

(217)465-4181

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-3	MCLEAN	42	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 70672		

D-95-052-07

42
- 2
40

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

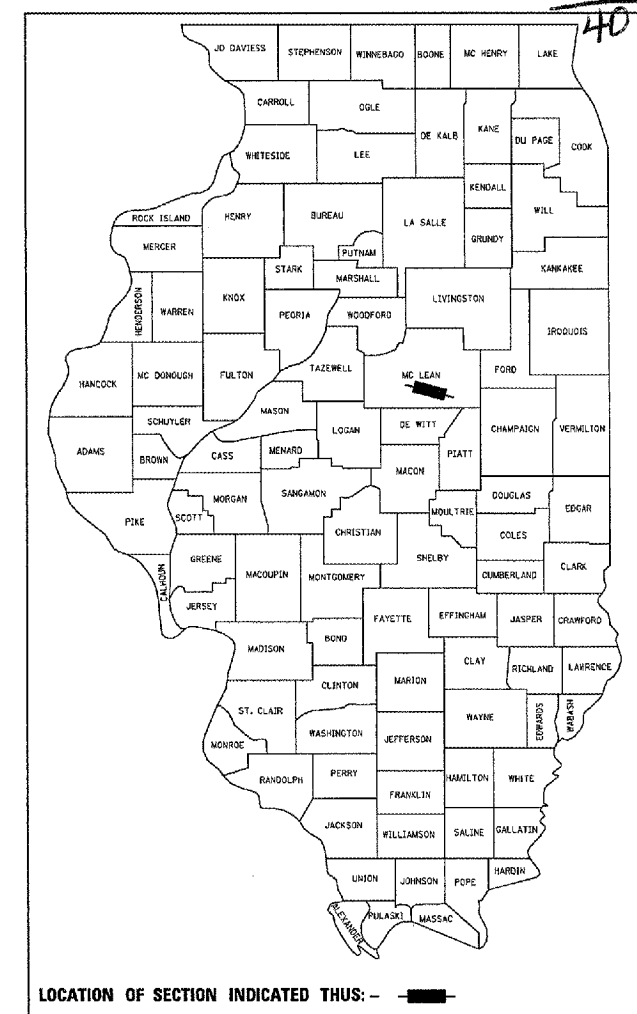
PROPOSED HIGHWAY PLANS

FAI ROUTE 74 (I-74)
SECTION (57-22)BR-3
MCLEAN COUNTY
PROJECT ACIM-074-5(156)140

C-95-052-07

BRIDGE REHABILITATION (STR# 057-0125) & PAINTING (STR# 057-0126)

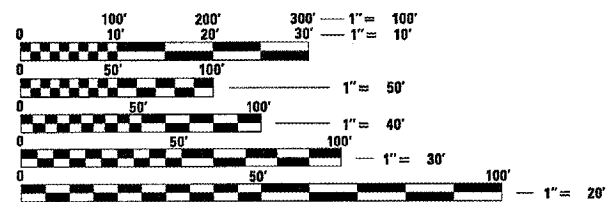
KICKAPOO CREEK 5.9 MILE OF US 51



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

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

DESIGN DESIGNATION
FUNCTIONAL CLASSIFICATION
INTERSTATE

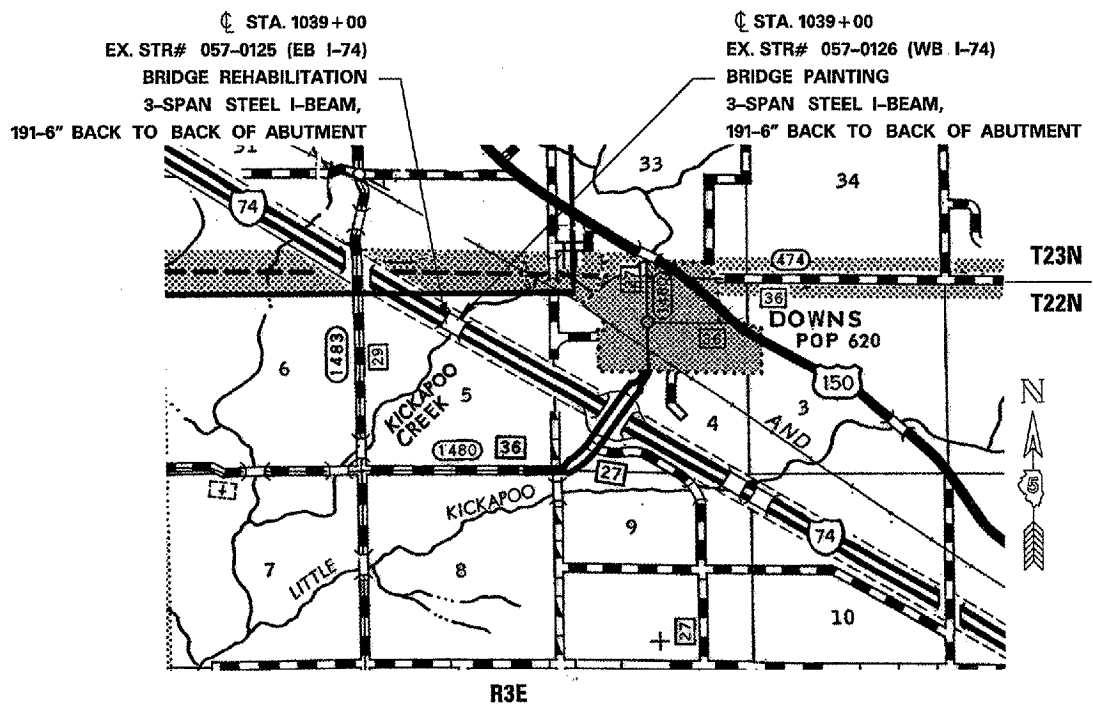


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: KENSIL GARNETT
SQUAD LEADER/DESIGNER: CORY SHEEHY

CONTRACT NO. 70672



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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 12/20 20 07

Joseph E. Overman
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

February 1, 2008
Eric E. Harau
ENGINEER OF DESIGN AND ENVIRONMENT

February 1, 2008
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

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LIST OF STANDARDS

STD. NO.	TITLE
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420401-06	BRIDGE APPROACH PAVEMENT
421001-02	BAR REINFORCEMENT FOR CRC PAVEMENT
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
482011-03	HMA SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-02	NAME PLATE FOR BRIDGES
542401	METAL END SECTION FOR PIPE CULVERT
542301-1	PRECAST REINFORCED FLARED END SECTIONS
542546	FLUSH INLET BOX FOR MEDIAN
601001-02	SUB-SURFACE DRAINS
601101	CONCRETE HEADWALL FOR PIPE DRAIN
602306-01	INLET, TYPE B
604021-01	BASE, FRAME, AND LIDS TYPE 5
609006-03	BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
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
701006-02	OFF ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701400-02	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-04	LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-06	LANE CLOSURE, FREEWAY/EXPRESSWAY WITH BARRIER
701426-02	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS > 45 MPH
701901	TRAFFIC CONTROL DEVICES
704001-04	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

FILE NAME =	USER NAME = collierbw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-74 OVER KICKAPOO CREEK -- INDEX & STANDARDS	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\projects\4565207\iv81\70672.txt.dgn		DRAWN -	REVISED -			74	(57-22)BR-3	MCLEAN	42	2	
		CHECKED -	REVISED -			SCALE:		CONTRACT NO. 70672			
		DATE -	REVISED -			SHEET NO.	OF	SHEETS	STA.	TO	STA.

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.

UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED.

J.U.L.I.E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800)892-0123 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 SHOULDERS 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.-542
BEFORE ORDERING PIPE CULVERTS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR THE EXACT LENGTHS.

G.N.-501A
THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHOULD TAKE SPECIAL CARE IN DEALING WITH THE PRESENCE OF LEAD ON THIS PROJECT.

G.N.-506A
CLEANING AND PAINTING OF STRUCTURE #057-0125 (I-74 EB) SHALL BE PAID FOR UNDER FURNISHING AND ERECTING STRUCTURE STEEL. CLEANING AND PAINTING OF STRUCTURE #057-0126 (I-74 WB) SHALL BE PAID FOR UNDER CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 1

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	1034+62.50		0.00	0.00	
		25.0			3.5
	Shoulder	1034+87.50		0.00	7.50
		1035+00.00	25.0		7.5
		1035+12.50		0.00	8.60
		25.0			4.0
	1035+37.50		0.00	0.00	
			Outside Total		14.9
Median Shoulder	1033+85.50		0.00	0.00	
		25.0			0.7
		1034+10.50		0.00	1.50
		1034+23.00	25.0		2.1
		1034+35.50		0.00	3.00
		25.0			1.4
	1034+60.50		0.00	0.00	
			Median Total		4.2

FURNISHED EXCAVATION 19.1 CUYD

USE 20.0 CUYD

SUMMARY OF QUANTITIES

LOCATION OF WORK:

FAI 74 FAI 74
RURAL RURAL
STA. 1035+00
TO 1043+00
90% FED / 10% STATE 90% FED / 10% STATE
STR# STR#
057-0125(EB) 057-0126(WB)
X071-2A SFTY-2A

CONSTRUCTION TYPE CODE:

CODE NO	ITEM	UNIT	TOTAL QUANTITY	QUANTITY	QUANTITY
20400800	FURNISHED EXCAVATION	CU YD	20.0	20.0	0.0
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	82.4	82.4	0.0
25000210	SEEDING, CLASS 2A	ACRE	0.5	0.5	0.0
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45.0	45.0	0.0
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45.0	45.0	0.0
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45.0	45.0	0.0
25100115	MULCH, METHOD 2	ACRE	0.5	0.5	0.0
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	50.0	50.0	0.0
28000400	PERIMETER EROSION BARRIER	FOOT	120.0	120.0	0.0
28000500	INLET AND PIPE PROTECTION	EACH	2.0	2.0	0.0
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	364.0	364.0	0.0
40603245	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N105	TON	280.0	280.0	0.0
40603550	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N105	TON	140.0	140.0	0.0
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	277.0	277.0	0.0
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR(FLEXIBLE)	SQ YD	54.0	54.0	0.0
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	954.0	954.0	0.0
44000700	APPROACH SLAB REMOVAL	SQ YD	320.0	320.0	0.0
48101200	AGGREGATE SHOULDERS, TYPE B	TON	32.0	32.0	0.0
48203100	HOT-MIX ASPHALT SHOULDERS	TON	81.0	81.0	0.0
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1.0	1.0	0.0
50102400	CONCRETE REMOVAL	CU YD	19.9	19.9	0.0
50104650	SLOPE WALL REMOVAL	SQ YD	56.0	56.0	0.0
50105220	PIPE CULVERT REMOVAL	FOOT	140.0	140.0	0.0
50200100	STRUCTURE EXCAVATION	CU YD	82.4	82.4	0.0
50300100	FLOOR DRAINS	EACH	12.0	12.0	0.0
50300225	CONCRETE STRUCTURES	CU YD	43	43	0.0
50300255	CONCRETE SUPERSTRUCTURE	CU YD	261.8	261.8	0.0
50300260	BRIDGE DECK GROOVING	SQ YD	1,058.0	1,058.0	0.0
50300300	PROTECTIVE COAT	SQ YD	1,287	1,287	0.0
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1.0	1.0	0.0

SUMMARY OF QUANTITIES

LOCATION OF WORK:

FAI 74 **FAI 74**
RURAL **RURAL**
STA. 1035+00
TO 1043+00
 90% FED / 10% STATE 90% FED / 10% STATE
STR# **STR#**
057-0125(EB) **057-0126(WB)**
X071-2A **SFTY-2A**

CONSTRUCTION TYPE CODE:

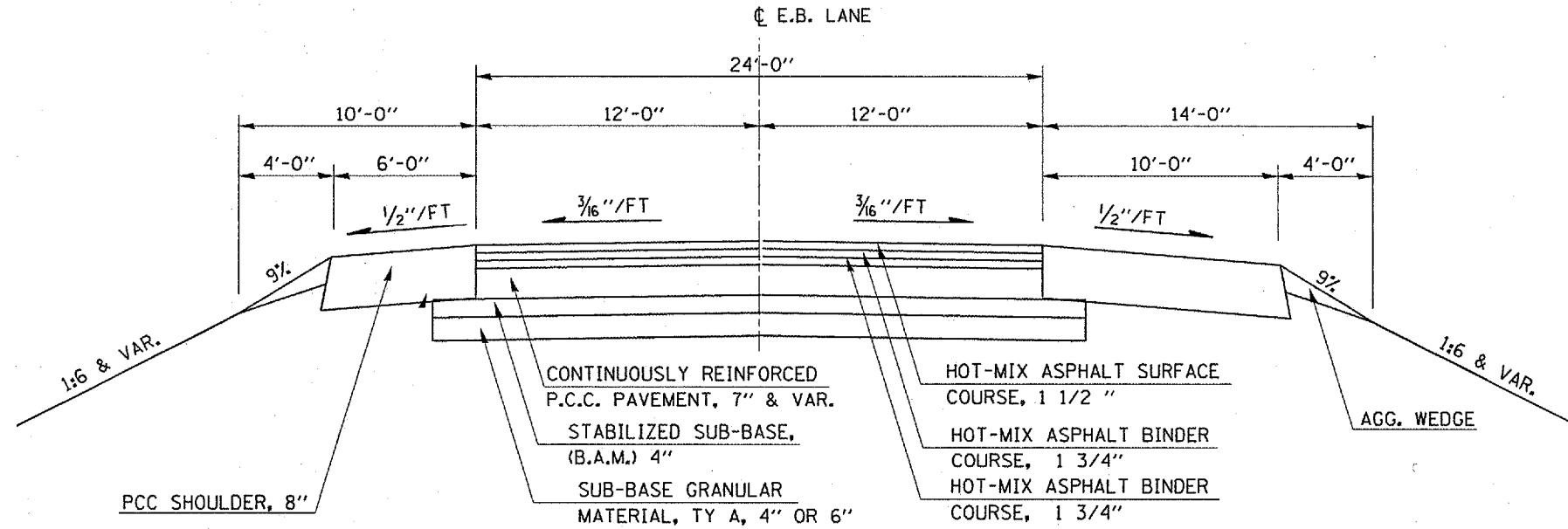
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50500505	STUD SHEAR CONNECTORS	EACH	3,492.0	3,492.0	0.0
50606701	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 1	L SUM	1.0	0.0	1.0
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	63,360	63,360	0.0
50800515	BAR SPLICERS	EACH	669	669	0.0
51100300	SLOPE WALL 6 INCH	SQ YD	56.0	56.0	0.0
51205200	TEMPORARY SHEET PILING	SQ FT	286	286	0.0
51500100	NAME PLATES	EACH	1.0	1.0	0.0
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12.0	12.0	0.0
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	6.0	6.0	0.0
52100520	ANCHOR BOLTS, 1"	EACH	24.0	24.0	0.0
52100540	ANCHOR BOLTS, 1 1/2"	EACH	24.0	24.0	0.0
54213447	END SECTIONS 12"	EACH	1.0	1.0	0.0
54244405	FLUSH INLET BOX FOR MEDIAN, STANDARD 542546	EACH	2.0	2.0	0.0
542A0223	PIPE CULVERTS, CLASS A, TYPE 1 18"	FOOT	140.0	140.0	0.0
58700300	CONCRETE SEALER	SQ FT	806	806	0.0
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	47	47	0.0
60100945	PIPE DRAINS 12"	FOOT	50.0	50.0	0.0
60108100	PIPE UNDERDRAINS 4" (SPECIAL)	FOOT	100.0	100.0	0.0
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	100	100	0.0
60240235	INLETS, TYPE B, TYPE 5 FRAME, CLOSED LID	EACH	1.0	1.0	0.0
60900240	TYPE C INLET BOX, STANDARD 609006	EACH	2.0	2.0	0.0
60900515	CONCRETE THRUST BLOCKS	EACH	2.0	2.0	0.0
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	262.5	262.5	0.0
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1.0	1.0	0.0
* 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1(SPECIAL) FLARED	EACH	1.0	1.0	0.0
63200310	GUARDRAIL REMOVAL	FOOT	425.0	425.0	0.0
* 63300205	REMOVAL AND REINSTALLATION OF EXISTING STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	200.0	200.0	0.0
* 63300405	REMOVAL AND REINSTALLATION OF EXISTING TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	1.0	1.0	0.0
* 63300455	REMOVAL AND REINSTALLATION OF EXISTING TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1.0	1.0	0.0
64200105	SHOULDER RUMBLE STRIP	FOOT	2,073.0	1,073.0	1,000.0

* DENOTES SPECIALITY ITEM

FILE NAME = c:\projects\d585207 (v8)\78672_text.dgn	USER NAME = collierbw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-74 OVER KICKAPOO CREEK - SUMMARY OF QUANTITIES	F.A.I RTE. 74	SECTION 057-22)BR-3	COUNTY MCLEAN	TOTAL SHEETS 42	SHEET NO. 5
PLOT SCALE = 41.5800' / IN.	PLOT DATE = 12/21/2007	DRAWN -	REVISED -			SCALE:		SHEET NO. OF SHEETS		STA. TO STA.
		CHECKED -	REVISED -			FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 70672
		DATE	REVISED							

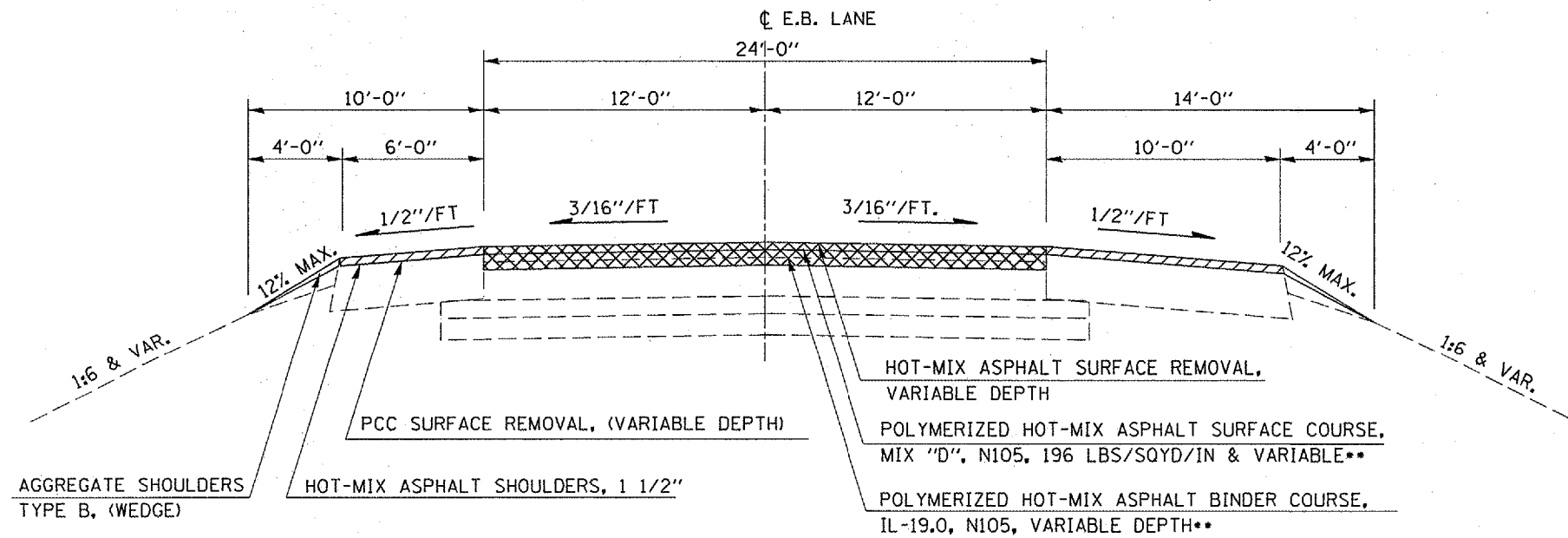
EXISTING TYPICAL CROSS SECTION

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

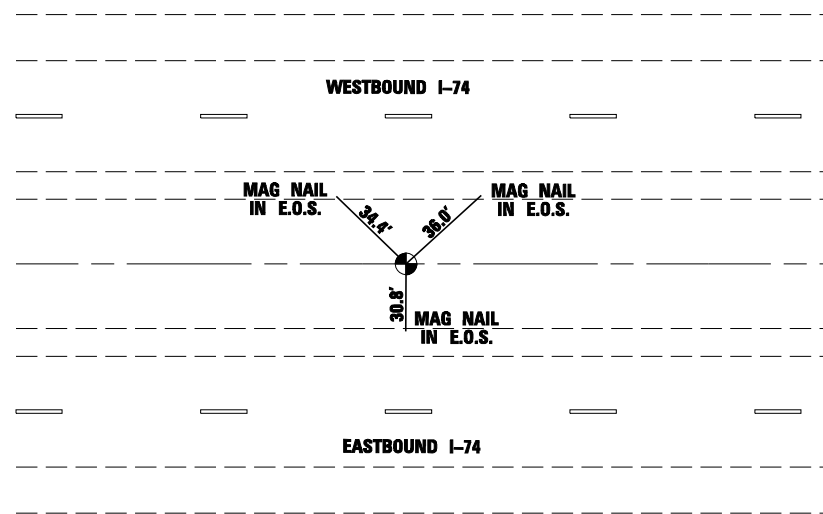


**** NOTE: ALL MAINLINE HMA TO BE PLACED UTILIZING A STRINGLINE!**

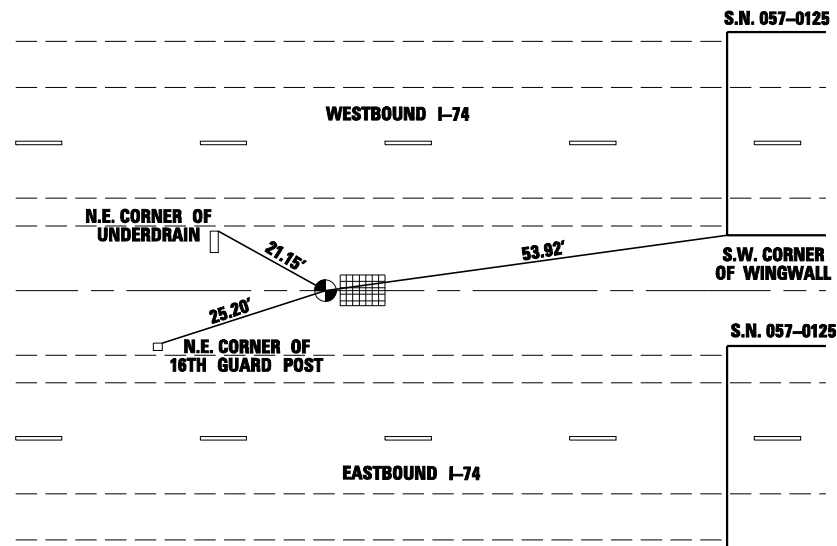
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PLOT SCALE = 44,0000 1 / IN.		CHECKED -	REVISED -			CONTRACT NO. 70672					
PLOT DATE = 12/21/2007		DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
						SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.

TIE POINT LAYOUT

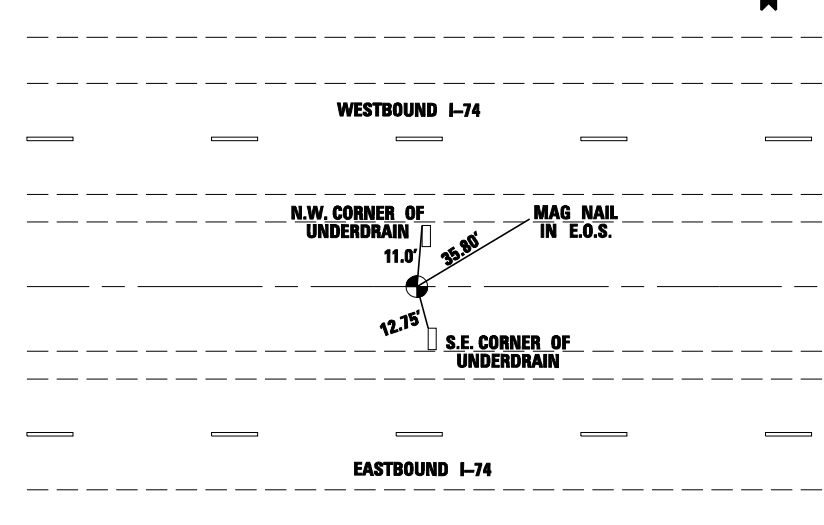
P.O.T. #4 1012 + 43.82
O/S = 0.0'



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 Elev. 760.49
 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.

4818-3

STA. 1037+98 Elev. 759.32
 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 structure over Kickapoo Creek on I-74.

TEMP-1

Elev. 759.26
 Location: Northeast corner of the northeast wingwall on structure #057-0125 eastbound I-74.

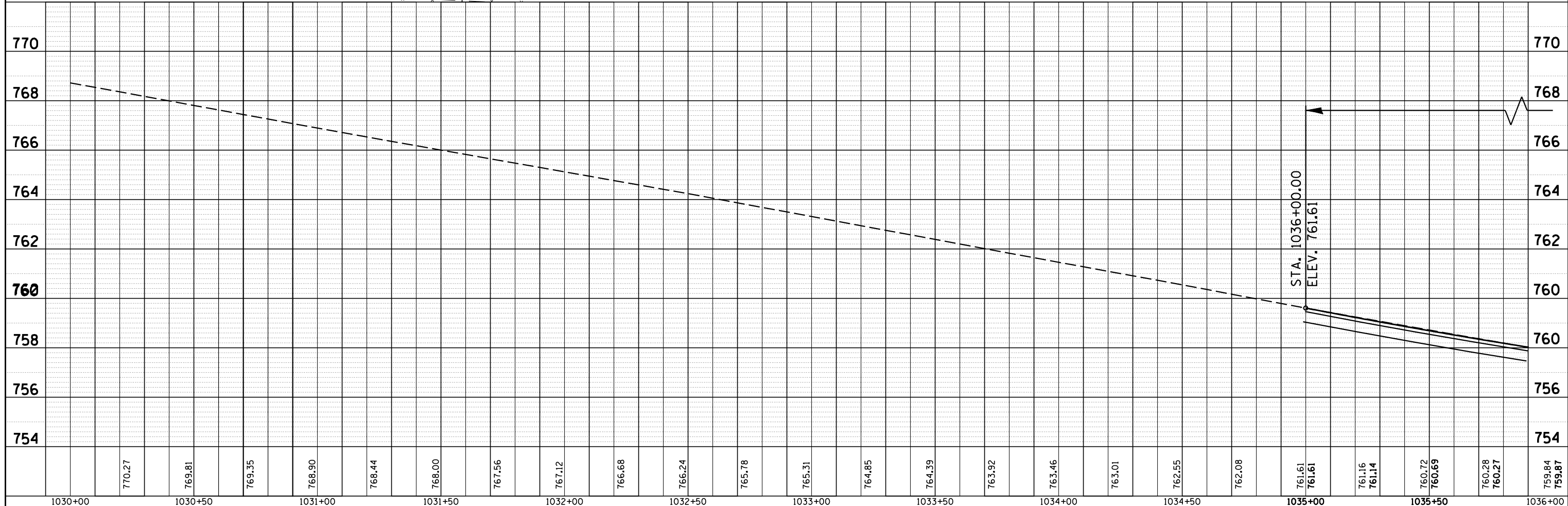
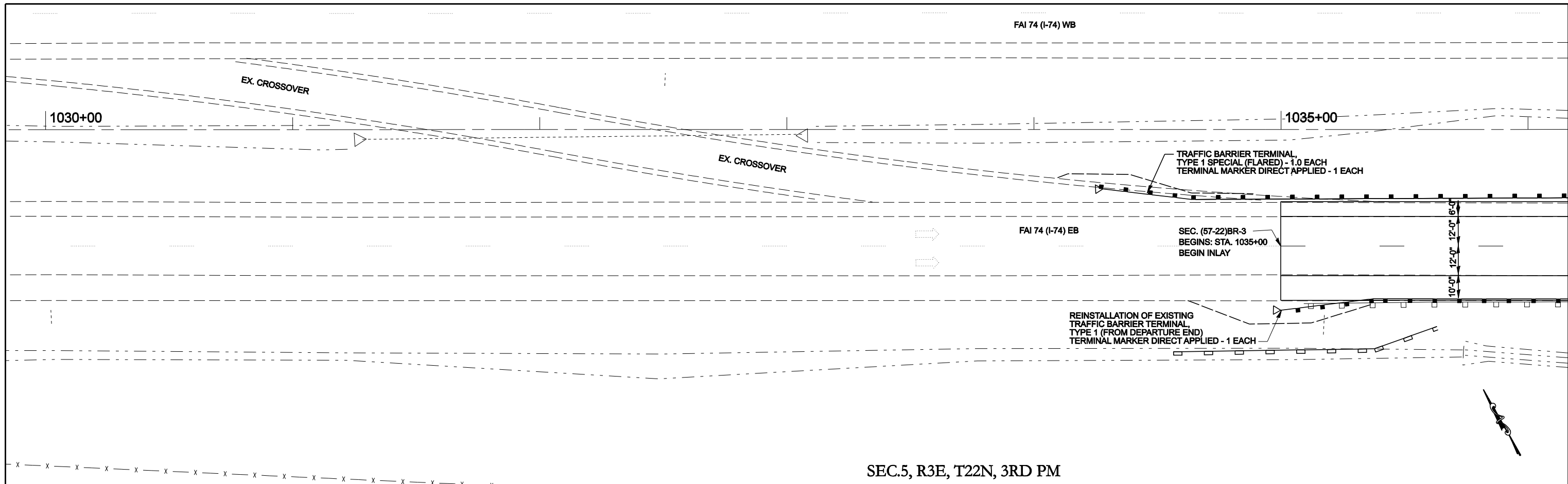
70671

Elev. 758.94
 Location: Northeast corner of the approach parapet on structure #057-0126 westbound I-74.

