.71
CL. BRG. PIER 1	103865.54	-5.60	756.63	756.65
F	103875.54	-5.60	756.59	756.62
G	103885.54	-5.60	756.54	756.58
H	103895.54	-5.60	756.50	756.55
I	103905.54	-5.60	756.47	756.51
J	103915.54	-5.60	756.44	756.48
K	103925.54	-5.60	756.41	756.44
CL. BRG. PIER 2	103934.46	-5.60	756.38	756.40
L	103944.46	-5.60	756.36	756.38
M	103954.46	-5.60	756.35	756.37
N	103964.46	-5.60	756.33	756.35
O	103974.46	-5.60	756.32	756.34
P	103984.46	-5.60	756.31	756.33
CL. BRG. E. ABUT.	103993.46	-5.60	756.31	756.33
EXP. JT.	103994.17	-5.60	756.31	756.33
BK. E. ABUT.	103995.75	-5.60	756.31	756.33

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2, 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	16
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
23 SHEETS

Contract No. 70671

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W .ABUT.	103804.25	-12.81	756.89	756.91
EXP. JT.	103805.83	-12.81	756.88	756.90
CL. BRG. W. ABUT.	103806.54	-12.81	756.87	756.89
A	103816.54	-12.81	756.80	756.83
B	103826.54	-12.81	756.74	756.77
C	103836.54	-12.81	756.68	756.72
D	103846.54	-12.81	756.62	756.65
E	103856.54	-12.81	756.56	756.59
CL. BRG. PIER 1	103865.54	-12.81	756.52	756.54
F	103875.54	-12.81	756.47	756.50
G	103885.54	-12.81	756.43	756.46
H	103895.54	-12.81	756.39	756.43
I	103905.54	-12.81	756.35	756.40
J	103915.54	-12.81	756.32	756.36
K	103925.54	-12.81	756.29	756.32
CL. BRG. PIER 2	103934.46	-12.81	756.27	756.29
L	103944.46	-12.81	756.25	756.27
M	103954.46	-12.81	756.23	756.25
N	103964.46	-12.81	756.21	756.23
O	103974.46	-12.81	756.20	756.22
P	103984.46	-12.81	756.20	756.22
CL. BRG. E. ABUT.	103993.46	-12.81	756.19	756.21
EXP. JT.	103994.17	-12.81	756.19	756.21
BK. E. ABUT.	103995.75	-12.81	756.19	756.21

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W .ABUT.	103804.25	-20.02	756.74	756.76
EXP. JT.	103805.83	-20.02	756.73	756.75
CL. BRG. W. ABUT.	103806.54	-20.02	756.72	756.74
A	103816.54	-20.02	756.65	756.68
B	103826.54	-20.02	756.59	756.62
C	103836.54	-20.02	756.53	756.57
D	103846.54	-20.02	756.47	756.50
E	103856.54	-20.02	756.41	756.44
CL. BRG. PIER 1	103865.54	-20.02	756.37	756.39
F	103875.54	-20.02	756.32	756.35
G	103885.54	-20.02	756.28	756.31
H	103895.54	-20.02	756.24	756.28
I	103905.54	-20.02	756.20	756.25
J	103915.54	-20.02	756.17	756.21
K	103925.54	-20.02	756.14	756.17
CL. BRG. PIER 2	103934.46	-20.02	756.12	756.14
L	103944.46	-20.02	756.10	756.12
M	103954.46	-20.02	756.08	756.10
N	103964.46	-20.02	756.06	756.08
O	103974.46	-20.02	756.05	756.07
P	103984.46	-20.02	756.05	756.07
CL. BRG. E. ABUT.	103993.46	-20.02	756.04	756.06
EXP. JT.	103994.17	-20.02	756.04	756.06
BK. E. ABUT.	103995.75	-20.02	756.04	756.06

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2, 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
23 SHEETS

Contract No. 70671

NORTH CURB LINE

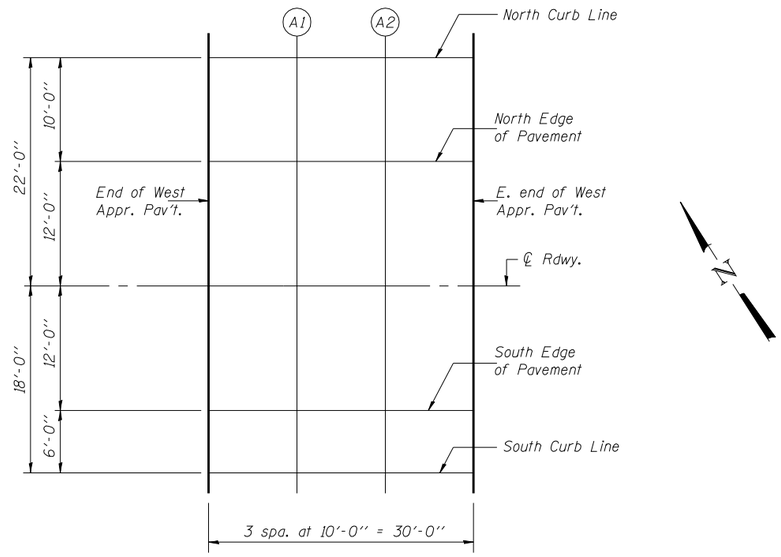
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End West Appr. Pav't.	103774.750	-22.000	756.92	756.95
A1	103784.750	-22.000	756.84	756.86
A2	103794.750	-22.000	756.77	756.79
E. End West Appr. Pav't.	103804.750	-22.000	756.69	756.71

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End West Appr. Pav't.	103774.750	-12.000	757.13	757.15
A1	103784.750	-12.000	757.05	757.07
A2	103794.750	-12.000	756.98	757.00
E. End West Appr. Pav't.	103804.750	-12.000	756.90	756.92

℄ ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End West Appr. Pav't.	103774.750	0.00	757.32	757.34
A1	103784.750	0.00	757.24	757.26
A2	103794.750	0.00	757.16	757.18
E. End West Appr. Pav't.	103804.750	0.00	757.09	757.11



PLAN
West Approach (W.B.)

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End West Appr. Pav't.	103774.750	12.00	757.13	757.15
A1	103784.750	12.00	757.05	757.07
A2	103794.750	12.00	756.98	757.00
E. End West Appr. Pav't.	103804.750	12.00	756.90	756.92

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End West Appr. Pav't.	103774.750	18.00	757.01	757.03
A1	103784.750	18.00	756.93	756.95
A2	103794.750	18.00	756.85	756.87
E. End West Appr. Pav't.	103804.750	18.00	756.78	756.80

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2. 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

TOP OF WEST APPROACH
SLAB ELEVATIONS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
23 SHEETS

Contract No. 70671

NORTH CURB LINE

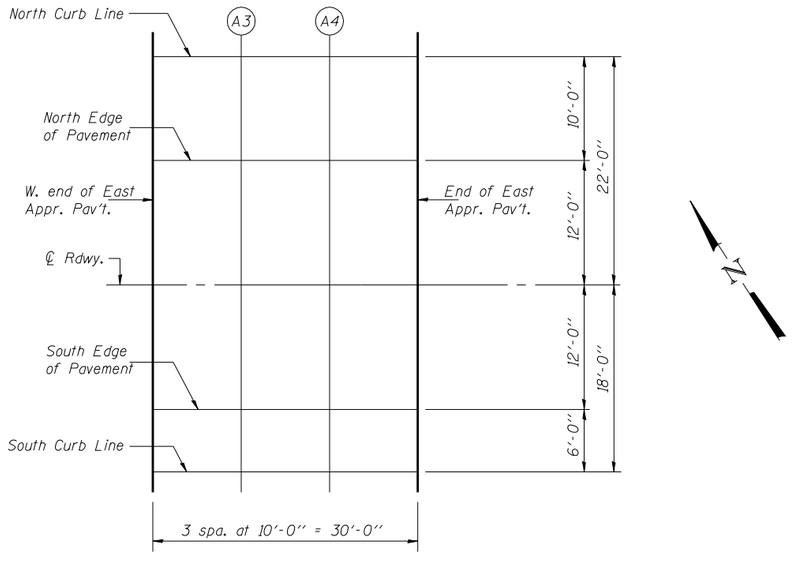
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End East Appr. Pav't.	103995.250	-22.000	756.00	756.02
A3	104005.250	-22.000	756.00	756.02
A4	104015.250	-22.000	756.01	756.03
E. End East Appr. Pav't.	104025.250	-22.000	756.02	756.04

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End East Appr. Pav't.	103995.250	-12.000	756.21	756.23
A3	104005.250	-12.000	756.21	756.23
A4	104015.250	-12.000	756.22	756.24
E. End East Appr. Pav't.	104025.250	-12.000	756.23	756.25

℄ ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End East Appr. Pav't.	103995.250	0.00	756.40	756.42
A3	104005.250	0.00	756.40	756.42
A4	104015.250	0.00	756.40	756.43
E. End East Appr. Pav't.	104025.250	0.00	756.41	756.43



PLAN
East Approach (W.B.)

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End East Appr. Pav't.	103995.250	12.00	756.21	756.23
A3	104005.250	12.00	756.21	756.23
A4	104015.250	12.00	756.22	756.24
E. End East Appr. Pav't.	104025.250	12.00	756.23	756.25

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End East Appr. Pav't.	103995.250	18.000	756.09	756.11
A3	104005.250	18.000	756.09	756.11
A4	104015.250	18.000	756.09	756.11
E. End East Appr. Pav't.	104025.250	18.000	756.10	756.12

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2, 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

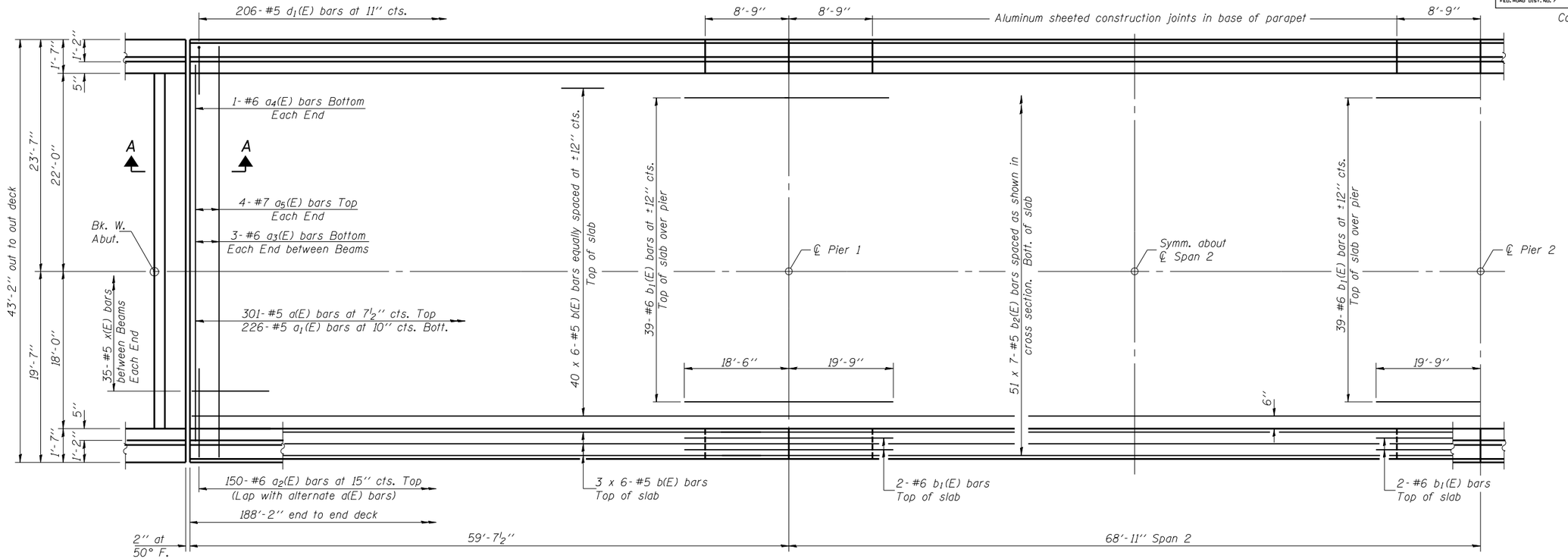
TOP OF EAST APPROACH
SLAB ELEVATIONS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	19
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8
23 SHEETS

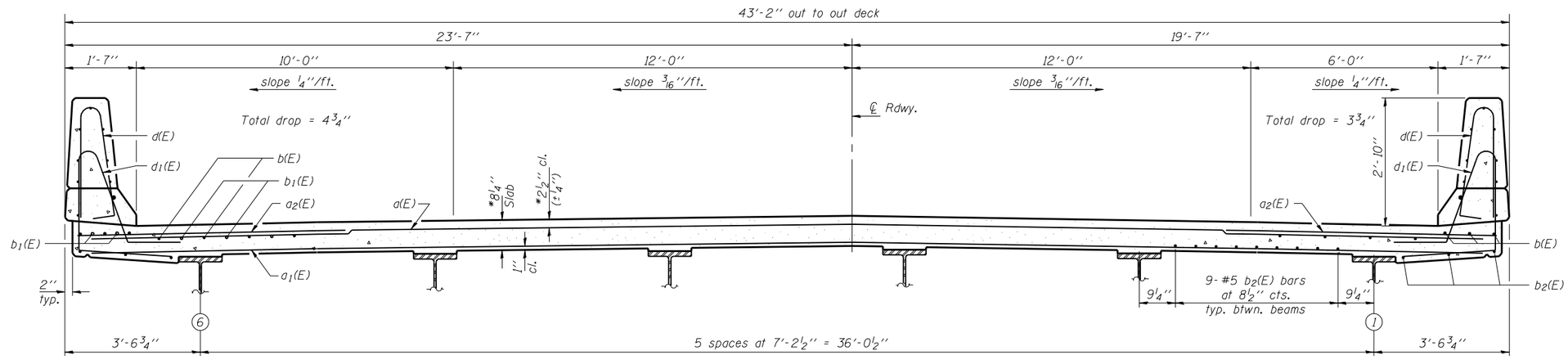
Contract No. 70671



PARTIAL PLAN

MIN. BAR LAP
#5 bar = 1'-8''

Notes:
. See sheet 9 of 23 for superstructure details and Bill of Material.
. Bars indicated thus 40 x 6- #5 etc. indicates 40 lines of bars with 6 lengths per line.
. See sheet 9 of 23 for parapet reinforcement.