FILE NAME = c:\projects\d505207 (v8)\70672_text.dgn	USER NAME = collierbw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-74 OVER KICKAPOO CREEK - TIE POINTS /BENCHMARKS			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 41.5800' / IN.	DRAWN -	REVISED -					74	(57-22)BR-3	MCLEAN	42	8
PLOT DATE = 12/21/2007	CHECKED -	REVISED -	DATE -	SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT NO. 70672			
									FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			

PLAN	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
	CADD FILE NAME	

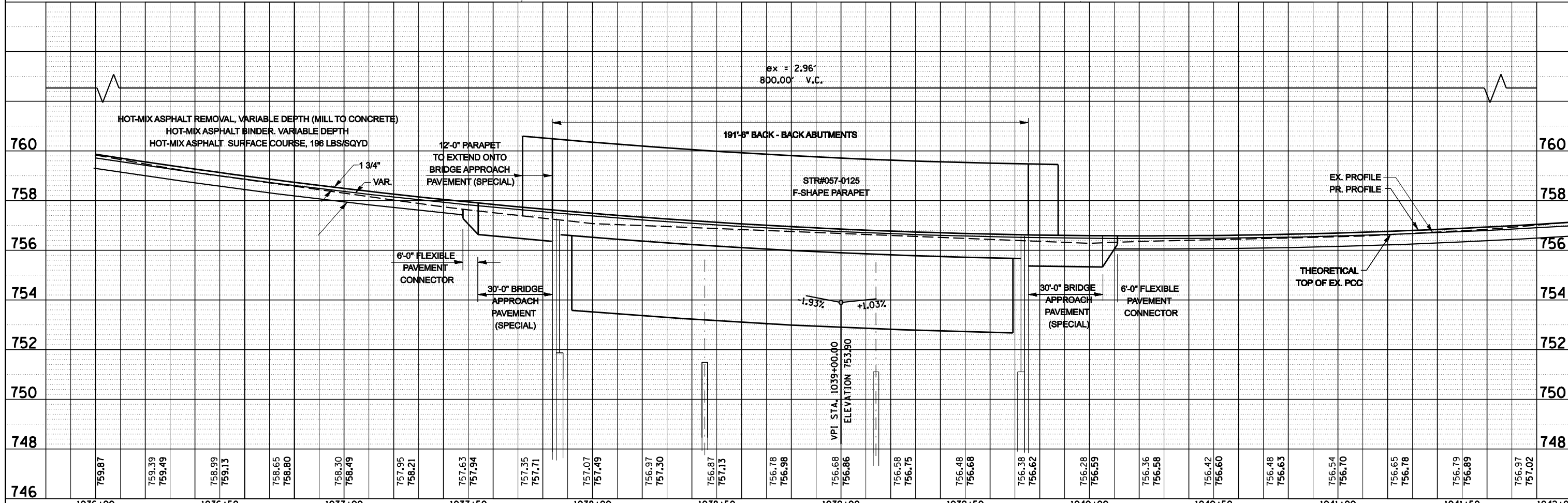
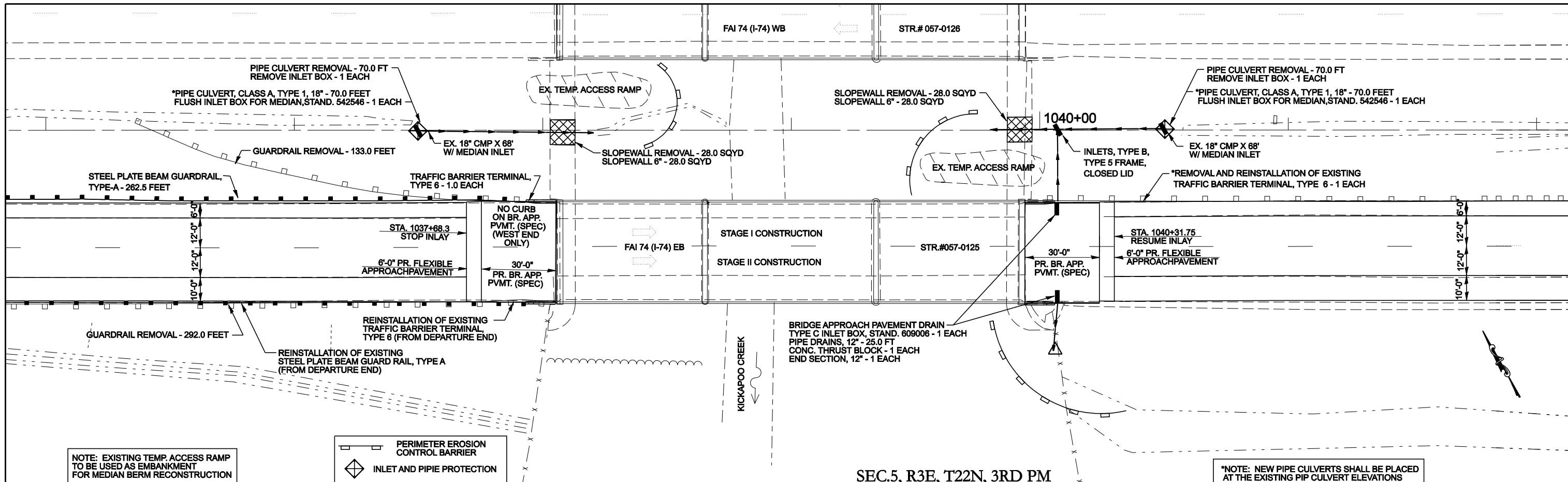
PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
	CADD FILE NAME	



FILE NAME =	USER NAME = collierbw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-74 OVER KICKAPOO CREEK PLAN & PROFILE SHEETS			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT SCALE = 40.0000' / IN.		CHECKED -	REVISED -		SCALE: 20			SHEET NO. OF SHEETS			STA. 1030+00 TO STA. 1036+00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
PLOT DATE = 12/21/2007		DATE -	REVISED -								CONTRACT NO. 70672		

PLAN	SURVEYED	DATE
	PLOTTED	BY
	CHECKED	
	ALIGNED	
	FILE NAME	
	NO.	

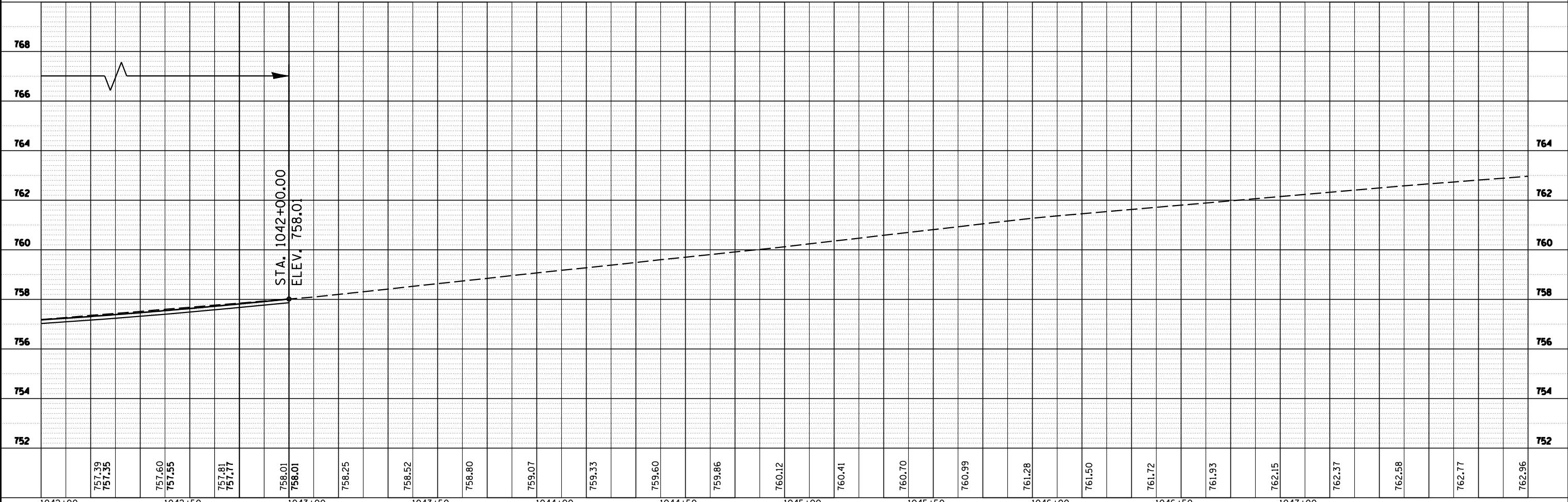
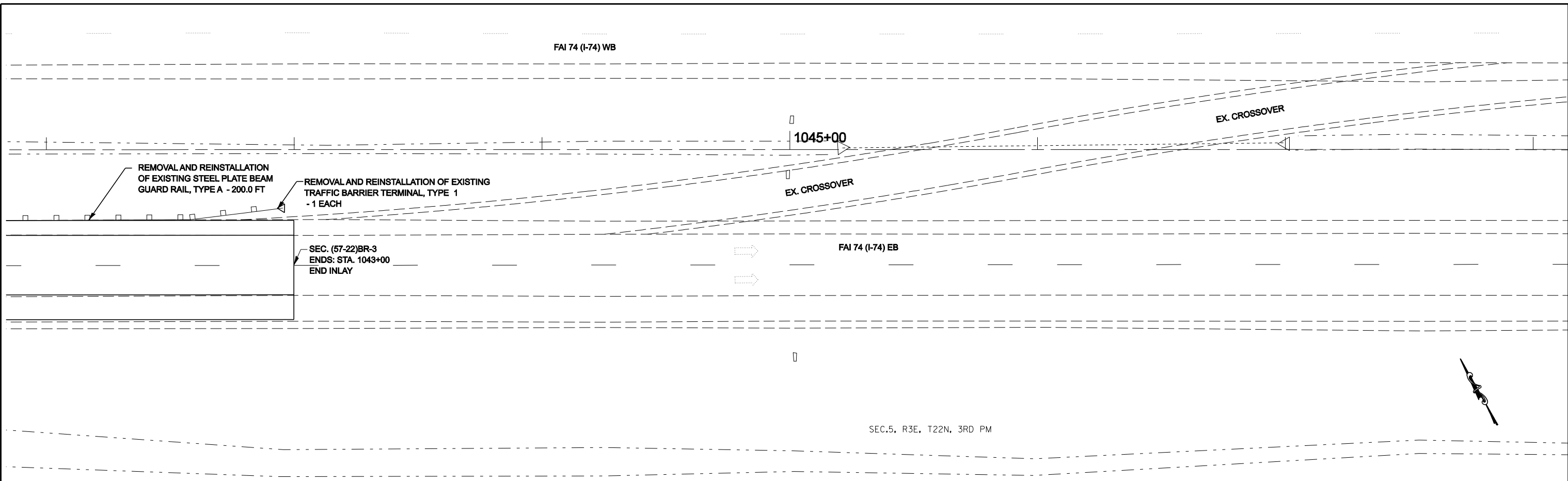
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	PLOTTED	BY
	CHECKED	
	GRADES	
	STRUCTURE	
	NOTATION	
	CHRD	
	NO.	



FILE NAME =	USER NAME = collierbw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-74 OVER KICKAPOO CREEK PLAN & PROFILE SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
744	744	DRAWN -	REVISED -			74	(57-22)BR-3	MCLEAN			
		CHECKED -	REVISED -			CONTRACT NO. 70672					
		DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	NOTED		
	CHECKED		
	FILE NAME		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	NOTED		
	CHECKED		
	FILE NAME		



FILE NAME =	USER NAME = collierbw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-74 OVER KICKAPOO CREEK PLAN & PROFILE SHEETS			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\projects\4595207 (v8)\70672.plansheets.pgn		DRAWN -	REVISED -					74	(57-22)BR-3	MCLEAN		
PLOT SCALE = 40.0000' / IN.		CHECKED -	REVISED -					CONTRACT NO. 70672				
PLOT DATE = 12/21/2007		DATE -	REVISED -					FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

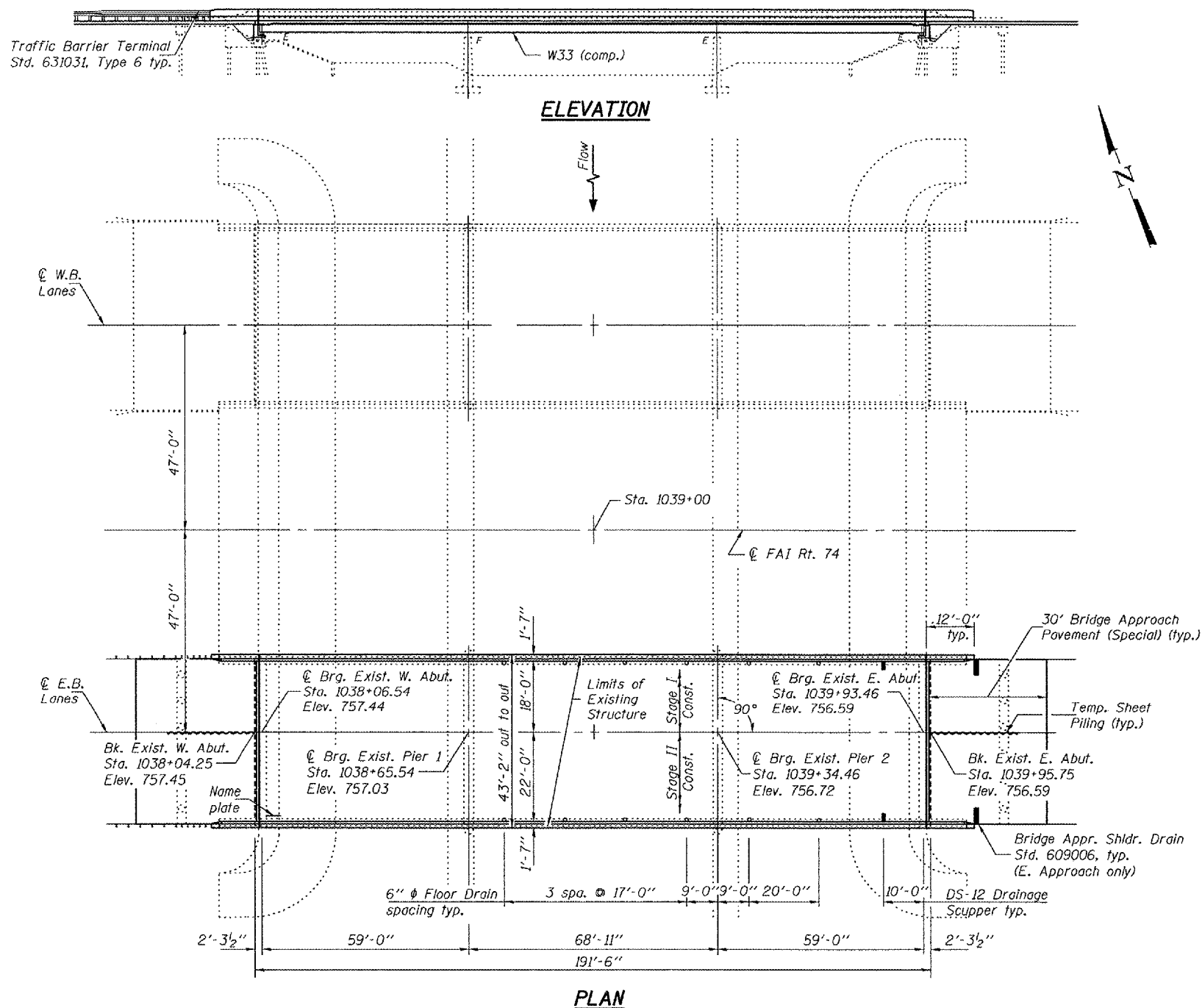
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 1
FAI 74	(57-22) BR-3	MCLEAN	42	12	24 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #70672

Bench Mark: 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. 057-0125, originally built in 1968 as F.A.I. Route 74, Section 57-22B. The existing is a three-span continuous, non-composite, rolled steel girder structure on pile bent abutments and solid wall piers on spread footings. The back to back abutment measures 191'-6" and the out to out of deck is 42'-0". The existing superstructure is to be removed and replaced. Traffic is to be maintained utilizing stage construction.

Salvage: The existing steel beams shall be salvaged and delivered to the LeRoy Maintenance Yard. To arrange for delivery, contact Rod Lashway at 309-962-4471. The splice in span 2 shall be unbolted. Cost included in Removal of Existing Superstructures.



INDEX OF SHEETS

- 1 General Plan & Elevation
- 2 General Data & Stage Construction Details
- 3 Modified Temporary Concrete Barrier for Stage Construction
- 4-7 Top of Slab Elevations
- 8-9 Top of Approach Slab Elevations
- 10 Superstructure
- 11 Superstructure Details
- 12 Drainage Scupper, DS-12
- 13 Modified Preformed Joint Strip Seal
- 14 Structural Steel
- 15 Structural Steel Details
- 16-17 Bearing Details
- 18 Concrete Removal-Abutments
- 19 Concrete Removal & Repairs-Piers
- 20 Abutments
- 21 Abutment Details
- 22 Pier 1
- 23 Pier 2
- 24 Bar Splicer Details

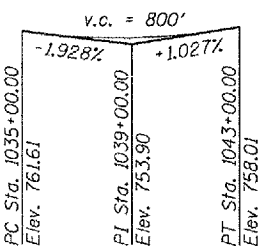
GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts $\frac{7}{8}$ " ϕ , holes $\frac{13}{16}$ " ϕ , unless otherwise noted.
Calculated weight of Structural Steel = 138410 lbs. (AASHTO M270 Gr. 50) = 14100 lbs. (AASHTO M270 Gr. 36)
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, 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 $\frac{1}{8}$ 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 abutment seats, and the exposed front face and side faces of the abutments. The Inorganic Zinc Rich Primer/Acrylic/Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4. See Special Provisions for "Cleaning and Painting New Metal Structures".
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 $\frac{1}{4}$ " will be ground off the bridge deck and the bridge approach pavement. See special provisions.
Reinforcement bars designated (E) shall be epoxy coated.

STATION 1039+00
REBUILT 20 BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. (57-22)BR-3
LOADING HS20
STRUCTURE NO. 057-0125 (E.B.)

NAME PLATE

See Std. 515001
Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plate.



PROFILE GRADE

The profile grade shows the final elevations after grinding.

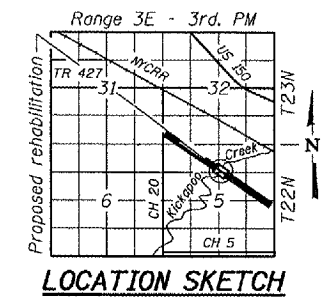
LOADING HS20-44 & ALT.
Allow 50#/sq. ft. for future wearing surface.

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)
 $f_y = 36,000$ psi (M270 Grade 36)
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



GENERAL PLAN & ELEVATION
F.A.I. RT. 74 OVER
KICKAPOO CREEK
F.A.I. RT. 74 - SEC. (57-22)BR-3
MCLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

DESIGNED *Phuoc P. Nam*
CHECKED *Stephan M. Ryan*
DRAWN *h.t. duong*
CHECKED *DPN/SMR*

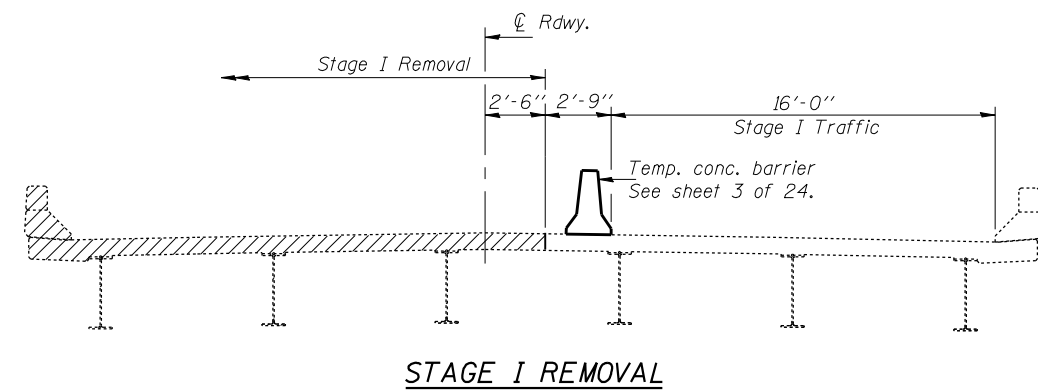
EXAMINED *January 2008*
PASSED *Robert E. Anderson*

STATE OF ILLINOIS
ENGINEERING BOARD
081-004625
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 11-30-2008

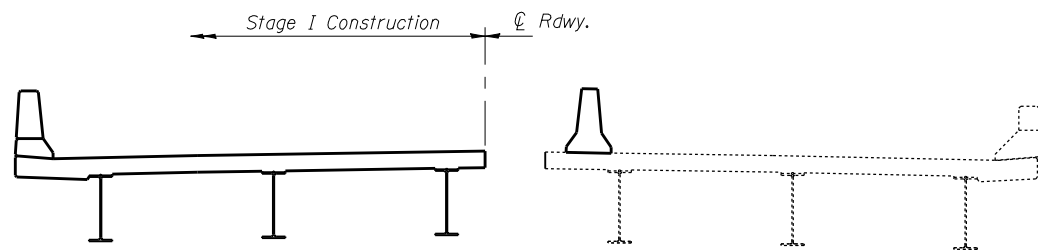
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2
FAI 74	(57-22) BR-3	McLEAN	42	13	24 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

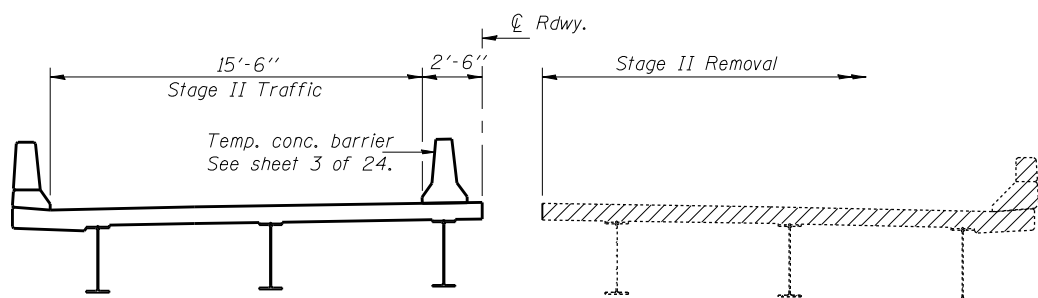
Contract #70672



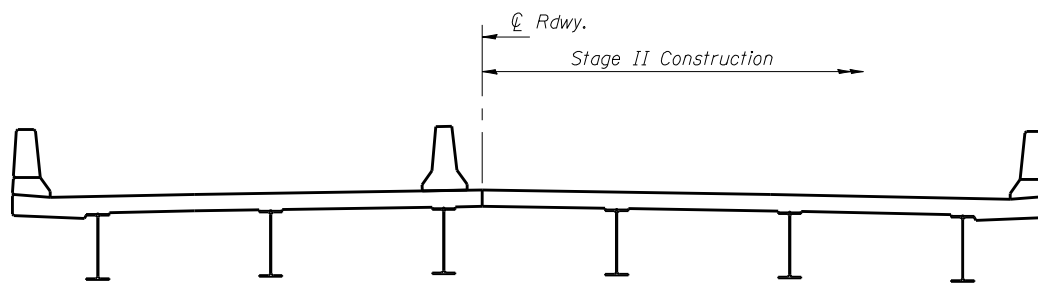
STAGE I REMOVAL



STAGE I CONSTRUCTION



STAGE II REMOVAL

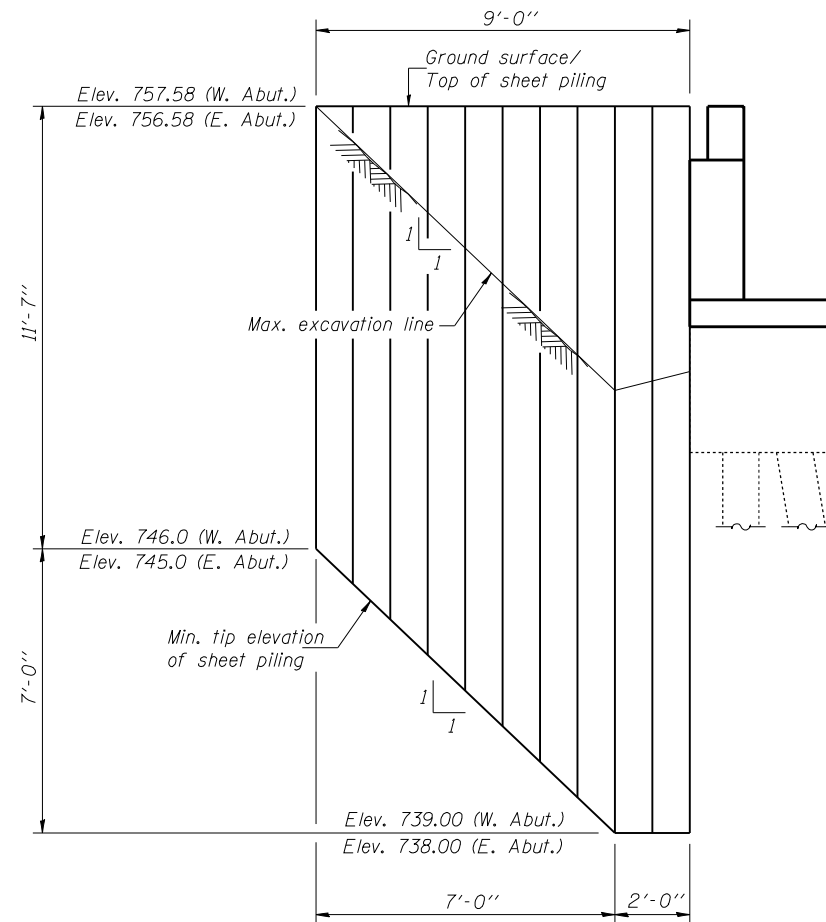


STAGE II CONSTRUCTION

Notes: Hatched areas indicate Removal of Existing Superstructures.
For quantity of temporary concrete barrier, see Roadway Plans.
All cross sections are looking East.
Stage construction shown is for the superstructure, abutments and Pier 1. Stage construction is different for Pier 2. See sheet 23 of 24.

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

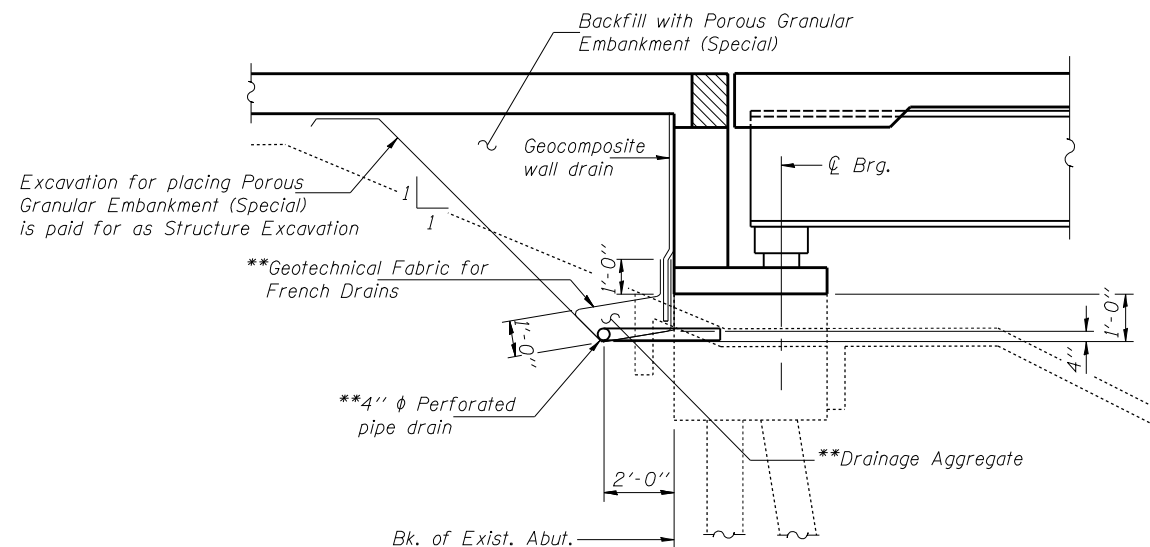
Jan. 31, 2008
EXAMINED *Thomas J. Domagalick*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES



TEMPORARY SHEET PILING AT ABUTMENTS

Min. section modulus = 30.2 in³/ft.

Note: If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.



SECTION THRU ABUTMENT

**Included in the cost of Pipe Underdrains for Structures, 4".

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		82.4	82.4
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		19.9	19.9
Structure Excavation	Cu. Yd.		82.4	82.4
Floor Drains	Each	12		12
Concrete Structures	Cu. Yd.		43.0	43.0
Concrete Superstructure	Cu. Yd.	261.8		261.8
* Bridge Deck Grooving	Sq. Yd.	1058		1058
* Protective Coat	Sq. Yd.	1287		1287
Furnishing & Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	3492		3492
Reinforcement Bars, Epoxy Coated	Pound	59360	4000	63360
Bar Splicers	Each	633	36	669
Temporary Sheet Piling	Sq. Ft.	286		286
Name Plates	Each	1		1
Elastomeric Bearing Assembly, Type I	Each	12		12
Elastomeric Bearing Assembly, Type II	Each	6		6
Anchor Bolt 1" φ	Each	24		24
Anchor Bolt 1/2" φ	Each	24		24
* Diamond Grinding (Bridge Section)	Sq. Yd.	1050		1050
Geocomposite Wall Drain	Sq. Yd.		47.0	47.0
Pipe Underdrains for Structures, 4"	Foot		100.0	100.0
Drainage Scupper, DS-12	Each	2		2
Concrete Sealer	Sq. Ft.		806.0	806.0
Preformed Joint Strip Seal	Foot	84.0		84.0
Structural Repair of Concrete (Depth ≤ 5')	Sq. Ft.		56.0	56.0

*Includes bridge approach pavements.

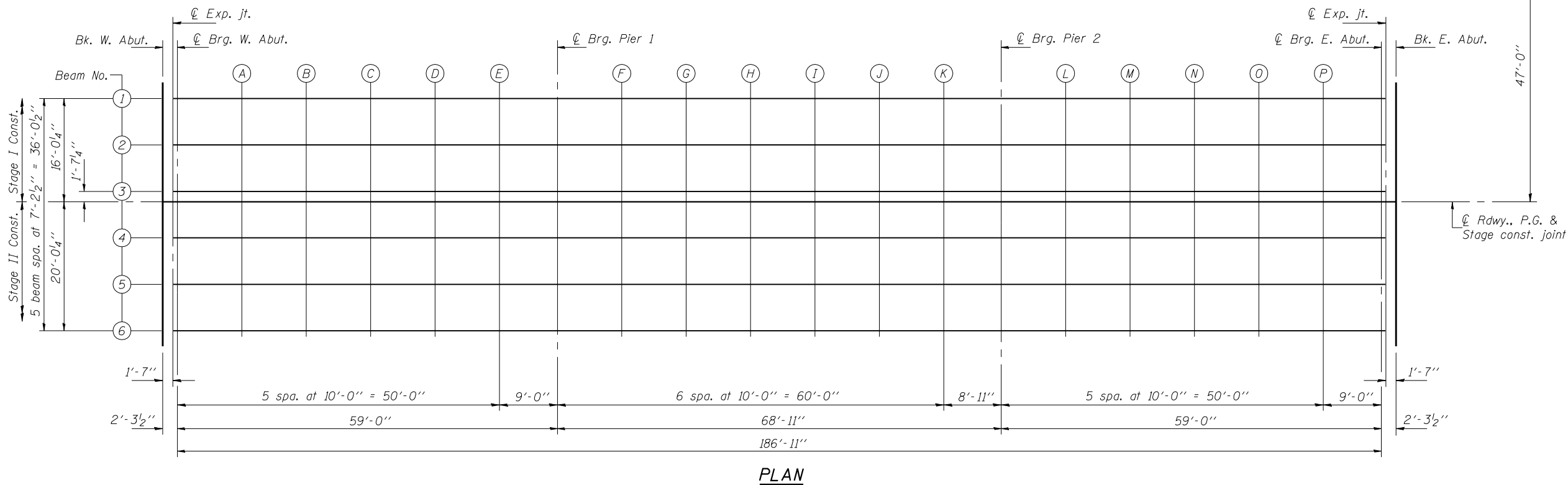
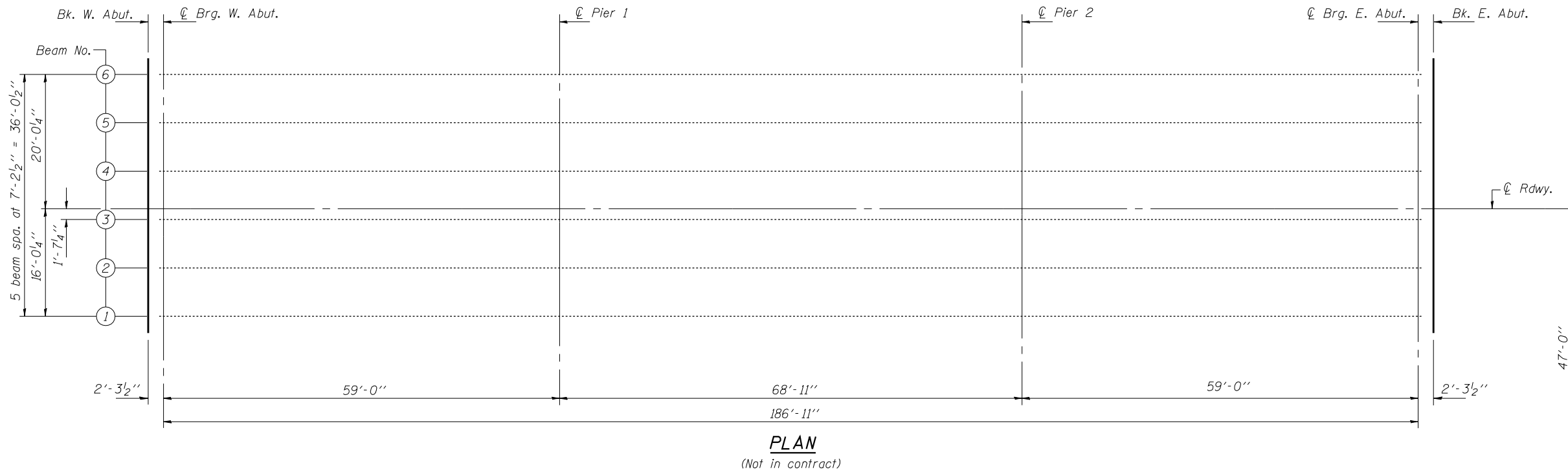
Notes: Drainage system components shall extend as shown to discharge onto slopewall. Provide rodent shield in the outlet pipe as shown on Highway Standard 601101. Core hole through existing wingwall for 4" φ pipe underdrains, 4 locations. Cost included with Pipe Underdrains for Structures, 4".

GENERAL DATA &
STAGE CONSTRUCTION DETAILS
F.A.I. RT. 74 - SEC. (57-22)BR-3
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4 24 SHEETS
FAI 74	(57-22) BR-3	MCLEAN	42	15	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #70672



DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

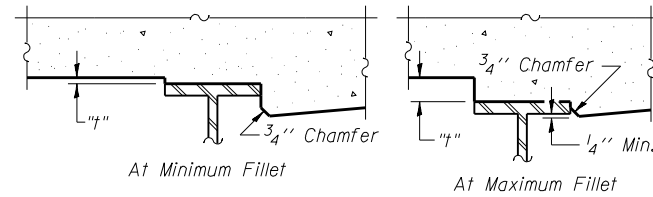
Jan. 31, 2008

EXAMINED *Thomas J. Domagalick*
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-3
MCLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

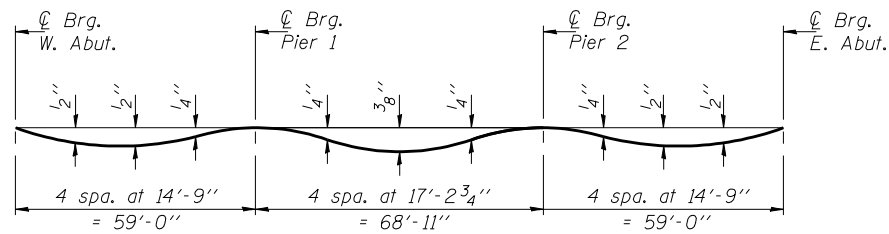
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-3	MCLEAN	42	16
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

SHEET NO. 5
24 SHEETS

Contract #70672



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 and grinding as shown below and on sheets 6 & 7 of 24.

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 4 of 24. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown below and on sheets 6 & 7 of 24, minus 8 1/4" deck thickness, equals the fillet heights "t" above top flange 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 6 & 7 of 24. 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	757.18	757.20
CL. EXP. JT.	103805.83	-16.02	757.17	757.19
CL. BRG. W. ABUT.	103806.54	-16.02	757.17	757.19
A	103816.54	-16.02	757.09	757.13
B	103826.54	-16.02	757.01	757.08
C	103836.54	-16.02	756.94	757.01
D	103846.54	-16.02	756.88	756.93
E	103856.54	-16.02	756.81	756.85
CL. BRG. PIER 1	103865.54	-16.02	756.76	756.78
F	103875.54	-16.02	756.71	756.74
G	103885.54	-16.02	756.65	756.69
H	103895.54	-16.02	756.6	756.66
I	103905.54	-16.02	756.56	756.61
J	103915.54	-16.02	756.52	756.56
K	103925.54	-16.02	756.48	756.51
CL. BRG. PIER 2	103934.46	-16.02	756.45	756.47
L	103944.46	-16.02	756.42	756.46
M	103954.46	-16.02	756.39	756.44
N	103964.46	-16.02	756.37	756.44
O	103974.46	-16.02	756.35	756.41
P	103984.46	-16.02	756.34	756.38
CL. BRG. E. ABUT.	103993.46	-16.02	756.32	756.34
CL. EXP. JT.	103994.17	-16.02	756.32	756.34
BK. E. ABUT.	103995.75	-16.02	756.32	756.34

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W. ABUT.	103804.25	-8.81	757.32	757.34
CL. EXP. JT.	103805.83	-8.81	757.31	757.33
CL. BRG. W. ABUT.	103806.54	-8.81	757.30	757.32
A	103816.54	-8.81	757.22	757.27
B	103826.54	-8.81	757.15	757.21
C	103836.54	-8.81	757.08	757.14
D	103846.54	-8.81	757.01	757.06
E	103856.54	-8.81	756.95	756.98
CL. BRG. PIER 1	103865.54	-8.81	756.89	756.91
F	103875.54	-8.81	756.84	756.87
G	103885.54	-8.81	756.79	756.83
H	103895.54	-8.81	756.74	756.79
I	103905.54	-8.81	756.69	756.74
J	103915.54	-8.81	756.65	756.69
K	103925.54	-8.81	756.61	756.64
CL. BRG. PIER 2	103934.46	-8.81	756.58	756.60
L	103944.46	-8.81	756.55	756.59
M	103954.46	-8.81	756.53	756.58
N	103964.46	-8.81	756.50	756.57
O	103974.46	-8.81	756.48	756.54
P	103984.46	-8.81	756.47	756.51
CL. BRG. E. ABUT.	103993.46	-8.81	756.46	756.48
CL. EXP. JT.	103994.17	-8.81	756.46	756.48
BK. E. ABUT.	103995.75	-8.81	756.46	756.48

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W. ABUT.	103804.25	-1.6	757.43	757.45
CL. EXP. JT.	103805.83	-1.6	757.42	757.44
CL. BRG. W. ABUT.	103806.54	-1.6	757.41	757.43
A	103816.54	-1.6	757.33	757.38
B	103826.54	-1.6	757.26	757.32
C	103836.54	-1.6	757.19	757.26
D	103846.54	-1.6	757.12	757.17
E	103856.54	-1.6	757.06	757.09
CL. BRG. PIER 1	103865.54	-1.6	757.01	757.03
F	103875.54	-1.6	756.95	756.98
G	103885.54	-1.6	756.90	756.94
H	103895.54	-1.6	756.85	756.90
I	103905.54	-1.6	756.81	756.86
J	103915.54	-1.6	756.76	756.81
K	103925.54	-1.6	756.73	756.76
CL. BRG. PIER 2	103934.46	-1.6	756.70	756.72
L	103944.46	-1.6	756.67	756.70
M	103954.46	-1.6	756.64	756.69
N	103964.46	-1.6	756.62	756.68
O	103974.46	-1.6	756.60	756.66
P	103984.46	-1.6	756.58	756.62
CL. BRG. E. ABUT.	103993.46	-1.6	756.57	756.59
CL. EXP. JT.	103994.17	-1.6	757.57	757.59
BK. E. ABUT.	103995.75	-1.6	756.57	756.59

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008
EXAMINED *Thomas J. Domagalick*
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-3
MCLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 24 SHEETS
FAI 74	(57-22) BR-3	MCLEAN	42	17	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #70672

CL ROADWAY, P.G. & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W. ABUT.	103804.25	0.00	757.46	757.48
CL. EXP. JT.	103805.83	0.00	757.44	757.46
CL. BRG. W. ABUT.	103806.54	0.00	757.44	757.46
A	103816.54	0.00	757.36	757.41
B	103826.54	0.00	757.29	757.35
C	103836.54	0.00	757.22	757.28
D	103846.54	0.00	757.15	757.20
E	103856.54	0.00	757.09	757.12
CL. BRG. PIER 1	103865.54	0.00	757.03	757.05
F	103875.54	0.00	756.98	757.01
G	103885.54	0.00	756.92	756.97
H	103895.54	0.00	756.88	756.93
I	103905.54	0.00	756.83	756.88
J	103915.54	0.00	756.79	756.83
K	103925.54	0.00	756.75	756.78
CL. BRG. PIER 2	103934.46	0.00	756.72	756.74
L	103944.46	0.00	756.69	756.73
M	103954.46	0.00	756.66	756.72
N	103964.46	0.00	756.64	756.71
O	103974.46	0.00	756.62	756.68
P	103984.46	0.00	756.61	756.65
CL. BRG. E. ABUT.	103993.46	0.00	756.60	756.62
CL. EXP. JT.	103994.17	0.00	756.59	756.61
BK. E. ABUT.	103995.75	0.00	756.59	756.61

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W. ABUT.	103804.25	5.60	757.37	757.39
CL. EXP. JT.	103805.83	5.60	757.36	757.38
CL. BRG. W. ABUT.	103806.54	5.60	757.35	757.37
A	103816.54	5.60	757.27	757.32
B	103826.54	5.60	757.20	757.26
C	103836.54	5.60	757.13	757.19
D	103846.54	5.60	757.06	757.11
E	103856.54	5.60	757.00	757.03
CL. BRG. PIER 1	103865.54	5.60	756.94	756.96
F	103875.54	5.60	756.89	756.92
G	103885.54	5.60	756.84	756.88
H	103895.54	5.60	756.79	756.84
I	103905.54	5.60	756.74	756.79
J	103915.54	5.60	756.70	756.74
K	103925.54	5.60	756.66	756.69
CL. BRG. PIER 2	103934.46	5.60	756.63	756.65
L	103944.46	5.60	756.60	756.64
M	103954.46	5.60	756.58	756.63
N	103964.46	5.60	756.55	756.62
O	103974.46	5.60	756.53	756.60
P	103984.46	5.60	756.52	756.56
CL. BRG. E. ABUT.	103993.46	5.60	756.51	756.53
CL. EXP. JT.	103994.17	5.60	756.51	756.53
BK. E. ABUT.	103995.75	5.60	756.51	756.53

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008
 EXAMINED *Thomas J. Domagalick*
 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-3
MCLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 24 SHEETS
FAI 74	(57-22) BR-3	McLEAN	42	18	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #70672

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W. ABUT.	103804.25	12.81	757.25	757.27
CL. EXP. JT.	103805.83	12.81	757.24	757.26
CL. BRG. W. ABUT.	103806.54	12.81	757.23	757.25
A	103816.54	12.81	757.16	757.20
B	103826.54	12.81	757.08	757.14
C	103836.54	12.81	757.01	757.08
D	103846.54	12.81	756.94	756.99
E	103856.54	12.81	756.88	756.91
CL. BRG. PIER 1	103865.54	12.81	756.83	756.85
F	103875.54	12.81	756.77	756.80
G	103885.54	12.81	756.72	756.76
H	103895.54	12.81	756.67	756.72
I	103905.54	12.81	756.63	756.68
J	103915.54	12.81	756.59	756.63
K	103925.54	12.81	756.55	756.58
CL. BRG. PIER 2	103934.46	12.81	756.52	756.54
L	103944.46	12.81	756.49	756.52
M	103954.46	12.81	756.46	756.51
N	103964.46	12.81	756.44	756.50
O	103974.46	12.81	756.42	756.48
P	103984.46	12.81	756.40	756.45
CL. BRG. E. ABUT.	103993.46	12.81	756.39	756.41
CL. EXP. JT.	103994.17	12.81	756.39	756.41
BK. E. ABUT.	103995.75	12.81	756.39	756.41

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection & Grinding
BK. W. ABUT.	103804.25	20.02	757.10	757.12
CL. EXP. JT.	103805.83	20.02	757.09	757.11
CL. BRG. W. ABUT.	103806.54	20.02	757.08	757.10
A	103816.54	20.02	757.01	757.05
B	103826.54	20.02	756.93	756.99
C	103836.54	20.02	756.86	756.93
D	103846.54	20.02	756.79	756.84
E	103856.54	20.02	756.73	756.77
CL. BRG. PIER 1	103865.54	20.02	756.68	756.70
F	103875.54	20.02	756.62	756.65
G	103885.54	20.02	756.57	756.61
H	103895.54	20.02	756.52	756.57
I	103905.54	20.02	756.48	756.53
J	103915.54	20.02	756.44	756.48
K	103925.54	20.02	756.40	756.43
CL. BRG. PIER 2	103934.46	20.02	756.37	756.39
L	103944.46	20.02	756.34	756.37
M	103954.46	20.02	756.31	756.36
N	103964.46	20.02	756.29	756.35
O	103974.46	20.02	756.27	756.33
P	103984.46	20.02	756.25	756.30
CL. BRG. E. ABUT.	103993.46	20.02	756.24	756.26
CL. EXP. JT.	103994.17	20.02	756.24	756.26
BK. E. ABUT.	103995.75	20.02	756.24	756.26

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008
 EXAMINED *Thomas J. Domagalick*
 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-3
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8 24 SHEETS
FAI 74	(57-22) BR-3	McLEAN	42	19	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #70672

NORTH EDGE OF SHOULDER

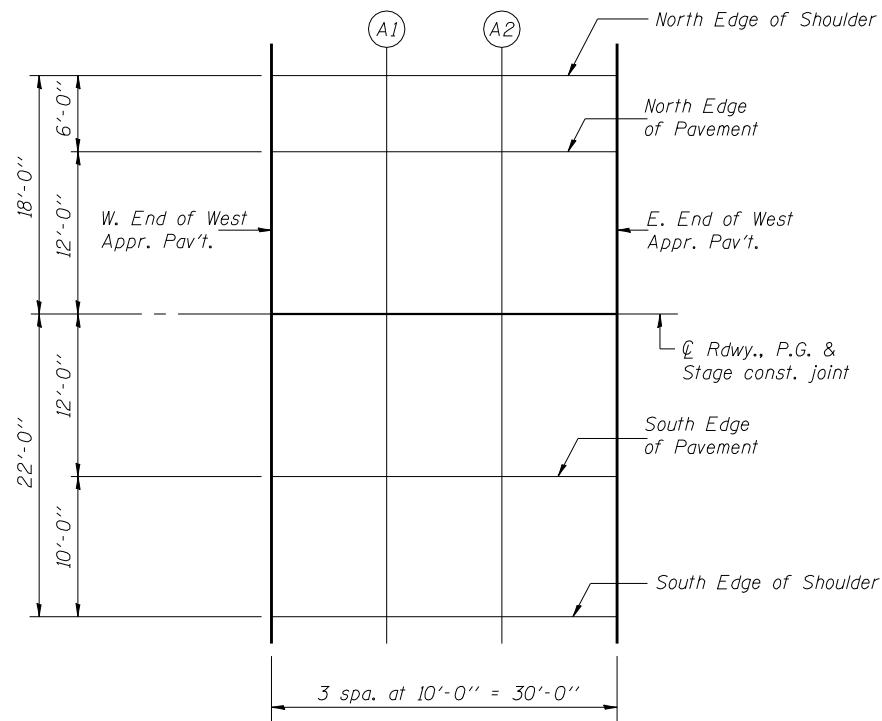
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End West Appr. Pav't.	103774.75	-18.00	757.40	757.42
A1	103784.75	-18.00	757.31	757.33
A2	103794.75	-18.00	757.22	757.24
E. End West Appr. Pav't.	103804.75	-18.00	757.14	757.16

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End West Appr. Pav't.	103774.75	-12.00	757.52	757.54
A1	103784.75	-12.00	757.43	757.45
A2	103794.75	-12.00	757.35	757.37
E. End West Appr. Pav't.	103804.75	-12.00	757.26	757.28

☉ ROADWAY, PROFILE GRADE & STAGE CONST. JT.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End West Appr. Pav't.	103774.75	0.00	757.71	757.73
A1	103784.75	0.00	757.62	757.64
A2	103794.75	0.00	757.53	757.55
E. End West Appr. Pav't.	103804.75	0.00	757.45	757.47



PLAN
West Approach (E.B.)



SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End West Appr. Pav't.	103774.75	12.00	757.52	757.54
A1	103784.75	12.00	757.43	757.45
A2	103794.75	12.00	757.35	757.37
E. End West Appr. Pav't.	103804.75	12.00	757.26	757.28

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End West Appr. Pav't.	103774.75	22.00	757.31	757.33
A1	103784.75	22.00	757.22	757.24
A2	103794.75	22.00	757.14	757.16
E. End West Appr. Pav't.	103804.75	22.00	757.06	757.08

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008
EXAMINED *Thomas J. Domagalick*
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-3
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9 24 SHEETS
FAI 74	(57-22) BR-3	McLEAN	42	20	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #70672

NORTH EDGE OF SHOULDER

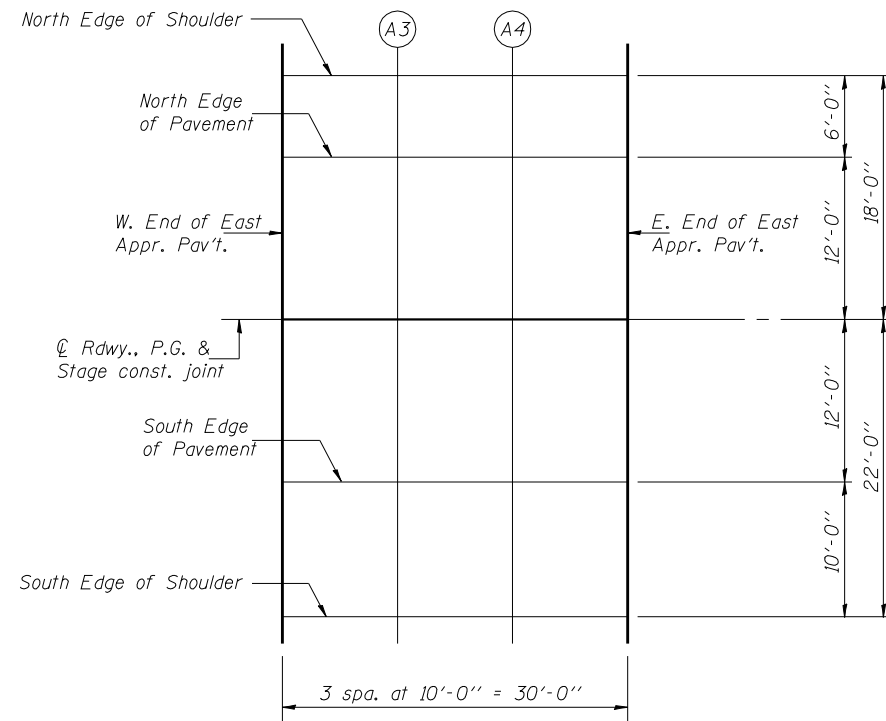
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End East Appr. Pav't.	103995.25	-18.00	756.28	756.30
A3	104005.25	-18.00	756.27	756.29
A4	104015.25	-18.00	756.27	756.29
E. End East Appr. Pav't.	104025.25	-18.00	756.27	756.29

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End East Appr. Pav't.	103995.25	-12.00	756.41	756.43
A3	104005.25	-12.00	756.40	756.42
A4	104015.25	-12.00	756.39	756.41
E. End East Appr. Pav't.	104025.25	-12.00	756.39	756.41

☉ ROADWAY, PROFILE GRADE & STAGE CONST. JT.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End East Appr. Pav't.	103995.25	0.00	756.59	756.61
A3	104005.25	0.00	756.59	756.61
A4	104015.25	0.00	756.58	756.60
E. End East Appr. Pav't.	104025.25	0.00	756.58	756.60



PLAN
East Approach (E.B.)



SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End East Appr. Pav't.	103995.25	12.00	756.41	756.43
A3	104005.25	12.00	756.40	756.42
A4	104015.25	12.00	756.39	756.41
E. End East Appr. Pav't.	104025.25	12.00	756.39	756.41

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. End East Appr. Pav't.	103995.25	22.00	756.20	756.22
A3	104005.25	22.00	756.19	756.21
A4	104015.25	22.00	756.19	756.21
E. End East Appr. Pav't.	104025.25	22.00	756.18	756.20

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

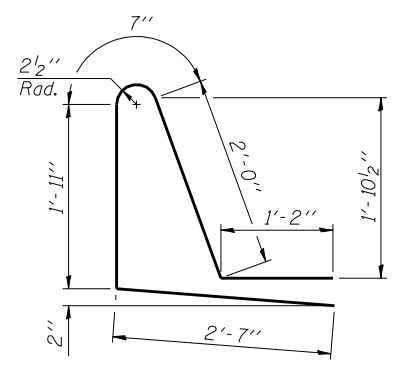
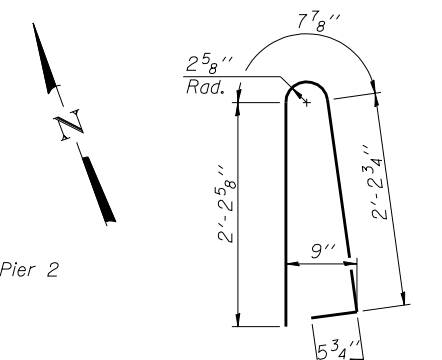
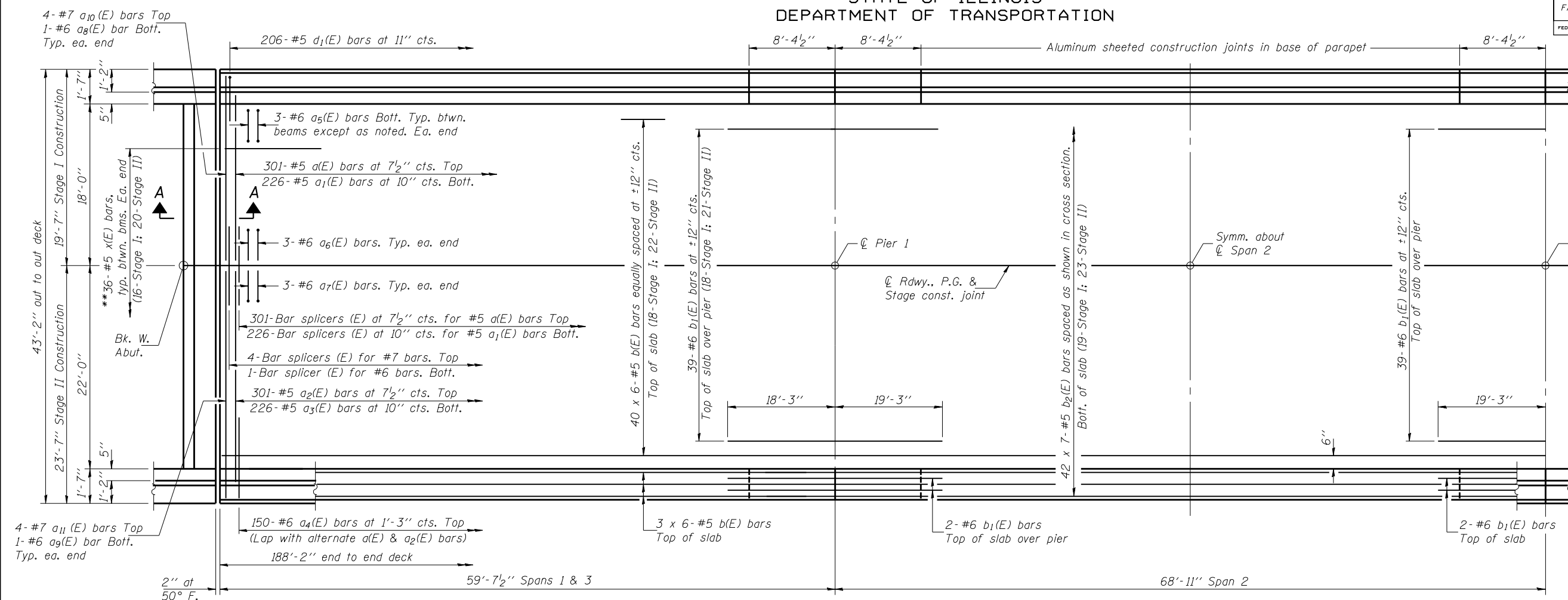
EXAMINED	Jan. 31, 2008
PASSED	Thomas J. Domagala ENGINEER OF BRIDGE DESIGN
	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

**TOP OF EAST APPROACH
SLAB ELEVATIONS
F.A.I. RT. 74 - SEC. (57-22)BR-3
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

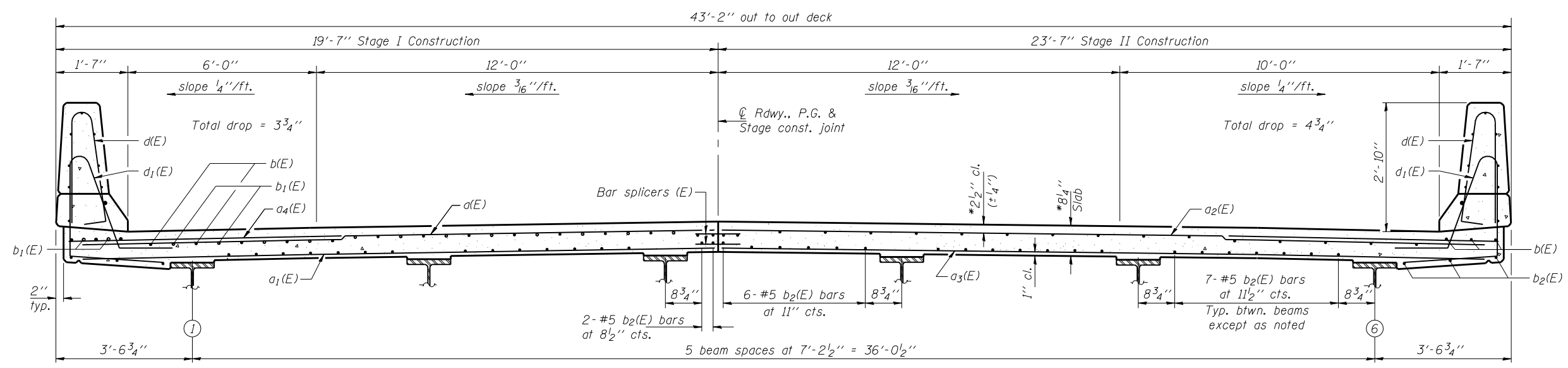
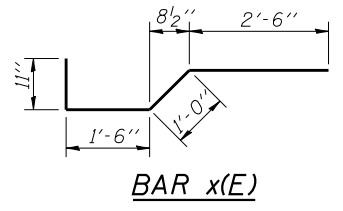
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
FAI 74	(57-22) BR-3	MCLEAN	42	21	24 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #70672



**7- #5 $x(E)$ bars between each adjacent pair of beams, except
2- #5 $x(E)$ bars between Beam 3 and stage const. line, and
6- #5 $x(E)$ bars between stage const. line and Beam 4.

PARTIAL PLAN



- Notes:
- See sheet 11 of 24 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 11 of 24 for parapet reinforcement.
 - See sheet 11 of 24 for Section A-A.
 - See sheet 24 of 24 for bar splicer details.
 - Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details of the Preformed Joint Strip Seal shown on sheet 13 of 24.

NEAR PIER

CROSS SECTION
(Looking East)

NEAR MIDSPAN

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008

EXAMINED *Thomas J. Domagalick*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

*Prior to Grinding

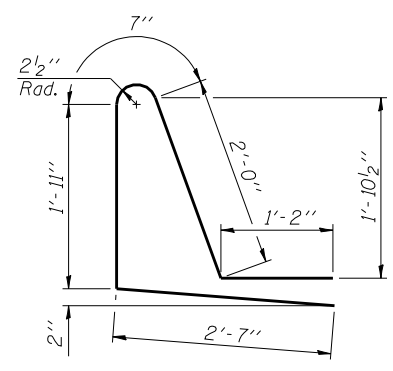
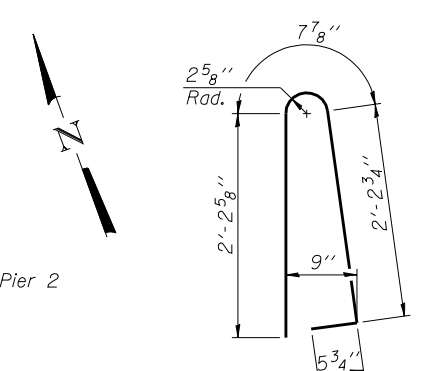
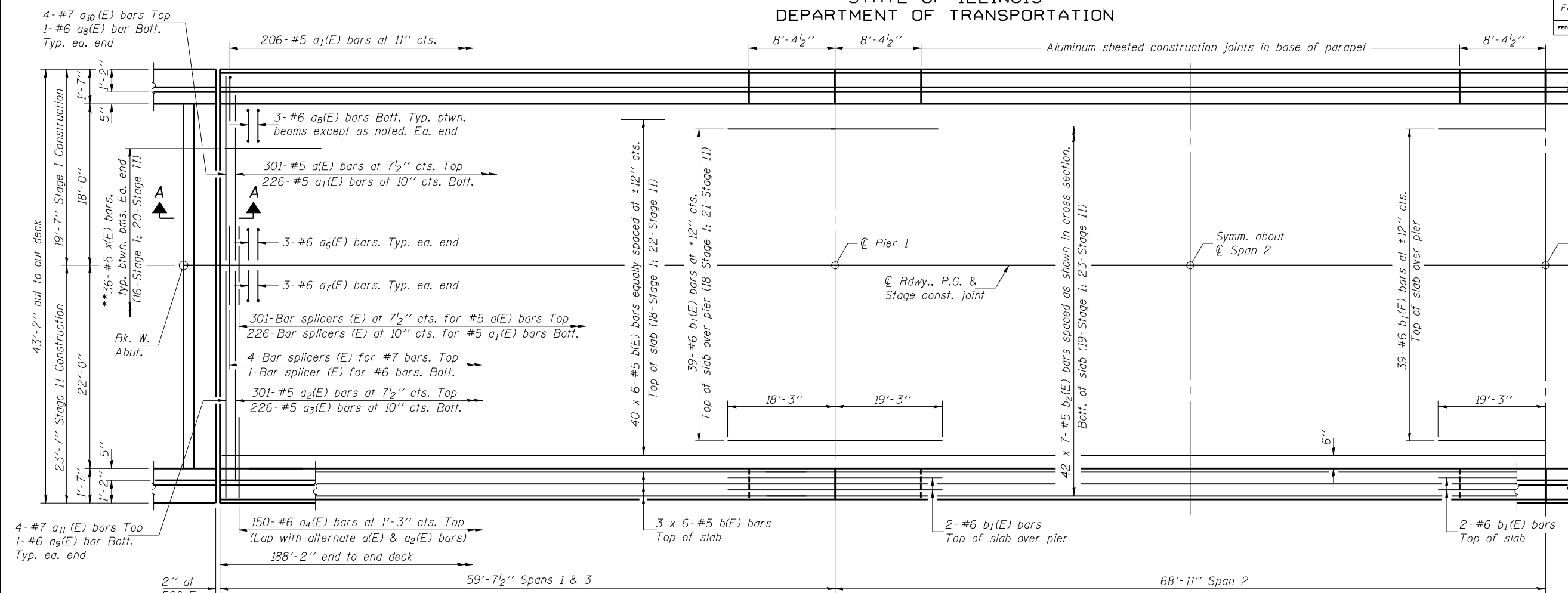
MIN. BAR LAP
#5 bar = 1'-8"

SUPERSTRUCTURE
F.A.I. RT. 74 - SEC. (57-22)BR-3
MCLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

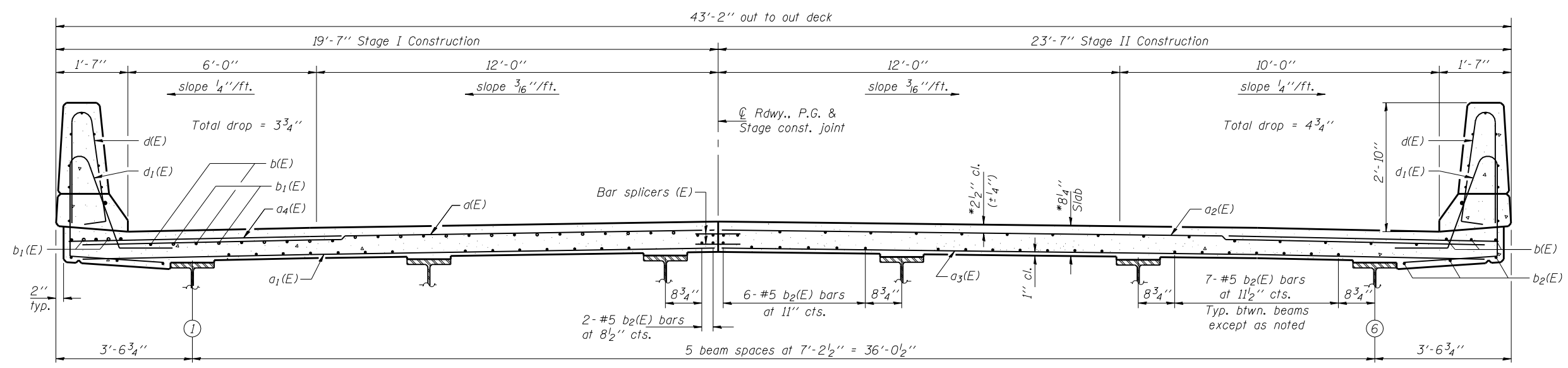
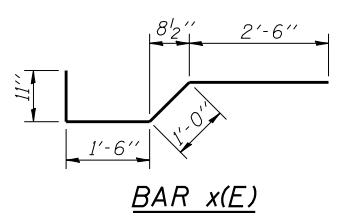
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
FAI 74	(57-22) BR-3	MCLEAN	42	21	24 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #70672



**7- #5 $x(E)$ bars between each adjacent pair of beams, except
2- #5 $x(E)$ bars between Beam 3 and stage const. line, and
6- #5 $x(E)$ bars between stage const. line and Beam 4.