NEAR MIDSPAN NEAR PIER

CROSS SECTION
(Looking East)

*Prior to Grinding

DESIGNED	Dewey H. Coultas
CHECKED	Chi-Cheung Chau
DRAWN	h.t. duong
CHECKED	DHC/CCC

AUGUST 2, 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

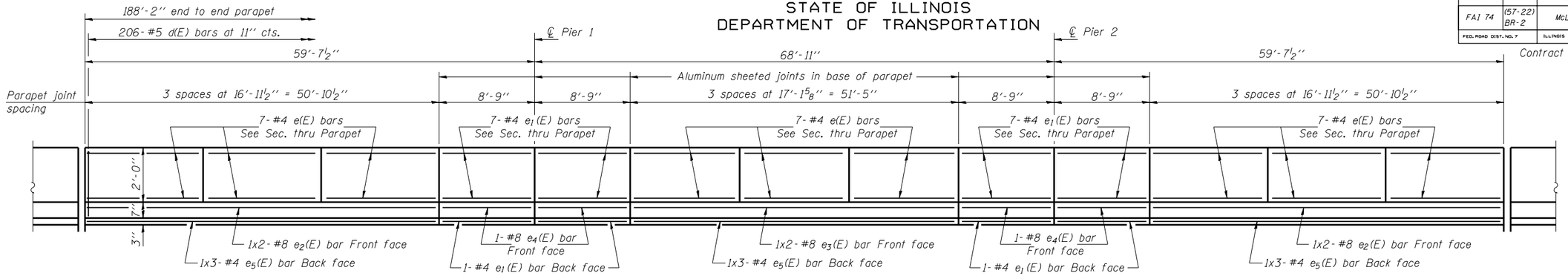
SUPERSTRUCTURE
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

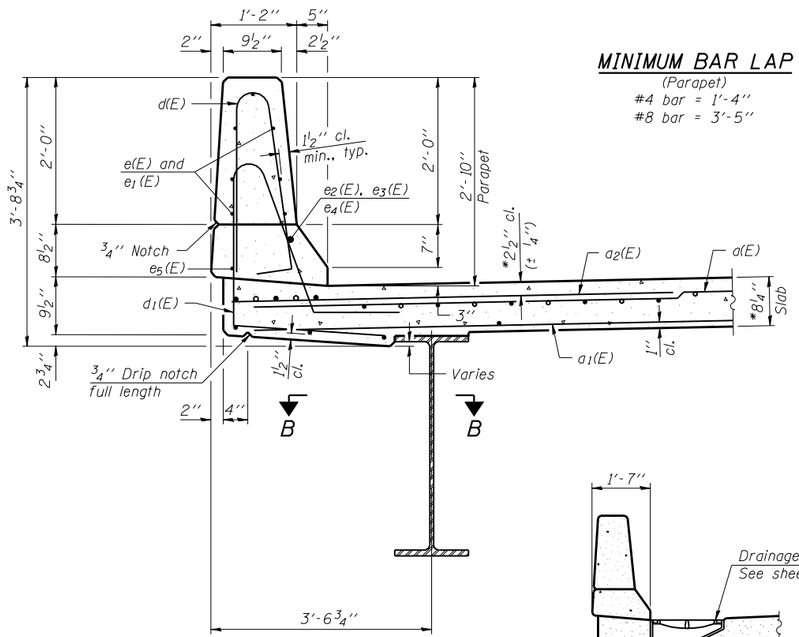
SHEET NO. 9
23 SHEETS

Contract No. 70671

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INSIDE ELEVATION OF PARAPET

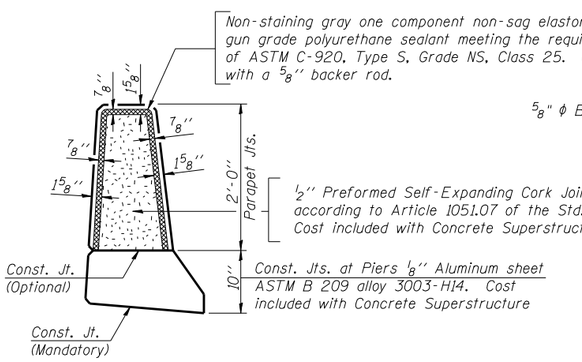


SECTION THRU PARAPET

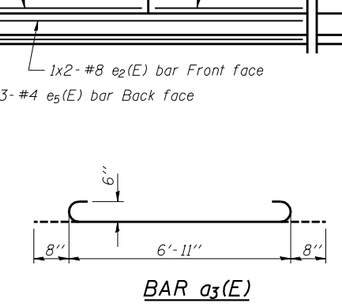
*Prior to Grinding

MINIMUM BAR LAP

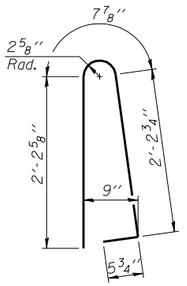
(Parapet)
#4 bar = 1'-4"
#8 bar = 3'-5"



PARAPET JOINT DETAILS



BAR a3(E)



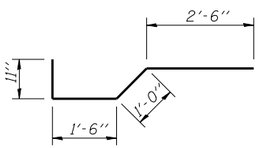
BAR d(E)

SUPERSTRUCTURE BILL OF MATERIAL

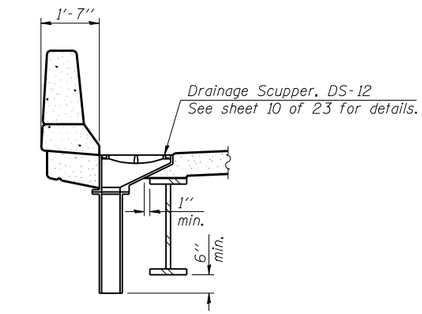
Bar	No.	Size	Length	Shape
a(E)	301	#5	42'-7"	
a1(E)	226	#5	41'-2"	
a2(E)	300	#6	6'-0"	
a3(E)	30	#6	8'-3"	
a4(E)	2	#6	35'-8"	
a5(E)	8	#7	42'-6"	
a6(E)	16	#5	2'-0"	
b(E)	276	#5	32'-9"	
b1(E)	86	#6	38'-3"	
b2(E)	357	#5	28'-4"	
d(E)	412	#5	5'-7"	
d1(E)	412	#5	8'-3"	
e(E)	126	#4	16'-8"	
e1(E)	64	#4	8'-5"	
e2(E)	8	#8	27'-0"	
e3(E)	4	#8	27'-3"	
e4(E)	8	#8	8'-5"	
e5(E)	18	#4	18'-2"	
x(E)	70	#5	5'-11"	
Reinforcement Bars, Epoxy Coated		Pound	61,310	
Concrete Superstructure		Cu. Yds.	260.0	

Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

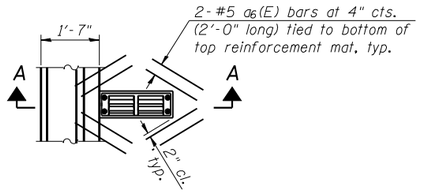
BAR d1(E)



BAR x(E)

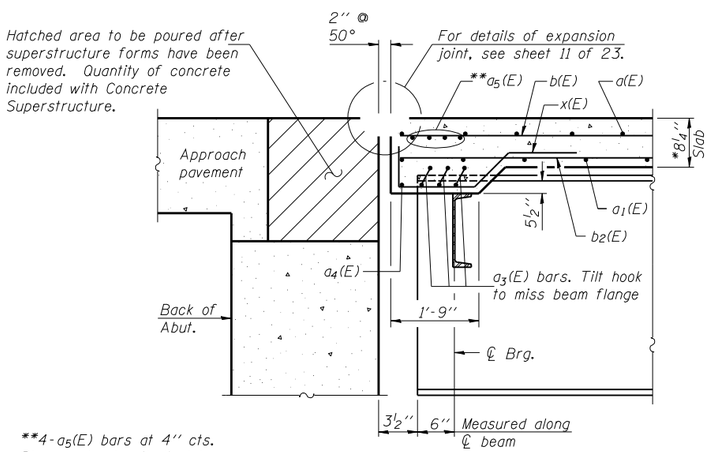


SECTION A-A



PLAN

Note:
Cut longitudinal reinforcement to clear drainage scuppers.



**4-a5(E) bars at 4" cts. Place under longitudinal bars.

SECTION A-A

SUPERSTRUCTURE DETAILS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

DESIGNED	Dewey H. Coultas
CHECKED	Chi-Cheung Chau
DRAWN	h.t. duong
CHECKED	DHC/CCC

AUGUST 2, 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

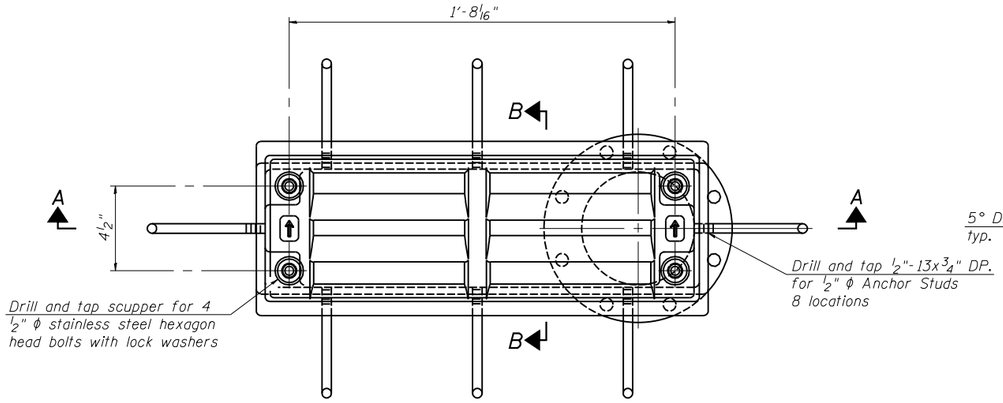
S-D 11-1-06

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

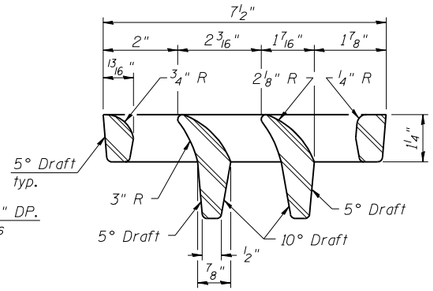
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
23 SHEETS

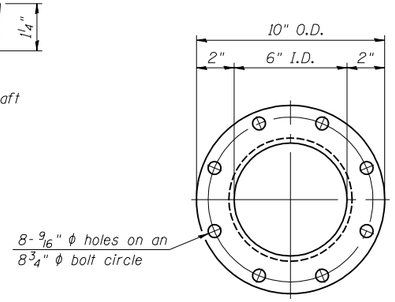
Contract No. 70671



PLAN



VANE GRATE DETAIL



Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

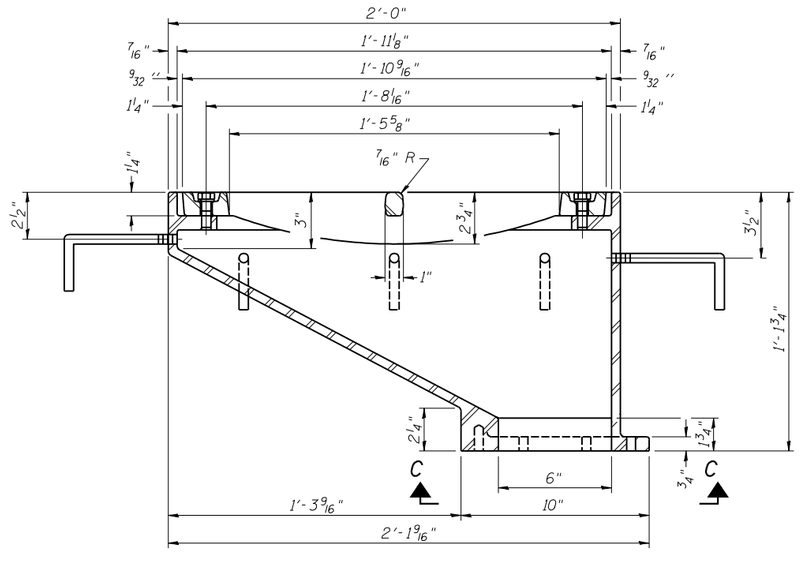
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

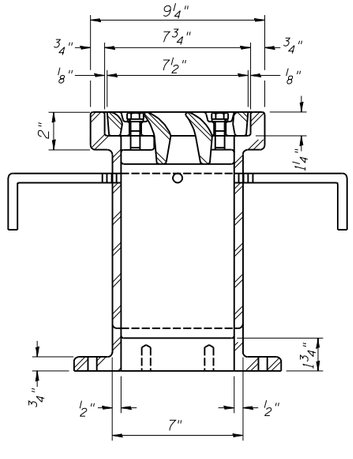
Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-12.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

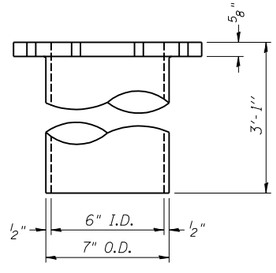


SECTION A-A

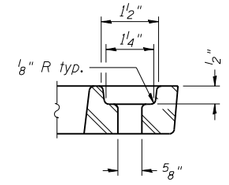
See sheet 9 of 23 for scupper location relative to parapet.



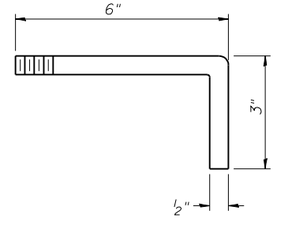
SECTION B-B



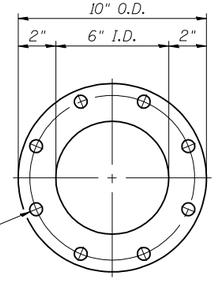
DOWNSPOUT



BOLT HOLE DETAIL



ANCHOR STUD DETAIL



VIEW C-C

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	2

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2. 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

DRAINAGE SCUPPER, DS-12
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

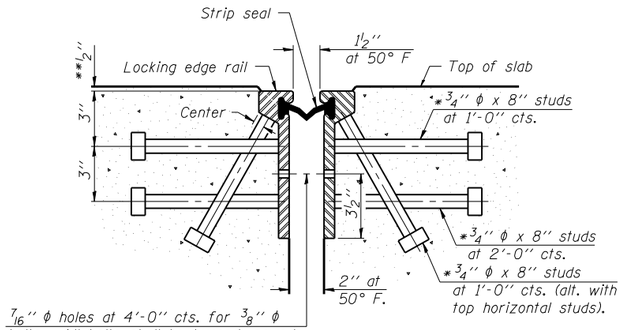
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.
** Prior to grinding

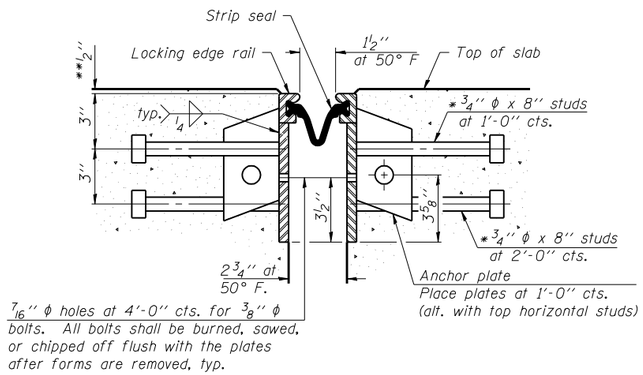
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 11
23 SHEETS

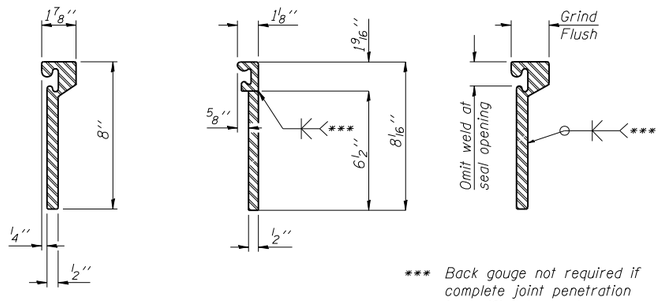
Contract No. 70671





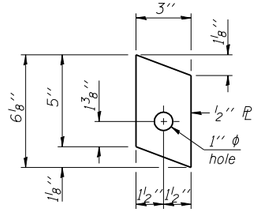
Notes:
The strip seal shall be made continuous and shall have a minimum thickness of ¼". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
The manufacturer's recommended installation methods shall be followed.
The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

SECTION THRU ROLLED RAIL JOINT

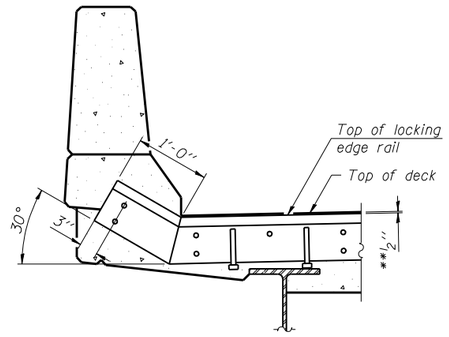


*** Back gouge not required if complete joint penetration is verified by mock-up.

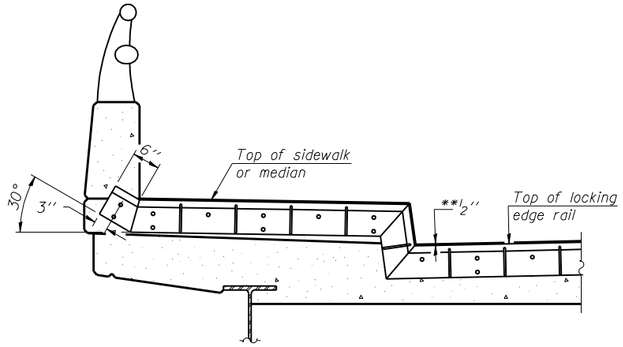
SECTION THRU WELDED RAIL JOINT



ANCHOR PL
(for welded rail)



AT PARAPET



AT SIDEWALK OR MEDIAN
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

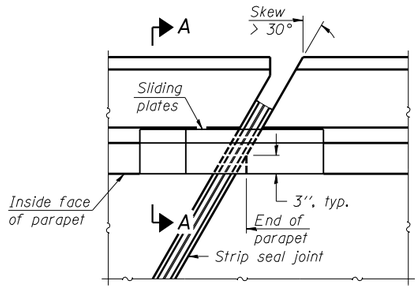
ROLLED (EXTRUDED) RAIL

WELDED RAIL

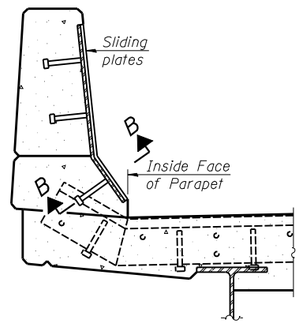
LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