PARTIAL PLAN



Notes: See sheet 11 of 24 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 11 of 24 for parapet reinforcement.
See sheet 11 of 24 for Section A-A.
See sheet 24 of 24 for bar splicer details.
Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details of the Preformed Joint Strip Seal shown on sheet 13 of 24.

CROSS SECTION
(Looking East)

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008

EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

*Prior to Grinding

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

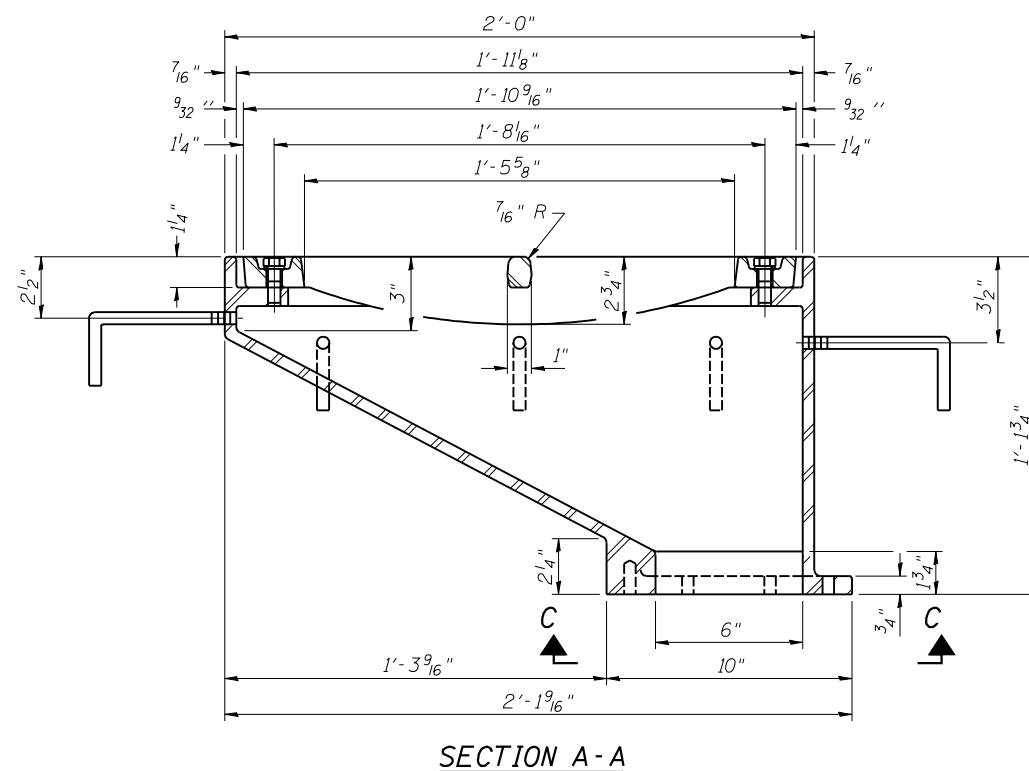
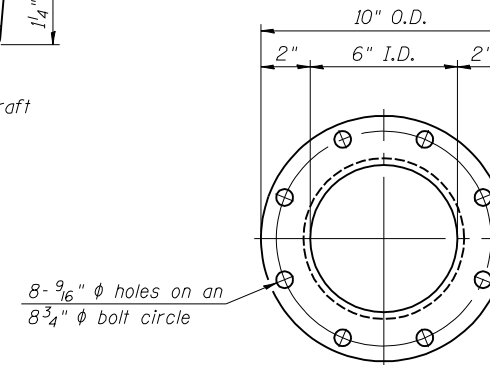
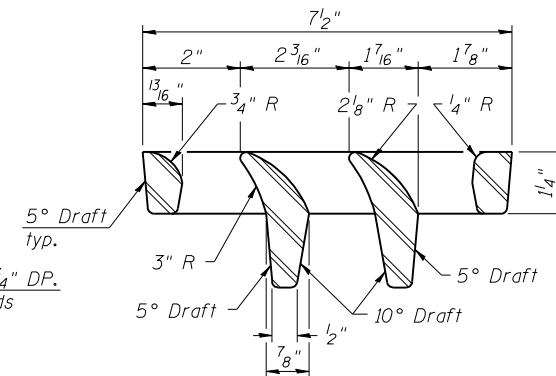
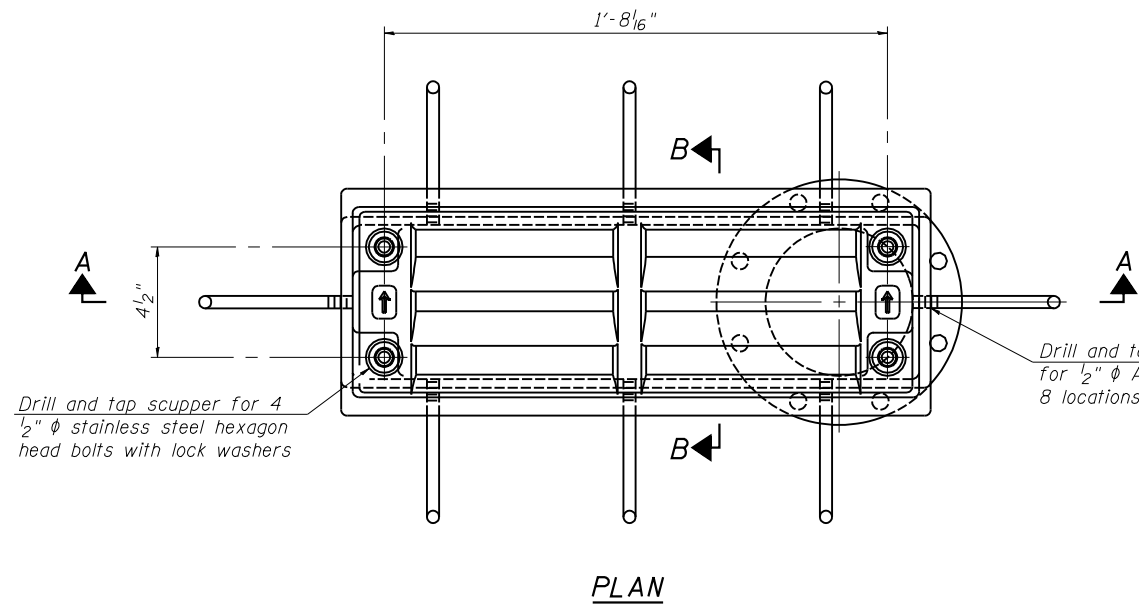
SUPERSTRUCTURE
F.A.I. RT. 74 - SEC. (57-22)BR-3
MCLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

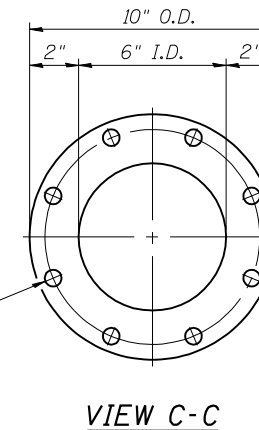
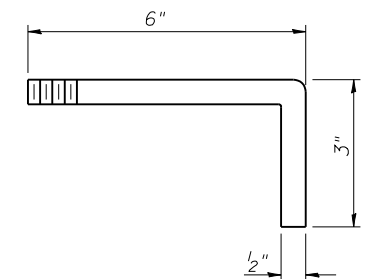
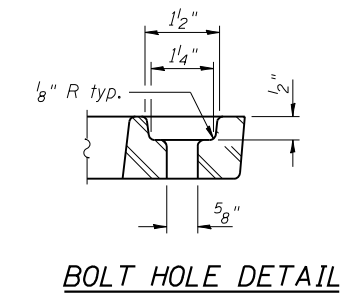
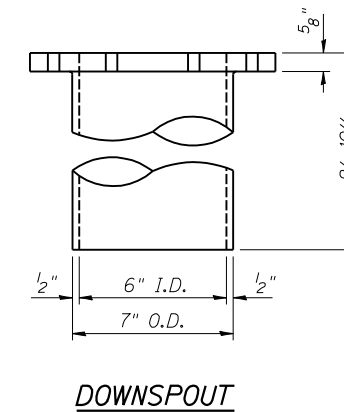
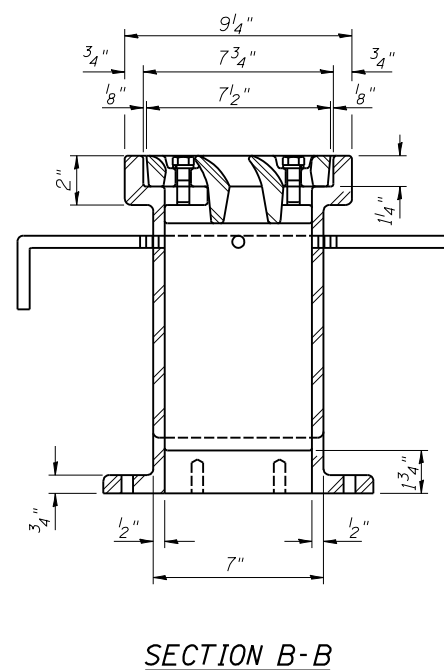
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 12 24 SHEETS
FAI 74	(57-22) BR-3	McLEAN	42	23	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #70672

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.
 Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
 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.



See sheet 11 of 24 for scupper location relative to parapet.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	2

DRAINAGE SCUPPER, DS-12
 F.A.I. RT. 74 - SEC. (57-22)BR-3
 McLEAN COUNTY
 STATION 1039+00
 STRUCTURE NO. 057-0125 (E.B.)

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

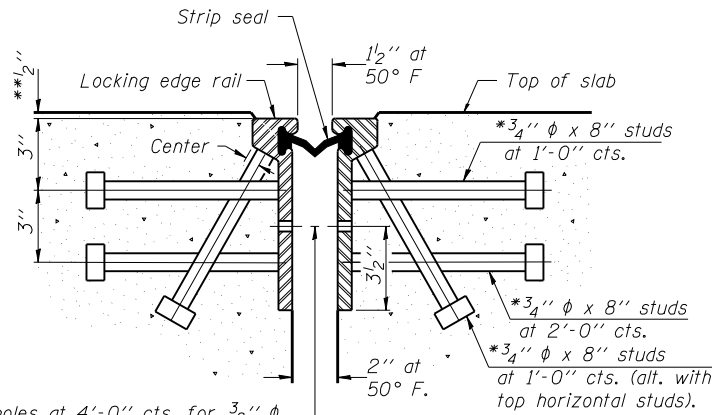
Jan. 31, 2008
 EXAMINED *Thomas J. Domagalick*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 13 24 SHEETS
FAI 74	(57-22) BR-3	MCLEAN	42	24	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

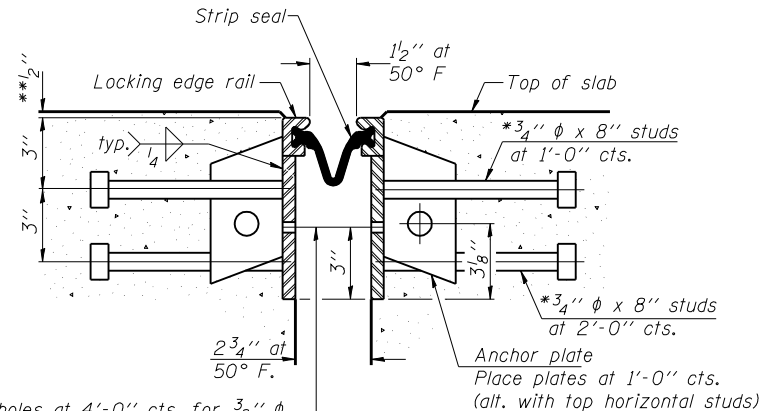
Contract #70672

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



7/16" phi holes at 4'-0" cts. for 3/8" phi bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU
ROLLED RAIL JOINT

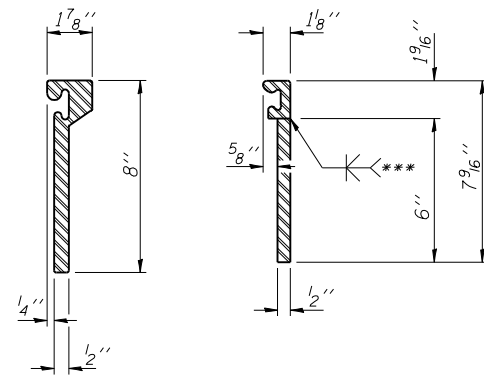


7/16" phi holes at 4'-0" cts. for 3/8" phi bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU
WELDED RAIL JOINT

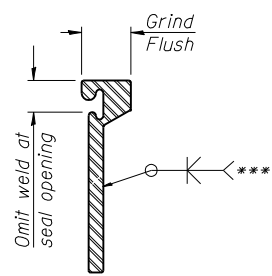
Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". 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.



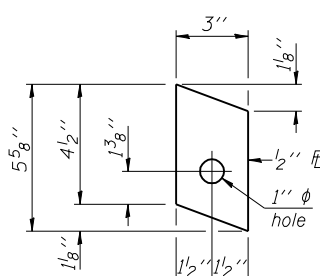
ROLLED
(EXTRUDED) RAIL

WELDED RAIL



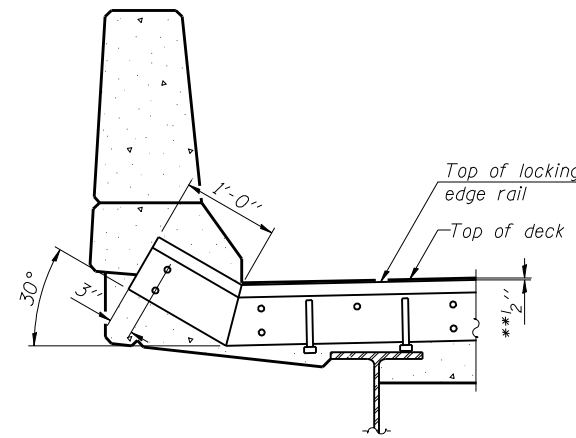
LOCKING EDGE
RAIL SPLICE

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

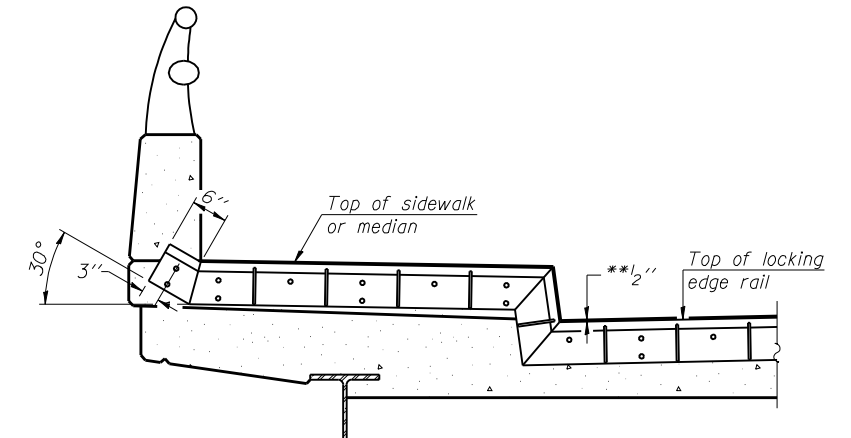


ANCHOR PLATE
(for welded rail)

** Prior to grinding.



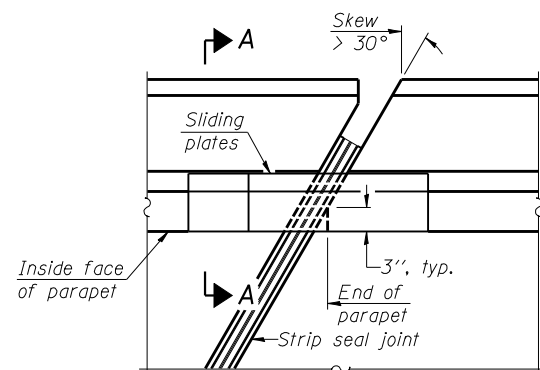
AT PARAPET



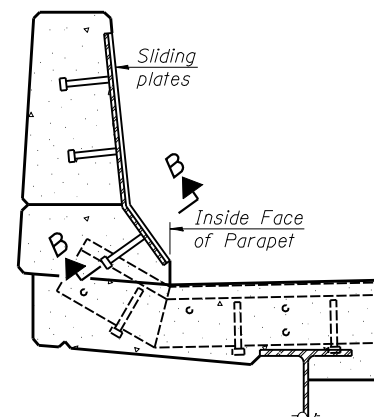
AT SIDEWALK OR MEDIAN

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.

LOCKING EDGE RAILS



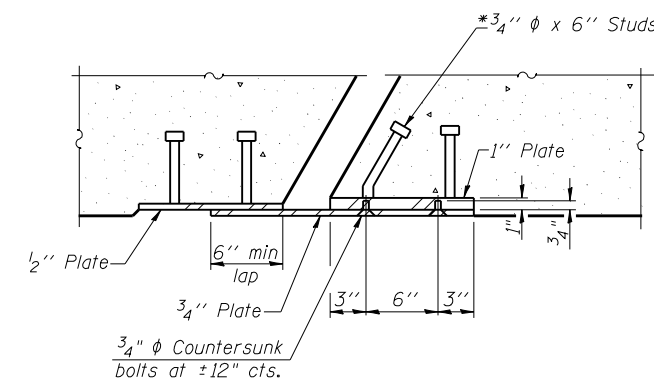
PLAN



SECTION A-A

POINT BLOCK DETAILS
(for skews > 30°)

TYPICAL END TREATMENTS



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	84

MODIFIED PREFORMED
JOINT STRIP SEAL
F.A.I. RT. 74 - SEC. (57-22)BR-3
MCLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

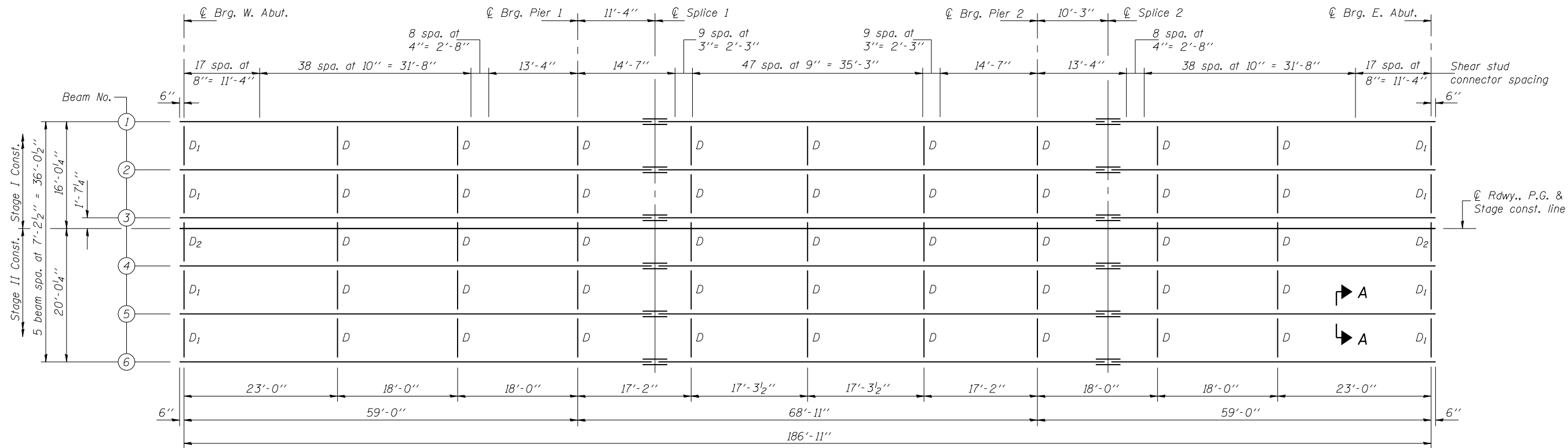
EXAMINED	Thomas J. Domagalaki ENGINEER OF BRIDGE DESIGN	Jan. 31, 2008
PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-3	MCLEAN	42	25
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 14
24 SHEETS

Contract #70672



PLAN

All beams shall be W33x118 AASHTO M 270, Grade 50 (NTR)

- Notes:
- . Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 - . All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
 - . For Section A-A, see sheet 15 of 24.

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008
EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

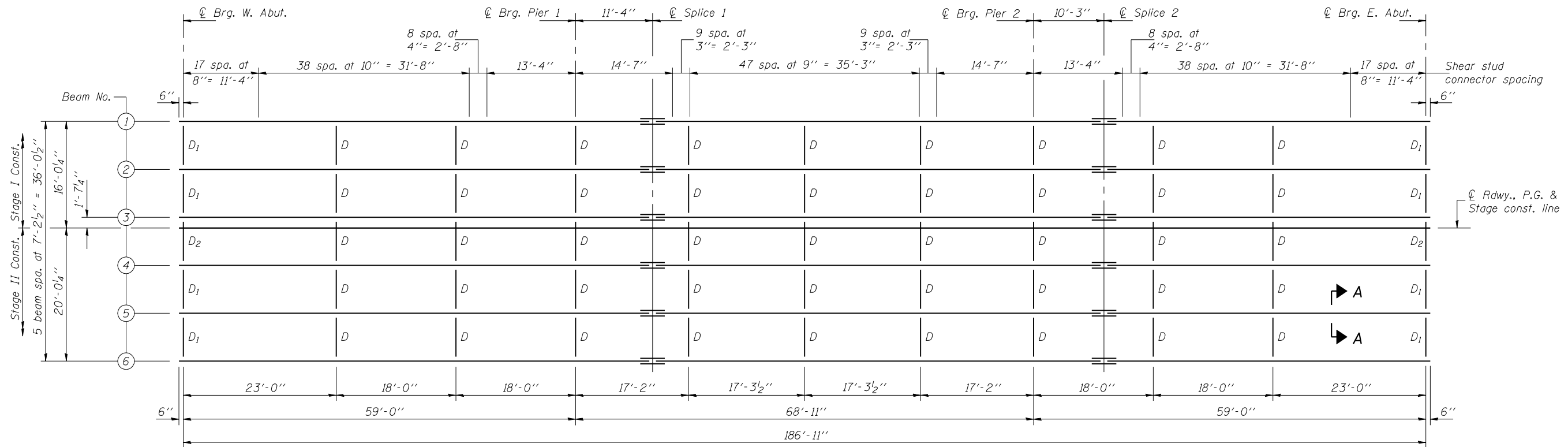
STRUCTURAL STEEL
F.A.I. RT. 74 - SEC. (57-22)BR-3
MCLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-3	McLEAN	42	25
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 14
24 SHEETS

Contract #70672



PLAN

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For Section A-A, see sheet 15 of 24.

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

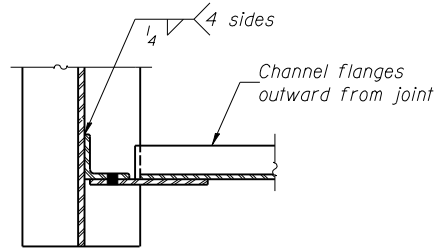
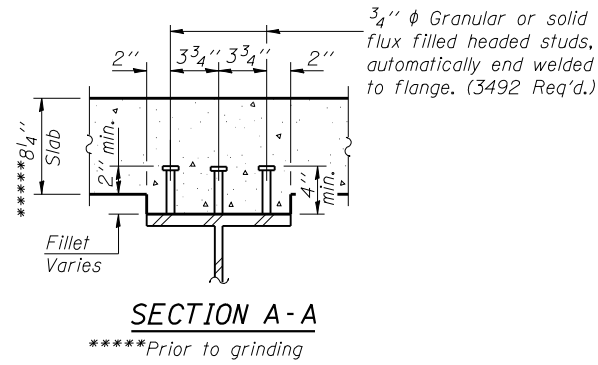
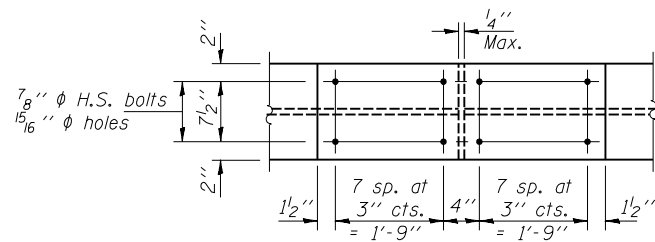
Jan. 31, 2008
EXAMINED *Thomas J. Domagalaki*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURAL STEEL
F.A.I. RT. 74 - SEC. (57-22)BR-3
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 15 24 SHEETS
FAI 74	(57-22) BR-3	MCLEAN	42	26	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #70672



	0.4 Sp. 1 & 0.6 Sp. 3	Piers 1 & 2	0.5 Sp. 2
I_s	(in ⁴) 5900	5900	5900
$I_c(n)$	(in ⁴) 16804	—	16804
$I_c(3n)$	(in ⁴) 12507	—	12507
S_s	(in ³) 359	359	359
$S_c(n)$	(in ³) 544	—	544
$S_c(3n)$	(in ³) 493	—	493
ρ	(k/')	0.875	0.875
$M \rho$	(k)	222.4	518.3
$s \rho$	(k/')	0.510	—
$M_s \rho$	(k)	149.2	—
$M \ddagger$	(k)	446.0	239.0
M_{imp}	(k)	121.3	63.3
$\rho_3 [M \ddagger + M_{imp}]$	(k)	945.5	503.8
M_a	(k)	1712.2	1328.7
M_u	(k)	2164.5	—
$f_s \rho$ non-comp	(ksi)	7.43	17.32
$f_s \rho$ (comp)	(ksi)	3.63	—
$f_s \rho_3 [M \ddagger + M_{imp}]$	(ksi)	20.86	16.84
f_s (Overload)	(ksi)	31.92	34.16
f_s (Total)	(ksi)	—	44.41
VR	(k)	53.3	—

	Abutments	Piers
$R \rho$	(k) 32.0	97.3
$R \ddagger$	(k) 30.4	37.5
Imp.	(k) 8.3	9.9
R_{Total}	(k) 70.7	144.7

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 (in⁴ and in³).

$I_c(n), S_c(n)$: 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 (in⁴ and in³).

$I_c(3n), S_c(3n)$: 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 (in⁴ and in³).

ρ : Un-factored non-composite dead load (kips/ft.).

$M \rho$: Un-factored moment due to non-composite dead load (kip-ft.).

$s \rho$: Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s \rho$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

$M \ddagger$: Un-factored live load moment (kip-ft.).

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

M_a : Factored design moment (kip-ft.).

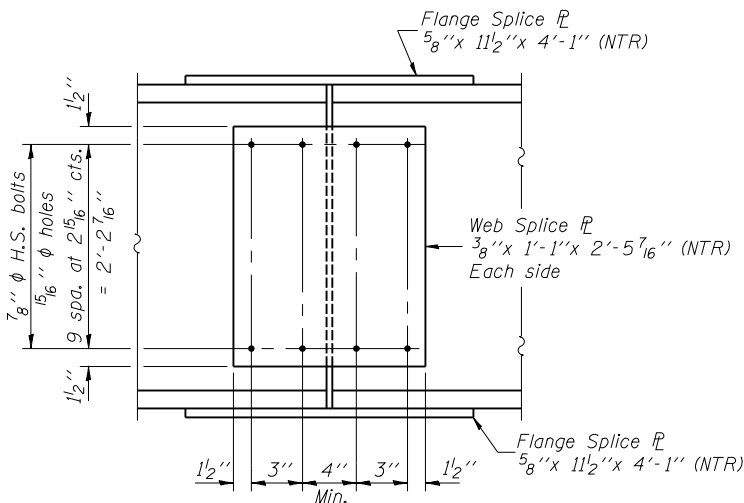
M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi).

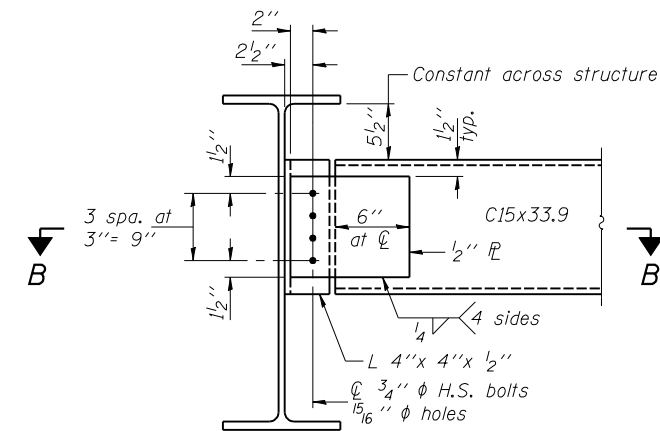
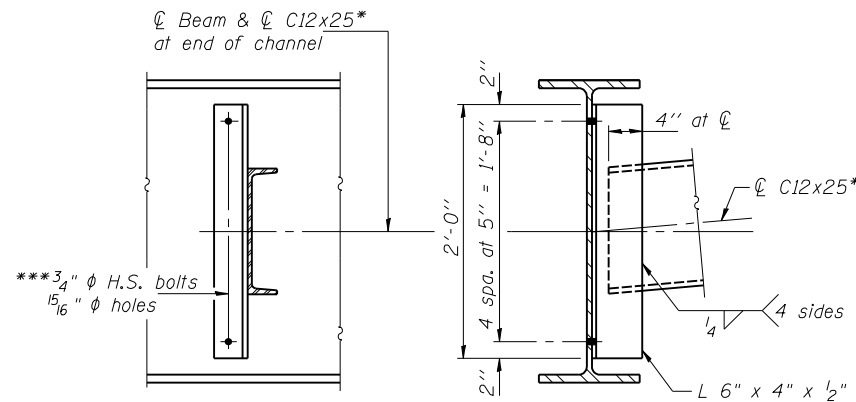
f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).

$\rho_3 [M \rho + M_s \rho + \frac{5}{9} (M \ddagger + M_{imp})]$

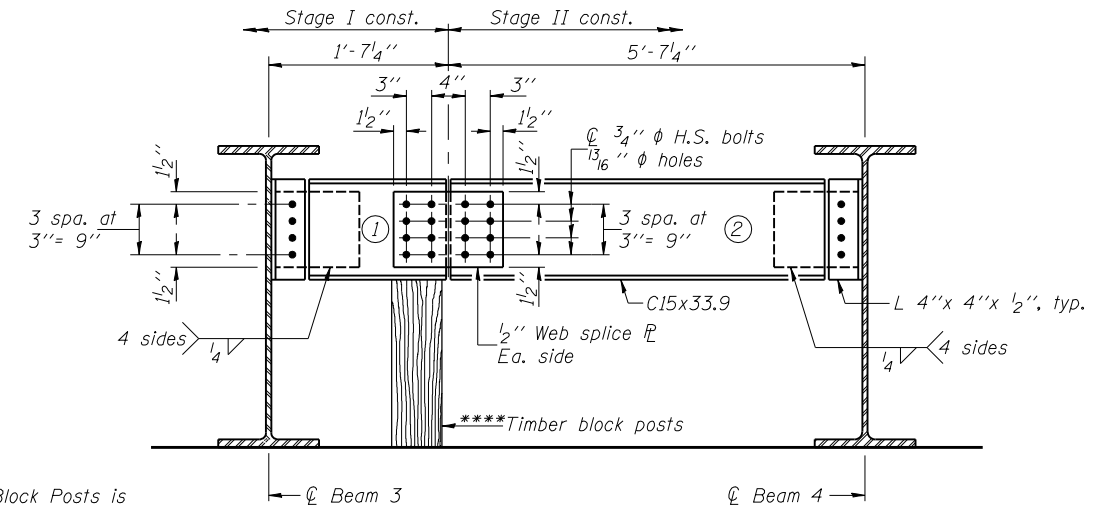
VR: Maximum \ddagger + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).



(See note on sheet 14 of 24 regarding "NTR" designation)



*****Cost of Timber Block Posts is included with Structural Steel.



END DIAPHRAGM D2 STAGE CONSTRUCTION SEQUENCE

- 1.) Order Diaphragm in two sections.
- 2.) Attach section ① of Diaphragm to Beam 3.
- 3.) Place Timber Block Posts between section ① of diaphragm and abutment bearing seat.
- 4.) Attach section ② of diaphragm to both Beam 4 and section ① of diaphragm during Stage II Construction with splice plates.
- 5.) Remove Timber Block Posts.

* Alternate channels C12x30 may be used to facilitate material acquisition. The calculated weight of structural steel is based on the lighter section, C12x25. The alternate, if utilized, will be provided at no extra cost to the department.

*** 1/2" vertical x 13/16" slotted holes in connection angles at the north side of Beam 4 only, except at the piers, provide 5/16" plate washers for slotted holes. The bolts for the slotted holes in angles at Beam 4 shall be finger tightened prior to the deck slab pouring of Stage II Construction and then be fully tightened after completion of Stage II pour.

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

Location	C Brg. W. Abut.	C Brg. Pier 1	C Splice 1	C Brg. Pier 2	C Splice 2	C Brg. E. Abut.
Beam 1	756.45	756.02	755.94	755.71	755.67	755.60
Beam 2	756.58	756.16	756.07	755.84	755.80	755.74
Beam 3	756.69	756.27	756.18	755.96	755.92	755.85
Beam 4	756.63	756.21	756.12	755.89	755.85	755.79
Beam 5	756.51	756.08	756.00	755.78	755.74	755.67
Beam 6	756.36	755.93	756.85	755.63	755.59	755.52

**For fabrication use only.

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.f. duong
CHECKED	DPN/SMR

Jan. 31, 2008

EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

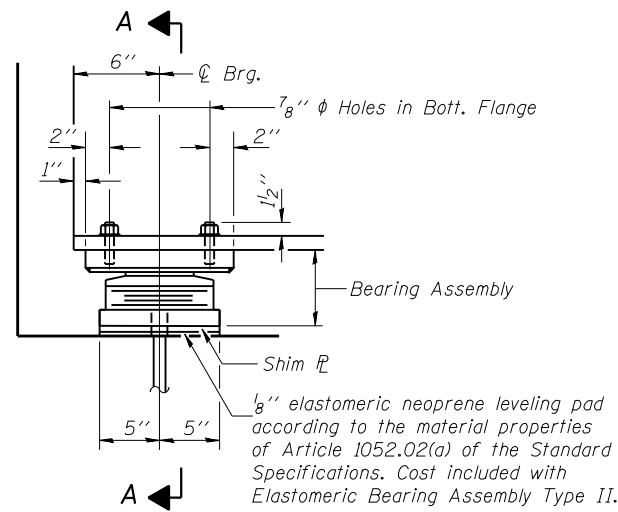
Notes: Two hardened washers required for each set of oversized holes.
All splice plates shall be AASHTO M 270, Grade 50.

STRUCTURAL STEEL DETAILS
F.A.I. RT. 74 - SEC. (57-22)BR-3
MCLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

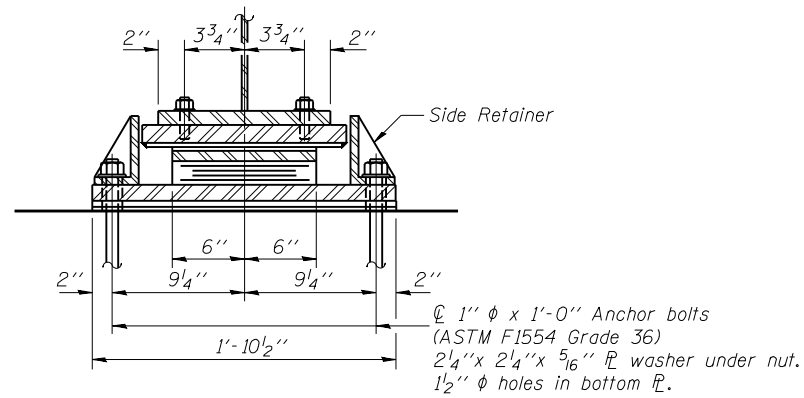
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 17 24 SHEETS
FAI 74	(57-22) BR-3	MCLEAN	42	28	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #70672

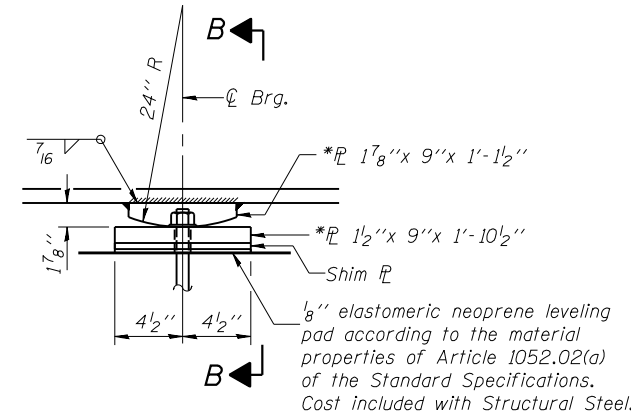


ELEVATION AT EAST ABUT.

TYPE II ELASTOMERIC EXP. BRG.

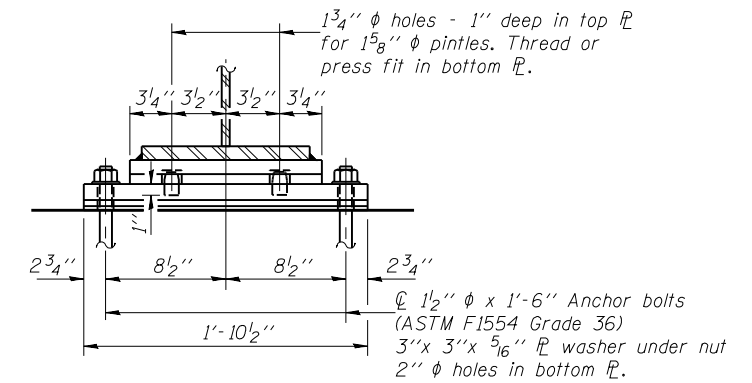


SECTION A-A

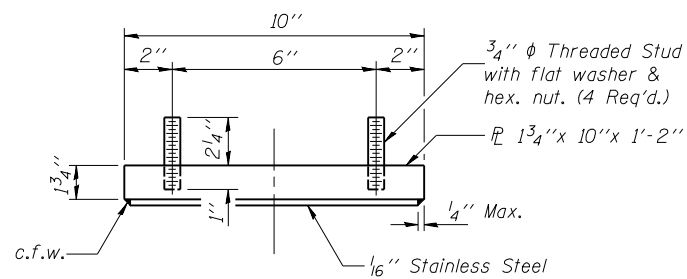


ELEVATION AT PIER 1

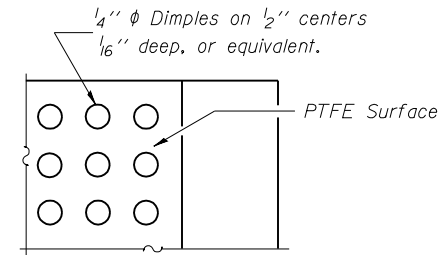
FIXED BEARING



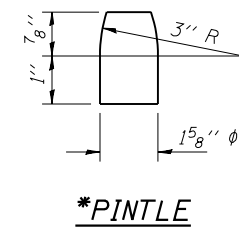
SECTION B-B



TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE



*PINTLE

*AASHTO M 270 Gr. 50

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 at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

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.

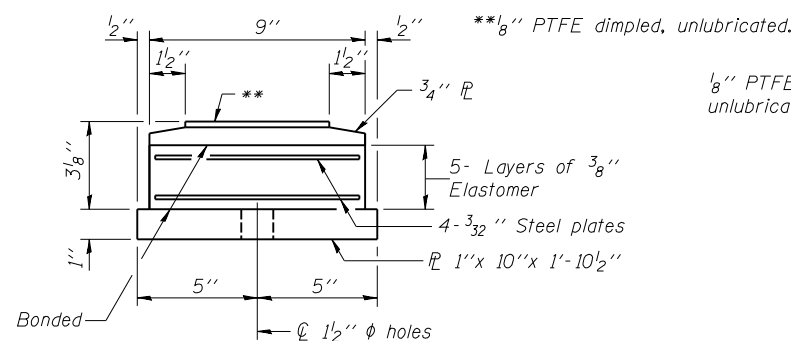
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The 1/8" PTFE 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.

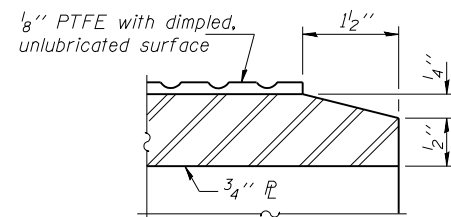
Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

The structural steel plates of the bearing assembly shall conform to the requirements of AASHTO M 270, Grade 50.

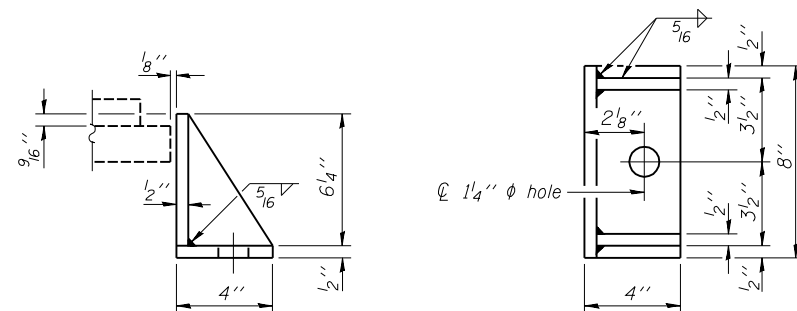
Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.



BOTTOM BEARING ASSEMBLY

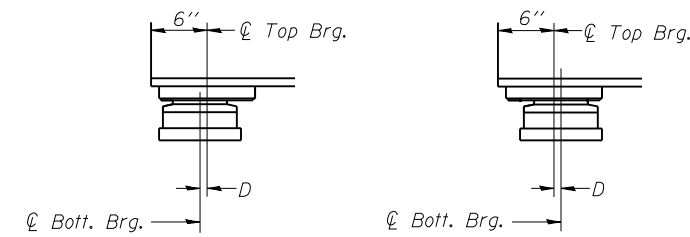


SECTION THRU PTFE



SIDE RETAINER

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



BELOW 50°F.

(Move bott. brg. away from fixed brg.)

ABOVE 50°F.

(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	6
Anchor Bolts 1" φ	Each	12
Anchor Bolts 1 1/2" φ	Each	12

BEARING DETAILS

F.A.I. RT. 74 - SEC. (57-22)BR-3

MCLEAN COUNTY

STATION 1039+00

STRUCTURE NO. 057-0125 (E.B.)

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

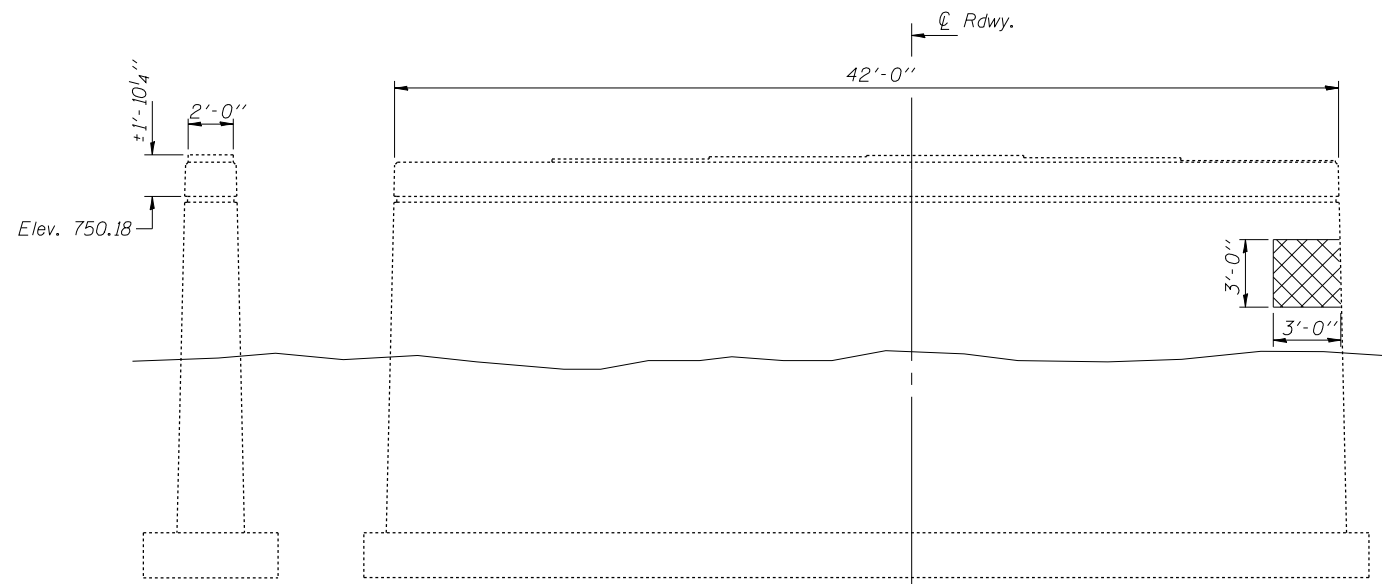
EXAMINED	Jan. 31, 2008
PASSED	Thomas J. Domagala ENGINEER OF BRIDGE DESIGN
	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(57-22) BR-3	McLEAN	42	30
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

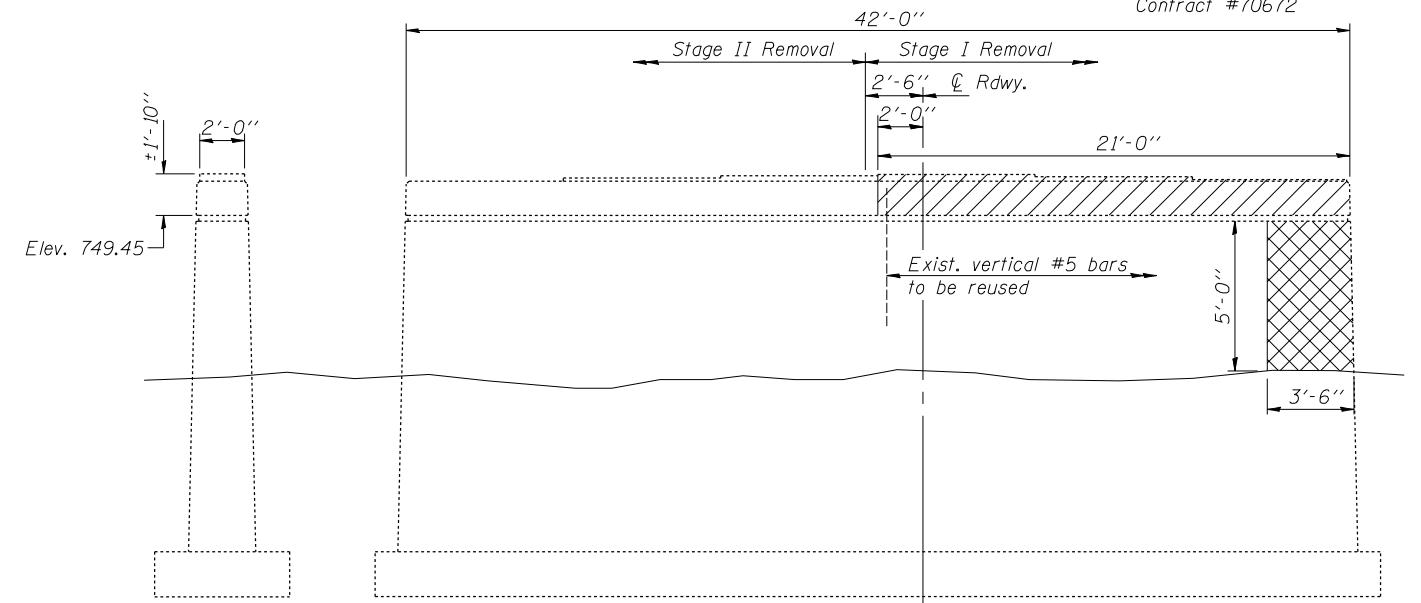
SHEET NO. 19
24 SHEETS

Contract #70672



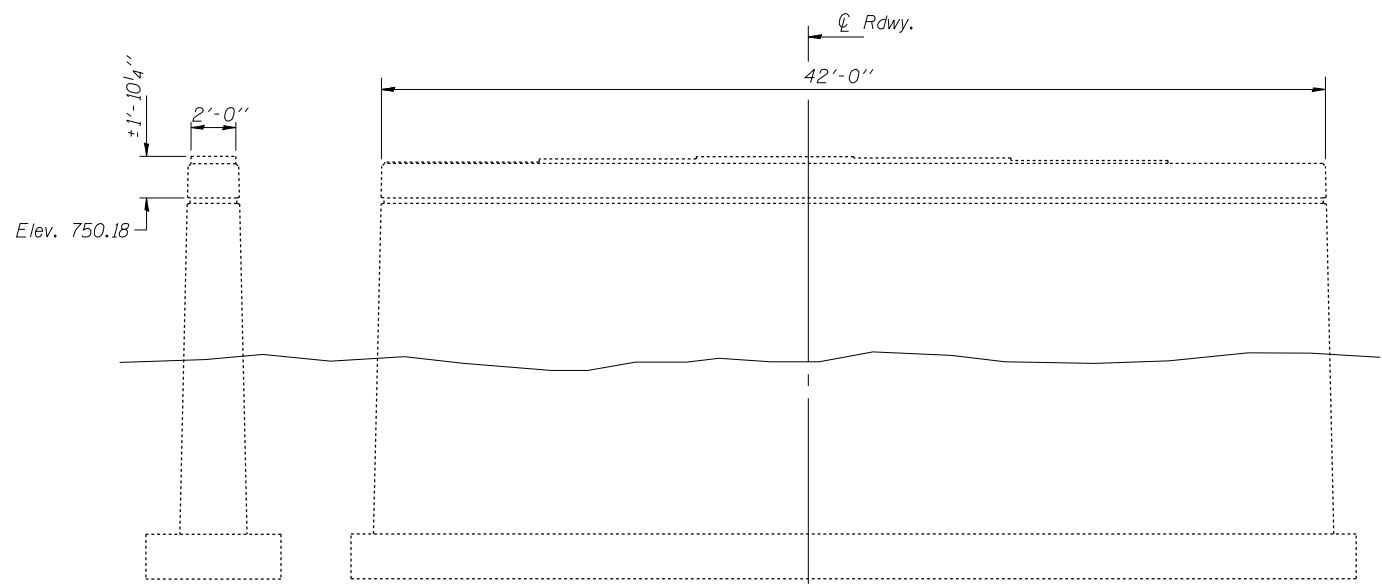
END VIEW

ELEVATION - PIER 1
(East face)



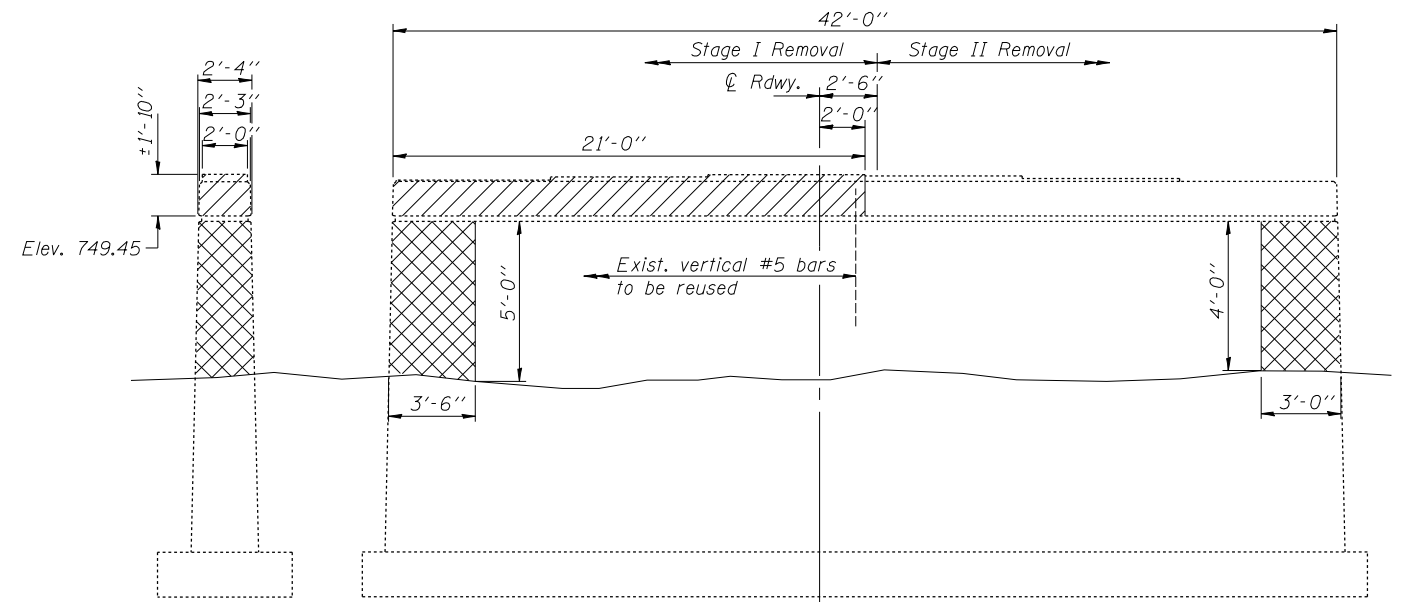
END VIEW

ELEVATION - PIER 2
(East face)



END VIEW

ELEVATION - PIER 1
(West face)



END VIEW

ELEVATION - PIER 2
(West face)

- Notes:
- . Hatched areas indicate Concrete Removal.
 - . Cross-hatched areas indicate Structural Repair of Concrete (Depth ≤ 5")
 - . Existing reinforcement bars extending into areas of new construction of Pier 2 shall be cleaned, straightened and incorporated into the new construction.
 - . The existing anchor bolts at Pier 1 and at Beams 4 thru 6 at Pier 2 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.	2.9
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	56

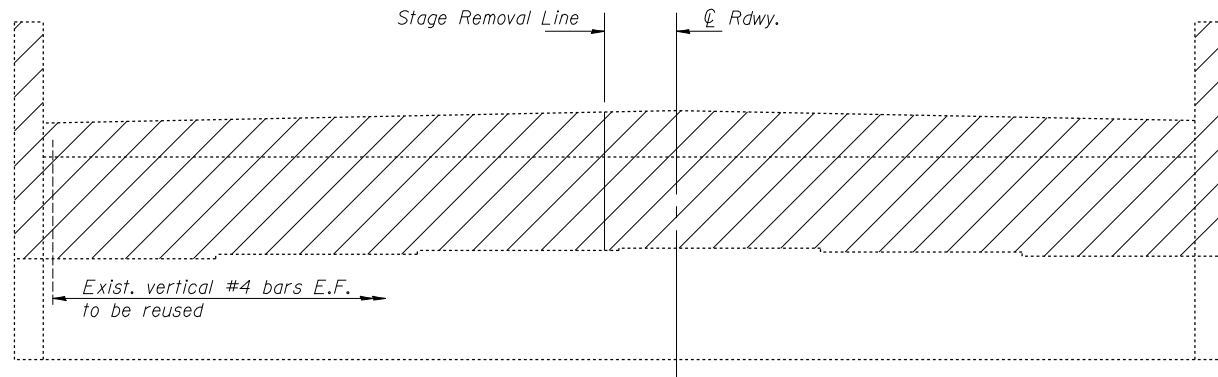
DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008
EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

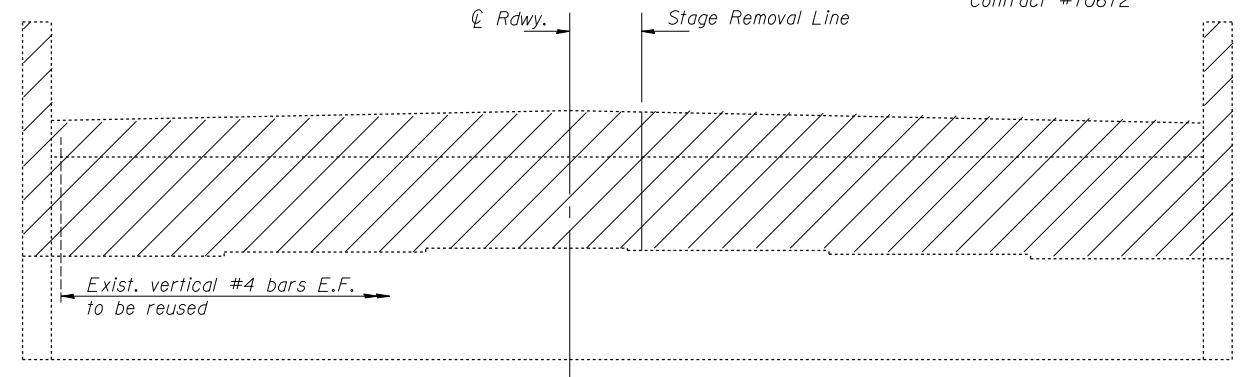
CONCRETE REMOVAL & REPAIRS-PIERS
F.A.I. RT. 74 - SEC. (57-22)BR-3
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

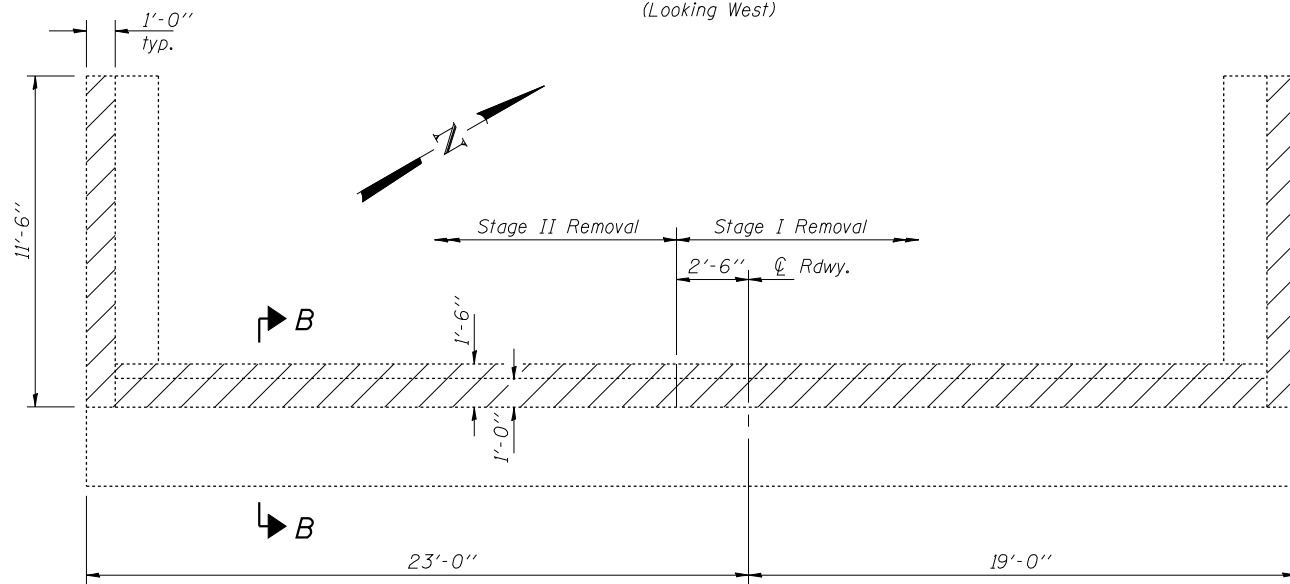
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 18 24 SHEETS
FAI 74	(57-22) BR-3	McLEAN	42	29	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract #70672		



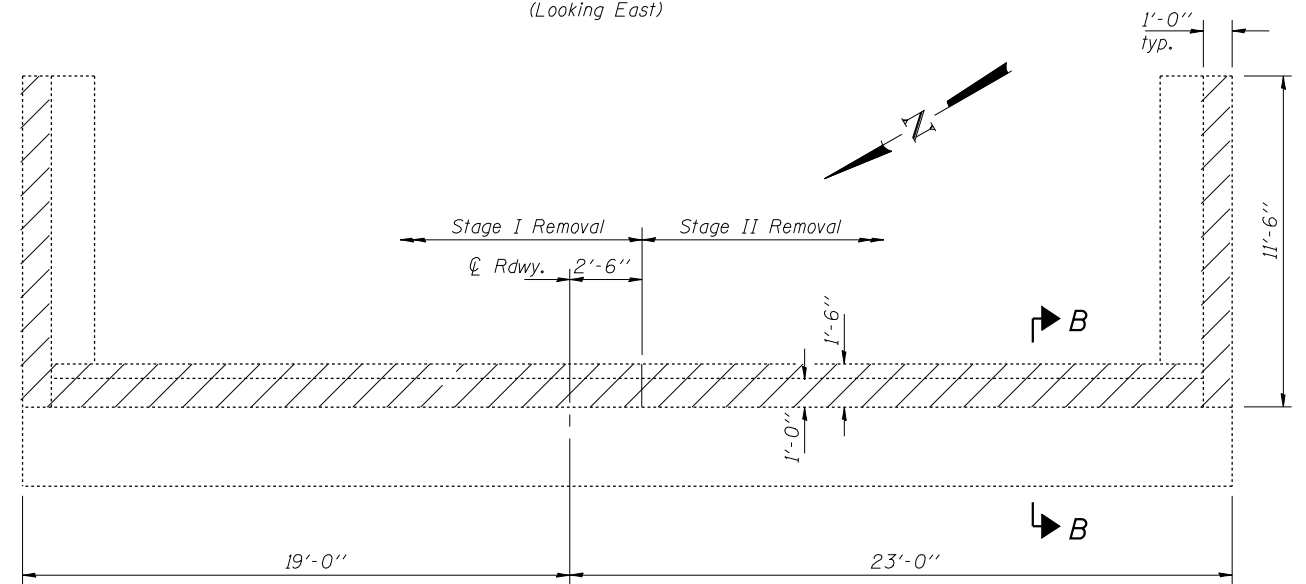
ELEVATION - WEST ABUT. (E.B.)
(Looking West)



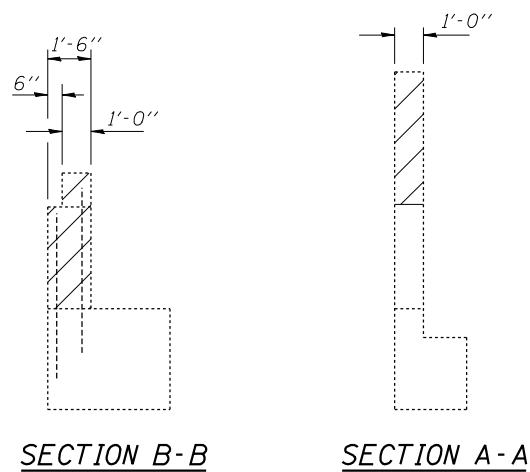
ELEVATION - EAST ABUT. (E.B.)
(Looking East)



PLAN - WEST ABUT. (E.B.)