LOCKING EDGE RAILS

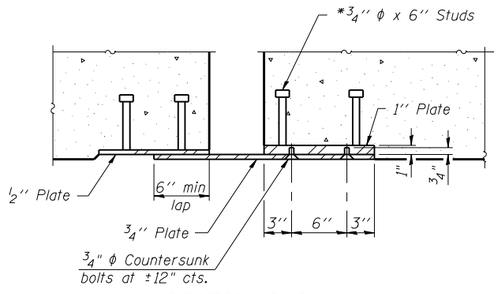


PLAN



SECTION A-A

TYPICAL END TREATMENTS



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	84

POINT BLOCK DETAILS
(for skews > 30°)

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2, 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

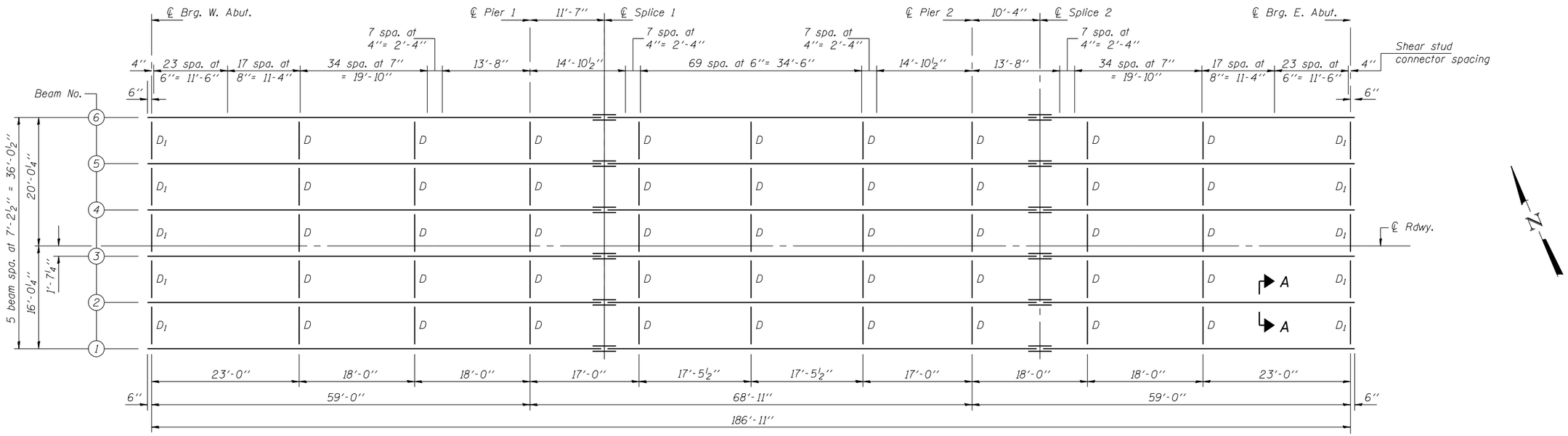
MODIFIED PREFORMED JOINT STRIP SEAL
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 12
23 SHEETS

Contract No. 70671



PLAN

All beams shall be W36x170 AASHTO M 270, Grade 50 (NTR)

Notes:
. Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
. All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
. For Section A-A, see sheet 13 of 23.
. Structural steel, bearings, and steel extensions are to be furnished under a separate contract and erected under this contract.
. Shear connectors are to be furnished and installed under this contract.
.
.

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2, 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

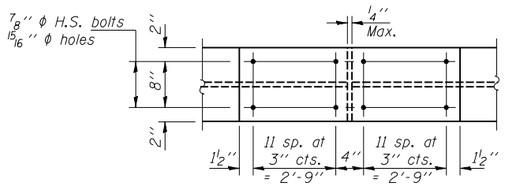
STRUCTURAL STEEL
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

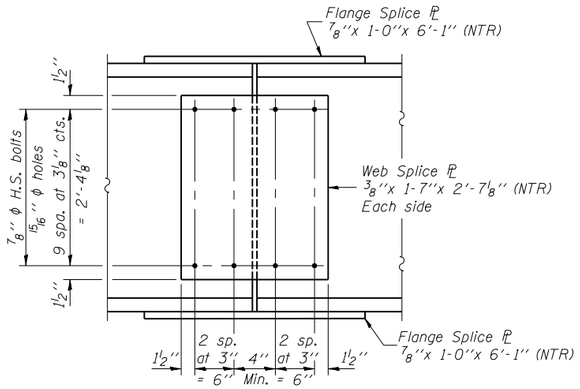
SHEET NO. 13
23 SHEETS

Contract No. 70671



PLAN - SPLICES 1 & 2

(Top & Bottom flanges)



ELEVATION - SPLICES 1 & 2

(12 Required)

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 & 0.6 Sp. 3	Piers 1 & 2	0.5 Sp. 2
I_s	(in^4)	10500	10500	10500
$I_c(n)$	(in^4)	26418	10500	26418
$I_c(3n)$	(in^4)	19322	10500	19322
S_s	(in^3)	581	581	581
$S_c(n)$	(in^3)	831	581	831
$S_c(3n)$	(in^3)	750	581	750
$M_{\mathcal{D}}$	('k)	237.8	558.1	174.8
$s_{\mathcal{D}}$	(k/')	0.510	———	0.510
$M_{s\mathcal{D}}$	('k)	141.0	———	122.8
M_L	('k)	439.7	251.6	448.4
M_{Imp}	('k)	119.5	66.6	115.6
$\frac{5}{3}[M_L + Imp]$	('k)	932.0	530.3	940.0
M_a	('k)	1704	1415	1609
M_u	('k)	3921	———	4061
f_s $\mathcal{D}$ non-comp	(ksi)	4.9	11.5	3.6
f_s $\mathcal{D}$ (comp)	(ksi)	2.3	———	2.0
f_s $\frac{5}{3}[M_L + M_{Imp}]$	(ksi)	13.5	———	13.6
f_s (Overload)	(ksi)	20.6	22.5	19.1
f_s (Total)	(ksi)	———	29.2	———
VR	(k)	54.8	———	57.0

INTERIOR BEAM REACTION TABLE			
		Abutments	Piers
$R_{\mathcal{D}}$	(k)	33.0	101.6
R_L	(k)	38.6	47.6
Imp.	(k)	10.5	9.4
R_{Total}	(k)	82.1	158.6

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

$\mathcal{D}$: Un-factored non-composite dead load (kips/ft.).

$M_{\mathcal{D}}$: Un-factored moment due to non-composite dead load (kip-ft.).

$s_{\mathcal{D}}$: Un-factored long-term composite (superimposed) dead load (kips/ft.)

$M_{s\mathcal{D}}$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_L: Un-factored live load moment (kip-ft.).

M_{Imp}: Un-factored moment due to impact (kip-ft.).

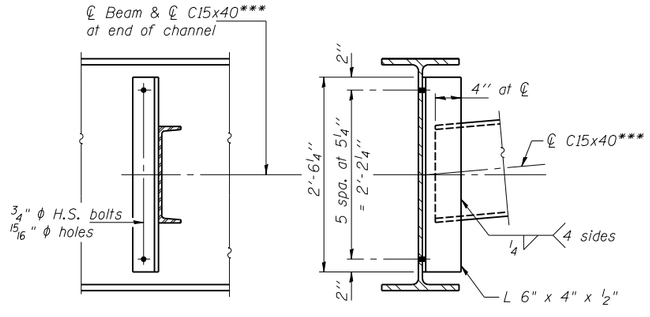
M_a: Factored design moment (kip-ft.). $1.3\ [M_{\mathcal{D}} + M_{s\mathcal{D}} + \frac{5}{3}(M_L + M_{Imp})]$

M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi). $M_{\mathcal{D}} + M_{s\mathcal{D}} + \frac{5}{3}(M_L + M_{Imp})$

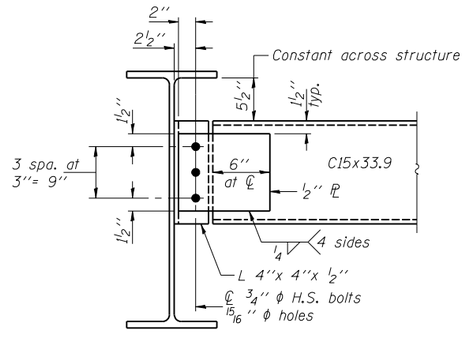
f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi). $1.3\ [M_{\mathcal{D}} + M_{s\mathcal{D}} + \frac{5}{3}(M_L + M_{Imp})]$

VR: Maximum L + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).



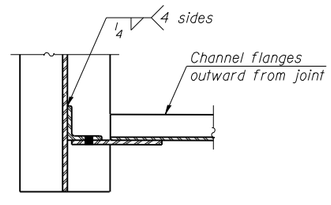
DIAPHRAGM D

(45 Required)

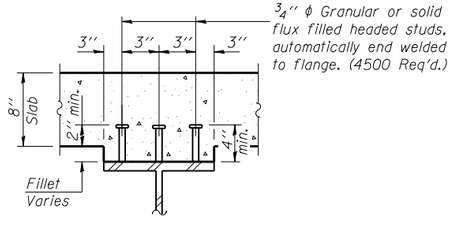


DIAPHRAGM D_1

(10 Required)



SECTION B-B



SECTION A-A

***Alternate channel C15x40 may be used to facilitate material aquisition. The calculated weight of structural steel is based on the lighter section, C15x40. The alternate, if utilized, will be provided at no extra cost to the department.

**TOP OF BEAM ELEVATIONS (W.B.)

Location	℄ Brg. W. Abut.	℄ Brg. Pier 1	℄ Splice 1	℄ Brg. Pier 2	℄ Splice 2	℄ Brg. E. Abut.
Beam 1	756.10	755.70	755.62	755.44	755.41	755.41
Beam 2	756.22	755.83	755.75	755.56	755.53	755.55
Beam 3	756.34	755.95	755.87	755.68	755.64	755.66
Beam 4	756.27	755.88	755.80	755.62	755.58	755.60
Beam 5	756.16	755.77	755.69	755.50	755.47	755.48
Beam 6	756.01	755.62	755.54	755.36	755.32	755.33

**For fabrication use only.

BEARING SEAT ELEVATIONS

For information only.

Location	W. Abut.*	Pier 1*	Pier 2	E. Abut.*
Beam 1	751.79	751.38	751.99	751.06
Beam 2	751.94	751.50	752.12	751.22
Beam 3	752.07	751.64	752.24	751.34
Beam 4	751.99	751.56	752.17	751.29
Beam 5	751.86	751.43	752.06	751.14
Beam 6	751.70	751.31	751.91	750.98

*Existing

Notes:
. Two hardened washers required for each set of oversized holes.
. All splice plates shall be AASHTO M 270, Grade 50.

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2. 2007

EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

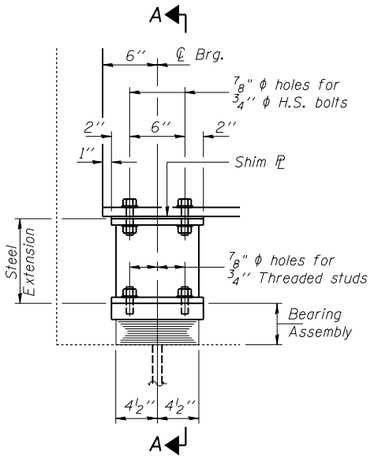
STRUCTURAL STEEL DETAILS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

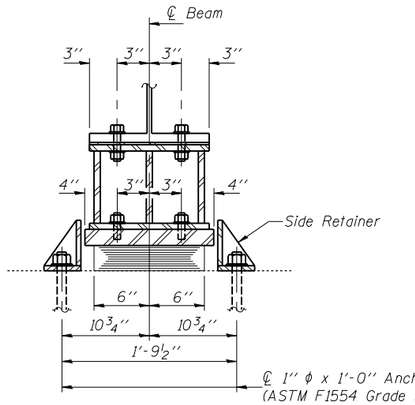
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	25
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 14
23 SHEETS

Contract No. 70671

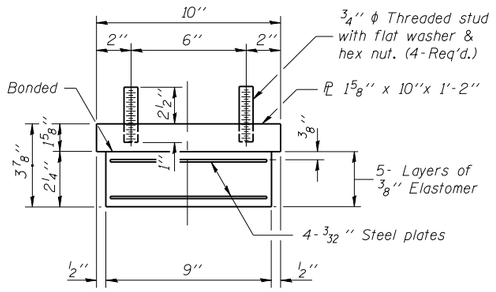


ELEVATION AT WEST ABUT.



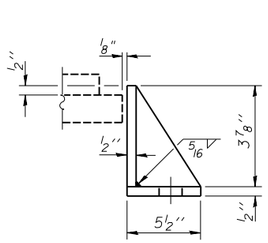
SECTION A-A

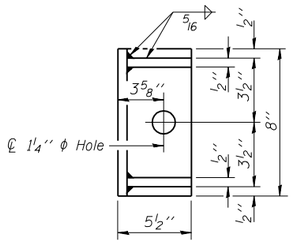
TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



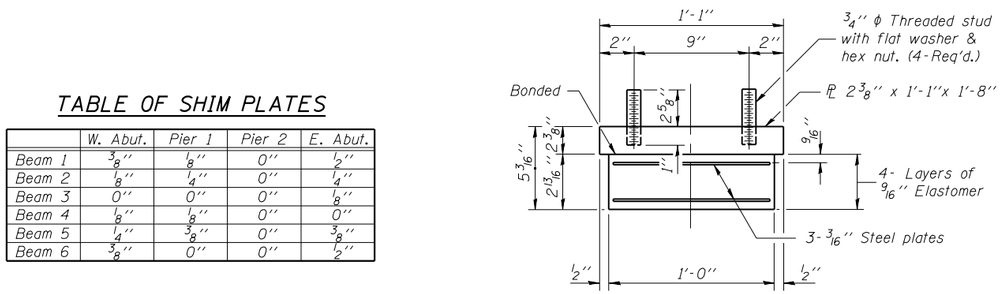


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

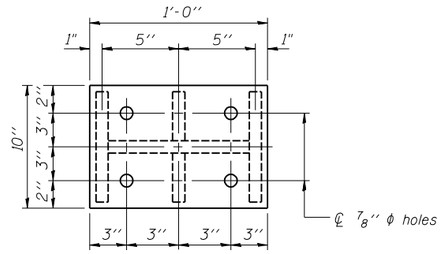
TABLE OF SHIM PLATES

	W. Abut.	Pier 1	Pier 2	E. Abut.
Beam 1	3/8"	1/8"	0"	1/2"
Beam 2	1/8"	1/4"	0"	1/4"
Beam 3	0"	0"	0"	1/8"
Beam 4	1/8"	1/8"	0"	0"
Beam 5	1/4"	3/8"	0"	3/8"
Beam 6	3/8"	0"	0"	1/2"

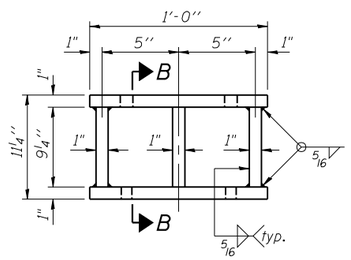


BEARING ASSEMBLY

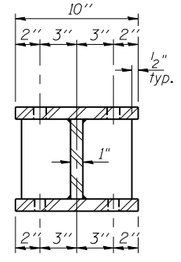
Note: Shim plates shall not be placed under Bearing Assembly.



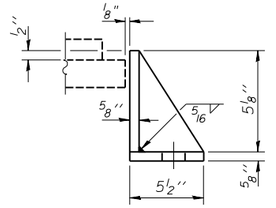
PLAN TOP AND BOTTOM PLATE

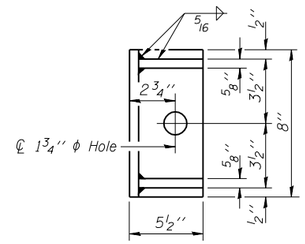


STEEL EXTENSION DETAIL



SECTION B-B





SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Installation of side retainers shall be included in the cost of Erecting Elastomeric Bearing Assembly, Type I.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

Anchor bolts and plate washers will be furnished and installed under this contract.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

Two 1/8 in. adjusting shims shall be provided by others for each bearing in addition to all other plates or shims and placed as shown on bearing details.

BILL OF MATERIAL

Item	Unit	Total
Erecting Elastomeric Bearing Assembly Type I	Each	12
Anchor Bolt 1" ϕ	Each	12
Anchor Bolt 1 1/2" ϕ	Each	12

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2. 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

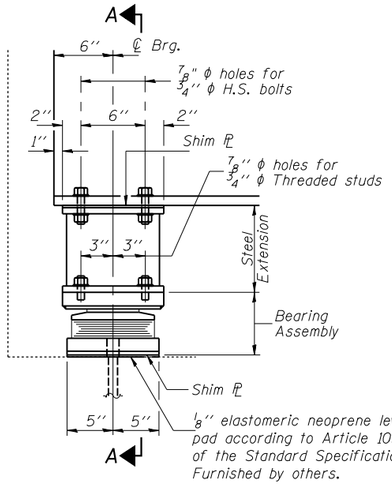
BEARING DETAILS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

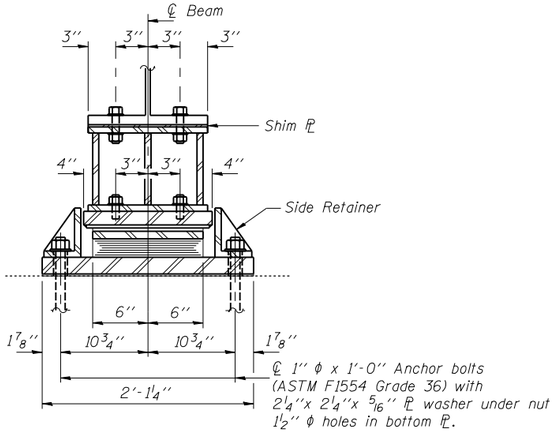
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
23 SHEETS

Contract No. 70671

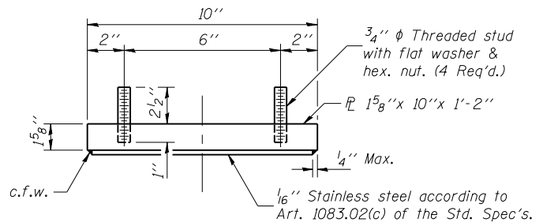


ELEVATION AT EAST ABUT.

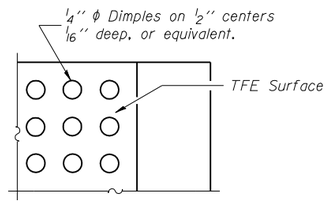


SECTION A-A

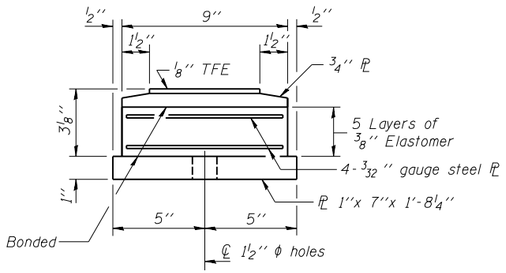
TYPE II TFE ELASTOMERIC EXP. BRG.



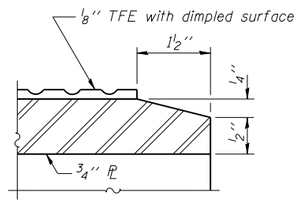
TOP BEARING ASSEMBLY



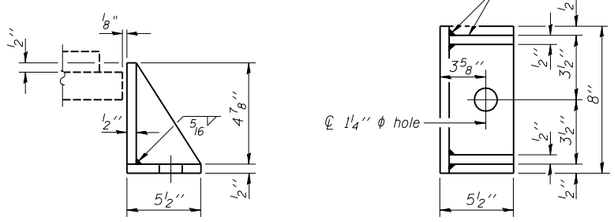
PLAN-TFE SURFACE



BOTTOM BEARING ASSEMBLY



SECTION THRU TFE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Installation of side retainers shall be included in the cost of Erecting Elastomeric Bearing Assembly, Type II.

The ⅛" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

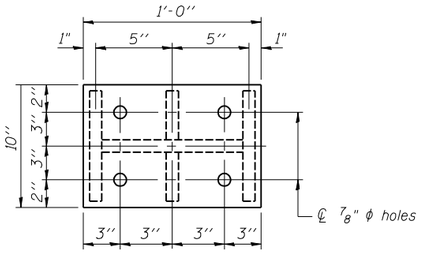
Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

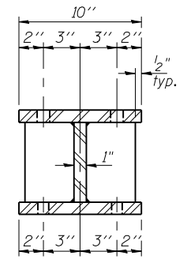
Anchor bolts and plate washers will be furnished and installed under this contract.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

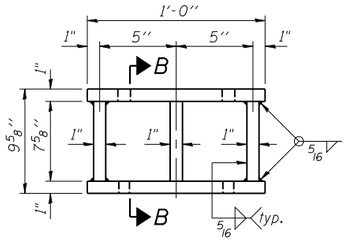
Two ⅛ in. adjusting shims shall be provided by others for each bearing in addition to all other plates or shims and placed as shown on bearing details.



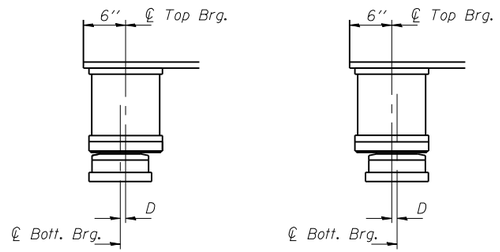
PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL



SETTING ANCHOR BOLTS AT EXP. BRG.

D = ⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Total
Erecting Elastomeric Bearing Assembly Type II	Each	6
Anchor Bolt 1" ϕ	Each	12

BEARING DETAILS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

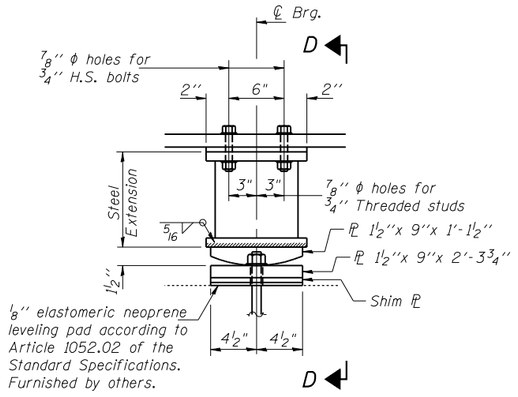
Aug. 2. 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

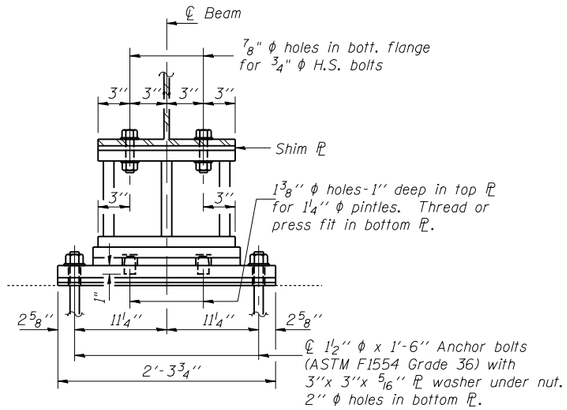
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	27
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 16
23 SHEETS

Contract No. 70671

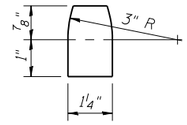


ELEVATION AT PIER 1

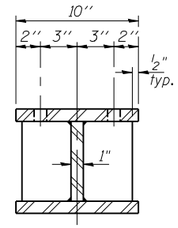


SECTION D-D

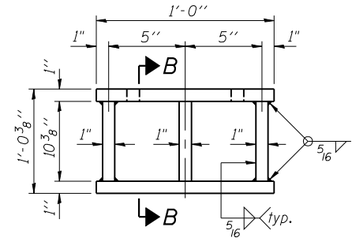
FIXED BEARINGS



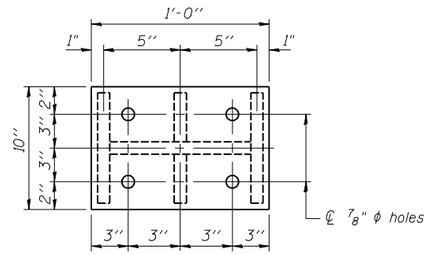
PINTLE



SECTION B-B

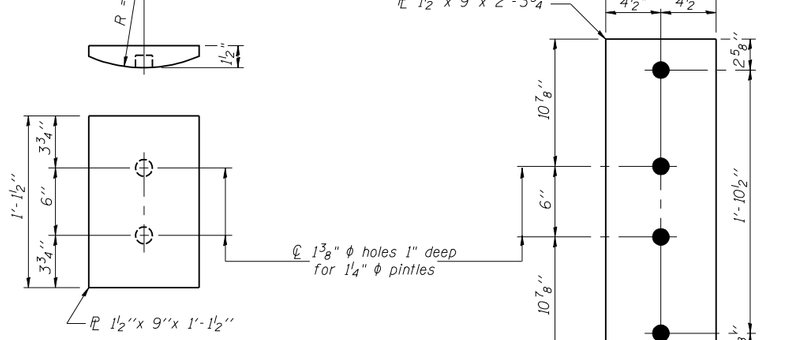


STEEL EXTENSION DETAIL



PLAN TOP AND BOTTOM PLATE

Note: . Omit bolt holes in bottom plates.
.



PLAN - TOP PLATE

PLAN - BOTTOM PLATE

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Anchor bolts and plate washers will be furnished and installed under this contract.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

Two 1/8 in. adjusting shims shall be provided by others for each bearing in addition to all other plates or shims and placed as shown on bearing details.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolt 1 1/2" ϕ	Each	12

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2. 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

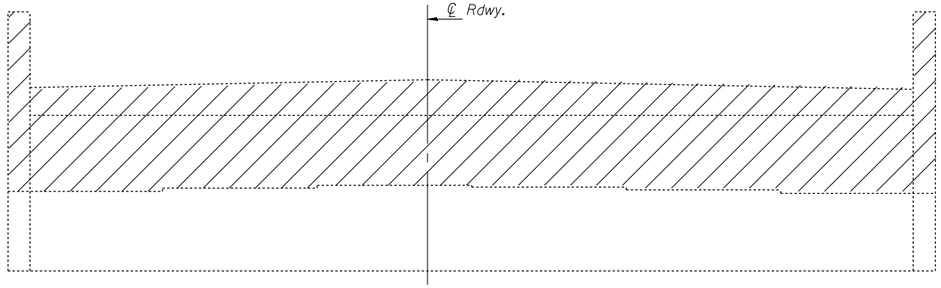
BEARING DETAILS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

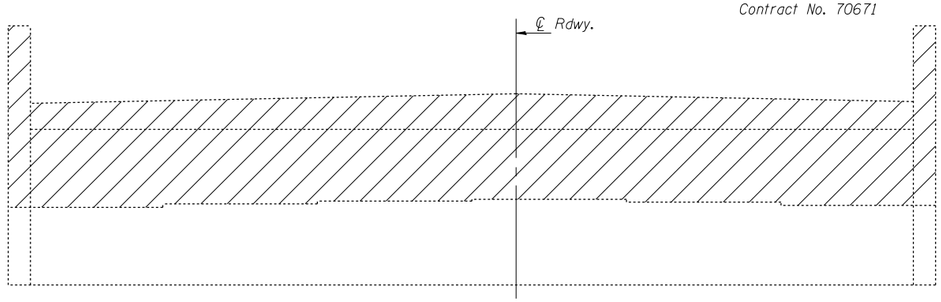
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	28
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 17
23 SHEETS

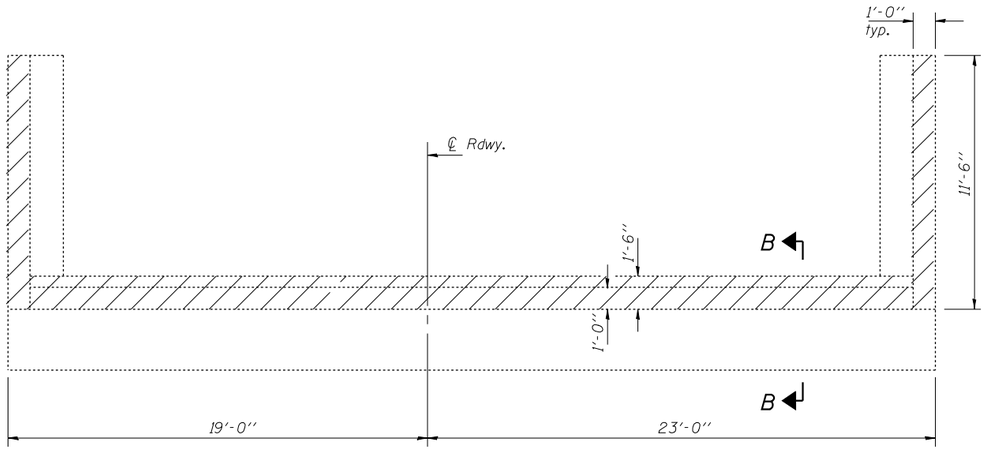
Contract No. 70671



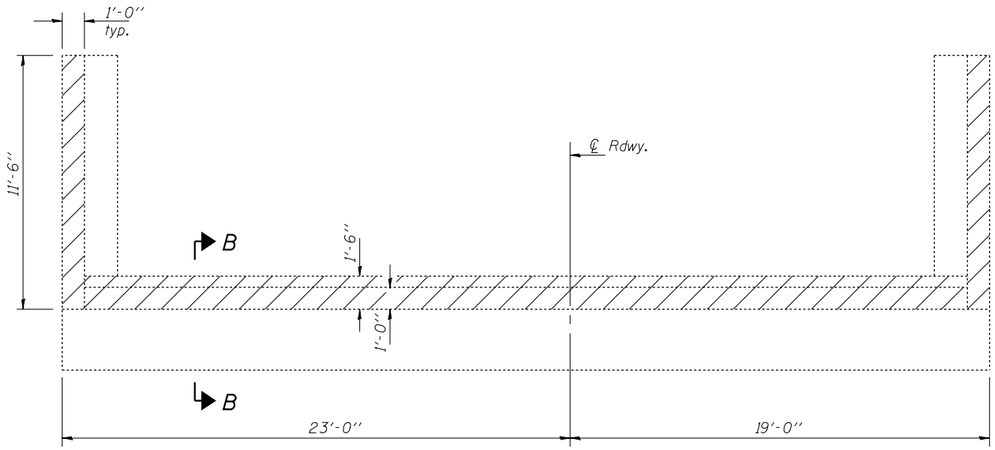
ELEVATION - WEST ABUT. (W.B.)



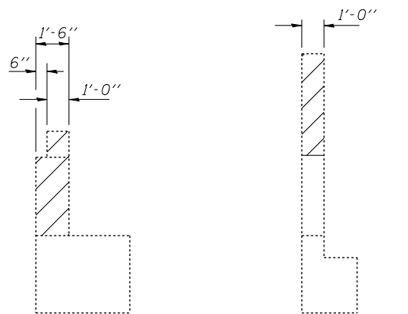
ELEVATION - EAST ABUT. (W.B.)



PLAN - WEST ABUT. (W.B.)

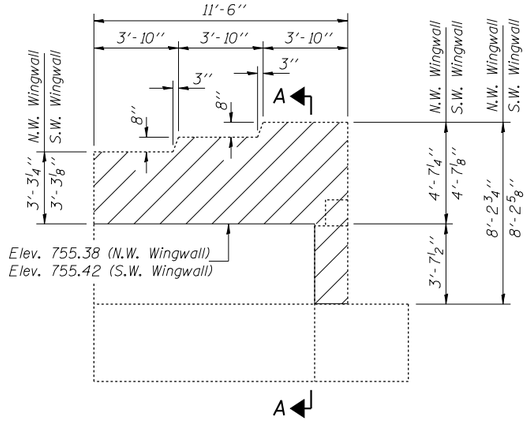


PLAN - EAST ABUT. (W.B.)

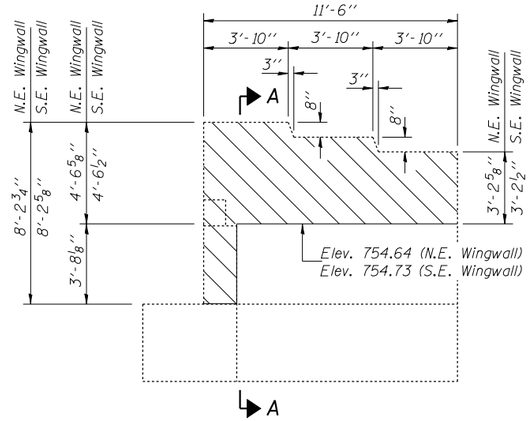


SECTION B-B

SECTION A-A



WINGWALL ELEVATION



WINGWALL ELEVATION

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

EXAMINED Aug. 2, 2007
Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

Notes: . Hatched area indicates Concrete Removal.
. Existing reinforcement bars extending into areas of new construction shall be cleaned, straightened and incorparated into the new construction.
. The existing anchor bolts shall be cut off, ground flush and sealed with epoxy. Cost included with Concrete Removal.