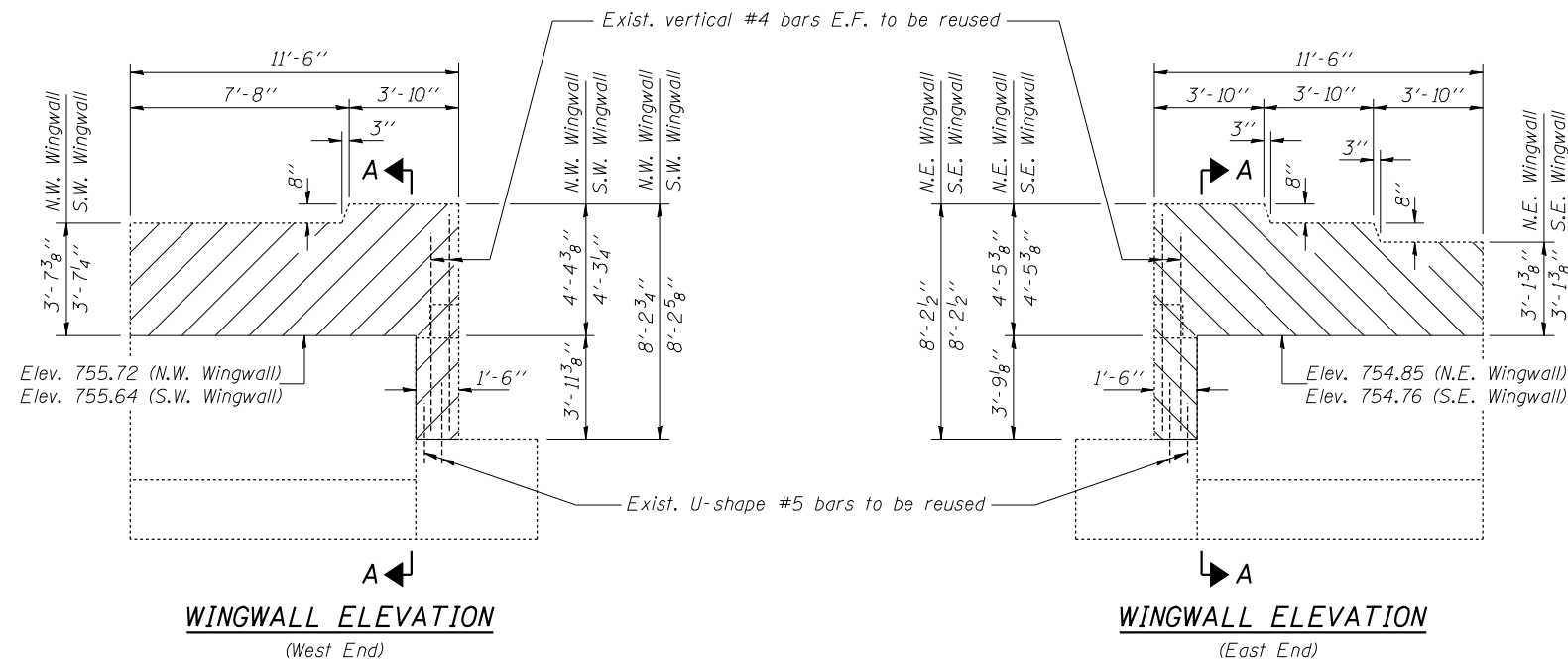


PLAN - EAST ABUT. (E.B.)



SECTION B-B

SECTION A-A



WINGWALL ELEVATION
(West End)

WINGWALL ELEVATION
(East End)

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 shall be cut off, ground flush and sealed with epoxy. Cost included with Concrete Removal. Existing reinforcement not extending into new construction shall be cut off flush and covered with 2" layer of cement grout. Cost included with Concrete Removal.

**TWO ABUTMENTS
BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	17.00

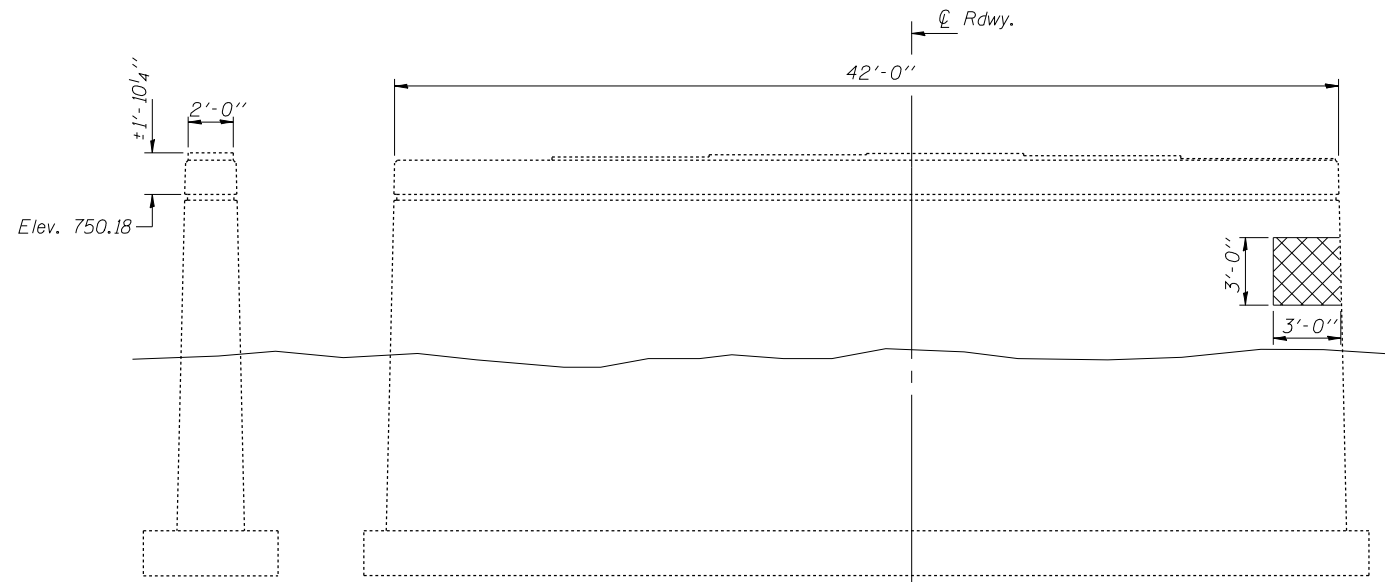
CONCRETE REMOVAL - ABUTMENTS
F.A.I. RT. 74 - SEC. (57-22)BR-3
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008
EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

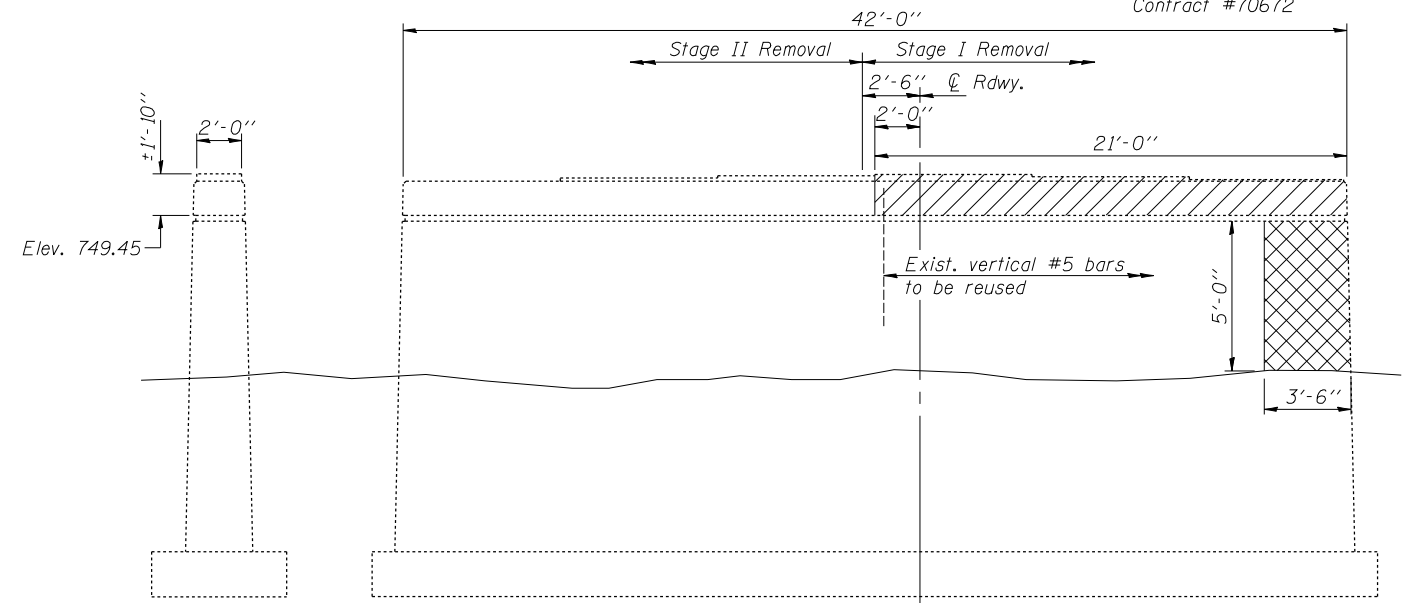
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 19 24 SHEETS
FAI 74	(57-22) BR-3	McLEAN	42	30	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract #70672		



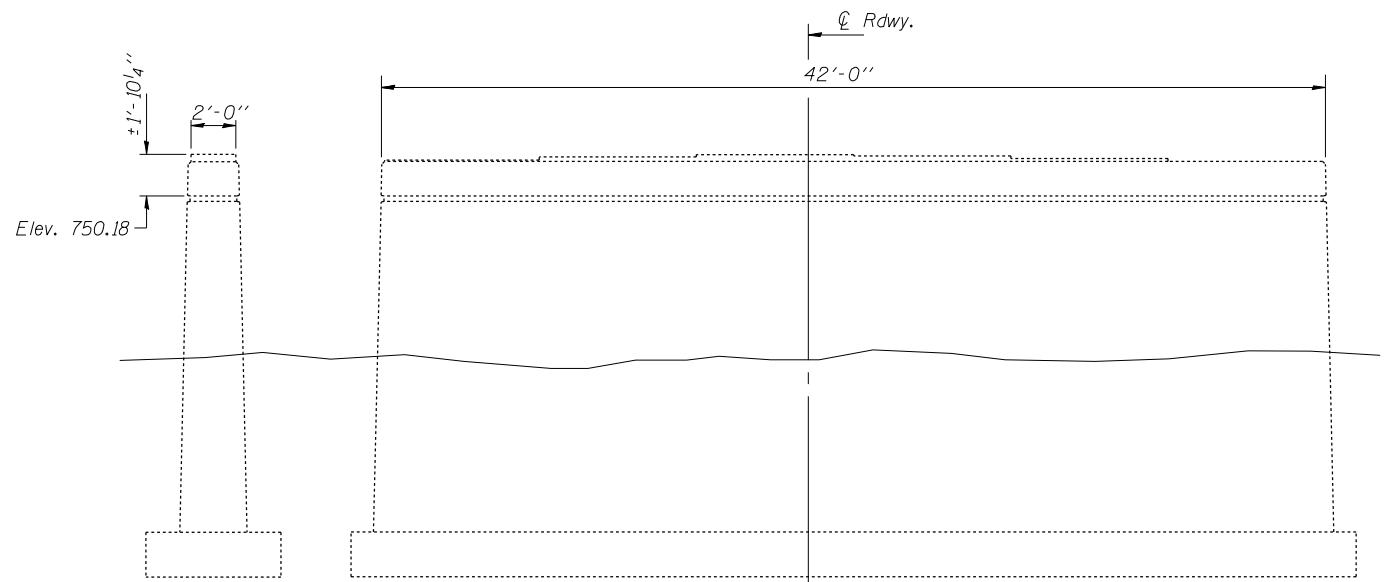
END VIEW

ELEVATION - PIER 1
(East face)



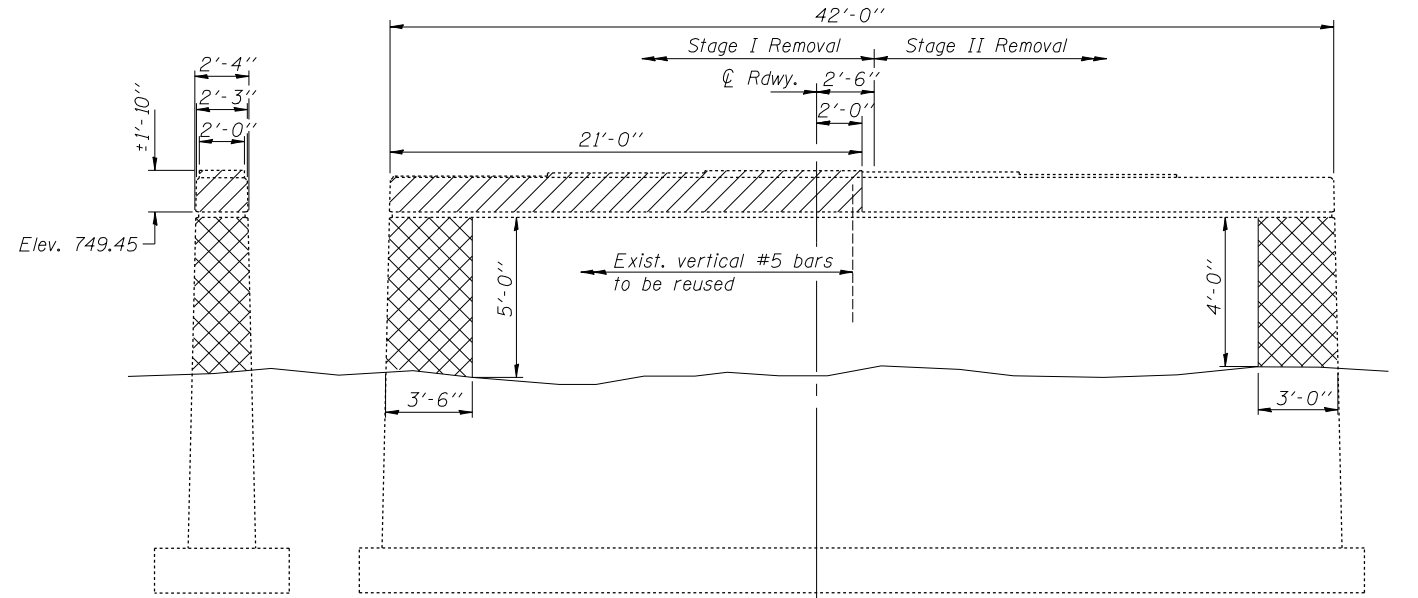
END VIEW

ELEVATION - PIER 2
(East face)



END VIEW

ELEVATION - PIER 1
(West face)



END VIEW

ELEVATION - PIER 2
(West face)

Notes: Hatched areas indicate Concrete Removal.
Cross-hatched areas indicate Structural Repair of Concrete (Depth ≤ 5")
Existing reinforcement bars extending into areas of new construction of Pier 2 shall be cleaned, straightened and incorporated into the new construction.
The existing anchor bolts at Pier 1 and at Beams 4 thru 6 at Pier 2 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.	2.9
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	56

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

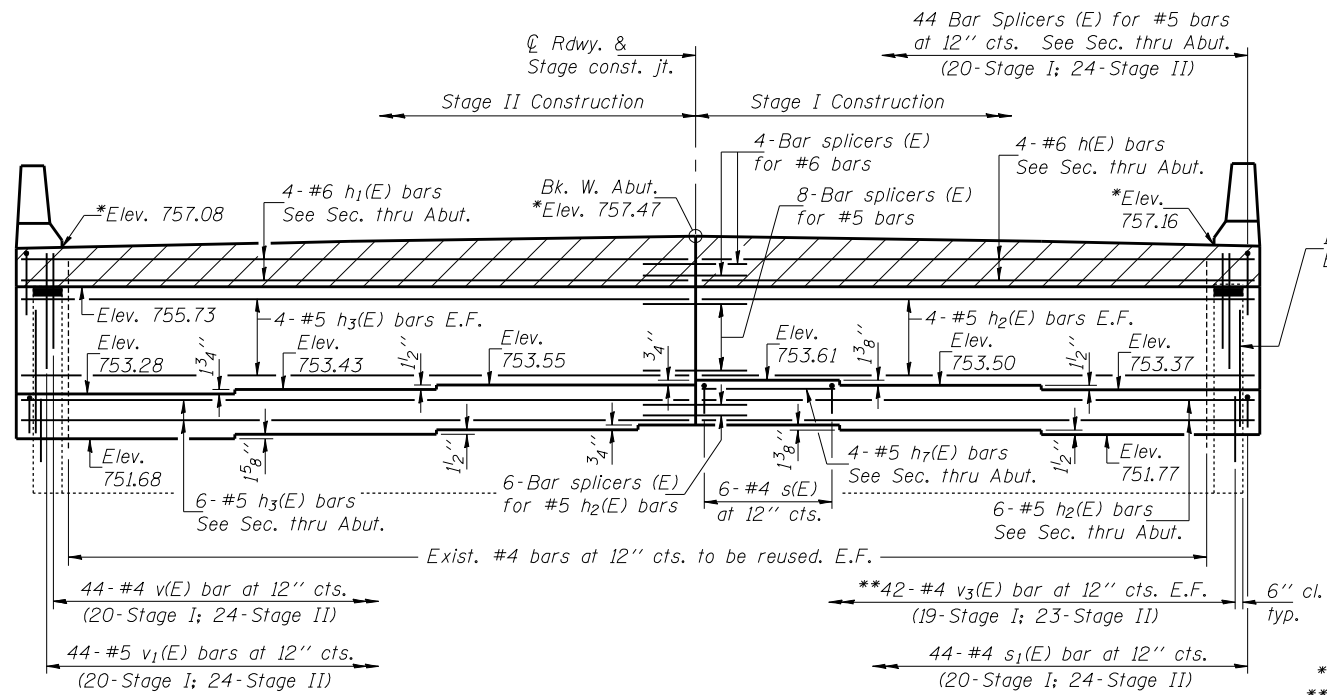
Jan. 31, 2008
EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

CONCRETE REMOVAL & REPAIRS-PIERS
F.A.I. RT. 74 - SEC. (57-22)BR-3
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

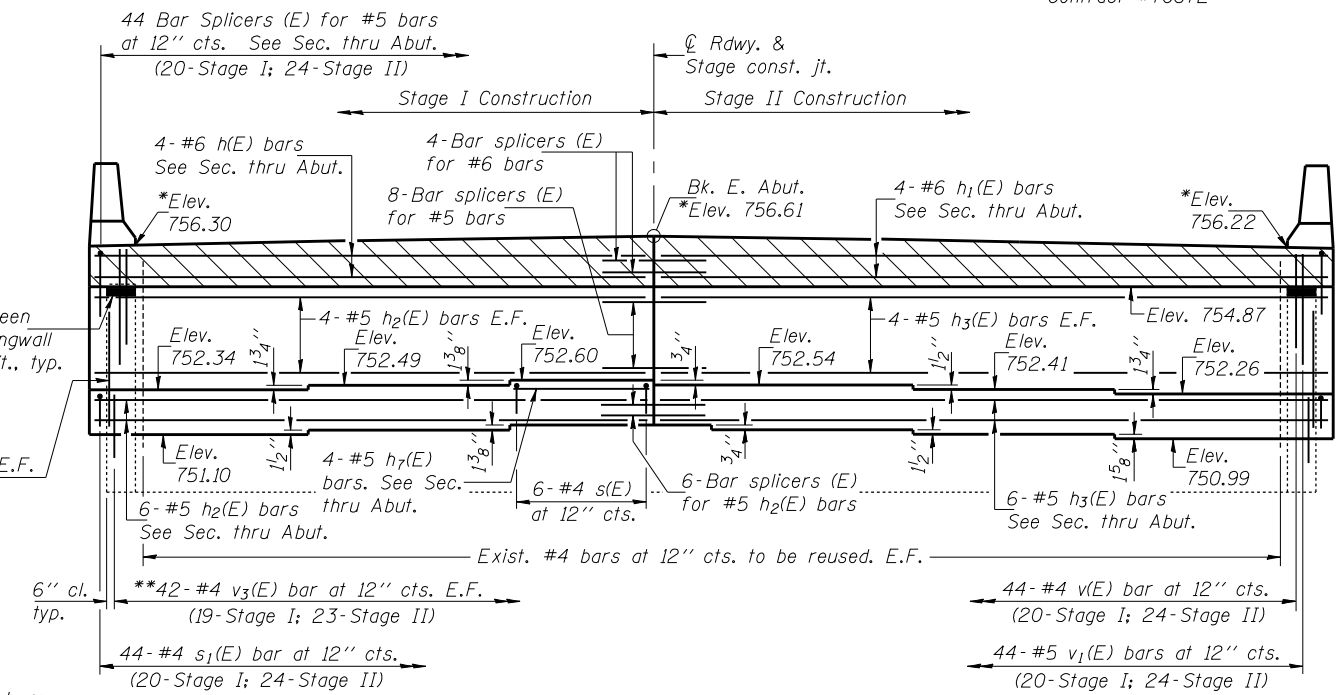
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAI 74	(57-22) BR-3	McLEAN	42	31	24 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #70672

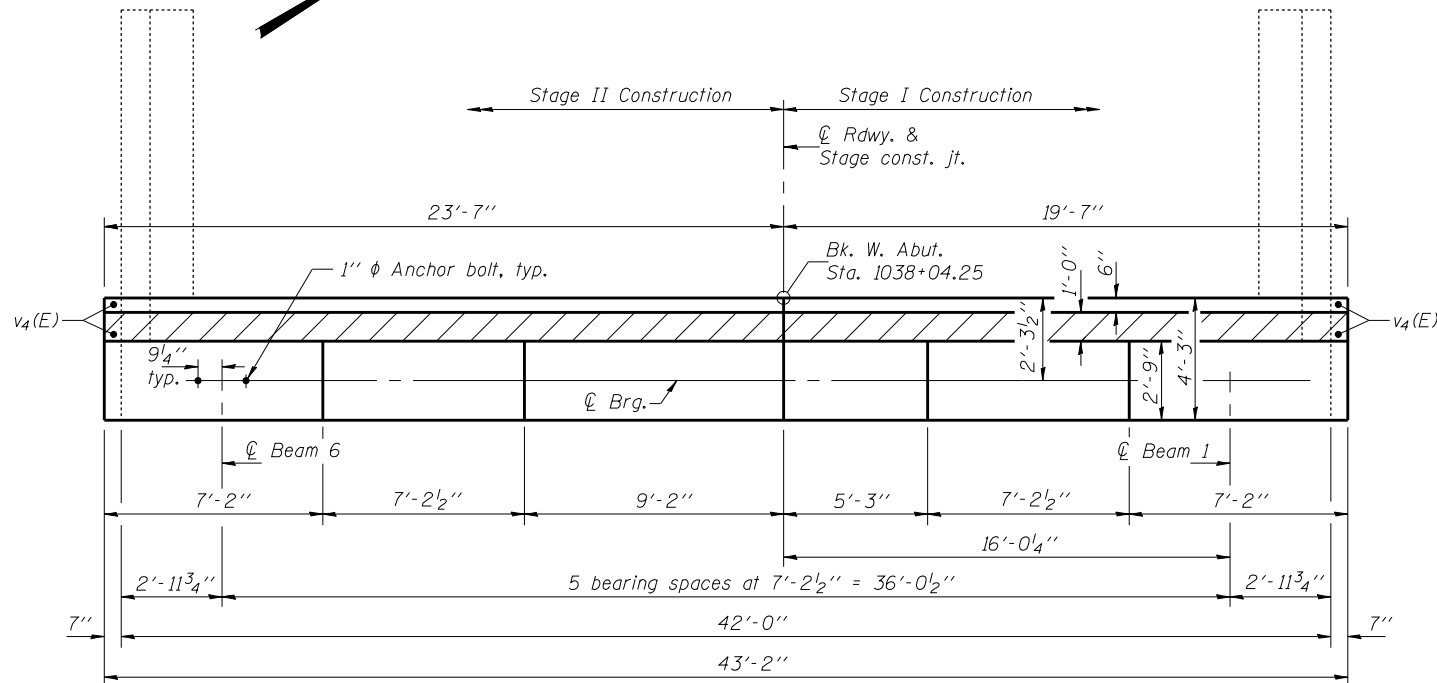


ELEVATION WEST ABUTMENT
(Looking West)

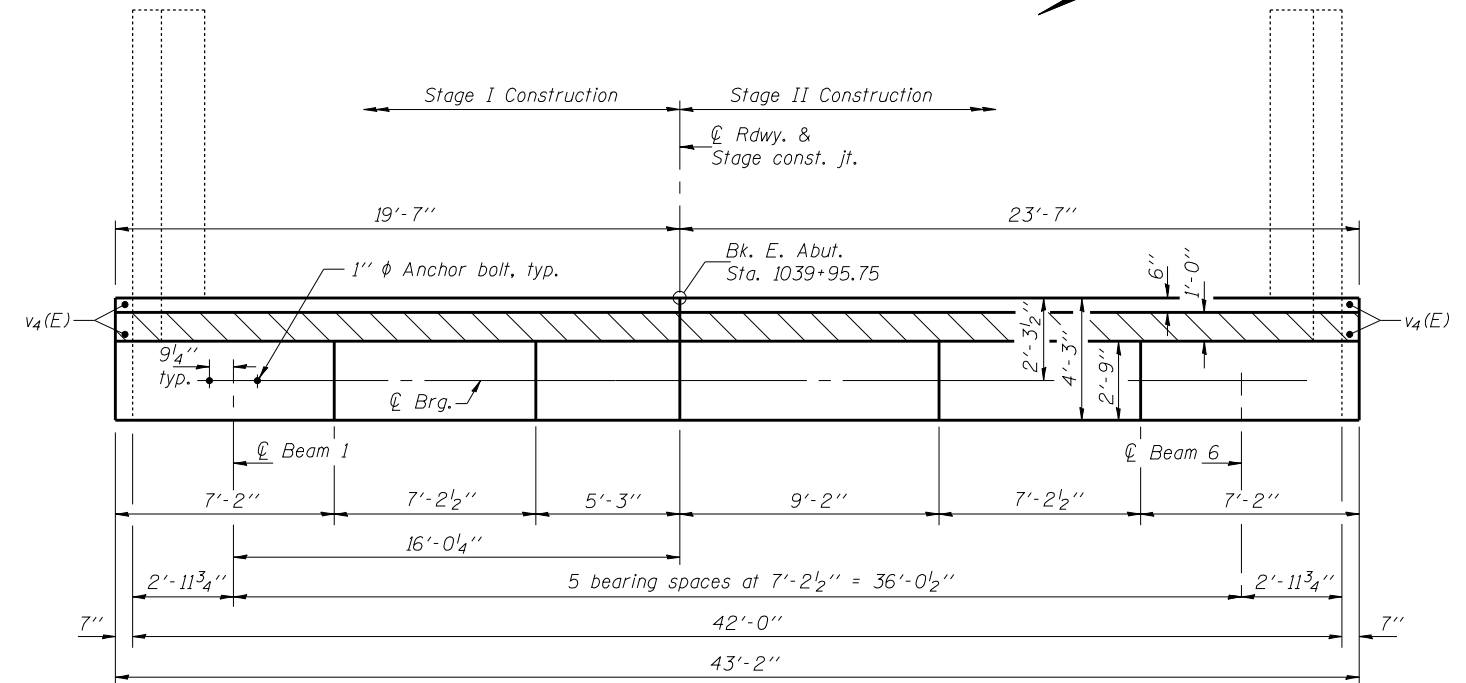


ELEVATION EAST ABUTMENT
(Looking East)

1- #5 v₄(E) bar E.F. Ea. end
1" P/J between remaining wingwall & appr. pav't., typ.
1- #5 v₄(E) bar E.F. Ea. end
*Prior to Grinding
**Epoxy grout #4 v₃(E) bars in 9" min. drilled holes according to Section 584 of the Std. Spec's.



TOP VIEW WEST ABUTMENT



TOP VIEW EAST ABUTMENT

Notes: Existing reinforcement bars extending into areas of new construction shall be cleaned, straightened, and incorporated into the new construction.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
Space reinforcement in cap to miss anchor bolts. See sheet 11 of 24 for Bill of Material.
See sheet 24 of 24 for bar splicer details.
See sheet 21 of 24 for Section thru Abutment.

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.f. duong
CHECKED	DPN/SMR

Jan. 31, 2008
EXAMINED *Thomas J. Domagalak*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

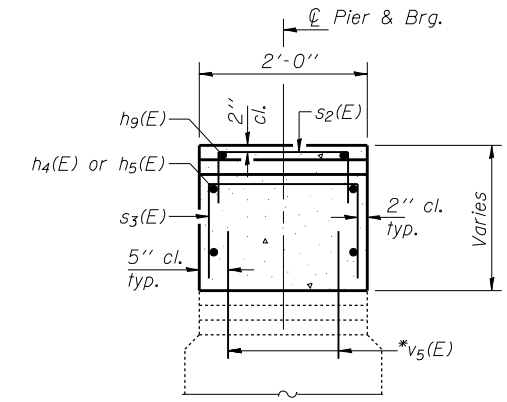
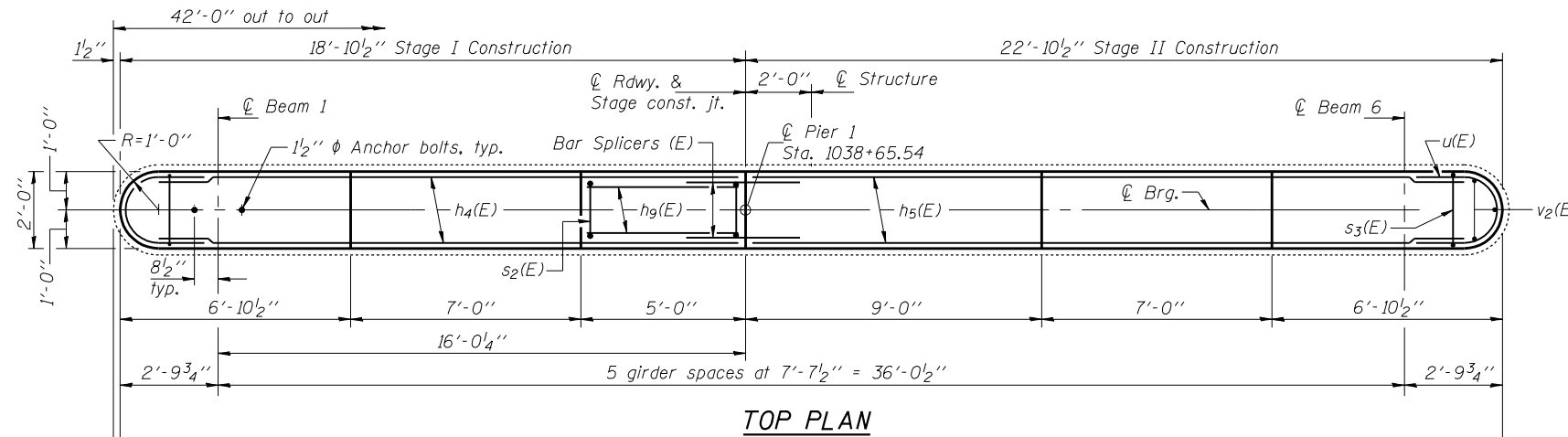
ABUTMENTS
F.A.I. RT. 74 - SEC. (57-22)BR-3
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

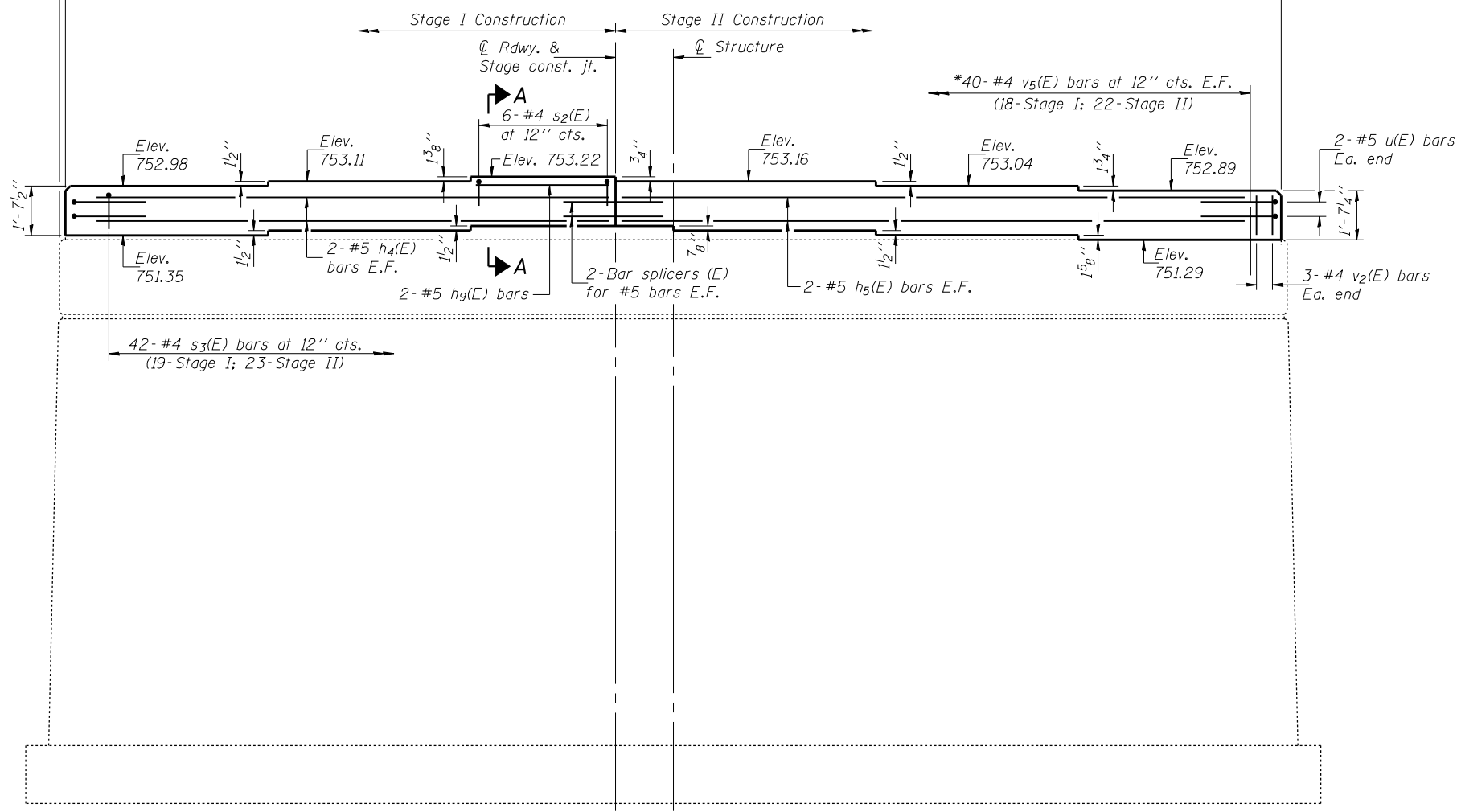
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 22 24 SHEETS
FAI 74	(57-22) BR-3	MCLEAN	42	33	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #70672

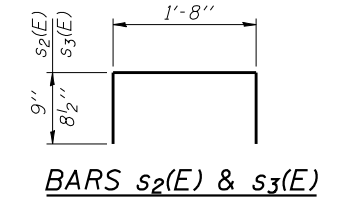
Notes: . Space reinforcement in cap to miss anchor bolts.
. See sheet 24 of 24 for bar splicer details.



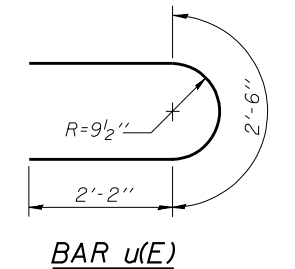
SECTION A-A



ELEVATION
(Looking East)



BARS s2(E) & s3(E)



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h4(E)	4	#5	17'-11"	—
h5(E)	4	#5	21'-11"	—
h9(E)	2	#5	4'-8"	—
s2(E)	6	#4	3'-2"	U
s3(E)	42	#4	3'-1"	U
u(E)	4	#5	6'-10"	C
v2(E)	6	#4	1'-3"	—
v5(E)	80	#4	1'-10"	—
Concrete Structures		Cu. Yd.	5.0	
Reinforcement Bars, Epoxy Coated		Pound	410	

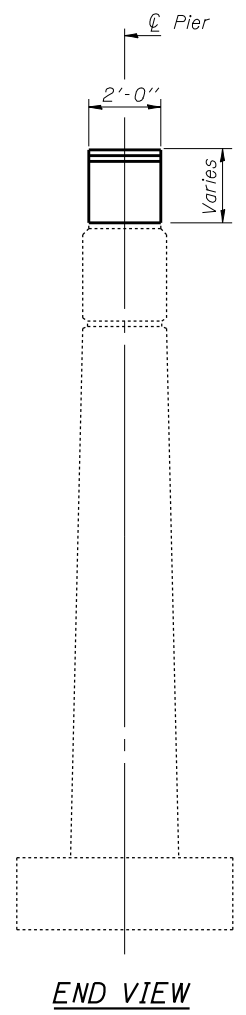
*Epoxy grout #4 v5(E) bars in 9" min. drilled holes according to Section 584 of the Std. Spec's.

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

PIER 1
F.A.I. RT. 74 - SEC. (57-22)BR-3
MCLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008
EXAMINED *Thomas J. Domagalick*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES



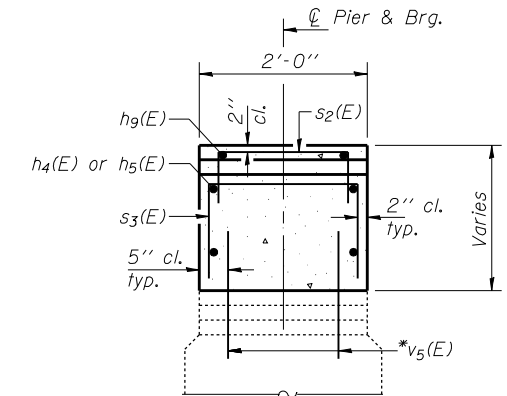
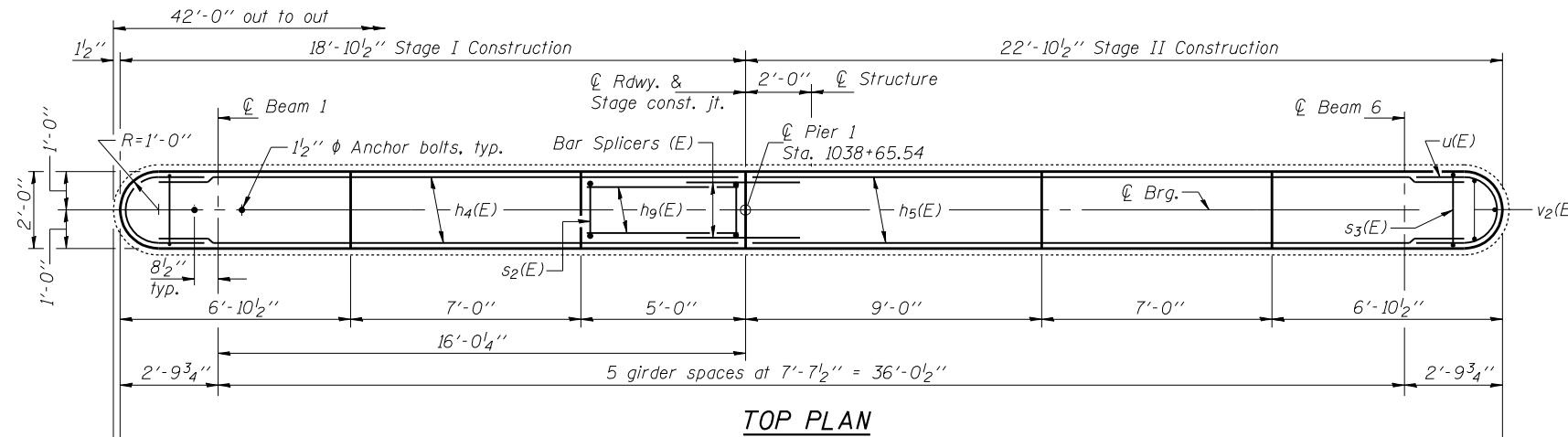
END VIEW

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

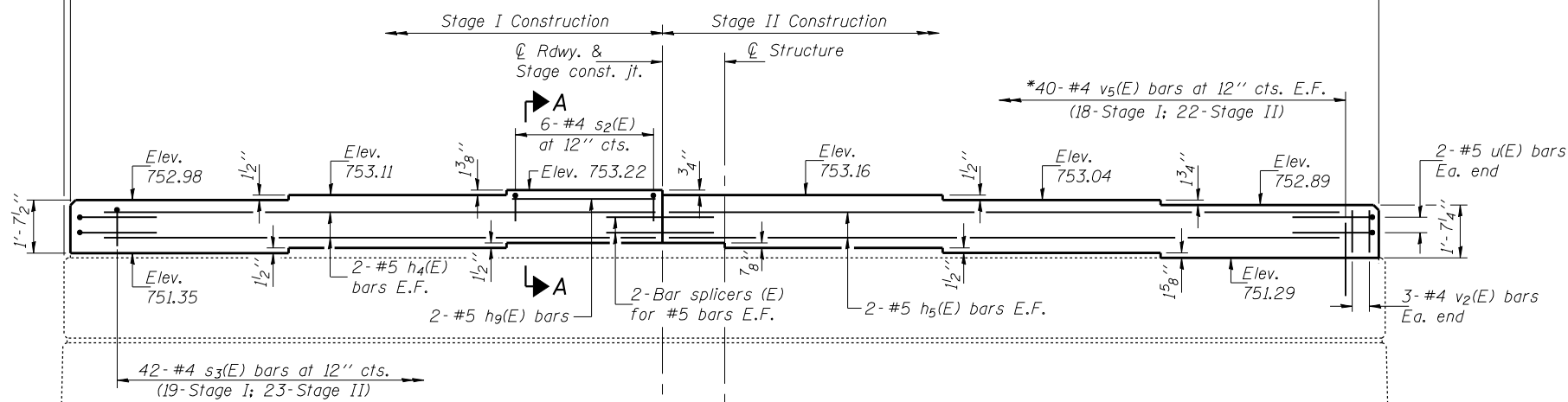
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 22 24 SHEETS
FAI 74	(57-22) BR-3	McLEAN	42	33	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #70672

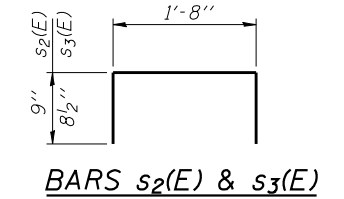
Notes: Space reinforcement in cap to miss anchor bolts.
See sheet 24 of 24 for bar splicer details.



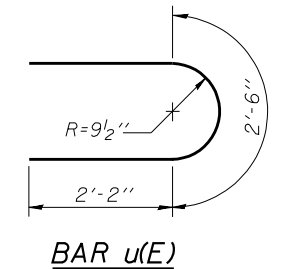
SECTION A-A



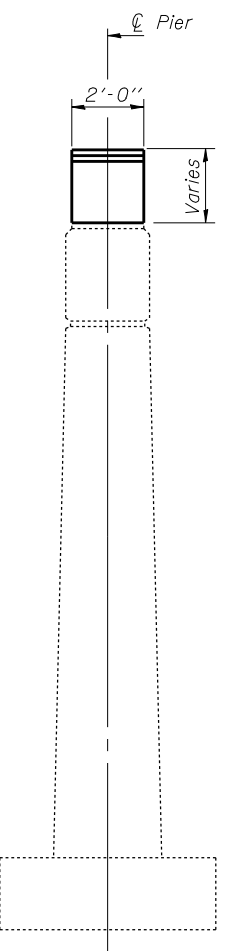
ELEVATION
(Looking East)



BARS s2(E) & s3(E)



BAR u(E)



END VIEW

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h4(E)	4	#5	17'-11"	—
h5(E)	4	#5	21'-11"	—
h9(E)	2	#5	4'-8"	—
s2(E)	6	#4	3'-2"	U
s3(E)	42	#4	3'-1"	U
u(E)	4	#5	6'-10"	C
v2(E)	6	#4	1'-3"	—
v5(E)	80	#4	1'-10"	—
Concrete Structures		Cu. Yd.	5.0	
Reinforcement Bars, Epoxy Coated		Pound	410	

*Epoxy grout #4 v5(E) bars in 9" min. drilled holes according to Section 584 of the Std. Spec's.

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

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008
EXAMINED *Thomas J. Domagalaki*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

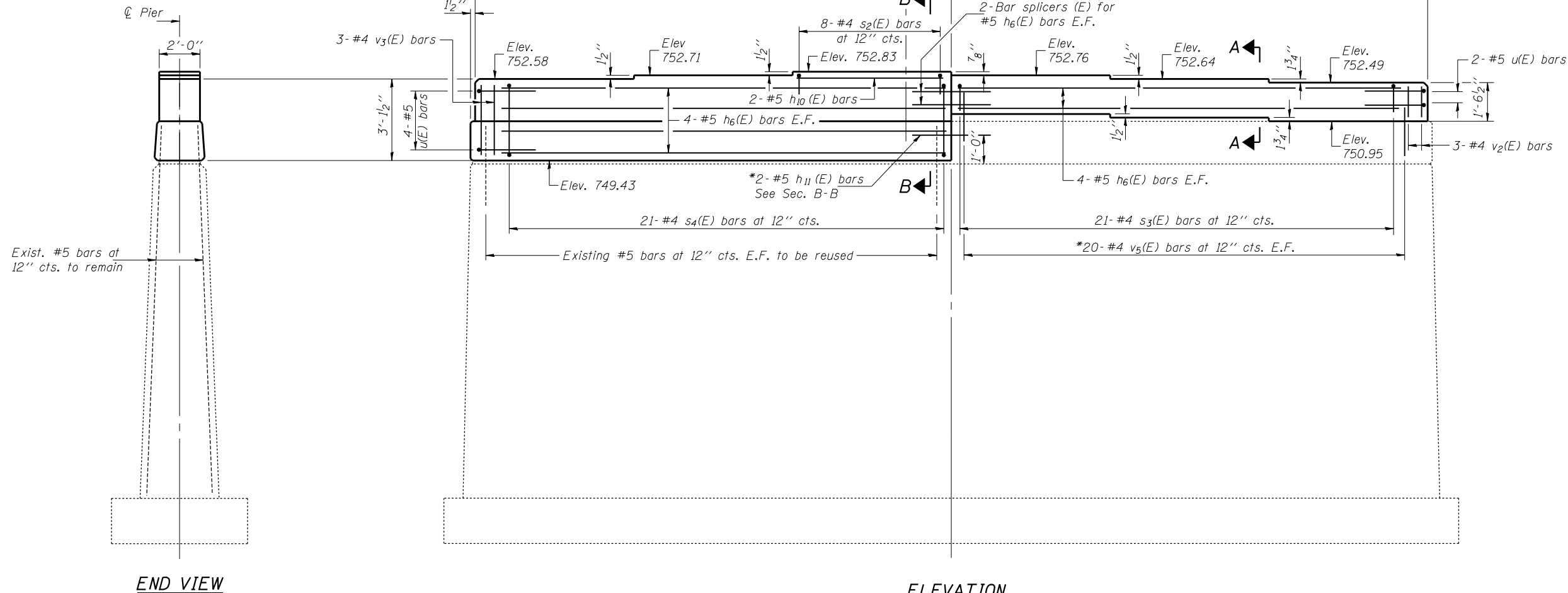
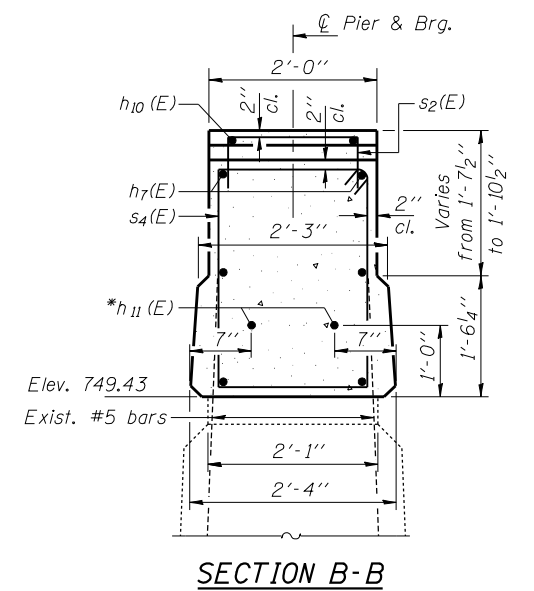
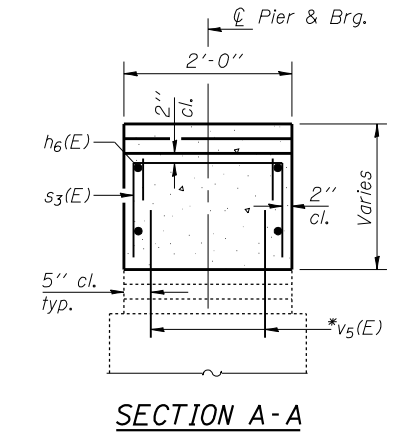
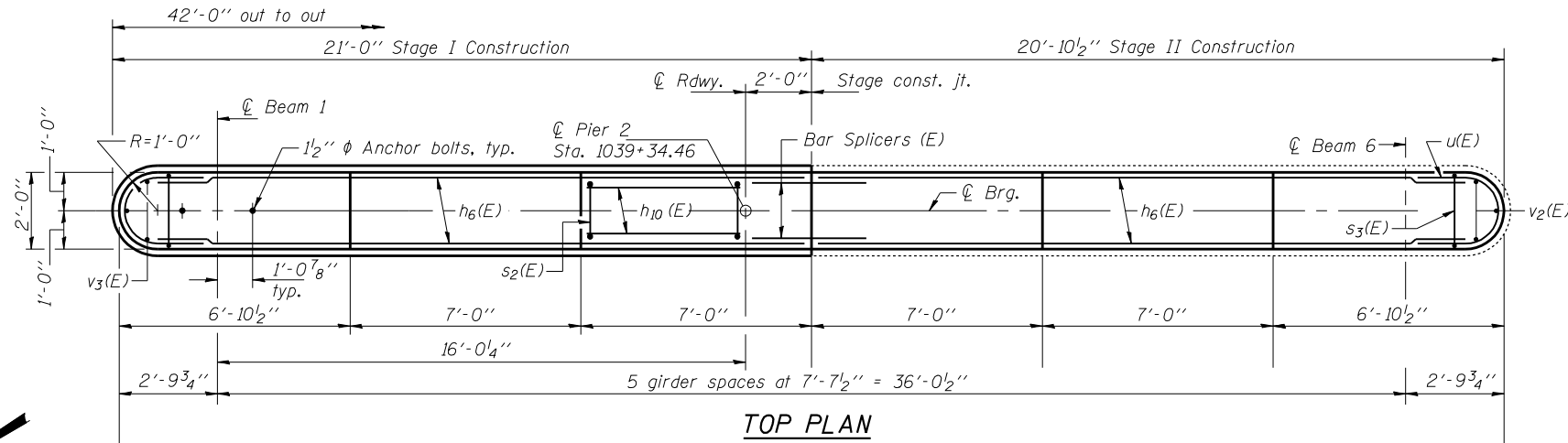
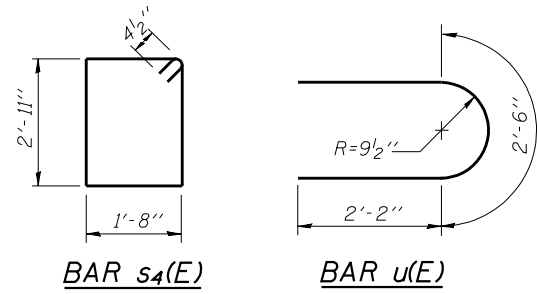
PIER 1
F.A.I. RT. 74 - SEC. (57-22)BR-3
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 23
FAI 74	(57-22) BR-3	MCLEAN	42	34	24 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #70672

Notes: Existing reinforcement bars extending into areas of new construction shall be cleaned, straightened, and incorporated into the new construction. Space reinforcement in cap to miss anchor bolts. See sheet 24 of 24 for bar splicer details.



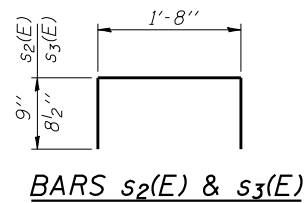
BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
h6(E)	12	#5	19'-11"	—	
h10(E)	2	#5	6'-8"	—	
h11(E)	2	#5	2'-9"	—	
s2(E)	8	#4	3'-2"	⌋	
s3(E)	21	#4	3'-1"	⌋	
s4(E)	21	#4	9'-11"	⌋	
u(E)	6	#5	6'-10"	⌋	
v2(E)	3	#4	1'-3"	—	
v3(E)	3	#4	2'-11"	—	
v5(E)	40	#4	1'-10"	—	
Concrete Structures				Cu. Yd.	7.9
Reinforcement Bars, Epoxy Coated				Pound	570

PIER 2
F.A.I. RT. 74 - SEC. (57-22)BR-3
MCLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008
EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES



ELEVATION
(Looking East)

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

*Epoxy grout #4 v5(E) & #5 h11(E) bars in 9' min. drilled holes according to Section 584 of the Std. Spec's.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 24 24 SHEETS
FAI 74	(57-22) BR-3	McLEAN	42	35	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

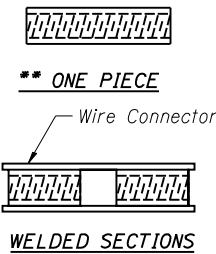
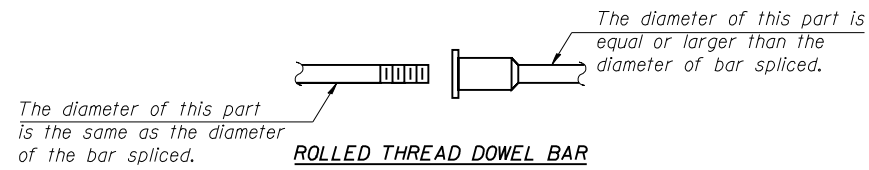
Contract #70672

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:

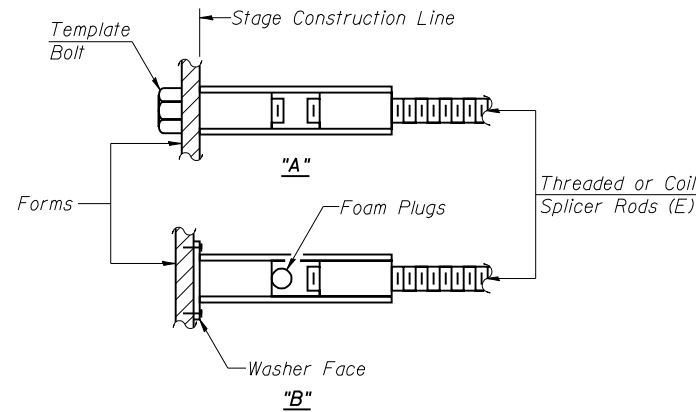
- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
 - ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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



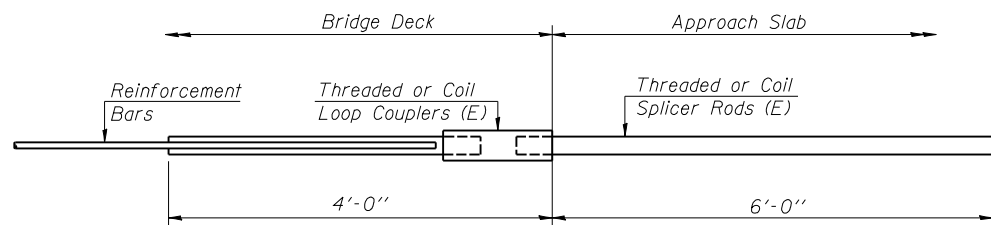
BAR SPLICER ASSEMBLY ALTERNATIVES

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



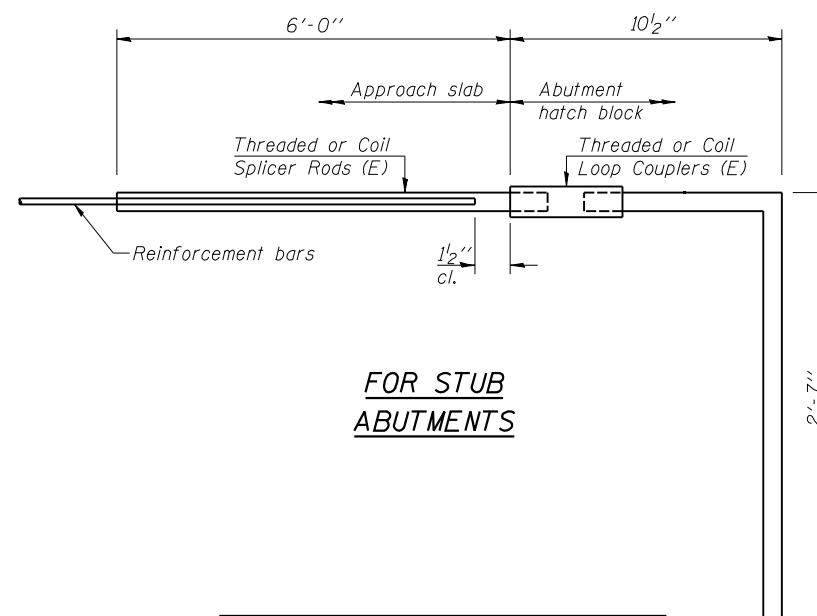
INSTALLATION AND SETTING METHODS

"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.



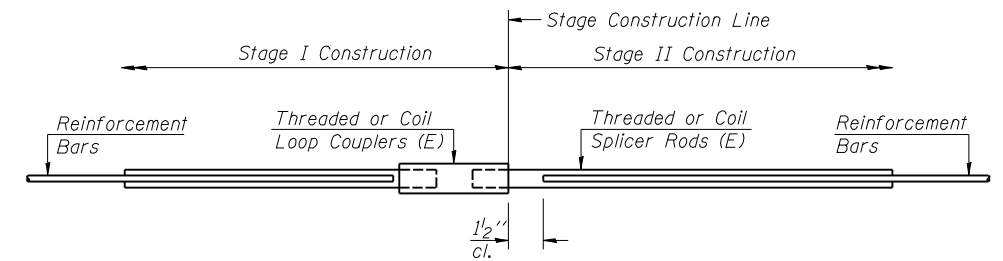
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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
#5	527	Deck
#6	2	Deck
#7	8	Deck
#6	8	Abut. Hatch Blk.
#5	16	Abut. Back Wall
#5	12	Abut. Cap
#5	4	Pier 1
#5	4	Pier 2

BAR SPLICER ASSEMBLY DETAILS
F.A.I. RT. 74 - SEC. (57-22)BR-3
McLEAN COUNTY
STATION 1039+00
STRUCTURE NO. 057-0125 (E.B.)