TWO ABUTMENTS
BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	24.3

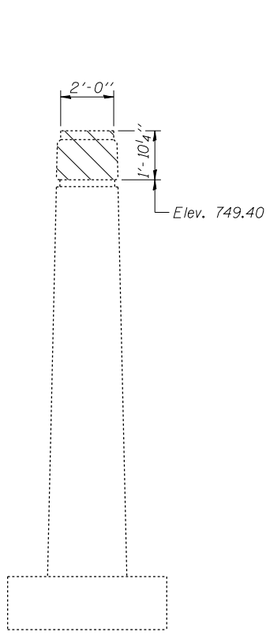
CONCRETE REMOVAL
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

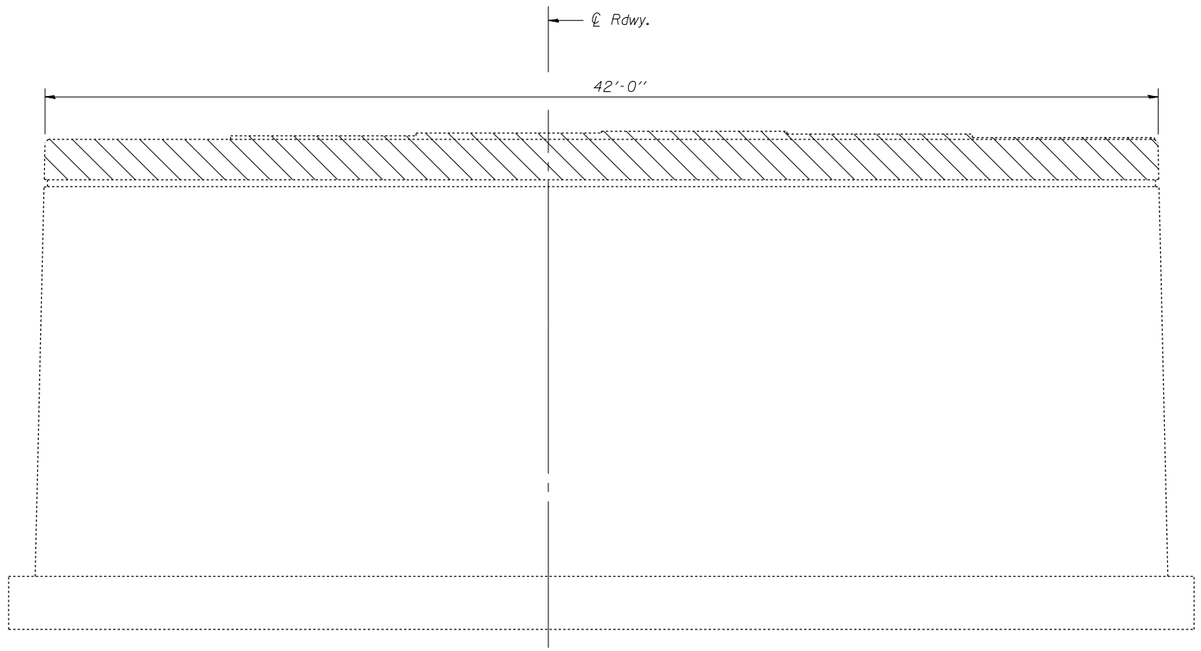
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	29
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 18
23 SHEETS

Contract No. 70671



END VIEW



ELEVATION - PIER 2
(Looking East)

Notes:
. Hatched area indicates Concrete Removal.
. Existing reinforcement bars extending into areas of new construction shall be cleaned, straightened and incorporated into the new construction.
. The existing anchor bolts at Pier 1 shall be cut off, ground flush and sealed with epoxy. Cost included with Concrete Removal.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	5.8

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2. 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

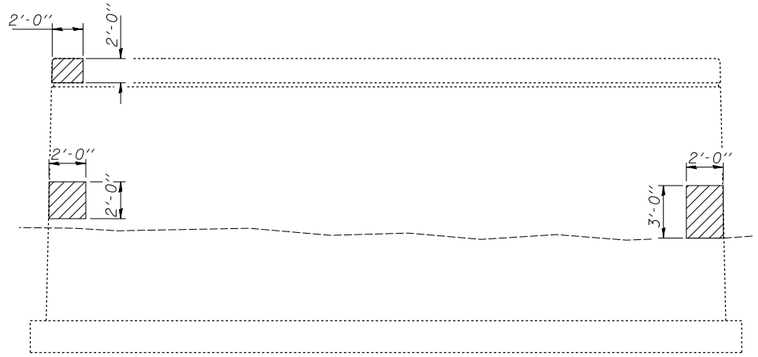
CONCRETE REMOVAL
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

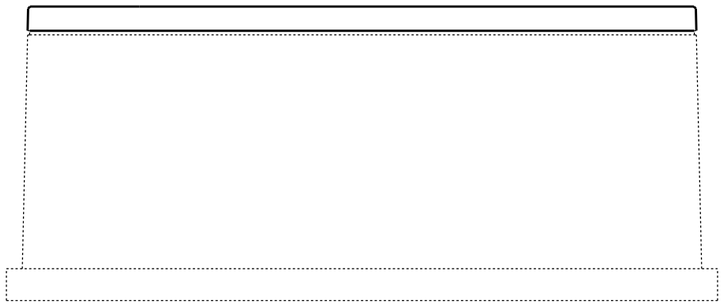
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	30
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 19
23 SHEETS

Contract No. 70671



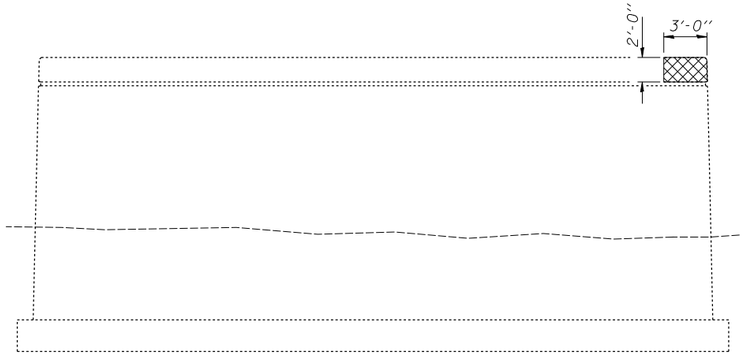
ELEVATION - PIER 1
(East face)



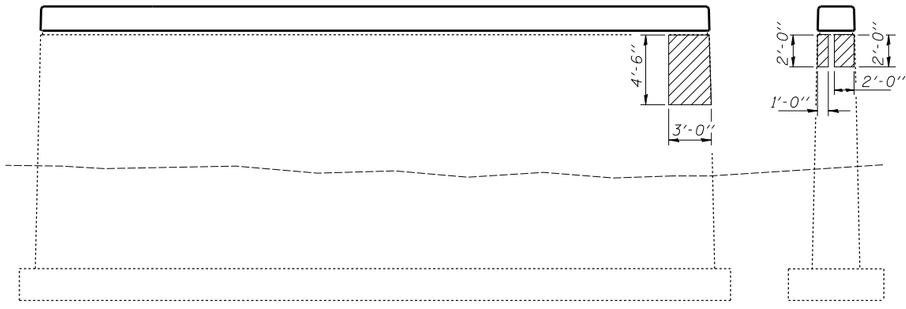
ELEVATION - PIER 2
(East face)

CONCRETE REPAIR LEGEND

- Delamination
- Spall
- Slopewall Removal & Replacement



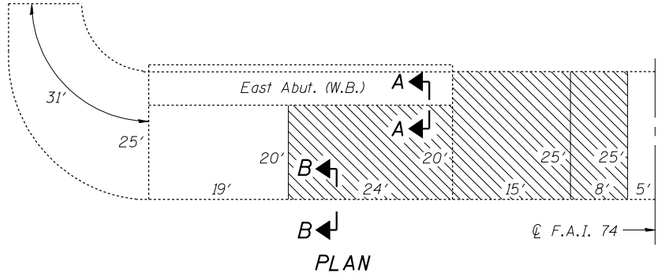
ELEVATION - PIER 1
(West face)



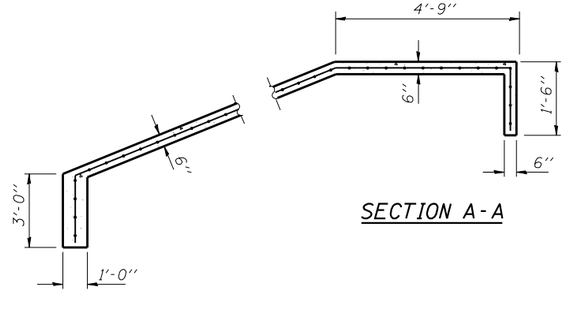
ELEVATION - PIER 2
(West face)

END VIEW
(South end)

Notes: . Slopewall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.



PLAN



SECTION A-A

SECTION B-B

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2. 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	40
Slopewall Removal	Sq. Yd.	120
Slopewall 6"	Sq. Yd.	120

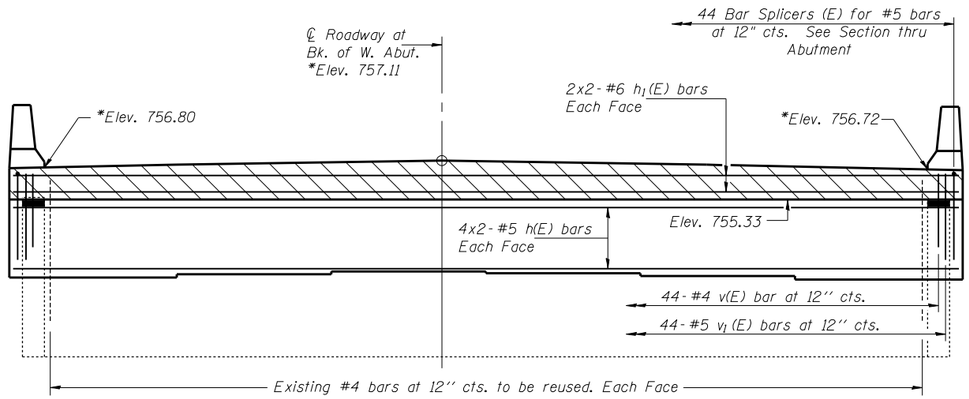
CONCRETE REPAIRS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	31
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 20
23 SHEETS

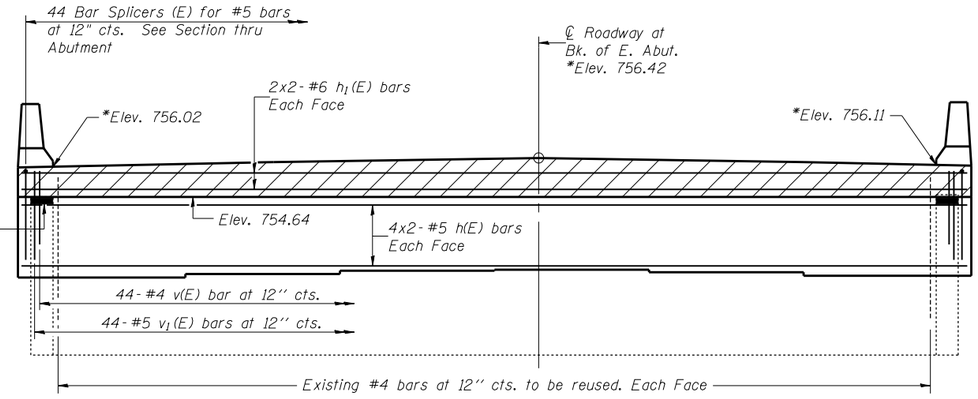
Contract No. 70671



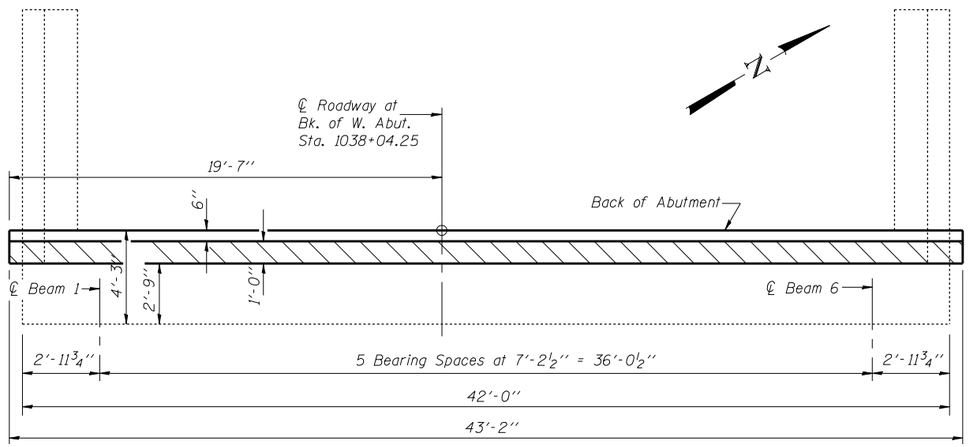
ELEVATION WEST ABUTMENT
(Looking West)

1'' PJF between remaining wingwall and approach pavement, typ.

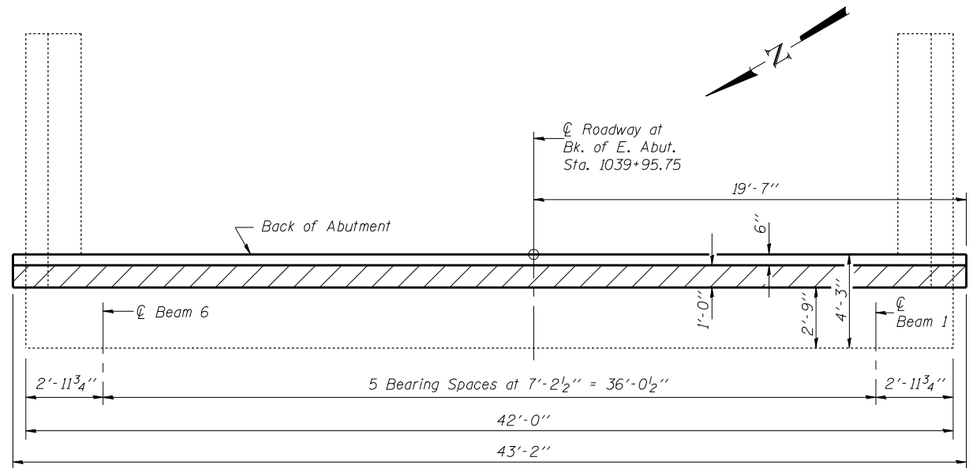
*Prior to Grinding



ELEVATION EAST ABUTMENT
(Looking East)



TOP VIEW WEST ABUTMENT



TOP VIEW EAST ABUTMENT

MIN. BAR LAPS

#5 bars = 2'-2''
#6 bars = 2'-7''

DESIGNED	Dewey H. Coultas
CHECKED	Chi-Cheung Chau
DRAWN	BML h.t. duong
CHECKED	DHC/CCC

JULY 31, 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

Note:
Existing reinforcement bars extending into areas of new construction shall be cleaned, straightened, and incorporated into the new construction.