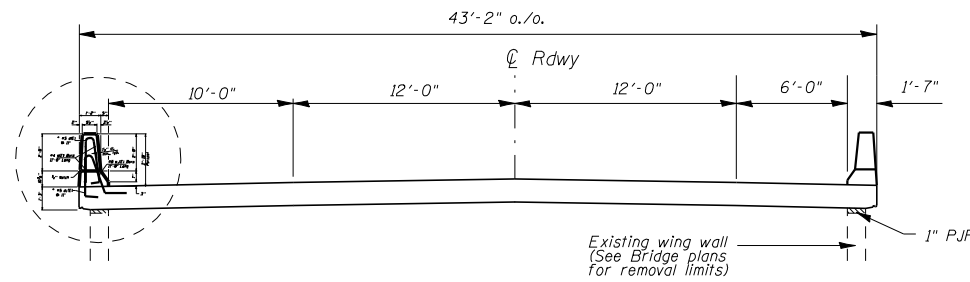
DESIGNED	DPN
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	DPN/SMR

Jan. 31, 2008

EXAMINED *Thomas J. Domagalak*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

BRIDGE APPROACH PAVEMENT (SPECIAL)



Bridge Approach Pavement near Abutment

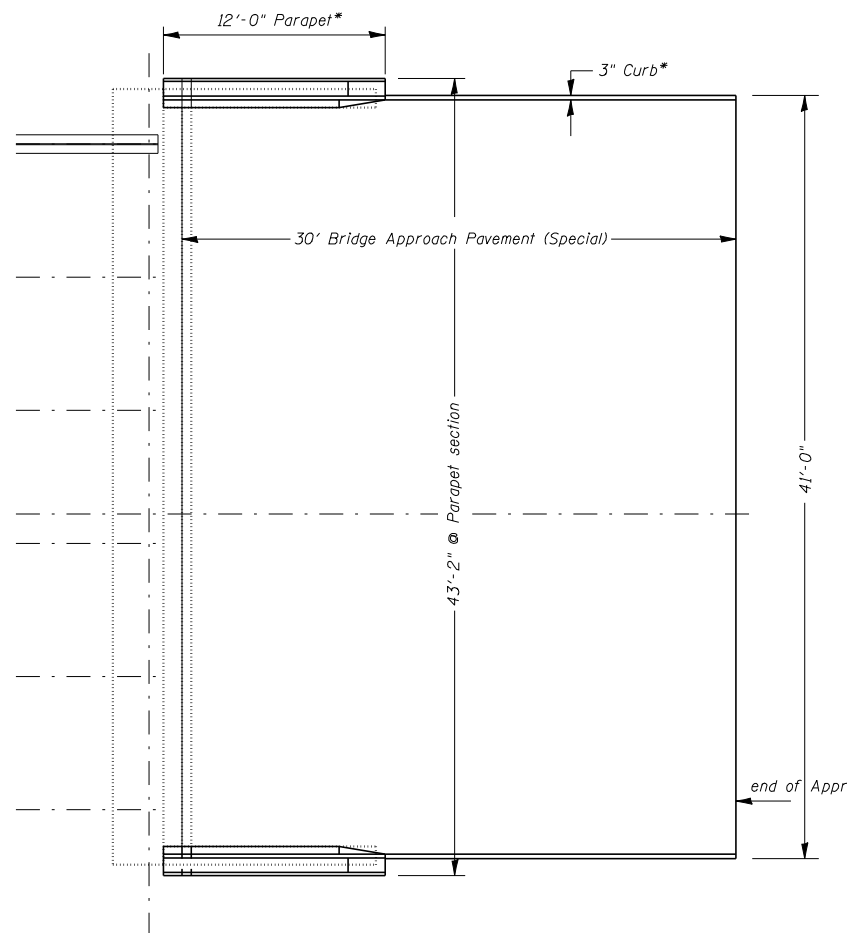
Looking Upstation

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

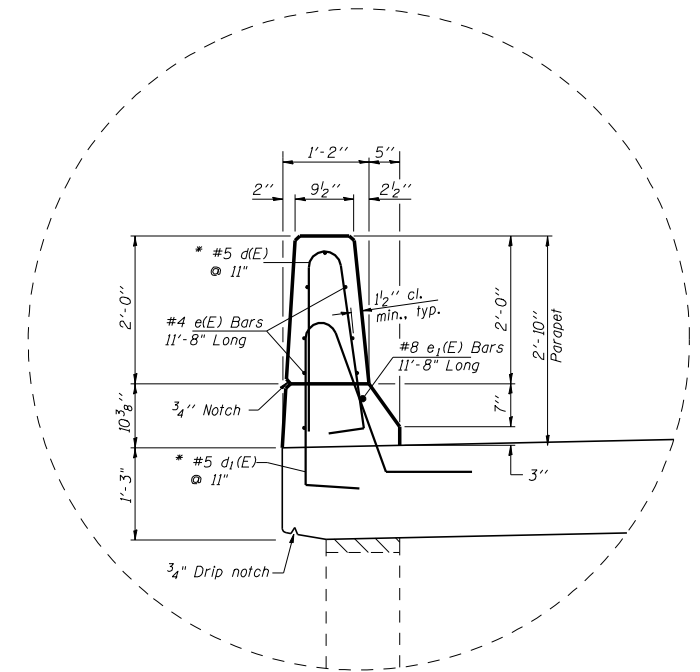
*Note: Please Reference District Special Provision for BRIDGE APPROACH PAVEMENT (SPECIAL)

*Note: NO Bridge Approach Pavement Curb to be constructed on the WEST or APPROACH END

*Note: Bridge Approach Pavement Drains to be constructed on the EAST or DEPARTURE END



Bridge Approach Pavement Plan



*Parapet Detail
See Bridge Plans
for More Information*

FILE NAME = c:\projects\d505207 (v8)\70672_text.dgn	USER NAME = collierbw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-74 OVER KICKAPOO CREEK - APPROACH PAVEMENT DETAIL	F.A.I RTE. 74	SECTION (57-22)BR-3	COUNTY MCLEAN	TOTAL SHEETS 42	SHEET NO. 38		
	PLOT SCALE = 41.5800' / IN.	DRAWN -	REVISED -			SCALE:	SHEET NO. OF SHEETS STA. TO STA.	CONTRACT NO. 70672				
	PLOT DATE = 12/21/2007	CHECKED -	REVISED -									
		DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT						

CLEANING AND PAINTING NEW METAL STRUCTURES

LOCATION #1

DESCRIPTION: FAI-74 WB OVER KICKAPOO CREEK
 NORTH WEST OF DOWNS
 COUNTY: MCLEAN
 ROUTE: FAI-74 WESTBOUND
 MARKED ROUTE: I-74 WB
 SECTION: (57-22)BR-3
 STRUCTURE NUMBER: 057-0126
 TYPE OF STRUCTURE: 3SPANS - 6 BEAM LINES

CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL INCLUDING DECK
 EXTENSION DRAINS SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR
 "CLEANING AND PAINTING NEW STEEL STRUCTURES."

THE DESIGNATED AREAS CLEANED SHALL BE PAINTED ACCORDING TO THE
 REQUIREMENTS OF PAINT SYSTEM 1-OZ/U. THE COLOR OF THE FINAL FINISH COAT
 FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1.
 THE COLOR OF THE FINAL FINISH COAT FOR ALL EXTERIOR AND BOTTOM FLANGE
 OF THE FASCIA BEAMS SHALL BE REDDISH BROWN MUNSELL NO. 2.5YR 3/4.

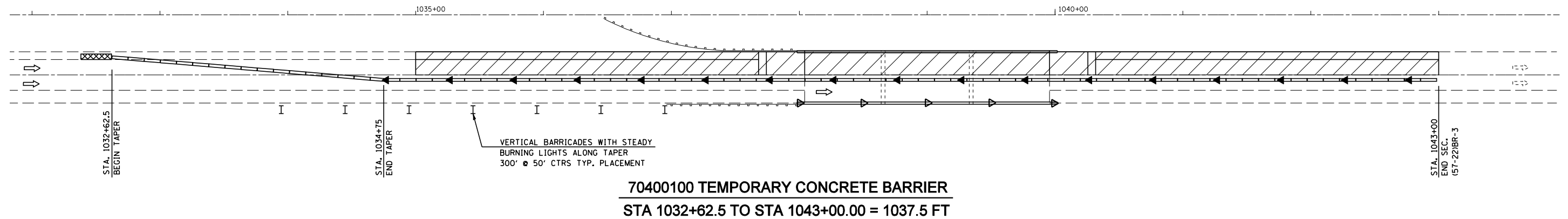
INORGANIC ZINC-RICH/ WATERBORNE ACRYLIC PAINT SYSTEM.
 THIS SYSTEM SHALL BE FOR SHOP AND FIELD APPLICATION OF THE COATING SYSTEM,
 SHOP APPLICATION OF THE INTERMEDIATE AND TOP COATS WILL NOT BE ALLOWED.

IN THE SHOP, ALL STRUCTURAL STEEL DESIGNATED TO BE PAINTED SHALL BE GIVEN
 ONE COAT OF INORGANIC ZINC RICH PRIMER. IN THE FIELD, BEFORE THE APPLICATION
 OF THE INTERMEDIATE COAT, THE PRIME COAT AND ANY NEWLY INSTALLED FASTENERS
 SHALL BE SPOT SOLVENT CLEANED PER SSPC-SP 1 AND ALL SURFACES PRESSURE
 WASHED TO REMOVE DIRT, OIL, LUBRICANTS, OXIDATION PRODUCTS, AND FOREIGN
 SUBSTANCES. WASHING SHALL INVOLVE THE USE OF POTABLE WATER AT A PRESSURE
 BETWEEN 1000 PSI (7 MPA) AND 5000 PSI (34 MPA) AND ACCORDING TO "LOW PRESSURE
 WATER CLEANING" OF SSPC-SP12. PAINT SPRAY EQUIPMENT SHALL NOT BE USED TO
 PERFORM THE WATER CLEANING. ALL DAMAGED SHOP PRIMED AREAS SHALL THEN BE
 SPOT CLEANED PER SSPC-SP3 AND SPOT PRIMED WITH ALUMINUM EPOXY MASTIC.
 THE STRUCTURAL STEEL SHALL THEN RECEIVE ONE FULL INTERMEDIATE COAT AND
 ONE FULL TOPCOAT OF WATERBORNE ACRYLIC PAINT.

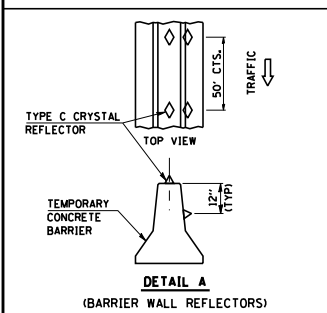
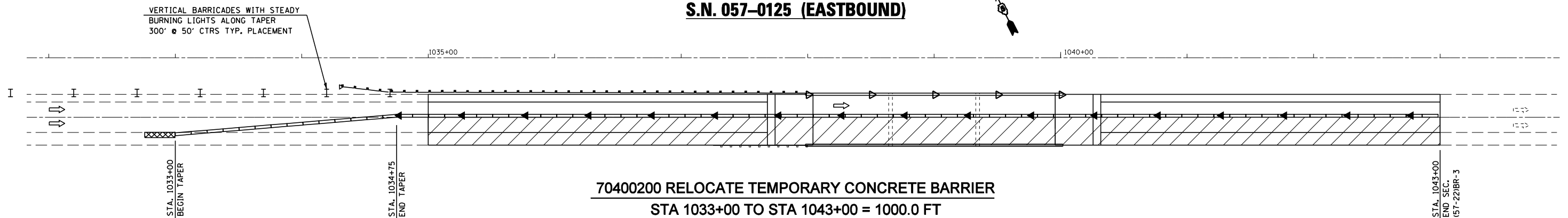
REFERENCES TO SHOP PAINTING FOR INFORMATION ONLY

FILE NAME = c:\projects\d505207 (v8)\70672_text.dgn	USER NAME = collierbw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-74 OVER KICKAPOO CREEK - CLEANING AND PAINTING NEW STRUCTURES	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED -			74	(57-22)BR-3	MCLEAN	42	39	
	PLOT SCALE = 41.5800' / IN.	CHECKED -	REVISED -			CONTRACT NO. 70672					
	PLOT DATE = 2/1/2008	DATE -	REVISED -			SCALE: SHEET NO. OF SHEETS STA. TO STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STAGE I CONSTRUCTION
S.N. 057-0125 (EASTBOUND)



STAGE II CONSTRUCTION
S.N. 057-0125 (EASTBOUND)



SYMBOLS	
◀	AMBER MONODIRECTIONAL REFLECTOR 50' CTS
▷	CRYSTAL MONODIRECTIONAL REFLECTOR 50' CTS
▬	TEMPORARY CONCRETE BARRIER
I	VERTICAL BARRICADES 50' CTS
⊠	IMPACT ATTENUATOR

PLAN NOTES:

ALL STAGING DETAILS SET UP IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION 701402.

PRIOR TO BARRIER PLACEMENT TRAFFIC CONTROL SHALL BE SET UP IN ACCORDANCE WITH STANDARD 701401.

TRAFFIC CONTROL DETAILS NOT SHOWN ARE TO CONFORM WITH STANDARD 701400 AND 701402.

MESSAGE BOARD SHALL BE PLACED TWO WEEKS PRIOR TO CONSTRUCTION AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS.

RESIDENT ENGINEER AND TRAFFIC CONTROL SUPERVISOR SHALL PROVIDE APPROPRIATE MESSAGE FOR CMS.

RAISED REFLECTIVE PAVEMENT MARKERS AFFECTED BY THE PROPOSED CONSTRUCTION SHALL BE REPLACED. THIS COST SHALL BE INCIDENTAL TO THE VARIOUS TRAFFIC CONTROL PAY ITEMS.

REFLECTORS FOR BARRIER WALL, BRIDGE RAIL AND GUARDRAIL SHALL BE INCLUDED IN THE COST FOR THE APPLICABLE TRAFFIC CONTROL PAY ITEMS.

PLACE VERTICAL BARRICADES WITH STEADY BURNING LIGHTS AT 50 FOOT CENTERS, 300 FEET PRIOR TO PINCH POINTS CAUSED BY EXISTING GUARDRAIL. THIS COST WILL BE INCIDENTAL TO STANDARD 701402

REFLECTORIZED TEMPORARY MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND ALONG-SIDE THE WORK AREA. THE EDGE LINE SHALL BE YELLOW FOR LEFT LANE CLOSURES. COST FOR THE PLACEMENT AND REMOVAL SHALL BE INCLUDED IN COST FOR APPLICABLE TRAFFIC CONTROL PAY ITEM.

FILE NAME =	USER NAME = collierbw	DESIGNED -	REVISED -
ct:\projects\d505207 (v8)\70672_stage.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

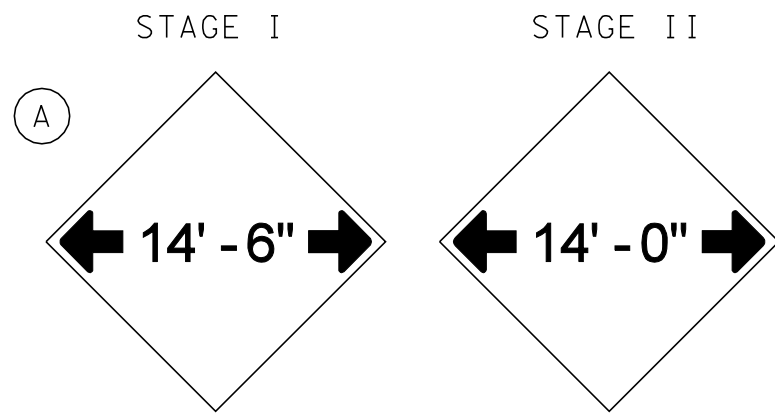
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I-74 OVER KICKAPOO CREEK - STAGE CONSTRUCTION DETAIL

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

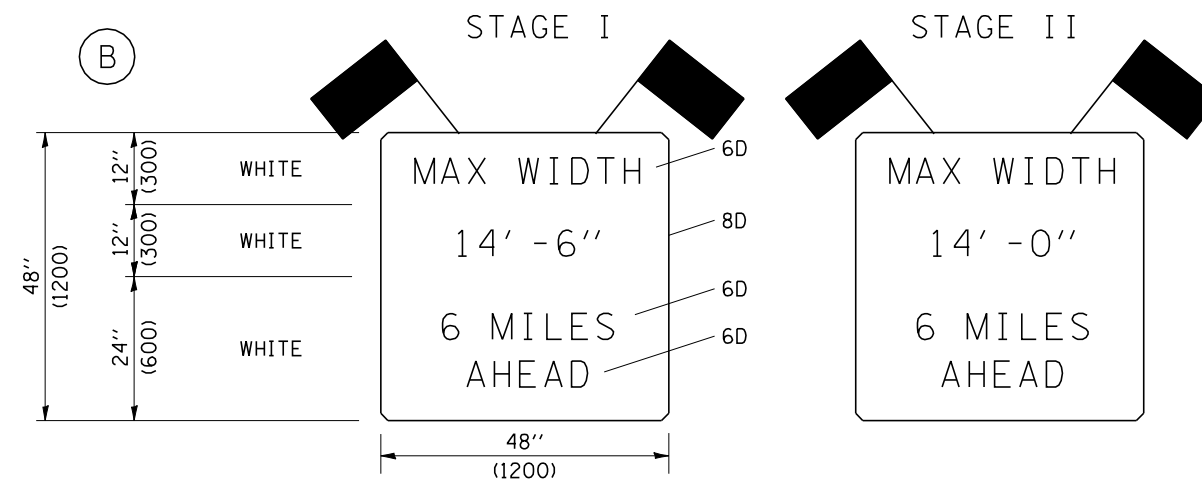
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-3	MCLEAN		
CONTRACT NO. 70672				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

WIDTH RESTRICTION SIGNING



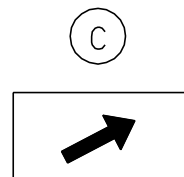
W12-I102-48"x48" - ORANGE (O)

- SIGN (A) 2 SIGNS - W12-2(O)-48"x48" - ORANGE (O)
1. TO BE PLACED 200' SOUTH OF OF US-51 NB TO I-74 EB RAMP
 2. TO BE PLACED JUST PRIOR TO I-74 BRIDGE ON US-51 BUS. SB TO I-74 EB RAMP

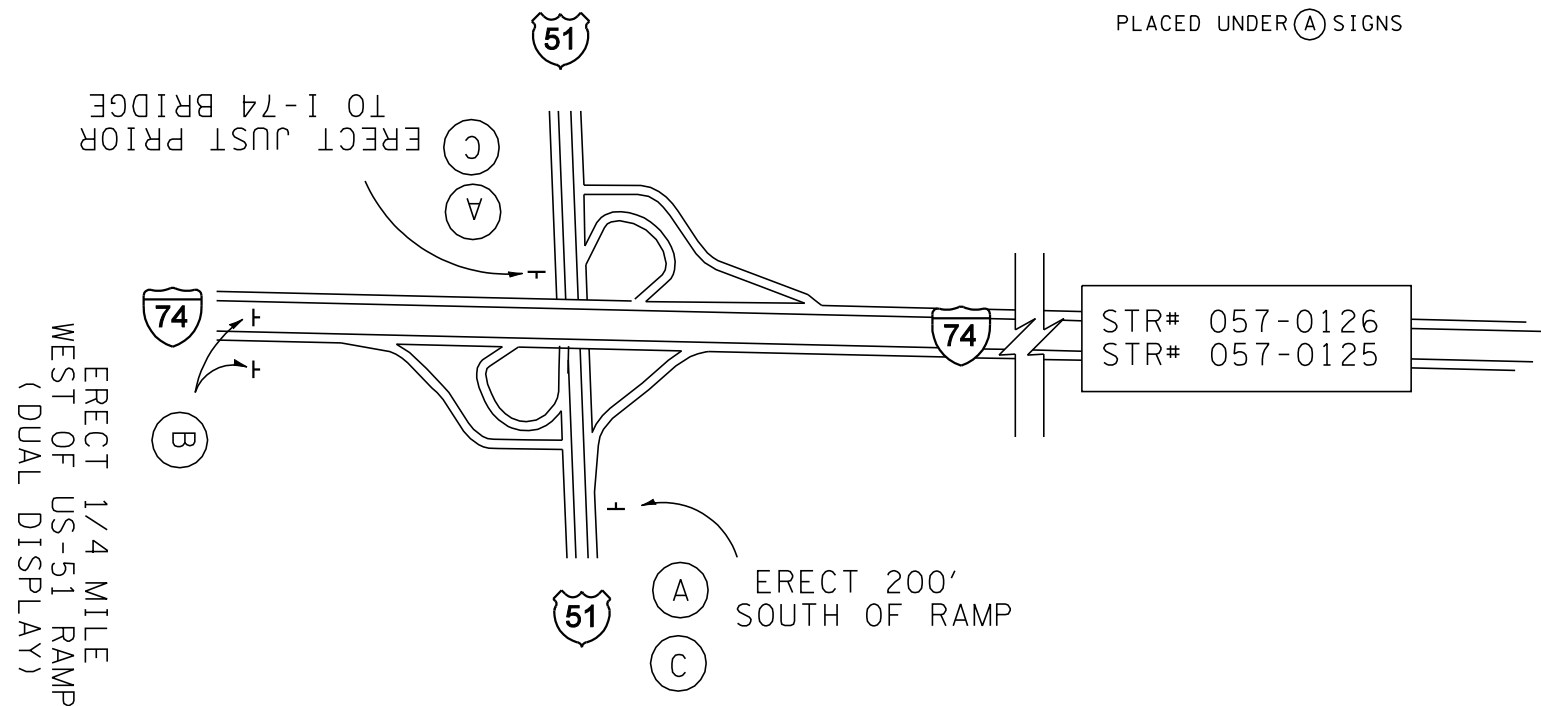


W12-I103-48"x48" - WHITE

- SIGN (B) 2 SIGNS - W12-I103 - 48" X 48" WHITE
AS SHOWN ARE TO BE PLACED
FLAGS REQUIRED
PLACED APPROXIMATELY
1/4 MILES WEST OF US-51 (DUAL DISPLAY) ON I-74EB



M6-2R 21" X 15" ORANGE (O)
PLACED UNDER (A) SIGNS



NOTE: STAGE I 14' -6"
STAGE II 14' -0"

GENERAL NOTES

NOTE: STAGE I WIDTH 14' -6" STAGE II WIDTH 14' -0"

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
2. ALL (B) SIGNS SHALL HAVE FLAGS INSTALLED UNLESS OTHERWISE DIRECTED.
3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
4. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.
5. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE DIRECTED.
6. ALL SIGNS SHOWN ORANGE (O) SHALL BE FLUORESCENT ORANGE.

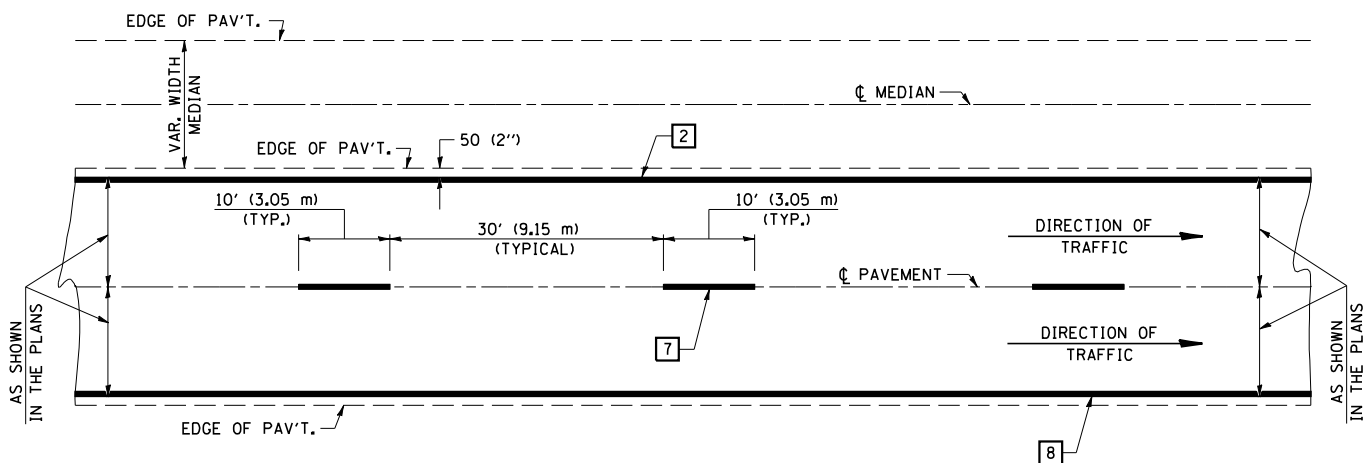
Note: All dimensions are in INCHES
(millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. X7200201

FILE NAME = c:\projects\d505207 (v8)\70672-stage.dgn	USER NAME = collierbw	DESIGNED -	REVISED - 11/06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WIDTH RESTRICTION SIGNING	F.A. I RTE. 74	SECTION (57-22)BR-3	COUNTY MCLEAN	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 100.0000' / IN.	DRAWN -	REVISED -			CONTRACT NO. 70672				
	PLOT DATE = 12/21/2007	CHECKED -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.
		DATE -	REVISED -							
						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

DESIGNER NOTE: PROVIDE MAP WITH SIGN LOCATIONS (A, B, ETC.) AND COORDINATE WITH TRAFFIC OPERATIONS ENGINEER.
INCLUDE DISTRICT SPECIAL PROVISION "WIDTH RESTRICTION SIGNING"

CENTERLINE INTERSTATE OR MULTI-LANE TWO WAY DIVIDED HIGHWAY

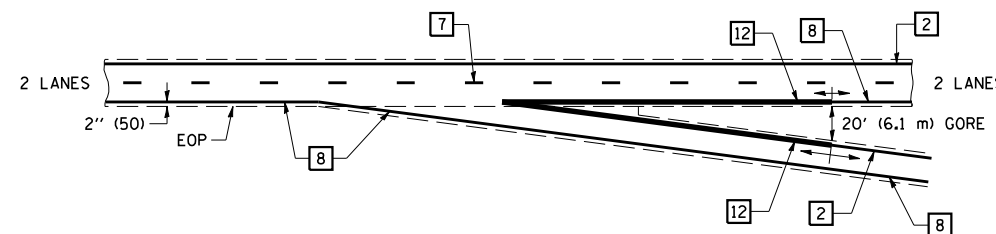


NOTE: PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.

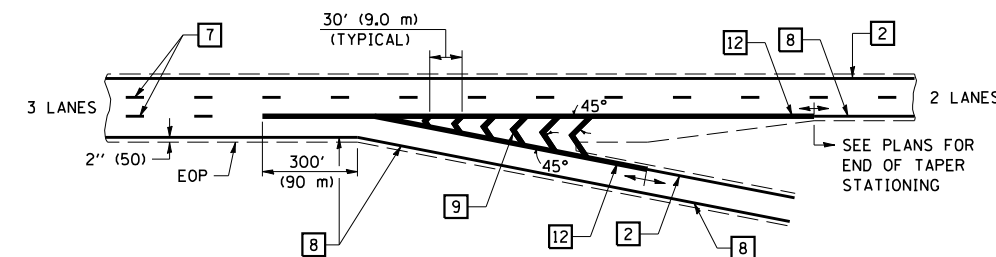
NOTE: SEE ARTICLES 780.04 & 781.03 FOR LOCATION OF STRIPES AND MARKERS RELATIVE TO EDGES OR JOINTS.

FOR RAISED REFLECTIVE PAVEMENT MARKERS, REFER TO STANDARD 781001.

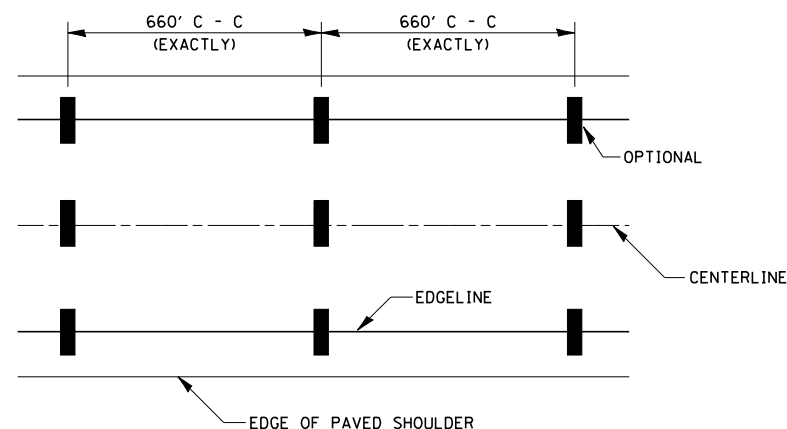
TYPICAL EXIT RAMP TERMINAL



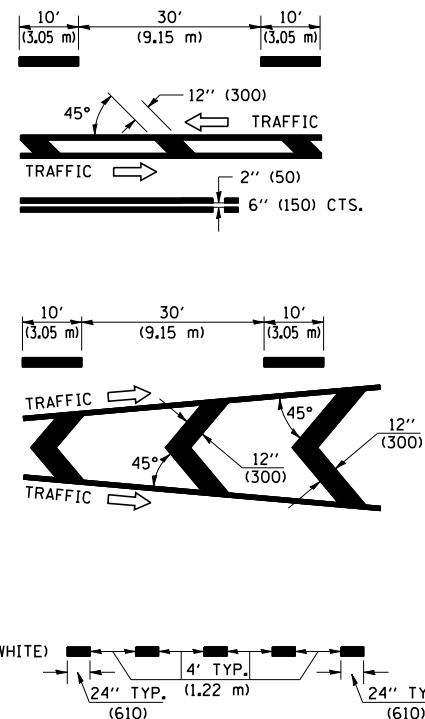
EXIT RAMP TERMINAL with EXCLUSIVE (auxiliary) LANE



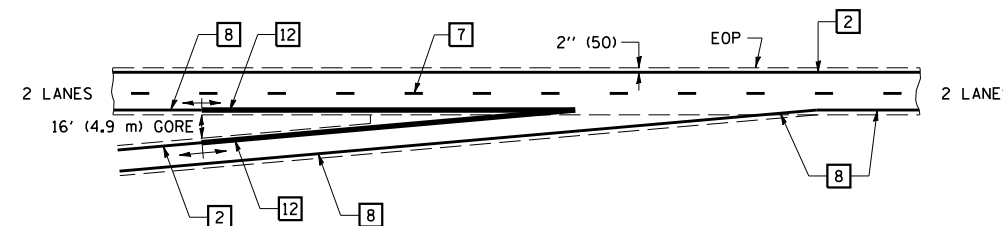
TYPICAL PAVEMENT MARKING LEGEND



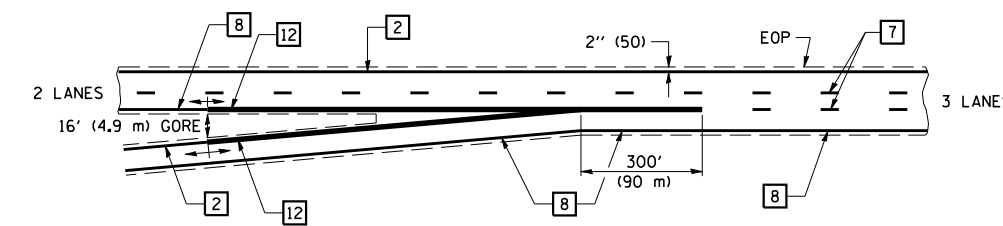
- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 RESERVED
- 6 RESERVED
- 7 4" (100) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)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



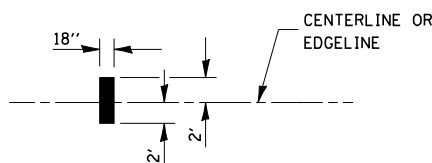
TYPICAL ENTRANCE RAMP TERMINAL



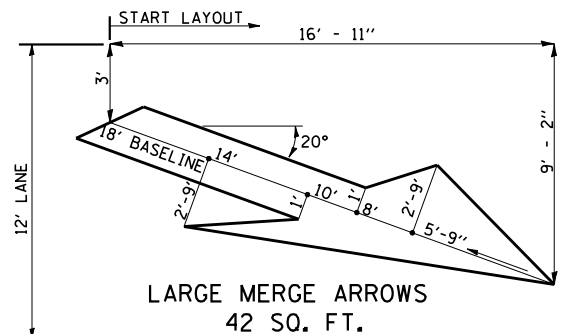
ENTRANCE RAMP TERMINAL with EXCLUSIVE LANE



IT WILL BE NECESSARY TO HAVE A REPRESENTATIVE OF THE STATE POLICE PRESENT SO THAT THE ACCURACY OF MEASUREMENT CAN BE ATTESTED TO IN COURT.



AERIAL SPEED CHECK ZONES



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

DISTRICT 5 DETAIL NO. 7800BBBB

FILE NAME =	USER NAME = collierbw	DESIGNED -	REVISED - 11/06
ct:\projects\d505207 (v8)\70672_text.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING (INTERSTATE & MULTI-LANE APPLICATIONS)

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

F.A. I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-22)BR-3	MCLEAN	42	42
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 70672	