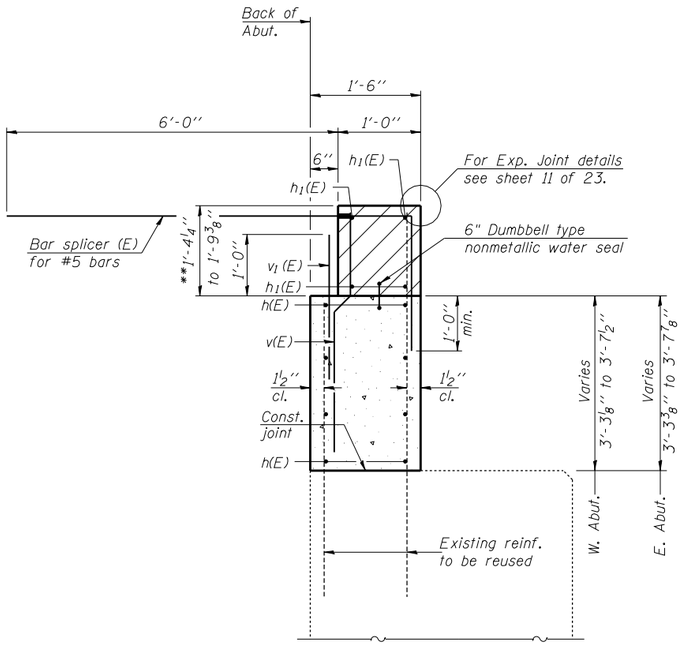
ABUTMENTS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	32
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

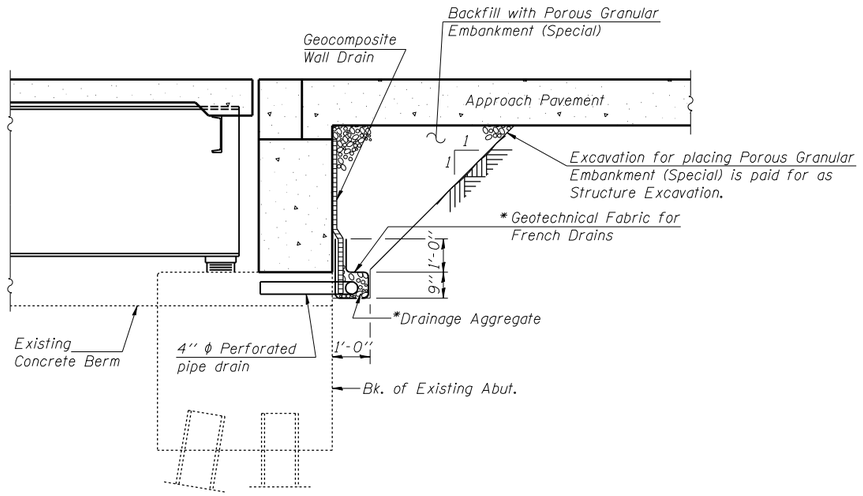
SHEET NO. 21
23 SHEETS

Contract No. 70671



SEC. THRU ABUT.

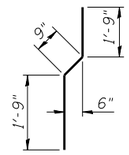
**Prior to Grinding



TYPICAL DRAIN DETAIL AT ABUTMENTS

(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures.



BAR v(E)

Note:
Drainage system components shall extend as shown to discharge onto slopewall. Provide rodent shield in the outlet pipe as shown on Highway Standard 601101.
Core hole through Existing Wingwall for 4" ϕ Underdrain Outlet Pipe, 4 locations. Cost included with Pipe Underdrains for Structures.

TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#5	22'-6"	———
h1(E)	16	#6	22'-9"	———
v(E)	88	#4	4'-3"	⌐
v1(E)	88	#5	3'-6"	———
Structure Excavation			Cu. Yd.	39
Concrete Structures			Cu. Yd.	16.6
Reinforcement Bars, Epoxy Coated			Pound	1870
Concrete Sealer			Sq. Ft.	731
Bar Splicers			Each	88

For details of Bar Splicers, see sheet 23 of 23.

DESIGNED	Dewey H. Coultas
CHECKED	Chi-Cheung Chau
DRAWN	h.t. duong
CHECKED	DHC/CCC

JULY 31, 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

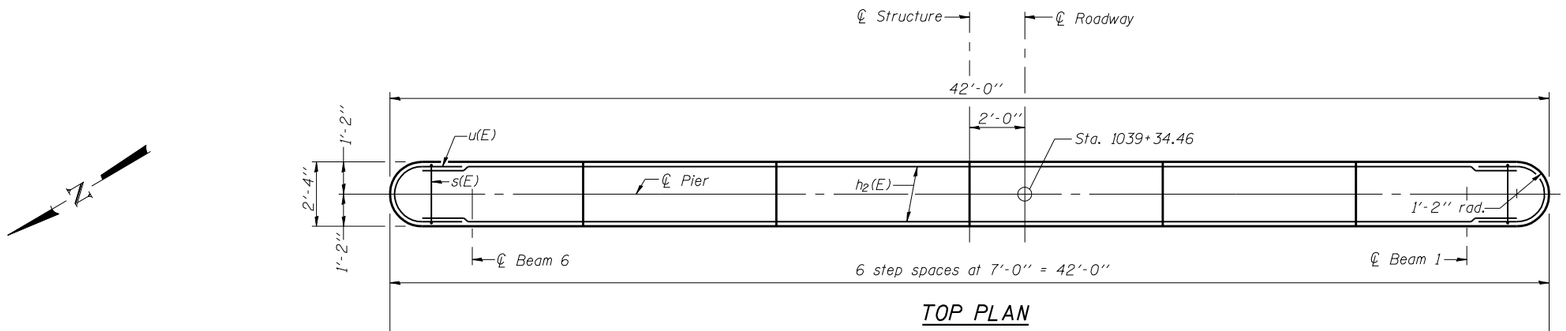
ABUTMENT DETAILS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

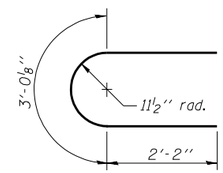
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	33
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 22
23 SHEETS

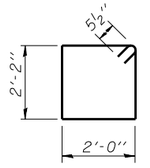
Contract No. 70671



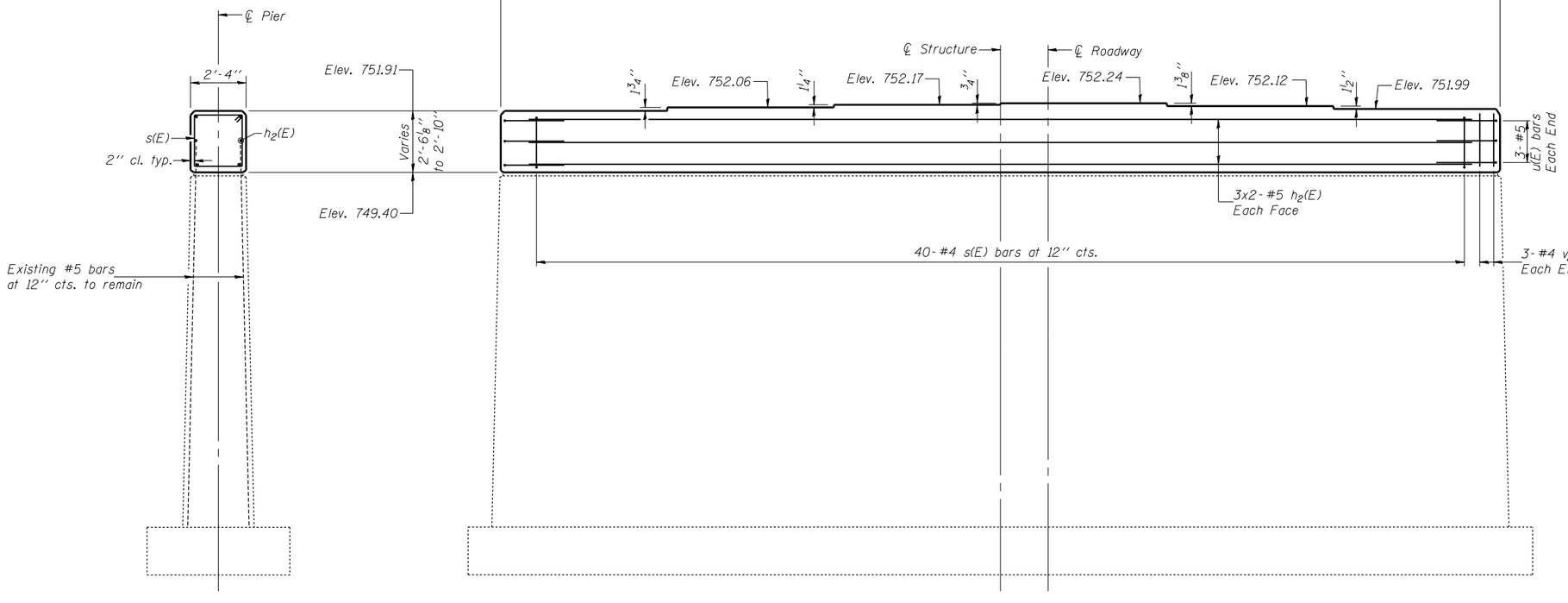
TOP PLAN



BAR u(E)



BAR s(E)



END VIEW

ELEVATION
(Looking East)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_2(E)$	12	#5	20'-11"	——
u(E)	6	#5	7'-4"	⊂
$v_2(E)$	6	#4	2'-2"	——
s(E)	40	#4	9'-3"	□
Concrete Structures			Cu. Yd.	9.5
Reinforcement Bars, Epoxy Coated			Pound	560

MIN. BAR LAP
#5 bars = 2'-2"

DESIGNED	Dewey H. Coultas
CHECKED	Chi-Cheung Chau
DRAWN	h.t. duong
CHECKED	DHC/CCC

JULY 31, 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

Note:
Existing reinforcement bars extending into areas of new construction shall be cleaned, straightened, and incorporated into the new construction.

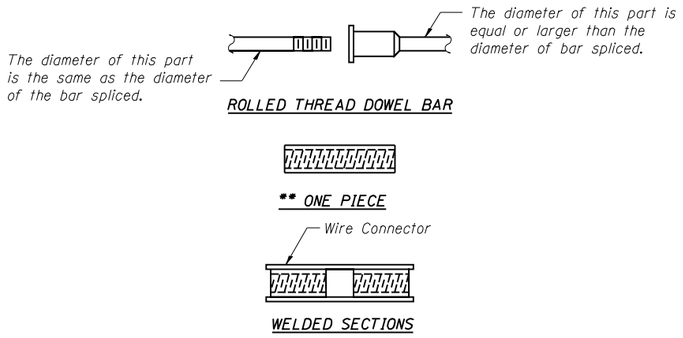
PIER 2
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-2	McLEAN	42	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

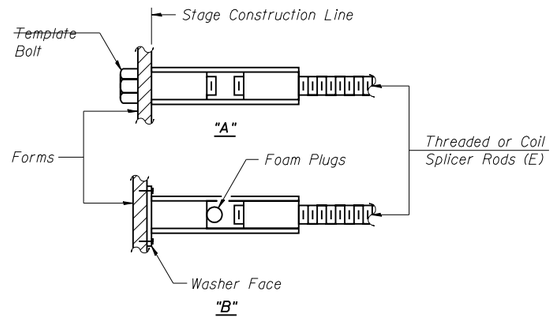
SHEET NO. 23
23 SHEETS

Contract No. 70671



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

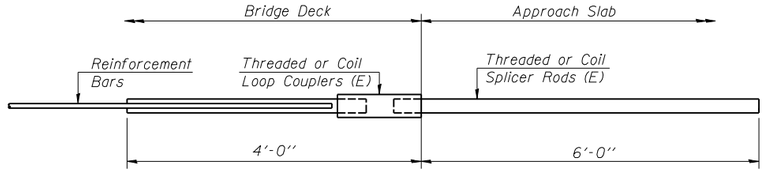
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) = 1.25 x fy x A_t

② Minimum *Pull-out Strength (Tension in kips) = 0.66 x fy x A_t

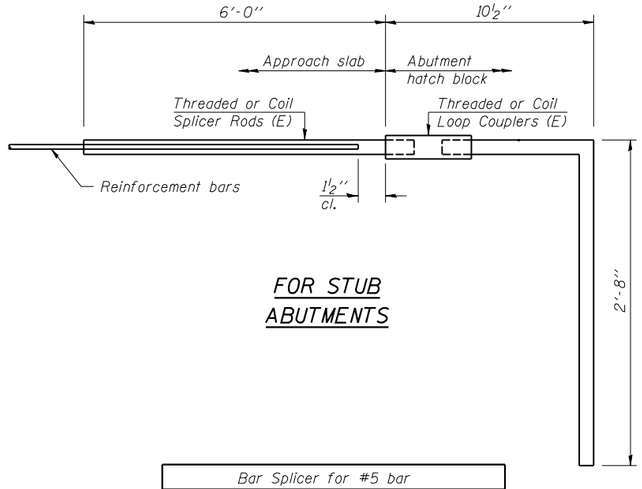
Where fy = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



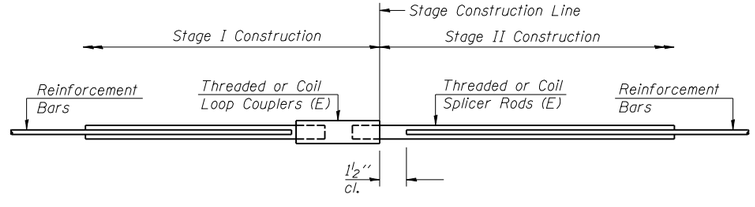
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 88



STANDARD

Bar Size	No. Assemblies Required	Location

DESIGNED	DHC
CHECKED	CCC
DRAWN	h.t. duong
CHECKED	DHC/CCC

Aug. 2. 2007
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

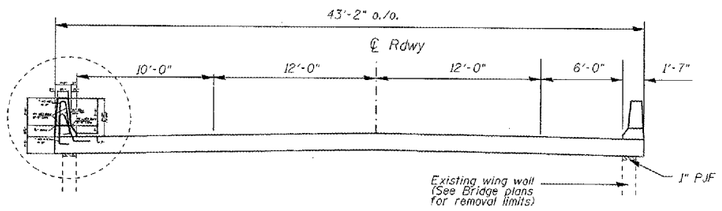
BSD-1 11-1-06

BAR SPLICER ASSEMBLY DETAILS
F.A.I. RT. 74 - SEC. (57-22)BR-2
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0126 (W.B.)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	36
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

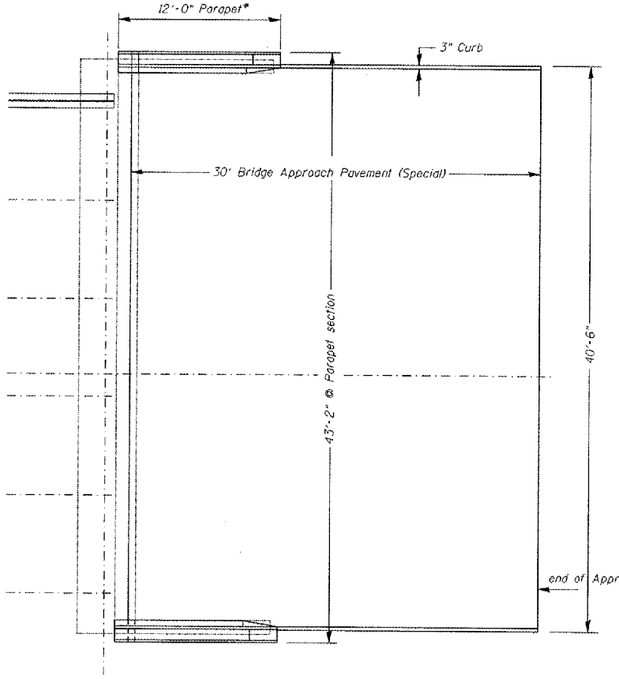
CONTRACT NO. 70671

BRIDGE APPROACH PAVEMENT (SPECIAL)

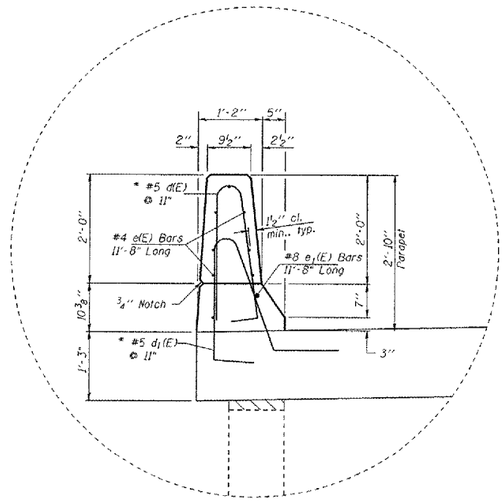


Bridge Approach Pavement near Abutment

Looking Upstation



Bridge Approach Pavement Plan



Parapet Detail

See Bridge Plans for More Information

*Note: Cost of Constructing Parapet inculded in Bridge Approach Pavement (Special) Pay Item

*Note: Please Reference District Special Provision for BRIDGE APPROACH PAVEMENT (SPECIAL)

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH PAVEMENT (SPECIAL)

KICKAPOO CREEK

STR# 057-0126 (WB I-74)

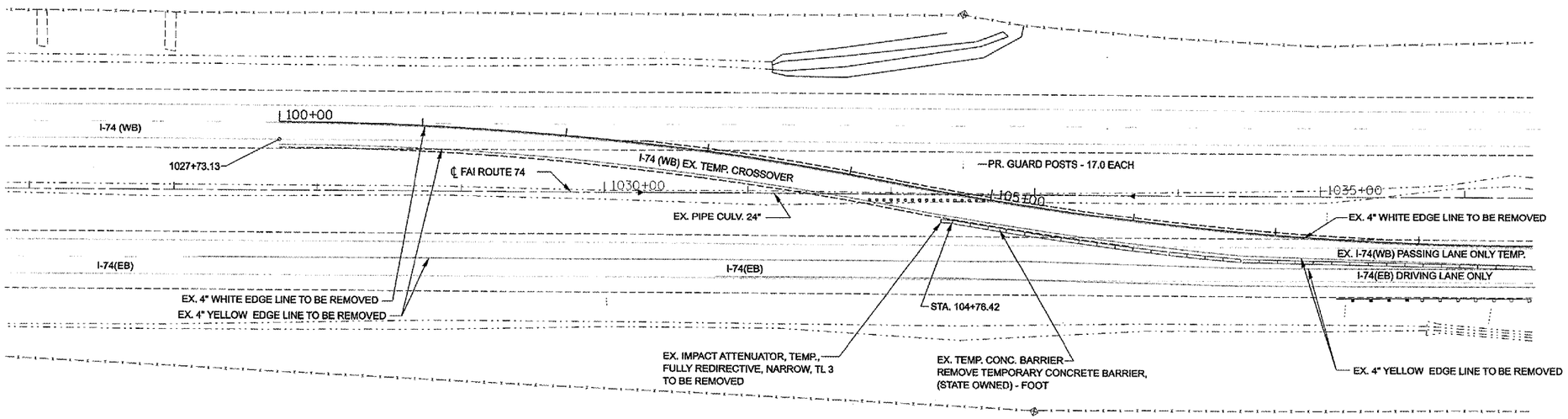
SCALE: DRAWN BY

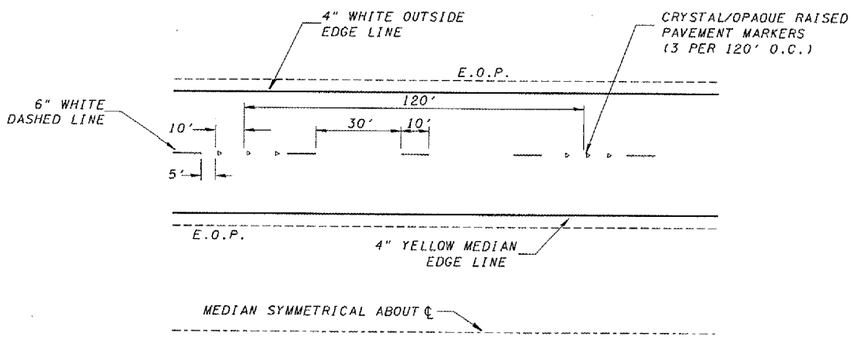
DATE CHECKED BY

PAVEMENT STRIPING DETAIL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	36
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 70671





TYPICAL PAVEMENT MARKINGS

Note: Striping Limits: Sta. 1025+00 to Sta. 1053+00 (EB & WB)

WORK ZONE PAVEMENT MARKING REMOVAL

Color	Location	Sta.	to	Sta.	Length	SqFt
WHITE	WB I-74	100+00.00		108+00.00	800.0	266.7
YELLOW	WB I-74	100+00.00		108+00.00	800.0	266.7
YELLOW	EB I-74	102+21.00		108+00.00	579.0	193.0
					TOTAL	**726.3**

REMOVE TEMPORARY CONCRETE BARRIER, STATE OWNED

Sta.	to	Sta.	Length
104+76.42		108+00.00	323.58

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT STRIPING

STR# 057-0126 (WB I-74)

STR# 057-0125 (EB I-74)

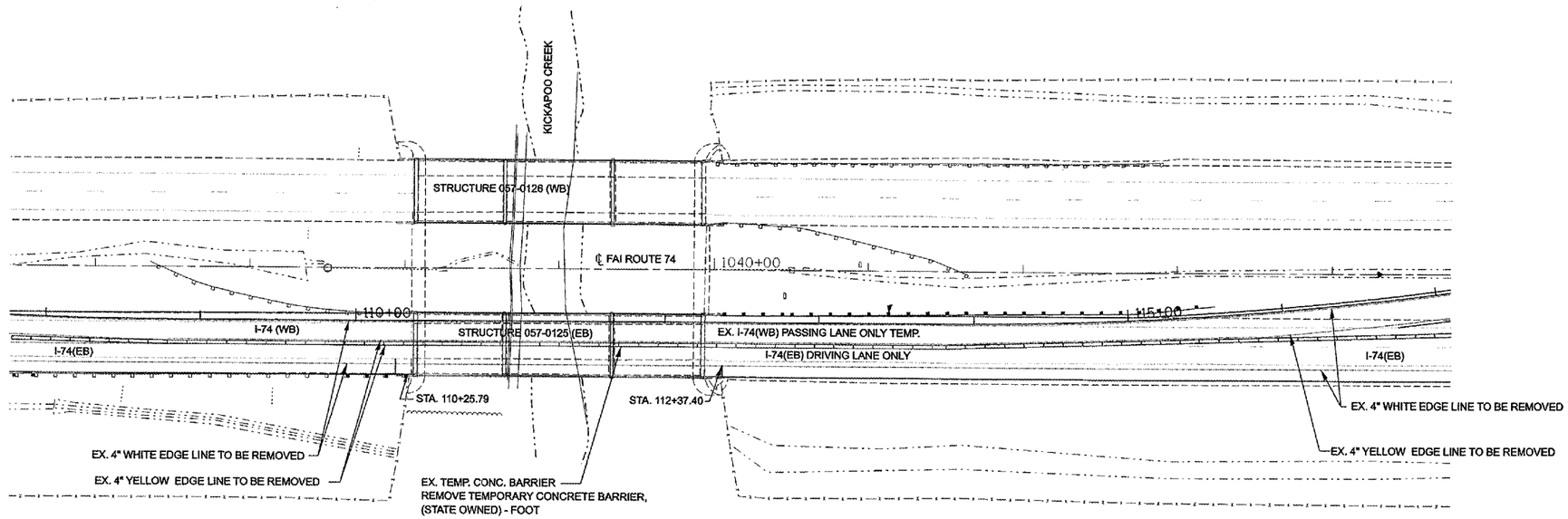
SCALE: 1"=40' DRAWN BY

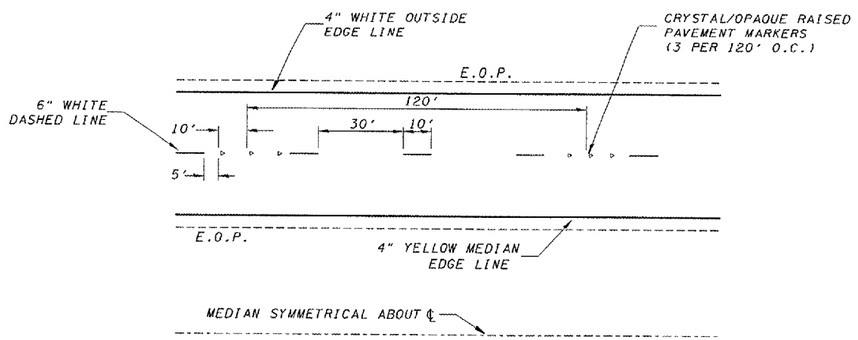
DATE 08/01/07 CHECKED BY

PAVEMENT STRIPING DETAIL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	37
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 70671





TYPICAL PAVEMENT MARKINGS

Note: Striping Limits: Sta. 1025+00 to Sta. 1053+00 (EB & WB)

WORK ZONE PAVEMENT MARKING REMOVAL

Color	Location	Sta.	to	Sta.	Length	SqFt
WHITE	WB I-74	108+00.00		115+00.00	700.0	233.3
YELLOW	WB I-74	108+00.00		115+00.00	700.0	233.3
YELLOW	EB I-74	108+00.00		115+00.00	700.0	233.3
					TOTAL	**700.0**

REMOVE TEMPORARY CONCRETE BARRIER, STATE OWNED

Sta.	to	Sta.	Length
108+00.00		115+00.00	700.00

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT STRIPING

STR# 057-0126 (WB I-74)

STR# 057-0125 (EB I-74)

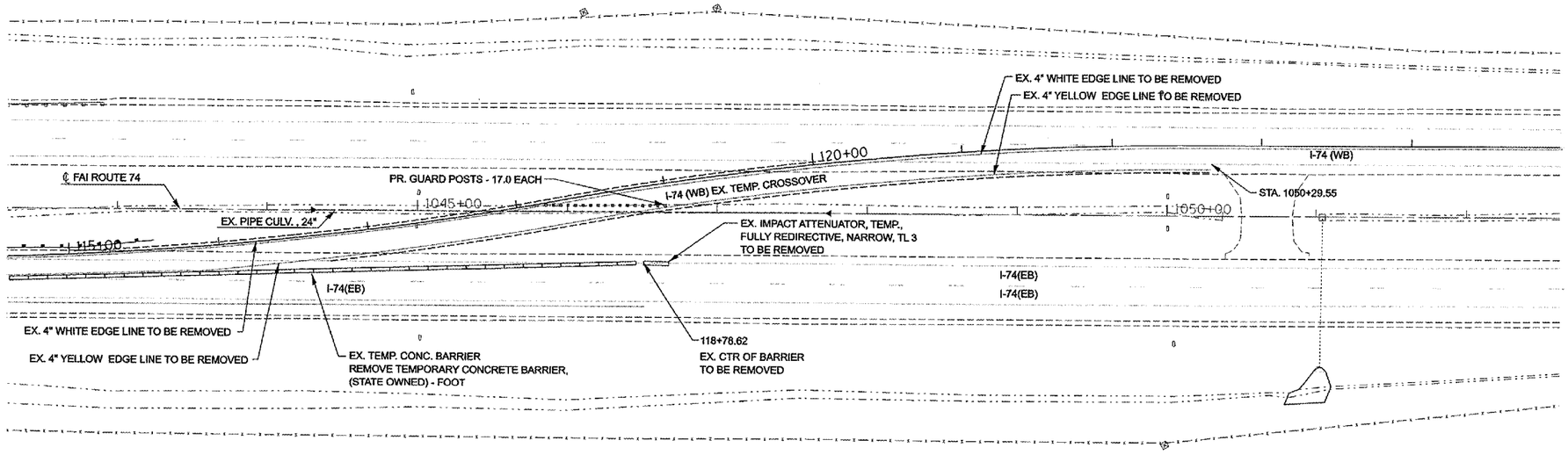
SCALE: 1"=40' DRAWN BY

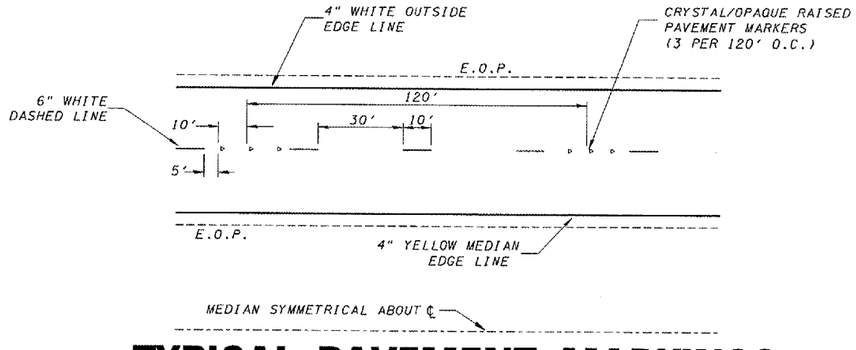
DATE 08/01/07 CHECKED BY

PAVEMENT STRIPING DETAIL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	38
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 70671





TYPICAL PAVEMENT MARKINGS

Note: Striping Limits: Sta. 1025+00 to Sta. 1053+00 (EB & WB)

WORK ZONE PAVEMENT MARKING REMOVAL

Color	Location	Sta.	to	Sta.	Length	
WHITE	WB I-74	115+00.00		123+00.00	800.0	266.7
YELLOW	WB I-74	115+00.00		123+00.00	800.0	266.7
WHITE	EB I-74	115+00.00		123+00.00	800.0	266.7
					TOTAL	**800.0**

REMOVE TEMPORARY CONCRETE BARRIER, STATE OWNED

Sta.	to	Sta.	Length
115+00.00		118+78.62	378.62

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT STRIPING

STR# 057-0126 (WB I-74)

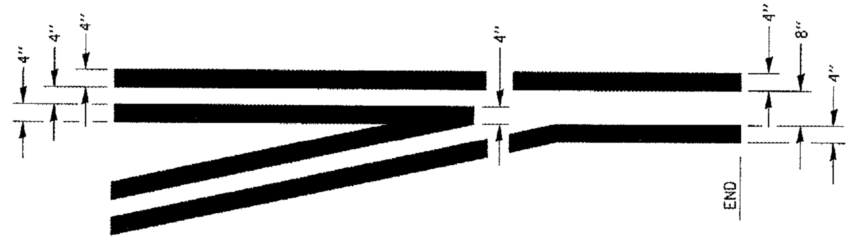
STR# 057-0125 (EB I-74)

SCALE: 1"=40' DRAWN BY

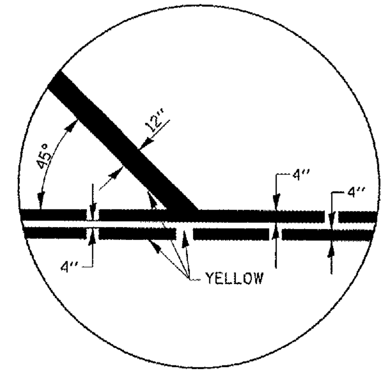
DATE 08/01/07 CHECKED BY

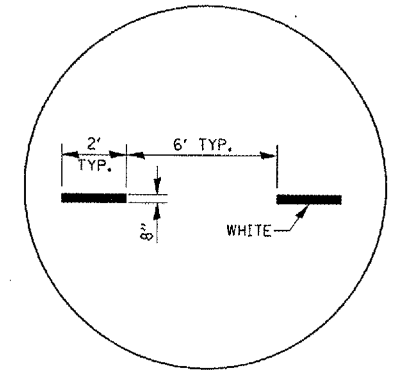
CONTRACT NO. 70671

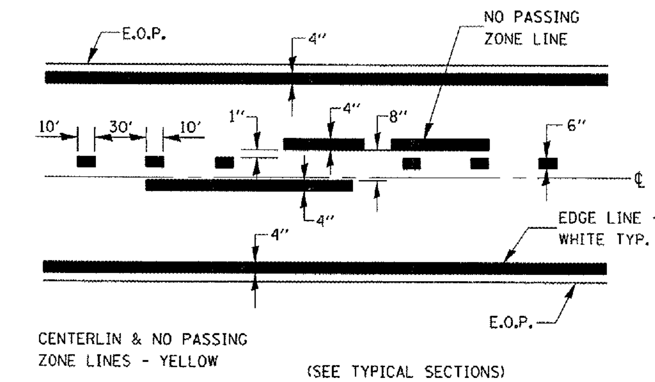
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	39
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



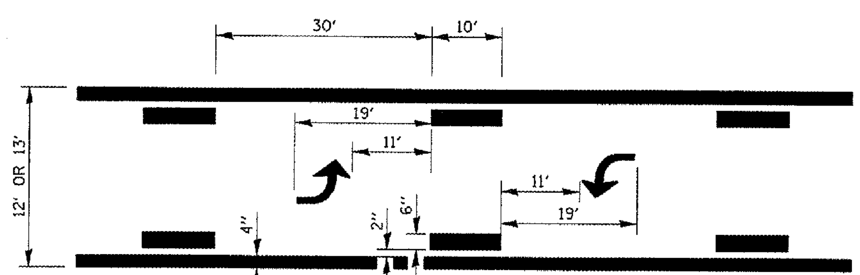
TYPICAL APPLICATION @ LEFT TURN LANES



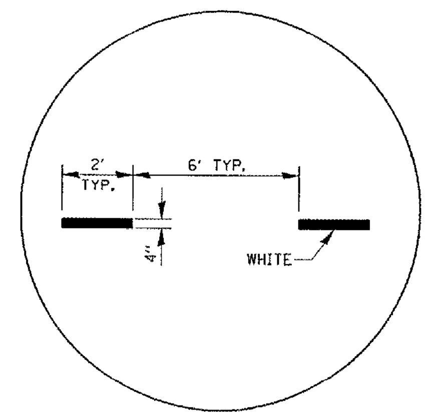


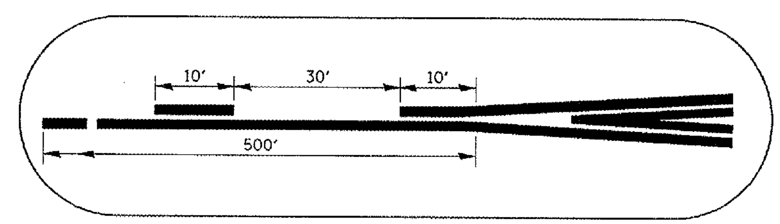


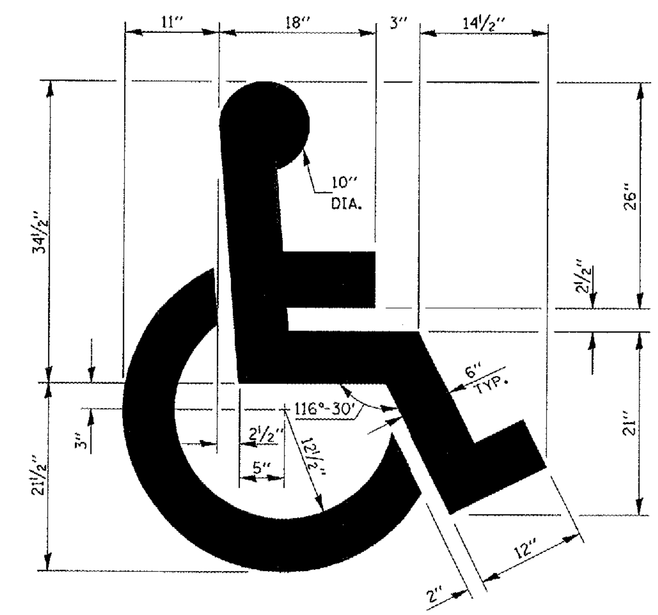
PAVEMENT MARKING



TYPICAL APPLICATION @ BI-DIRECTIONAL TURN LANE







TYPICAL DETAIL FOR PAINTING HANDICAP MARKINGS

DESIGNER NOTE:

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

DATE	REVISIONS	NAME
11/06	CREATED FROM D4 DETAILS	TJB

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING (MCLEAN COUNTY "SPOT" IMPROVEMENTS ONLY)

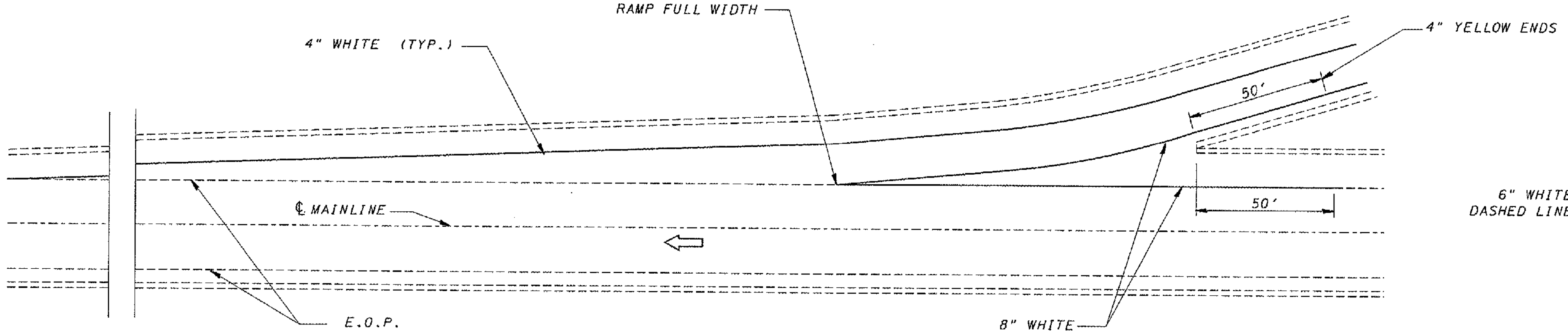
DISTRICT 5 DETAIL NO. 7800CCCC

SHEET 1 OF 3

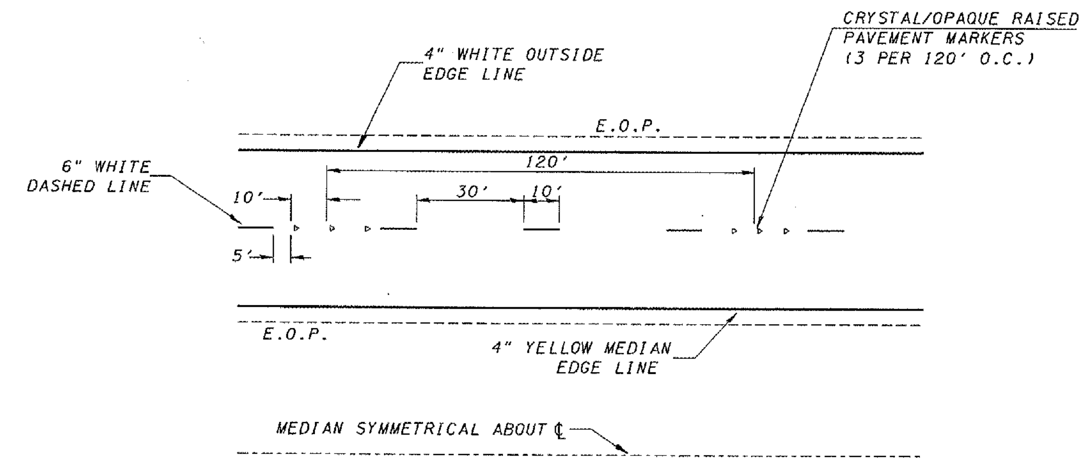
PLOT DATE = 8/2/2007
FILE NAME = c:\projects\d585107 (v8)\70671.text.dgn
PLOT SCALE = 2:1 / IN.
USER NAME = collierb

CONTRACT NO. 70671

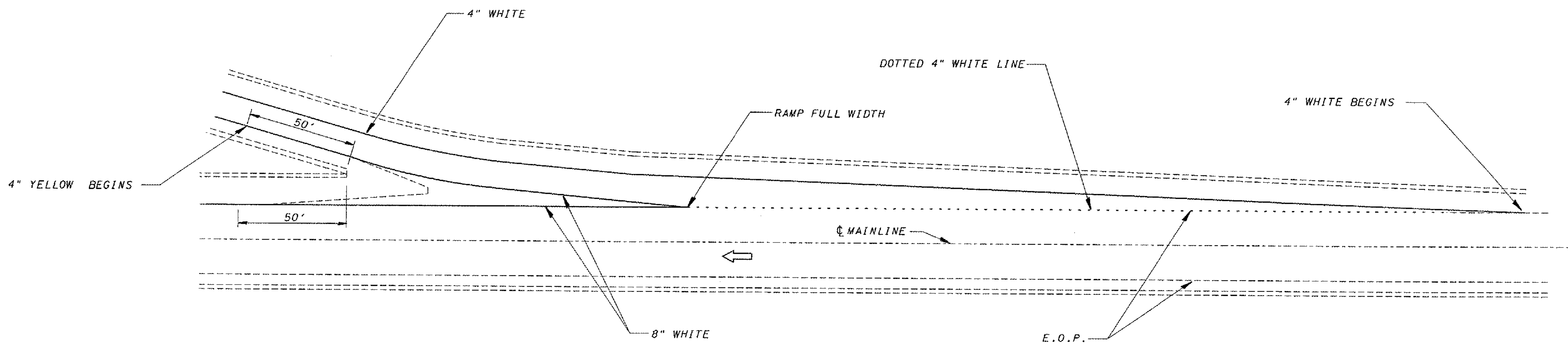
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	40



TYPICAL PAVEMENT MARKING FOR ENTRANCE RAMP TERMINALS



TYPICAL PAVEMENT MARKINGS



TYPICAL PAVEMENT MARKINGS FOR EXIT RAMP TERMINALS

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

DATE	REVISIONS	NAME
11/06	CREATED FROM D4 DETAILS	TJB

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING
(MCLEAN COUNTY "SPOT" IMPROVEMENTS ONLY)

DISTRICT 5 DETAIL NO. 7800CCCC

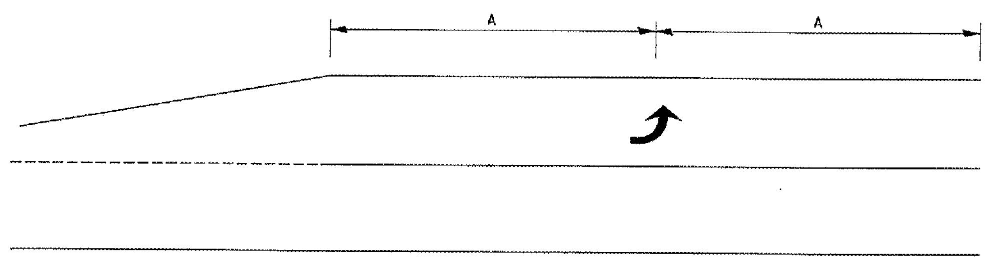
SHEET 2 OF 3

DESIGNER NOTE:

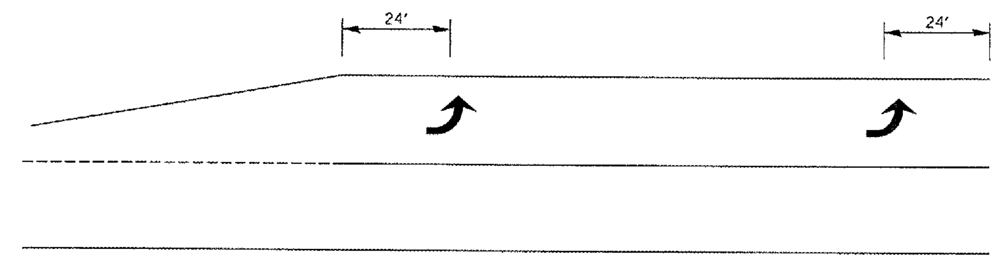
PLOT DATE = 8/2/2007
FILE NAME = c:\projects\d505087\w8\70671.tex.dgn
PLOT SCALE = 21.1765 ' / IN.
USER NAME = collierbw

CONTRACT NO. 70671				
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	41

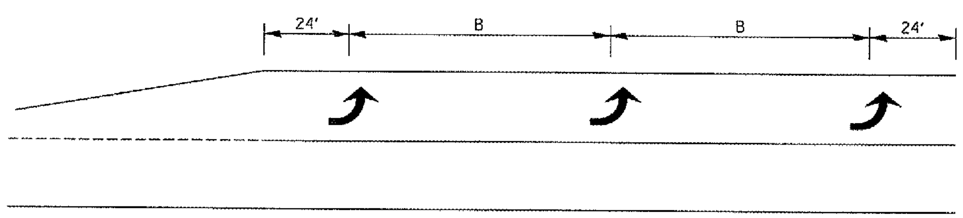
TYPICAL PLACEMENT OF ARROWS IN TURN LANES



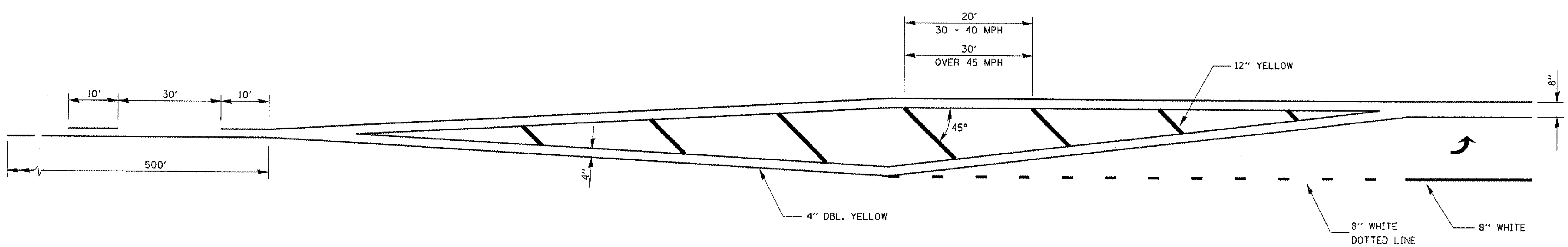
99' AND UNDER



100' TO 149'



150' AND LONGER



DESIGNER NOTE:

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

DATE	REVISIONS	NAME
11/06	CREATED FROM D4 DETAILS	TJB

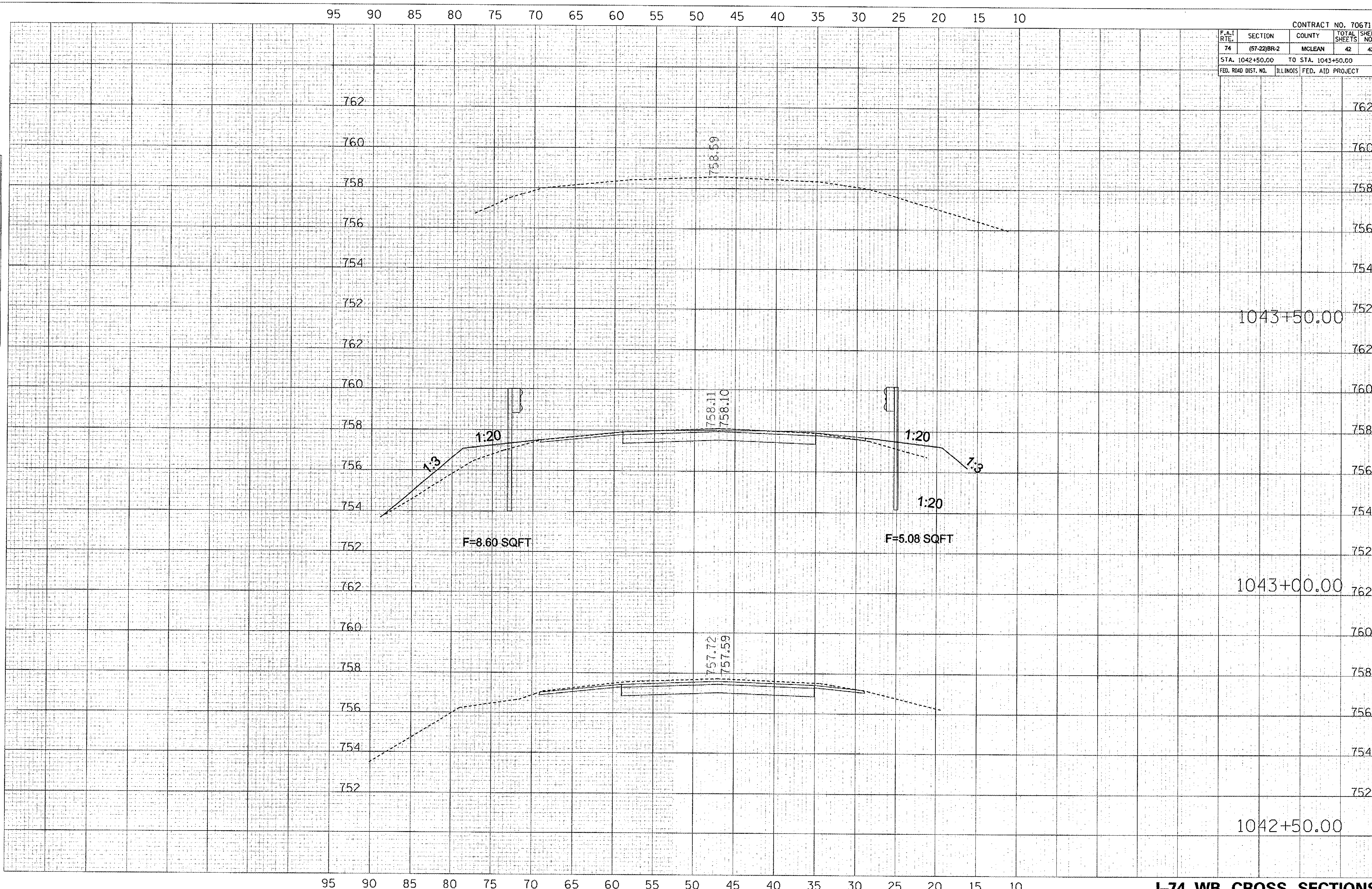
ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING (MCLEAN COUNTY "SPOT" IMPROVEMENTS ONLY)

DISTRICT 5 DETAIL NO. 7800CCCC

CONTRACT NO. 70671

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-2	MCLEAN	42	42
STA. 1042+50.00 TO STA. 1043+50.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

PLOT DATE = 8/2/2007
FILE NAME = c:\projects\d505107 (v8)\i-74.xs.
PLOT SCALE = 5.2941 ' / IN.
USER NAME = collierbw

I-74 WB CROSS SECTIONS